A MITEL
PRODUCT
GUIDE

OpenScape Business V4

Manager E

Administrator Documentation

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Mitel

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Contents

1 Administering OpenScape Business by Manager E 1-1
1.1 Manager E and OpenScape Business Assistant 1-1
1.2 Not supported or partially supported OpenScape Business features 1-1
1.2.1 Systemview 1-1
1.2.2 Stationview 1-6
1.2.3 Transfer 1-6
1.2.4 Maintenance 1-6

2 Introduction 2-1
2.1 About this Documentation 2-2
2.1.1 Documentation and target groups 2-3
2.1.2 Display Conventions 2-5
2.2 Further information 2-6
2.3 Basic Functions 2-7
2.3.1 Read/write database 2-8
2.3.2 Online mode 2-9
2.3.3 Maintenance (Remote) 2-9
2.3.4 Security (User administration) 2-10
2.3.5 Settings 2-13
2.3.6 Password level 2-13
2.4 Wizard 2-14
2.5 File Types 2-15
2.5.1 Customer database (CDB) 2-16
2.5.2 Application Processor System (APS) and Loadable Texts (Languages) 2-16
2.6 File ass_150e.ini 2-17
2.7 System Requirements 2-18
2.8 Communication/access types 2-18
2.9 Installing and Uninstalling the Software 2-19
2.10 Brief guidelines for starting up 2-20
2.11 Releasing the USB Interface On HiPath 2000 / HiPath OpenOffice EE for Administration 2-21

3 Operation 3-1
3.1 Program Window 3-2
3.1.1 Menu bar 3-4
3.1.2 Toolbar 3-5
3.1.3 System View/Net View and Station View 3-7
3.1.4 Administration area 3-9
3.1.5 Status bar 3-11
3.2 Copying and Deleting Entries (Drag & Drop) 3-11
3.3 Context Menu 3-12

3.4 Table Handling 3-13
3.5 Invoking Help 3-15

4 Start and Log-on 4-1
4.1 Logging on to Manager E 4-1

5 Starting up HiPath 5000 RSM/AllServe 5-1
5.1 Starting up a New HiPath 5000 RSM/AllServe System 5-2
5.1.1 HiPath 5000 server:creating 5-2
5.1.2 Adding nodes 5-3
5.1.3 Setting up the HiPath IP address (HIP) 5-3
5.1.4 Configuring netwide call numbers 5-4
5.1.5 Assigning HG 1500 channels to the last route and assigning the protocol 5-4
5.1.6 Assigning routing parameters to HG 1500 trunks 5-5
5.1.7 Configuring LCR 5-6
5.1.8 Setting up a server IP address and node ID 5-8
5.1.9 Restarting the server service 5-8
5.1.10 Logging on the HG 1500 card 5-8
5.2 Administering an Existing HiPath 5000 RSM/AllServe System 5-9
5.2.1 Transferring data from the node to the server 5-9
5.2.2 Mapping the configuration 5-10
5.2.3 Stations overview 5-10
5.2.4 Administering the speed dialing destination 5-10
5.2.5 Administering the HG 1500 card 5-11
5.2.6 Administering HG 1500 call numbers 5-11
5.2.7 Logging on/off a node 5-12
5.2.8 Adding nodes 5-13
5.2.9 APS transfer 5-13
5.2.10 Password protection 5-14
5.2.11 LOG file mechanism - Feature server status messages 5-14
5.2.12 Maintenance access 5-15
5.3 Settings for optiClient Attendant 5-16
5.3.1 Setting the Central busy signaling Flag 5-16
5.3.2 Entering a PABX number for the last route 5-16
5.4 Information on Inter-system Busy Signaling 5-16
5.5 Configuring Stations for the Use of Non-Voice Services 5-17
5.5.1 HiPath 5000 RSM/AllServe Network 5-17
5.5.2 IP network 5-18
5.6 Parameterizing for Media PC Streaming 1.0 (not in the USA) 5-19
5.6.1 Route Configuration 5-20
5.6.2 Configuring LCR 5-21
5.6.3 Media Streaming in the network 5-23
5.6.4 Configuring an HG 1500 card for Media Streaming 5-23
5.6.5 Configuring announcements in connection with Media Streaming and HPCO . . 5-24
5.6.6 Configuring cross-node ACD groups 5-25

5.7 Central Busy Signaling with Attendant P 5-27
5.8 HiPath 5000 RSM/AllServe Speed Upgrade from V8 to V9. 5-31

6 Implementing Features. 6-1
6.1 Features for All Traffic Types. 6-2
6.2 Features for General Incoming Traffic 6-4
6.3 Features for General Outgoing Traffic 6-9
6.4 Features for General External Traffic. 6-11
6.5 Features for Incoming External Traffic. 6-12
6.6 Features for Outgoing External Traffic. 6-15
6.7 Least Cost Routing (LCR) 6-18
6.8 Features for Internal Traffic 6-19
6.9 Tenant Service. 6-21
6.10 Other Features. 6-22
6.11 Network 6-25
6.12 Features for Call Detail Recording. 6-27
6.13 ISDN Features 6-29
6.14 Small Remote Site Concept. 6-31
6.15 Mobility Entry (not for U.S.) 6-32

7 Menu Overviews 7-1
7.1 File 7-1
7.2 Settings 7-3
7.3 System Status 7-6
7.4 Tools 7-6
7.5 Options 7-7
7.6 Applications 7-7
7.7 Help 7-7

8 Station view. 8-1
8.1 Station selection 8-2
8.2 Station parameters 8-3
8.2.1 Station view: Flags 8-5
8.2.2 Station view: Activated features 8-16
8.2.3 Station view: Workpoint Client. 8-20
8.2.4 Station view: Groups 8-24
8.2.5 Station view: Forwarding. 8-25
8.2.6 Station view: BRI (only in the USA). 8-26
8.2.7 Station view: Template Editor 8-27
8.2.8 Station view: ISDN flags 8-27

9 File menu 9-1
9.1 New | HiPath 3000. 9-3
9.2 New | HiPath 5000 RSM/AllServe Server 9-4
9.3 Delete | HiPath 3000 9-6
9.4 Transfer | HiPath 5000 RSM/AllServe Server 9-7
9.5 New 9-10

9.6 Open 9-11
9.7 Save Customer Database 9-13
9.8 Save Customer Database As 9-14
9.9 Close 9-15
9.10 Output 9-16
9.11 Compare Customer Database 9-17
9.12 Convert 9-18
9.13 Load APS texts 9-21
9.14 Append CDB to APS 9-22
9.15 Print / Print Preview. 9-23
9.16 Printer Setup 9-23
9.17 Output MDF Plan 9-24
9.18 Generate System Info Files. 9-24
9.19 Transfer 9-25
9.19.1 Transfer | Communication 9-26
9.19.2 Transfer | Communication | Maintenance 9-36
9.19.3 Maintenance | | Event Log 9-37
9.19.4 Maintenance | Restart/Reload 9-39
9.19.5 Maintenance | Out of Service 9-40
9.19.6 Maintenance | Base Station Status (not in the USA) 9-42
9.19.7 Maintenance | Trunk Status 9-45
9.19.8 Maintenance | Trunk Error Counter 9-46
9.19.9 Maintenance | Call Monitoring 9-48
9.19.10 Maintenance | Station Status 9-51
9.19.11 Maintenance | V.24 Status 9-53
9.19.12 Maintenance | Card status 9-55
9.19.13 Maintenance | IVM (only if an IVM card is plugged in) 9-57
9.19.14 Maintenance | IVM: Language selection 9-59
9.19.15 Maintenance | IVM: Reset passwords 9-60
9.19.16 Maintenance | IVM: Initialize mailboxes 9-61
9.19.17 Maintenance | IVM: Change super user password. 9-62
9.19.18 Maintenance | IVM: Mailbox configuration (as of IVM Version 2). 9-63
9.19.19 Maintenance | IVM: Mailbox configuration: General. 9-64
9.19.20 Maintenance | IVM: Mailbox configuration: Message call. 9-66
9.19.21 Maintenance | IVM: Mailbox configuration: Substitute 9-67
9.19.22 Maintenance | IVM: Mailbox configuration: COS 9-68
9.19.23 Maintenance | IVM: Mailbox configuration: Personal week plan 9-69
9.19.24 Maintenance | IVM: Mailbox configuration: E-mail notification 9-70
9.19.25 Maintenance | IVM: Mailbox Configuration: Automatic Call Forwarding. 9-72
9.19.26 Maintenance | IVM: Execute file operations 9-73
9.19.27 Maintenance | IVM: Execute file operations: Display Statistical Data 9-77
9.19.28 Maintenance | EVM 9-78
9.19.29 Maintenance | EVM: Initialize mailboxes 9-80
9.19.30 Maintenance | EVM: Execute file operations 9-81

9.19.31 Maintenance | OpenStage Phones: Event Log 9-85
9.19.32 Maintenance | OpenStage Phones: SW distribution 9-86
9.19.33 Maintenance | OpenStage Phones: Trace 9-90
9.19.34 Maintenance | Trace Settings 9-96
9.19.35 Transfer | Communication | Security 9-102
9.19.36 Security | User administration 9-103
9.19.37 Security | Protocol 9-105
9.19.38 Transfer | Callback connection 9-107
9.19.39 Transfer | Loadable texts 9-109
9.19.40 Transfer | SW Transfer 9-110
9.20 Exit 9-112

10 Settings Menu 10-1
10.1 Settings | Netwide Data 10-2
10.1.1 Stations - Netwide Data 10-3
10.1.2 Netwide Data 10-8
10.1.3 Resource Management (HiPath 5000 RSM/AllServe) 10-10
10.2 Settings | Set up station 10-11
10.2.1 Subscriber 10-12
10.2.2 Key programming 10-16
10.2.3 Key programming: Fill/Delete 10-23
10.2.4 Key programming: Print 10-24
10.2.5 Terminal hw sw version 10-25
10.2.6 Fax 10-27
10.2.7 Emergency 10-28
10.2.8 Mobility Entry (not for U.S.) 10-30
10.2.9 HXG Configuration (V4.0 and Earlier) 10-32
10.2.10 Gatekeeper (V5.0 and Later) 10-33
10.2.11 Gateway (V5.0 and Later) 10-35
10.2.12 OSO Ports 10-36
10.3 Settings | Cordless (Not in the USA) 10-38
10.3.1 Cordless | System-wide 10-39
10.3.2 Cordless | SLC 10-42
10.3.3 Cordless | Multi-SLC 10-45
10.3.4 Cordless | Base station 10-47
10.4 Settings | Lines/networking 10-49
10.4.1 Trunks 10-50
10.4.2 Buttons 10-52
10.4.3 Trunks | Parameter/ISDN flags 10-53
10.4.4 Trunks | Parameter/MSI flags 10-61
10.4.5 Trunks | Parameter/General Flags 10-65
10.4.6 Trunks | Parameter/TMANI Parameter 10-68
10.4.7 Trunks | Parameter/Template Editor 10-72
10.4.8 Routes 10-73
10.4.9 Routing parameters 10-83

10.4.10 ISDN parameters 10-91
10.4.11 LCOSS 10-95
10.4.12 PRI (US only) 10-97
10.4.13 QSIG features (not in the USA) 10-98
10.4.14 IP trunks for HG 1500 10-100
10.4.15 IP trunks for SIP providers and OpenScape Office 10-102
10.4.16 E.164 table 10-104
10.5 Settings | Least Cost Routing 10-106
10.5.1 Flags and COS 10-107
10.5.2 Dial plan 10-109
10.5.3 Schedule 10-123
10.6 Settings | Incoming calls 10-125
10.6.1 Call Pickup 10-126
10.6.2 Ringing assignment per line 10-127
10.6.3 Call forwarding 10-130
10.6.4 Groups/hunt groups 10-134
10.6.5 Groups/Hunt groups | Station parameters 10-139
10.6.6 Groups/Hunt Group | Group Membership 10-142
10.6.7 Groups/Hunt groups | External destinations 10-144
10.6.8 Team/top 10-145
10.6.9 Edit team/top 10-149
10.6.10 UCD parameters 10-151
10.6.11 UCD groups 10-153
10.7 Settings | Classes of service 10-157
10.7.1 Station 10-158
10.7.2 Day or Night 10-159
10.7.3 Allowed/Denied numbers 10-162
10.7.4 CON matrix 10-164
10.7.5 Group assignment 10-167
10.7.6 Overview 10-169
10.7.7 Autom. night service 10-171
10.7.8 Special days 10-173
10.7.9 autom. COS changeover 10-174
10.8 Settings | System Parameters 10-177
10.8.1 Flags 10-178
10.8.2 LDAP 10-192
10.8.3 System settings 10-195
10.8.4 Intercept / Attendant 10-203
10.8.5 Display 10-209
10.8.6 Flexible menus 10-213
10.8.7 Speed dialing system 10-214
10.8.8 Service codes 10-219
10.8.9 Texts 10-221
10.8.10 Time parameters 10-223

10.8.11 Tones and ring types 10-233
10.8.12 Daylight saving time/DISA 10-235
10.8.13 Plus Products Flags/MW 10-239
10.9 Settings | Auxiliary equipment 10-242
10.9.1 Ext. connection 10-243
10.9.2 Actuators 10-245
10.9.3 Announcement 10-250
10.9.4 Announcement | External destinations 10-253
10.9.5 Paging 10-254
10.9.6 Sensors 10-256
10.9.7 PhoneMail 10-259
10.9.8 Integrated Voice Mail (IVM) (only if an IVM card is plugged-in) 10-261
10.9.9 IVM | Parameter/Mailbox Parameters 10-265
10.9.10 IVM | Parameter/COS 10-269
10.9.11 IVM | Additional Settings/General 10-274
10.9.12 IVM | Additional settings/Advanced 10-280
10.9.13 IVM | Additional settings/Network parameters 10-282
10.9.14 IVM | Additional settings /Automatic attendant 10-284
10.9.15 IVM | Additional Settings/Calendar 10-286
10.9.16 IVM | Additional Settings/Central distribution list 10-288
10.9.17 IVM | Additional Settings/Group mailbox 10-289
10.9.18 EVM (Entry Voice Mail) 10-291
10.9.19 EVM | Additional settings/General 10-294
10.9.20 EVM | Additional settings / Automatic attendant: 10-297
10.10 Settings | Network 10-299
10.10.1 Basic settings 10-300
10.10.2 IP parameters 10-304
10.10.3 SNMP Data 10-308
10.10.4 SNMP partner/Communication Partner 10-310
10.10.5 PSTN partner 10-314
10.10.6 Edit PSTN partner 10-315
10.10.7 Firewall 10-319
10.10.8 Firewall | Edit IP firewall 10-321
10.10.9 Firewall | Edit application firewall 10-323
10.10.10 Routing 10-325
10.10.11 Routing | Edit IP routing 10-326
10.10.12 Mapping 10-327
10.10.13 Mapping | Edit IP mapping 10-328
10.10.14 HiPath 5000 RSM/AllServe Parameters 10-329
10.10.15 Gatekeeper 10-330
10.10.16 Ext. H.323-GK 10-333
10.10.17 Ext. SIP 10-335
10.10.18 IP Ports 10-338
10.10.19 Resource Management 10-340

10.11 Settings | Licensing 10-341
10.11.1 Licensing – HXG. 10-342
10.11.2 Licensing – Base Station (not in the USA) 10-343
10.11.3 Licensing – S2M. 10-344
10.11.4 Licensing – IVM 10-345
10.11.5 Licensing – System-wide 10-346

11 System Status Menu 11-1
11.1 System-wide 11-2
11.1.1 Cards 11-3
11.1.2 Card Configuration | T1 Configuration 11-6
11.1.3 Card Configuration | Card data. 11-7
11.1.4 Loadware 11-10
11.1.5 System 11-11
11.1.6 Flags. 11-14
11.1.7 Forwarding 11-15
11.1.8 Line states 11-17
11.1.9 System texts. 11-19
11.1.10 UCD Agents 11-20
11.2 Call charges 11-21
11.2.1 Stations (Not in the USA) 11-22
11.2.2 Trunks (Not in the USA) 11-23
11.2.3 Output format 11-24
11.2.4 Output format | LAN settings 11-29
11.2.5 Factors (Not in the USA) 11-31
11.2.6 Account codes 11-34
11.2.7 Callbox (Not in the USA) 11-37

12 Tools Menu 12-1
12.1 Run Wizard (HiPath 3000) 12-2
12.2 Starting the S0 Wizard (HiPath 500). 12-3
12.3 Start IP Access Manager 12-5

13 Options Menu 13-1
13.1 Program Options. 13-2
13.1.1 Program options General 13-3
13.1.2 Program options Save options 13-5
13.1.3 Program options Communication 13-8
13.1.4 Program options ISDN 13-12
13.2 Password Level. 13-14
13.3 Change Password. 13-15
13.4 Delete Call Numbers. 13-16
13.5 Call number presetting to two-digits/three-digits. 13-17

14 Applications Menu 14-1

15 Help Menu 15-1

15.1 Help Topics 15-2
15.2 Using Help 15-2
15.3 Info 15-2
Index Z-1

1 Administering OpenScape Business by Manager E

1.1 Manager E and OpenScape Business Assistant

OpenScape Business is the successor of HiPath 3000. The Manager E administrator tool is therefore also used to set up the OpenScape Business features until the OpenScape Business Assistant WBM is completely developed. Based on this circumstance, there are features which are not supported any more by Manager E for OpenScape Business. In addition, there are features which are partially supported or were contrariwise expanded for OpenScape Business.

1.2 Not supported or partially supported OpenScape Business features

The following sections specify the features which are not supported or partially supported by Manager E for OpenScape Business. In addition, there are features in these sections which were expanded for OpenScape Business.

The used phrases in the following sections are:

- "Not supported": The features are no longer set in the Manager E, but only in the WBM.
- "Partially supported": The features are partially set in the Manager E and partially in the WBM.
- "Enhanced": For OpenScape Business, the setting options were enhanced in the Manager E.

Those features which were not changed in Manager E and are set in the same way in OpenScape Business and HiPath 3000, are not listed here.

1.2.1 Systemview

1.2.1.1 "Settings" menu

Set up station

- Gatekeeper — Partially supported, i.e. without:
  - Selection of HG 1500 gatekeeper and "Enable gateway resources" check box
  - H.323 Client in the "Selected station" area
  - H.323 Client in the "Configured station" area
- Mobility Entry — Partially supported, i.e. without:
  - "License" column in the "Mobile Connection" table

• OSO Ports	Enhanced. In the "Assigned ports" area, the following types were added: • "Conference" • "MeetMe"

Cordless

For the Cordless initial operation, all OpenScape Business and HiPath 3000 features are supported in the same way.

Lines / networking

• Trunks	Supported. The trunk types which are diplayed in the "Type" column were expanded.	The following additional trunk types are used: • "CornetNQ": for a TDM trunk connection to another node (e.g. S_0/S_{2M}) • "SIPQ": for an IP trunk connection to another node • "SIP-Trunk": for a SIP provider (ITSP) connection The other trunk types are unchanged.
• IP Trunks	Supported, but the types of trunks which are selectable in the "Number" area were changed:	
	• ITSP1 • ITSP2 • ITSP3 • ITSP4	Are used to connect the system to an Internet Telephony Service Provider.
	• Networking	Is used to connect different nodes over IP trunking.
	• SIP Interconnection 1 • SIP Interconnection 2	Are used to connect the system to another system via SIP protocol.

Least cost routing

All OpenScape Business and HiPath 3000 features are supported in the same way.

Incoming calls

• Call forwarding	Supported. In addition, the number of call destination lists was expanded.

Classes of service

• Day	Supported. In addition, the names of the COS groups can be set.
• Night	Supported. In addition, the names of the COS groups can be set.

System parameters

• System settings	Supported and enhanced. In addition, the announcement player settings are configurable: • Respective route (used trunk group) • Access call number
• Speed dialing system	Supported. In addition, the number of the speed dialing system destinations was expanded.

Auxiliary Equipment

• Announcement	Supported, partially supported and enhanced. The following features were added in the the "Announcement equipment" table: • New type of announcement "Ann. Player" in the "Type of ann." column • All ten EVM ports displayed in the "Access" column Without: • Selection of slot for HG 1500 board in the "Selection" area • G.723 Audio Codec, i.e. four audio codecs instead of five audio codecs available ("MOH sources" area -> "Audio Codecs")
• EVM (for UC Smart Voicemail)	Supported, partially supported and enhanced. **"Mailboxes" table:** The following options were added in the "Mailboxes" table, column "Greeting": • Greeting 3 (for Auto Attendant mailboxes) • Greeting 4 (for Auto Attendant mailboxes) • Type of Call (for normal and AutoAttendant mailboxes) • None

"Additional settings" window -> "Overview" tab:
The following features were added in the "Additional settings" window -> "Overview" tab:

- "EVM Tui" options field with OSO and EVM options. The EVM option is the default value. If OSO was selected, all configured mailboxes are set with Greeting 1.
- "Order Of Data Announcement" options field with "Date after message" and "Date before message" options. Is only active, if EVM in the "EVM Tui" was selected.
- "Amount of Messages per Mailbox" input field (default: 10, range: 0 - 65535 (i.e. no limitation)
- "EVM deactivation" check box

The following feature was deleted in the "Additional settings" window -> "Overview" tab:

- "Recording quality" area with the "Memory-optimized greetings and messages", "HiQuality greetings, memory-optimized messages" and "HiQuality greetings and messages" options

"Additional settings" window -> "Automatic attendant" tab (for UC Smart Company Auto Attendant):
The following features were added in the "Additional settings" window -> "Automatic attendant" tab:

- "Configured mailboxes" field
- "1/Day", "2/Night", "3" and "4" radio buttons in the "Speed dial/ Intercept destinations" area. The "Day" and "Night" radio buttons are not supported for OpenScape Business.
- "Type" column in the "Speed dial/Intercept destinations" area. The types are "call number" and "mailbox".

Network

- Basic settings — Partially supported, i.e. without:
  - Selection of protocols in the "IP access" field and all related settings.

  Only the OSO IP address can be set.
- SNMP Data — Partially supported, i.e. without the following fields:
  - "System identification"
  - "Multiple Trap"
  - "SNMP Flags"

  Only the trap flags in the "Trap Flags" table can be set.
- SNMP partner — Not supported
- PSTN partner — Not supported

- Firewall — Partially supported, i.e. without:
  - "IP firewall" table

  Only the "Application firewall" can be set.
- Routing — Not supported
- Mapping — Not supported
- Gatekeeper — Not supported
- Ext. H.323 — Not supported
- Ext. SIP — Not supported
- IP Ports — Not supported

Licensing

In the Manager E, the complete licensing feature is not available for OpenScape Business.

- HXG — Not supported
- Basestation — Not supported
- S2M — Not supported
- IVM — Not supported
- System-wide — Not supported

1.2.1.2 "System status" menu

System-wide

- Cards — Supported, but the listed cards differ from the HiPath 3000 cards. It depends on the OpenScape Business variant which cards are available.
  The EVM is no longer present as a hardware module.

Call charges

- Output format — Partially supported and enhanced:
  In the "Port assignment" area -> "Output format" options field: The "HTTPS" and "LAN-TCP-Client" options are only available.

1.2.2 Stationview

1.2.2.1 "Flag status" tab

- "Outgoing call priority" flag Not supported

1.2.3 Transfer

(File > Transfer > SW Transfer)

- SW Transfer — Partially supported, i.e. without: Software transfer

The software of the OpenStage U_{P0} system phones will be updated by Manager E as in HiPath 3000 V9.

1.2.4 Maintenance

(File > Transfer > Communication > Maintenance)

- Error History — Not supported
- Event Log — Not supported
- Restart / Reload — Partially supported. Is only for slots/cards. The following operating elements are displayed:
  - "Reset- / reload card" area with the "Slot / card" option field
  - "Read card information" button
- Tracer settings — Not supported
- Error Reaction Table — Not supported
- EVM — Supported and changed. The following operating elements are displayed:
  - Buttons:
    - "Read data"
    - "Initialize mailboxes"
    - "Delete all Mess./Greetings"
    - "Execute file operations"
  - Fields:
    - "Languages"
    - "Mailbox Information" with the "Total Recorded Messages"
- V.24 Status — Not supported
- DMA — Not supported
- Traces — Not supported

2 Introduction

HiPath 3000/5000 V9, Manager E, Administrator Documentation:
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HiPath 3000 Manager is the administration program for the following communication systems:

- Hicom 150 E Office
- Hicom 150 H
- HiPath 3000
- HiPath AllServe
- HiPath 5000
- HiPath 500
- HiPath 2000
- HiPath OpenOffice EE

This administration manual is intended for anyone who is responsible for the administration and management of one of the above communication systems. All the important information needed to operate the HiPath 3000 Manager administration program can be found here.

- If you already have HiPath 3000 Manager installed and want to start working with it immediately, go to Chapter 4, “ Start and Log-on”.
- Chapter 3, “Operation” describes the user interface of HiPath 3000 Manager.
- This chapter describes the basic functions of HiPath 3000 Manager.

The help for HiPath 3000 Manager describes all available functions for all supported communication systems. If you cannot access certain functions, this is most likely due to the fact that these functions are not supported by the selected communication system. HiPath 3000 Manager automatically shows you only those functions which are supported by the selected communication system.

Requirements

All hardware components of the communication system have been installed and connected.

HiPath 3000 Manager must have been installed on your PC by you or by authorized service personnel. Your PC must have a CD-ROM or DVD drive for this.

If you are using Windows NT/2000/XP/2003, note that the access rights of the current account may not be sufficient for the installation and operation of HiPath 3000 Manager.
If this is the case, HiPath 3000 Manager must be installed and operated under an account that has the appropriate system access rights.
If you are not sure about your access rights, contact your system administrator.

Note that the power management feature on your PC should not be active when transferring customer databases to and from the communication system.

Chapter Contents

This chapter contains the following topics:

Topic
Section 2.1, “About this Documentation”, on page 2-2
Section 2.2, “Further information”, on page 2-6
Section 2.3, “Basic Functions”, on page 2-7
Section 2.4, “Wizard”, on page 2-14
Section 2.5, “File Types”, on page 2-15
Section 2.6, “File ass_150e.ini”, on page 2-17
Section 2.7, “System Requirements”, on page 2-18
Section 2.8, “Communication/access types”, on page 2-18
Section 2.9, “Installing and Uninstalling the Software”, on page 2-19
Section 2.10, “Brief guidelines for starting up”, on page 2-20
Section 2.11, “Releasing the USB Interface On HiPath 2000 / HiPath OpenOffice EE for Administration”, on page 2-21

2.1 About this Documentation

This documentation describes the communication systems that belong to the HiPath 3000 system family, i.e., the HiPath 3800, HiPath 3550, HiPath 3350, HiPath 3500 and HiPath 3300 and the Real-Time Services Manager HiPath 5000 RSM.

In this document, HiPath 3000/5000 is also referred to as the communication system.

Information about the UC Suite for HiPath 3000 (OpenScape Office HX) can be found in the documentation for the OpenScape Office V3 product.

The available features and the released applications may differ from country to country. The Sales Information is therefore the only document which describes the binding features and scope of hardware available for your country.

2.1.1 Documentation and target groups

The documentation for HiPath 3000/5000 is intended for different target groups.

- HiPath 3000/5000 V9, Feature Description
  This document describes all the features of HiPath 3000/5000 and is intended for sales and customers.
- HiPath 3000/5000 V9, First Steps
  This document is a quick reference guide for installing and starting up a HiPath 3000 communication system and is intended for administrators.
- HiPath 3000/5000 V9 Manager C, Administrator Documentation/Online Help
  This documentation describes administration using HiPath Manager 3000 Manager C and is intended for customer administrators.
- HiPath 3000/5000 V9 Manager E, Administrator Documentation/Online Help
  This documentation describes administration using HiPath Manager 3000 Manager E and is intended for administrators.
- HiPath 3000/5000 V9 HiPath HG 1500 V3, Administrator Documentation/Online Help
  This documentation describes the administration of HiPath HG 1500 using Web Based Management (WBM) and is intended for administrators.
- HiPath 3000/5000 V9, Configuration Examples
  This document includes detailed descriptions of selected service tasks (such as the configuration of networks) and is aimed at administrators.
- HiPath 3000/5000 V9, Service Manual
  This document describes the hardware, installation and start-up of HiPath 3000/5000 and is intended for the service technician.
- HiPath 3000/5000 V9, Inventory Manager
  This document describes the operation of the Inventory Manager and is intended for the service technician.
- HiPath 3000/5000V9, Software Manager
  This document describes the operation of the Software Manager and is intended for the service technician.
- HiPath 3000, DLI, Administrator Documentation
  This document describes the centralized administration of IP Workpoints via the system and is intended for service technicians.

Documentation in the environment of HiPath 3000/5000

More information on HiPath 3000/5000 can be found in the documentation for the following products:

- HiPath 3000 V9, myPortal entry Web Services
- OpenScape Office V3
- HiPath Xpressions Compact V3
- Entry VoiceMail
- OpenStage Telephones

2.1.2 Display Conventions

The documentation for HiPath 3000/5000 uses different methods to present different types of information.

Purpose	Presentation	Example
Texts in the body text that are particularly important.	Bold	**Name** must not be deleted.
User interface elements that are to be operated.	Bold	Click **OK**.
Menu sequence	Bold -> Bold	**File** -> **Exit**
Texts in files and texts to be entered or selected in input or selection fields.	Courier and bold	**`Word1 Word Word3`**
Placeholders	In angle brackets and italics	*<InstDir>*
Files and directories in which files are located	Courier	*<InstDir>*`/config/services/global.cfg`

Worksteps and subordinate worksteps in instructional text	Numbered and nested lists	1. Select the **SIP Registrar** check box. The input fields are activated.
		2. Set the following:
		  1. Enable the **Authentication** option.
		  2. Fill in the input fields:
		  • SIP UserID: e.g., **`hipath3000br13`**
		  • Realm: enter the realm to which the authentication applies, e.g., **`sol`**
		3. Click **Apply**. The changes are saved.

Settings that need not necessarily be performed in sequence.	Bulleted list	

Identifies useful notes and information.

2.2 Further information

Contents	Languages	URL
Product overview Product descriptions	German, English	http://opus1.global-intra.net:8080/TopNet/index.html
Electronic documentation for Unify products Selection and download options for: • User documentation • Administrator documentation • Service documentation • Sales documentation	German, English, French, Italian, Dutch, Portuguese, Spanish	http://apps.g-dms.com:8081/techdoc/search_de.htm
Experts Wiki Information on communication systems, telephones and Unified Communications	German, English	http://wiki.unify.com
OpenScape Interactive Request and Information System OSIRIS Knowledge base with questions and answers about products and solutions	German	https://osiris.unify.com/
Knowledge Management for Operational Support and Services KMOSS Platform for providing service information: • Tips & Tricks • Service Infos, sorted by products	English	https://www.g-dms.com/livelink/livelink.exe/open/12466438

2.3 Basic Functions

Besides the usual management options provided via the User administration, you can also manage the communication system via the Settings (a list of the communication systems supported by the program can be obtained via **Help/About**). The capabilities offered by the program are determined by the Password level.

A detailed description of the HiPath 3000/5000 communication system can be found in the “HiPath 3000/5000, System Reference Manual”.

A detailed description of all available features can be found in the manual “HiPath 3000/5000, Feature Description”.

Basic functions

Section 2.3.1, “Read/write database”, on page 2-8
Section 2.3.2, “Online mode”, on page 2-9
Section 2.3.3, “Maintenance (Remote)”, on page 2-9
Section 2.3.4, “Security (User administration)”, on page 2-10
Section 2.3.5, “Settings”, on page 2-13
Section 2.3.6, “Password level”, on page 2-13

2.3.1 Read/write database

General Procedure

1. The configuration of the communication system is read via the menu item **File/Transfer/ Communication/Read/write database/System -> PC** and is then stored as the customer database in your PC's main memory.
2. This customer database can now be administered using the **Settings** menu and can also be stored on the hard disk for later use.
3. In order to enable the implemented settings, the database is transferred back to the communication system via the menu item
PC -> System.

The transfer from the **PC -> System** overwrites all previous communication system settings.

Delta mode

When Delta mode is activated, only changes made since the customer database was last downloaded are written to the communication system. If, for example, only a station name is changed, then the transmission time is drastically reduced.

To determine the delta data, the program compares the loaded customer database with the file **lastload.kds**, which is automatically created after every transfer from the **System -> PC** and is stored on the hard disk.

See also:

– Section 9.19, "Transfer", on page 9-25
– Section 9.19.1, "Transfer | Communication", on page 9-26

2.3.2 Online mode

Online mode allows you to make changes to the communication system's customer database in real time. The operating elements of a system telephone can be mapped on the display terminal via **File/Transfer/Communication/Online/Online**. You use these to emulate a system administration terminal. Using Assistant T commands, you can now make changes to the "active" database, i.e. the CDB currently loaded in the communication system. Your changes take effect immediately. It is not necessary to download and then upload the customer database.

See also:
– Section 9.19, "Transfer", on page 9-25 – Section 9.19.1, "Transfer	Communication", on page 9-26

2.3.3 Maintenance (Remote)

The Maintenance facility is used to change the settings that are needed for remote maintenance of the communication system.

See also:
– Section 9.19, "Transfer", on page 9-25 – Section 9.19.1, "Transfer	Communication", on page 9-26 – Section 9.19.2, "Transfer	Communication	Maintenance", on page 9-36

2.3.4 Security (User administration)

User administration

The access parameters between the program and the communication system are defined via the user administration (**File/Transfer/Communication/Security/User administration**). Up to 16 users (= administrators) can be entered. A user is identified by his or her name. The establishment of a user group defines the usage rights of the respective user. Authentication is carried out by means of a password.

Two user names and the user groups linked to them, which are relevant for the administration, are preset in the default setting of the user administration:

- **User name “31994” with the user group “Service”**
  As long as no other user groups are set up, this user group has the access rights to all administrable system data and the execute rights for all actions available in the system. Excluded from this are access rights that are reserved for the development (see user group “Development”).
- **User name “633423” or “office” with the user group “Customer”**
  The user group ‘Customer’ has access to all data that is intended for administration by the customer (see also further below).
- **User name “*95” with the user group “none”**
  As long as no other user groups other than the one described above are set up, it is possible to administer customer-relevant data using the telephone with this user group (due to compatibility reasons with Hicom 150 E Office Rel. 1.0). This entry has no meaning for the communication system administration with HiPath 3000 Manager.

User access rights can be determined by specifying one of the 6 user groups available.

- User group **<none>**
  This user group has no meaning when using the program for administration.
- The user group **User admin**
  This user group has the access rights to the **User administration** dialog, where the user and the linked user groups are set up.
- The user group **Revision**
  This user group has the access rights to the **Security protocol** dialog.
- User group **Service**
  By default, only the user “**31994**” exists (see further below).
- The user group **Administration** (Customer)
  By default, only the user “**633423**” exists (see further above).
  This user group can access data that is intended for administration by the customer. This customer data can, however, also be additionally set up by the service. An exception is the confidential customer data, which may be handled only by the customer:

  - PIN code (only relevant for administration on the system telephone)
  - Individual speed dialing facility (only relevant for administration on the system telephone)
  - Contents of the name keys of system telephones
  - Central speed dial destinations
  - Call charge data per station and per line
- The user group **Call charges**
  has the access rights to the data from call detail recording, call charge data records and the call detail counter. If this user group is not set up, the rights belong to the customer user group. If the customer is not set up either, they belong to the service user group.
- User group **Development**
  In addition to the access rights of the service user group, the Development user group has the possibility of administering additional data in the communication system.

Security protocol (log)

A distinction is made in the security protocol (log) between:

- **Offline mode**
- **Online mode, Active logging**
- **Online mode, Logging not active**

The protocol mode is selected via a dialog.

Offline mode

In offline mode, only the existing archive file can be opened, viewed and printed. The archive files cannot be modified. There is no connection with a communication system, so the archive information from the communication system cannot be displayed.

Online mode, Active logging

A connection to the communication system is set up for online mode. In order to use this mode with active logging, the logging facility in the communication system must actually be active (determined by the hardware configuration).

If logging has already been executed, the archive information from the communication system is also displayed. The archive file name is taken from the communication system and an attempt is made to open this file and to display the archive information it contains. The archive information from the communication system and from the archive file are normally identical.

Online mode, Logging not active

In order to use this mode with inactive logging, the logging facility in the communication system must not be active (determined by the hardware configuration).

See also:

- Section 9.19, “Transfer”, on page 9-25
- Section 9.19.1, “Transfer | Communication”, on page 9-26
- Section 9.19.36, “Security | User administration”, on page 9-103
- Section 9.19.37, “Security | Protocol”, on page 9-105

2.3.5 Settings

The **Settings** option is used to administer the customer database currently loaded in the program. In order to enable the implemented settings, the customer database is transferred to the communication system via the menu item **File | Transfer | Communication | Read/write database | PC -> System** .

See also:
– Chapter 8, “Station view” – Chapter 10, “Settings Menu” – Chapter 11, “System-wide”

2.3.6 Password level

The password level determines the administration options of the CDB or the communication system.

The identification and authentication procedure has been altered significantly as of Hicom 150 E Office Rel. 2.

– Up to and including Hicom 150 E Office Rel. 1.0
  The entered code for starting the program is immediately verified (against the passwords specified for the program). The user is then assigned the corresponding rights. The user name is not used.

– As of Hicom 150 E Office Rel. 2.0
  The user name and password are checked against the customer database or the communication system. This means that the user name and password can only be entered here; the check, however, is only implemented after call setup or when a customer database has been opened.

See also:
– Section 2.3.4, “Security (User administration)”, on page 2-10 – Section 13.2, “Password Level”, on page 13-14

2.4 Wizard

The Wizard provides a guided dialog for entering the most important customer data. The customer data that is needed for an initial startup is collected here and then transferred to the customer database (CDB) of the communication system. Please note, however, that the Wizard only collects the most important customer data that is needed for a fast startup. Detailed entries can be processed later in HiPath 3000 Manager.

The Wizard can be started with **Tools | Run Wizard** (for HiPath 3000) or with **Tools | Run S0 Wizard** (HiPath 500).

The Wizard can also be run more than once. Note that in such cases, the currently loaded CDB is taken into account in the Wizard. In other words, all features which were set up later using HiPath 3000 Manager and which are not handled via the dialogs of the Wizard are retained.

Follow the instructions given in the user interface after you have started the Wizard.

After the Wizard has been run, you can optionally carry out additional settings in the HiPath 3000 Manager to optimize your communication system to suit your purposes.

Once you have modified the customer data, you still must transfer it to the communication system. On completion of this step, the communication system is ready for operation.

2.5 File Types

The following types of files exist:

– *.cdb, Customer database

– *.fst, Application Processor System (APS)

As of Hicom 150 E Office Rel. 2.2:

– *.lng, Loadable texts (languages)

– *.net, NET files, Central Database for networked systems on the HiPath 5000 server

The program tool will not recognize files with other extensions as databases.

Topic
Section 2.5.1, “Customer database (CDB)”, on page 2-16 Section 2.5.2, “Application Processor System (APS) and Loadable Texts (Languages)”, on page 2-16

2.5.1 Customer database (CDB)

The customer database (CDB) contains all customized settings of the communication system. You can use the HiPath 3000 Manager to edit the CDB. The CDB data is generated on your PC in a file with the extension *.kds and then transferred to the communication system when you are done editing.

After selecting the software version (Version) and the system type (Expansion), a new empty CDB can be created via **File/New**. The individual cards are configured via **System Status/ Cards**.

Please note that the CDB should always be first transferred from the communication system. This ensures that the data that you edit always reflects the current status. Nevertheless, you should still save the CDB on a data medium just to be on the safe side.

See also:

- Section 2.3.1, “Read/write database”, on page 2-8
- Section 2.5, “File Types”, on page 2-15
- Chapter 9, “File menu”

2.5.2 Application Processor System (APS) and Loadable Texts (Languages)

Load APS texts is used for exchanging variable texts in the following existing files:

- *.fst, APS transfer over HiPath 3000 Manager
- *.fli, APS transfer over TFTP (TCP/IP)
- *.fls, APS transfer over TFTP (TCP/IP) with Office One
- *.b01, Programming a flash card
- *.mmc, Programming a multimedia chip

See also:

- Section 2.5, “File Types”, on page 2-15

2.6 File ass_150e.ini

The **ass_150e.ini** file is stored in the folder **C:\Documents and Settings\<user>\Application Data\Siemens\Manager E**. <user> indicates the login of the registered user on the PC. The file can be edited with an editor (such as Notepad).

You can change the listed modem types and also add further modems via this file. A new modem can be added under [Modem_6], for example, if the entries [Modem_1] to [Modem_5] already exist. The same applies to the [ModemString_x] entry for the ”system modem”.

If desired, you can use the file ass_150e.ini to specify or change the default editor to be used when displaying or editing the maintenance data, for example. You can enter any desired editor that is available on your system as the editor.

As of V5.0, the IP address of the CLA host for licensing is also specified in the **ass_150e.ini** file (see also Section 10.11, “Settings | Licensing”, on page 10-341).

When updating the application, you will be asked whether or not the file ass_150e.ini should be overwritten. If you respond with **Yes**, the file asse_150e.ini will be overwritten, and the old asse_150e.ini file will be saved under the name asse_150e.old.
Consequently, if you have changed the parameters for the modems, for example, you should copy the modem parameters from the ass_150e.ini (asse_150e.old) file to the new ass_150e.ini.
Similarly, if you have changed the settings for the column widths in the tables, for example, and want to use these settings in the new version, you will need to copy the [Desktop] section from the old ass_150e.ini (asse_150e.old) file to the new ass_150e.ini file.

2.7 System Requirements

The following minimum requirements must be met for the program to operate successfully:

Computer	depends on operating system requirements
RAM	at least 512 MB
Hard disk memory	300 Mbytes free
Operating system	Windows Vista (32 and 64 Bit), Windows NT, Windows 2000, Windows XP, Windows 2003

2.8 Communication/access types

The HiPath 3000 Manager supports the following communication/access types:

- Serial
- Analog modem
- S_0
- IP

2.9 Installing and Uninstalling the Software

Installation

1. Insert the installation CD into your CD-ROM drive.
   If your CD-ROM drive is configured with an Autostart function, the CD menu will open automatically. If the CD menu does not open automatically, select **Start** | **Run** and then use the **Browse** button to find and execute the file
   `<CD-drive>:\ setup.exe`.
2. Select the menu item **Installation** from the CD menu.
3. Then select the menu item HiPath 3000 Manager from the following menu.
4. This starts up the installation wizard. Follow the instructions on the screen to complete the installation.
5. When the procedure has finished, you are notified that the installation has been successfully performed.
   Confirm the message with the **OK** button.

The program has been installed.

Uninstallation

1. First close/exit the HiPath 3000 Manager (if not already closed).
2. Select **Start I Settings** | **Control Panel**.
3. Double-click the **Software** symbol in the **Control Panel** window.
4. Select the HiPath 3000 Manager entry in the list of installed programs and click the **Add/ Remove** button.
5. Confirm the security query with the **Yes** button.
6. The program data is now removed from your PC.
   Wait for this procedure to be completed.
7. When the procedure has finished, you are notified that uninstallation has been successfully performed.
   Confirm the message with the **OK** button.

The program has been uninstalled.

2.10 Brief guidelines for starting up

The following steps are needed to start up the communication system:

- Install communication system (by authorized service personnel)
- Connect terminals
- Connect PCs to communication system (e.g., via serial interface)
- Start the CD included in the delivery and install HiPath 3000 Manager on the PC
- Start HiPath 3000 Manager
- Transfer CDB from the communication system to the PC (File | Transfer)
- Optimize CDB in HiPath 3000 Manager
  – Configure station (Settings | Set up station, Station or Stationview)
  – Configure lines (Settings | Lines/networking, Lines and Routes)
  – Swapping/Replacing Languages, if necessary (File | Transfer, Loadable texts)
- Print out label sheets for system telephone(s) (e.g., optiPoint 500) (Settings | Set up station, Key programming, Labeling)
- Save CDS (File | Save customer database as)
- Transfer CDB from the PC back to the communication system (File | Transfer)

2.11 Releasing the USB Interface On HiPath 2000 / HiPath OpenOffice EE for Administration

On system start-up the USB interface on HiPath 2000/HiPath OpenOffice EE is in CLI mode (CLI: Command Line Interface). In order to perform HiPath 2000/HiPath OpenOffice EE administration with HiPath 3000 Manager via USB, the system interface must be enabled via CLI.

This requires the following steps:

1. Connect the PC and HiPath 2000/HiPath OpenOffice EE via a USB cable
2. If the USB driver **HiPath 2000/HiPath OpenOffice EE Gateway** is not yet installed on the PC, you must first set up the driver. Once you have plugged in the USB cable, Windows finds the new hardware, and the new interface must be installed with the USB driver. The USB driver is provided on the HiPath 2000/HiPath OpenOffice EE system CD (usb.inf/ usb.sys)
3. Determine the COM interface (e.g. COM 3) for the USB port. To do so, start the Device Manager under **My Computer** | **Properties** | **Hardware** . Under Ports (COM and LPT), you can view the number of the COM interface of the HiPath 2000/ HiPath OpenOffice EE Gateway
4. Use the “Hyperterminal” program to set up a connection to HiPath 2000/ HiPathOpenOffice EE and enable the USB interface of HiPath 2000/HiPath OpenOffice EE. Once the USB interface is enabled via CLI, HiPath 2000/ HiPath OpenOffice EE enables this interface for V.24 operation. To do this:
   - Enter any character
   - Log on using your user name and password (31994/…)
   - Obtain write access using the command “get write access”
   - Enable the USB interface using the command “release usb”, and confirm with “y” (yes)

To revert to CLI functionality on HiPath 2000/HiPath OpenOffice EE, a reset must be carried out on HiPath 2000/HiPath OpenOffice EE.

In order to use HiPath 3000 Manager to connect via USB with HiPath 2000/HiPath OpenOffice EE, select USB as the interface under **Options | Program options | Communication**, and select the COM port of the USB driver (the baud rate settings are not relevant for USB). In the **Transfer** dialog, select **Direct** access.

3 Operation

This chapter is intended to familiarize you with the operation of HiPath 3000 Manager.

Contents of this chapter

Section 3.1, “Program Window”, on page 3-2
Section 3.1.1, “Menu bar”, on page 3-4
Section 3.1.2, “Toolbar”, on page 3-5
Section 3.1.3, “System View/Net View and Station View”, on page 3-7
Section 3.1.4, “Administration area”, on page 3-9
Section 3.1.5, “Status bar”
Section 3.2, “Copying and Deleting Entries (Drag & Drop)”, on page 3-11
Section 3.3, “Context Menu”, on page 3-12
Section 3.4, “Table Handling”, on page 3-13
Section 3.5, “Invoking Help”, on page 3-15

3.1 Program Window

After you start HiPath 3000 Manager and log on successfully (see Chapter 4, “ Start and Log-on”), the program window appears. The display is optimized for a screen resolution of 1024 x 768 pixels.

The information that is displayed in the separate areas of the program window can differ, depending on the program status.

The following representation of the user interface gives an example of the program window. The exact display depends on the hardware components in use. The display in your program window may therefore differ.

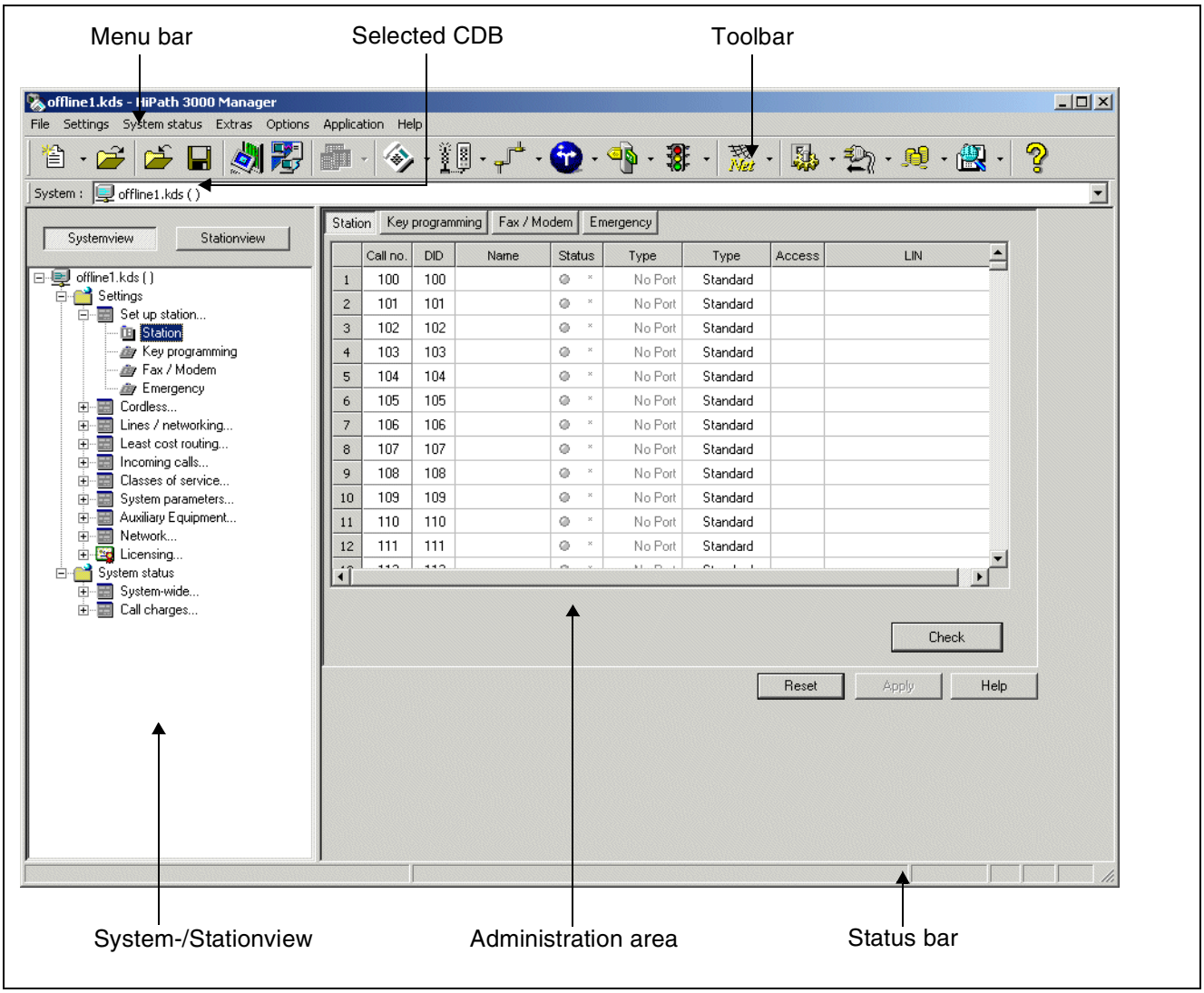
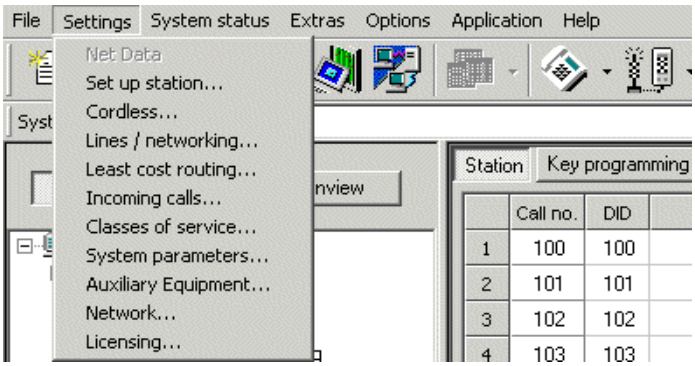


Figure 3-1 The Program Window

In the program window you will find:
Menu bar
Toolbar
System View/Net View and Station View
Administration area
Status bar

3.1.1 Menu bar

The functions of HiPath 3000 Manager can be accessed via the menu bar. When you click the left mouse button on one of the menu items, the menu opens, and you can then select the functions.

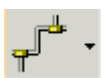


The following items can be found on the menu bar:
File menu
Settings Menu
System Status Menu
Tools Menu
Options Menu
Options Menu
Help Menu

An overview of the menus can be found in Chapter 7, “Menu Overviews”.

3.1.2 Toolbar

You can use the toolbar to start important functions directly and quickly; these functions are also available on the menu bar. Some icons allow you to reach other functions if you click the triangle to the right of the icon.

The following items can be found on the toolbar: (from left to right)	
	New
	Open
	Close
	Save Customer Database
	Transfer
	Transfer | HiPath 5000 RSM/AllServe Server
	Settings | Netwide Data
	Settings | Set up station
	Settings | Cordless (Not in the USA)
	Settings | Lines/networking

The following items can be found on the toolbar: (from left to right)	
	Settings I Least Cost Routing
	Settings I Incoming calls
	Settings I Classes of service
	Settings I Network
	Settings I System Parameters
	Settings I Auxiliary equipment
	Call charges
	System-wide
	Help Topics

An overview of the menus can be found in Chapter 7, “Menu Overviews”.

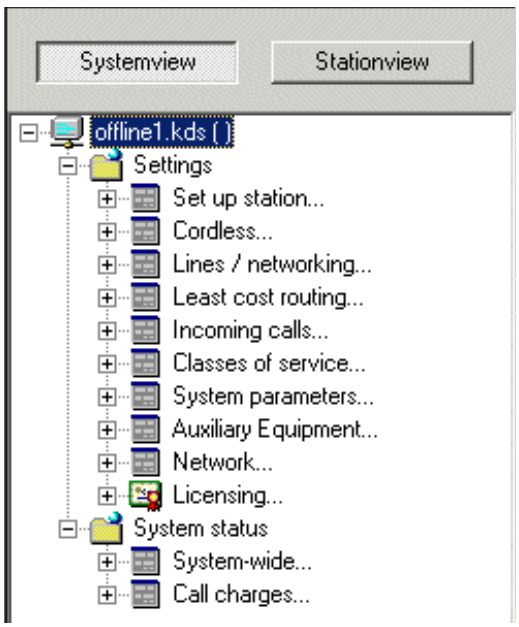
3.1.3 System View/Net View and Station View

The configuration of the communication system occurs via the System, Net and Station views. The system view shows the configuration from the viewpoint of the hardware / boards. If a network CDB has been loaded, the system view changes to the net view and includes all systems of the network. The station view can be used to obtain a quick overview of all configured stations. You can optionally switch between the various views by using the **Systemview**, **Netview** and **Stationview** buttons.

You can scale the width of the views area freely, even to the extent of making it completely invisible. To adjust the size, proceed in the same way as described for changing the column width in tables (see Section 3.4, “Table Handling”, on page 3-13).

System View and Net View

The system/net view includes navigation trees for all opened CDBs. The navigation tree provides you with quick access to the menu functions **Settings** and **System Status** (see also Section 3.1.1, “Menu bar”, on page 3-4). You can expand or collapse individual branches of the tree by clicking the + or - symbol before the relevant entries in the navigation tree. For each opened CDB, a separate branch is created in the navigation tree. When a network CDB is loaded, the branches for each CDB are initially collapsed.



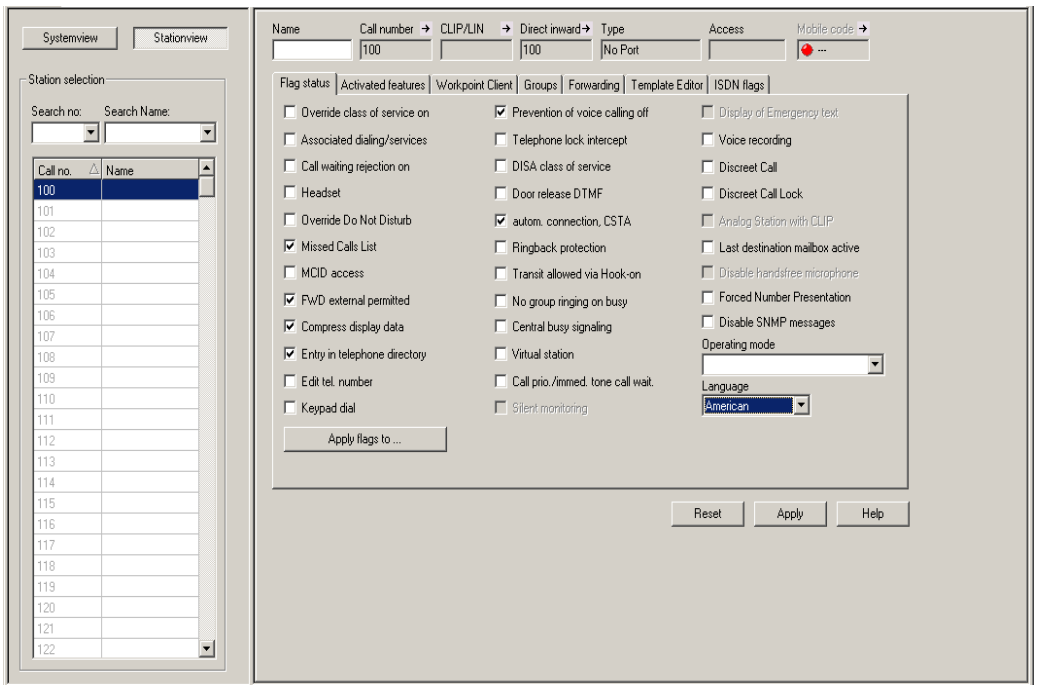
Station view

The station view contain a table (station selection) with the call numbers and names of all stations. If a network CDB is loaded, the station view includes all stations in the network. Inactive stations are shown in gray. In the case of groups, a group icon is additionally displayed before the station name.

You can select a station via the **Station selection**. The station parameters for the selected station are displayed in the right window pane (see also Section 8.2, “Station parameters”, on page 8-3). The stations are sorted in ascending or descending order by one of the columns (Call no. or Name). You can change the sorting order by clicking the column headers.

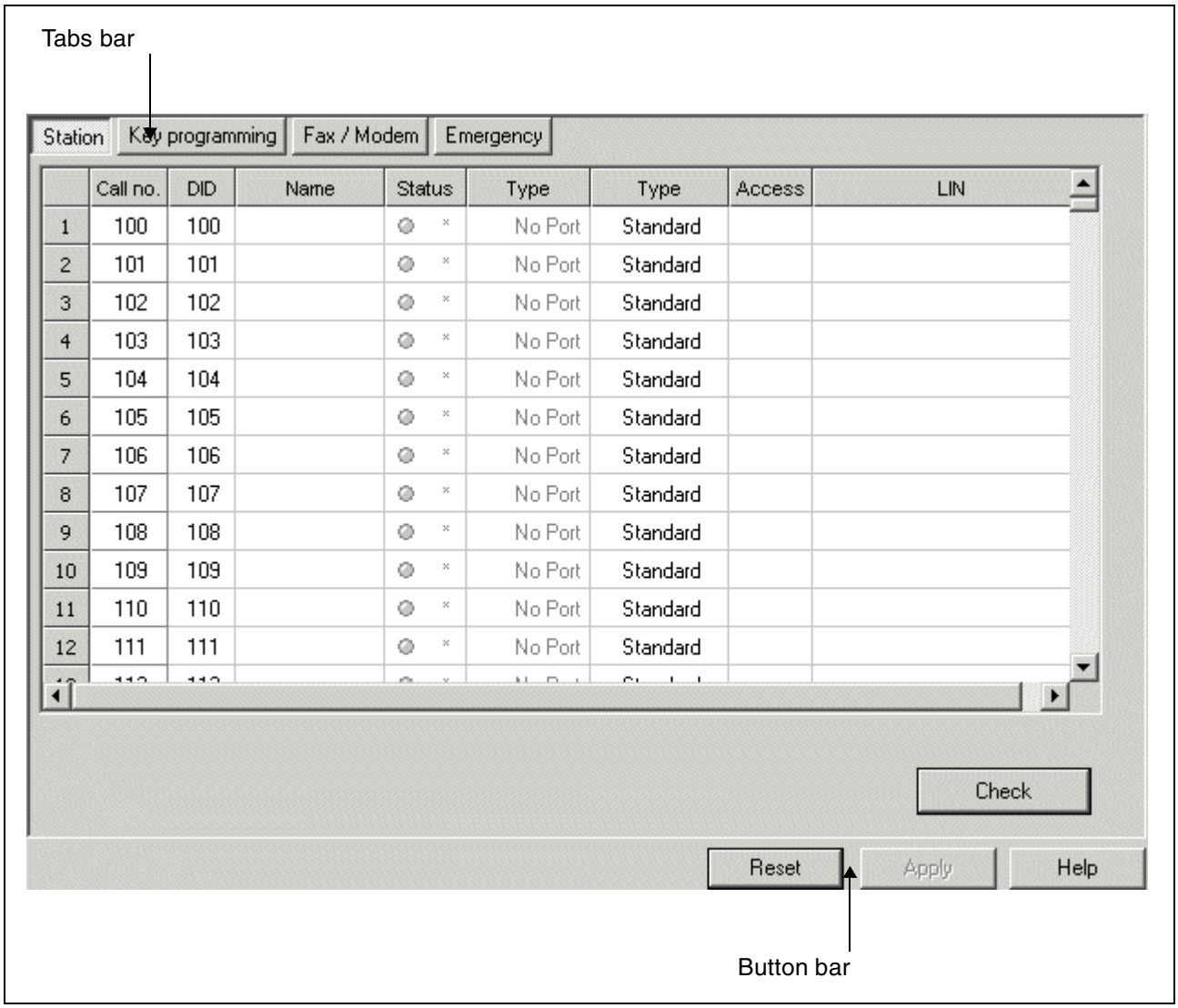
The **Search no.** and **Search Name** fields/drop-down lists can be used to find a particular station. To do this, enter a call number or a name in the fields or select an entry from the drop-down lists. As you enter each character, the first (or closest) hit in the table is highlighted and can be made visible by moving the table. In this case, the table is automatically sorted in ascending order by the call number or name. On pressing the Enter key, the highlighted station is selected, and the station parameters/details for that station are displayed in the right window pane.

Due to system restrictions, not all parameters in the station view can be set for the selected station. This applies, in particular, to the call numbers, groups and forwarding. The arrow symbol on the right next to each parameter enables you to directly access the dialog box in which the corresponding parameter can be set.



3.1.4 Administration area

The Administration area displays the dialogs in which settings for the communication system can be made. A detailed list of the communication systems supported by HiPath 3000 Manager can be found by selecting **Help/About...**).



Tabs bar

The tabs can be used to switch between the dialogs of the respective functions. You can also open the individual tabbed pages directly via the **Toolbar** (see also Section 3.1.2, “Toolbar”, on page 3-5) or the **Navigation tree** (see Section 3.1.3, “System View/Net View and Station View”, on page 3-7).

Button bar

Button	Description
Reset	Discards the changes and restores the settings to the applicable values on calling up the dialog box.
Apply	Accepts the changes into the opened CDB. Note that the changes will only take effect in the communication system after the CDB has been transferred back to the system.
Help	Displays the help text for the open dialog.

To avoid data loss, especially in cases where you have made many changes, you should also use the **File/Save customer database** or **File/Save customer database as** function to ensure that your changes are also written to the file.

3.1.5 Status bar

The status bar provides you with additional brief information on the status of HiPath 3000 Manager.

The status bar consists of 4 areas:

Area	Description
Info	This area is used to display program messages and additional information, e.g., on the selected function.
CAPS	Status of Caps Lock key
NUM	Status of the Num Lock key

3.2 Copying and Deleting Entries (Drag & Drop)

You can copy and delete entries easily by using the “drag & drop” technique (“click and drag”):

1. To do this, first click on any entry that you want to copy or delete by using the left mouse button.
2. You can now drag the entry while holding down the left mouse button to the field to which it is to be copied.
3. To delete the contents of a field, drag and drop the entry onto the icon for the Recycle Bin.

3.3 Context Menu

If you right-click certain areas in the windows (e.g., in tables), a context menu appears with different menu items that are suited to the current situation. Two sample context menus are described below.

Example Context menu in tables

Delete	Marked areas are deleted.
Copy	Marked areas are copied to the clipboard.
Paste	Marked areas are pasted from the clipboard into the table.
Sort ascending	The table is sorted in ascending order according to the marked column.
Sort descending	The table is sorted in descending order according to the marked column.
Sort logical	Sorting as with the older Hicom Assistant versions.

Example Context menu in key programming

Delete	The selected key of all selected stations is cleared.
Clear all	All keys of all selected stations are cleared.
Copy	The currently selected key of the selected station is copied.
Copy all	All keys of the selected station are copied.
Paste	For all marked terminals, the keys copied earlier are copied over to the currently selected station. Multiple stations may be selected (using the Shift or Ctrl key).
Fill/Delete:	The dialog will offer options for filling in the keys (only for busy lamp fields).

3.4 Table Handling

All tables are handled in the same way when changing entries or the appearance of the table.

Changing entries in tables

1. Use the left mouse button to select the field to be changed (click the field).
2. Place the mouse pointer at the entry you want to change and enter the changes. The previous contents are retained.
3. Click the **Apply** button.

or

1. Use the left mouse button to click twice on the field to be changed (double-click the field).
2. Enter the changes. The previous contents are completely overwritten.
3. Click the **Apply** button.

The table entries in some tables cannot be changed.

Sorting tables

1. With the left mouse button, click the header of the column that you want to use for sorting the table. The table can be sorted via the header in ascending, descending and partly in logical order.

or

1. Click the header of the column that you want to use for sorting the table. The column is selected.
2. With the right mouse button, click on the selected column (right-click the selected column). The context menu is displayed.
3. Select the type of sorting from the context menu.

Some tables cannot be sorted.
Due to the sorting of the table, it is conceivable that important table entries may only appear at the end of the table.
The sorting method applies to the relevant table regardless of the opened CDB and remains in effect even after exiting HiPath 3000 Manager.

Changing column width

1. In the table header, guide the mouse pointer over the column marking to the right of the column whose width you want to change (or between two columns). The mouse pointer changes to a column identifier.
2. Click the left mouse button. While holding the mouse button down, drag the mouse to the right or left to change the column width.
3. You can also use this function on several columns at once. To do this, select several columns with the "Shift" key and the left mouse button. Click the header.

3.5 Invoking Help

HiPath 3000 Manager offers you multiple ways to invoke help.

- If you want to start the help without starting HiPath 3000 Manager, select **Start/Programs/ HiPath 3000 Manager/HiPath 3000 Manager Help**.

Alternatively,

- you can start the help from within HiPath 3000 Manager via **Help/Help contents** or via the Help icon in the toolbar.

Context-sensitive help

HiPath 3000 Manager assists you in the process of editing settings by means of a context-sensitive help.

- Press the F1 key on your keyboard to obtain specific help on the current tab/dialog.

or

- Click the **Help** button from within the current tabbed page or dialog box.

In addition, brief information is also displayed in the status bar (see Section 3.1.5, “Status bar”, on page 3-11).

4 Start and Log-on

Start the HiPath 3000 Manager using:

Start/Programs/HiPath 3000 Manager/HiPath 3000 Manager.

If you are using Windows NT/2000, please note that the access rights of the current account may not be sufficient.

The HiPath 3000 Manager administration program must be started under an account that has the appropriate system access rights.

If you are not sure about your access rights, contact your system administrator.

4.1 Logging on to Manager E

The **Log-on** window is displayed on starting the program.

1. To log on, enter your **User name** and **Password** in the corresponding input fields (when logging on for the first time, enter the default user name “31994” and the default password “31994”). More details on user names and passwords can be found in Section 2.3.4, “Security (User administration)”, on page 2-10 and Section 2.3.6, “Password level”, on page 2-13.
2. Confirm the entries with the **OK** button.
3. The Program window is displayed. The contents of the window depend on the configuration of your communication system.

If you have already created a password, use it. You can change the password later at any time via **Options/Change password**. When entering your password, note that it is case-sensitive!

5 Starting up HiPath 5000 RSM/AllServe

A networked system consists of a server (HiPath 5000 RSM/AllServe) and one or more nodes (HiPath 3000).

The nodes are linked with the server via the IP customer network. The server is the central access for administering the network and the nodes.

The networked system administration includes the setup of the nodes and the HG 1500 cards inserted in the nodes as well as the server (Feature Server). The node is administered via HiPath 3000 Manager. The server is the central and only administration interface in the networked system.

The nodes form a logical system. The passwords for the *Service* user range must be identical in all nodes. The *Service* user range class of service is required for accessing the server and modifying consistent netwide data.

The nodes are first configured offline (prepared for the networked system). The server is then set up and the file transfer operation is started. In the course of file transfer, the node is registered at the server and the node data is imported by the server. Future administrative tasks at the node will be performed from the server.

The software version of the notes must be checked before setup. This system may only be started up if the current software version is installed in all nodes. Similarly, the software and the firmware version of HG1500 must be checked and updated to the latest version.
In addition, the software versions of the server and HiPath 3000 Manager must be identical.

Contents of this Chapter

Section 5.1, “Starting up a New HiPath 5000 RSM/AllServe System”
Section 5.2, “Administering an Existing HiPath 5000 RSM/AllServe System”
Section 5.3, “Settings for optiClient Attendant”
Section 5.4, “Information on Inter-system Busy Signaling”
Section 5.5, “Configuring Stations for the Use of Non-Voice Services”
Section 5.6, “Parameterizing for Media PC Streaming 1.0 (not in the USA)”
Section 5.7, “Central Busy Signaling with Attendant P”

5.1 Starting up a New HiPath 5000 RSM/AllServe System

Topic
– Section 5.1.1, “HiPath 5000 server:creating” – Section 5.1.2, “Adding nodes” – Section 5.1.3, “Setting up the HiPath IP address (HIP)” – Section 5.1.4, “Configuring netwide call numbers” – Section 5.1.5, “Assigning HG 1500 channels to the last route and assigning the protocol” – Section 5.1.6, “Assigning routing parameters to HG 1500 trunks” – Section 5.1.7, “Configuring LCR” – Section 5.1.8, “Setting up a server IP address and node ID” – Section 5.1.9, “Restarting the server service” – Section 5.1.10, “Logging on the HG 1500 card”

5.1.1 HiPath 5000 server:creating

If a networked system does not yet exit, it can be created with **File** (offline generation).

1. Configure the server via:
   File | HiPath 5000 RSM/AllServe | New | HiPath 5000 RSM/AllServe Server
   The **New Server** dialog box appears.
2. Enter the name of the server in the **Name** field.
3. Click the **Finish** button.
   A new empty Server NET file is created.

Warning:
This generation of a HiPath 5000 RSM/AllServe server **CANNOT** be loaded on a running HiPath 5000 server.
To do this, proceed as follows:

- Power up HiPath 5000 without the respective system CDB
- Use **File | HiPath 5000 RSM/AllServe | Transfer | HiPath 5000 RSM/ AllServe Server** and the **Server->Manager** button to transfer the HiPath 5000 to HiPath 3000 Manager
- Add a new node via **File | HiPath 5000 RSM/AllServe | New | HiPath 3000/ AllServe Node**.

5.1.2 Adding nodes

Once setup is complete, individual nodes can be added to the server.

1. To add a new node, select:
   File | HiPath 5000 RSM/AllServe | New | HiPath 3000/AllServe Node
   The **Enter Source** dialog box appears.
2. Select the required **source.**

   The following source options are available:
   – Customer database file
     CDB is loaded from a local drive
   – Create offline
     CDB is generated offline
   – Direct load from system
     Transfer dialog is started
3. Click **Next**.
   The **Enter node data** dialog box appears.
4. Enter the node data.
5. Click the **Finish** button.
   The node is created.

Reboot the system if a new node has been added to HiPath 5000 RSM.

To add the new node on a running HiPath 5000 server, proceed as follows:
– Select: **File | HiPath 5000 RSM/AllServe | Transfer | HiPath 3000/ AllServe Node**
. The **Transfer** dialog box appears.
– Click the **Add node** button.

5.1.3 Setting up the HiPath IP address (HIP)

1. Load the node CDB.
2. Select **Settings | Network**.
3. Select the **HIP** protocol from the **IP-Access** drop-down list in the **Basic settings** tab.
4. Enter the **IP address** and the **Subnet mask** in the areas **LAN interface** and **PSTN interface**.

The HG 1500 card is integrated in the LAN. The system administrator of the relevant LAN provides the necessary information.

For **Routing**, the IP address of the HG 1500 card should be entered as the gateway.

5.1.4 Configuring netwide call numbers

To configure netwide call numbers, every node should be assigned to a defined call number range. For node 1, e.g. one-thousand call numbers (1001, 1002, etc.), for node 2, e.g. two-thousand call numbers (2000, 2001, etc.), etc.

Please note that all call numbers and codes (trunks, internal accesses, groups, etc.) are unique in all individually generated systems. The unique numbering of all systems belonging to the networked system must therefore be defined before the system is generated.

5.1.5 Assigning HG 1500 channels to the last route and assigning the protocol

Assigning HG 1500 channels to the last route

All HiPath HG 1500 channels must be placed in the last route as only the PABX number of the last route is entered in the CAR table. This procedure applies to networks with different local network accesses for each node.

HG 1500 channels **must be** assigned to the last route (route 8 for HiPath 2000/HiPath OpenOffice EE, route 16 for HiPath 3000, route 64 for HiPath 5000). A name can be assigned for the last route (e.g. “LAN”).

1. To assign an HG 1500 channel to the last route, click on **Settings| Lines/networking**
2. Click **Route** column in the row containing the desired trunk and select the last route.

Assigning a protocol to HG 1500 channels

1. In the **Param** column, double-click the row containing the required trunk.
   The **Parameter** dialog box appears.
2. Select the entry **HXGM/HXGS: CorNet IP- Trunking** from the **Protocol: Description** drop-down list.

Assigning routes to HG 1500 channels

1. Click the **Routes** tab.
2. Select the last route from the **Routes** list.
3. Enter the call number of the PABX in the **PABX number** field.

The node is identified in the networked system on the basis of the PABX number. The PABX number must not be listed in the numbering plan and must be unique in the networked system.

5.1.6 Assigning routing parameters to HG 1500 trunks

1. Click the **Routing parameters** tab.
2. Select the last route from the **Routes** list.
3. In the **Route type** area, activate the option **PABX**.
4. In the **No. Type, outgoing** area, activate the option **Internal**.
5. In the **Call number type** area, activate the option **Internal/DID**.
6. Deactivate the **Over. service 3.1 kHz audio** option in the area **Routing flags**.
7. Deactivate the options **Add direction prefix, incoming and** Add direction prefix, outgoing *in the area* **Routing flags**.

5.1.7 Configuring LCR

When configuring LCR for a CorNet network, the dial plan for internal network call numbers should always be configured without access codes.
Example: -ZXXX
All other configurations lead to incorrect displays or even malfunctions. The procedure in the dialing rules table must be “Corporate network” for trunk group 16.

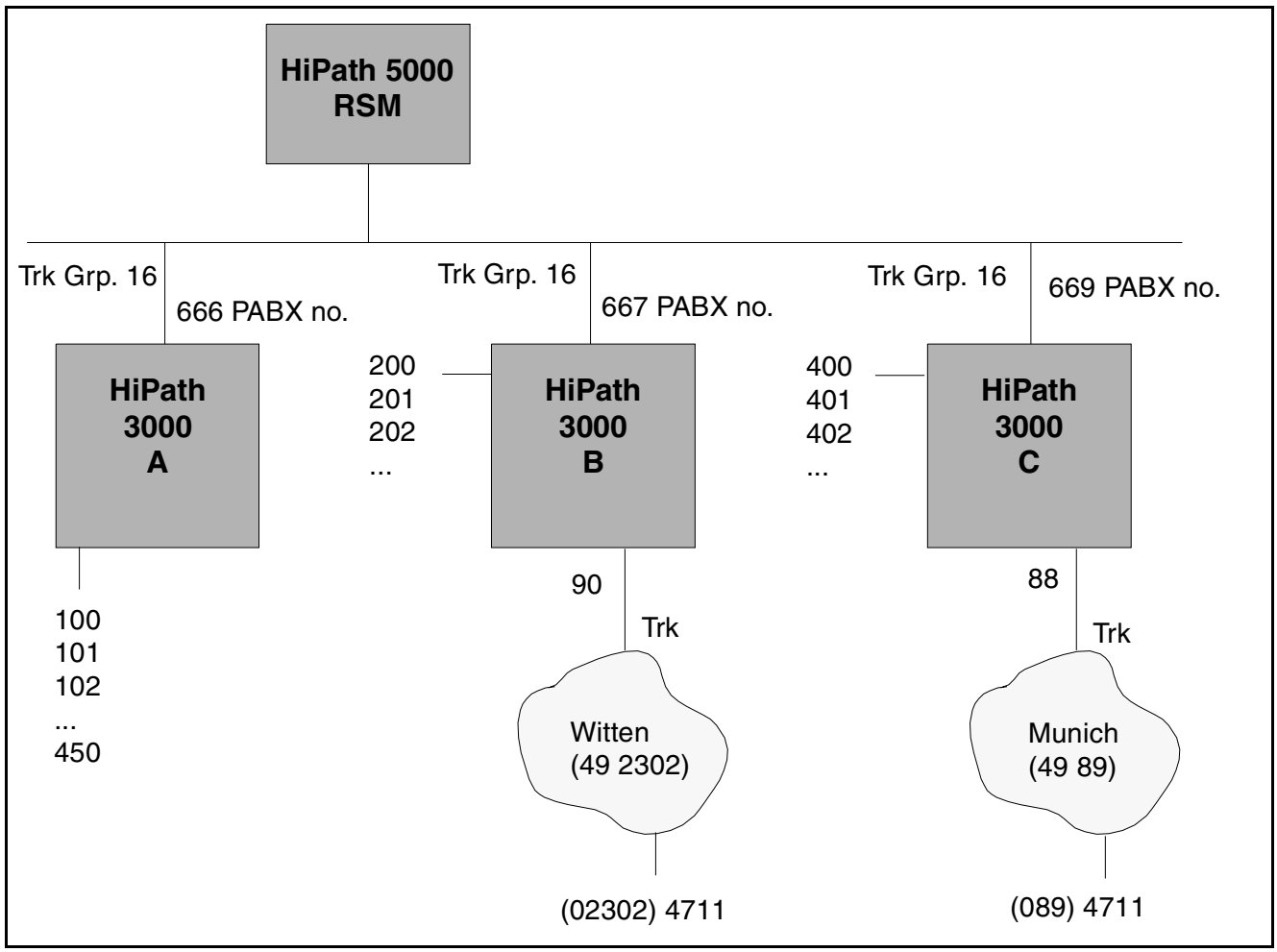


Figure 5-1 Example of an networked system with closed numbering and ISDN trunk connections at various locations in the same country

Dial plan node A:

1. 0C0Z → Route table 1: Trunk group 16: Dial rule: D667E16A or D669E669A

   (Dial rule depends on time or COS, where applicable)

2. 0CZ → Route table 2: Trunk group 16: Dial rule: D 667E1A or D669002302A

   (Dial rule depends on time or COS, where applicable, assuming that node A belongs to the local Witten network,

   or if node A belongs to the local Munich network → Dial rule: D6670089A or D669E1A)

3. -2xx → Route table 3: Trunk group 16: Dial rule: A

   (X = any digit between 0...9)

4. -4xx → Route table 3: Trunk group 16: Dial rule: A

Dial plan node B:

1. 0C0Z → Route table 1: Trunk group 1: Dial rule: A,

   0C0Z → Route table 1: Trunk group 16: Dial rule: D669E1A

2. 0CZ → Route table 2: Trunk group 1: Dial rule: A,

   0CZ → Route table 2: Trunk group 16: Dial rule: D669002302A

3. -1xx → Route table 3: Trunk group 16: Dial rule: A

4. -4xx → Route table 3: Trunk group 16: Dial rule: A

Dial plan node C:

1. 0C0Z → Route table 1: Trunk group 1: Dial rule: A,

   0C0Z → Route table 1: Trunk group 16: Dial rule: D667E1A

2. 0CZ → Route table 2: Trunk group 1: Dial rule: A,

   0CZ → Route table 2: Trunk group 16: Dial rule: D6670089A

3. -1xx → Route table 3: Trunk group 16: Dial rule: A

4. -2xx → Route table 3: Trunk group 16: Dial rule: A

5.1.8 Setting up a server IP address and node ID

1. Select **Settings** I **Network**.
2. Click the **HiPath 5000 RSM/AllServe Parameter** tab.
3. Enter the server **IP address** and the **Node ID**.

Every node in the networked system must be assigned a unique node ID (e.g. main system node ID 1, second system node ID 2, etc.). The number used is unlimited. In addition, the HG 1500 card that should perform the network tasks must be marked in each node.

5.1.9 Restarting the server service

The Feature server is a software component that contains the central database and the interface to HiPath 3000 Manager. The Feature server is automatically loaded as a service when the server PC is activated.

Restarting the Feature server

1. Start the **Remote service** program group under **Start** - **Settings** - **Control Panel**.
2. Open the **Services** console and the right-click the entry **DB Feature Server**.
3. Select the function **Start** from the context menu.

   The Feature server and related services are started.

5.1.10 Logging on the HG 1500 card

Log-on is performed by manually resetting the HG 1500 card. The HG 1500 card of the communication systems then log on to the server. If a reset is not performed, the communication systems automatically log on to the server after 10 minutes. After log-on, the generated call number table is automatically loaded to the communication system. When this is done, a connection can be set up via IP from node to node.

5.2 Administering an Existing HiPath 5000 RSM/AllServe System

Topic
– Section 5.2.1, “Transferring data from the node to the server” – Section 5.2.2, “Mapping the configuration” – Section 5.2.3, “Stations overview” – Section 5.2.4, “Administering the speed dialing destination” – Section 5.2.5, “Administering the HG 1500 card” – Section 5.2.6, “Administering HG 1500 call numbers” – Section 5.2.7, “Logging on/off a node” – Section 5.2.8, “Adding nodes” – Section 5.2.9, “APS transfer” – Section 5.2.10, “Password protection” – Section 5.2.11, “LOG file mechanism - Feature server status messages” – Section 5.2.12, “Maintenance access”

5.2.1 Transferring data from the node to the server

Once the server and the node have been created, the data can be transferred from the node to the server. It is advisable to check node availability in the network before starting this action.

In the case of offline generation, the data is already available on the server and thus does not have to be transferred.

Checking node availability with PING

Check the availability of the HIP (HiPath) and the IP address of the HG 1500 card using the PING command.

PING is called up from the command line level in the server PC.

1. Start the DOS prompt via the Start menu in the Windows operating system.
2. Enter PING followed by the IP address, e.g.
   PING 198.6.101.52

If error messages are output in the course of PING execution, check the IP entries of the communication system and the HG 1500 card and the cables and connectors.

Transferring data

Data transfer is performed at the server PC via the HiPath 3000 Manager.

1. Select the function **File | HiPath 5000 RSM/AllServe | Transfer | HiPath 5000 RSM/ AllServe Server**.
   The **Transfer HiPath 5000 RSM/AllServe Server** dialog box appears.
   The name of the HiPath 5000 AllServe server is entered in the **Server** field.
2. Click the button **System -> Server**
   . The CDB data is transferred to the server.

Searching for the server

You can search for the server if the wrong or no name is entered for it in the **Server** field. In this case, the transfer is not started until the correct server is set.

The name of the server can also be entered directly in the **Server** field.

1. Click the **Browse** button.
   The **Find Computer** list appears.
2. Select the required server PC and then start the data transfer operation.

5.2.2 Mapping the configuration

HiPath 3000 Manager provides an overview of the configured nodes. The networked system with the nodes used and the HG 1500 cards are displayed in the menu tree. The configured stations are shown in a netwide overview.

5.2.3 Stations overview

The stations configured in the networked system are displayed under **Netwide data | Stations**. The display can be sorted by column to provide a quick and clear overview of the location of a station per node or the allocation of stations to specific nodes. The modification of the internal station number, the DID and the station name is also performed here.

5.2.4 Administering the speed dialing destination

Speed dialing destinations are still administered on a node basis and saved in these nodes. As the server, however, is used for the central configuration of all nodes, all SDD data is saved redundantly on the server. All SDDs can be updated in all nodes by means of an update mechanism. To this end, the SDD data is copied to the relevant node.

The SDD currently edited is copied to all known nodes of the networked system with the **All database equal** button. The button is only active when:

- all seizure codes are equal in all nodes
- the maximum number of speed dial destinations is equal in all nodes

If the button is grayed out, this means that the networked communication systems support a different number of speed dial destinations (e.g., a Pro supports 1000 speed dial destinations, but a Point supports only 300). Please note, however, that if speed dial destinations are entered in the Point, it is possible to match them against the Pro.

5.2.5 Administering the HG 1500 card

The WBM is automatically started when selecting a HG 1500 card in the menu tree. The corresponding IP address of the HG 1500 card is automatically communicated to the WBM on startup. All administrative functions of the HG 1500 card are thus available.

5.2.6 Administering HG 1500 call numbers

The possible HiPath HG1500 call numbers and ports available in a networked system are administered in HiPath 3000 Manager. To do this, call numbers must be reserved for each HiPath HG 1500 card installed for the stations. You must also decide which B-channels are used as trunks for the HG 1500 card. As in the current T1 configuration (USA), these administration points are implemented via **System-wide | Cards | Card Config.**

If call numbers are set up with the WBM for routing, for example, only the call numbers already reserved in the communication system are available. This guarantees HG 1500 data synchronization.

System telephones are administered in the HiPath 3000 communication system.

5.2.7 Logging on/off a node

A communication system can only log on to a node within a defined networked system via an administration operation. Consistent network-wide data is entered in the communication system via **File | HiPath 5000 RSM/AllServe | New | HiPath 3000/AllServe Node**.

Consistent netwide data is used when all data associated with this node is entered in the server database in accordance with the consistency rules. Consistent data, station call numbers, group call numbers, etc. must be entered via the Manager.

This netwide consistent data is:

Date	**Consistency condition**
Station and group call number external	unique
Station and group call number internal	unique
Call number X.75 modem external	unique
Call number IMOD external	unique
DISA code external	unique
Call number X.75 modem internal	unique
Call number IMOD internal	unique
PABX number to the last route (HXG route)	unique
Trunk code	unique
Service codes	equal to
Substitution codes	equal to
Password user group service	equal to
Password user group development	equal to
Password user group customer	equal to
Password user group revision	equal to
Password user group charge admin	equal to
Password user group user administrator	equal to

The data is part of a netwide database on the server.

5.2.8 Adding nodes

A distinction is made between two scenarios:

- The node is generated offline, data consistency is guaranteed. Log-on creates a unique allocation (node ID) from a HG 1500 card to the central board. This means that HG 1500 cards can be retrofitted.
- A HG 1500 card is installed/retrofitted or the IP address is changed. The user is logged on to the server (see above), but no CDB has yet been generated offline for this communication system. In this case, the user receives an appropriate message at the server in the course of administration.

In the case of an OFFLINE configuration with HiPath 3000 Manager, the following administration steps must be performed:

1. The CDB of the new node must be transferred to the server; on the other hand, if the CDB was generated on the server, it must be transferred to the node.
2. The HiPath HG 1500 cards are to be administered with their IP address.

   If a node needs to be removed from the networked system, this node must be removed from the server database via HiPath 3000 Manager by selecting **File | HiPath 5000 RSM/ AllServe | Delete | HiPath 3000/AllServe Node**.

   This prevents node administration with the server.

5.2.9 APS transfer

A new system APS can be added to individual nodes via the TFTP protocol. Using SNMP or HiPath 3000 Manager, a TFTP server address and a path name are then configured via **Settings | Network | Basic settings** in the area **TFTP Server** on which APS is saved. The server can also be located on a TFTP server of this kind. The APS transfer is the performed following an SNMP command or after a timeout.

APS transfer is also possible via HiPath 3000 Manager. In this case, APS transfer is started via HiPath 3000 Manager, and the FST files must be saved in the server's directory.

APS transfer can be executed from a remote center.

5.2.10 Password protection

The server checks if the access passwords in all nodes are identical for the user classes. If not, an error message is displayed, and the user administration must be corrected. The password prompt when logging on to HiPath 3000 Manager at the server is also captured via the named passwords. Administrative access to the server and thus to the database on it is protected by a password mechanism.

User classes are configured with name and password via **File | HiPath 5000 RSM/AllServe | Transfer | HiPath 5000 RSM/AllServe Server**.

5.2.11 LOG file mechanism - Feature server status messages

As the Feature server does not have an interface, the Windows Event Viewer is used for the status information. This standard tool is used by VSRV, CAR and REGSEVER in order to report both status information and error messages.

Event entry parameters are set via the tool itself, i.e. the length of the event file, the validity of the events in days, the reaction on reaching the maximum size, the display filter and many more things are set with the Event Viewer tool.

The event file can be saved under a user-specified name and thus all information can be sequentially documented and archived.

Opening Event Viewer

Event Viewer can be opened via **Start | Settings | Administrative Tools | Event Viewer**.

The event file of the Feature server can be opened from every computer in the domain in the customer LAN. The server PC must be selected for this in the network browser via **Action | Connect to another computer | Another computer**.

To monitor a specific application, e.g. the Feature server in Event Viewer, the Feature server must be selected as the event source in the filter functions.

Remote access

Events to be displayed at remote terminals can be sent as SNMP traps. To do this, the relevant application is selected with the program **evntwin.exe** (Event Translator Config Tool) under the WIN2000 SYSTEM32 directory and the individual possible server events can be configured as traps.

The IP addresses of the traps are defined as destinations in the properties of the Windows **SNMP_Service**.

A trap is sent to the destinations entered by the server PC when an event occurs. Random events can thus be displayed at random IP addresses.

5.2.12 Maintenance access

The networked system supports data administration as well as maintenance and ONLINE functions. The data is transferred directly from a selected node to the relevant Manager.

5.3 Settings for optiClient Attendant

A number of settings must be made in HiPath 3000 Manager following the configuration of optiClient Attendant. All station statuses can only be displayed network-wide if all six optiClient Attendants are registered at a HLB.

Topic
– Section 5.3.1, “Setting the Central busy signaling Flag”, on page 5-16 – Section 5.3.2, “Entering a PABX number for the last route”, on page 5-16

5.3.1 Setting the Central busy signaling Flag

The **Central busy signaling** flag must be set under **Station view** for the extensions in the other nodes to be signaled at optiClient Attendant.

1. Select the **Flags** tab.
2. Activate the **Central busy signaling** option.

Check if the value for **Delay of busy signaling messages** is set to **100ms** under **Settings I System parameters I Time parameters**.

5.3.2 Entering a PABX number for the last route

The PABX number must be entered for the last route via **Settings I Lines/networking I Routes**.

1. Make the relevant entries in the **PABX number** fields.

5.4 Information on Inter-system Busy Signaling

Information on **Inter-system busy signaling** must be entered via **Settings I Lines/networking I QSIG features**.

1. Enter the node ID of the destination system in the **Call no. target system** field.
2. Enter the PABX number of the destination system in the **Call no. target system** field.
3. This PABX number must also be configured in LCR.

5.5 Configuring Stations for the Use of Non-Voice Services

A fax/data gateway is implemented on the HG 1500 card for the use of NonVoice services (FAX, MODEM, X.75).

The internal station numbers of networked nodes must be appropriately configured in order to support the data gateway functionality. A distinction is made here between two different networking variants:

- HiPath 5000 RSM/AllServe (central administration via server)
- IP trunking (administration via HiPath 3000 Manager and WBM per node/HG 1500 card)

5.5.1 HiPath 5000 RSM/AllServe Network

If this functionality is to be used in a networked system, then the individual call numbers of the various nodes must be configured via the HiPath 3000 Manager.

1. Configuration is performed via the **Station view**.
2. In the station table, select the call number for which a data service is to be created.
3. The type for the data services is activated under **Activated features**:

Data service	**Extension Type**
Digital data transfer X75	Default
Analog modem services	Modem
Fax	Fax

5.5.2 IP network

Configuration is performed via WBM in an IP network environment. The *Routing* item is used for two settings in the program.

1. All nodes in the IP network must be entered with a unique node number and the associated IP address under the entry **Voice Gateway | PBX node**.
2. The station call numbers and their node number which should be reached by the HiPath HG 1500 card to be configured are entered under **Voice Gateway | PBX routing**. It may also be necessary to adapt the assigned service (voice, fax, modem).

The default setting “Voice” must be used for digital data transfer via X75.

The access authorization flag must be set via HiPath 3000 Manager under **Settings | Network | HiPath 5000 RSM/AllServe Parameter** in the field **HiPath 5000 RSM/AllServe access authorization** for the corresponding HXGM/HXGS card.

CO–CO transit cannot be supported in a call-number-protected service evaluation. Similarly, it is not possible to reach multiple services via a single call number (e.g. fax or S_0 card with miscellaneous services under an MSN).

5.6 Parameterizing for Media PC Streaming 1.0 (not in the USA)

This section describes the setup of the communication system for Media Streaming. Note that Media Streaming is also possible without the HiPath 5000 RSM/AllServe server.

Topic
– Section 5.6.1, “Route Configuration” – Section 5.6.2, “Configuring LCR” – Section 5.6.3, “Media Streaming in the network” – Section 5.6.4, “Configuring an HG 1500 card for Media Streaming” – Section 5.6.5, “Configuring announcements in connection with Media Streaming and HPCO” – Section 5.6.6, “Configuring cross-node ACD groups”

The steps described here are performed via the HiPath 3000 Manager and the WBM of the HG 1500, for example, and are typical for a stand-alone system with a communication system **and** a server in a networked system .

In addition to the existing communication system configuration, an access code must be assigned for each of the services fax, voice mail and announcements in connection with Media Streaming, where each access code is assigned a route.

Before you configure the communication system for Media Streaming, create a backup copy of the existing CDB.

Read the CDB from a networked system

1. Select the menu item **File | HiPath 5000 RSM/AllServe | Transfer | HiPath 5000 RSM/ AllServe Server**.
2. Then click the **Server -> Manager** button.
   The CDB is read.

Read the CDB from a stand-alone system

1. Select the menu item **File | Transfer.**
2. Click the **System -> PC** button.
   The CDB is read.

5.6.1 Route Configuration

When configuring networked systems, system networking must be performed via a “Trunk HG 1500 card” and the media PC must be connected via a separate “Media HG 1500 card” for the Payload Switching feature in connection with Media Streaming. These cards have the same hardware and software expansion level but a different configuration.

Configuring Route 15

This step configures **Route 15** for the media card.

1. Select the menu item **Settings | Lines/networking** and then click on the **Routes** tab.
2. Select **Trk Grp 15** and assign a unique name, e.g. Media HXG, under **Route Name**.
3. Click **Apply**.

Configuring Route 16

This step configures **Route 16** for a LAN. Route 16 LAN is used with a server PC both in IP trunking and Media Streaming.

1. Select the menu item **Settings | Lines/networking** and then click on the **Routes** tab.
2. Select **Trk Grp 16** and assign a unique name, e.g. IP Trunk, under **Route Name**.
3. Click **Apply**.

Allocating routes to newly configured trunks

In this step, the newly created trunks are assigned to **Route 16** (LAN) and a corresponding protocol.

1. Select the menu item **Settings | Lines/networking** and then click on the **Trunks** tab.
2. Assign route 16 (IP Trunk) to the new trunks created on the HXGM card one after the other (e.g. slot 5).
3. Assign route 15 (Media-HXG) to the trunks just configured for the media card (e.g. slot 4).

Allocating a protocol

1. Double-click the **Param** column.
2. Assign the protocol **HXGM/HXGS: Trunk Cornet Plus …** to the new trunks created.
3. Assign the protocol **HXGM/HXGS: CorNet Variant 2 Master direct Xpressions** to the media card.
4. Confirm with **Apply**.

5. Then click **Apply**.

Configuring routing parameters

The parameter necessary for Media Streaming is set here for route 15 (LAN).

1. Click the **Routing parameters** tab.
2. Select the route **IP Trunk** from the selection window.The following table describes the parameters to be configured.

Parameter	Settings
Route optimize active	No
Routing flags	Over. service 3.1 kHz audio
Analog trunk seizure	no pause
Trunk call pause	Pause 6s
Type of seizure	linear
Route type	PABX
No. and type, outgoing	Internal
Call number type	Internal/DID

Perform the above-mentioned steps for route 15 also (Media-HXG).

5.6.2 Configuring LCR

Please note the different configuration of the LCR in node 1 (with Media PC card) and the following nodes with only one trunk card.

The configuration steps described here apply both for node 1 with Media PC and trunk card and for every other node with a trunk card.

1. Select the menu item **Settings | Least cost routing** and then click the **Codes and Flags** tab.
2. Activate the options **Activate LCR** and **Digit-by-digit**.

Configuring the dialing rules table for LAN

The configuration steps described here apply both for node 1 with Media PC and trunk card and for every other node with a trunk card.

1. Click the **Dialing rules table** tab.
2. Create a dial rule that provides the rule format **E1A** with the procedure **Corporate network**.
3. Then click **Apply**.

Configuring route tables for node 1

The configuration steps described here only apply for node 1 with a Media card.

1. Click the **Route table** tab.
2. Link the previously configured dial rule to route 15 (Media-HXG).
3. Then click **Apply**.

Configuring route tables for all other nodes

The configuration steps described here only apply for all other nodes in the networked system with trunk card.

1. Click the **Route table** tab.
2. Link the previously configured dial rule to route 16 (IP Trunk).
3. Then click **Apply**.

Configuring dial plans

This tab is used to configure the respective access codes for the announcements, fax and voice mail services which are later bound in the PCO to the corresponding protocol.

The configuration steps described here apply both for node 1 with Media PC and trunk card and for every other node with a trunk card.

1. Select the **Dial plan** tab.
2. Assign a dialed digit string to the above-mentioned route table.
3. Transfer the CDB to the communication system.

Transferring the CDB to a networked system

1. Select the menu item **File | HiPath 5000 RSM/AllServe | Transfer | HiPath 5000 RSM/AllServe Server**.
2. Then click the **Manager -> Server** button.
   The CDB is transferred. Communication system access to the Media PC is now created.

5.6.3 Media Streaming in the network

The service access codes and the LCR configuration are created for a networked system. As a result, no more entries are needed in HG 1500 card for PBX nodes and call number ranges. Only the **Netwide data** dialog is to configured.

1. Select the menu item **Netwide data | Netwide data (Media Attachment Devices)**.
2. Enter the IP address of the trunk card from node 1 and enter the access codes for the individual services.
3. Transfer the CDB to the communication system.

5.6.4 Configuring an HG 1500 card for Media Streaming

The configuration steps described below are performed via WBM and only apply to the Media HXG card in node 1. All other HXG cards automatically receive their setting for PABX routing from the server through the settings under Media Attachment Devices (Car tables). The access codes for the individual services and the IP address for the application server are also configured here.

The HG 1500 card must be basically configured in accordance with the HG 1500 Service Manual as a prerequisite for the HG 1500 connection to the server. The card thus has a permanent IP address and is available in the LAN.

Configuring cards

1. Read the card's current CDB.
2. From the **Voice Gateway** level, select the menu **PBX Node**.
3. Click the Pencil icon to add a new node.
4. Enter an appropriate node ID followed by the IP address of the Application Server.
5. Enter the values described in the table below for each parameter.

Parameter	Value
PBX node	1
Audio Codecs	G.711 a-law, G711 U-Law, G.723 (in this sequence)
PBX node monitoring	activated
Packeting	1
IP address	customer-specific
IP address	0.0.0.0

Entering call number ranges

The relevant access codes are to be entered here for the voice, fax and announcements services (as for the configuration in HiPath 3000 Manager). The communication system's announcement service must provide a voice band on the HG 1500.

1. Click the **PBX routing** level in the menu tree.
2. Click the Pencil icon
3. Enter the access code for the relevant service and bind it to the previously configured node (communication system, Media PC).
4. Click the new access code in the menu tree and select the previously configured access code for the relevant service.
5. Proceed as described in steps 1 through 3 for the other services.

   The access codes configured in the communication system are now sent by the HG 1500 card to the server on which Media Streaming is running.

5.6.5 Configuring announcements in connection with Media Streaming and HPCO

Since announcements are also connected via the HPCO's IP trunk (Call Center application) for media streaming, it is no longer necessary to select analog ports in HiPath 3000 Manager; instead, select external destinations which are routed to the HPCO IP route.

Setting up external destinations

1. Click the **Access** column under **Auxiliary equipment** - **Announcement** and select **External destination**.
   Repeat this procedure for the number of user announcement ports (recommendation: at least four ports).
2. Click the **External destinations** button.
3. Select Trk Grp 16 in the **Route** field or the IP line name used for this route.
4. Enter the **call number** which is later configured for the ACDLOOP protocol in the HPCO IP-APL in the Call no. field. A combination of access codes for announcements and a separate consecutive call number is used as a call number.
5. Repeat the steps described here for all other announcement devices.

A separate consecutive call number should be used for every announcement device. These call numbers are configured as a DID range in the HPCO IP-APL for ACDLOOP.

Announcement port sample configuration

Port	Description
Announcement port 1	Call number entered for the external destination 50 780
Announcement port 2	Call number entered for the external destination 50 781
Announcement port 3	Call number entered for the external destination 50 782
Announcement port 4	Call number entered for the external destination 50 783

5.6.6 Configuring cross-node ACD groups

In a network comprising multiple systems, agents can be distributed across the entire network. The agents log on to every node with a unique ID for the UCD group via the HPCO client or telephone. To this end, a UCD group is created in every node with the associated agent IDs. These agent IDs must be unique throughout the network. A maximum of 150 IDs are available. Key programming is identical for every agent in every node, i.e. the UCD functions can also be used in the remote node. The **routing ports for the home agents are** omitted in this solution as the calls can be directly distributed by HiPath ProCenter Office.

Configuration

Announcements are always connected in the node in which the call is initiated. For Media Streaming, the announcement ports are separate in every node and never need to be configured.

Example

The UCD group A configured in the communication system has the following properties:

- the UCD group provides access for the call center application via a CSTA link
- agents that log on with the IDs 110, 111, 120 and 121 are ACD group A agents
- the UCD group has the same call number as UCD group A (e.g. 450)
- the UCD group is set by the “Host Controlled” application

The UCD groups A’ and A” have the following properties:

- the UCD groups receive the same UCD group number (e.g. #201)
- the UCD groups have a unique agent ID range
- the UCD groups have different call numbers (e.g. 451 and 452) (see emergency concept)
- The UCD groups A, A’ and A” together form the network-wide ACD group A for the call center application connections.

HiPath ProCenter Office uses:

- The application sets UCD group A Host Controlled to prevent calls being distributed by HiPath 3000. The application can only distribute the call to a random agent in the UCD groups A, A' and A". The algorithm used is available in HiPath ProCenter Office (e.g. skill-based routing).

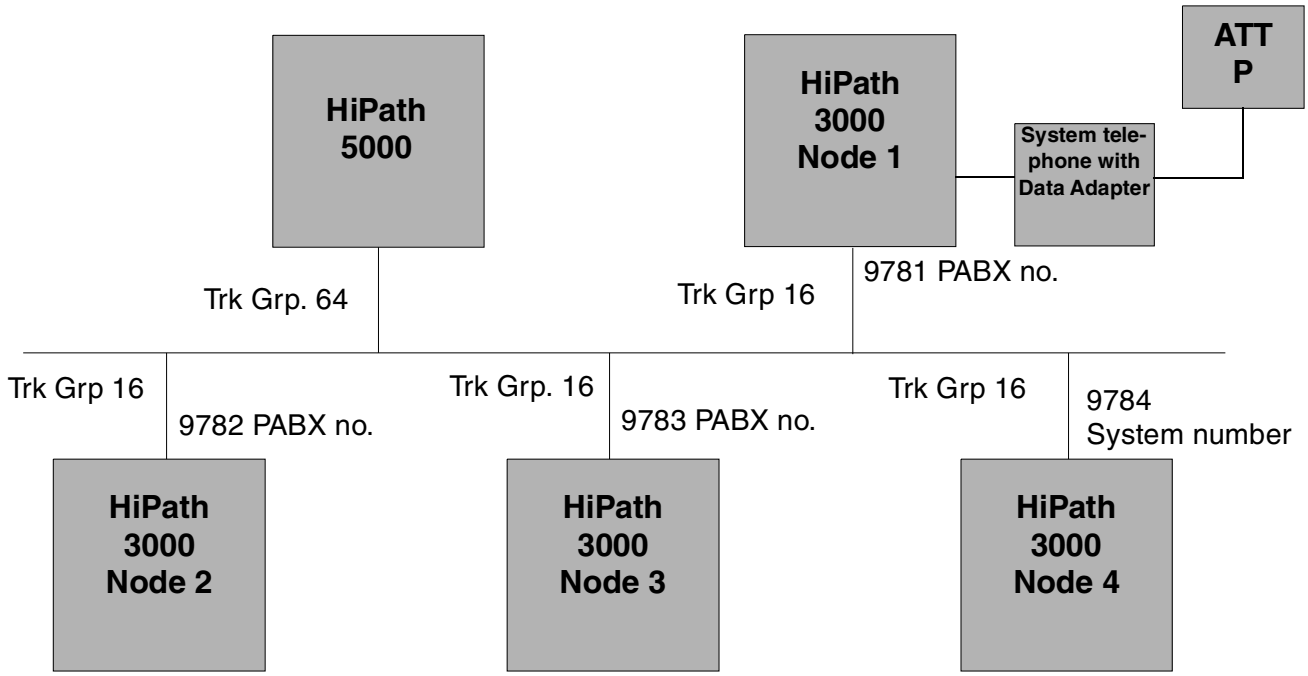
Emergency concept

If HiPath ProCenter Office crashes, calls can be forwarded from UCD group A via a suitable overflow to UCD group A' and A" (call forwarding - ring no answer) thus guaranteeing local distribution to the agents. A UCD call is now processed in the familiar sequence for a local UCD group (longest idle).

5.7 Central Busy Signaling with Attendant P

This section describes which steps are required to set up central busy signaling in connection with Attendant P.

Sample configuration



- No settings are needed in the HG 1500 cards because, among other things, the CAR tables in the HG 1500 cards are created automatically.
- In this description, Attendant P is operated via an RS232 connection.
- The subnode busy signaling of card tab 3-16 differs from that of the main node, which uses card tabs 1 and 2. Different colors can be set up in the Configuration Manager to indicate the states “internal busy”, “external busy” and “station is ringing”. In the case of the subnode card tab 3-16, the color selected for “internal busy” is the same as the color for “station is ringing”.
- Attendant P must also function when the server is shut down. In other words, none of the components associated with other servers such as the Feature Server, TAPI, etc., affect the functionality of Attendant P.

Setting up the PABX number in the node

Every node in a networked system has its own unique PABX number.

1. Select the menu item **Settings | Lines/networking**.
2. Select the **Routes** tab.
3. In the **Routes** list, select **Trk Grp. 16** for HiPath 3000 and **Trk Grp. 64** for HiPath 5000.
4. Enter the name of the route, e.g., LAN, in the **Route Name** field.
5. In the **PABX Number Incoming** area, enter the unique call number of the PABX in the **PABX number** field.
6. Repeat steps 1-5 for each node.

Setting up the call number of the destination system

The call number of the target system need not be set up for the node at which Attendant P is to be operated (in the sample configuration, Attendant P is operated at node 1). In all other nodes (2-4), the call number must be set up.

1. Select the menu item **Settings | Lines/networking**.
2. Then select the **QSIG features** tab.
3. In the **Inter-system busy signaling** area, enter the value of node 1 in the **System no. target system** (here 1) and **Call no. target system** (here 9781) fields.
4. Repeat steps 1-3 for the other nodes.

Setting up the time parameter to delay central busy signaling messages

The time parameter for the “delay of busy signaling messages” need not be set up for the node at which Attendant P is to be operated (in the sample configuration, Attendant P is operated at node 1). For all other nodes (2-4), this time parameter should be set to 100ms.

1. Select the menu item **Settings | System Parameters**.
2. Select the **Time parameters** tab.
3. In the table for the **Delay of busy signaling messages**, select the value **100ms** as the base value.
4. Repeat steps 1-3 for the other nodes.

Setting up the station flag for central busy signaling at stations

The station flag for “central busy signaling” need not be set up for the node at which Attendant P is to be operated (in the sample configuration, Attendant P is operated at node 1). This flag must be set for every station of the other nodes (2-4) to be signaled at Attendant P.

1. Select the **Station view**.
2. Set the flag for **Central busy signaling** on the **Station flags** tab.

3. Set the flag for every station to be signaled at Attendant P.
4. Repeat steps 1-5 for the other nodes.

Configuring and adapting LCR

In order use the central busy signaling functionality, you will need to first configure or adapt LCR (least cost routing).

For the node at which Attendant P is to be operated (in the sample configuration, this is node 1), every other node (2-4) must be additionally configured in the LCR under “Dialed digits”.

1. Select the menu item **Settings I Least Cost Routing**.
2. Select the **Dial plan** tab.
3. In the **Dialed digits** column of the table, enter the station numbers of the other nodes (2-4) and assign a **Route table** to them.
4. Select the **Dialing rules table** tab.
5. In the **Rule name** column of the table, enter a rule name for the other nodes (2-4), then assign the **Rule format** “E1A” to them, and then select the **Procedure** “Corporate Network”.
6. Select the **Route table** tab.
7. From the **Selection** list, select the route table that you assigned to the other nodes in step 3.
8. In the route table, select in the **Route** column **Trk Grp. 16** for HiPath 3000 and **Trk Grp. 64** for HiPath 5000, and assign the **Dial rule** configured during step 5.
9. Repeat steps 7-8 for the other nodes.

In the other nodes (2-4), only the target node needs to be evaluated in the LCR.

10. To do this, create an entry for node1 in the dial plans of each of the other nodes (2-4) by proceeding as described earlier in steps 1-8.

Configuring Attendant P

1. For each node (2-4), create a separate BLF file (a *.txt file) containing all stations to be signaled at Attendant P. The file names must be unique and must correspond to the name of the node (e.g., BLF_NODE_2.txt, etc.).
2. Copy the BLF files you created to the directory of Attendant P.
3. Assign the BLF files to the cards. The BLF card tabs 1 and 2 are always assigned to the node at which Attendant P is operated (in the sample configuration, this is node 1). All other card tabs (3 through 16) can be assigned to the other nodes (2-4).

Example: assigning node 2 to card tab 3:
- Start Attendant P
- Select the menu item File | Settings
- Select the BLF tab
- Click the Set Network BLF button
- Select the BLF file BLF_NODE_2.txt
- Select card 3

Every BLF card can be assigned a name via the Configuration Manager of Attendant P. The Configuration Manager is installed automatically during the installation of Attendant P.
- Start the configuration Manager
- Select the menu item File |Configuration File
- Double-click Config
- Select the menu item Edit | BLF Label
- Assign the appropriate names to the BLF cards

5.8 HiPath 5000 RSM/AllServe Speed Upgrade from V8 to V9

Overview

If a speed upgrade from V8 to V9 is to be performed for the HiPath 3000, and the node is already in an RSM network, the node must be removed from the network before the speed upgrade and then added back to it.

Initial problem

A HiPath 3000 V8 node is located in an RSM network. This node has already been added to the DB Feature Server. The service technician performs a speed upgrade for this HiPath 3000 V8 node to HiPath 3000 V9 by changing the MMC. After the speed upgrade, an attempt is made via **File** -> **Transfer** -> and the "**PC -> System**" button to transfer changes to this HiPath 3000 V9. However, an error message such as "KDS <-> System inkompatibel" or "CDB <-> System incompatible" now appears in the "Transfer" window.

Procedure to resolve the problem

1. Remove the relevant HiPath 3000 V8 node from the DB Feature Server in HiPath 3000 Manager E via **File** -> **HiPath 5000 RSM/AllServe** -> **Delete** -> **HiPath 3000**.
2. Then go to the RSM dialog and click on the button to delete the node.
3. Perform the speed upgrade from V8 to V9 for this node.
4. Add the node back using HiPath 3000 Manager E via **File -> HiPath 5000 RSM/AllServe -> New -> HiPath 3000 -> Add new node -> Next**. In the "Enter Source" window, enter the option **Load from system** and click **Finish**.
5. Then go to the RSM dialog and click on the button to add a node. It should now be possible to transfer changes to the HiPath 3000 V9 via **File** -> **Transfer** -> "**PC -> System**" button.

6 Implementing Features

This chapter contains overviews about the setup and testing of features with HiPath 3000 Manager.

Note that only the features that can be configured using HiPath 3000 Manager are described here.

A detailed description of all available features can be found in the “HiPath 3000/5000 Feature Description”.

Details on how to operate the features can be found in the respective operating instructions of the individual telephones.

Features sorted by traffic type
Section 6.1, “Features for All Traffic Types” Section 6.2, “Features for General Incoming Traffic” Section 6.3, “Features for General Outgoing Traffic” Section 6.4, “Features for General External Traffic” Section 6.5, “Features for Incoming External Traffic” Section 6.6, “Features for Outgoing External Traffic” Section 6.7, “Least Cost Routing (LCR)” Section 6.8, “Features for Internal Traffic” Section 6.9, “Tenant Service” Section 6.10, “Other Features” Section 6.11, “Network” Section 6.12, “Features for Call Detail Recording” Section 6.13, “ISDN Features” Section 6.14, “Small Remote Site Concept” Section 6.15, “ Mobility Entry (not for U.S.)”

6.1 Features for All Traffic Types

Feature	Setup	Testing
Music on Hold	Internal MOH: System settings, Music On Hold MOH via a/b interface: Ext. connection, External MOH Assign the MOH to internal traffic restriction (ITR) groups (Group assignment)	Set up a call. Activate consultation hold. The party on hold receives music from the correct source.
Announcements	Configure announcement device: Announcement Configure sensors: Sensors	Call the configured station. The installed announcement activates.
Automatic recall	Time parameters, Dial time during transfer before answer, Change in recall time	Set up a call. Initiate consultation hold. Call another station. Perform an unscreened transfer. Do not answer the call at the destination. After the timer expires, the call returns in the form of a recall.
Setting the Signaling Method for Analog Stations	Station view: Activated features	-
optiPoint Attendant	Intercept / Attendant	-
Override	Station view: Flags	Place a call to an internal station that is engaged in an internal or external call. Dial the override code (*62). The station is notified of a busy override by an alerting tone when the override is first initiated.

Feature	Setup	Testing
Overload Indication	Key programming	The number of queued calls can be displayed by pressing the key **show no. of calls** (key LED). Configure an overload LED on the AC (or night station). Set up a call from the AC. An external call reaches the AC. The overload LED flashes. Another call reaches the AC. Further external calls reach the attendant If 50% of the preset number of calls (max. 15) is reached, the overload-LED flashes.
Discreet call	Station view: Flags	Dial the code for discreet calling (*945). Call an internal station that is conducting a call. Only the discreetly called station can hear the activated station. Analog terminals cannot be destination terminals for discrete calling.

6.2 Features for General Incoming Traffic

Feature	Setup	Testing
Call signaling	Set up call signaling (for station and groups): Station view: Activated features, Call signaling, internal and external. Change the ring cadences throughout the system: Tones and ring types	Set call signaling for an internal call. Set call signaling for an external call. Call the station from an internal station. Call the station from an external station. You should be able to hear distinctive rings.

Feature	Setup	Testing
Call Waiting Tone/Call Waiting	Enable system-wide call waiting when busy: Intercept / Attendant, Call waiting on busy Enable immediate call waiting when busy by port: Trunks | Parameter/General Flags, Enable immediate call waiting when busy	**Call waiting** for internal calls: If an internal station is busy, the calling party receives a busy signal. Five seconds later, the busy party receives a display message indicating that a call is waiting, and the call waiting tone is activated. For the calling party, the busy signal changes to a ring tone. The busy party can answer the call using the “Accept call waiting” function. **Call waiting** for CorNet: Call waiting is activated immediately. **Immediate call waiting when busy** for internal calls: If an internal station is busy, the calling party receives a ring tone. The busy party is informed that a call is waiting by a display message and a call waiting tone. The busy party can answer the call using the “Accept call waiting” function. **Call Waiting Tone:** (external calls) If a busy internal station receives a call from the public network, the busy station immediately receives a message indicating that a call is waiting. Any ISDN information (CLIP) is displayed on the screen if the calling party has enabled this feature.
Call Management (CM)	Settings | Incoming calls	-

Feature	Setup	Testing
Call Forwarding—No Answer (CFNA) With a Timeout Call Forwarding (CF)—Busy and No Answer	Call forwarding	Call the station. The call must be forwarded to the programmed destination in accordance with the programmed period of time.
Subscriber Groups Group call Group Call with Busy Signaling	Groups/hunt groups	Call the group's station number. The stations in the group should ring.
Hunt Group	Configure a hunt group: Groups/hunt groups Set CFNA time: Call forwarding	Call the hunt group number. The first station rings. If the call is not answered or if the station is busy, the second station rings.
Uniform Call Distribution (UCD)	UCD groups	Call the UCD group. The logged-on agent who was idle the longest receives the call. If all agents are busy or unavailable, the call is placed in a defined queue.
Queues (UCD)	UCD groups	Call the UCD group. If all agents are busy or unavailable, the call is placed in a defined queue.
Call prioritization	UCD parameters	-
Work Time (Wrap up)	UCD parameters	Set up a call. Terminate the call. Call the UCD group again. No calls are signaled to the UCD station for the configured work time.

Feature	Setup	Testing
Recorded Announcement / (MOH) with UCD	Announcement	Announcement devices connected to SLA boards are called directly (announcement and music on hold only). Announcements via TIEL connections can be tested only if they have been registered as a wait queue for UCD or as an announcement for announcement before answering. If announcement devices are connected to SLA boards, the corresponding announcement or music on hold must be played. If they are connected to a TIEL board, the announcement must be played when an ACD/ UCD group is called.
Overflow With UCD	Call forwarding	Do not answer a call to the UCD group. After the call forwarding—no answer time has expired, the call is signaled at the overflow destination.
Automatic Incoming Call Connection (AICC) With UCD	UCD groups	-
UCD Home Agent	UCD groups	Configure a UCD home agent. Call the UCD group. The call is signaled at the home station.
Silent Monitoring	Station view: Flags, Silent Monitoring and Override class of service on	Set up a call. An internal station overrides another station.

Feature	Setup	Testing
Caller List/Station Number Storage	Class of service: Station view: Flags Caller list mode: Flags	Call a station and hang up the phone. If a Caller list key is programmed, the LED must light up. Otherwise, retrieve the entries from the caller list via the menu or by entering a code (*82).
Call Pickup Within Call Pickup Groups	Configure pickup groups: Call Pickup Program pickup key: Key programming	Call a station in a pickup group. Use the pickup key or enter *57 to pick up the call from another station in this pickup group.
Call Pickup from an Answering Machine	Configure port: Station view: Activated features Configure DSS key: Key programming	Call the answering machine. After the answering machine has answered the call, press the programmed DSS key to pick up the call from the answering machine.
Fax Waiting Message/Answering Machine	Configure key: Key programming	Place a call to the appropriate extension. The programmed key will light up when the call is answered.
Deferring a Call	Configure key: Key programming	Call an internal station that has the keys programmed. Press an available trunk or call key on this telephone to set up an outgoing connection.

6.3 Features for General Outgoing Traffic

Feature	Setup	Testing
dual-tone multifrequency transmission (DTMF)	Configure DTMF mode system-wide: Flags, DTMF automatic	**Check system-wide DTMF mode:** Set up a call. The connection automatically switches over to DTMF mode after it is successfully set up. Each keystroke on the dialing keypad transmits a DTMF signal. **Check temporary DTMF mode:** Set up a call. Enter code *53 after the connection is successfully set up. Each keystroke on the dialing keypad transmits a DTMF signal.
System Telephone Lock (Changeover)	Enter subscriber class of service: System settings	Use the input procedure to lock the telephone. After the communication system has been programmed, you can no longer place the external calls prohibited by the class of service.
Automatic COS changeover time-dependent	autom. COS changeover	-
Hotline	Configure a hotline: Station view: Activated features Hotline destination: System settings	Lift the handset at the station. The telephone connects to the hotline destination as configured (immediately or after a timeout).
Mobile PIN	Key programming	Press Mobile PIN key. Enter PIN. When the LED on the Mobile PIN key lights up, the feature is activated. The LED goes out when you terminate the call.

Feature	Setup	Testing
B channel allocation	Trunks, Assign lines (B channels) to the correct routes	Set up a series of connections in the affected routes. Check the status of the boards to see whether a B channel on the required route was seized each time.

6.4 Features for General External Traffic

Feature	Setup	Testing
Multi-Device Connection	Configure S_0 port: Trunks | Parameter/ISDN flags Configure call number: Subscriber	-
Routes	Trunks and Routes and Routing parameters	-
Trunk Keys	Key programming	Press the trunk key. You can place an outgoing call if a trunk is available.
Call Keys	Key programming	The call key starts flashing when an incoming call arrives.
Transit Traffic	Flags	Activate external call forwarding on an authorized telephone. Call the station using the CO station number. The call arrives at the external destination number.
Translate Station Numbers to Names for System Speed Dialing	Speed dialing system	Set up a call using system speed dialing. The name of the destination appears on the display.

6.5 Features for Incoming External Traffic

Feature	Setup	Testing
Call Allocation	Ringing assignment per line	Call the analog trunk via the central office. The station entered rings.
Night service	Configure night answer/call allocation: Ringing assignment per line Configure authorized station: Station, Authorized station for night service Configure intercept position, night: Intercept / Attendant	Activate night answer. Dial the system number via the central office. The call arrives at the night station.
Direct inward dialing	Enter DID numbers: Subscriber Enter system number: Routes Enter intercept criteria: Intercept / Attendant	Place a DID call to a user via the central office. The dialed user answers the call (talk state). Terminate the call.
Signaling of Direct Inward Dialing Numbers for Incoming Calls	Set up call signaling (for station and groups): Station view: Activated features, Call Signaling Change the ring cadences throughout the system: Tones and ring types	-
Direct Inward System Access (DISA)	Enter DISA authorization: Station view: Flags Configure DISA: System settings	Call DISA number by DID. Activate call forwarding for a station by means of a DISA procedure. Call forwarding is activated for this station.

Feature	Setup	Testing
Intercept Conditions	Intercept / Attendant	**Intercept no answer:** Seize the trunk and call any station in the communication system using DID. The called station is switched to the intercept position or the call forwarding station in accordance with the ring cycle. **Intercept busy:** Set up an external or internal call from a station. Use DID to attempt to reach this station via the trunk. The call is either signaled at the intercept position or forwarded as entered in CM. **Intercept if incomplete or invalid number dialed:** Seize the trunk and use DID to dial any station in the system with an incomplete station number (for instance, omit the third digit in the three-digit DID number). The call is routed to the intercept position. Seize the trunk and dial a DID number that does not exist in the system. The call is routed to the intercept position. **Intercept if no number dialed:** Seize the trunk and dial the communication system station number without a DID number. After a timeout, the call is intercepted or released.

Feature	Setup	Testing
DTMF DID	Trunks	Parameter/MSI flags	Seize the trunk and dial the analog trunk. Suffix-dial the DID number. The DID station rings.
Announcement Before Answering	Announcement	-
Collect Call Barring per Trunk	Trunks	Parameter/MSI flags	-
Collect Call Barring per Station	Configure collect call barring per station: Station view: Flags, Set collect call barring per station Configure collect call barring system-wide: Flags, Set collect call barring	Place a collect call to a station in the system. Check whether collect call barring works.
Analog Direct Inward Dialing via MFC-R2	Trunks	Parameter/MSI flags, Highlight the signaling method, highlight the distance from CO System parameters Flags	Receive an incoming call on the MFC-R2 trunk. Check whether direct inward dialing is functioning properly.

6.6 Features for Outgoing External Traffic

Feature	Setup	Testing
Last Number Redial (LNR)	Enable redial with ACCT throughout the system: Flags	Set up an external connection. Release the external connection. The dialed number is in the redial memory. If “redial with ACCT” is enabled, enter ACCT. Press the redial key. Press the redial key to step through the stored numbers (and the ACCT). The system dials the station number (ACCT) after a short waiting time.
System Speed Dialing	Speed dialing system, Enter the trunk group code, station number, and name for the desired speed-dialing destination	Access the speed-dialing destination by entering a code (*7 + destination number) or using a key + destination number. The system sets up an external connection.
System Speed Dialing in Tenant Systems	Speed dialing system, Enter the trunk group code, station number, and name for the desired speed-dialing destination Administer the speed-dialing number range under Group assignment.	Access the speed-dialing destination by entering a code (*7 + destination number) or using a key + destination number. The system sets up an external connection.
Trunk Seizure Type and Prime Line On (Automatic Line Seizure)	Configure Prime Line on: Routing parameters Assign trunk group: Trunks Configure trunk keys/call keys: Key programming	Configure Prime Line on. Dial a number. The trunk is automatically seized.

Feature	Setup	Testing
Block dialing	Settings	Least Cost Routing	Configure automatic least cost routing with block dialing. Dial an external station number. The trunk is seized when the timer has expired and outdialing is completed.
Dial Tone Detection	Configure audible tone monitoring: Routing parameters, Pause before dial and Analysis of second dial tone Configure times: Time parameters, Dial tone monitoring time and Time between HT analysis and dialing	Configure pause before dialing. The digits are transmitted after the pause time expires.
End-of-Dialing Recognition	Time parameters	Dial an external number. The last digit is transmitted after the timer expires.
Trunk Signaling Method	Trunks	Parameter/MSI flags	Seize an analog trunk. The correct signaling method is detected automatically.
Configurable Toll Restriction	Configure allowed/denied lists: Allowed/Denied numbers Configure station class of service: Station	Authorize a station for outward-restricted trunk access. The station cannot set up an outgoing external connection (exception: speed dialing system).
Traffic Restriction Groups	Configure ITR matrix: CON matrix Configure ITR groups: Group assignment	Configure several ITR groups. From one station, attempt to call another station in a different ITR group. Stations with different ITR classes of service cannot make calls to each other. Whether stations can make calls to one another depends on their class of service in the ITR matrix.

Feature	Setup	Testing
Private Trunk	Configure ITR matrix: CON matrix Configure ITR groups: Group assignment	Only the station configured can seize the private trunk.
Trunk Queuing	Flags	Station A seizes a trunk. Station B presses the trunk key or dials a CO code. Confirm that “Trunk queuing” should be performed. Station A hangs up. Station B rings; user picks up the handset and hears a dial tone.
Denied List for Undialed Trunks	Allowed/Denied numbers, Assign reference station in Station, Assign COS group for reference station	A user calls the attendant console (AC). The AC sends dial tone to the user via the “Transfer trunk” menu option. The user can set up a call within the allowed area by seizing a trunk (0).
Assigning Speed-Dialing Numbers to ITR Groups	Group assignment	A user dials an allowed speed-dialing number: OK. A user dials a denied speed-dialing number: no authorization.
Codelock intercept	Configure intercept destination: Intercept / Attendant, Codelock intercept	-
Keypad dial	Enable keypad dialing by trunk group: Routing parameters, Select trunk group and set keypad dialing routing flag. Enable keypad dialing by station: Station view: Flags, Keypad dial	Activate keypad dialing (service menu or code *503). Select trunk. Enter keypad information. Test appropriate network provider service.

Feature	Setup	Testing
E911 Emergency Call Service (USA Only)	Trunks	Parameter/General Flags, E911 Emergency Call Service	After installing and configuring the feature, arrange a test call with the emergency call center; this test call verifies that the call proceeds without errors.
CLIP no screening	Routes, Enter system number - incoming, Enter system number - outgoing, Activate or deactivate “suppress station number” Routing parameters, Select no. and type, outgoing	Have the “no screening” option configured in the public exchange. Call a free subscriber. The subscriber display shows the configured system number - outgoing.

6.7 Least Cost Routing (LCR)

Feature	Setup	Testing
Routing Tables	Configure LCR: Settings	Least Cost Routing	Place an outgoing call. The call is routed according to the setting.

6.8 Features for Internal Traffic

Feature	Setup	Testing
Direct Station Selection (DSS key)	Key programming	Press DSS key. The programmed extension rings.
Names	Configure a station name: Subscriber, Change name for relevant station Configure group names: Groups/hunt groups, Enter name for the relevant group Configure routes: Routes, Enter the name for the desired route	Call the station from another internal telephone with display. The calling party name appears on the display.
Entrance Telephone/Door Opener	Before configuring an entrance telephone, you should first delete all features for this station. Ext. connection, Door relay	Press the doorbell. The entrance telephone ring destination sets up a voice connection to the entrance telephone. You can activate the door opener from the ring destination if configured.
Radio Paging Equipment (PSE) Simple Radio Paging Equipment/Simple PSE Radio Paging Equipment via ESPA	Ext. connection	Select the procedure for a PSE search. Verify that the search procedure is implemented.
Message Texts/Mailboxes/ Message Waiting	Texts, Info texts	Enter *68 or press the Send Message key. Enter the internal station number of the destination. Enter the required text. The transmitted text appears on the display of the destination station. Enter the code (#68-0) or press the key to delete the message.

Feature	Setup	Testing
Advisory Messages	Texts, Answer texts	Use code *69 or a configured function key on a system telephone with display to activate an absence text. Call the station from another system telephone with display. The activated message appears in the display.
Internal Phonebook	Flags, Display, Internal Phonebook	-
LDAP Internal Phonebook	Flags, Display, Internal Phonebook Flags, LDAP	Press the internal phonebook key. Complete an LDAP search. Wait for an answer from the LDAP server.
Room Monitor	Flags, Room monitor	Lift the handset (on telephones without a microphone). Activate the room monitor feature by dialing *88 or pressing the Room Monitor key. Call this extension from another internal station. The call is immediately through-connected. All sounds in the room are transmitted.
Edit tel. number	Station view: Flags, Editing the telephone number	Enter station number. Edit call number. Activate digit transmission.

6.9 Tenant Service

Feature	Setup	Testing
Tenant Service Tenant Service Configuration	CON matrix Group assignment Station Day or Night Intercept / Attendant Ringing assign-ment per line Trunks Routes	Customer A has trunks 1 and 2. Customer B has trunks 3 and 4. Both customers should be able to seize the trunk using “0.” (9 in U.K. and U.S.) The trunks are assigned to stations via an ITR group. Customer A’s stations are entered in ITR1 and customer A’s trunks are entered in ITR2. Customer B’s stations are entered in ITR3 and customer B’s trunks are entered in ITR4. The ITR groups for customer A’s stations and trunks receive mutual ITR. For its own stations, customer A receives mutual ITR for customer B’s stations. For its own stations, customer A receives incoming ITR for customer B’s trunks. The ITR groups for customer B’s stations and trunks receive mutual ITR. For its own stations, customer B receives incoming ITR for customer A’s trunks. Customer A’s trunks must receive mutual ITR. Customer B’s trunks must receive mutual ITR. Trunk 1 and trunk 2 are placed in trunk group 1. Trunk 3 and trunk 4 are placed in trunk group 2. Overflow from trunk group 1 to trunk group 2. Customer A receives incoming and outgoing class of service for trunk group 1 and incoming class of service for trunk group 2. Customer B receives incoming and outgoing class of service for trunk group 2 and incoming class of service for trunk group 1. The intercept is removed in system settings, and for each trunk the intercept position for “0” (9 in U.K. and U.S.) is entered in the call allocation for trunks.

6.10 Other Features

Feature	Setup	Testing
Voice Channel Signaling Security	Station view: Flags	Place a call from a telephone with call waiting rejection. Call the station. The call waiting tone does not sound. You receive a busy signal on the calling station.
Date and Time Display	In communication systems without digital trunks Set the daylight saving time table: Daylight saving time/DISA Set the date format: Display	For digital trunks, set up an external call. The date and time are set automatically if the central office generates a message containing this information (not for the USA). In communication systems without digital trunks and for digital trunks in the U.S., set the date and time using the procedure described above.
Actuators	Actuators	Dial the code for the relay. The relay activates as configured.
Sensors	Sensors	-
Multilingual Text Output	Replace existing system language: Transfer I Loadable texts, Select the text to be loaded or deleted Transfer I Communication, Start loading the text Select a language for each station: Station view: Flags	The display on the system telephone appears in the language selected.
Associated Dialing	Station view: Flags	From an authorized station, dial a station number for another station. Example: An authorized station dials 01191 to the central office for station 12. * 67 12 0 01191

Feature	Setup	Testing
Associated services	Station view: Flags	From an authorized station, activate a feature for another station using the procedure. (for example, station 11 activates call forwarding to internal station 13 for station 16). Station 11 dials: * 83 16 *11 13
Display Number of Stations with Direct Trunk Access	Display stations: CO call privileges: Number of	Display the number of stations with direct trunk access using the procedure.
Reset Activated Features	Flags, Select the station whose features you want to delete	-
Relocate	Enable Relocate system-wide: Flags, Relocate allowed	Start Relocate function (code or Service menu, etc.). Enter internal number of the destination station. Enter telephone lock PIN (if needed). After confirmation that the feature has executed successfully (display “Stn. number: XXXXX”), check that the exchange of the individual user profiles (station number, key programming, trunk access, etc.) has taken place.
Delete all call numbers	Delete Call Numbers	-
Team/Top Configuration Team Configuration Top Configuration	Team/top	-
Automatic conference release (MULAP privacy release)	Key programming Key code = MULAP privacy release	-
Storing Procedures on Procedure Keys	Key programming Key code = procedure key Procedure = max. 32 characters (0 ... 9, *, #, P (Pause))	Press procedure key. The procedure is executed.

Feature	Setup	Testing
Customer-specific display	System settings	The new text appears in the display on all telephones immediately after you change it.
IP Mobility IP Mobility Extension	Station view: Workpoint Client	-
Live Call Record (Voice recording)	Station view: Flags (Voice recording) Flags (Warning tone during voice recording) PhoneMail (Live Recording Device) IVM | Additional Settings/General Service codes	An authorized station activates the procedure. Recording begins.
Logos for OpenStage terminals (as of HiPath 3000 V7 R3)	Station System parameters System settings OpenStage logo	-

6.11 Network

Feature	Setup	Testing
Satellite CS Capability	Set trunk type: Routing parameters Set ISDN parameters: Trunks Routes	Call a station in another networked communication system.
Tie Trunk Via TIEL	Adapting the signaling protocol: Trunks, Double-click TIEL Param 1 Trunks I Parameter/MSI flags, Setting the Maintype	-
Closed Numbering	Station view: Flags, Least cost routing	Call the internal number of another networked station.
Open numbering scheme	Flags, Open numbering scheme, Voice mail node number, Node number Routes, PABX number - incoming	
CorNet CO call privileges	Station Allowed/Denied numbers Trunks Routes Routing parameters	Dial an external, outgoing connection from the satellite CS via the main CS. Outgoing connections are possible if permitted by the subscriber class of service.
Call Detail Recording With Networking	Output format	Conduct a chargeable call. The charges for this call are displayed as configured.
Station Number/Name Display	Display	Call a networked station. Depending on the configuration, you see either the station name or the station number.

Feature	Setup	Testing
Call Forwarding With Rerouting	Routing parameters	Forward a call to station C in the main CS from station B in the satellite CS. Call station B in the satellite CS from station A in the main CS. If possible, the trunks to the satellite CS are released.
QSIG, COS changeover	Trunks ǀ Parameter/ISDN flags ISDN flags => QSIG	-

6.12 Features for Call Detail Recording

Feature	Setup	Testing
silent reversal	Configure silent reversal per trunk: Trunks	Parameter/MSI flags, Silent Reversal	In Germany not testable.
Advice of Charges at Station During Call (AOC-D)	Output format	Conduct a chargeable call. The charges for this call are displayed as configured.
Call Duration Display on Telephone	Display, Call timer display	-
Call Detail Recording, Attendant (CDRA) (Not for the USA)	Output format, Callbox (if required)	Conduct a call from the callbox. At the end of the call, the LED on the Display charges key lights up.
Call Detail Recording Per Trunk (CDRT) (Not for the USA)	Configure CDRT output to $U_{P0/E}$ port: Output format, CDRT (select $U_{P0/E}$ port)	Conduct a chargeable call. Display the call charges for the trunk from the system telephone.
Account Code (ACCT)	Account codes Additional step if LCR is active and mandatory ACCT is used: Dial plan	Configure “mandatory ACCT” You cannot seize a trunk until you enter the ACCT.
Call Detail Recording Central (CDRC)	Output format	Conduct a chargeable call. The call charge details are transferred to the V.24 (RS-232) interface. “CDRC outgoing without connection” can be tested using a call that is not chargeable.
Toll Fraud Monitoring	Time parameters	Set up an outgoing connection (station has external call forwarding) using direct inward dialing and the DISA function. When the timer expires, the message Time exceeded appears on the AC display

Feature	Setup	Testing
Printer Pipe Mode	Output format, Port assignment $U_{P0/E}$ port=station number with control adapter	Conduct a chargeable call. If CDRC is set, a call data record appears on the output device (such as the printer) at the end of the call.
Call-Charge Display With Currency	Configure the calculation precision, call charge factor: Factors (Not in the USA) Delete CDR data: Stations (Not in the USA), Delete call charges at station Trunks (Not in the USA), Delete CDR per line Transfer call charge data (PC –> System): Transfer | Communication, Read/write CDB - Mark call charges	-

6.13 ISDN Features

Feature	Setup	Testing
Calling Line Identification Restriction (CLIR)	Activate CLIR across the system: Display, Call number suppression on	Call an internal station. The station number of the calling party is no longer displayed.
Malicious Caller Identification (MCID)	Station view: Flags	-
Programming National and International Codes for Outgoing Calls	ISDN parameters, Enter national/ international prefix	Place a call via ISDN. Enter number in the caller list. Set callback from the number list.
Caller ID After Release	Display, Caller list mode, external rings and calls	Set up incoming call. Release call. Check call number in caller list.
collect call barring for ISDN trunks	Configure collect call barring per station: Subscriber, Set collect call barring per station	Place a collect call to a station in the system. Check whether collect call barring works.
Simultaneous signaling of a call with a MULAP group	System view I Settings I Incoming calls I Groups/Hunt groups Create an IVM group and a MULAP group in the “Group” table. The IVM group should be includes as a member for the MULAP group in the “Members” team.	Calling the MULAP number from an external telephone. Both calls must signal the call at the same time.

Feature	Setup	Testing
ISDN network with UUS (Telefonica)	Set up in all communication systems involved: • System view	Settings	Least Cost Routing: Configure Least Cost Routing fully and then activate it. Under Dial plan, set the “UUS Networking” flag for the assigned profile to “Yes”. • System view	Settings	Lines/networking	ISDN parameters: Enter the dial-in number for the UUS service. • System view	Settings	Lines/networking	Routing parameters: • Disable the “Deactivate UUS per route” and “Name in CO” flags.	An internal station calls another internal station that is connected to a different communication system that was configured for ISDN networking with UUS. The name and phone number of the calling party is to be displayed at the called party.

6.14 Small Remote Site Concept

Feature	Setup	Testing
Small Remote Site Concept	Emergency	-

6.15 Mobility Entry (not for U.S.)

Feature	Setup	Testing
Configure virtual station	Station view: Flags (DISA class of service flag, Virtual station flag)	-
Assign virtual station to mobile station	Settings I Set up station I Mobility Entry	-
DISA administration for system dial-up	Settings I System Parameters I Daylight saving time/DISA I Area: Remote use of services, DISA	-
Basic MULAP group configuration	Settings I Incoming calls I Groups/Hunt groups I Group table, Selection and Members table	-
Administer “PABX number Incoming”	Settings I Lines/networking I Routes I Areas: PABX number incoming and PABX number outgoing	-
Activate E.164 numbering	Settings I System Parameters I Flags I Area: Switches I E.164 numbering	-
Activate Least Cost Routing	Settings I Least Cost Routing I Flags and COS I “Activate LCR” check box	-

For detailed administration examples, refer to HiPath 3000/5000 Practical Examples - Configuring Mobile Connection.

7 Menu Overviews

This chapter contains an overview of the menus available in HiPath 3000 Manager. A detailed description of the menu items, tabs, dialog boxes and all fields can be found in the chapters that follow.

Please refer to Chapter 8, “Station view” for a detailed description of the station view.

Menu overviews	**Detailed description in:**
Section 7.1, “File”, on page 7-1	Chapter 9, “File menu”
Section 7.2, “Settings”, on page 7-3	Chapter 10, “Settings Menu”
Section 7.3, “System Status”	Chapter 11, “System Status Menu”
Section 7.4, “Tools”	Chapter 12, “Tools Menu”
Section 7.5, “Options”	Chapter 13, “Options Menu”
Section 7.6, “Applications”, on page 7-7	Chapter 14, “Applications Menu”
Section 7.7, “Help”, on page 7-7	Chapter 15, “Help Menu”

7.1 File

File Menu - Commands and Tabs/Dialogs
HiPath 5000 RSM/AllServe • New | HiPath 3000 • New | HiPath 5000 RSM/AllServe Server • Delete | HiPath 3000 • Transfer | HiPath 5000 RSM/AllServe Server
New
Open
Save Customer Database
Save Customer Database As
Close
Output
Compare Customer Database
Convert
Append CDB to APS
Load APS texts

Table 7-1 Overview of File menu

File Menu - Commands and Tabs/Dialogs
Print / Print Preview
Printer Setup
Output MDF Plan
Generate System Info Files
Transfer • Transfer	Communication • Transfer	Communication	Maintenance – Maintenance		Event Log – Maintenance	Restart/Reload – Maintenance	Out of Service – Maintenance	Base Station Status (not in the USA) – Maintenance	Trunk Status – Maintenance	Trunk Error Counter – Maintenance	Call Monitoring – Maintenance	Station Status – Maintenance	V.24 Status – Maintenance	Card status – Maintenance	IVM (only if an IVM card is plugged in) – Maintenance	IVM: Language selection – Maintenance	IVM: Reset passwords – Maintenance	IVM: Initialize mailboxes – Maintenance	IVM: Change super user password – Maintenance	IVM: Execute file operations – Maintenance	IVM: Execute file operations: Display Statistical Data – Maintenance	IVM: Mailbox configuration (as of IVM Version 2) – Maintenance	EVM: Initialize mailboxes – Maintenance	EVM – Maintenance	EVM: Execute file operations – Maintenance	OpenStage Phones: Event Log – Maintenance	OpenStage Phones: SW distribution – Maintenance	OpenStage Phones: Trace • Transfer	Communication	Security – Security	User administration – Security	Protocol • Transfer	Callback connection • Transfer	Loadable texts • Transfer	SW Transfer
Exit

Table 7-1 Overview of File menu

7.2 Settings

Settings Menu - Commands and Tabs/Dialogs
Settings	Netwide Data • Stations - Netwide Data • Netwide Data • Resource Management (HiPath 5000 RSM/AllServe)
Settings	Set up station • Subscriber • Key programming – Key programming: Fill/Delete – Key programming: Print • Terminal hw sw version • Fax • Emergency • Mobility Entry (not for U.S.) • HXG Configuration (V4.0 and Earlier) • Gatekeeper (V5.0 and Later) • Gateway (V5.0 and Later)
Settings	Cordless (Not in the USA) • Cordless	System-wide • Cordless	SLC • Cordless	Multi-SLC • Cordless	Base station
Settings	Lines/networking • Trunks – Trunks	Parameter/ISDN flags – Trunks	Parameter/MSI flags – Trunks	Parameter/General Flags – Trunks	Parameter/Template Editor • Routes • Routing parameters • ISDN parameters • LCOSS • PRI (US only) • QSIG features (not in the USA)
Settings	Least Cost Routing • Flags and COS • Dial plan • Schedule

Table 7-2 Overview of Settings menu

Settings Menu - Commands and Tabs/Dialogs
Settings	Incoming calls • Call Pickup • Ringing assignment per line • Call forwarding • Groups/hunt groups – Groups/Hunt groups	Station parameters – Groups/Hunt Group	Group Membership – Groups/Hunt groups	External destinations • Team/top – Edit team/top • UCD parameters • UCD groups
Settings	Classes of service • Station • Day or Night • Allowed/Denied numbers • CON matrix • Group assignment • Overview • Autom. night service • Special days • autom. COS changeover
Settings	System Parameters • Flags • LDAP • System settings • Intercept / Attendant • Display • Flexible menus • Speed dialing system • Service codes • Texts • Time parameters • Tones and ring types • Daylight saving time/DISA • Plus Products Flags/MW

Table 7-2 Overview of Settings menu

Settings Menu - Commands and Tabs/Dialogs
Settings	Auxiliary equipment • Ext. connection • Actuators • Sensors • Announcement • Paging • PhoneMail • Integrated Voice Mail (IVM) (only if an IVM card is plugged-in) – IVM	Parameter/Mailbox Parameters – IVM	Parameter/COS – IVM	Additional Settings/General – IVM	Additional settings/Network parameters – IVM	Additional settings /Automatic attendant – IVM	Additional Settings/Calendar – IVM	Additional Settings/Central distribution list – IVM	Additional Settings/Group mailbox • EVM (Entry Voice Mail) – EVM	Additional settings/General – EVM	Additional settings / Automatic attendant:
Settings	Network • Basic settings • IP parameters • SNMP Data • SNMP partner/Communication Partner • PSTN partner – Edit PSTN partner • Firewall – Firewall	Edit IP firewall – Firewall	Edit application firewall • Routing – Routing	Edit IP routing • Mapping – Mapping	Edit IP mapping • HiPath 5000 RSM/AllServe Parameters • Gatekeeper • Ext. H.323-GK • Ext. SIP • IP Ports • Resource Management

Table 7-2 Overview of Settings menu

Settings Menu - Commands and Tabs/Dialogs
Settings	Licensing • Licensing – HXG • Licensing – Base Station (not in the USA) • Licensing – S2M • Licensing – IVM • Licensing – System-wide

Table 7-2 Overview of Settings menu

7.3 System Status

System Status Menu - Commands and Tabs/Dialogs
System-wide • Cards – Card Configuration	T1 Configuration – Card Configuration	Card data • Loadware • System • Flags • Forwarding • Line states • System texts • UCD Agents
Call charges • Stations (Not in the USA) • Trunks (Not in the USA) • Output format – Output format • Factors (Not in the USA) • Account codes • Callbox (Not in the USA)

Table 7-3 Overview of System Status menu

7.4 Tools

Tools Menu - Commands and Tabs/Dialogs
• Run Wizard (HiPath 3000) • Start IP Access Manager

Table 7-4 Overview of Tools menu

7.5 Options

Options Menu - Commands and Tabs/Dialogs
Program Options • Program options General • Program options Save options • Program options Communication • Program options ISDN
Password Level
Change Password
Delete Call Numbers

Table 7-5 Overview of Options menu

7.6 Applications

Applications Menu - Commands and Tabs/Dialogs
Applications Menu

Table 7-6 Overview of Applications menu

7.7 Help

Help Menu - Commands and Tabs/Dialogs
Help Topics
Using Help
Info

Table 7-7 Overview of Help menu

8 Station view

The **Station view** shows all stations and their parameters in the communication system. Most of the parameters for each individual station in the communication system can be defined via the station view.

Tabs and Dialog boxes
• Station selection • Station parameters – Station view: Flags – Station view: Activated features – Station view: Workpoint Client – Station view: Groups – Station view: Forwarding – Station view: BRI (only in the USA) – Station view: Template Editor – Station view: ISDN flags

8.1 Station selection

The **Station selection** consists of a table with with the columns “Call no.” and “Name”. The **Search no.** and **Search Name** fields/drop-down lists can be used to find specific stations. Selecting a station in the table causes the parameters of the selected station to be displayed on the right.

Search no:

The **Search no.** drop-down list can be used to find a particular call number. You can select one of the call numbers already entered in the drop-down list or enter the call number that you want to find directly into the field. The station to be located is marked in the table, and the parameters are shown on the right.

Search Name

The **Search Name.** drop-down list can be used to find a particular station name. You can select one of the names already entered in the drop-down list or enter the name that you want to find directly into the field. The station to be located is marked in the table, and the parameters are shown on the right.

(call number) column

The **Call no.** column contains the internal call number of the relevant station.

Name column

The **Name** column shows the name associated with the station.

8.2 Station parameters

On selecting a station in the “Station selection” dialog, the parameters for the selected station are displayed on the right. You can then edit the parameters for the station via the tabs or view the status of the station. For parameters that cannot be edited here, you will find a link (arrow symbol) next to each such parameter that enables you to switch directly to the appropriate dialog in the system view where you can then set the parameters as required.

Name

The name assigned to the station is entered here. The name can be a person’s name, the name of a department or any other suitable entry. The name can contain a maximum of 16 characters.

Note that no validity check is performed for the entered characters, so it is your responsibility to ensure that only valid characters are used.

The following ISO 8859-1 characters can be entered:
- Character 32 through 127 (the usual West-European characters, digits, letters)
- German Umlauts (Ä, Ö, Ü, ä, ö, ü)
- the characters Å, Æ, Ñ, Ø, Õ, õ.

Characters that are not permitted will be replaced with a space in the display.

When setting language conversion “Greek” or “Cyrillic”, the letters of the Greek or Cyrillic alphabet can be entered in capital letters.

Station Number

The internal call number of each station is shown here (see also Subscriber). To change the call number, click on the arrow symbol after the number.

CLIP/LIN

The valid DID (direct inward dialing) number for CLIP or LIN is shown here (see also Subscriber). To change the call number, click on the arrow symbol after the CLIP/LIN.

Direct inward dialing (DID)

The DID number assigned to the corresponding extension is displayed here (see also Subscriber) To change the DID number, click on the arrow symbol after the DID.

Type

Can only be changed by physically reconfiguring the communication system.

The type of telephone connected to the station port is automatically specified by the communication system. If a telephone is not connected, No Port is displayed in the column. If an analog telephone is connected, the column entry is “No Fe”.

- **No Port**, i.e. no telephone connected
- **No Fe**, i.e. analog telephone connected
- System telephone connected
- **S_0 station**

Access

Can only be changed by physically reconfiguring the communication system.

The name, number, slot of the station system board and the type of Workpoint Client (SYS=System, S_0) are displayed here. This column also indicates whether the port is a master or a slave.

Mobile code

The status of the mobile phone and the PIN code to log on the mobile telephone are displayed here (see also Cordless | SLC, Area: Portable Parts). To change the PIN code, click on the arrow symbol after the mobile code.

Tabs for Station Parameters
– Station view: Flags – Station view: Activated features – Station view: Workpoint Client – Station view: Groups – Station view: Forwarding – Station view: BRI (only in the USA) – Station view: Template Editor – Station view: ISDN flags

See also:
– Section 8.1, “Station selection”, on page 8-2 – Section 8.2.1, “Station view: Flags”, on page 8-5 – Section 8.2.2, “Station view: Activated features”, on page 8-16 – Section 8.2.3, “Station view: Workpoint Client”, on page 8-20 – Section 8.2.4, “Station view: Groups”, on page 8-24 – Section 8.2.5, “Station view: Forwarding”, on page 8-25 – Section 10.2.1, “Subscriber”, on page 10-12 – Section 10.3.2, “Cordless | SLC”, on page 10-42

8.2.1 Station view: Flags

You can activate and deactivate station flags and parameters by using **Flags**. Unlike system flags, station flags apply only to the station for which they are set.

“Override class of service on” flag

Authorized stations can break into an existing connection with a code or key. The affected stations are notified of the override by a warning tone (and by a display).

Associated dialing/services flag

The user defines the call number of the destination station in the PC address book and activates the dialing. The PC executes the associated dialing.
An authorized station can activate or deactivate services for any other station in the communication system.

Call waiting rejection on flag

This flag disables the call waiting feature. When Call waiting rejection is set, incoming calls for busy stations are immediately processed in accordance with Call Management (see Settings | Incoming calls). If this flag is deactivated, an incoming call to a busy internal station is signaled by a warning tone and, if applicable, on the display.

Headset flag

Each system telephone (digital) can be furnished with a headset after this authorization has been enabled (connection to the handset connection).

The use of a headset for the system telephone is recognized by the communication system automatically; an authorization enable is not necessary in this case.

If this flag is set, the station can be equipped with a headset that plugs into the handset connection or into the headset adapter. This allows users to answer calls without lifting the handset simply by pressing a key.

If this flag is set, calls cannot be made by pressing the speaker key; an enable key must be programmed so that calls can be made.

Override Do Not Disturb flag

If a caller hits a busy extension, the called station is signaled that a call is waiting with the call waiting tone. If a station with the “Override Do Not Disturb” feature hits a station that has activated call waiting rejecting, the station can override the Do Not Disturb. The called station can now accept this call without ending the existing one.

Missed Calls List flag

This flag activates the missed calls list for this station. The missed calls list records calls that were not answered (terminals with display only). The calls are time-stamped (time and date) and included in a chronological list. Only calls that also have a call number or a name are recorded. If a caller makes several calls, the timestamp of the entry is updated and a call counter is incremented for the caller.

If a station-specific missed calls list is created for an individual station in a station group, the station can access both lists as a shared list.

If an external incoming call is routed via the automatic attendant to an internal station and the station is currently busy or has call forwarding activated, no entry is made to the missed calls list.

MCID access flag (not in the USA)

This flag allows malicious callers to be traced (MCID, Malicious Call Identification). You must apply to your public network operator in order to use this feature.

FWD external permitted flag

This flag allows this station to forward calls to an external destination. If call forwarding to an external destination is permitted, an incoming DID call is connected via two B-channels by the communication system. External call numbers cannot be entered with the speed dialing feature; however, a key can be programmed for this purpose. If a key is programmed, the external station number is stored in the speed dialing pool.

When carrying out external call forwarding, the call charges that arise for the station that initiated the external FWD are displayed on this station's telephone after the end of the call and are also recorded in the call detail recording/CDRC.

Compress display data flag

Display outputs are compressed to enhance performance. If the display on a $U_{P0/E}$ terminal changes, the communication system only updates the difference relative to the previous display. If an application (e.g. Smartset / TAPI) is connected via an RS 232 adapter (data or control adapter), this feature must be deactivated.

The flag must be deactivated for applications that obtain the call number information from the telephone's display, (i.e., uncompressed output with call number instead of compressed output with name).

This flag must be disabled manually for system telephones with a Chinese display until HiPath 3000 V4.0 SMR 7. As of SMR 7, this is no longer required.

Names are generally displayed only when the **Calling ID only** flag under Display **Display name/call number** is deactivated.

Entry in telephone directory flag

This entry controls whether or not the call number of the station is entered in the telephone directory. In the case of stations which can only be reached via a group call number (e.g. MULAP), it may not be helpful to record their call numbers in the telephone directory.

On all telephones with a display, you can view the directory of all internal stations with names and call numbers as well as entries from the SSD (name, destination call number), specifically search for the required station and then call that station.

Edit tel. number flag

Allows a telephone number to be edited during the input. The editing is possible using the menu system of a system telephone with display. At the end, **Dialing** must then be selected. This flag has no effect when using other devices.

Keypad dial flag

Keypad dial allows for the handling of stimulus procedures to the ISDN CO. The numbers dialed in the CO direction are packed in information elements and sent to the CO. Display messages are sent in the other direction.

This feature is therefore only relevant for terminals with displays. Routes that support the stimulus procedures to the ISDN CO must be set up accordingly under Routing parameters.

Actions carried out with the feature Keypad Dial are not subject to a system control, so that, under certain circumstances, misuse, significant faulty operations, or unnoticed or undesired actions that result in liability for payment may occur.

Prevention of voice calling off flag

Voice calling is only possible to internal $U_{P0/E}$ terminals with loudspeakers (also groups) using the voice calling button or a code. When the flag is set, this station can be called directly, without the called station lifting the handset. This switches on the loudspeaker at the destination station. If the flag is not set, the incoming speaker call is signaled as a normal call at the station.

Codelock intercept flag

If the code lock for a station is active and a trunk group code is dialed from that station, the call is immediately forwarded to the intercept destination entered here. Therefore, when dialing a number for which the station has no authorization, the call is signaled by the station call number entered under Intercept / Attendant.

DISA class of service flag

This flag allows station ports to activate Direct Inward System Access services, (Mobility Entry stations do not require DISA authorization) such as send info texts, activate or deactivate actuators, or activate or deactivate night service.

Otherwise a fundamental authorization for the use of the DISA features is allocated for all internal ports (call numbers) using the system administration in the customer database: feature activation in the communication system via an external call. Furthermore, with DISA, it is possible to make an outgoing external connection via the incoming external connection.

Door release DTMF (Dual Tone Multi Frequency) flag

If this flag is set, the station can open a door with the DTMF/MFV code signaling when a door relay is connected to the relevant port.

Autom. connection, CSTA flag

Calls set up over the CSTA server can optionally work with or without auto answer at the originating device. Setting the flag causes the auto answer to be activated.

Ringback protection flag (only specific countries)

This flag can be activated in Brazil, Indonesia, Malaysia and Singapore.

(only relevant if ringback calls are offered by the telecommunication provider)
This feature makes it possible to set up ringback protection individually for each station, thus making it possible to automatically refuse incoming ringback calls. This also applies in the case of call forwarding, call pickup, an intercept, etc.

If this flag is set, ringback protection is activated when the station is called via MFC-R2 DID (Brazil, Malaysia and Singapore)/SMFC DID (Indonesia). This also applies to call forwarding, call pickup, intercept, etc.

Transit allowed via Hook-on flag

This flag activates the transfer of an external call to an external station when the handset is replaced.

This flag also affects the behavior in a conference (see HiPath 3000/5000, Feature Description, Conference):

The following dependencies apply in a conference:

- If the flag is not set at the station of the conference leader, and the conference leader hangs up, the entire conference will be terminated, and all connections will be cleared.

- If the flag is set at the station of the conference leader, and the conference leader hangs up, while other internal users are still participating in the conference, then the person who has been in the conference for the longest period becomes the new conference leader. If the new conference leader also hangs up, then the status of his or her “Transit allowed via Hook-on” flag will determine how the conference proceeds.

No group ringing on busy flag

The flag is set for the connected station so that the user can thus control which stations in the call ringing group should be called when the “master” is busy. If several stations have programmed the same station/Smartset for group ringing, this flag is valid once for all connections (via all “masters”).

If this flag is **not set**, group ringing is always implemented (provided the station with group ringing programmed can be reached). This corresponds to the standard behavior.

If the flag is **set**, group ringing depends on availability of the “master”:
- The “master” is free (Immediate group ringing)
- The “master” can be called (Group ringing after 5 seconds)
- The “master” cannot be called/call waiting is not active (No group ringing)

The “master” is the station with group ringing programmed

Central busy signaling flag

This flag must be set for stations which have busy signaling on a centralized communication system, see alsoQSIG features (not in the USA).

The implementation of central busy signaling is designed for a maximum of 100 stations per system (nodes).

Virtual station flag

Virtual ports are used for the signaling of statuses and calls on all systems. This flag can only be set for station ports for which a physical telephone interface is not available. This port is automatically activated.

If hardware is available for a particular port, any attempt to configure this port as a virtual station will be rejected. If a port has already been configured as a virtual station, any cards which are then plugged will not be activated. Virtual ports have their own internal and external call numbers under which they can be reached.

If stations are configured using a virtual station template, the **Virtual station** flag is only set for ports which do not have hardware.

"Call prio./immed. tone call wait." flag

By setting this flag (Call priority/immediate tone call waiting), calls through this station are signaled with a higher priority to partners. The priority is set to be the same as that of external calls. In other words,, the prioritized calls are thus queued before existing internal calls, but after existing external calls. Note that existing first calls (not waiting calls) are usually never displaced, regardless of their ring type. If the same priority is also to be set for an internal call in another node, then the station flag "Call prio./immed. tone call wait." (Area: Circuit flags, Call prio./immed. tone call wait.) must be set for the corresponding trunk.

If this flag is set, the caller receives a ring tone immediately instead of a busy tone. This has no impact on the acoustic signaling. The prioritized calls are still signaled like an internal call.

This feature is important for phonemail connections.

Silent Monitoring flag

With the "Silent Monitoring" feature an authorized subscriber can override an internal subscriber during a conversation, without the person noticing. This feature only works if the station also has override privileges.

The "Silent Monitoring" feature is not supported in HiPath 540/580. The **Silent Monitoring** flag must be deactivated.

The "Silent Monitoring" feature is enabled in the following countries:

- up to HiPath 3000/5000 V7 SMR 10: USA, IND, SIN, GBR, RSA, IM, BRA, THA, MAL, NDL, FRA, AUS, NSL, HGK, IRL, ARG, BEL, SPA, POR, CHN
- from HiPath 3000/5000 V8 and HiPath OpenOffice EE V1 R2: all countries

"Display of Emergency text" flag

If this flag is activated, the emergency text specified under Settings | Setup station | Emergency will be shown on the display in the event of an emergency.

Voice recording flag

If the flag is enabled, the user can activate voice recording during a call. In addition, the "Warning tone during voice recording" under Flags can be used to specify whether or not a warning tone should be output on starting the voice recording. Furthermore, a suitable Live Recording device must be configured under PhoneMail. If the IVM is to be used for voice recording, then the maximum length of the voice recording can be set via IVM | Additional Settings/General, and the appropriate signaling method to be used before starting a voice recording (if any) can be defined.

Discreet Call flag

This flag can be set to activate the discreet calling feature at a station. By using the code *945, an authorized subscriber can then discreetly join an ongoing call. Only the discreetly called station can hear the activated station.

This feature is only allowed if the call between the two stations is a simple connection between two stations. It cannot be used in the case of consultation calls or conferences.

Discreet Call Protection flag

Activating this flag protects the station from the Discreet Calling feature.

Analog Station with CLIP flag

If this flag is activated, the call number for analog stations is transmitted (CLIP = Calling Line identification Presentation). The following applies to Germany, Austria, Switzerland, etc.: An incoming CLIP is always signaled between the first and second ring (see also CLIP protocol ETSI FSK Type 1). This flag prevents the display from showing status changes such as those that may result from transfer before answer, for example. Special characters are not displayed.

The flag can only be used if there are analog ports in the system.

For hardware restrictions, see Section 10.8.3.16, “Analog Station with CLIP”, .

Last destination mailbox active flag

If this flag is activated and the called party is not available, the call is forwarded to the substitute mailbox and the caller’s number is displayed on the substitute telephone.

Disable handsfree microphone flag

If this flag is activated, the handsfree microphone cannot be used.

This flag is only supported by OpenStage phones.

Forced Number Presentation flag

If this flag is activated, the caller’s phone number - not name - appears on the called party’s display.

Disable SNMP messages flag

If this flag is activated, no SNMP messages about the status of the connected telephones are sent.

Example: Telephones that were once connected to the system and then removed are permanently signaled as failed by SNMP messages. If status messages are not required for specific ports, they can be disabled by activating this flag.

Operating mode drop-down list

In this drop-down list, an **operating mode** can be selected for the subscriber line.

The following operating modes apply:

INT:	The templates 1, 15, 16 and 17 are used for the International analog subscriber line, enabling the required flash time to be set. – Templates 1. SLA Default template OPS short: Flash_min 40 ms, Flash_max 200 ms -> Flash time 40 ms – 420 ms – Templates 15. SLA, OPS long: Flash_min 250 ms, Flash_max 700 ms -> Flash time 250 ms – 950 ms – Templates 16. SLA, ONS short: Flash_min 70 ms, Flash_max 280 ms -> Flash time 70 ms – 350 ms – Templates 17. SLA, ONS long: Flash_min 100 ms, Flash_max 750 ms -> Flash time 100 ms – 850 ms

Brazil:	until SMR_K Rel 2.2: – Templates 1. SLA Default template OPS short: Flash_min 80 ms, Flash_max 120 ms -> Flash time 80 ms – 200 ms – Templates 15. SLA, OPS long: Flash_min 100 ms, Flash_max 700 ms -> Flash time 100 ms – 800 ms – Templates 16. SLA, ONS short: Flash_min 70 ms, Flash_max 280 ms -> Flash time 70 ms – 350 ms – Templates 17. SLA, ONS long: Flash_min 100 ms, Flash_max 750 ms -> Flash time 100 ms – 850 ms As of SMR_L Rel 2.2 to HiPath 3000 V1.2/Hicom 150 H V1.2: – Templates 1. SLA Default template OPS short: Flash_min 70 ms, Flash_max 280 ms -> Flash time 70 ms – 350 ms – Templates 15. SLA, OPS long: Flash_min 100 ms, Flash_max 700 ms -> Flash time 100 ms – 800 ms – Templates 16. SLA, ONS short: Flash_min 80 ms, Flash_max 120 ms -> Flash time 80 ms – 200 ms – Templates 17. SLA, ONS long: Flash_min 100 ms, Flash_max 750 ms -> Flash time 100 ms – 850 ms As of HiPath 3000 V1.2/Hicom 150 H V1.2: – Templates 1. SLA Default template OPS short: Flash_min 70 ms, Flash_max 280 ms -> Flash time 70 ms – 350 ms Impedance : 900 Ohm – Templates 15. SLA, OPS long: Flash_min 100 ms, Flash_max 750 ms -> Flash time 100 ms – 850 ms Impedance : 900 Ohm – Templates 16. SLA, ONS short: Flash_min 70 ms, Flash_max 280 ms -> Flash time 70 ms – 350 ms Impedance : 600 Ohm – Templates 17. SLA, ONS long: Flash_min 100 ms, Flash_max 750 ms -> Flash time 100 ms – 850 ms Impedance : 600 Ohm
USA:	– OPS short and OPS long line: Input impedance Zr = 600 Ohm Simulation impedance Zn = 350 Ohm + 1000 Ohm || 210 nF – ONS short and ONS long: Input impedance Zr = 600 Ohm Simulation impedance Zn = 600 Ohm

Belgium:	– OPS short and ONS short line Input impedance Zr = 150 Ohm + 830 Ohm || 72 nF Simulation impedance Zn = 600 Ohm – ONS long and OPS long line: Input impedance Zr = 150 Ohm + 830 Ohm || 72 nF Simulation impedance Zn = 350 Ohm + 830 Ohm || 72 nF
China:	The configuration MSI short / long line and SLA ONS and OPS can be used to set different relative levels in China: The standard configuration is MSI long line and SLA OPS. The following levels are realized: – SLA OPS: A/D 0 dBr, D/A –3.5 dBr – SLA ONS: A/D 0 dBr, D/A –7.0 dBr – MSI short line -> SLA OPS: A/D 0.0 dBr, D/A -3.5 dBr – MSI short line -> SLA ONS: A/D -4.0 dBr, D/A -3.0 dBr – MSI short line -> SLA OPS: A/D 0.0 dBr, D/A –3.5 dBr – MSI short line -> SLA ONS: A/D -6.0 dBr, D/A -1.0 dBr With the selection MSI long line and SLA ONS, external calls are amplified.

In all other countries, only one input and simulation impedance is available which is configured using all 4 port templates. The flash times for the various templates are also identical for all other countries.

Language drop-down list

Here you select the language for the display texts created by the communication system for each station.

You can also select the language for support of the Flexible menus function here. To do this, select the entry German (HiPath 4000) or English (HiPath 4000).

Apply flags to ... button

This button allows you to apply the settings you have made for the selected station to one or more (or all) stations.

To select the stations to which the flags are to be applied, the **Apply flags to...** dialog box is displayed. In this dialog, the stations to which the flags are to be applied can be selected in the first column of the table. If the flags are to be applied to all stations, select the option **For all stations**.

See also:

- Section 8.1, “Station selection”, on page 8-2
- Section 8.2, “Station parameters”, on page 8-3
- Section 8.2.2, “Station view: Activated features”, on page 8-16
- Section 8.2.3, “Station view: Workpoint Client”, on page 8-20
- Section 8.2.4, “Station view: Groups”, on page 8-24
- Section 8.2.5, “Station view: Forwarding”, on page 8-25
- Section 9.19.21, “Maintenance | IVM: Mailbox configuration: Substitute”, on page 9-67
- Section 10.2.7, “Emergency”, on page 10-28
- Section 10.4.5, “Trunks | Parameter/General Flags”, on page 10-65
- Section 10.4.9, “Routing parameters”, on page 10-83
- Section 10.4.13, “QSIG features (not in the USA)”, on page 10-98
- Section 10.6, “Settings | Incoming calls”, on page 10-125
- Section 10.6.2, “Ringing assignment per line”, on page 10-127
- Section 10.8.4, “Intercept / Attendant”, on page 10-203
- Section 10.8.5, “Display”, on page 10-209
- Section 10.8.6, “Flexible menus”, on page 10-213
- Section 10.8.12, “Daylight saving time/DISA”, on page 10-235
- Section 10.9.5, “Paging”, on page 10-254

8.2.2 Station view: Activated features

Activated features is used to
- display the features currently activated by the station
- reset the PIN of the station
- define the type of terminal device that is attached to each port
- define further parameters such as call signaling, paging, hotline and dialing method

Activated flags

You can see here whether the station has activated or deactivated the corresponding feature.

"System telephone lock reset" option

This option can be used to reset the telephone lock code for a station to 00000. To do this, proceed as follows:

1. Transfer the CDB from HiPath 3000 to the administrator PC.
2. Reset the code:
   a) Click **Station view** and mark the desired station under **Station selection**.
   b) Then select the **Activated features** tab.
   c) Activate the **System telephone lock reset** option.
   d) Click **Apply**. The change is saved in the CDB on the administrator PC.
3. Transfer the edited CDB back to HiPath 3000. The **Delta mode** must be *deactivated* for this, and the **Call charges** option must be *activated*.

Important: If the CDB is loaded back to the HiPath 3000 when delta mode is enabled, the telephone lock code is not reset to 00000.

Deactive (disable) flag on transfer option

Activate this option to disable the features activated by the stations. This flag cannot be selected in networked systems.

Key modules

The number of key modules is displayed here.

Extension Type drop-down list

The extension type for the relevant port is selected in the drop-down list.

Standard	This setting is intended for system and analog telephones.
Phone Mail (call number, 5-digit)	This is used when connecting PhoneMail to a communication system with a numbering plan of up to five digits.
Phone Mail (call number, 6-digit)	This is used when connecting PhoneMail to a communication system with a numbering plan of up to six digits.
Answer Machine	With this setting, connected calls can be picked up via a DSS key. Besides being selected for answering machines, this entry should also be selected for pseudo (dummy) ports where no physical equipment has been set up. This prevents the communication system from checking the operating status of the port.
Fax	Call override is not possible with this setting. It is reserved for fax machines only.
Loudspeaker	This setting facilitates paging via the a/b port.
P.O.T MW LED (not in the USA)	This setting should be selected for standard analog telephones (P.O.T = Plain Old Telephone) with a message-waiting LED.
Door station with pulsed loop	This setting should be selected if a terminal with pulse dialing is used.
Modem	Call override is not possible with this setting. It is intended for modems.
P.O.T with VMWI	This setting has to be selected for standard analog telephones (P.O.T = Plain Old Telephone) which support CLIP and are equipped with the “Visual Message Waiting Indication” (VMWI) function. Telephones which are equipped with VMWI indicate that a callback was activated for this telephone. If this setting is selected for an analog telephone which is not equipped with VMWI, after a callback was executed, a ring tone sounds on the telephone though there is no call.

When a fax or modem station is deleted (i.e., the call number and DID are deleted), the extension type must also be be reset to the default (standard).

Call signaling Internal drop-down list

Every station can be assigned one of a total of eight possible internal ringing tones here. This means that in addition to the external ringing tone, an internal ringing tone is assigned here and subsequently transmitted for internal calls.

"Call signaling extern" drop-down list

Here you can select three **ring types** for external calls.

- **System telephone**
  Ring type 1 = External call (e.g., double ring)
  Ring type 2 = External call CO 2 (e.g., triple ring)
  Ring type 3 = External call CO 3 (e.g., short/long/short)
- **Analog telephones**, **Germany**:
  Ring type 1 = External call
  Ring type 2 = Automatic recall
  Ring type 3 = Doorbell ring
- **Analog telephones**, **Other countries**:
  Ring type 1 = External call
  Ring type 2 = External call
  Ring type 3 = External call

Paging receiver (not in the USA) drop-down list

A paging system pocket receiver can be assigned to a station here. The index entered here refers to the paging system call number table in the Paging.

Hotline, Mode, Hotline (Number)

The following options are available for selection in the "Hotline mode" selection list:

- "Off": The feature is deactivated.
- "Off-hook alarm after timeout": The call to the hotline takes place after a predefined delay (off-hook alarm time). If the subscriber dials a digit before this interval has expired, the hotline is not called. The off-hook alarm time is set under **Settings | System Parameters | System settings / Area: Hotline**, and may not be set to "0" when using this option, see Section 10.8.3.8, "Area: Hotline".
- "Hotline": The hotline number is called directly after the receiver is lifted at the telephone in question.

In the **Hotline** drop-down list, you can set the hotline index (hotline number) to be used at the relevant station.

Hotline numbers for the indexes and delay intervals can be set via **System settings**.

To change these settings, click on the arrow symbol after Hotline.

Payload Security

If this flag and the **SPE support** system flag are activated, the Signaling & Payload Encryption (SPE) feature is supported for the selected subscriber(s). This means that the signaling and payload data is encrypted for this/these subscriber/s.

The subscribers must have one of the following telephones for this: OpenStage CorNet-IP (HFA), optiPoint 410 (not: optiPoint 410 entry, optiPoint 410 economy), optiPoint 420 (not: optiPoint 420 economy).

OpenStage TDM features an option for indicating whether or not part of a connection path to an IP station is encrypted (off = no information is displayed).

For OpenStage TDM it is not possible to encrypt the signaling and voice data along the complete connection path.

The payload security setting does not work for any other telephones.

8.2.2.1 Area: Dialing method, DP/DTMF

The signaling method (**DP**=pulse dialing, **DTMF**=Dual Tone Multi Frequency) used at the terminal in question is configured here. This feature is only available for analog lines. If a system telephone is connected, this item is deactivated. Digital phones default to DTMF. DTMF must be activated for ports configured as answering machines.

See also:

- Section 8.1, “Station selection”, on page 8-2
- Section 8.2, “Station parameters”, on page 8-3
- Section 8.2.1, “Station view: Flags”, on page 8-5
- Section 8.2.3, “Station view: Workpoint Client”, on page 8-20
- Section 8.2.4, “Station view: Groups”, on page 8-24
- Section 8.2.5, “Station view: Forwarding”, on page 8-25
- Section 10.8.1, “Flags”, on page 10-178
- Section 10.8.3, “System settings”, on page 10-195
- Section 10.9.5, “Paging”, on page 10-254

8.2.3 Station view: Workpoint Client

Workpoint Client is used to define the parameters for an IP terminal, e.g., the IP address for an H.323 or SIP client.

8.2.3.1 Area: System Client

Status message flag

This flag activates the “keep-alive” mechanism for system telephones.

If **Status message** is enabled, the status of system telephones can be determined with the HiPath 3000 Manager. When a system telephone is dropped, it is flagged as “inactive” in the CDB after 4 minutes. When the CDB of the system is read, the status can be queried via **Settings | Set up station | Subscriber** in the **Status column**. In addition, the status can also be determined via Maintenance | Station Status.

The flag must not be enabled when setting up a system telephone as a home client or when using the “Short-Hold” feature (see Edit PSTN partner). Disabling this flag reduces the message traffic between the HG 1500 boards and the system telephones.

Authentication active flag

You can define here whether this client requires authentication at the LAN card in order to be used. This is specially relevant in the case of clients who are not on the internal LAN but who are dialing in from the outside.

Password

If authentication has been activated, enter the password for this client here and confirm your entry by repeating it.

Station type, Mobile, Non-mobile, Mobile blocked

A Mobile Workpoint Client (**Mobile** option) is not assigned to any IP terminal. The call no. of a Mobile Workpoint Client can be used by a subscriber to log on to any IP terminal (that permits this) via the logon procedure (*9419) (provided the option **Mobile blocked** is not activated).

The feature is only supported from the third station port onwards.

For a non-mobile Workpoint client (**Non mobile** option), by contrast, the call no. is permanently assigned to an IP terminal.

The non-mobile profile is needed for the initial logon (Home Logon) of an IP terminal. Mobile Workpoint Clients may not be used for the home logon.

If the **Mobile blocked** option has been activated for a Workpoint Client, a subscriber cannot log on with a mobile Workpoint Client at that IP terminal.

When using a WLAN2 phone, the option **Non mobile** must be set before registering the WL2 phone with the communication system.

Redundancy Destination

The redundancy concept takes effect in cases where an application fails. The HFA client is then forwarded to the redundant gatekeeper defined here. In order to define a redundant gatekeeper, the Redundancy Service Application (RSA) must be running in a HiPath 5000 network.

IP Address

Specify the IP address of the redundant gatekeeper for HFA clients here.

IP Address

Enter the IP address of the standby system.

8.2.3.2 Area: S0 / H.323 / SIP Client

In order to protect the communication system against SIP attacks from the LAN and the Internet, the following behavior is predefined for setting up a SIP client:

- The “Authentication active” flag is activated by default.
- A password is generated automatically with random characters in the “Password” and “Validate password” input fields. The administrator cannot read this password and is hence required to change it explicitly. The password has to be “strong” and with a length from 8 to 20 characters.
- The `SIP - <extension call number>` string is filled automatically into the “UserID” input field.

Authentication active flag

You can define here whether the client requires authentication at the LAN card in order to be used. This is specially relevant in the case of clients who are not on the internal LAN but who are dialing in from the outside.

Password/Validate password

If authentication has been activated, enter the password for the client here and confirm your entry by repeating it.

UserID

Enter the user account of the client here.

Realm

Enter the realm of the client here.

IP Address

Before you start configuring clients in the administration program, you will need to determine the IP addresses of the client PC involved. In cases where a client is operated at the gatekeeper, this overhead is not required, since the gatekeeper handles the allocation of call numbers to IP addresses. Consequently, the IP address 255.255.255.255 is configured for clients that are operated at the gatekeeper.

The IP address must be unique within the network . Any new IP address to be configured should therefore be “pinged” before it is assigned. If the IP address responds, it should not be assigned again.

Fixed IP address

Entering a fixed IP address ensures that only one H.323 client can log on to the system with this IP address. If this flag is activated, the IP address and the call number are verified. If this flag is not activated, only the call number is verified.

As of HiPath 3000 V9, H.323 clients are no longer supported.

SMG register

Small Media Gateway register. If this flag is activated, this client can also register at an SMG.

Analog adapter connected

This flag must be activated when an analog station is connected to HiPath 3000 via AP 1120 H.323 and HG 1500. The analog station can make unrestricted use of the HG 1500 features.

If this flag is activated for an AP 1120 SIP, the features are restricted for the analog station. The analog station is able to participate in the “Transfer a call” function passively (accept a transferred call) but not actively (transfer a call).

See also:

- Section 8.1, “Station selection”, on page 8-2
- Section 8.2, “Station parameters”, on page 8-3
- Section 8.2.1, “Station view: Flags”, on page 8-5
- Section 8.2.2, “Station view: Activated features”, on page 8-16
- Section 8.2.4, “Station view: Groups”, on page 8-24
- Section 8.2.5, “Station view: Forwarding”, on page 8-25
- Section 9.19.10, “Maintenance | Station Status”, on page 9-51
- Section 10.2.1, “Subscriber”, on page 10-12
- Section 10.10.6, “Edit PSTN partner”, on page 10-315

8.2.4 Station view: Groups

Groups can be used to list all the groups in which the selected station is a member.

8.2.4.1 Hunt groups table

This table lists all hunt groups to which the selected stations belong. To edit the Groups/Hunt groups, click on the arrow symbol after the number.

8.2.4.2 Team/Top table

This Team/Top table lists all Team/Top groups to which the selected stations belong. MULAPs belonging to the listed Team/Top groups are not shown here. To edit Team/Top, click on the arrow symbol after Team/top

8.2.4.3 Area: Class of service groups

The class of service (COS) groups for day and night of the selected station are shown here. Select a COS group for day or night from the drop-down list to assign it to the station. To edit the COS groups, click on the arrow symbol after Class of service groups.

8.2.4.4 Area: Call pickup groups

This area shows the call pickup group in which the selected station is a member and the other members of that group. To assign a station to a call pickup group, select the appropriate call pickup group from the drop-down list. To edit the call pickup groups, click on the arrow symbol after Call pickup groups.

See also:

– Section 8.1, “Station selection”, on page 8-2
– Section 8.2, “Station parameters”, on page 8-3
– Section 8.2.1, “Station view: Flags”, on page 8-5
– Section 8.2.2, “Station view: Activated features”, on page 8-16
– Section 8.2.3, “Station view: Workpoint Client”, on page 8-20
– Section 8.2.5, “Station view: Forwarding”, on page 8-25
– Section 10.6.1, “Call Pickup”, on page 10-126
– Section 10.6.4, “Groups/hunt groups”, on page 10-134
– Section 10.6.8, “Team/top”, on page 10-145
– Section 10.7.1, “Station”, on page 10-158
– Section 10.7.2, “Day or Night”, on page 10-159

8.2.5 Station view: Forwarding

Forwarding can be used to show the status of any call forwarding that may have been set for the selected station. Under **Call forwarding** you can view whether the station has been forwarded to another station and/or is the destination of call forwarding itself.

8.2.5.1 Area: Call forwarding

The current status of the set call forwarding is shown under **Status**. One of three forwarding methods can be set here (External, Internal or All). If the field after status is empty, the station has not enabled any call forwarding.

Under **Forwarding destination from**, you can view all the (internal) stations that have set the currently selected station as a call forwarding destination.

8.2.5.2 Area: Ringing group

Under **Stations included** you can view all the stations that have currently been added by the selected station to the answer group.

Connection of shows all the stations that have currently added the selected station to an answer group.

8.2.5.3 Area: Call forwarding

The call forwarding details for the selected stations are shown in this field. Use the drop-down list to select one call dest. list each for **Day**, **Night** and **Internal**, respectively. In the fields below the drop-down lists, the currently defined call dest. lists are displayed. To edit call destination lists, click on the arrow symbol after Call forwarding.

See also:

- Section 8.1, “Station selection”, on page 8-2
- Section 8.2, “Station parameters”, on page 8-3
- Section 8.2.1, “Station view: Flags”, on page 8-5
- Section 8.2.2, “Station view: Activated features”, on page 8-16
- Section 8.2.3, “Station view: Workpoint Client”, on page 8-20
- Section 8.2.4, “Station view: Groups”, on page 8-24
- Section 10.6.3, “Call forwarding”, on page 10-130

8.2.6 Station view: BRI (only in the USA)

You can use **BRI** to set the parameters for BRI stations.

If no TMQ4 board has been configured, all fields of the **BRI** tab will be grayed out.

CO/Protocol

This field allows you to choose the protocol for the BRI trunk line connected to the system. Protocols can be selected via the drop-down list .

SPID setup

When you order ISDN BRI primary directory service, your telephone company provides a SPID (Service Profile Identifier) for all telephone numbers you have configured. The SPIDs are sent with your ISDN order form.

The SPID has between 8 and 14 digits and acts as a terminal ID for the central office. The SPID references a particular location in the CO memory where the relevant details of your service are stored. You can enter up to two SPIDs per BRI line.

To enter the SPID numbers for each port, first select the slot/port in the drop-down list, and then enter the SPID. For example, a SPID could include an area code, a prefix, a number, and a four-digit suffix.

FIN for message waiting

The Feature Identification Number (FIN) is provided by your telephone company. Entering this number in this field enables stations associated with ISDN primary directory numbers to receive message waiting on and off commands from a CO-based voicemail system via BRI lines. This field must be completed manually.

CAID or PDID setup

PDID (Phantom Direct Identifier) numbers are used with the DMS 100 protocol. CAID (Call Appearance Identifier) numbers are used with all other protocols. These numbers should be entered in the fields provided.

CAID number corresponds to a “button” in your telephone company’s CO. This button is assigned to the DID number of a specific station. Up to 64 buttons may be configured for each BRI line. Typically buttons one through forty-four are used for trunk lines. Buttons forty-five through sixty-four are used for feature codes.

Phantom numbers are used by the DMS 100 system for trunk lines. The PDID number is the DID number for the station in question. You can specify the DID number for the station plus other numbers that should also be signaled if the first number is busy.

Each station can be assigned a maximum of four CAID or PDID numbers.

See also:
– Section 8.1, “Station selection”, on page 8-2 – Section 8.2, “Station parameters”, on page 8-3

8.2.7 Station view: Template Editor

For standard operation, no change in country-specific pre-settings is necessary in the templates!

If you need to make changes to the templates in specific cases, note that you will need to ensure the consistency of the modified data yourself!

See also:
– Section 8.1, “Station selection”, on page 8-2 – Section 8.2, “Station parameters”, on page 8-3 – Section 10.4.7, “Trunks	Parameter/Template Editor”, on page 10-72

8.2.8 Station view: ISDN flags

You can use the **ISDN flags** mask to define protocols for the individual ISDN PRI or CorNet lines listed under **Trunks**.

A description of the fields in the dialog box can be found under Trunks | Parameter/ISDN flags.

See also:
– Section 8.1, “Station selection”, on page 8-2 – Section 8.2, “Station parameters”, on page 8-3 – Section 10.4.3, “Trunks	Parameter/ISDN flags”, on page 10-53

9 File menu

HiPath 5000 RSM/AllServe – New	HiPath 3000 – New	HiPath 5000 RSM/AllServe Server – Delete	HiPath 3000 – Transfer	HiPath 5000 RSM/AllServe Server
New
Open
Save Customer Database
Save Customer Database As
Close
Output
Compare Customer Database
Convert
Append CDB to APS
Load APS texts
Print / Print Preview
Printer Setup
Output MDF Plan
Generate System Info Files

Table 9-1 File menu

Transfer • Transfer	Communication • Transfer	Communication	Maintenance – Maintenance		Event Log – Maintenance	Restart/Reload – Maintenance	Out of Service – Maintenance	Base Station Status (not in the USA) – Maintenance	Trunk Status – Maintenance	Trunk Error Counter – Maintenance	Call Monitoring – Maintenance	Station Status – Maintenance	V.24 Status – Maintenance	Card status – Maintenance	IVM (only if an IVM card is plugged in) – Maintenance	IVM: Language selection – Maintenance	IVM: Reset passwords – Maintenance	IVM: Initialize mailboxes – Maintenance	IVM: Change super user password – Maintenance	IVM: Mailbox configuration (as of IVM Version 2) – Maintenance	IVM: Mailbox configuration: General – Maintenance	IVM: Mailbox configuration: Message call – Maintenance	IVM: Mailbox configuration: Substitute – Maintenance	IVM: Mailbox configuration: COS – Maintenance	IVM: Mailbox configuration: Personal week plan – Maintenance	IVM: Mailbox configuration: E-mail notification – Maintenance	IVM: Mailbox Configuration: Automatic Call Forwarding – Maintenance	IVM: Execute file operations – Maintenance	IVM: Execute file operations: Display Statistical Data – Maintenance	EVM – Maintenance	EVM – Maintenance	EVM: Initialize mailboxes – Maintenance	EVM: Execute file operations – Maintenance	OpenStage Phones: Event Log – Maintenance	OpenStage Phones: SW distribution – Maintenance	OpenStage Phones: Trace • Transfer	Communication	Security – Security	User administration – Security	Protocol • Transfer	Callback connection • Transfer	Loadable texts • Transfer	SW Transfer
Exit

Table 9-1 File menu

9.1 New | HiPath 3000

File | HiPath 5000 RSM/AllServe | New | HiPath 3000

The source of the customer database for a new node can be entered via **New | HiPath 3000**. A new node can only be set up after an empty server customer database has been created via New | HiPath 5000 RSM/AllServe Server.

Selecting this menu option opens the **Enter Source** dialog window.

Area: Source

Customer database file

The **Customer database file** option opens the dialog box. Open, via which you can then select the customer database to be opened.

Create offline

If you select **create offline**, an offline customer database is generated. After clicking **Next**, the Enter node data dialog box opens.

Load from system

The **load from system** option opens the dialog box Transfer, via which the customer database can be transferred from the communication system.

Copy netwide data to node

If this option is activated, the service and substitution codes from the first created CDB are copied to all other CDBs in the networked system.

Enter node data

The **Enter node data** dialog box can be used to configure customer and system-specific data for the customer database to be generated.

See also:
– Chapter 9, “File menu” – Section 9.2, “New	HiPath 5000 RSM/AllServe Server”, on page 9-4 – Section 9.5, “New”, on page 9-10 – Section 9.6, “Open”, on page 9-11 – Section 9.19, “Transfer”, on page 9-25

9.2 New | HiPath 5000 RSM/AllServe Server

File | HiPath 5000 RSM/AllServe | New | HiPath 5000 RSM/AllServe Server

An empty Server NET file is created via **New | HiPath 5000 RSM/AllServe Server**.

Selecting this menu option opens the **New Server** dialog window.

An empty Server NET file can be created as soon as a name is entered. A new structure, via which the System View/Net View and Station View can be configured, is created in the menu tree (see Settings | Netwide Data). The source of the customer database for a new node can be entered here via New | HiPath 3000.

Area: Data

Name

A name is entered here for the network.

Version

The software version can be selected here.

Country version

The country version can be selected here.
See also HiPath 3000 Service Manual.

Add new node

If the **Add new node** option is enabled, the dialog box Enter Source (**) opens on clicking** Next-New | HiPath 3000.

Warning:
This generation of a HiPath 5000 RSM/AllServe server **CANNOT** be loaded on a running HiPath 5000 server.
To do this, proceed as follows:

- Power up HiPath 5000 without the respective system CDB
- Transfer this HiPath 5000 to HiPath 3000 Manager via Transfer | HiPath 5000 RSM/AllServe Server, **Server->Manager** button
- Add new nodes via New | HiPath 3000

See also:

- Section 5.1, “Starting up a New HiPath 5000 RSM/AllServe System”, on page 5-2
- Chapter 9, “File menu”
- Section 9.1, “New | HiPath 3000”, on page 9-3
- Section 9.5, “New”, on page 9-10
- Section 10.1, “Settings | Netwide Data”, on page 10-2

9.3 Delete | HiPath 3000

File | HiPath 5000 RSM/AllServe | Delete | HiPath 3000

The **Delete | HiPath 3000** option is used to delete an existing node from the customer database.

Selecting this menu option opens the **Delete node** dialog window.

Node

All nodes are displayed in the list. Select the nodes to be deleted from the list. On clicking **OK**, the selected nodes are deleted.

See also:
– Chapter 9, “File menu” – Section 9.1, “New | HiPath 3000”, on page 9-3

9.4 Transfer | HiPath 5000 RSM/AllServe Server

File | HiPath 5000 RSM/AllServe | Transfer | HiPath 5000 RSM/AllServe Server

Transfer | HiPath 5000 RSM/AllServe Server is used to load the server configuration to HiPath 3000 Manager and to transfer the modified configuration back to the server.

Area: Security

Change password

Opens the **Change password in system** dialog, via which the current password being used in all nodes and in the server can be modified. Changes are implemented immediately in all nodes and in the server.

User administration

Opens the Security | User administration dialog, where the user administrator can define new users, assign them to a user group, and also delete existing users. Changes are implemented in all nodes and in the server.

Area: HiPath 5000 RSM/AllServe Server

Area: Server

A server computer can be specified in this field. If this computer is not available, the error message **PC not found!** is displayed. If the server software has not been loaded on this computer, the error message **HiPath 5000 RSM/AllServe server not installed on this PC!** is displayed.

Browse

The system to be used as the server can be selected via Browse.

Area: Update server from systems

System->Server

Pressing the **System->Server** button loads the customer data memory from the individual nodes to the server. The data is then loaded from the server to the main memory of the PC (this corresponds to the **Server->Manager** option).

Area: Read/write database

Server->Manager, Manager->Server

Server->Manager is used to transfer the customer database from the server to the main memory of the PC.

Manager->Server is used to load the active customer databases from the PC to the server and then automatically to the appropriate nodes.

The PC and the server can be the same machine. Depending on the communication system, the transfer can take between two and six minutes.

Note that a read is always implemented first in order to have an error-free customer database even if a transmission error should occur.

When a customer database is downloaded from the communication system, it is always assigned the file name HiPathServerDB.net, and the node customer database is named HiPathServerDBx.kds (where x corresponds to the number of the node in question).

Delta mode

Delta mode can only be activated if a CDB is already loaded in your PC's main memory.

When **Delta mode** is activated, only changes made since the customer database was last downloaded are written to the communication system. If, for example, only a station name is changed, then the transmission time is drastically reduced.

Hardware

Pressing the **Hardware** button causes the data of a particular memory area (ROM = Read Only Memory) of the communication system to be overwritten by the customer database. This data primarily consists of hardware settings that are not to be changed by HiPath 3000 Manager.

It makes sense to select this field when exchanging the motherboard or when there are changes in the HW configuration. Once the customer database has been loaded, the communication system implements a hard restart, which synchronizes port allocation in the communication system with the customer data that has just been imported.

The following data is overwritten:

- Baud rate of the V24 interfaces
- Call forwarding destinations in the CO
- Volume setting of the system telephone (loudspeaker and headset)
- Display setting of the system telephone
- Ringer volume of the system telephone
- Sent or received info texts
- Telephone type, by port

- Card type, by slot
- Registration status of the mobile telephones
- Serial number of mobile telephones
- ACD port assignment for ID recognition

Call charges

Pressing the **Call charges** button causes the contents of a particular memory area (RDI = ReaD or Init) of the communication system to be overwritten by the customer database. This data contains values that can be only read or initialized by HiPath 3000 Manager.

It makes sense to select this field when exchanging the motherboard so that all data can be completely taken over or when resetting the following data in HiPath 3000 Manager:

- Call charges
- Counter for the features activated in the communication system
- Station code lock

The following data is also overwritten:

- External call forwarding destinations
- Activated call forwarding by station
- Messages sent (message waiting)
- Call forwarding destinations
- Codeword for enabling the mobile telephone
- Cordless base station data

Area: Add/Delete Nodes

Add Node, Delete Node

These buttons are only enabled when nodes have been added or deleted. It is only via these buttons that the changes made are also permanently implemented in the HiPath 5000 server.

See also:

- Section 5.1, “Starting up a New HiPath 5000 RSM/AllServe System”, on page 5-2
- Chapter 9, “File menu”
- Section 9.2, “New | HiPath 5000 RSM/AllServe Server”, on page 9-4
- Section 9.19, “Transfer”, on page 9-25
- Section 9.19.36, “Security | User administration”, on page 9-103

9.5 New

File | New

An empty CDB is created by selecting **New**.

The CDB generated in this manner has no cards inserted, i.e., the card configuration must be generated under **Cards**. Only then do station and line ports become visible in the corresponding dialog boxes.

To upload the customer database from the PC to the communication system, the card configuration in the Software settings (**System status | System-wide**) must match the actual hardware plugged into the system. If you require an actual status of the hardware, trunks, or extensions, the customer database must be downloaded from the communication system to the PC.

If you upload an automatically created customer database, you must reset the communication system.

Customer data and system-wide

Selecting **New** from the File menu opens a wizard that allows you to create a new customer database automatically.

You can enter customer-specific information in the **Customer data** dialog box, which appears when you select this item.

You can define system-specific information in the **System-wide** dialog box, which appears when you click the **Next** button.

See also:

- Chapter 9, “File menu”
- Section 10.10, “Settings | Network”, on page 10-299
- Section 11.1, “System-wide”, on page 11-2
- Section 11.1.1, “Cards”, on page 11-3

9.6 Open

File | Open customer database

The **Open customer database** dialog box allows you to open a customer database file on your PC's hard drive or on a floppy disk.

Once you have opened a customer database, the name of that database is displayed in the title bar of the application window. This database is now the "active" or "current" database, which means that any changes you make will apply to this customer database.

Now you can edit the customer database "offline", i.e., the changes that you make do not affect your communication system as yet. The changes do not become effective until you have transferred the modified CDB back to the communication system. Make sure that you also save your changes locally on your hard disk or a diskette.

If you commission authorized service personnel to change the CDB for you via remote service, be sure to the CDB on your hard disk or on a data medium after this has occurred.

Look in:

By default, the folder set via **Options | Program options General** is searched for files. You can change the folder to open a saved CDB.

File name

Name of the CDB. Any customer database that you download from a communication system to your PC will be called **lastload.kds**.

File type

For a description of the various file types, see Section 2.5, "File Types", on page 2-15.

If you select **All file types (*.*)**, all the files which can be opened are displayed.

Notes

This field displays notes that were stored when saving the file.

Info

This field is used to display the customer name, system type, APS stamp and the date when the selected customer database was last saved.

See also:

- Section 2.5, “File Types”, on page 2-15
- Chapter 9, “File menu”
- Section 9.9, “Close”, on page 9-15
- Section 13.1.1, “Program options General”, on page 13-3
- HiPath 3000/5000 Service Manual, Save customer data

9.7 Save Customer Database

File | Save customer database

The active CDB can be saved in file via **Save customer database**. The file extension is always ***.cdb**.

When you are saving the CDB for the first time, the dialog box Save Customer Database As is displayed so that you can enter the file name.

If the customer database was manually stored or was stored by the communication system by means of the automatic store function (see Program options General), it can no longer be loaded from the PC into the communication system in Delta mode. If you use Delta mode, the changes that you made before you saved will not be transferred.

See also:

– Section 2.5, “File Types”, on page 2-15
– Chapter 9, “File menu”
– Section 9.8, “Save Customer Database As”, on page 9-14
– Section 13.1.1, “Program options General”, on page 13-3

9.8 Save Customer Database As

File | Save customer database as

The active CDB can be saved under a different file name by using **Save customer database as**. You can then specify the name and storage location of the file.

> ⚠ If the customer database was manually stored or was stored by the communication system by means of the automatic store function (see Program options General), it can no longer be loaded from the PC into the communication system in Delta mode. If you use Delta mode, the changes that you made before you saved will not be transferred.

Save

Similarly, the default storage location is the folder that was set using **Options | Program options General**. You can optionally change the folder and specify some other storage location.

File name

The name of the CDB. Any customer database that you download from a communication system to your PC will be called **lastload.kds**.

File type

For a description of the various file types, see Section 2.5, “File Types”, on page 2-15.

Notes

This field can be used to enter notes which are then stored with the saved customer database.

Info

This field is used to display the customer name, system type, APS stamp and the date when the selected customer database was last saved.

See also:

- Section 2.5, “File Types”, on page 2-15
- Chapter 9, “File menu”
- Section 9.7, “Save Customer Database”, on page 9-13
- Section 13.1.1, “Program options General”, on page 13-3

9.9 Close

File | Close customer database

The **Close customer database** menu item can be used to close the active customer database.

Please note, however, that it is not necessary to close the current customer database or to exit the HiPath 3000 Manager before opening a new CDB. When you open a new CDB, the active CDB is closed automatically. This also applies on exiting the program. If you have made changes to the customer database, you will see a message that allows you to save the changes that you have made.

See also:

- Chapter 9, “File menu”
- Section 9.6, “Open”, on page 9-11
- Section 9.20, “Exit”, on page 9-112

9.10 Output

File | Output customer database

Output customer database can be used to import a CDB as a text file into an editor (e.g., Wordpad). The text can then be edited and printed via the print function of the editor. Any changes made in the text file have no effect on the CDB.

In order to output a CDB, you must first select the desired CDB. This can be done via a dialog box, which is similar to the one for Open.

The CDB can also be output on a PC or sent to a printer via the System Administration EC 2 using the V.24 interface of the communication system.

See also:

- Section 2.5, “File Types”, on page 2-15
- Chapter 9, “File menu”
- Section 9.6, “Open”, on page 9-11

9.11 Compare Customer Database

File | Compare customer database

The contents of two customer databases can be compared by using the **Compare customer database** function. The result of the comparison is imported as text in an editor (e.g., Wordpad). This text can then be edited and printed by using the print function of the editor. Any changes made in the text have no effect on the CDB.

If you have made changes to a CDB, and saved it under a different file name, you can use this feature to compare the old and the new files. What you then have is a file containing only the changes to the CDB, i.e. a delta file. Please note, however, that the delta file will not contain all the changes that were made. For example, the options in the right half pane under Settings | System Parameters | Flags are not evaluated. The delta file contains a paragraph in its header in which the compared customer database names and the creation data are listed.

The delta file does not include all changes at present!

In order to compare two customer databases, you must first select the two databases that you want to compare. This can be done via separate dialog boxes, which are similar to the one for Open.

See also:

- Section 2.5, “File Types”, on page 2-15
- Chapter 9, “File menu”
- Section 9.6, “Open”, on page 9-11

9.12 Convert

File | Convert customer database

There are two procedures for conversion:

- Procedure 1: Upgrading a HW configuration with the same SW version
- Procedure 2: Upgrading a SW Version for compatible HW configurations

During a conversion procedure, only one type of conversion is carried out. If both types are required, conversion has to be activated twice.

Procedure 1: Upgrading a HW configuration with the same SW version

The following upgrades are supported:
- Hicom 150 E Office Point to Hicom 150 E Office Com
- Hicom 150 E Office Com to Hicom 150 E Office Pro
- HiPath 3350/HiPath 3300 to HiPath 3550/HiPath

For this purpose the stored old customer database is converted into a customer database created offline.

Only the following bulk data is transferred during conversion:

Station:	DID call number
	Internal call number
	Name
	Station flags
Trunks:	Code
	Routes
	Line flags
Routes:	Codes
	Route names
	Associated lines
	Routing parameters

Table 9-2 Language conversion bulk data

LCR:	Codes & Flags
	Classes of service
	Dial plan
	Route tables
	LCR - Time plan
	Dialing rules table
Classes of service:	Station data
	Classes of service day/night
	Allowed/Denied numbers
	CON matrix
	Group assignment
System parameters:	Complete
Call charges:	Output format
	Factors
	Account codes

Table 9-2 Language conversion bulk data

All non-convertible data are assigned the default values of the respective communication system. The numbering plan is taken over 1:1, and no default call numbers exist.

Procedure 2: Upgrading a SW Version for compatible HW configurations

Generally, data is not lost with this type of upgrade.

Exceptions:

- When upgrading to HiPath 3000/5000 V9 or HiPath 2000 V2/HiPath OpenOffice EE, the node number must be entered under **Settings** | **System Parameters** | **Station Flags** following CDB conversion; otherwise, IP-networked satellite systems will no longer be able to dial into the CO.
- When upgrading from Release 1.0 to Release 2.0, the system parameters “Tones and ring types” and “Time parameters” are assigned the new default values. This is because the new default values differ from the old default values.
- When upgrading from OfficeStart to HiPath 3150 or from OfficeOne to HiPath 3250, STLS2 is relocated from slot 4 to slot 1. The configured stations and/or lines are lost in the process and must be reconfigured.
- Any online station that may be present (always the last station), is lost in the process.

- In the case of optiPoint 500 Advance devices that are already connected to systems up to and including HiPath 3000 V3.0 SMR1, upgrading to HiPath V3.0 SMR3 or higher may result in problems with key assignments. After **Read CDB** (System -> PC), these key assignments must be adapted manually.

Note:
- Data which is only relevant to the new SW version is initialized beforehand.
- When upgrading from OfficePro to HiPath 37xx, the slave ports remain at the original positions (from position 251 onward). However, the converted CDB must be transferred with the hardware flag set.

Compatible HW configuration means:
- OfficeStart to OfficeStart/HiPath 3150
- OfficeOne to OfficeOne/HiPath 3250
- OfficePoint to OfficePoint
  Upgrades from OfficePoint to HiPath 3350/HiPath 3300 must be performed in 2 steps. First, a HW upgrade to OfficeCom with the same SW version and then a SW upgrade to HiPath 3350/HiPath 3300.
- OfficeCom to OfficeCom/HiPath 3550/HiPath 3500
  (independent of number of boxes)

Note:
- The above mentioned conversions also work form Hicom 150 H V1.2 to HiPath 3000 V1.2.

Importing IP client data from one or more HG 1500 CDBs

After the system CDB has been converted successfully, you can import IP client data from one or more HG 1500 CDBs. The data of the client is automatically transferred from the selected database to the converted system CDB.

The following general conditions apply:
- Importing is only possible when converting to HiPath 3000 Version 3.0.
- Only data from customer databases of HG 1500 Version 2.4 can be imported.
  If required, the CDB or CDBs must first be converted to the appropriate version using Manager I.
- Only the client data that can be uniquely assigned via the DID number and the client type is imported.

See also:
– Chapter 9, “File menu”

9.13 Load APS texts

File | Load APS texts

Load APS texts is used for exchanging variable texts in existing files. For a list of supported file types, see Section 2.5, “File Types”, on page 2-15.

Load source File

Various source files can be selected here.

Load LNG file

The corresponding LNG file can be selected here. The compatibility stamp and the hardware variant must match in this case.

Loadable texts

All fixed and variable languages are shown here in a source file. The respective variable languages can be altered in this field. The fixed languages cannot be configured as variable languages.

Save file

The file can be saved here in the required format. As of Release 3.0, the target and source files must have the same format.

Note:

– Once the function “Load APS texts” has been executed, HiPath 3000 Manager is reset. This means that the customer database file must be reloaded (“Open customer database”).

Loading the APS texts resets the HiPath 3000 Manager, which means that the customer database file must be reloaded (see Open).

See also:

– Section 2.5, “File Types”, on page 2-15
– Chapter 9, “File menu”
– Section 9.6, “Open”, on page 9-11
– Section 9.14, “Append CDB to APS”, on page 9-22

9.14 Append CDB to APS

File | Append CDB to APS

Append CDB to APS is used to append an existing CDB file (*.CDB) to an existing APS file (*.FST, *.FLI). The new file created is an APS file with CDB data.

APS - Load File

Various source files (*.FST, *.FLI) can be selected here.

CDB - Load File

The corresponding CDB file can be selected here. The compatibility stamp and the hardware variant must match in this case.

Save file

The file can be saved in the desired format here. The formats to be created depend on the source file.

Source file	Target file
*.FST	*.FST (transfer via HiPath 3000 Manager)
*.FLI	*.FLI (transfer via TFTP (TCP/IP))

See also:

- Section 2.5, “File Types”, on page 2-15
- Chapter 9, “File menu”
- Section 9.13, “Load APS texts”, on page 9-21

9.15 Print / Print Preview

File | Print
File | Print preview

The menu items **Print** and **Print preview** can be activated when the Subscriber dialog is open.

Print can be used to print out station-related data (e.g., flags, assigned class of service groups and Call Management settings) in a compressed and clear form. In addition, the user can select if the data should be output to a file (in Excel format *.csv), or to paper. The data printed out is sorted according to the algorithm selected in the table (ascending, descending, logical).

See also:

- Chapter 9, “File menu”
- Section 9.16, “Printer Setup”, on page 9-23
- Section 10.2.1, “Subscriber”, on page 10-12

9.16 Printer Setup

File | Printer setup

Printer options can be set up via **Print setup**. This opens the standard Windows **Printer setup** dialog box, in which the settings can be made.

See also:

- Chapter 9, “File menu”
- Section 9.15, “Print / Print Preview”, on page 9-23

9.17 Output MDF Plan

File | Output MDF plan

Output MDF plan is used to print main distribution frame (MDF) plans for the loaded customer database. A separate subroutine is called via **Output MDF plan**.

To print the MDF plan, open the **File | Print MDF cabling** menu or click the print icon.

General

The customer name can be specified here.

Main distribution frame

Here you can select the distributor type via the **MDF choice** menu. The MDF strip settings can be changed by using the drag and drop technique.

See also:
– Chapter 9, “File menu”

9.18 Generate System Info Files

File | Generate system info files

The **Generate system info files** menu item is used to generate the files **hcmagent.txt**, **hcmpp.txt** and **hcmsrc.txt** and to place them in the HiPath 3000 Manager folder. These files serve as control files for System Plus products. Inactive terminals and adapters are recorded in these files, together with all ports to which a call number has been assigned.

The files hcmagent.txt and hcmpp.txt have the same content.

See also:
– Chapter 9, “File menu”

9.19 Transfer

File | Transfer

The **Transfer** dialog is primarily used to load the configuration of the communication system into HiPath 3000 Manager and to transfer the modified configuration back to the communication system. Besides transferring the configuration (CDB), you can also use the Transfer dialog for Maintenance and Security / User Administration tasks.

Tabs and Dialog boxes
• Transfer	Communication – Transfer	Communication	Maintenance – Transfer	Communication	Security • Transfer	Callback connection • Transfer	Loadable texts

9.19.1 Transfer | Communication

File | Transfer | Communication

The **Communication** tab allows you to set up various types of transfers between the communication system and your PC.

The settings in the interfaces must correspond to those in the communication system.

Example:

If you select either the **Modem** or the **ISDN** options, you must enter a number via which the communication system can be accessed before a connection can be established. For example: 9,14084921234...890.
In this case, because the connection is to be set up by the automatic attendant and the standard number of the IMOD has not been changed, the connection is established from a PABX (9,) followed by the local or long-distance number and then the (...890).

9.19.1.1 Area: Access

Direct

If your PC is connected directly to the communication system, you should select the **Direct** option. To use this option, the PC must be connected to the communication system via a null modem cable.

Modem

If you have a modem connection between the communication system and your PC, select the **Modem** option. When this option is selected, the communication system displays a text box where telephone numbers can be entered.

To ensure proper functioning, the settings under Modem parameters, Modem type, and Init string might need to be adjusted (see Program options Communication).

ISDN

The **ISDN** option is only activated if the PC is equipped with an board and if **capi.dll** is installed. With this option, the communication system is accessed via a B-channel. Internally, access is provided through the second ELIC component (digital modem). The digital modem number can be configured in Transfer | Callback connection.

RMM Client

This option makes it possible to access the communication system via an RMM (Remote Management Machine) server application.

This type of access is used in remote centers for the administration of the communication system.

The RMM server application runs on a PC server and independently administers the digital and analog trunk access.

The connection between the PC and the RMM server occurs via LAN.

Call number

If you select either the **Modem**, **ISDN** or **RMM Client** options, you must enter a number via which the communication system can be accessed before a connection can be established.

RMM Server

The **RMM Client** option displays the name of the server on which the RMM server application runs. The computer name is entered in Program options Communication.

IP-HiPath

This option makes it possible to access the communication system over a LAN via the HG 1500 card or the LAN interface.

IP-IVM

This option enables LAN access to the IVM via the direct LAN connection.

IP address

In order to set up a connection, the IP address via which the communication system can be reached must be specified for the **IP-HiPath** and **IP-IVM** options.

Disconnect following action

By default, the connection is automatically terminated after an action has been implemented (e.g., **Read/write database** or **Maintenance**). It is not possible to terminate the connection for ISDN and modem connections. This allows you to execute several actions sequentially (Read customer database -> Event Log ,...).

The connection must be released manually using the **Hang up** button, or – if no additional actions are executed – is automatically ended after an adjustable time. This time can be set under Program options Communication.

Hang up

Releases/Terminates a modem or ISDN connection.

9.19.1.2 Error signaling option

If error signaling is active, incoming error messages are saved in the error file (*.err). The name of the error file can be defined in **Program Options** I **General**. If no file name is specified, the error messages are stored in the file ERRORSIG.ERR. In order to read the error file, the file must be copied and then opened with a text editor.

Here, you can also activate an acoustic error warning.

When an error is detected, and error warning is active, a pop-up window appears with an appropriate error message. The error is also indicated by an acoustic signal (every 5 seconds for approx. 1 second) and by a flashing icon (flash rate: 500 ms) in the task bar. The acoustic warning and the flashing symbol can be deactivated using the **Close** button in the pop-up window or by closing the pop-up window.

Start

If the **Start** button is pressed, HiPath 3000 Manager goes into receive mode for error messages.

Minimize

The **Minimize** button can be used to minimize HiPath 3000 Manager to an icon on the desktop.

If the communication system could not send the same error message five times in sequence (remote modem or remote PC not ready) this error message is only sent when a new error occurs.

9.19.1.3 Area: Route

PIN code

The customer can program an individual six-digit PIN code in the system administration (Remote service, Accesses). To set up a connection to a digital modem, this individual code must be entered in the **PIN code** field. The default PIN code will not work with a digital modem. This means that the customer must explicitly allow the access to the modem by entering this PIN code.

If necessary, the PIN code can be reset to the default value using the password-protected system administration function (terminal only, i.e., not HiPath 3000 Manager).

If the station PIN is reset and the customer database is loaded to the system in **Delta mode**, the PIN number in the system is not set to 00000. In order to transfer a PIN number to the communication system, delta mode must be deactivated and the **Call charges** option activated.

9.19.1.4 Area: Connection setup

When either **Modem** or **ISDN** is selected as the access, you can select between the two connection setup options (**Callback active** or **Service call via code**).

If no option is selected, this means a direct connection setup (without callback).

Callback active, Index, Suffix dialing

In this mode, the DID number of the IMOD/ELIC is dialed, and a callback password is entered for the subsequent query of the logon password. The system checks this callback password and then allows you to enter the station number to which the callback should occur (provided the password is valid). The PABX releases independently. Then the service call number and the suffix belonging to the callback password are dialed in the communication system.

The communication system can administer up to 6 different callback passwords and their associated Transfer | Callback connection.

Service call via code

This option differs from the usual callback procedure because the start of the callback isn't initiated by HiPath 3000 Manager itself, but by the selection of a code or via the service menu on the system telephone of the communication system.

For example, if the selected access method and action are **ISDN** and **Read/write database**, respectively, and if **Service call via code** is activated, pressing the HiPath 3000 ManagerSystem -> PC **button will cause** to immediately switch to receive mode and to wait for the incoming service call.

The waiting time for the system call in the service center is limited to 15 minutes and can be ended manually at any time by the service technician.

As in the case of a callback, only the destinations set up under Transfer | Callback connection (with the option of manual suffix dialing on-site) can be reached.

The service call is primarily used after the initial startup of a communication system, e.g., when the system data is not known at the remote center.

9.19.1.5 Read/write database, System -> PC, PC -> system option

Read/write database can be used to transfer the CDB from the communication system to the PC (**System -> PC**) or to load the active CDB from the PC to the communication systems **PC -> system**). Depending on the communication system, this procedure takes between two and six minutes.

Note that a read is always implemented first in order to have an error-free customer database even if a transmission error should occur.

When the CDB is downloaded from the communication system, it is always assigned the file name **lastload.kds**. In the process, all changes that were undertaken on the existing lastload.kds file are overwritten. If the existing file should be retained, it must be renamed beforehand (e.g., via Save Customer Database As).

The following options are available for applications connected to Manager E via the OLE port:

- **Read CDB with IVM**. The CDB is load with IVM.
- **Read CDB without IVM**. The CDB is loaded without IVM.

Load IVM data, System -> PC, PC -> System

If **IVM Download** is activated (default setting), the IVM data is transferred from the communication system to the PC using the **System -> PC** button. If **IVM Download** is deactivated, only the CDB is transferred.

If **IVM Upload** is activated (default setting), the IVM data is transferred from the PC to the communication system using the **PC -> System** button. If **IVM Upload** is deactivated, only the CDB is transferred.

Delta mode

Delta mode can only be activated when a CDB read from the communication system was loaded. The option has a gray background when a customer database has been loaded from the hard disk.

When **Delta mode** is active, only the changes made since the last **Read database** are written into the communication system. If, for example, only a station name is changed, then the transmission time is drastically reduced. In order to determine the delta data, the loaded/active CDB is compared with the **lastload.kds** file, which is automatically created and stored on the hard disk whenever the CDB is read.

Following every successful delta transmission, a log file is created in which the transmitted data is recorded. A dialog box is displayed to allow you to specify the name of the log file. If no name is explicitly specified for the log file, a log file named **delta.log** is generated automatically. The Log file contains a paragraph in its header in which the compared customer database names and the creation data are listed. The creation date of the reference customer database is the date on which the customer database is stored on the hard disk. The creation date of the delta customer database is the PC time at which the delta transmission was triggered.

If the database was manually stored or was stored by the communication system by means of the automatic store function (see Program options General), it can no longer be loaded from the PC into the communication system in Delta mode. If you use Delta mode, the changes that you made before you saved will not be transferred.

Only the customer database that is currently loaded in the communication system should be transmitted. An older customer database may not be transmitted into the communication system in this manner.

Call charges

Activating the **Call charges** option causes the contents of a particular memory area (RDI = ReaD or Init) of the communication system to be overwritten by the customer database. This data contains values that can be only read or initialized.

It makes sense to select this field when exchanging the motherboard so that all data can be completely taken over or when resetting the following data:

- Call charges
- Counter for the features activated in the communication system
- Station code lock

The following data is also overwritten:

- External call forwarding destinations
- activated call forwarding by station
- Messages sent (message waiting)
- Call forwarding destinations
- Codeword for enabling the mobile telephone
- Cordless base station data

Hardware

Activating the **Hardware** option causes the data of a particular memory area (ROM = Read Only Memory) of the communication system to be overwritten by the customer database. To the greatest possible extent, this data is hardware settings that are not to be changed.

Selecting this field can be useful when replacing the motherboard or when modifying the HW configuration. Once the customer database has been loaded, the communication system implements a hard restart which synchronizes port allocation in the system with the customer data which has just been imported.

The following data is overwritten:

- Baud rate of the V.24 interfaces
- Call forwarding destinations in the CO
- Volume setting of the system telephone (loudspeaker and headset)
- Display setting of the system telephone
- Ringer volume of the system telephone
- Sent or received info texts
- Telephone type, by port
- Card type, by slot
- Registration status of the mobile telephones
- Serial number of the mobile telephones
- ACD port assignment for ID recognition

9.19.1.6 Online option

If you want to access the communication system quickly, you can use Online mode. In this mode, system telephone operating elements are displayed on the screen. You can use these to emulate an Assistant T terminal (a telephone from which you can program the communication system). Your changes take effect immediately. It is not necessary to download and then upload the CDB. To use this feature, you must know how to program using **Assistant T**.

The entire online protocol is recorded in a log file. A dialog box is displayed to allow you to specify the name of the log file. If no name is explicitly specified for the log file, a log file named**delta.log** is generated automatically.

The changes made in online mode to the CDB in the communication system have no effect on any loaded or active CDB in HiPath 3000 Manager.

In order to configure features for each individual station (e.g. associated call forwarding for a dummy port), the items **DISA class of service** and **Associated dialing/services** (see Station view: Flags) must be enabled for the online port.

The online port features can be administered via the last station port of the communication system:

- Station 40 with call no. 70 in the Hicom 150 E Office Point/One/Start
- Station 124 without call no. in HiPath 3150, 3250
- Station 376 with call no. 687 in the Hicom 150 E Office Com, HiPath 3500, 3550
- Station 376 without call no. in HiPath 3300, 3350

If the communication system was accessed in online mode, the last station port is identified in HiPath 3000 Manager with **ONLINE CARD XX-1**.

Online mode is no longer possible once the last station port has been assigned to a card.

In Online mode, the user interface is identical to that of **Assistant T**. The system telephone shown provides an eight-line display, three control keys, and eight function keys. A loudspeaker and service keys are also available. You can click the buttons with the mouse, or use your PC keyboard to make entries.

The function keys F1 through F12 on your PC keyboard have the following functions:

Key	**Seizure**
F1	Online Help
F2	DSS key 2
F3	DSS key 3
F4	DSS key 4
F5	DSS key 5
F6	DSS key 6
F7	DSS key 7
F8	DSS key 8
F9	DSS key 1
F10	ENB enter key
F11	Service key
F12	Loudspeaker key

9.19.1.7 APS transfer option

If you select the **APS transfer** option you can transfer the entire system software from the PC to the communication system. You use the 'APS transfer' feature to replace the Application Processor System (APS) in a communication system from a service center (remote service). APS transfer is implemented in the same way as downloading a customer database. APS transfer can be completed either directly or remotely using an analog or ISDN modem.

When the APS is transferred to a system in a different time zone, the APS is switched at the time specified in the remote communication system.

If the **APS transfer** field has a gray background, the FST file was not opened correctly.

9.19.1.8 Maintenance option

On selecting the **Maintenance** option, further dialogs to set parameters for remote maintenance of the communication system are displayed (see Section 9.19.2, "Transfer | Communication | Maintenance").

9.19.1.9 Security option

The **Security** option displays the **Change password**, **User administration** and **Protocol** buttons.

Change password

When you select this option, a **Change password in system** dialog box is displayed. This dialog box allows you to change the current password used in the communication system. The change is immediately executed.

User administration

When you select this option a dialog Security | User administration is displayed where the user administrator can define new users and assign them to a user group. Existing users can be deleted.

Protocol

When you select this option, the Security | Protocol dialog box is displayed, where the revisor can control the security data records.

9.19.1.10 Transfer texts option

Transfer texts can only be activated after an LNG (language) file has been opened via **File | Open customer database**. You can use this option to set the “Transfer texts” mode for loading languages. The **Transfer texts** button appears.

Clicking the **Transfer texts** button initiates the loading of the languages that were selected earlier via the Transfer | Loadable texts dialog. The system first checks whether the text language stamp and the system stamp are identical. The text language transfer is rejected if the stamps differ. If they are identical, the communication system switches to receive mode, and the required RAM is made available. The data is then transferred. The communication system automatically performs all additional steps once the transfer is complete.

See also:

– Section 2.3.2, “Online mode”, on page 2-9
– Section 2.3.4, “Security (User administration)”, on page 2-10
– Section 9.19, “Transfer”, on page 9-25
– Section 9.19.2, “Transfer | Communication | Maintenance”, on page 9-36
– Section 8.2.1, “Station view: Flags”, on page 8-5
– Section 13.1.1, “Program options General”, on page 13-3
– Section 13.1.3, “Program options Communication”, on page 13-8

– HiPath 3000/5000 Service Manual, Boards
– HiPath 3000/5000 Service Manual, Teleservice
– HiPath 3000/5000 Service Manual, APS transfer
– HiPath 3000/5000 Service Manual, Save customer data

9.19.2 Transfer | Communication | Maintenance

File | Transfer | Communication | Maintenance

Maintenance is used to change the settings that are needed for remote maintenance of the communication system. Remote maintenance is possible through direct access (V.24 interface) or through Callback.

To see the Maintenance dialogs:

1. Select **File/Transfer**.
2. Switch to the **Communication** tab.
3. Select the **Maintenance** option.
4. Click the **Maintenance** button.

Tabs and Dialog boxes
• Maintenance		Event Log • Maintenance	Restart/Reload • Maintenance	Out of Service • Maintenance	Base Station Status (not in the USA) • Maintenance	Trunk Status • Maintenance	Trunk Error Counter • Maintenance	Call Monitoring • Maintenance	Station Status • Maintenance	V.24 Status • Maintenance	Card status • Maintenance	IVM (only if an IVM card is plugged in) – Maintenance	IVM: Language selection – Maintenance	IVM: Reset passwords – Maintenance	IVM: Initialize mailboxes – Maintenance	IVM: Change super user password – Maintenance	IVM: Execute file operations – Maintenance	IVM: Execute file operations: Display Statistical Data – Maintenance	IVM: Mailbox configuration (as of IVM Version 2) • Maintenance	EVM – Maintenance	EVM: Initialize mailboxes – Maintenance	EVM: Execute file operations • Maintenance	OpenStage Phones: Event Log • Maintenance	OpenStage Phones: SW distribution • Maintenance	OpenStage Phones: Trace • Maintenance	Trace Settings

9.19.3 Maintenance | | Event Log

The communication system has its own error memory in the form of a circular buffer. This error history buffer can be read via the **Event Log** option.

9.19.3.1 Event Log table

Date column

This is the date and time at which the error occurred. These dates are shown in the format day/month/year. The time is shown in the hours/minutes/seconds format.

Timestamp column

Shows the internal timestamp of the system (in hex) at which the error occurred.

Error Cl./No. column (Error Class and Number)

Errors are classified by error class (category) and error number. A distinction is made between the error classes A, B and C:

Error Class A column

This class is used to describe customer-related errors. This type of error is not signaled.

Error Class B column

Errors in this class are service-related, i.e., the errors reported can be resolved by replacing hardware or by reconfiguring the customer database in consultation with the network operator. Examples of Class B errors would be the failure of cards, individual ports on cards, or CO lines. These errors may be signaled to a service center. Class B errors are numbered as shown below.

01	Measure of HiPath 3000 Manager
09	Hardware error
12	Processor exception
15	APS transfer error
16	General error
20	Call processing error
21	Device handler error
23	Network error
26	Presence error

28	Recovery error
29	IOP error
30	LW / FW error

Error Class C column

Class C errors are development-related errors. This type of error is used for diagnosis and problem analysis by specialists. These errors are not signaled.

Slot/Port column

This column contains the slot/port where the problem occurred.

Eventlog Text column

The error is described in plain text here.

Measure column

The error handling actions defined by the flags are indicated here.

9.19.3.2 Buttons

Save

The **Save** button can be used to save the contents of the Event Log dialog as an ASCII file.

Delete Eventlog

To delete the list, click the **Delete** Eventlog button.

Read Eventlog

To read the history, click the **Read** Eventlog button. Any errors will be displayed in the table. After data has been successfully transferred, the APS stamp and customer name are displayed in the status bar. Any errors that have occurred are sorted and displayed by date and time.

See also:
– HiPath 3000/5000 Service Manual, Error messages

9.19.4 Maintenance | Restart/Reload

Restart/reload can be used to

- **restart** the entire system.
  When you restart the system, you reboot it with the database intact.
- **reload** individual cards.
  Note that a reload operation always reloads only one card at a time.

It is important to recognize that neither of these commands is equivalent to a Reload function. The Reload function would wipe out the existing database and revert to the original German default.

9.19.4.1 HXG - Remote initial startup

Slot / card, DID

To start HXG - Remote for the first time:

1. In the **DID** field, enter the relevant DID number for each HXG card (up to three).
2. Click **Accept data**.

You can now communicate with the remote HXG card via an S_0 call.

9.19.4.2 Area: System

Hard restart

If you select the **Hard Restart** option, you will restart the entire system.

9.19.4.3 Area: Reset/reload card

Slot/card, Activate Reload Card, Read card information

To start reloading an individual card:

1. Click the **Read card information button.**
2. Select the appropriate card from the **Slot/card drop-down list.**
3. Click the **Activate Reload Card button.**

9.19.5 Maintenance | Out of Service

Out of Service can be used to display all station and line ports available in the communication system.

9.19.5.1 Out of Service table

Slot/Port column

This column indicates the slot and port where the station or trunk (line) is located.

Call no. column

This is the number assigned to the port.

Name column

This is the name associated with the station or trunk.

Status column

The ports can be either **active** or **inactive** based on whether or not there is a valid telephone or trunk line connected to the port. This terminology is consistent throughout. The ports can also be **In service**, which is the default, or **Out of service from tool**, which means that they have been blocked via **Lock card**.

9.19.5.2 Buttons

Block selection, Release selection

The ports listed in the table can be blocked or released using the **Block Selection** or **Release Selection** buttons.

Ports of an IVM or HG1500 cannot be blocked.

Lock card, Release card

Entire cards can be blocked or released using the **Lock card** or **Release card** buttons. This blocks or releases all cards with listed ports. Blocking a card has the same effect as blocking all its ports.

Read Data

When you click on the **Read Data** command button, all station and line ports available in the communication system are displayed in the table.

- When blocking $U_{P0/E}$ ports, the accompanying physical port is always taken out of operation. This has as a result that when, for example, a master port is selected, the accompanying slave port is also taken out of operation.
- When individual mobile telephones of a cordless board are blocked with **Block Selection**, the entire board and therefore **all** mobile telephones are always blocked. To block individual mobile parts, change the PIN of the appropriate mobile part.
- Note that being **In Service** is not the same as being **Active**. For example, a port status might be: **Active, In Service** or it might also be **Inactive, In Service**.
- To keep from preventing Assiatant T activities, the first 2 ports are not blocked when the first SLMO/SLU is blocked.

9.19.6 Maintenance | Base Station Status (not in the USA)

Base Station Status can be used to display the status for the base stations.

9.19.6.1 Area: UPN port

All U_{PN} ports of the associated base stations are listed in the table. A specific base station for which the status is to be displayed can be selected from this table (in advance data have to be loaded).

Save

When you click on the **Save** button, the status of the **Cordless Base Stations** (BS) connected to the communication system are saved.

Read data

When you click on the **Read data** button, the status of the **Cordless Base Stations** (BS) that are connected to the communication system are read out.

9.19.6.2 Area: Base station data V1 + V2

Base station	The number of the selected base station is displayed.
Software version	The software version of the base station is displayed here.
Hardware version	The hardware version of the base station is displayed here.
Status	The status of the associated port is displayed here. Possible statuses: – Port active – Port not connected – Port blocked – Port connected, inactive – 1st expansion port for … (no. of main port) – 2nd expansion port for … (no. of main port)
Overload	Number of the overload situations on the $U_{P0/E}$ interface.
Restarts	Number of times the base station was restarted.
Delete	The counter is reset with **Clear**. The Clear button can currently not be activated; the meter is deleted each time a new query is executed.

9.19.6.3 Area: SLC16-wide

Lost Calls	Number of calls that could not be processed due to a lack of resources.
SLMC Overload	Number of overload situations on the SLC16 card. A minimum number of pool elements is not available on the SLC16 card. All incoming connections will be rejected by the SLC16 IWU until the overload situation returns to normal.
LR Roam	LR Roam counts each connection for a mobile telephone with a default PMID and located at a different SLC. Number of locate request messages that reported roaming (i.e. the current location of the mobile telephone has changed). Each time the mobile phone is switched on, a locate request is executed. If the mobile phone is switched off and switched on again in another radio cell, this meter does not execute a count.
LR Async	LR Async counts each connection for a mobile telephone with a default PMID where the SLC is unchanged. This refers to the number of locate request messages which reported layer asynchronicity (i.e. the current location of the mobile phone is unchanged). The count is always performed for the home SLC, and only if a connection is actually set up or supports the CHO with the default PMID. In addition, the criteria for a location update must be met for each connection, i.e. a LOCATE request has been received or the security procedures, authentication (and coding) have been implemented for the link.
HDLC Error	Number of uncritical HDLC error messages that were not reported to the communication system (overflow, underrun, CRC error).
CMI Version	The current Cordless version is displayed here.

9.19.6.4 Area: Base station data V2

L1/L2 Error	Number of L1/L2 errors that occurred in the base station.
Abnormal Release	Number of interrupted calls in the base station.
Calls per BS	Number of calls made via the base station (both incoming and outgoing).
Hopping Mode	CMI Version 2 systems always operate in fast hopping mode, i.e. all frequency – time slot pairs can be used. This provides for 120 duplex channels. In the case of base stations with slow hopping, only every second frequency – time slot pair can be used. This means than only 60 duplex channels are available. All cordless version 1 systems operate in slow hopping mode.

BHO Count OK	Number of successfully completed intracell handovers (bearer handovers BHO), i.e. successful transfer of the carrier frequency and/or the time slot within a radio cell. Not supported by Hicom cordless EM V2.1 and V2.2. Although the meter is not supported, the Bearer Handover feature is available.
BHO Count not OK	Number of intracell handovers that failed (bearer handovers BHO). Not supported by Hicom cordless EM V2.1 and V2.2. Although the meter is not supported, the Bearer Handover feature is available.
Intra SLC handover	Number of handover procedures within the SLC16 card. This is counted in the new base station.
Inter SLC handover	Number of handover procedures between SLC16 cards. This is counted in the new base station. Not available up until and including Hicom 150 E Office Rel. 2.2 of the Hicom 150 E Office.

See also:

– HiPath 3000/5000 Service Manual, HiPath Cordless Office

9.19.7 Maintenance | Trunk Status

The communication system logs the current status of each system trunk (line) in a table. If the status changes, the new status is entered with a time stamp. The **Trunk Status** mask allows you to view this table.

If the status changes, the new status is entered with a time stamp. The time stamp contains the time, with second accuracy, in addition to the date.

The following states are possible for each line:
- Idle
- Line-to-line connection
- Line shutdown (using lockswitch, HiPath 3000 Manager)
- Line failure

9.19.7.1 Trunk Status table

Date column

This is the date of this trunk status. The date is displayed in the format day/month/year.

Time column

This is the time of this trunk status. The time is displayed on a twenty-four-hour clock, hour/minute/second.

Slot/Port column

This column contains the slot/port where the trunk is located.

Trunk Number column

The Trunk Number column shows the call number of the trunk, i.e., the trunk access code.

Commentary column

The status of the individual trunk is displayed in the commentary.

File menu
Transfer

9.19.7.2 Buttons

Read Data

To display the trunk status, click the **Read data** button.

See also:
– HiPath 3000/5000 Service Manual, Line status

9.19.8 Maintenance | Trunk Error Counter

The **Trunk Error Counter** allows you to isolate and diagnose trunk problems.

The error messages are provided with a time stamp. In addition, the error class and the error number are also output along with the slot/port. After an error-free data transfer, the APS stamp and the customer name are displayed in the status bar.

The error message is also displayed in plain text in the Commentary column.

9.19.8.1 Trunk error counter table

Date column

This is the date of this trunk error. The date is displayed in the format day/month/year.

Time column

This is the time of this trunk error. The time is displayed on a twenty-four-hour clock, hour/minute/second.

Error categ. / no. column

This column displays the trunk error category and number.

Slot/Port column

This column contains the slot/port where the trunk is located.

Commentary column

This column displays an explanation of the error in plain text.

9.19.8.2 Buttons

Delete error counter

All error entries in the communication system are deleted via **Delete error counter**.

Read data

To display the contents of the error memory sorted by line in the table, click the **Read Data** button.

See also:
– HiPath 3000/5000 Service Manual, Line status

9.19.9 Maintenance | Call Monitoring

Call Monitoring is used for

- Monitoring the call establishing or tare down of trunk- and station ports
- Recording of special events (com_dia.h) and change of states (SUB states)
- Recording of dialed digits and transmitted calling party number.

9.19.9.1 Call Monitoring table

No column

Each column will be numbered sequentially beginning with the number 1.

Time column

Time when the event or changing of state happened in hours, minutes and seconds in the country specific time format.

Access column

Subscriber or trunk number (Slot/port) of the monitored port.

Status column

Status of the port (definition of the status in statecom.h).

The status is displayed in plain text (IDLE, CALL REQUEST, …).

Status	Meaning
Idle	Port is idle
Call Initiated	Port is ready
Overlap Sending	External sending of digits
Outgoing Call Proc	End-of-dialing
Call Request	Waiting for ALERT
Call Present	Port is ringing
Active	Port is in an active call
Hold	Port is on Hold
Disconnect Indication	Request to disconnect active call
Direct	Port is in Speaker Call/Handsfree answerback mode
Intrusion	Port is activating Override

Status	Meaning
Call Back A	Callback Stn A
Call Back B	Callback Stn B
Busy	Port is busy
Error	Port is in Error state
Disconnect PI	Wait for Disconnect from PI (Progress Indicator)
Sensor	Signal was send by Sensor
Conference Master	Conference Master
Room monitor	Port has activated Room monitoring
Paging	Port is in process of using Paging
Help Dial	Port is in process of using Associated dialing
Remote	Trunk port is used for remote administration or DISA
ACD	Universal call distribution
Silent Monitor	Port is in process of using Silent Monitoring
Unknown State	Unknown State

Event column

All Events are displayed in this column: (Definition of events in com_dia.h)

Event	Meaning
Setup	Trunk: incoming or outgoing seizure
Setup Ackn	Trunk: Seizure acknowledgment
Info	Trunk: Information (Number Digits)
Call Proc	Trunk: Unevaluated end-of dialing
Progress	Trunk: Additional Info for call setup
Alert	Trunk: Evaluated end-of dialing
Connect	Trunk: Connection of B-channel
Connect Ackn	Trunk: Acknowledgement of Connecting B-channel
Disconnect	Trunk: Request for disconnect
Release	Trunk: Acknowledgement of disconnect
Release Compl	Trunk: Connection released
Monitor On	Line/Stn: Start call monitoring.
Monitor Off	Line/Stn: (Continuation)

Event	Meaning
Off Hook	Station: Handset goes off hook
On Hook	Station: Handset goes on hook
Digit	Station: Digits are dialed

Direction column

Incoming or outgoing is displayed (definition in com_dia.h).

Direction	Meaning
Outgoing	Event to Device Handler from System software
Incoming	Event from Device Handler to System software

Info column

A maximum of 25 characters can be displayed. If en-block sending is selected, the dialed digits are displayed here.

All Monitoring information can be saved in a text file in ASCII format. This is done by clicking the ‘Save file‘ button, which opens a standard Windows dialog box in which the file name and folder can be specified.

9.19.9.2 Buttons

Start, Stop

Call Monitoring is started and stopped via the **Start** and **Stop** buttons, respectively. The dialog can only be exited after the monitoring service has been stopped.

Save

The **Save** button can be used to save the contents of the Call Monitoring dialog as an ASCII file.

Port, Read data

Call Monitoring is initiated by selecting the **Read Data** button, which reads out the port data of all available ports in the system. The selection can be made via the **Port selection** field, where the trunk and station ports are displayed and can be selected.

9.19.10 Maintenance | Station Status

Station Status can be used to query the status of the individual station (internal call number).

9.19.10.1 Area: Selection

Call no., Name, Slot/port, Read data

The **Selection** field is used to select the station, for which the status is required.

In order to do this, the internal call number of the desired station must be entered in the **Call no.** field.

After the data has been loaded from the communication system, the name of the selected station is displayed in the **Name** field, and the slot and port number to which the station is connected are shown under **Slot/port**.

Read data starts the transfer of the station data from the communication system to the HiPath 3000 Manager.

9.19.10.2 Area: Activated Features

After the data was read, the status of the activated features will be displayed here.

9.19.10.3 Area: Data

Terminal type

After the data has been read, the terminal status is displayed here.

Terminal status

After the data has been read, the terminal status (active/inactive) is displayed here.

Direct inward dialing (DID)

After the data has been read, the external call number of the station is displayed on the terminal.

Language

After the data has been read, the assigned menu language of the system telephone is displayed here.

Connection state

Idle:	The station is idle.
Off hook:	The station is off hook, but didn't dial anything yet.
Queued:	This station is in a waiting queue (e.g. waiting for an available ACD Agent).
Connected:	The station is connected to a second station, to a trunk or to a member of a group.
Hold:	The station is held by another station.
Failed:	The connection can't be established (e.g. unavailable Number dialed).
Alerting:	The station is ringing.

Connected to

In case the connection status is "connected", the number of the connected station or the trunk number will be displayed as well.

9.19.10.4 Area: Forwarding

Status

Off:	No Call forwarding activated
Internal:	Call forwarding for internal calls activated only
External:	Call forwarding for external calls activated only
All:	Call forwarding activated for internal and external calls

Forwarding Destination

Call number of the call forwarding destination.

9.19.10.5 Stations included table

The station which are assigned in an answer group with this station number (via *81).

9.19.11 Maintenance | V.24 Status

V.24 Status **can be used to query the status of a V.24 interface** on the central board or a terminal adapter of a sytem telephone.

9.19.11.1 Area: Interface selection

Is used to select the wanted interface. A distinction can be made between a **V.24** interface on the central board or a **terminal adapter** of a system telephone. The V.24 interface can be selected via the **V.24 port** drop-down list. A terminal adapter can be selected by entering the **station number** of the sytem telephone, to which the terminal adapter has been connected.

9.19.11.2 Area: Line status

After clicking on the **Read data** button, the states are displayed.
- Line status = 1 means “Line active”
- Line status = 0 means “Line inactive”

The individual lines are assigned as follows:
- **DTR**: Communication system
- **DSR**: Telephone
- **RTS**: Communication system
- **CTS**: Telephone

Two status examples are given in the following:

Example 1: Port open:
- DTR: 1
- DSR: 0
- RTS: 1
- CTS: 0

Example 2: HiPath 3000 Manager Online:
- DTR: 1
- DSR: 1
- RTS: 1
- CTS: 1

9.19.11.3 Area: Monitoring V.24

The **Start** and **Stop** buttons can be used to start or stop monitoring. In case of started monitoring, the incurred time and the number of sent/received bytes is displayed.

After monitoring has been stopped, the transferred bytes can be viewed by activating the buttons **Hexadecimal**, **ASCII** or **Hex + ASCII**. For this purpose, an external text editor (default is Wordpad) is started; this editor can also be used to store or print data. The desired editor can be configured via the File ass_150e.ini.

9.19.12 Maintenance | Card status

Card status can be used to display the status of all cards. The status is updated every 3 seconds.

9.19.12.1 Card status table

Slot column

Physical slot number.

Board column

Card designation.

Not plugged column

Marked with a cross if the card is not plugged.

Faulty column

Marked with a cross if the card is faulty (not loaded).

Blocked column

Marked with a cross if at least one port on this card is blocked.

Free column

Marked with a cross if all ports on this card are free.

Res. column

Marked with a cross if at least one station or line on this card has picked up, is being called or is talking.

Clock ref. column

Marked with a cross if the card is furnishing the clock.

9.19.12.2 Buttons

Start, Stop

Click the **Start** button to start the display and **Stop** to end the refresh process.

- The status ”Blocked” can occur in combination with ”Free” or ”Res.”.
- The status ”Clock ref.” also occurs in combination with other statuses.
- The status ”Not plugged” or ”Faulty” cannot occur in combination with other statuses.
- If a plugged card is not displayed, that means that the card is either faulty or cannot be configured.

9.19.13 Maintenance | IVM (only if an IVM card is plugged in)

In **IVM**, the actions **Read data , Activate/Deactivate SW lock** and **Change super user password** are carried out by pressing the corresponding buttons.

Every time the button is pressed, the file is transferred to the IVM and then read in again in order to update the display.

Read data

Current IVM information is displayed after **Read data** is pressed.

Hardware version

The hardware version of the IVM sand the associated Unify code (part) numbers are shown here. In the case of an IVMP8 or IVMS8, 2 code numbers are displayed; one for the wall housing (e.g., HiPath 3350, HiPath 3550) and one for the 19” rack housing (e.g., HiPath 3300, HiPath 3500).

Software version

The software version of the IVM and the associated Unify code (part) number are displayed here.

Language 1, 2, 3

Descriptions of the languages currently available on the IVM can be found here. The language and version are displayed.

MAC ID

The MAC ID of the IVM card. This information is needed to set up network access.

Released channels

Maximum number of channels that can be concurrently seized.

Activated features

The features available in the current software are listed here. At present, this includes only the Automatic attendant functionality.

Res. mailboxes, free

Initial statistical data on the capacity of the IVM can be found here. This includes: how many mailboxes are currently reserved and how many are still free.

Hard disk load

Here you can see what percentage of the IVM storage capacity has already been utilized. See Maintenance | IVM: Execute file operations: Display Statistical Data for further details.

Lock

The lock status of the IVM after the **Read data** is displayed in the two activation boxes **HW lock active** and **SW lock active**.

The current status of the SW lock can be changed using the button **Activate/Deactivate SW lock** .

After the locks have been inserted, it can be determined how far the IVM channels have already changed from the call state to the silent call state using the display of the **active channels**. To update the display of the active channels, the **Read file** button must be pressed again.

Next Buttons

The “Next“ buttons branch to the appropriate subdialogs.

Subdialogs
– Maintenance	IVM: Language selection – Maintenance	IVM: Reset passwords – Maintenance	IVM: Initialize mailboxes – Maintenance	IVM: Change super user password – Maintenance	IVM: Mailbox configuration (as of IVM Version 2) – Maintenance	IVM: Execute file operations – Maintenance	IVM: Execute file operations: Display Statistical Data

9.19.14 Maintenance | IVM: Language selection

Up to three of the languages available on the IVM can be selected and then used for announcements via the **Language selection** option.

Available languages

All languages that are available on the IVM and compatible with the current software are listed here.

Language 1 to 3

Shows the languages (1 to 3) being currently used on the IVM. These languages can be changed by deleting them or by assigning a new language from those available with the “Drag & Drop” technique.

Setting languages

The current selection is reported to the IVM.

See also:

- Section 9.19.13, “Maintenance | IVM (only if an IVM card is plugged in)”, on page 9-57
- Section 9.19.15, “Maintenance | IVM: Reset passwords”, on page 9-60
- Section 9.19.16, “Maintenance | IVM: Initialize mailboxes”, on page 9-61
- Section 9.19.17, “Maintenance | IVM: Change super user password”, on page 9-62
- Section 9.19.18, “Maintenance | IVM: Mailbox configuration (as of IVM Version 2)”, on page 9-63
- Section 9.19.26, “Maintenance | IVM: Execute file operations”, on page 9-73
- Section 9.19.27, “Maintenance | IVM: Execute file operations: Display Statistical Data”, on page 9-77
- Section 10.9.9, “IVM | Parameter/Mailbox Parameters”, on page 10-265
- Section 10.9.11, “IVM | Additional Settings/General”, on page 10-274

9.19.15 Maintenance | IVM: Reset passwords

Mailbox users who have forgotten their passwords can restore the default password by using the **Reset passwords** option.

Mailboxes

All configured mailboxes are listed and selectable in this field.

Reset passwords

The password of the mailboxes contained in this field can be reset. The passwords of all listed mailboxes are reset.

The mailboxes can be selected from the **Mailboxes** field using drag & drop or can be entered into the **Reset passwords** field.

Mailboxes are deleted using a double click or using the right mouse button context menu; they can also be deleted by dragging and dropping them into the Recycle Bin.

As a default, the list is empty.

See also:

- Section 9.19.13, “Maintenance | IVM (only if an IVM card is plugged in)”, on page 9-57
- Section 9.19.14, “Maintenance | IVM: Language selection”, on page 9-59
- Section 9.19.16, “Maintenance | IVM: Initialize mailboxes”, on page 9-61
- Section 9.19.17, “Maintenance | IVM: Change super user password”, on page 9-62
- Section 9.19.18, “Maintenance | IVM: Mailbox configuration (as of IVM Version 2)”, on page 9-63
- Section 9.19.26, “Maintenance | IVM: Execute file operations”, on page 9-73
- Section 9.19.27, “Maintenance | IVM: Execute file operations: Display Statistical Data”, on page 9-77

9.19.16 Maintenance | IVM: Initialize mailboxes

If a mailbox has been set up operated incorrectly, it can be restored to its original state by using the **Initialize mailboxes** option. For details on which features are affected by the initialization, please refer to the IVM documentation.

Mailboxes

All configured mailboxes are listed and selectable in this field.

Initialize mailboxes

The mailboxes contained in this field can be initialized. All listed mailboxes are initialized.

The mailboxes can be selected from the **Mailboxes** field using drag & drop or can be entered into the **Initialize passwords** field.

Mailboxes are deleted using a double click or using the right mouse button context menu; they can also be deleted by dragging and dropping them into the Recycle Bin.

As a default, the list is empty.

See also:

- Section 9.19.13, “Maintenance | IVM (only if an IVM card is plugged in)”, on page 9-57
- Section 9.19.14, “Maintenance | IVM: Language selection”, on page 9-59
- Section 9.19.15, “Maintenance | IVM: Reset passwords”, on page 9-60
- Section 9.19.17, “Maintenance | IVM: Change super user password”, on page 9-62
- Section 9.19.18, “Maintenance | IVM: Mailbox configuration (as of IVM Version 2)”, on page 9-63
- Section 9.19.26, “Maintenance | IVM: Execute file operations”, on page 9-73
- Section 9.19.27, “Maintenance | IVM: Execute file operations: Display Statistical Data”, on page 9-77

9.19.17 Maintenance | IVM: Change super user password

Upon pressing the **Change super user password** button, a password dialog is opened in which the new super user password is to be entered and confirmed. The input is hidden on entry. No demand for entry of the old super user password is made.

Details on the functionality of the super user ID can be found in the IVM documentation.

See also:

– Section 9.19.13, “Maintenance | IVM (only if an IVM card is plugged in)”, on page 9-57
– Section 9.19.14, “Maintenance | IVM: Language selection”, on page 9-59
– Section 9.19.15, “Maintenance | IVM: Reset passwords”, on page 9-60
– Section 9.19.16, “Maintenance | IVM: Initialize mailboxes”, on page 9-61
– Section 9.19.18, “Maintenance | IVM: Mailbox configuration (as of IVM Version 2)”, on page 9-63
– Section 9.19.26, “Maintenance | IVM: Execute file operations”, on page 9-73
– Section 9.19.27, “Maintenance | IVM: Execute file operations: Display Statistical Data”, on page 9-77

9.19.18 Maintenance | IVM: Mailbox configuration (as of IVM Version 2)

Mailbox configuration can be used to display and partially configure the settings for the individual mailboxes.

Tabs
– Maintenance	IVM: Mailbox configuration: General – Maintenance	IVM: Mailbox configuration: Message call – Maintenance	IVM: Mailbox configuration: Substitute – Maintenance	IVM: Mailbox configuration: COS – Maintenance	IVM: Mailbox configuration: Personal week plan – Maintenance	IVM: Mailbox configuration: E-mail notification

See also:
– Section 9.19.13, “Maintenance	IVM (only if an IVM card is plugged in)”, on page 9-57 – Section 9.19.19, “Maintenance	IVM: Mailbox configuration: General”, on page 9-64 – Section 9.19.20, “Maintenance	IVM: Mailbox configuration: Message call”, on page 9-66 – Section 9.19.21, “Maintenance	IVM: Mailbox configuration: Substitute”, on page 9-67 – Section 9.19.22, “Maintenance	IVM: Mailbox configuration: COS”, on page 9-68 – Section 9.19.23, “Maintenance	IVM: Mailbox configuration: Personal week plan”, on page 9-69 – Section 9.19.24, “Maintenance	IVM: Mailbox configuration: E-mail notification”, on page 9-70

9.19.19 Maintenance | IVM: Mailbox configuration: General

The general settings of the mailbox are displayed via **General**. The settings released for the mailbox by the COS (see also Maintenance | IVM: Mailbox configuration: COS) fare automatically displayed.

9.19.19.1 Selection table

You can select the mailbox whose data is to be displayed/modified here.

9.19.19.2 Area: Status

Mailbox activated

This option shows whether the mailbox has been released. If this is not the case, it can be released by enabling the option. Please note, however, that it is not possible to deactivate a mailbox that has already been released.

Message recording activated

This option shows whether message recording has been turned on. The status can be activated and deactivated.

9.19.19.3 Area: Greetings

active

You can see here - depending on the COS of the mailbox - which of the maximum of 4 greetings is activated. The active greeting can also be changed. In addition, you can also see for each greeting whether a “Standard” greeting or “User-defined” greeting is involved.

User name available

This option shows whether a user name is available. The status cannot be changed here.

Private message available

This option shows whether a private message is available. The status cannot be changed here.

9.19.19.4 Area: Settings

The settings for the following options are displayed here. The settings of these options cannot be modified here.

Language	Set language
Greeting control	Selected type of greeting control (manual, day/night HiPath, calendar or type of call; depending on the COS of the mailbox, not all options are always available)
Fax intercept	Current Fax intercept
Hunt group code	Current hunt group code
Route code	Current route code (trunk group)
Attendant console	Call no. of the attendant console
Name selection permitted	The mailbox is entered in the directory for name dialing
Information mailbox	The mailbox is configured as an information mailbox, which allows the caller to navigate within the greeting or to listen to it repeatedly, for example.
Automatic hook on after announcement	After the announcement, the mailbox is automatically released. This option is only available for information mailboxes.

Sorting messages

You can set the sort order for messages in each mailbox separately using the drop-down list (LiFo or FiFo). If you select LiFo (Last in - First out), the most recent message is announced first. If you select FiFo (First in - First out), the oldest message is announced first.
Default setting: system-specific.

See also:

– Section 9.19.18, “Maintenance | IVM: Mailbox configuration (as of IVM Version 2)”, on page 9-63
– Section 9.19.20, “Maintenance | IVM: Mailbox configuration: Message call”, on page 9-66
– Section 9.19.21, “Maintenance | IVM: Mailbox configuration: Substitute”, on page 9-67
– Section 9.19.22, “Maintenance | IVM: Mailbox configuration: COS”, on page 9-68

9.19.20 Maintenance | IVM: Mailbox configuration: Message call

Message call can be used to configure the message call (if allowed by the mailbox COS):

- Activate/deactivate message call function generally
- Activate message call, provided the call number is entered there
- Define call numbers and suffixes
- Define general greeting message for urgent calls
- Define notification times at which a message call is to occur

9.19.20.1 Selection table

You can select the mailbox whose data is to be displayed/modified here.

9.19.20.2 Area: General greeting message

Activated	Activate or deactivate the message call function generally
Message call active	Activated call number to be notified
Call Number	Call numbers to be notified
Suffix dialing	Digit sequence sent as DTMF characters after connecting to the call number to be notified, e.g., in the display of a pager
only urgent calls	Message calls should only be made in urgent cases
Weekly program with notification times (Monday ... Sunday)	currently set user-defined notification times within the framework of a weekly program (Monday to Sunday). If no times have been set, the current time appears in both fields here. To deactivate a message call for a day, both times must be set to 00:00.

See also:

– Section 9.19.18, “Maintenance | IVM: Mailbox configuration (as of IVM Version 2)”, on page 9-63
– Section 9.19.19, “Maintenance | IVM: Mailbox configuration: General”, on page 9-64
– Section 9.19.21, “Maintenance | IVM: Mailbox configuration: Substitute”, on page 9-67
– Section 9.19.22, “Maintenance | IVM: Mailbox configuration: COS”, on page 9-68

9.19.21 Maintenance | IVM: Mailbox configuration: Substitute

Important: The substitute mailbox is deactivated by default for every IVM COS group.

Substitute can be used to configure the substitute call (if allowed by the mailbox COS):
- Activate/deactivate substitute function generally
- Activate substitute, provided the call number is entered there
- Define call number

9.19.21.1 Selection table

You can select the mailbox whose data is to be displayed/modified here.

9.19.21.2 Area: Substitute

Activated	Activate or deactivate the substitute function generally
Substitute function active	Manually activated call numbers to be dialed in place of the original number.
Substitute function active and **Selection according to call type active**	Active call numbers (the first four numbers) to be dialed in place of the original number.
Call number	Enter the call numbers to which a call is to be forwarded when using the substitute function.

See also:

- Section 9.19.18, “Maintenance | IVM: Mailbox configuration (as of IVM Version 2)”, on page 9-63
- Section 9.19.19, “Maintenance | IVM: Mailbox configuration: General”, on page 9-64
- Section 9.19.20, “Maintenance | IVM: Mailbox configuration: Message call”, on page 9-66
- Section 9.19.22, “Maintenance | IVM: Mailbox configuration: COS”, on page 9-68

9.19.22 Maintenance | IVM: Mailbox configuration: COS

COS is used to display the COS of a mailbox in detail.

9.19.22.1 Selection table

You can select the mailbox whose data is to be displayed here.

9.19.22.2 Area: COS

The relevant COS (Class Of Service) is displayed here. The settings of the mailbox cannot be modified here.

See also:

- Section 9.19.18, “Maintenance | IVM: Mailbox configuration (as of IVM Version 2)”, on page 9-63
- Section 9.19.19, “Maintenance | IVM: Mailbox configuration: General”, on page 9-64
- Section 9.19.20, “Maintenance | IVM: Mailbox configuration: Message call”, on page 9-66
- Section 9.19.21, “Maintenance | IVM: Mailbox configuration: Substitute”, on page 9-67

9.19.23 Maintenance | IVM: Mailbox configuration: Personal week plan

The **Personal week plan** can be used if different settings from the general calendar (see Section 10.9.15, “IVM | Additional Settings/Calendar”, on page 10-286) are required.

Every AutoAttendant Mailbox receives a personal week plan. This personal week plan has the same structure as the general calendar (daytime, noon, night-time and special time).

9.19.23.1 Area: Selection

You can select the mailbox whose data is to be displayed/modified here.

9.19.23.2 Personal Week Plan Activated flag

This flag enables or disables the Personal Week Plan feature. The Personal Week Plan can only be edited if the flag has been activated. After the personal mailbox calendar has been activated, the general calendar is no longer used.

9.19.23.3 Area: Week plan

The times for the mailbox can be defined here for each day of the week and recording can be activated or deactivated.

9.19.23.4 Use Common Special Days (Year) flag

This flag can only be set if the **Personal Week Plan Activated** flag is enabled.

When allocating/activating a personal week plan, you can select whether (flag disabled) or not (flag enabled) the personal week plan is also to apply on the defined special days .

See also:

- Section 9.19.18, “Maintenance | IVM: Mailbox configuration (as of IVM Version 2)”, on page 9-63
- Section 9.19.19, “Maintenance | IVM: Mailbox configuration: General”, on page 9-64
- Section 10.9.8, “Integrated Voice Mail (IVM) (only if an IVM card is plugged-in)”, on page 10-261
- Section 10.9.11, “IVM | Additional Settings/General”, on page 10-274
- Section 10.9.15, “IVM | Additional Settings/Calendar”, on page 10-286

9.19.24 Maintenance | IVM: Mailbox configuration: E-mail notification

When new voice mail messages arrive in the mailbox, an email notification is created and sent. The user can then check the message from a phone and also from a PC via his or her email mailbox. Furthermore, the presence of the notification in the form of a file also makes it easy to create an electronic archive of such messages.

9.19.24.1 Call no. and Name table

You can select the mailbox whose data is to be displayed/modified here.

9.19.24.2 Use Template button

This button has no effect on the email addresses.

9.19.24.3 E-mail Notification flag

This flag enables or disables the E-mail Notification feature.

9.19.24.4 Defining email messages

You can enter up to 3 email addresses. For every email address, you can also define whether the message should be appended as a Wave file.

9.19.24.5 Area: SMTP Server

You can enter either the IP address or the DNS Name of the SMTP server here. The default setting for the SMTP port is 25.

9.19.24.6 Area: Delete voice mails

You can select between three alternatives here:

Manual: The voicemail is deleted manually.

Automatic - after notification: The voicemail is deleted automatically, e.g., immediately after the email was sent.

Automatic - after predefined time: The voicemail is deleted after a predefined time period (1-90 days). Only the voice mails that have already been heard are deleted.

9.19.24.7 Area: SMTP Authentication

If the SMTP Authentication flag is not activated, then no authentication occurs.

If the SMTP Authentication flag has been activated, you will need to enter your user name and password and to select the authentication and encryption method.

See also:

- Section 9.19.18, “Maintenance | IVM: Mailbox configuration (as of IVM Version 2)”, on page 9-63
- Section 9.19.19, “Maintenance | IVM: Mailbox configuration: General”, on page 9-64
- Section 10.9.8, “Integrated Voice Mail (IVM) (only if an IVM card is plugged-in)”, on page 10-261
- Section 10.9.11, “IVM | Additional Settings/General”, on page 10-274
- Section 10.9.13, “IVM | Additional settings/Network parameters”, on page 10-282

9.19.25 Maintenance | IVM: Mailbox Configuration: Automatic Call Forwarding

Automatic call forwarding can be used if the station does not respond to a call within a given time (this time can be set). The call is then automatically forwarded to the specified call forwarding destination.

9.19.25.1 Selection table

In this area, you can select the mailbox to which the call should be automatically forwarded.

9.19.25.2 Activate Calling Ling Identification Presentation (CLIP)

You can activate automatic call forwarding in this area.

9.19.25.3 Allocation table

Index column

Index of the incoming call number.

Incoming call number column

You can enter the calling stations here.

Column number

You can enter the switching destination here.

See also:

- Section 9.19.18, “Maintenance | IVM: Mailbox configuration (as of IVM Version 2)”, on page 9-63
- Section 9.19.19, “Maintenance | IVM: Mailbox configuration: General”, on page 9-64
- Section 10.9.8, “Integrated Voice Mail (IVM) (only if an IVM card is plugged-in)”, on page 10-261
- Section 10.9.11, “IVM | Additional Settings/General”, on page 10-274

9.19.26 Maintenance | IVM: Execute file operations

Execute file operations can be used to select the desired file operation.

9.19.26.1 Area: Read file

LOG

The IVM's **LOG** file contains information about the status, error occurrence and error recovery.

On selecting **LOG**, the **PC file** dialog box appears; this is the file on the PC where the file loaded from the IVM is to be stored.

If the **Read: IVM-->PC** button is then pressed, the size of the LOG file is displayed. This can be used to reach conclusions concerning the transmission time. After confirmation of the transmission start, the transmission of the LOG file is carried out.

After the successful transmission, the IVM LOG data are stored under the name previously input.

STATISTIC

The IVM's **STATISTIC** file contains information about the IVM's use distribution.

On selecting **STATISTIC**, the **PC file** dialog box appears; this is the file on the PC where the file loaded from the IVM is to be stored.

If the **Read: IVM-->PC** button is then pressed, the size of the STATISTIC file is displayed. This can be used to reach conclusions concerning the transmission time. After confirmation of the transmission start, the transmission of the STATISTIC file is carried out.

After the successful transmission, the IVM statistic data are stored under the name previously entered and the data contained are displayed (see Maintenance | IVM: Execute file operations: Display Statistical Data).

As an alternative, the **Load: File-->PC** button may also be used; then a statistic file that was saved earlier can be displayed once again (see (Maintenance | IVM: Execute file operations: Display Statistical Data).

TRACE

The IVM's **TRACE** file contains information about error events. Upon demand, it is provided from the trace memory of the IVM for a specific time period.

On selecting **TRACE,** the **PC file** dialog box appears; this is the file on the PC where the file loaded from the IVM is to be stored. Then the trace information, such as date of the oldest and newest entries, is displayed.

In the **Read trace: Date** field, you can limit the time period of the trace data that are to be read by entering **Start** and **End**. The fields are filled with the IVM default values and may be changed only within this range. Nonconforming inputs, such as end date < start date, are rejected.

If the **Read: IVM-->PC** button is then pressed, the size of the TRACE file is displayed. This can be used to reach conclusions concerning the transmission time. After confirmation of the transmission start, the transmission of the TRACE file is carried out.

After the successful transmission, the IVM trace data are stored under the name previously input.

BACKUP

The **Backup** file contains data about mailboxes that should be saved. It is compiled by the IVM when the HiPath 3000 Manager requests it.

On selecting **BACKUP**, the **PC file** dialog box appears (this is the file on the PC where the file loaded from the IVM is to be stored), and the registered mailboxes are displayed in a list.

The **BACKUP-/RESTORE Parameter** option can be used to set whether the messages are to be included in the backup. You can define whether the data of **all mailboxes** or only **these mailboxes** should be saved. If **these mailboxes** was selected, the appropriate mailboxes can be marked in the list of all configured mailboxes.

If the **Read: IVM->PC** button is then pressed, the size of the BACKUP file is displayed. This can be used to reach conclusions concerning the transmission time. After confirmation of the transmission start, the transmission of the Backup file is carried out.

After the successful transmission of the IVM backup file, the IVM backup data are stored under the name previously input.

9.19.26.2 Area: Write file

RESTORE

The **Restore** file is an extract from a Backup file and is compiled from such a backup file. If a Restore file is transferred to the IVM, the IVM accepts the data contained in it automatically.

On selecting **RESTORE**, the **PC file** dialog box opens. You can then enter the file on the PC from where the backed up data is to be restored. After the file name has been entered, the Assistant reads the mailbox information that was stored in it. The mailboxes contained are displayed in a list. By using the options in the **BACKUP-/RESTORE parameter** field, the information **Greetings**, **Messages** or **Mailbox configuration** that was contained in the backup file is now presented for selection. The highlight can be removed from data that are not to be a part of the restore.

The restore process type can be set with the **overwrite** option. In default mode, **overwrite** is not selected. In this case, the selected mailboxes are overwritten with the restore data or recreated. For the selected **overwrite** option, all mailboxes set up in the IVM are first deleted and then the selected restore data is written. You can define whether the data of **all mailboxes** or **these mailboxes** should be restored. If **these mailboxes** was selected, the appropriate mailboxes can be marked in the list of all configured mailboxes that are present in the backup file.

After pressing the button **Write: PC-->IVM**, the volume of the data to be transferred is displayed. This can be used to reach conclusions concerning the transmission time. After confirmation of the transmission start, the transmission of the Restore data to the IVM is carried out.

UPGRADE

The APS and language files are in XML format. They are verified with a checksum.

After selecting **UPGRADE**, ”Open file” dialogs are offered for entering the file names of the **APS file**, **Lang. – File 1**, **Lang. – File 2** and **Lang. – File 3**.

- File 3 . The input of the APS, language 1 and language 2 file is optional; either none, one, two or all three files can be given.

In addition, the time when the switchover to the new SW should be made can be set up. In the **Switchover** field, a fixed time can be entered by either selecting the **Immed.** check box or by using the **Date** and **Time** fields.

On pressing the **Write: PC->IVM** button, the following status information is displayed: the consistency of the selected APS and language files, errors in files and any error messages.

If no files have been selected in the ”Open file” dialog, a display shows whether or not APS or language files that can be switched over to are already on the IVM.

If the selected files were consistent, the total amount of data that must be transferred to the IVM is displayed. After confirmation of the transmission start, the selected APS and language files are first transferred to the IVM (if selected) . In connection with this, the IVM then switches the APS over at the selected time. If the selected time already lies in the past, the switchover is implemented immediately.

9.19.26.3 Greetings, PC->IVM Delta

This option shows the configured mailboxes in a list box or, if the **Greetings** option is selected (versions 2 and 3), in another list box. The required mailboxes can be selected and modified.

- IVM - Version 1:
  Once you have selected a mailbox from the **Select mailbox to store greeting** list box, the greetings are immediately downloaded from the IVM and displayed in the **Greetings** field.

- IVM - Version 2 and Version 3:
  If you select the **Greetings** option (radio button) the **Select mailbox to store greeting** list box appears next to the **Select mailbox to store greeting** list box, where you can select several mailboxes.

The greetings can be modified in the **Greetings** field for the selected mailboxes. If no mailbox is selected in the **Select mailbox to store greeting** list box, the greetings in the **Greetings** field are transferred to the mailboxes selected in the **Select mailbox to store greeting** list box.

When you click **Delete**, “Standard” is displayed. In other words, the greeting is deleted on the IVM and the standard greeting is reset.

When a greeting is selected, it is automatically converted into the CCITT format in the background. This may take some time when large files are involved.

After the editing has been completed, only the modified data is transferred to the IVM on clicking the **PC->IVM Delta** button.

9.19.26.4 Data transfer via IP-IVM with FTP

If the conditions for fast FTP access to the IVM are satisfied, the option **Data transfer via IP-IVM with FTP** is enabled and can be selected. On selecting this option, the relevant IP address is displayed.

See also:
– Section 9.19.13, “Maintenance	IVM (only if an IVM card is plugged in)”, on page 9-57 – Section 9.19.14, “Maintenance	IVM: Language selection”, on page 9-59 – Section 9.19.15, “Maintenance	IVM: Reset passwords”, on page 9-60 – Section 9.19.16, “Maintenance	IVM: Initialize mailboxes”, on page 9-61 – Section 9.19.17, “Maintenance	IVM: Change super user password”, on page 9-62 – Section 9.19.18, “Maintenance	IVM: Mailbox configuration (as of IVM Version 2)”, on page 9-63 – Section 9.19.27, “Maintenance	IVM: Execute file operations: Display Statistical Data”, on page 9-77

9.19.27 Maintenance | IVM: Execute file operations: Display Statistical Data

Statistical data is displayed via **Maintenance | IVM: Execute file operations** and the **STATISTIC** option.

Display Statistical Data displays different types of statistics of the IVM.

General

The **General** tab shows some general information on the usage level of the IVM.

Sort by

The **Sort by ...** tabs contains details on 25 mailboxes each, including the call number of the mailbox, the number of available messages for that mailbox, how many of those messages have not been processed, the total recording time, the date the mailbox was last accessed by the user, and the respective dates of the most recent and oldest messages. The tabs are sorted in various ways (by number of messages, age of message and by total recording time) and may also include different mailboxes.

Busy times table

The **Busy times table** tab shows the periods (broken down hourly) within the last 30 days in which the IVM was not available for the indicated number of minutes because all ports were busy. This allows conclusions to be drawn about whether the number of ports for a given customer should be increased to achieve an acceptable level of availability.

See also:

– Section 9.19.29, “Maintenance | EVM: Initialize mailboxes”, on page 9-80
– Section 9.19.26, “Maintenance | IVM: Execute file operations”, on page 9-73

9.19.28 Maintenance | EVM

During the execution of **Maintenance | EVM**, the EVM is no longer accessible to the user.

Read data

Current EVM information is displayed on clicking **Read data**.

Hardware version

The Unify part numbers of the EVM are shown here.

Firmware version

The Firmware version of the EVM is shown here.

Languages

The languages loaded into the EVM are shown here. The following naming conventions exist:

xxxxAABB

where:
xxxx= four-digit version number
AA = two-digit language code
BB = two-digit country code

The country code (BB) is usually identical to the language code (AA).

Language Code	Country Code	Language
de	de	German
en	uk	English (UK)
es	es	Spanish
fr	fr	French
it	it	Italian
nl	nl	Dutch
pt	pt	Portuguese
ro	ro	Romanian

Production information

The Production Information for the EVM board is shown here.

Memory usage

Here you can see what percentage of the EVM storage capacity has already been used.

Initialize mailboxes

This button takes you to the corresponding Maintenance | EVM: Initialize mailboxes subdialog .

Delete all Mess./Greetings

On clicking the **Delete all Mess./Greetings** button, all messages and greetings on the EVM are deleted.

Execute file operations

This button takes you to the corresponding Maintenance | EVM: Execute file operations subdialog.

9.19.29 Maintenance | EVM: Initialize mailboxes

The configured mailboxes are shown in the **Mailboxes** list and can be transferred to the **Initialize mailboxes** list by using the “drag&drop” technique.

Initialize mailboxes

On clicking the **Initialize mailboxes** button, the following actions are performed for the mailboxes in the **Initialize mailboxes** list:

Standard Mailboxes:
- The password is reset
- The Recording flag is set
- Messages are deleted
- Greetings are deleted
- Greeting control to manual
- Active greeting: Greeting 1

AutoAttendant Mailboxes:
- The password is reset
- The “Intercept after announcem.” and “no suffix-dialing” flags are disabled.
- Speed destinations are deleted
- Greetings are deleted
- Greeting control to manual
- Active greeting: Greeting 1

See also:

- Section 9.19.28, “Maintenance | EVM”, on page 9-78
- Section 9.19.30, “Maintenance | EVM: Execute file operations”, on page 9-81

9.19.30 Maintenance | EVM: Execute file operations

Execute file operations can be used to select the desired file operation.

9.19.30.1 Area: Read file

BACKUP

On selecting **BACKUP**, the **PC file** dialog box appears (this is the file on the PC where the file loaded from the EVM is to be stored), and the configured mailboxes are displayed in a list.

The **Messages** option can be used to set whether the messages are to be included in the backup. You can define whether the data of **all mailboxes** (default) or only **these mailboxes** should be saved. If **these mailboxes** was selected, the mailboxes to be saved must be selected in the list of all configured mailboxes.

If the **Read : EVM->PC** button is then clicked, the EVM backup data is stored under the name that was entered earlier.

The backup of the EVM involves a partial backup, where only the greetings and messages are saved. By contrast, all data is always saved for an IVM backup.

Details about the EVM mailbox configuration are saved in the CDB and not in the EVM backup.

9.19.30.2 Area: Greetings

The configured mailboxes are shown in the drop-down list. The desired mailbox can be selected. The greetings in the selected mailbox are loaded on the PC for Greeting 1 (day) and Greeting 2 (night), respectively, and displayed. If the name **Standard** is displayed here, this means that no customized greeting is available for the subscriber.

Save

On clicking **Save**, the greeting is saved under the specified path and file name.

The greetings are saved in binary format on the PC and can therefore not be played back or modified.

Load

A previously saved greeting or a Wave file can be selected by clicking **Load**. The Wave file to be loaded must have the following format:

PCM, 16 Bit, 8khz, mono

The selected Wave file is converted on loading. Depending on the size of the Wave file, this may take some time. You can select the audio quality via the **CODEC setting** subdialog. The available options are: memory-optimized or HiQuality.

After the loading has been completed, the modified data is transferred to the EVM on clicking the **Write: PC->EVM** button.

Clear/Undo

The selected greeting can be deleted. After clicking **Clear** (but before the transfer to the EVM !), the selection can be optionally undone by then clicking **Undo**.

After the editing has been completed, the modified data is transferred to the EVM on clicking the **Write: PC->EVM** button.

9.19.30.3 Area: Write file

RESTORE

On selecting **RESTORE**, the **PC file** dialog box opens. You can then enter the filename under which the data that was backed up earlier with **BACKUP** is stored. After the file name has been entered, the mailbox information that was stored in it is read and displayed in a window.

The Restore behavior depends on the options **Overwrite**, **All mailboxes**, **These mailboxes** and **Messages** (see the following table for details).

Overwrite	All mailboxes These mailboxes	Restore Behavior
not activated	All mailboxes	Existing greetings are overwritten with the Restore file. If the **Messages** option is also enabled, the messages contained in the Restore data are added as well. Existing messages are retained.
not activated	These mailboxes	
activated	All mailboxes	Before the Restore, **all** greetings and messages on the EVM are deleted (this refers to all mailboxes, including those not contained in the Restore data). The greetings contained in the Restore data are transferred. If the **Messages** option is also enabled, the messages contained in the Restore data are transferred as well.
activated	These mailboxes	Before the Restore, **only** the greetings and messages of the selected mailboxes on the EVM are deleted. The greetings of the selected mailboxes contained in the Restore data are transferred. If the **Messages** option is also enabled, the messages of the selected mailboxes contained in the Restore data are transferred as well.

The Restore data is transferred to the EVM on clicking the **Write: PC->EVM** button.

UPGRADE

The **UPGRADE** function enables the loading and deletion of language files and Firmware updates of the EVM. The language and Firmware files are in binary format.

Languages file

The language file to be loaded can be selected via **Languages file**. After a valid language file has been selected, the version and language are displayed (see Maintenance | EVM for naming conventions).

On clicking **Write: PC-> EVM**, the selected file is transferred to the EVM.

Firmware

The Firmware to be loaded can be selected via **Firmware**. After a valid Firmware file has been selected, the version is displayed.

On clicking **Write: PC-> EVM**, the selected file is transferred to the EVM.

Deleting a Language File

The language files loaded on the EVM are displayed in the list. (see Maintenance | EVM for naming conventions). After a language file has been selected, the selected file can be removed from the EVM by clicking the **Delete Language File** button.

See also:
– Section 9.19.28, “Maintenance | EVM”, on page 9-78 – Section 9.19.29, “Maintenance | EVM: Initialize mailboxes”, on page 9-80

9.19.31 Maintenance | OpenStage Phones: Event Log

Using **Event Log** the data of a selected OpenStage terminal can be transferred to the PC.

To access the dialog box, click the **Event Log** button in the **OpenStage Phones** tab.

9.19.31.1 Download OpenStage Event Log area

OpenStage equipment

This displays all active OpenStage terminals. The drop-down list is used to select the OpenStage terminal for which the data is to be transferred to the PC.

Filename

The **Browse** button is used to specify the name, type and storage location of the file to contain the data from the OpenStage terminal.

Start the download

Buttons:

- **Phone -> PC**:
  This button is used to transfer the data of the OpenStage terminal to the PC.
- **Open**:
  By clicking on this button the file with the data for the OpenStage terminal can be selected and opened.

See also:

– Section 9.19.32, “Maintenance | OpenStage Phones: SW distribution”, on page 9-86
– Section 9.19.33, “Maintenance | OpenStage Phones: Trace”, on page 9-90
– Section 9.19.40, “Transfer | SW Transfer”, on page 9-110
– Section 10.2.5, “Terminal hw sw version”, on page 10-25
– Section 10.8.1, “Flags”, on page 10-178

9.19.32 Maintenance | OpenStage Phones: SW distribution

SW distribution enables the software of individual or several selected terminals and extenders of the OpenStage family to be updated at a preconfigured time.

To access the dialog box, click the **SW distribution** button in the **OpenStage Phones** tab.

Before carrying out the software upgrade for the OpenStage terminals, the new software version must be made available by using **File | Transfer | SW Transfer** and **File| Transfer | Communication | APS Transfer**.

The **Read Data** button is used to read in, and display in the table, the data of the OpenStage terminals and extenders for which a new software version was made available. OpenStage terminals and extenders for which the software is to be updated manually must be selected here.

The time at which to update the software (immediately, time-controlled, or after the next reset) is selected using **APS -Activation**. Whether **Auto Upgrade** is activated in the customer database is displayed here for information, as this setting affects the software distribution. If **Auto Upgrade** is activated, an automatic software update will be done for the selected OpenStage terminals and extenders at the preconfigured time. Manual software updating is done using the **Upgrade** button.

The data of the OpenStage terminals and extenders selected in the table can be stored using the **Store Data** button. The **LogFile** button can be used to query a log file in which all executed actions are recorded.

9.19.32.1 Phone family area

The OpenStage terminals visible in the table can be selected here. A manual software upgrade can be executed only for the visible terminals. An automatic software upgrade is, however, not affected by this setting.

9.19.32.2 Actual version in MMC area

This displays the current software versions for OpenStage terminals and extenders that are stored on the MMC of the system

9.19.32.3 APS-Activation area

The software update for the OpenStage terminals is executed as soon as the corresponding resource is available. The switchover time that follows that is determined by the following setting:

- **Date/Time**:
  The terminals are updated at a specified time. The date and time are set from the drop-down lists.
- **Immediate**:
  The terminals are updated immediately, as soon as the required system resources are available.
- **on next reset**:
  The terminals are updated during the next reset.

Auto Upgrade displays whether the software upgrade will be automatic. For automatic software updating the **Automatic OpenStage TDM telephone software update** flag has to be activated in **Settings | System Parameters | Flags**.

9.19.32.4 Table

Here the data of the selected OpenStage terminals and extenders read in from the **Read Data** button can be displayed and the OpenStage terminals and extenders selected for manual or automatic software update.

Call Number column

Here the number assigned to the terminal is displayed.

Name column

The name assigned to the station is entered here.

Type column

Here the type of the terminals or extenders is displayed.

Column: Current SW Version

Here the current software version of the terminal or extender is displayed.

Upgrade SW Version column

Here the new software version of the terminal or extender is displayed.

Status column

Here the following status values for terminals or extenders can be displayed:

Status	Meaning
OOS	OUT_OF_SERVICE: The terminal or extender is not active.
NPOSS	NOT_POSSIBLE: There is no software in the system for this family of terminals.
REQ	REQUIRED: An update is required but there is no update request. The **Auto Update** flag is deactivated.
MARKED	MARKED: The terminal or extender will be upgraded as soon as the system has the required resource available.
TRANS	TRANSFERING: A software transfer is in progress.
WAIT	WAITING: The terminal or extender is currently waiting for further processing by the system
OK	OK: The terminal or extender is at the same or later version as the system. No further activities.
FAIL	FAILED: The update of the terminal or extender was not successful. No further activities.

Column: HW Version

Here the hardware version of the terminal or extender is displayed.

Column: Access

Here the slot location of the corresponding terminal or extender is displayed.

9.19.32.5 Buttons

Select all

This button selects all the terminals and extenders listed in the table.

Deselect all

This button deselects all the terminals and extenders listed in the table.

Read data

This button is used to read in the data for the selected terminals and extenders and display it in the table.

Store data

This button is used to store the data of the terminals and extenders that are selected in the table.

Log File

This button creates a log file in which all executed actions are recorded.

Upgrade

This button is used to carry out the manual software upgrade of the terminals or extenders selected in the table at the preconfigured time (APS activation).

See also:

- Section 9.19.1, “Transfer | Communication”, on page 9-26
- Section 9.19.31, “Maintenance | OpenStage Phones: Event Log”, on page 9-85
- Section 9.19.33, “Maintenance | OpenStage Phones: Trace”, on page 9-90
- Section 9.19.40, “Transfer | SW Transfer”, on page 9-110
- Section 10.2.5, “Terminal hw sw version”, on page 10-25
- Section 10.8.1, “Flags”, on page 10-178

9.19.33 Maintenance | OpenStage Phones: Trace

Use **Trace** to configure appropriate trace settings and transfer them to the
 to be traced.telephone you want to trace. Trace data (trace profiles) can be downloaded from the telephone to the PC for logging and analysis (e.g. troubleshooting) after the trace routine.

The Trace function is only available on OpenStage 60 TDM and OpenStage 80 TDM telephones.

To access the Trace dialog, click the **Trace** button on the **OpenStage Phones** tab. Select the OpenStage TDM telephone you want to trace in the **OpenStage** drop-down list. Use the **Selection** table to define the **Trace ID** and, in the same line, the **Trace Level** required for the Trace ID. Then the flags and parameters in the **Error Trace and Core Dump Configuration** area can be activated (e.g. **Delete Core Dump**) and defined (e.g. trace duration **Timeout (Minutes)**). Use the **PC -> Phone** button to transfer the trace settings from the PC to the OpenStage TDM telephone you want to trace. You can now start tracing the stationary OpenStage TDM telephone, for example, with a call. When the trace finishes on the OpenStage TDM telephone, go to **File Name** and select the PC folder where you want to transfer the OpenStage TDM telephone's trace data for analysis (troubleshooting, for instance) on the PC. Use the **Phone -> PC** button to transfer the trace data to the PC folder. You can then forward the trace data to Administration/Development for analysis.

9.19.33.1 Trace Area

OpenStage

This displays all active OpenStage TDM terminals. Open the drop-down list and select the OpenStage TDM telephone whose trace data (trace profiles) you want to transfer to the PC for analysis (troubleshooting, for instance) after the trace routine.

File Name

Click **Browse** and select the PC folder (for example, C:\temp\OPERA\trace99.tar) where the OpenStage TDM telephone's trace profile (for example, binary data) should be transferred for analysis (troubleshooting, for instance).

Phone -> PC button:
Use this button to transfer an OpenStage TDM telephone trace to the PC folder that you selected under **File Name**.

9.19.33.2 Trace-Process Area

You can specify the components (**Trace-ID**) and **Trace-Level** for the trace process in the table here, transfer the trace settings from the PC to the selected OpenStage TDM telephone and perform the error trace and core dump configuration.

Selection

The **Selection** table consists of the columns **Trace-ID** and **Trace-Level**. The software components for tracing a selected OpenStage TDM telephone can be chosen in the **Trace-ID** column. You can select the trace level (0 through 6) of the relevant software component for the trace routine in the **Trace-Level** column.

The following are descriptions of the software components listed in the **Trace-ID** column:

Trace-ID	Meaning
Administration	This option is used to change and set user and administrator menu parameters in the telephone database.
Application Framework	All telephone applications (such as “Call View” and “Call Log”) or the internal phonebook operate within the Application Framework. This component is responsible for switching between different applications and activating a required application.
Application Menu	Features options for starting and stopping applications.
Bluetooth Service	Is a service for managing Bluetooth connections between external Bluetooth devices and the telephone. Bluetooth is only available on HiPath OpenStage 60/80 telephones.
Call Log	Lets you display the telephone’s “call history”.
Call View	Lets you show calls on the display.
Certificate Management	Lets you verify and exchange security certificates.
Communications	Is involved in transferring call-specific information and signaling data to and from the CSTA service.
Component Registrar	Lets you register data associated with different telephone types (such as HFA/SIP telephones).
CSTA Service	Is a service for all possible CSTA messages. CSTA messages are used by all services in the telephone as “Common Call Progression” and “Control Protocol”.
Data Access Service	Is a service that allows other services to access data in a telephone database.
Desktop	Is responsible for the display’s individual views. These are mainly the status bar on top of the display and the FPK label.
Digit Analysis Service	Is a service for the analysis and modification of data streams that are sent and received via the telephone (for example, phone number conversion from canonical format into non-canonical format).
Directory Service	Is a service for comparing data such as the phone numbers of incoming and outgoing calls with entries in the internal phonebook.

Trace-ID	Meaning
DLS Client Management	Supports interaction with the DLS (Deployment and Licensing Service).
Health Service	The Health Service lets you: • monitor the telephone for diagnostic purposes • provide a “logging interface” for other services in the telephone.
Help	Provides the Help function.
Instrumentation Service	Is a service for exchanging telephone data for remote-control, testing, and monitoring purposes using the “Husim Phone Tester”.
Java	Every Java application running on the telephone also operates in the “Java Sandbox”, controlled by the Java Service.
Journal Service	Is a service for storing and accessing the “call history” information that is used by the “Call Log” application.
Media Control Service	Is a service for controlling “media streams” (voice, tones, ringer melodies, and so on) on the telephone.
Media Processing Service	Software layer between the “Media Control”, “Tone Generation”, and “Voice Engine” services. The “Media Processing Service” regulates changeover between audio devices, such as the handset and loudspeaker, for example.
Mobility Service	Is a service for logging on to different telephones and configuring these telephones based on the user’s individual profile.
OBEX Service	This service enables the telephone’s Bluetooth access. Bluetooth is only available on HiPath OpenStage 60/80 telephones.
OpenStage Client Management	This tool enables other services within the telephone to operate the database.
Password Management Service	Is a service for checking the passwords used in the telephone.
Physical Interface Service	Is a service for telephone application via the keyboard, mode keys (e.g. to start applications), programmable function keys, the clickwheel, and the slider.
Phonebook	Is responsible for the telephone’s internal phonebook application.
POT Service	Is a service that performs basic telephony if the “Call View” application fails.
Service Framework	Environment where other telephone services operate. This service controls how services are started and stopped.
Service Registry	Is a service for recording all services that currently operate within the telephone.

Trace-ID	Meaning
Sidecar Service	Is a service for interaction between the telephone and all additional key modules possible.
SIP Call Control	Contains the call model for the telephone and is linked to telephony and call processing.
SIP Messages	SIP messages that are exchanged by the telephone.
SIP Signalling	Is involved in SIP display creation and record analysis and communicates directly with the SIP memory.
Team Service	Is a service that mainly involves the key functions.
Tone Generation Service	Is a service for creating tones on the telephone.
Transport Service	This service offers an IP (LAN) interface from the telephone to the “external environment”.
Vcard Parser Service	This service manages the conversion and identification of VCard information when sending or receiving VCards via Bluetooth.
Voice engine	Provides a switching mechanism for “Voice Streams” within the telephone. It is therefore also involved in QDC, Music On Hold, and Voice Instrumentation.
Web Server Service	This service lets the telephone access the web.

Trace-Level column

The following trace levels can be selected in a drop-down list for the selected trace ID:

Trace level	
0	OFF
1	FATAL
2	ERROR
3	WARNING
4	LOG
5	TRACE
6	DEBUG

Transferring trace profiles

Use the **PC -> Phone** button to transfer the trace settings from the PC to the OpenStage TDM telephone you want to trace.

9.19.33.3 Error Trace and Core Dump Configuration Area

The phone reset that was caused by an error generates a core dump in addition to the trace. Core dump behavior is defined here. When uploading the trace, the trace and, where applicable, the core dump are zipped together and transferred as a single tar file (.tar).

automatic delete before start

If this flag is set, the existing trace file is automatically deleted every time you start a trace routine and a new empty trace file is created.

delete core dump

If this flag is activated, the stored data that was written to a trace file is deleted. By default, this flag is not set.

activate core dump

If this flag is activated, the trace data is saved.

max. core size [MB]

You can select the maximum core size (in MB) in the drop-down list.
The following settings are available:
Unlimited, 1 MB, 5 MB, 10 MB, 15 MB, 25 MB, 50 MB, 75 MB, 100 MB.

File size

The trace file size is entered here. Once the maximum file size is reached, the data is deleted and a new trace file is generated. The new trace data is then written to the new trace file.

Trace file size (in bytes): 65,536 to 4,194,304

Timeout [Minutes]

The duration of the trace operation (trace time in minutes) is entered here.

Trace time (in minutes): 0 to 15

See also:

– Section 9.19.31, “Maintenance | OpenStage Phones: Event Log”, on page 9-85
– Section 9.19.32, “Maintenance | OpenStage Phones: SW distribution”, on page 9-86
– Section 9.19.40, “Transfer | SW Transfer”, on page 9-110
– Section 10.2.5, “Terminal hw sw version”, on page 10-25
– Section 10.8.1, “Flags”, on page 10-178

9.19.34 Maintenance | Trace Settings

Trace profiles

The trace profiles are feature-oriented with specific traces are assigned to them. This allows users with limited experience to activate the required traces in accordance with the faulty feature. Up to three trace profiles can be activated. This is an advantage where a fault occurs in several features.

Procedure

1. Click on **Set Default** to enable the trace profile.
2. Based on the fault that occurs in the “Trace Profiling” -> “Step 1: Feature Selection” list, determine the required trace profiles. See also “Trace profiles with assigned traces“.
3. Select the trace profiles and click on **Add Profile** to add the trace profile from the list below.
4. Under “Step 2: Combined Problem”: Link the selected feature to a superordinate problem from the five options shown and then activate the option that is most appropriate. The first option is activated by default and can be selected if no other option corresponds.
5. Activate traces from the “Trace-Process” menu list, if applicable.
6. Click on **Write Data** to transfer the trace settings from the profiles added above and from the activated option to the communication system.
7. Click on **Trace Start** to start the traces.

NOTE: If there are too many active traces, this will reduce the performance of the communication system. For this reason, the following must be observed for the traces in the “Trace-Process” list:

- The traces may only be activated by very experienced users, where requested by the development department or where prompted by a help text.
- The traces may only be activated after traces have already been activated via the “Trace Profiling” list.
- The traces may only be activated in addition to the traces selected via the “Trace Profiling” list.

Trace profiles with assigned traces

The following table shows the trace profiles available in the “Trace Profiling” -> “Step 1: Feature Selection” list and the traces assigned to them:

Trace profile	Assigned traces
Automatic Call Distribution (UCD Groups)	• CP-Port-Service Handler • CP-Port-User • CP-Net
Actuators / Sensors / Door Opener	• CP-Port-Service Handler • CP-Port-User • AkSe • Obus • DH-SLA
Call Forwarding - Call Dest. List	• CP-Port-Service Handler • CP-Port-User • CP-Net
Call Pickup Group (standalone environment)	• CP-Port-User
Call Pickup Group (network environment)	• CP-API
DSS Keys	• CP-API
BMO (Central Busy Signaling)	• CP-Port-Service Handler
CLIR (Calling Line Identification Restriction)	• CP-Port-Service Handler • CP-Port-User
Caller List (missed calls)	• CP-Port-Service Handler • CP-Port-User
Code Lock - DND (do not disturb) - Room monitor	• CP-Port-Service Handler • CP-Port-User
CTI (Computer Telephony Integration)	• CP-Port-Service Handler • CP-Port API • API-CTI
Group Call (Hunt groups, Groups, Call Waiting group)	• CP-Net
Path replacement	• CP-Net
Handsfree Answer	• CP-Port-Service Handler
Message Waiting	• CP-Port-Service Handler • CP-Port-User

Table 9-3 Trace profiles with assigned traces

Trace profile	Assigned traces
Night Service	• CP-Port-Service Handler • CP-Port-User
Automatic Callback	• CP-Port-Service Handler • CP-Port-User • CP-Port-Sub
Ringing Group	• CP-Net • CP-Port-Service Handler
Camp-on	• none
Silent Call Waiting	• CP-Port-Service Handler
Call Transfer	• CP-Net • CP-Port-User
MULAP / Mobile Connect	• CP-Net
Conference / Call Intrusion / Silent monitoring / Discreet Call (whisper)	• CP-Net • DH-NW • CP-Resource Manager Interface
Call Duration	• DH-UPN • CP-Port-Accounting • Display
OCA (optiClient Attendant)	• DH-UPN • CP-Port-Sub • DH-CORNET-TS
CDR (Call Charges)	• DH-UPN • CP-Port-Accounting • CP_CCO: GEZ • CP-CCO
EVM	• DH-UPN • DH-EVM • VMM
IVM	• DH-UPN
CLIP on analog phones	• DH-SLA • Input-Output process
CMI	• DH-UPN • DH-CMI
Assistant-T	• CP-Port-User • DH-UPN

Table 9-3 Trace profiles with assigned traces

Trace profile	Assigned traces
Associated services - Flex Call	• CP-Port-User • DH-UPN
Common Hold	• CP-Port-User • DH-UPN
DISA	• CP-Port-User • DH-UPN
DTMF	• CP-Port-User
Hotline	• CP-Port-User • DH-UPN
Key Programming	• CP-Port-User • DH-UPN
LDAP - Phonebook	• CP-Port-User • DH-UPN
Meet me	• CP-Port-User • DH-UPN
MSN	• CP-Port-User • DH-UPN
Mute	• CP-Port-User • DH-UPN
Override	• CP-Port-User • DH-UPN
Park Call	• CP-Port-User • DH-UPN
PKZ (Account codes)	• CP-Port-User • DH-UPN
Redial	• CP-Port-User • DH-UPN
IP Mobility	• CP-Port-User • DH-UPN
Speaker call	• CP-Port-User • DH-UPN
Speed Dialing System	• CP-Port-User • DH-UPN

Table 9-3 Trace profiles with assigned traces

Trace profile	Assigned traces
LCR	• CP-Port-User • CP-Net • CP-Port-Sub
Plug in/out devices and accessories	• DH-UPN • DH-CORNET-TS
Led signaling	• DH-UPN
TLANI/TLA/TMANI port/card blocking	• DH-HKZ • Input-Output Process
SLA/SLMA/SLMAE port/card blocking	• DH-SLA • Input-Output Process
E&M Tie trunks	• DH-E&M • Input-Output Process
Calls via analog trunks	• DH-HKZ • Input-Output Process
Calls to/from analog subscribers	• DH-SLA • Input-Output Process
Call lost - Destination not reachable	• CP-Port-User
Card module startup problem	• Presence • Input-Output process
Attenuation problems	• NW traces
IMODN function	• Presence • IMOD
Resources problems: (MOH, Conferences, DSPs, Paging, Announcements)	• DH-RM • CP-Resource Manager Interface • DH-NW
LIM	• Ethernet Driver
ANI Module	• Obus • DH-HKZ
T1 Analog (Loopstart/Groundstart)	• DH-HKZ
T1 Digital	• none
Licencing	• Database

Table 9-3 Trace profiles with assigned traces

Options

The options in the “Step 2: Combined Problem” list activate additional trace settings. Information is provided via help texts as to which traces apart from system software traces should be additionally activated. The options to be additionally activated are:

Option	Assigned traces
General problem category	
General Display issue	• DH-UPN
Speechpath problem (if no IP telephones/ trunks are integrated)	• CP-Resource Manager Interface
Speechpath problem	• DH-UPN • DH-NW
Wrong display at OpenStage 40/60/80	• CP-Port-Sub • DH-UPN • DH-CORNET-TS

Table 9-4 Options from the “Step 2: Combined Problem” list

9.19.35 Transfer | Communication | Security

File |Transfer |Communication | Security

Security is used to manage the security parameters in the system.

To view the Security dialogs:

1. Select **File/Transfer**.
2. Switch to the **Communication** tab.
3. Select the **Security** option.
4. Select one of the buttons on the right of the **Security** option.

Tabs and Dialogs
• Security	User administration • Security	Protocol

9.19.36 Security | User administration

File | Transfer | Communication | Security | User administration

The **User administration** function can be used to define new users and to assign them to a user group. Existing users can be deleted.

For more information on user administration, see also Section 2.3.4, “Security (User administration)”, on page 2-10.

New users are registered by entering a user name in the table and assigning a user group. Then a password is assigned to the newly set-up user by double-clicking on the Password column; this password must be changed when logging on to the communication system for the first time.

Users who are already registered can be deleted by deleting the corresponding user name and resetting the user group to **none**.

9.19.36.1 User administration table

User name column

This column is used to enter the user name, which may be up to 15 characters. The following characters are permitted:
abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ1234567890 #*+-.,)/

User group column

User access rights can be determined by specifying one of the 6 user groups available (see Section 2.3.4, “Security (User administration)”, on page 2-10).

Password column

By double-clicking on a field of this column the **Create password** dialog box is opened for the selected user. A default password can only be created for new users. Passwords cannot be modified here. In any case, this can only be implemented by the users themselves.

If a user forgets their password, they must be deleted from the system by another authorized user and reconfigured.

If the last authorized user also forgets their password, the communication system has to be regenerated.

Created column

In this column the creation date of the user is displayed.

Last used column

This column indicates when the selected user last logged into the communication system.

9.19.36.2 Buttons

Group chip card

<currently without any function>

Indiv. chip card

<currently without any function>

See also:
– Section 2.3.4, “Security (User administration)”, on page 2-10 – Section 9.19.1, “Transfer	Communication”, on page 9-26

9.19.37 Security | Protocol

File | Transfer | Communication | Security | Protocol

Protocol can be used to display the archiving information from the communication system.

A distinction is made here between:
- Offline mode
- Online mode, Active logging
- Online mode, Logging not active

For more information on the Security protocol, see Section 2.3.4, “Security (User administration)”, on page 2-10.

9.19.37.1 Buttons

Archive (online mode)

Pressing this button activates the transfer of available data records from the communication system. After the transfer has completed successfully, the **Display** and **Print** buttons appear. These buttons can then be used to display or print the logs that were last requested. After archiving, the logs are automatically deleted from the communication system.

Read only (online mode)

This button can be used to call up logs from the communication system without deleting them or adding them to an archive file.

Display

The selected archive file is converted to text and an external editor is launched. The external editor can be configured in the **ass_150e.ini** file. The columns in the text file are separated by tabs.

Print

Pressing this button opens a dialog box where a range of data records can be selected. The default printer is used for printing.

Exit

If online mode (yes) was selected, but logging is not active in the communication system after connection setup, the dialog can only be exited via the **Exit** button. The logging mode (active/ inactive) depends on your HW configuration.

See also:
– Section 2.3.4, “Security (User administration)”, on page 2-10 – Section 9.19.1, “Transfer	Communication”, on page 9-26

9.19.38 Transfer | Callback connection

File | Transfer | Callback connection

The **Callback connection** dialog allows you to enter numbers for the callback feature configured under Transfer | Communication.

9.19.38.1 Area: Callback connection

In the fields, you can configure callback numbers associated with the callback passwords. The first callback number is also used as a destination for automatic error signaling. Up to six numbers can be entered.

Via X75

If the **Via X75** option is activated for a specific number, call setup is implemented via the second ELIC (B-channel). Otherwise, the call setup is implemented via the communication system **IMOD**.

In the U.S., the **Via X75** option should not be activated. The only tested and supported connection is via an analog modem (IMOD).

Error Signaling “On”

This option is used to turn on error signaling. It is only when this option is activated that class B errors are sent from the communication system to the remote center. The destination call number is the first call number in the callback connection.

9.19.38.2 Area: Integrated modem

Internal call number, DID call number

Numbers for internal calls and direct inward dialing calls (DID) for the **IMOD** can be configured here.

9.19.38.3 Digital Modem

Internal call number, DID call number

Numbers for internal calls and DID calls for the second **ELIC** (B-channel) can be configured in these fields.

See also:
– Section 9.19, “Transfer”, on page 9-25 – Section 9.19.1, “Transfer	Communication”, on page 9-26

9.19.39 Transfer | Loadable texts

File | Transfer | Loadable texts

The **Loadable texts** mask defines the fixed or variable languages set. The maximum number of languages depends on the communication system:

The display text languages currently available in the communication system can be viewed as follows:

1. Select **File | Read customer database**
2. Select **System Status | System-wide** and go to the **System texts** tab.
3. The languages currently available in the communication system are displayed in the list box **Available languages**.

If a language is set up in the customer database for a telephone, and this language is no longer available in the communication system (e.g., after the exchange of a reloadable language or an APS transfer), then German is displayed instead of this language.

The date/time format of a station with a language that isn't loaded in the communication system corresponds to the language that is set up.

A single text language cannot be reloaded; instead all variable text languages are always reloaded. Languages that should not be changed should therefore also always be indicated.

9.19.39.1 Area: Fixed

The fixed languages set are displayed in this field. The languages cannot be changed.

9.19.39.2 Area: Variable

The variable languages set are displayed in this field.

See also:

– Section 9.19, "Transfer", on page 9-25
– Section 11.1, "System-wide", on page 11-2

9.19.40 Transfer | SW Transfer

File | Transfer | SW Transfer

SW Transfer enables selection of new software for updating the system software or the terminal or extender software of the OpenStage family and specification of the time for system software updating of the system.

9.19.40.1 System SW area

The **Browse** button is used to select new software for updating the system software.

9.19.40.2 System Switchover time area

The time at which to update the system software is set here. The software update can be started immediately (after loading the new software) or done at a specified time of day. The date and time are set from the drop-down lists.

9.19.40.3 EG Station Type Area

With the **Browse** Button, you can select new software to update the various terminals and the extender software for the OpenStage family (TDM connection type) .

Logos can also be selected for OpenStage 40, OpenStage 60 and OpenStage 80 TDM connection terminals in order to transfer them to the system.

- Logo OpenStage 40 T = Logo file with a customer-specific logo for the OpenStage 40 terminal. The following file requirements apply:
  - Size of the image: 144 x 32 pixels
  - Color: Monochrome
  - Format BMP (Windows bitmap file)
  - Maximum size: 702 bytes:
- Logo OpenStage 60/80 T = Logo file with a customer-specific logo for OpenStage 60 and OpenStage 80 terminals. The following file requirements apply:
  - Size of the image: 240 x 70 pixels
  - Color: Colored
  - Format PNG (Portable Network Graphics) or JPG
  - Maximum size: 5 ... 30 Kbytes

- Logo Default: = Logo file with 15 default logos for the OpenStage 40, OpenStage 60 and OpenStage 80 terminals. The following default logos are currently available: Unify, Deutsche Telekom. Additional company logos are projected.

  The currently available default logo file can be downloaded from the same software server as the system software. The file is named
  logoX.X.X.X.bin (e.g.: **logo1.2.3.4.bin** = default logo file for version V1 R2.3.4).

See also:

– Section 9.19.31, “Maintenance | OpenStage Phones: Event Log”, on page 9-85
– Section 9.19.32, “Maintenance | OpenStage Phones: SW distribution”, on page 9-86
– Section 10.2.5, “Terminal hw sw version”, on page 10-25
– Section 10.8.1, “Flags”, on page 10-178

9.20 Exit

File | Exit

Exits the HiPath 3000 Manager. The active CDB is closed. If changes were made to the customer database since the last “Save”, you will be asked whether you want to save the CDB.

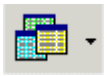
See also:
– Chapter 9, “File menu” – Section 9.7, “Save Customer Database”, on page 9-13 – Section 9.8, “Save Customer Database As”, on page 9-14 – Section 9.9, “Close”, on page 9-15

10 Settings Menu

Settings	Netwide Data
Settings	Set up station
Settings	Lines/networking
Settings	Least Cost Routing
Settings	Incoming calls
Settings	Classes of service
Settings	System Parameters
Settings	Auxiliary equipment
Settings	Network
Settings	Licensing

Table 10-1 Settings Menu

10.1 Settings | Netwide Data

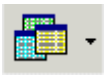


Settings | Netwide Data

You can use **Settings | Netwide Data** to define specific parameters for all stations in a networked system. The data which can be modified here for the individual communication systems must be consistent in the network.

Tabs
• Stations - Netwide Data • Netwide Data • Resource Management (HiPath 5000 RSM/AllServe)

10.1.1 Stations - Netwide Data



Settings | Netwide Data | Stations

The **Stations** tab consists of a table, which is divided into the columns described below. Values for call numbers, DID numbers, and names can be altered by selecting individual fields.

You can also configure the stations via the new Station view.

Node call number

If open numbering is set, the call number of the node is displayed here. A station is reached from an external telephone by dialing this node number, followed by the call number or the DID number.

As of HiPath 3000/5000 V5.0, the node number is no longer placed before the DID automatically, regardless of whether the recipient is a local CO or tie trunk. The node number must therefore be entered as the PABX number (see Areas: PABX number incoming and PABX number outgoing).

10.1.1.1 User-defined columns

The first three columns can be defined by the user. The system offers standard settings for the first two fields, but they can also be overwritten.

Call no. (Call number) column

The **Call no.** column contains the internal call number of the relevant station. This number may contain a maximum of six digits.

DID (direct inward dialing number) column

The DID number assigned to the corresponding extension is entered in this column. This number may contain a maximum of 11 digits. This is the call number used for DID and CorNet.

If a call number if modified in this table, the same modifications must be made in Call Management (Settings | Incoming calls).

The tables under Settings | Incoming calls are updated immediately once changes have been saved for the Call no. and DID fields.

Name column

The name assigned to the station is entered here. The name can be a person's name, the name of a department or any other suitable entry. The name can contain a maximum of 16 characters.

The program does not check the characters entered. It is therefore the user or service technician's responsibility to ensure that only signs permitted are used.

The following ISO 8859-1 characters can be entered:
- Character 32 through 127 (the usual West-European characters, digits, letters)
- German Umlauts (Ä, Ö, Ü, ä, ö, ü)
- the characters Å, Æ, Ñ, Ø, Õ, õ.

Characters that are not permitted will be replaced with a space in the display.

When setting language conversion "Greek" or "Cyrillic", the letters of the Greek or Cyrillic alphabet can be entered in capital letters.

10.1.1.2 System-specific columns

The system-specific data contained in the previous columns may only be modified by actually reconfiguring the communication system.

Type column (fourth column)

Can only be changed by physically reconfiguring the communication system.

You can specify here whether the call number relates to a station port or group port.

Inactive column

Can only be changed by physically reconfiguring the communication system.

The status of the relevant station port is displayed in the **inactive** column. If the * symbol appears in this column, the port (station) is inactive. If the field is empty, the port is active.

The status indicated here is that of the port when the customer database is downloaded.

Type column (sixth column)

Can only be changed by physically reconfiguring the communication system.

The type of telephone connected to the station port is automatically specified by the communication system. If a telephone is not connected, No Port is displayed in the column. If an analog telephone is connected, the entry "P.O.T." appears in the column.

- **No Port**, i.e., no telephone connected
- **P.O.T.**, i.e., analog telephone connected
- System telephone connected
- **S_0 station**

Access column

Can only be changed by physically reconfiguring the communication system.

The name, number and slot of the station system card is displayed here. This column also indicates whether the port is a master or a slave.

This column is often not fully visible. In order to see all entries, use the horizontal scroll function or reduce the width of the other columns by moving the column separators.

System column

Can only be changed by physically reconfiguring the communication system.

This column indicates the network node where the station is located.

10.1.1.3 Network name field

The network name designates the name of the networked system. The configuration is saved under the network name with the suffix *.net. The network name has no significance for the operation of the networked system, but is only used for transparency.

10.1.1.4 Buttons

LCR Support

LCR Support is intended only for Customer Service.

Requirements for LCR Support:

- HiPath 5000 RSM/AllServe
- MS Excel (any version as of Excel 97) must be installed on the PC

LCR Support can be used to generate dial plan proposals in an Excel table for each individual node of the network with respect to the availability of the stations at the remaining nodes in the network. An Excel file is created in the process with as many tables as the nodes on the network. The names of the tables (= titles of the tabs visible in Excel at the bottom left of the screen) are identified by the names of the CDBs of the nodes.

The rest of the structure in the table depends on the type of numbering for nodes on the network. A distinction can be made here between closed and open numbering.

Closed numbering	Every table consists of 3 columns (Excel columns A, B and C).
	The first column (A) lists all internal call numbers of the processed node (detectable from the table name), sorted in ascending order.
	The second column (B) lists all internal call numbers of the remaining nodes, sorted in ascending order.
	The third column (C) lists the resulting proposals for the dial plan of the node, also sorted in ascending order. Note that only "-" and "x" are used here, since the dial plan proposals need to be transparent and easy to understand. If required, the full internal call numbers are listed.
Open numbering	In this case, the tables consist of only one column (A) in which the node call numbers of the remaining nodes are listed with a leading "-" and a closing "z". The node call number used is the node number entered via Flags if open numbering was selected.

The generated proposal must be saved as an Excel file. A **Save As** dialog box appears after the generation for this purpose. This dialog box defaults to directory of the HiPath 3000 Manager and the name of the network. The file type filter is preset to .xls and can only be changed to All Files (*.*). If an existing file is to be overwritten, an appropriate dialog box with a prompt to this effect is displayed by Excel (which runs in the background).

The default option enabled in this dialog box is **No**, which means that the generated Excel file will NOT be saved, and the older information in the Excel file named <**network_name**>**.xls** is retained. This also applies if the operation is aborted using **Cancel**.

The file generated by Excel using this method can then be opened, and the dial plan proposals can be transferred to the respective CDBs.

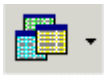
Check

Ensure that you have not assigned the same station number or DID number to two or more stations by pressing the **Check** button to initiate a check. If duplicates are found, an error message is displayed together with a list of the duplicates. You can then make appropriate corrections.
When assigning call numbers in the communication system to S_0 stations, the closing digits of this number must be unique in relation to all internal call numbers of all other stations (for example: The S_0 call number 9553193 conflicts with the station call number 193.).

See also:

- Section 10.1, “Settings | Netwide Data”, on page 10-2
- Section 10.1.2, “Netwide Data”, on page 10-8
- Section 10.1.3, “Resource Management (HiPath 5000 RSM/AllServe)”, on page 10-10
- Section 10.2.1, “Subscriber”, on page 10-12
- Section 10.4.8.4, “Areas: PABX number incoming and PABX number outgoing”, on page 10-75
- Section 10.5.2, “Dial plan”, on page 10-109
- Section 10.6, “Settings | Incoming calls”
- Section 10.8.1, “Flags”, on page 10-178

10.1.2 Netwide Data



Settings | Netwide Data | Netwide Data

Netwide data is only displayed if a CDB of a node was loaded from the server. **Netwide data** can be used to configure all the parameters that apply throughout the network.

10.1.2.1 Area: Media-PC

IP address

The IP address of the Media PC server in the customer LAN. The media PC can be used an an announcement device, for voice mail or as a Fax server.

Announcement

The call number for the announcement device in the networked system.

Voicemail

The call number of the voice mail in the networked system.

Fax

The call number for the fax device in the networked system.

10.1.2.2 Link SQL DB

URL or IP address or DNS name of the server on which the SQL database for saving the Work-Point Client parameters is stored. The address is made known to the WorkPoint Clients via the Autodiscovery server.

10.1.2.3 Area: External HiPath 5000 RSM/AllServe Domain Link

If multiple domains are networked with one another, a destination address can be entered here for up to 4 domains. If one of the call numbers or IP addresses entered in domain B is then dialed from within domain A, the connection is routed to domain B and processed further in that domain.

Domain entries are required for networking with HiPath 4000 and HiPath 3000 systems that are not integrated in the HiPath 5000 RSM/AllServe network. In this case, the node ID of the other system can be used as the call number. For the HiPath 3000, the node ID is located under **Set-**

tings | Lines/networking | Routes under Route 16 (**Trk Grp. 16**) in the area **PABX number-incoming** in the **PABX number field**. In the HiPath 4000, a separate node ID must be configured for networking. The LCR must then be modified as needed so that the node Id is dialed before the actual call number.

Domain Call No.

Call number of a gateway in an external domain. The call number must be unique within the own domain.

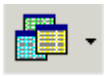
Domain IP address

IP address of the gateway in the external domain.

See also:

– Section 10.1, “Settings | Netwide Data”, on page 10-2
– Section 10.1.1, “Stations - Netwide Data”, on page 10-3
– Section 10.1.3, “Resource Management (HiPath 5000 RSM/AllServe)”, on page 10-10
– Section 10.10.15, “Gatekeeper”, on page 10-330

10.1.3 Resource Management (HiPath 5000 RSM/AllServe)



Settings | Netwide data | Resource Management

Resource management enables you to manage the resources (MOH/Conference) in a network system. If a network system includes individual communication systems or groups of communication systems that are linked via a WAN, there may not be enough bandwidth available to allow the use of the conference resources in one WAN segment, for example, by a communication system in another WAN segment. In such cases, resource management can be used to build groups which then use only the resources in their own WAN segment and do not access the resources in another WAN segment. If all the communication systems in the network are linked via a WAN, then resource management has no practical use.

10.1.3.1 Table

When a network CDB is loaded, all system CDBs associated with the network CDB are shown in the table.

Node IP address column

Shows the HIP IP addresses of all nodes included in the network CDB.

In an IP network, the supply of IP addresses is not supported here.

Node ID column

Shows the IDs of the corresponding nodes.

CDB Name column

Shows the file name of the corresponding system CDB (node).

WAN 1, ... WAN 5

Under **WAN1** to **WAN 5** you can specify how the individual nodes should mutually use their resources. You can assign up to 5 groups (WAN segments) to each node. For each node, you can specify to which group it should belong and thus from which node it should use the resources. If a node is not assigned to any group, only the resources within the node itself can be used for that node. In order to use the resource management for a node, the node must be assigned to at least 2 WAN segments.

See also:
– Section 10.1, “Settings	Netwide Data”, on page 10-2 – Section 10.1.1, “Stations - Netwide Data”, on page 10-3 – Section 10.1.2, “Netwide Data”, on page 10-8

10.2 Settings | Set up station

Settings | Setup station

Settings | Setup station can be used to view and optionally define or edit the settings for stations, fax/modem, emergency operation for Workpoint clients and the key programming in the communication system.

You can also configure the stations via the new Station view.

Tabs and Dialog boxes
• Subscriber • Key programming – Key programming: Fill/Delete – Key programming: Print • Terminal hw sw version • Fax • Emergency • Mobility Entry (not for U.S.) • HXG Configuration (V4.0 and Earlier) • Gatekeeper (V5.0 and Later) • Gateway (V5.0 and Later) • OSO Ports

10.2.1 Subscriber

Settings | Setup station | Stations

The **Station** tab consists of a table, which is divided into the following columns. The values for the call number, DID number and name can be changed by selecting the individual fields.

The table is often not fully visible. In order to see all entries, use the horizontal scroll function or reduce the width of the columns by moving the column separators.

This station status can also be printed via Print / Print Preview.

You can also configure the stations via the new Station view.

Call no. (call number) column

The **Call no.** column contains the internal call number of the relevant station. This number may contain a maximum of six digits.

When a fax or modem station is deleted (i.e., the call number and DID are deleted), the extension type must also be be reset to the default (standard).

DID (direct inward dialing number) column

The DID number assigned to the corresponding extension is entered in this column. This number may contain a maximum of 11 digits. This is the call number used for DID and CorNet.

When a fax or modem station is deleted (i.e., the call number and DID are deleted), the extension type must also be be reset to the default (standard).

If a call number if modified in this table, the same modifications must be made in Call Management (Settings | Incoming calls).

The tables under Settings | Incoming calls are updated immediately once changes have been saved for the Call no. and DID fields.

If your provider has assigned you various MSNs, you can enter these “CO numbers” in the **DID** column to define the call allocation. The MSN is entered without the “prefix”. An MSN can only be assigned to a single internal call number. If an MSN is to be signaled at multiple internal stations, a group or hunt group call number must be entered. The stations are then assigned to the groups (see Groups/hunt groups).
If you want to unassign the MSN, you can also delete it from the **DID** column. Please note, however, that a call to an unassigned MSN (CO numbers) will not be signaled or only signaled at the first port at the intercept position.

Name column

The name assigned to the station is entered here. The name can also be entered via the Station view. More details on the name of a station can be found in the station view under Name.

Status column

Can only be changed by physically reconfiguring the communication system.

The status of the relevant station port is displayed in the **Status** column. If a gray symbol or the * symbol appears in this column, the port (station) is inactive. If a green symbol appears in this column or if the field is empty, the port (station) is inactive.

Cordless base stations with SLUC cards are always shown as inactive, since this call number cannot be reached.

If a mobile phone is involved, the following status indicators are used:

Port active	PP registered	Status display	Meaning
no	yes	green	OK
yes	yes	red	Board lockswitch set for registered PP.
no	no	yellow	PP was automatically logged off by a change to the PIN in the Manager E.
yes	no	gray	No PP was ever registered on this port.

The status indicated here is that of the port when the customer database is downloaded.

Type column

Can only be changed by physically reconfiguring the communication system.

The type of telephone connected to the station port is automatically specified by the communication system. If a telephone is not connected, No Port is displayed in the column. If an analog telephone is connected, the column entry is “No Fe”.

- **No Port**, i.e. no telephone connected
- **No Fe**, i.e. analog telephone connected
- System telephone connected
- **S_0 station**

Access column

Can only be changed by physically reconfiguring the communication system.

The name, number, slot of the station system board and the type of Workpoint Client (SYS=System, S_0) are displayed here. This column also indicates whether the port is a master or a slave.

For an offline-configured database, there are no slave ports with HiPath 37xx. You can assign a slave port to a specific master port by double-clicking the Access field. The result is identical to connecting a slave terminal on the hardware side and then reading the CDB. If a slave port is assigned, you can remove it for both the master port and the slave port by double-clicking the Access field.

CLIP column

If Configurable CLIP is activated, a valid DID number can be specified for each device here. (See also Configurable CLIP under Flags). If no CLIP number was specified, the supplied Calling Partner Number is delivered (as before).

CLIP and LIN (Location Identification Number; only in the USA) are mutually exclusive. By default, LIN is activated for the USA and CLIP for all other countries. If CLIP is activated for the USA, LIN is automatically disabled.

LIN column (Location Identification Number; USA only)

When emergency number E911 is set up, a valid DID (direct inward dialing) is entered for each telephone. This number identifies the location of the station from which the emergency call was made. There is no consistency test carried out for this.

LIN and CLIP are mutually exclusive (see also CLIP).

Check button

Ensure that you have not assigned the same station number or DID number to two or more stations by pressing the **Check** button to initiate a check. If duplicates are found, an error message is displayed together with a list of the duplicates. You can then make appropriate corrections.

When assigning call numbers in the communication system to S_0 stations, the closing digits of this number must be unique in relation to all internal call numbers of all other stations (for example: The S_0 call number 9553193 conflicts with the station call number 193).

See also:

- Chapter 8, “Station view”
- Section 9.15, “Print / Print Preview”, on page 9-23
- Section 10.2.2, “Key programming”, on page 10-16
- Section 10.2.5, “Terminal hw sw version”, on page 10-25
- Section 10.2.7, “Emergency”, on page 10-28
- Section 10.2.8, “Mobility Entry (not for U.S.)”, on page 10-30
- Section 10.6, “Settings | Incoming calls”, on page 10-125
- Section 10.2.10, “Gatekeeper (V5.0 and Later)”, on page 10-33

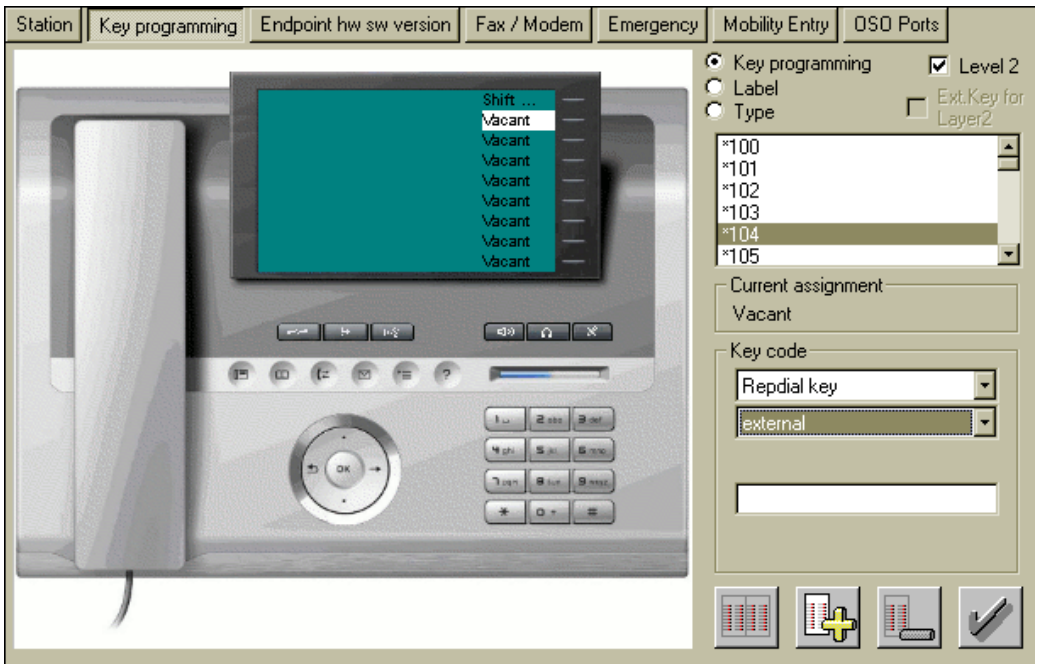
10.2.2 Key programming

Settings | Setup station | Key programming

> ***Important:*** **Key designations for telephones with paper labels** are not stored in the CDB but in a separate file on the administration PC. This file is found in the “HiPath 3000 Manager E” directory together with the CDB.
> Thus, when a CDB is changed and then transferred back to HiPath 3000, the file with the key designations remains on the administration PC. If a different administration PC is used for changes later, the key designations will no longer be available.

In the **Key programming** tab , the telephones’ keys can be reserved. Depending on the station that was selected, the connected telephone is displayed. Furthermore, key modules can be inserted and programmed as well as removed. It is possible to distinguish between a key extension and a busy lamp field.

If you click on one of the programmable keys, its assignment is displayed in the **Current assignment** field. This assignment can be changed and stored by selecting a feature in the field **Key code**.



These functions are selected using the options in the upper right-hand corner of the mask.

- **Key programming option**
- **Label option** (key labeling)
- **Type option** (configuring the appropriate system telephone)

A list box containing numbers and names is provided below these functions. The station to be edited can be selected here. The number and name are highlighted in color in the list box, and also appear on the system telephone display (if it has one).

If you select a key under **Key programming**, the key name is highlighted in color and the current assignment is displayed in the **Current assignment** field. The programmable functions are displayed in a list box (Key code). When you select one of the features, it appears in the selection box. To add the feature to the key, click on the symbol with the red check mark.

You can copy the key assignment of the current station to another station via the context menu.

Level 2

Checkboxes:

- The **Level 2** check box is not activated by default and cannot be changed, i.e., only the first key level is displayed. It is only if the “Shift Key” function is set for a key on the first key level that this check box will be enabled. After this action, it can be activated or deactivated.
- If the **Level 2** check box is activated, the second key level will be displayed too. The **Key programming** and **Label** options are applied for the second key level from now. This check box has no significance for the **Type** option.
  Only external call numbers can be programmed on the second key level.

LEDs:

The LEDs always display the states of the programmed features and call numbers for the first key level but not for the second key level. Even if the user of the telephone switched to the second key level with the shift key, the LEDs still display the states for the first key level.

Note:

- The second key level can also be used on key modules, but not on busy lamp fields.
- On the optiPoint 500 advance telephones, the keys on the second key level are not labeled due to lack of space.

List box

The station to be edited can be selected here. The number and name are highlighted in color in the list box, and also appear on the system telephone display (if it has one).

Special features of optiPoint 500 entry

Display-related key programming (e.g. call parking, call hold, conference) is no longer allowed for optiPoint 500 phones.

When reprogramming the default keys, keep in mind that some of these keys cannot be reset to the default values after the change!

The list of the programmable keys includes the following options:

- Repertory dialing
- Speed dialing
- Speaker call

Depending on the telephone type and/or configuration, not all keys may appear in the selection box.

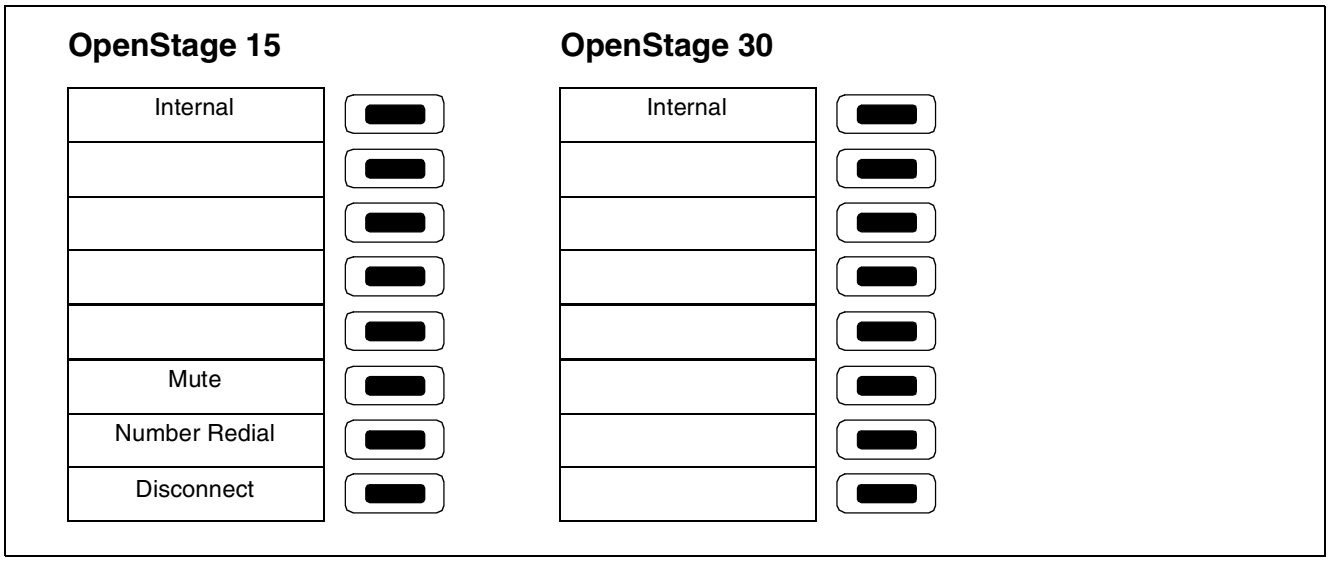
The following keys cannot be programmed on entry and basic:

- Advisory message
- Ringer cutoff
- Handsfree answer back
- Waiting tone on & off
- Call waiting answer (until SMR_G Rel 2.2)
- Toggle/Connect (until SMR_G Rel 2.2)
- Conference (until SMR_G Rel 2.2)
- Park (until SMR_G Rel 2.2)
- View call
- DTMF dial
- Room monitor
- Release CO trunk
- View call charges
- Calls in queue
- Delete
- Loudspeaker (blocked for entry only)

For reasons of standardization, please ensure that you do not assign alternative or additional features to the four function keys next to or above the number pad for the terminal types “advance plus”, “standard” and “memory”. Tests must be performed in exceptional situations to ensure that the system is working properly. It must also be ensured that any changes made do not result in unwanted errors.

Special features with OpenStage 15 and OpenStage 30

When a new OpenStage 15/30 is connected to the communications system, the programmable function keys are by default assigned with the functions with the displayed in the image:



- Assignment of the first programmable function key with the function “Internal”:
  - If the “Simplified dialing” feature is activated, then the “Internal” function is automatically assigned to the first programmable function key.
  - The “Internal” function can be assigned to another programmable function key.
  - If the “Simplified dialing” feature is deactivated having been previously activated, the “Internal” function is removed from the first programmable function key. If however the “Internal” function is assigned to another programmable function key, it is not removed.
  - If the “Simplified dialing” feature is reactivated, then the “Internal” function is automatically assigned to the first programmable function key, even if this function key is occupied with another function.
  - If the “Simplified dialing” feature is not activated, then the “Internal” function is also not available.
- The assignment of the programmable function keys is maintained if a reset is executed on HiPath 3000 or OpenStage 15/30 is disconnected and reconnected. If the operating system is reloaded, the assignment of the programmable function keys is lost.
- Swapping out terminals:
  - If OpenStage 15/30 is replaced by another terminal (e.g., by another OpenStage), then the programmable function keys of this terminal are occupied by default with the functions intended for the terminal.
  - If a terminal is replaced by OpenStage 15/30, then the functions keys are occupied by default with the functions displayed in the above figure.

- If HiPath 3000 is upgraded from an older to a newer system software, then the OpenStage 15/30 connected before the upgrade maintain the same function key assignment as before the upgrade.

Special features with OpenStage 60 and OpenStage 80

A programmable sensor key on the telephone can be programmed using the HiPath 3000 redial function (“Expanded Redial”). If the redial function is activated by pressing the sensor key, one of the last 10 external call numbers dialed can be selected.

The HiPath 3000 redial function does not affect the internal list of call numbers dialed that is stored in the telephone. The redial function of the telephone is available via this list. The last 10 external call numbers dialed are also stored here.

10.2.2.1 Key programming option

All system telephones come with default key programming. However, all of these keys can be reprogrammed. On display models, some keys can be programmed by the user as well.

When key programming is activated, the telephone connected is displayed in the graphics on the left side of the dialog for each selected station whose call number is activated in the list box.

It is possible to copy the key programming of a terminal to other stations via the context menu. The context menu also provides deletion and filling options.

If you click on one of the programmable keys, this key is highlighted in color and its assignment is displayed in the **Current assignment** field. This assignment can be changed by selecting a feature in the **Key code** field. You can then add the selected feature to the key by clicking the checkmark icon.

Current assignment

When a key on the telephone’s graphic display is selected/clicked, the current assignment of the key is displayed.

You can copy the key assignment of the current station to another station via the context menu. You can use **Copy** to copy the currently selected key or **Copy all** to copy all keys of this terminal. You can then use **Paste** to copy over the keys that you copied earlier to the currently selected station. Multiple stations may be selected (using the Shift or Ctrl key).

Key code

To program a key, the new function is selected under **Key code**. Depending on the feature, necessary additional information is queried in the additional fields. The user prompts are the same in this case as for the key programming on the telephone.

10.2.2.2 Label option

Another feature available on the **Key programming** tab is printing key labels. If you have a printer attached to the PC used to manage the communication system, you can print out a faceplate for the system telephone that lists the functions you have programmed for the individual keys. This faceplate fits under the protective plastic overlay that sits on top of the keys. There are different faceplate styles to fit the various system telephones.

To print a faceplate for your terminals, select the **Label** option. The **Key code** field is replaced by the **Key text** field, and the **Print** and **Font** buttons are displayed. Print opens a dialog box in which you can specify the **Label print** type (Key programming: Print) .

If you click on one of the programmable keys, this key is highlighted in color and its assignment is displayed in the **Current assignment** field. The text for this key is displayed in the Key text field and can be modified by overwriting the text.

This feature is useful for DSS keys. The name assigned to the station can be printed and placed next to the key.

Key text

When selecting the **Label** option, the **Key code** field is replaced by the **Key text** field, and the **Print** and **Font** buttons are displayed. If you click on one of the programmable keys, this key is highlighted in color and its assignment is displayed in the **Current assignment** field. The text for this key is displayed in the Key text field and can be modified by overwriting the text.

10.2.2.3 Type option

In this connection, a future telephone type can be predefined for station ports that aren't inserted. Because of this, keys can be predefined on telephones without the telephone being physically inserted in the communication system. If the telephone type entered is inserted into the communication system later and if it matches the programmed type, then the keys are activated with the predefined function.

If a different type of telephone is physically inserted, the new telephone is put into service with the standard assignments.

The **Terminal type** list box appears when selection this option. This list box is used to determine the terminal type which should be assigned to the station. A corresponding graphic display of each of the system telephones is stored in the communication system.

If a terminal is already connected to the station port, the communication system automatically displays the appropriate graphic display.

Terminal type

On selecting the **Type** option, the **Terminal type** list box appears. This list box is used to determine the terminal type which should be assigned to the station.

10.2.2.4 Icon buttons

Range	Description
	Clicking the icon switches the display between the terminal and the key extension unit/key module or the busy lamp field (only possible if a key extension unit is attached).
	When you click the icon, one or more key extension units/key modules of a system telephone or a busy lamp field are plugged in (if supported by the device). If you already have four units, this button will be grayed out. As of Hicom 150 E Office Pro/Com Rel. 2.0, you will be prompted to specify whether you want a key extension unit or a busy lamp field.
	When you click the icon, one or more key extension units/key modules or busy lamp fields are deleted. This always deletes the last key extension unit. If there are no units available, this button will be grayed out. As of Hicom 150 E Office Pro/Com Rel. 2.0, you will be prompted to verify whether a key extension unit or busy lamp field is involved.
	When you click on the icon, the current key assignment is saved.

See also:

- Chapter 8, “Station view”
- Section 10.2.1, “Subscriber”, on page 10-12
- Section 10.2.3, “Key programming: Fill/Delete”, on page 10-23
- Section 10.2.4, “Key programming: Print”, on page 10-24

10.2.3 Key programming: Fill/Delete

Settings | Setup station | Key programming
BLF | Fill/Delete

Fill/Delete BLF keys enables you to quickly set up or delete a busy lamp field. The choices for filling out the field are ordered by call number (ascending order); only existing call numbers can be filled in.

To call up the dialog, click on the first icon button on the Key programming tab and select the menu item Key programmingFill/Delete from the context menu (a busy lamp field should have already been set up in advance via using the second icon button)

Fill direction

You can select either **vertically** or **horizontally**. The starting key is the one selected on calling the context menu. The direction last used is offered again at the next call.

Action

Fill (default value) or **Delete** can be selected.

- When filling, the **start call number** and **end call number** or **start call number** and **number** must be entered.
- When deleting, only the number must be entered.

Start call number

Drop-down list with all call numbers. The call number to be placed on the first key (= selected key) should be specified.

End call number

Drop-down list with all call numbers. The last call number to be displayed should be specified. The **Number** field is automatically adjusted when the end call number is entered. The end call number must not be smaller than the starting call number.

Number

Drop-down with the number of possible keys. The number depends on the position of the selected key. The field “End call number” is automatically adjusted whenever the number is entered.

See also:
– Section 10.2.2, “Key programming”, on page 10-16

10.2.4 Key programming: Print

Settings | Setup station | Key programming
Label | Print

Label allows you to print key labels for your telephones.

To access the dialog box, select the Key programming tab and then select the **Label** option. Click the **Print** button.

A dialog appears where you can select the telephones and attached key modules for which you want to print the key assignment.

In a network, you can choose whether you want to print the key assignment for all or selected telephones.

Column: Print

Select the ports for which key labeling should be printed.

Column: BLF / EKL

Select the ports for which key labeling should additionally be printed for the key modules added.

All stations

All ports are selected for which key labeling is to be printed.

Print on printed form? (without frame)

Prints the label without a frame.

See also:
– Section 10.2.2, “Key programming”, on page 10-16

10.2.5 Terminal hw sw version

Settings I Set up station I Endpoint hw sw version

The hardware/software version of the terminals is made up of the **current OpenStage SW versions in MMC** and a table, in which the number, the name, the type, the location as well as the current software and hardware version of the terminals are displayed.

The table is often not fully visible. In order to see all entries, use the horizontal scroll function or reduce the width of the columns by moving the column separators.

10.2.5.1 Area » Current OpenStage SW Versions in MMC«

The current software version is displayed here which is available on the MMC card for upgrading OpenStage T devices.

10.2.5.2 Table

Call Number column

The internal number of each IP terminal is displayed here. No number is displayed for IP terminals which have been added to Manager E but which are not yet registered in the system.

Name column

This column displays the name of the station.

Type column

This column displays the terminal type of OpenStage and optiPoint IP telephones.

Column: Current SW Version

The current software version of the OpenStage and optiPoint IP terminals registered on the system is displayed here. No software version is displayed for IP terminals which have been added to Manager E but which are not yet registered in the system.

Column: HW Version

The hardware version of the OpenStage terminals which are registered on the system is displayed here.

Column: Access

The slot location of the respective IP terminal is displayed here.

See also:
– Section 9.19.31, “Maintenance	OpenStage Phones: Event Log” – Section 9.19.32, “Maintenance	OpenStage Phones: SW distribution” – Section 9.19.33, “Maintenance	OpenStage Phones: Trace” – Section 9.19.40, “Transfer	SW Transfer” – Section 10.8.1, “Flags”

10.2.6 Fax

Settings | Setup station | Fax

Fax/Modem should only be configured in cases where the customer has an IP network without a HiPath 5000 RSM/AllServe server installed. In the HiPath 5000 RSM/AllServe system, the tables for every involved node are generated automatically and silently (without a visible dialog) by the server.

The **Fax/Modem** table is evaluated for fax/modem connections only in the case of an IP network. A maximum of 128 call numbers of fax or modem ports, which are not installed in the own node but in the networked remote node, can be entered in the table. In the case of an incoming connection, the A station number is searched in this table. If the number is found there, this means that a fax or data connection is involved, and the Resource Manager in the own system can activate the required DSP.

Call no. (call number) column

In the **Call No.** column, you can enter a call number of up to 16 digits for a fax or modem port in a networked node.

Fax / Modem column

You can select whether the station number is assigned to a fax or modem port. If no selection (blank) is made, the station number will no longer be evaluated.

Check column

If the entered call number is not unique within the table (from a digit analysis point of view), a red arrow appears. The row in question must then be corrected (it is not possible to import an inconsistent CDB into the system).

All database equal button

All database equal loads the contents of the table into all currently loaded/opened CDBs.

See also:
– Section 10.2.1, “Subscriber”, on page 10-12

10.2.7 Emergency

Settings | Setup station | Emergency

Emergency enables you to control the behavior of the IP Workpoint clients (system clients) within the framework of the SRS concept (Small Remote Sites). A detailed description of the SRS concept can be found in the manual “HiPath 3000/5000, Feature Description”.

Small remote sites redundancy

Activate this flag if the SRS concept is to be used.

Emergency text

Enter the text (max. 15 characters) to be displayed on the system clients in the event of an emergency (failure of the HiPath 4000) here.

Workpoint Clients table

The table shows all the system clients that have been set up.

Call No. column

The internal call number of each station is shown here.

Name column

The name assigned to the station is shown here.

CFSS-Destination column

You can select a forwarding destination for each station via the drop-down list. If the system client is not working (e.g., because the PC on which OpenScape Personal Edition is running has been shut down), calls will be forwarded to the specified destination.

The local call number may not be entered as a target. If a station with the same call number is entered as a CFSS target in another system, this call number must be unique within the system. It should not conflict with the internal dial plan. A call number of this type must then be assigned a prefix (or seizure code) that is configured in the LCR dial plan.

Emergency text column

For each system client you can specify here whether the text entered in the **Emergency Text** field should be shown on its display in the event of an emergency. The **Emergency text for all** button can be used to enable or disable the option for all system clients.

Manual Switchback column

Under normal circumstances, the system client automatically registers back at the HiPath 4000 as soon as it detects that the HiPath 4000 can be reached again.

If the **Manual Switchback** option is set, and the CDB is being copied back to the communication system, the terminals are forced to immediately switch back to their main system. The switchback occurs independently of the call state.

“Emergency text for all” button

Click this button to enable or disable the option in the **Emergency text** column for all system clients.

“Manual Switchback for all” button

Click this button to enable or disable the option in the **Manual Switchback** column for all system clients.

See also:
– Section 10.2.1, “Subscriber”, on page 10-12 – HiPath 3000/5000 Feature Description, Small Remote Site Concept

10.2.8 Mobility Entry (not for U.S.)

Settings | Set up station | Mobility Entry

Mobility Entry is used to integrate mobile stations in the HiPath 3000 system. Mobile stations are GSM phones and home workstations. Mobile stations are therefore treated as internal stations. A mobile station can make an outgoing call via the system. Incoming calls are signaled both on the system and on the mobile station.

Important: Mobility Entry is not supported behind SIP provider interfaces or in IP networks. Consequently, the “Callback” function is not supported either. Mobility Entry is only enabled for the node to which the CO is connected.

For Mobility Entry, automatic least cost routing must be fully configured and then activated. This enables an external GSM telephone (mobile station number) that is assigned to a virtual station to be reached for an incoming call.

10.2.8.1 Mobile Connection table

The table shows all configured numbers for Mobility Entry. A maximum of 100 entries are possible.

Stations column

The number of a virtual port or of a dual-mode SIP station is selected here.

Mobile number column

The mobile call number is entered here.

The columns in the next row of the table (e.g., 2) can only be filled out after the **Virtual station** and **Mobile call number** columns have been filled out in the previous row of the table (e.g., 1).

Web feature ID column

The web feature ID defines how the stations should log in on the myPortal web client and myPortal entry Widget. Normally, a previously configured basic MULAP is specified here. If the station has a smart phone but no system phone, the virtual number needs to be entered instead.

Licence Column

In the “Licence” column you can select to which virtual station one of the available licenses should be assigned.

HiPath 2000 and **HiPath OpenOffice EE** are not licensed via Manager E. The “Licence” column is therefore not visible in Manager E. With HiPath 2000 and HiPath OpenOffice EE the available licenses are automatically assigned to the first mobile stations which were created.

10.2.8.2 Assigned Licences Area

The number of assigned licenses (e.g. **3**/0) and the number of available licenses (e.g. 0/**10**) are displayed here.

HiPath 2000 and **HiPath OpenOffice EE** are not licensed via Manager E. The “Assigned Licences” area is therefore not visible in Manager E.

See also:
– Section 10.8.12, “Daylight saving time/DISA” -> Mobility Callback, DID no. (from HiPath 3000/5000 V8, HiPath OpenOffice EE V1 R2) – Section 10.5, “Settings	Least Cost Routing” – HiPath 3000/5000 Feature Description, Mobility Entry (not for USA)

10.2.9 HXG Configuration (V4.0 and Earlier)

Settings | Set up station | HXGx Configuration

HXG Configuration is used to configure the station ports of the HG 1500 cards.

10.2.9.1 Area: Selection

HG 1500 Card

The HG 1500 cards plugged into the communication system can be selected via **HG 1500 Card**.

10.2.9.2 Stations table

This table displays all station ports which are free in the communication system and which can be configured, as well as all configured station ports for this card.

Selected station, System Client, S0 Extension, Setup

If **System Client** is selected, then all selected station ports are configured as system clients via **Setup**.

If **S0 Station** is selected, all selected station ports are configured as S**0** stations via $_{\text{Setup}}$.

Selected station, Delete

All selected station ports are deleted by pressing **Delete**.

Configured station

The system clients and S_0 stations configured for the current HG1500 card are displayed in this field.

See also:
– Section 10.4, “Settings	Lines/networking”, on page 10-49 – Section 11.1.1, “Cards”, on page 11-3 – Section 11.1.2, “Card Configuration	T1 Configuration”, on page 11-6 – Section 11.1.3, “Card Configuration	Card data”, on page 11-7 – Section 10.2.10, “Gatekeeper (V5.0 and Later)”, on page 10-33 – Section 10.2.11, “Gateway (V5.0 and Later)”, on page 10-35

10.2.10 Gatekeeper (V5.0 and Later)

Settings | Set up station | Gatekeeper

Gatekeeper is used to configure the Workpoint clients of the station ports of the inserted HG 1500 boards.

10.2.10.1 Area: Selection

Gatekeeper HG 1500

Under **HG 1500 Gatekeeper**, select the HG 1500 board plugged into the communication system that is configured as a gatekeeper (see also Settings | Network | Gatekeeper).

Enable gateway resources flag

The “Enable gateway resources” flag enables the DSP resources of the selected HG 1500 card. DSP resources are required for B channel connections (voice payload data) between TDM and IP devices. When the flag is activated, the DSP resource of the HG 1500 card can be used for voice payload data (requires B channel licenses for the HG 1500 card). To prevent loss of performance, it is recommended that this flag be deactivated in the case of large IP configurations with several HG 1500 cards. HG 1500 then “only” works in gatekeeper mode (to perform station registration/deregistration, call signaling, etc. One gatekeeper is possible for each HiPath 3000 system. Additional HG 1500 cards then perform the gateway functions.

The following rules must be observed:

- In HiPath 3000 systems with a single HG 1500, the “Enable gateway resources” flag must be activated to facilitate combined gateway and gatekeeper functionality.
- In HiPath 3000 systems with several HG 1500 cards, the “Enable gateway resources” flag is used to define whether the selected HG 1500 only offers gatekeeper functionality or combined gateway and gatekeeper functionality.

In HiPath 3000 systems with several HG 1500 cards, internal resource management controls the allocation of calls and traffic to the individual HG 1500s.

10.2.10.2 Stations table

This table displays all station ports which are free in the communication system and which can be configured, as well as all configured station ports for this card.

Selected station, System Client, H.323 Client, SIP Client Setup

If **System Client** is selected, then all selected station ports are configured as system clients via **Setup**.

If **H.323 Client** is selected, all selected station ports are configured as H.323 clients via **Setup**. All H.323 clients are assigned the default IP address entered under the Default H.323 Client field under Program options General.

As of HiPath 3000 V9, H.323 clients are no longer supported.

If **SIP Client** is activated, all selected station ports are configured via “Setup as SIP client”.

The configuration of the System/H.323 clients occurs via Station view: Workpoint Client.

Selected station, Delete

All selected station ports are deleted by pressing **Delete**.

Configured station

This field shows the number of configured system clients, H.323 clients and SIP clients of the HG 1500 board.

See also:

– Section 10.2.11, “Gateway (V5.0 and Later)”, on page 10-35
– Section 10.4, “Settings | Lines/networking”, on page 10-49
– Section 10.10.15, “Gatekeeper”, on page 10-330
– Section 11.1.1, “Cards”, on page 11-3
– Section 11.1.2, “Card Configuration | T1 Configuration”, on page 11-6
– Section 11.1.3, “Card Configuration | Card data”, on page 11-7
– Section 10.11, “Settings | Licensing”, on page 10-341

10.2.11 Gateway (V5.0 and Later)

Settings | Set up station | Gateway

Gateway is used to configure the S_0 stations of the station ports of the inserted HG 1500 boards.

10.2.11.1 Area: Selection

HG 1500 Card

Under **HG 1500 Board**, select an inserted HG 1500 board in the communication system that is not configured as a gatekeeper (see also Settings | Network | Gatekeeper).

10.2.11.2 Stations table

This table displays all station ports which are free in the communication system and which can be configured, as well as all configured station ports for this card.

Selected station, S0 Extension, Setup

Setup can be used to configure all selected station ports as S_0 extensions on the selected HG 1500 board.

Selected station, Delete

All selected station ports are deleted by pressing **Delete**.

Configured station

This field shows the number of S_0 stations set up for the selected HG 1500 board.

See also:
– Section 10.2.10, “Gatekeeper (V5.0 and Later)”, on page 10-33 – Section 10.4, “Settings	Lines/networking”, on page 10-49 – Section 10.10.15, “Gatekeeper”, on page 10-330 – Section 11.1.1, “Cards”, on page 11-3 – Section 11.1.2, “Card Configuration	T1 Configuration”, on page 11-6 – Section 11.1.3, “Card Configuration	Card data”, on page 11-7

10.2.12 OSO Ports

Settings | Set up station | OSO Ports

Virtual stations must be configured for functions provided by HiPath 3000 and used by OpenScape Office. These functions are: Fax, fax groups, AutoAttendant, voicemail groups and call parking. The virtual stations are configured as OpenScape Office ports via **OSO Ports**.

10.2.12.1 OSO Port Configuration area

This area contains a table with the following columns:

“Virtual Station” column

A virtual station/port can be selected for each line from a selection list in this column. The list contains the virtual stations which were configured for OpenScape Office. When a virtual station is selected from this select list, it is deleted from the list.

“Type” column

One of the following types can be assigned for each station in this column: “fax”, “fax groups”, “AutoAttendant”, “voicemail groups” and “parking”. For each type a different maximum number of assignments is possible:

- fax: 250
- fax groups: 30
- AutoAttendant: 20
- voicemail groups: 20
- parking: 1

“Number” column

This column can only be accessed when the fax type is selected. The number can then be selected from a select list .

10.2.12.2 Assigned Ports area

This area displays the ports already assigned, i.e., virtual stations, for every type (“fax”, “fax groups”, “AutoAttendant”, “voicemail groups” and “parking”). And in addition the maximum number of ports which can be assigned.

Example

fax: 4/250

The “fax” type was assigned 4-times to a station/port. 250 assignments are possible.

10.3 Settings | Cordless (Not in the USA)

Settings | Cordless

Settings | Cordless can be used to set the parameters for Cordless.

Tabs and Dialog boxes
• Cordless	System-wide • Cordless	SLC • Cordless	Multi-SLC • Cordless	Base station

10.3.1 Cordless | System-wide

Settings | Cordless | System-wide

System-wide contains system parameters for Cordless (CMI).

10.3.1.1 Area: CMI data

System ID

The **System ID** is entered in this field as an 8-digit hexadecimal digit sequence.

The following applies here:

1st. digit	E/ARC	Access Right Class
2nd. - 5th. digits	EIC	Equipment Installers Code
6th. - 7th. digits	FPN	Fixed Part Number
8th. digit	FPS	Fixed Part Subscriber

The entry **must** have 8 digits.

Freq. band

Europe / world:	1.88 - 1.90 GHz
China:	1.90 - 1.92 GHz
Latin America:	1.91 - 1.93 GHz

When reading the CDB data, the value entered is compared with the default, which depends on the country parameters. If there is a deviation, a message is displayed. Depending on the acknowledge, the entry can be retained or overwritten by the default value.

Speech coding

The system-wide speech codec is displayed under Speech coding (a-law, µ-law).

Encryption

Encryption is the encoding of the data at the air interface and can be activated or deactivated (default: active = on).

Login window

The time the login window is open can be changed (default: 10 minutes).

10.3.1.2 Area: Echo Handling

These parameters can be used to disable the echo handling set under Trunks | Parameter/General Flags for mobile stations on a node-wide basis. By default, all parameters are set to automatic. The settings are then made in accordance with the line settings of the calls. Potential improvements by general deactivation or line-specific activation must be tested in individual cases.

Echo Suppressor

The Echo suppressor (ES) inserts an attenuator in the receive direction of a mobile telephone, depending on its transmit level. If the echo suppressor is turned on in cases where there is loud extraneous noise, it is conceivable that the receive signal may be further dampened. This could adversely affect the clarity of the call.

In the “inactive” mode, the receive direction of the mobile telephone is not attenuated when the phone has a high transmit level. In the case of analog trunk switching and loud environments, this setting can offer improved clarity of the trunk station at the mobile telephone.

Echo Canceller

The Echo Canceller (EC) eliminates unwanted signal echoes caused by a 4/2-wire conversion on the land line. If the Echo Canceller is activated without an echo, errors may occur, since the Echo Canceller attempts to adapt to a non-existent echo.

In the “Inactive” mode, the activation of this parameter is prevented, and the Echo Canceller is always off.

Artificial Echo

The Artificial Echo Path (AE) echoes back an attenuated voice signal (24dB) from the land line to the remote subscriber. This may be needed in the case of an international connection, for example, to provide an inserted echo canceller with a certain preload.

In the “Inactive” mode, the activation of this parameter is prevented, and the Artificial Echo is always off.

PP Deviation Control

Echoes often occur when VoIP calls are made using DECT handsets.The "PP Deviation Control" function can be activated to suppress/minimize these echoes. This function affects all DECT handsets connected to the HiPath 3000 communications systems. The activation or deactivation only takes affect for a handset when it is turned off and turned back on.

The function can be used with Gigaset S3 professional, Gigaset SL3 professional, Gigaset S4 professional and newer handsets.

In "Deactivate" mode echo suppression does not work and echoes can occur when VoIP calls are made using DECT handsets. By default the function is deactivated.

10.3.1.3 ECO Mode

For the entire system, the ECO Mode can be activated for all Gigaset S4 professional, OpenStage SL4 professional, and OpenStage M3 professional handsets. The transmission power of these handsets is either reduced by a fixed value or each handset independently adapts its transmission power according to the intensity of the incoming signal.

If the handsets are used with reduced transmission power, it can be required to adapt the footprints of the base stations.

The following functions can be selected in the „ECO Mode“ drop-down menu:

- Off: The ECO Mode is deactivated for the entire system.
- On: The ECO Mode is activated for the entire system. The transmission power of the handsets is reduced by a fixed value.
- Adaptive: The adaptive ECO Mode is activated for the entire system. Each handset adapts its transmission power according to the intensity of the incoming signal. The transmission power is not adapted in the process of intercell handover.

See also

– Section 10.3.2, “Cordless | SLC”, on page 10-42
– Section 10.3.3, “Cordless | Multi-SLC”, on page 10-45
– Section 10.3.4, “Cordless | Base station”, on page 10-47

10.3.2 Cordless | SLC

Settings | Cordless | SLC

The parameters for the SLC16 card can be configured via **SLC**. All cordless cards are displayed in the system.

10.3.2.1 Table SLC

System ID	If a HiPath 3000 system belongs to a HiPath 5000 RSM networking, its Node ID is greater than zero (Network -> HiPath 5000 RSM/All-Serve Parameter -> Node -> Node ID). In this case, the System ID of the SLC board of the HiPath 3000 system (Cordless -> Multi-SLC -> SystemID) must be the same one like the Node ID.	-
Slot	Slots of the inserted SLC16 cards	-
SLC16 no.	Unique system-wide ID number of the SLC card	configurable The range of values is: 1-15, 17-31, 33-47, ..., 127 (multiples of 16 are not allowed).
Number of PPs	Number of Portable Parts (PP). The number of portable parts can be increased in the **Portable Parts** area	-
SLC Call no.	Unique system-wide call number of the S_0 extension line	configurable
Access	Name, number and slot of the S_0 extension line	-

If a still unconfigured cordless card is detected, the corresponding row in the table is preset with automatically configured data and shaded in gray. In addition, a message appears indicating that this data will only be copied to the CDB on clicking **Apply**. The predefined values are the SLC16 no. and, for the first cordless card, also the system ID. If the system ID is preset, the node ID is used. If the node ID should be “0” (if the system consists of only one node), the system ID is preset to “1”. If cordless cards have already been configured, their system IDs are taken as the defaults. The node ID is used for systems with multiple nodes.

Check

On clicking the **Check** button, the **SLC16 no.** and the **SLC call no.** are checked for system-wide uniqueness.

10.3.2.2 Area: Portable Parts (mobile telephones)

The parameters of the portable parts (PPs or mobile telephones) are displayed in the table.. You can then choose to display either the mobile telephones of the SLC card selected in the table **per SLC in Slot**) or all mobile telephones (**All**).

Call Number	Call no. of the mobile phone	-
Name	Name of the mobile phone	-
Mobile code	PIN code to log on the mobile telephone.	configurable The mobile code must be unique system-wide.
Access	Name, number and slot for the S_0 extension line	-

Status display of the PP

An icon in front of the mobile code displays the status. The following combinations are possible:

Port active	PP registered	Status display	Meaning
no	yes	green	OK
yes	yes	red	Board lockswitch set for registered PP
no	no	yellow	PP was automatically logged off by a change to the PIN in the Manager E.
yes	no	gray	No PP was ever registered on this port.

Add

If the number of portable parts is less than the (version-dependent) size allowed in the system, then the field next to the **Add** button can be used to enter and add an additional number of portable parts (per card).

Deleting PPs

The Portable Parts selected in the table are removed from the system with **Delete**.

Fill Mobile Code

The **Fill Mobile Code** button is used to automatically generate the PIN codes for registering mobile telephones. The PIN for the mobile code is generated from the call number of the station. No mobile code is generated for stations without call numbers; the mobile codes must be entered manually in such cases.

See also:

– Section 10.3.1, “Cordless | System-wide”, on page 10-39
– Section 10.3.3, “Cordless | Multi-SLC”, on page 10-45
– Section 10.3.4, “Cordless | Base station”, on page 10-47

10.3.3 Cordless | Multi-SLC

Settings | Cordless | Multi-SLC

The parameters for the SLC16 table are configured via **Multi-SLC**. All SLC16 cards that are in the DECT system are configured, i.e., all SLC16 cards (**SLC16 No.**) of the individual nodes (Node ID).

Read from CDB, Multi CDB

The list box **Read from CDB** contains the names of all opened CDB files of the corresponding communication systems.

With the additional entry **Multi-CDB**, the SLC16 table data from all open CDB files is merged. Identical data lines in multiple CDBs are displayed only once. In individual CDB's, data lines that differ or that are additional are specially represented, in addition to the corresponding CDB name in the column "Special features", which can't be edited, or with the number of CDB files, if not all have the same data lines. **Multi-CDB** thus also serves to support the recognition of inconsistencies in the SLC16 tables among several CDB files. For example, lines that have the same SLC number but different RNR numbers are inconsistent. To create consistency, one of the lines with the same SLC number is to be decided on as the reference for all CDB's (corrected, if necessary), the rest of the lines with this SLC number are to be deleted using the context menu and the table is to be saved in all opened CDB files.

10.3.3.1 SLC16 table

The data of the CDB file currently displayed in the list field are in the **SLC16 table**.

SLC16 no.	SLC16 card number
System ID	If a HiPath 3000 system belongs to a HiPath 5000 RSM networking, its Node ID is greater than zero (Network -> HiPath 5000 RSM/AllServe Parameter -> Node -> Node ID). In this case, the System ID of the SLC board of the HiPath 3000 system (Cordless -> Multi-SLC -> SystemID) must be the same one like the Node ID.
Number	Number is the call number under which the SLC-16 DSS-1 port (home card) can be reached by other SLC's (current location card). The data are important in order that the individual SLC cards be able to serve a station from external SLC16 cards (current location card).
Specialities	For **Multi-CDB**, the respective CDB names are displayed.

Write into CDB, Multi-CDB

Write into CDB contains the names of all opened CDB files of the affected communication systems.

The CDB file that is currently displayed/selected in this list is always the one that is written to. This allows the SLC16 table data of one CDB file to be transferred into another one.

In case of **Multi CDB**, the displayed table data is written to **all opened** CDB files, thus creating uniformity among these files.

See also:

- Section 10.3.1, “Cordless | System-wide”, on page 10-39
- Section 10.3.2, “Cordless | SLC”, on page 10-42
- Section 10.3.4, “Cordless | Base station”, on page 10-47

10.3.4 Cordless | Base station

Settings | Cordless | Base station

Base station offers an overview of the connected base stations to the plugged cordless cards (SLC, SLUC).

10.3.4.1 Table

Slot	Slot in which the cordless card is plugged. Slot 2 is displayed for the mainboard (SLUC).	-
Type	Type of the base station (BS). If no base station is connected, **No Port** is displayed.	For an SLC card, the station type is just displayed. For an SLUC card, the station type can be selected. If the type of **No Port** is changed to **BS3**, 12 mobile telephones and one SLC network line are created at the first setup.
Master port Additional port 1 Additional port 2	For an SLC card, the ports to which the base station is connected are displayed. For an SLUC card, all ports with the connected terminal devices are displayed.	

10.3.4.2 Area: BS Frequency

The frequencies of the selected base station is displayed here. Up to 10 different frequency channels can be selected simultaneously.

The frequencies can only be changed in the development mode.

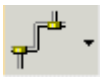
By default 10 frequency channels have been set.

Frequency (Channel)	DECT	Europe 1880 – 1900 MHz	Latin America 1910 – 1930 MHz
10	9	1881.792 MHz	1911.168 MHz
9	8	1883.520 MHz	1912.896 MHz
8	7	1885.248 MHz	1914.624 MHz
7	6	1886.976 MHz	1916.352 MHz
6	5	1888.704 MHz	1918.080 MHz
5	4	1890.432 MHz	1919.808 MHz
4	3	1892.160 MHz	1921.536 MHz
3	2	1893.888 MHz	1923.264 MHz
2	1	1895.616 MHz	1924.992 MHz
1	0	1897.344 MHz	1926.720 MHz

See also:

– Section 10.3.1, “Cordless | System-wide”, on page 10-39
– Section 10.3.2, “Cordless | SLC”, on page 10-42
– Section 10.3.3, “Cordless | Multi-SLC”, on page 10-45

10.4 Settings | Lines/networking

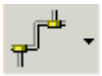


Settings | Lines/networking

You use **Settings | Lines | Networking** to determine parameters related to trunks, routes, and ISDN.

Tabs and Dialog boxes
• Trunks – Trunks	Parameter/ISDN flags – Trunks	Parameter/MSI flags – Trunks	Parameter/General Flags – Trunks	Parameter/Template Editor • Routes • Routing parameters • ISDN parameters • LCOSS • PRI (US only) • QSIG features (not in the USA) • IP trunks for HG 1500 • IP trunks for SIP providers and OpenScape Office • E.164 table

10.4.1 Trunks



Settings | Lines/networking | Trunks

The **Trunks** mask can be used to view and define basic trunk information and to configure additional, specialized trunk information.

The **Trunks** tab consists of a table, which is divided into the columns described below. The values of the trunk, SI/Tr, code, route, flags, inactive and type can be altered by selecting individual fields. If you double-click on the field in the **Param** column and then click **Apply**, another dialog opens.

10.4.1.1 Trunks table

Of the seven fields in this mask, four are system-defined (Trunk, SI/Tr, Inactive, and Type), two are user-defined (Code and Route), and one provides access to three additional masks (Parameters).

Trunk column

This is the physical CO trunk that is connected to the communication system. You select the trunk (line) by clicking on the appropriate line number.

SI/Le column

This field indicates the card type and the slot and port number where a specific trunk is connected to the communication system.

Code column

This is the number that tells the communication system to seize a specific trunk. It is used to test the trunk or to program a line key.

Route column

In this column, the trunk is assigned a certain route. These are the same names and numbers of the routes that appear in the **Routes** field under:

- Settings | Lines/networking | Routes, and
- Settings | Lines/networking | Routing parameters

The **Routes** field is used to assign a trunk to a certain route.

Important: If “None” is set in this column for a certain active trunk, system behavior will not be stable. Also, the system can receive a call on this trunk but the call cannot be forwarded.

Param (Parameter) column

The dialog boxes for the parameters can be accessed by double-clicking the corresponding field. If a station is being used as a template (see Copy flags), two asterisks (**) appear in this column.

Tabs for trunk parameters

- Trunks | Parameter/ISDN flags
- Trunks | Parameter/MSI flags
- Trunks | Parameter/General Flags
- Trunks | Parameter/Template Editor

Inactive column

If the line is inactive, an asterisk appears in this field.

Type column

The trunk type of the selected line is shown here. Inactive lines are designated No Port.

10.4.2 Buttons

Copy flags

Copy function with which the ISDN or main station interface (MSI) flags that were temporarily stored for a line earlier using the **Template** button can be applied to any other line (see also the Template button under Trunks | Parameter/ISDN flags).

Check

If the trunk codes are changed, the consistency of the codes isn't checked until the **Check** key is activated. Therefore, the codes can be entered into the table first and then a complete check of the uniqueness of the codes can be implemented.

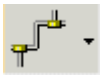
If consistency errors appear during the check, the codes that are not unique are displayed in a separate window. The corresponding lines in the trunk table must then be corrected.

If you make changes to the trunk codes, you can perform a check to ensure that you have not assigned any duplicate codes. If you have entered the same code for two trunks, the communication system displays a list of the duplications. You can then change one of the duplicate codes so that each code is unique.

See also:

– Section 10.4, “Settings | Lines/networking”, on page 10-49
– Section 10.4.3, “Trunks | Parameter/ISDN flags”, on page 10-53
– Section 10.4.4, “Trunks | Parameter/MSI flags”, on page 10-61
– Section 10.4.5, “Trunks | Parameter/General Flags”, on page 10-65
– Section 10.4.7, “Trunks | Parameter/Template Editor”, on page 10-72
– Section 10.4.8, “Routes”, on page 10-73
– Section 10.4.9, “Routing parameters”, on page 10-83

10.4.3 Trunks | Parameter/ISDN flags



Settings | Lines/networking | Trunks | Parameter | ISDN flags

You can use the **ISDN flags** mask to define protocols for the individual ISDN PRI or CorNet lines listed under **Trunks**. See also Station view: ISDN flags.

To access the dialog box, double-click into the TrunksParam **column in the** tab.

10.4.3.1 Area: Trunk, Previous port, Next port

This box shows the trunk code, card, slot number, and physical port of the selected trunk. The individual **slots/ports** can be selected using the **Next trunk** and Previous **trunk** buttons.

10.4.3.2 Area: Protocol: description

Each protocol template entry comprises the items **Interface**, **Protocol** and **Additional info**.

Interface

S_0	Basic access 2B+D via S_0 interface
BRI	Basic access 2B+D via U_{2B1Q} interface (USA)
S_2	Primary multiplex access 30B+D
T1	Primary multiplex access 23B+D (USA)

Protocol

Name of protocol used.

Additional info

CO/ Bus	Interface to the public CO/ Interface to an internal station
Master/ Slave	Networking interface - master PABX Networking interface - slave PABX

H118/H150/ H300	Determines the type of CorNet protocol: – H118/H150: optimized for connection with Hicom 150 E Office/HiPath 3000. – H300: optimized for connection with HiPath 4000 The setting H118/H150 must be used for HPCO (HiPath Procenter Office).
Connection: Direct/ Dedicated line	This parameter is required for controlling the clock supply when networking via S_0. Type of connection for networking via S_0 interface: – In the case of direct connections, the communication systems are connected to each other using a direct cable connection. The **master PABX** provides the reference clock for communication systems networked for this type of operation. – In the case of dedicated lines, the communication systems are connected via leased lines (with clock supply) provided by a network operator. For this type of operation, the **master PABX** uses the reference clock in the network. A **slave PABX** always uses the remote station clock - the parameter is not relevant in this case, i.e. only one slave template each exists for a direct connection and a dedicated line.
CRC4 check: yes/no	CRC4 procedure setting for S_{2M} interfaces (e.g. France) The QSIG protocol is not unique in the definition of interface parameters. As a result, the implementations provided by the communication system manufacturers vary. Therefore, in the case of Hicom 150 E Office/HiPath 3000 systems, the parameters CR Length (Call Reference Length) and CHI Format (format of the “channel identification” protocol element) can be adapted to suit the requirements of the partner system. In this case, the peer system parameters must be determined. The standard template is used when networking two Hicom 150 E Office/HiPath 3000 systems.
CR=1/ CR=2	CR Length: the call reference can be 1 or 2 bytes long.
CHI=S_0/ CHI=S_2	CHI Format: either S_0 or S_{2M} can be selected as the format of the “channel identification” protocol element.
B-ch.1:1->port (in expert mode only)	Assigns the logical ports to the B channels of an S_{2M} interface (primary rate interface) which is connected to the Central Office. In other words: Port 780**1** is assigned to B channel **1**, port 780**2** is assigned to B channel **2**, port 780**3** is assigned to B channel **3**, … Thus, if the logical port information is sent via TAPI to a TAPI-based CTI application, the application recognizes the assigned B channel (e.g., port 780**3** -> B channel **3**).

Protocol Selection

Protocol Selection	Remark
BRI: AT&T custom CO	USA only not HiPath 2000/ HiPath OpenOffice EE
S0: automatic CO PP	
S0: automatic bus	
S0: CorNet-N variant master (H300) direct	not HiPath 2000/ HiPath OpenOffice EE
S0: CorNet-N variant master (H300) nailed connection	not HiPath 2000/ HiPath OpenOffice EE
S0: CorNet-N Slave (H300)	not HiPath 2000/ HiPath OpenOffice EE
S0: CorNet-N variant slave (H300) nailed connection	not HiPath 2000/ HiPath OpenOffice EE
S0: CorNet-N variant master (H150/H118) direct	not HiPath 2000/ HiPath OpenOffice EE
S0: CorNet-N variant master (H150/H118) nailed connection	not HiPath 2000/ HiPath OpenOffice EE
S0: CorNet-N Slave (H150/H118)	not HiPath 2000/ HiPath OpenOffice EE
S0: CorNet-N variant slave (H150/H118) nailed connection	not HiPath 2000/ HiPath OpenOffice EE
S0: EURO CO PP	
S0: Euro CO PMP	
S0: Euro bus	
S0: Euro bus as external extension number via nailed connection	
BRI: NI1 CO	USA only not HiPath 2000/ HiPath OpenOffice EE
S0: NI1 bus	USA only not HiPath 2000/ HiPath OpenOffice EE
T1: ATT 5ESS CO	USA only
T1: ATT 5ESS NI-2 CO	USA only

Table 10-2 Protocol Selection

Protocol Selection	Remark
T1: ATT 5ESS NI-2 CO OSA	USA only
T1: ATT Bell Canada DMS100 CO	USA only
T1: ATT Bell Canada DMS100 CO TNS	USA only
S2: CorNet-N variant master (H300)	not HiPath 2000/ HiPath OpenOffice EE
S2: CorNet-N Slave (H300)	not HiPath 2000/ HiPath OpenOffice EE
S2: CorNet-N variant master (H150/H118)	not HiPath 2000/ HiPath OpenOffice EE
S2: CorNet-N Slave (H150/H118)	not HiPath 2000/ HiPath OpenOffice EE
S2: Euro-Amt PP (with CRC4)	not HiPath 2000/ HiPath OpenOffice EE
S2: Euro-Amt PP (without CRC4)	not HiPath 2000/ HiPath OpenOffice EE
T1: ATT FTS2000 DMS250 CO	USA only
T1: Generic NI-2 CO	USA only
T1: Generic NI-2 CO OSA	USA only
T1: IDA-P (Hong Kong)	USA only
T1: MCI DEX600 CO	USA only
T1: MCI DMS250 CO	USA only
T1: NORTEL DMS100 CO	USA only
T1: NORTEL DMS100 CO TNS	USA only
T1: ATT 4ESS CO	USA only
T1: ATT FTS2000 5ESS CO	USA only
T1: Unify EWSD CO	USA only
T1: Unify EWSD CO OSA	USA only
T1: Unify NI-2 CO	USA only
T1: Unify NI-2 CO OSA	USA only
T1: SPRINT DMS250 CO	USA only
T1: ATT Westing House DMS250 CO	USA only
S0: S0 fax server (DSS1/QSIG)	

Table 10-2 Protocol Selection

Protocol Selection	Remark
S0: ECMA-QSIG master direct CR=1 CHI=S0	
S0: ECMA-QSIG master direct CR=1 CHI=S2	
S0: ECMA-QSIG master direct CR=2 CHI=S0	
S0: ECMA-QSIG master direct CR=2 CHI=S2 (Standard)	
S0: ECMA-QSIG master (nailed connection) CR=1 CHI=S0	
S0: ECMA-QSIG master (nailed connection) CR=1 CHI=S2	
S0: ECMA-QSIG master (nailed connection) CR=2 CHI=S0	
S0: ECMA-QSIG master (nailed connection) CR=2 CHI=S2 (Standard)	
S0: ECMA-QSIG slave CR=1 CHI=S0	
S0: ECMA-QSIG slave CR=1 CHI=S2	
S0: ECMA-QSIG slave CR=2 CHI=S0	
S0: ECMA-QSIG slave CR=2 CHI=S2 (standard)	
S2: ECMA-QSIG master CR=2 CHI=S2 (standard)	not HiPath 2000/ HiPath OpenOffice EE
S2: ECMA-QSIG master CR=1 CHI=S0	not HiPath 2000/ HiPath OpenOffice EE
S2: ECMA-QSIG master CR=1 CHI=S2	not HiPath 2000/ HiPath OpenOffice EE
S2: ECMA-QSIG master CR=2 CHI=S0	not HiPath 2000/ HiPath OpenOffice EE
S2: ECMA-QSIG slave CR=2 CHI=S2 (standard)	not HiPath 2000/ HiPath OpenOffice EE
S2: ECMA-QSIG slave CR=1 CHI=S0	not HiPath 2000/ HiPath OpenOffice EE
S2: ECMA-QSIG slave CR=1 CHI=S2	not HiPath 2000/ HiPath OpenOffice EE
S2: ECMA-QSIG slave CR=2 CHI=S0	not HiPath 2000/ HiPath OpenOffice EE
S2: NEC CO PP (with CRC4, not permanently active)	not HiPath 2000/ HiPath OpenOffice EE
IVM: Standard	not HiPath 2000/ HiPath OpenOffice EE

Table 10-2 Protocol Selection

Protocol Selection	Remark
S2: IO-QSIG Master CR=2 CHI=S2 (standard)	not HiPath 2000/ HiPath OpenOffice EE
S2: ISO-QSIG Slave CR=2 CHI=S2 (standard)	not HiPath 2000/ HiPath OpenOffice EE
S0: ISO-QSIG master direct CR=2 CHI=S2 (standard)	
S0: ISO-QSIG master (nailed connection) CR=2 CHI=S2 (standard)	
S0: ISO-QSIG Slave CR=2 CHI=S2 (standard)	
HXGM/HXGS: Trunk CorNet-N Plus (HiPath 5000 RSM/AllServe H150)	not HiPath 2000/ HiPath OpenOffice EE
HXGM/HXGS: Subscriber	not HiPath 2000/ HiPath OpenOffice EE
S0: CorNet-N Variant 2 master direct Xpressions	not HiPath 2000/ HiPath OpenOffice EE
S2: CorNet-N Variant 2 master direct Xpressions	not HiPath 2000/ HiPath OpenOffice EE
HXGM/HXGS: CorNet-N Variant 2 master direct Xpressions	not HiPath 2000/ HiPath OpenOffice EE
Automatic PRI Configuration	not HiPath 2000/ HiPath OpenOffice EE
S0: Euro Numeris (VN6) automatic PP	France only
S0: Euro Numeris (VN6) PP	France only
S2M: Euro Numeris (VN6) PP	France only not HiPath 2000/ HiPath OpenOffice EE
S2M: Euro Numeris (VN6) PP without CRC4 check	France only not HiPath 2000/ HiPath OpenOffice EE
CorNet-IP (Trunking)	
S0: CorNet-NQ Master Direct CR=2 CHI=S2 (standard)	
S0: CorNet-NQ master (nailed connection) CR=2 CHI=S2 (standard)	
S0: CorNet-NQ slave CR=2 CHI=S2 (standard)	
S2: CorNet-NQ master CR=2 CHI=S2 (standard)	not HiPath 2000/ HiPath OpenOffice EE

Table 10-2 Protocol Selection

Protocol Selection	Remark
S2: CorNet-NQ slave CR=2 CHI=S2 (standard)	not HiPath 2000/ HiPath OpenOffice EE

Table 10-2 Protocol Selection

10.4.3.3 Area: B-Channel-Mode, outgoing, incoming

In the **B-Channel-Mode** field, each individual B-Channel of a PRI or CorNet line can be blocked for incoming and/or outgoing traffic. This option can be used for a shared T1 line, for example, when parts of the T1 spectrum are used for other services.

The **outgoing** and **incoming** buttons are used to define the type of seizure for a physical B-channel.

The following seizure types are possible:
- outgoing only
- incoming only
- outgoing and incoming (standard)

The B-Channel-Mode configuration is only evaluated when the communication system must offer a B-channel. The following scenarios are possible:

S_2 outgoing:	The communication system must offer a B-channel.
S_2 incoming:	The remote station must offer a B-channel. This B-channel is accepted by the communication system and the configuration is not checked. It is thus of no direct significance.
S_0 outgoing:	As the communication system does not pre-assign a B-channel (any channel), this configuration is of no direct significance.
S_0 incoming:	When the remote station sets up a call and a B-channel has not been specified, the communication system offers a B-channel in accordance with the B-channel mode configuration.

10.4.3.4 Template button

The template feature allows you to preserve the selections that you have made for a given trunk so that you can use the same selections on one or more other trunks. When used in conjunction with the **Copy flags** button, this allows you to set parameters via a **template** without selecting each of the features individually again.

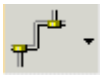
You can use the template in the **ISDN flags** dialog box to apply your settings to the **MSI flags** and the **General flags** dialog boxes as well; these masks do not have a template of their own.

The ISDN Protocol will be changed for the whole T1 span as soon as one channel is changed. For the MSI flags (G/L start, analog T1 and analog DID) the type needs to be changed on a per channel basis.

See also:

– Section 8.2.8, “Station view: ISDN flags”, on page 8-27
– Section 10.4.1, “Trunks”, on page 10-50
– Section 10.4.4, “Trunks | Parameter/MSI flags”, on page 10-61
– Section 10.4.5, “Trunks | Parameter/General Flags”, on page 10-65
– Section 10.4.7, “Trunks | Parameter/Template Editor”, on page 10-72
– Section 10.4.8, “Routes”, on page 10-73
– Section 10.4.9, “Routing parameters”, on page 10-83

10.4.4 Trunks | Parameter/MSI flags



Settings | Lines/networking | Trunks | Parameter | MSI flags

MSI flags can be used to define options for the individual analog trunks listed under **Trunks**.

To access the dialog box, double-click the TrunksParam **column on the** tab and select the MSI flags tab.

If the trunk you have selected is not an analog trunk, only the **Trunk** field is displayed.

10.4.4.1 Area: Trunk, previous trunk, next trunk

This box shows the trunk code, card, slot number, and physical port of the selected trunk. The individual **slots/ports** can be selected using the **Next trunk** and **Previous trunk** buttons.

10.4.4.2 Area: Dialing method

This is the CO signaling method.

In order to make a pre-configuration possible, the MSI parameters can be modified independently of the trunk type. If analog trunk boards are used, the signaling method is selected automatically, provided a signaling method has not been explicitly configured. Dial pulsing (DP) and dual-tone multi-frequency signaling (DTMF) are signaling methods that are manually configurable.

MFC-R2 and DTMF cannot be operated in parallel on a board.

Automatic

The dialing method is automatically detected by the communication system each time the line is used. This is the default for analog lines.

DTMF

Dual Tone Multi-Frequency is used.

DP

Dial pulsing is used.

MFC-R2 with CLIP

If this flag is activated, the calling party's number is identified and displayed at the called party's terminal. This only applies to CO lines with MFC-R2 functionality (SMFC in Indonesia). CLIP is a feature for incoming calls and stands for "Calling Line Identification Presentation" (not available in Singapore).

MFC-R2 without CLIP

If this flag is activated, the calling party's number is not identified.

10.4.4.3 Area: CO call identific., single ring, double ring

The **CO call identific.** option determines whether a PBX MSI line has a **single ring** or a **double ring** for CO calls (does not apply to HiPath H3800 hardware).

10.4.4.4 Area: Flash, long, short

This entry signals the CO that special instructions for features such as conference or call forwarding are to follow. Long is 270 ms, short is 90 ms. To program the flash time, select the **Template Editor** tab.

10.4.4.5 Area: Line Length, long, short

This option can correct loss of voice transmission. If there is a consistent loss of volume during transmission, you can switch the setting to **long** (not for Europe).

The line length indicates the actual distance between the station and the communication system. The line length **short** is entered as default, but must be set to **long** where necessary (in the case of high attenuation = long line).

Refer to the **Operating modes** field in Station view: Flags for relative levels and impedances.

10.4.4.6 Area: Station flags

On the right side of the mask is a series of flags that can either be activated or deactivated. These flags are described below.

The **Trunk supervision** flag can be activated for certain boards, such as TMANI/TLANI. TMANI/TLANI boards are reset when certain MSI flags change.

DTMF DID flag

This flag allows the communication system to receive the call and provide a DTMF receiver for suffix dialing to a station number. If the flag is not set, the call is redirected to the allocated group.

This flag must be turned on if an analog DID card (TMDID) is used. This flag switches a DTMF receiver to the trunk to detect the DTMF signals if analog DID is implemented for the trunk. This flag can also be used for analog Ground/Loop start Lines. In that case the DTMF information transmitted by the calling party will be detected and a switching function can be realized. To activate an announcement, an announcement device can be configured via Announcement (Announcement prior to answer).

Trunk supervision flag

With this flag set and if there is no dial tone after trunk seizure for a particular analog line, the communication system makes that line inactive.

If Trunk supervision is activated, this trunk is taken out of operation if there is no dial tone after seizure. Thereafter, the communication system checks at cyclical intervals to see whether a dial tone is once again present. When it is, the line is put back into operation.

Ringback protection flag (for Brazil only)

Lets the central office know that ringback calls should not be supported.

There are two corresponding timers for this feature, **Time for activation/deactivation of NSI rel. for ringback prot. (BRAS)** (see Time parameters).

Silent-Reversal flag (not in the USA)

Silent reversal on MSI trunk at call start and end via the central office for precise call detail recording. Is supported in the following countries: Argentina, Turkey, Brasil, India, Australia, Singapore, Malaysia, Thailand, New Zealand, Taiwan, Korea, China, Indonesia, Philippines, Spain, United Kingdom.

For IM countries with silent reversal, the silent reversal debounce timer in the MSI port templates is not set as the default and must be set to 200 ms.

Charge module plugged in/Activated flag (not in USA)

This flag is used to notify the communication system that a **charge module is plugged in**. The charge module is integrated on the TM2LP board (in the HiPath 3800). In order to be able to receive charges via MSI, the flag **Charge module activated** must be set in this case.

As a result, other input impedances and second ringer impedances are set for the corresponding port.

For the TML8W, the settings short/long trunk and with/without charge data module should always be made for at least four ports. Otherwise, they are not applied, even when these ports are not connected or are disabled in the system.

Activating the **Charge module activated** flag for the first trunk on the TMANI/TLANI boards allows call charge recording to be performed on all trunks on the boards.

With Release Monitoring flag

Normally, Groundstart COs offer release monitoring. For exceptional COs, where this is not the case, this flag should be deleted. Transit connections are then monitored on a time basis and cannot “hang” (same function as with Loopstart COs).

This flag is not used for non-groundstart COs. The display is arbitrary and should not be interpreted.

10.4.4.7 Area: Maintype

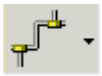
Here you select one of two CO signals to initiate a trunk seizure. You must select the appropriate setting for the central office or the remote switch. The two signals are ground start, which is the most common type of CO signal, and loop start, which is an older CO signal used primarily with key systems.

Setting for TMANI/ TLANI:	Ground start or loop start.
Setting for TMGL:	Ground start or loop start.
Setting for TIEL:	E/M tie line with winkstart/delayed or E/M tie line with immediate dial.
Setting for TMDID:	Direct inward dialing with winkstart/delayed or direct inward dialing with immediate dial.
Setting for T1 analog:	Ground start, loop start, E/M tie line with winkstart/delayed, E/M tie line with immediate dial, Direct inward dialing with winkstart/delayed or direct inward dialing with immediate dial.
Setting for TML8W:	Default For Austria protocol ÜFS For IM with silent reversal

See also:

- Section 8.2.1, “Station view: Flags”, on page 8-5
- Section 10.4.1, “Trunks”, on page 10-50
- Section 10.4.3, “Trunks | Parameter/ISDN flags”, on page 10-53
- Section 10.4.5, “Trunks | Parameter/General Flags”, on page 10-65
- Section 10.4.7, “Trunks | Parameter/Template Editor”, on page 10-72
- Section 10.8.10, “Time parameters”, on page 10-223
- Section 10.9.3, “Announcement”, on page 10-250

10.4.5 Trunks | Parameter/General Flags



Settings | Lines/networking | Trunks | Parameter | General flags

General flags is used to define DISA options for ISDN lines.

To access the dialog box, double-click in the TrunksParam **column in the tab and select the** General flags tab.

10.4.5.1 Area: Trunk, previous trunk, next trunk

This box shows the trunk code, card, slot number, and physical port of the selected trunk. The individual **slots/ports** can be selected using the **Next trunk** and **Previous trunk** buttons.

10.4.5.2 Area: DISA day/night, None, Only night, Only day, Day and night

In the **DISA day/night** field, code receiver (CR) parameters can be configure for each line. There are four options for DISA day/night service. You can allow full external access to telephone features (such as voice mail and call forwarding) only when night service is active, only when day service is active, or at both times. If you select **none**, the DISA function will be deactivated.

One of the following options can be selected:
- **None**, line always has CR turned on
- **Only night**, line has CR connected only during the day
- **Only day**, line has CR connected only during the night
- **Day and night**, line without CR connection

To make sure the DISA settings are complete, you must also set the DISA DID number in the Daylight saving time/DISA. You must also active the Station view: FlagsDISA class of service **flag under** .

If DISA has been configured for an MSI line, this line can no longer be used for call management.

No DISA flag may be set for MSI lines with DTMF DID since otherwise the DTMF is stopped for this line. In this case, the DISA handling is completed in the same manner as the direct inward dialing on ISDN lines.

10.4.5.3 Area: Circuit flags, Call prio./immed. tone call wait.

By setting this flag (Call prio./immed. tone call wait), calls on this trunk are signaled to partners as having a higher priority. The priority is set to be the same as the priority of external calls. In other words, calls via a prioritized line are thus queued before existing internal calls, but after existing external calls. Note that existing first calls (not waiting calls) are usually never displaced, regardless of their ring type.

With call waiting, the caller always receives a ring tone immediately regardless of whether or not this flag is set.

10.4.5.4 Area: CMI Flags, Echo Canceller, Echo Suppressor, Artificial Echo

The CMI Flags (see also Settings | Cordless (Not in the USA)) determine the echo behavior for all mobile stations within the communication system that are phoning via this trunk.

Note that when using the trunk as a CMI extension connection or with mobile phones at an SLC, the line-specific echo parameters do not take effect.

The settings are made by the system depending on the line type used.
Exception: for 4-wire analog dedicated lines, the **Echo Canceller** must be manually set to OFF.

Should problems nonetheless occur, the behavior can be changed by switching it manually.

The default settings are as follows:

Connection to the CMI station via:	**Artificial Echo**	**Echo suppressor**	**Echo Canceller**	**Remarks**
Analog trunk connection	on	on	on	Default value
Digital trunk connection (ISDN)	on	on	off	Default value
Dedicated line, 2-wire, analog	on	on *	on	Default value
Dedicated line, 4-wire, analog	on	on *	off	Echo Canceller must be set to OFF manually.
Dedicated line, digital	on	on *	off	Default value

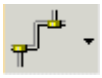
* for campus-wide connections or VoIP, “off” can also be used.

The system cannot automatically differentiate between 2 and 4-wire TIE trunks. Consequently, in the case of an analog 2-wire TIE trunk hardware configuration, the **Echo Canceller** flag must be reset manually.

See also:

– Section 8.2.1, “Station view: Flags”, on page 8-5
– Section 10.3, “Settings | Cordless (Not in the USA)”, on page 10-38
– Section 10.4.1, “Trunks”, on page 10-50
– Section 10.4.3, “Trunks | Parameter/ISDN flags”, on page 10-53
– Section 10.4.4, “Trunks | Parameter/MSI flags”, on page 10-61
– Section 10.4.7, “Trunks | Parameter/Template Editor”, on page 10-72
– Section 10.4.8, “Routes”, on page 10-73
– Section 10.4.9, “Routing parameters”, on page 10-83
– Section 10.8.12, “Daylight saving time/DISA”, on page 10-235

10.4.6 Trunks | Parameter/TMANI Parameter



Settings | Lines/networking | Trunks | (double-click) column “Parameter”/ TMANI Parameter

To display the “TMANI Parameter” tab, the TMANI card must be configured under System Status | System-wide | Cards. The TMANI card provides interfaces for the analog trunk.

10.4.6.1 Area: Trunk, previous trunk, next trunk

This box shows the trunk code, card, slot number, and physical port of the selected trunk. The individual **slots/ports** can be selected using the **Next trunk** and **Previous trunk** buttons.

10.4.6.2 Area: Frequency

In this area you can configure for the selected trunk the tones that can occur when a connection is being established. To do so, select the tone in the “Frequency” selection box and assign this tone the frequency value in the “Value” selection box.

Selection box: “Frequency”

Available for selection are:

Tone	Default for “Value” (in Hz)
Frequency busy tone	440
PBX dial tone frequency	300-500
Special dial tone frequency	300-500
Dial tone frequency	1400

Table 10-3 Tones and their default values in the “Frequency” area

Selection box: “Value”

Configurable for each tone (in Hz) are: 150, 330, 340, 350, 367, 400, 425, 433, 440, 450, 480, 520, 525, 600, 620, 800, 850, 900, 950, 1000, 1004, 1140, 1300, 1400, 1800, 2100, 300-500.

10.4.6.3 Area: Threshold

In this area you can define the voltage and current values as of which a signal is considered “available” or “not available”.

Selection box: “Threshold”

Available for selection are:

Voltage/current	Default for “Value”
Threshold voltage (high)	18
Threshold voltage (low)	5
Threshold current (high)	14
Threshold current (low)	6

Table 10-4 Voltages and currents as well as their default values in the “Threshold” area

Selection box: “Value”

Configurable for each threshold voltage / threshold current are: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32.

10.4.6.4 Area: General

General parameters can be configured in this area.

Selection box: “General”

Available for selection are:

Parameter	Default for “Value”
Busy tone - Max. Pause	40
Busy tone - Max. Pulse	60
Busy tone - Min. Pause	60
Busy tone - Min. Pulse	40
Call charge tone level	20
Impedance index	34
Max. call impulse	19
Min. call impulse	2
PBX dial tone - Min. Pulse	15
Call detection hybrid	0
Special dial tone - Max. Pause	105
Special dial tone - Max. Pulse	65

Table 10-5 Parameters in the “General” area

Parameter	Default for “Value”
Special dial tone - Min. Pause	95
Special dial tone - Min. Pulse	55
TX/RX attenuation	0
Dial tone - Min. Pulse	55

Table 10-5 Parameters in the “General” area

Input field: “Value”

For each parameter, values ranging from 0 ... 255 can be entered.

10.4.6.5 Area: Station flags

The following values can be configured in this area:

Parameter	Configurable values
Idle period	• Less than 0.5 ms • 3 ms +-10% (default) • 26 ms +-10%
Operating period	• 512 ms • 128 ms (default) • 64 ms • 8 ms
Ring tone threshold	• 13.5 V - 16.5 V • 19.35 V - 23.65 V (default) • 40.5 V - 49.5 V
DCV	• 3.1 V • 3.2 V • 3.35 V • 3.5 V (default)
MINI	• 10 mA (default) • 12 mA • 14 mA • 16 mA
Ring tone impedance	• Maximal (default) • Artificially created
BTM	• Tone range • Packet (default)

Table 10-6 Values that can be configured in the “Flags” area

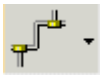
Parameter	Configurable values
PCM format	• A-law (default) • µ-law
Call monitoring debounce time	Default: 3 Input range: 0.. 15
Current limit	• activated (default) • deactivated

Table 10-6 Values that can be configured in the “Flags” area

See also:

– Section 10.4.1, “Trunks”, on page 10-50
– Section 10.4.2, “Buttons”, on page 10-52
– Section 10.4.3, “Trunks | Parameter/ISDN flags”, on page 10-53
– Section 10.4.4, “Trunks | Parameter/MSI flags”, on page 10-61
– Section 10.4.5, “Trunks | Parameter/General Flags”, on page 10-65
– Section 10.4.7, “Trunks | Parameter/Template Editor”, on page 10-72

10.4.7 Trunks | Parameter/Template Editor



Settings | Lines/networking | Trunks | Parameter | Template Editor

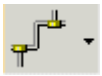
For standard operation, no change in country-specific pre-settings is necessary in the templates!

If you need to make changes to the templates in specific cases, note that you will need to ensure the consistency of the modified data yourself!

See also:

– Section 8.2.7, “Station view: Template Editor”, on page 8-27
– Section 10.4.1, “Trunks”, on page 10-50

10.4.8 Routes



Settings | Lines/networking | Routes

Routes can be configured via **Routes**. A route is assigned to every line (in the case of ISDN BRI, 2 B-channels). A line cannot be assigned to more than one route. The standard configuration for all lines is Route 1. The CO call privileges assigned to the B-channel determine the access rights available to even or uneven B-channels which have been set up. Non-switched MSI lines must be deleted via system administration.

In an LCR environment, this code is only used for the display; seizure codes are programmed in the Dial plan. In the case of networking, the input is to be entered or deleted in accordance with the configuration of the remote system.

In an HiPath 3000/5000 IP network, route 16 must always be used. The Feature server (HiPath 5000) uses this route to generate its call number tables automatically. Note that rerouting should not be enabled for route 16.

Configuring different routes for simplified dialing

Even if simplified dialing (Prime Line) is activated, trunks can be configured for different routes. In other words, the collision check is no longer performed. A fax line can now be accessed via direct trunk access code or via a trunk key for the line in question.

The redial function is implemented based on the line/route seized. If the fax line was seized originally, the redial function will access the fax line as well. If simplified dialing is activated, redial is performed for the route 1 trunks.

Routes for OpenScape Office

The routes for OpenScape Office can also be configured in this window. The Route 1 and the Routes 10 - 16 are not used for OpenScape Office.

10.4.8.1 Routes list

The **Routes** list contains a list of available routes.

10.4.8.2 Area Route, Name

To assign a name to a route, type a name in the **Route Name** text box. The entered name replaces the default route number in the **Routes** list.

Route names appear on the system telephone display when:

- the user presses or programs a call key, and
- during incoming calls where the call number or name of the caller is not available.

If you do not assign a name to the route, the route number will normally appear in the display. What appears depends on what you enter in the **Route type** field in the Routing parameters mask.

10.4.8.3 Area: CO code (2nd. CO code)

You only define the second trunk code if the communication system is a subsystem of another communication system (e.g., a HiPath 3000 switch as a subsystem of a 9006 switch), or if it is networked with several other communication systems. In this case, the second trunk code is the seizure code for the main system. With this code, the subsystem can access the CO trunks of the main system.

The second CO code is the code used for seizing a CO line in the remote station. With MSI lines, in accordance with the entry in the **Trunk call pause** field of the Routing parameters mask, the dial tone is monitored again when a second CO code is dialed. The digits are requested after a timeout. The second CO code is only evaluated if **PABX** is selected in the **Route type** field under routing parameters.

In a digital network this field is only used to provide the correct display and callback information (Missed Calls List). The second CO code (trunk seizure in the other node) is configured in the LCR Dial Plan in this case.

To route trunk seizure of a HiPath 4000 station via HiPath 3000 in LCR, a second trunk seizure code XX must be configured for both switches. This prevents conflict between trunk seizure and the attendant code.

Procedure:

HiPath 4000 Stn: “0…”

LCR HiPath 4000: “0...” -> “XX...”

LCR HiPath 3000: “XX...” -> Trunk seizure

Warning: In this case, the flag “External traffic transit“ must be carefully verified as otherwise transit traffic may also be possible with the new CO code.

10.4.8.4 Areas: PABX number incoming and PABX number outgoing

The “CLIP no screening” feature is implemented by splitting the **PABX number** field into “PABX number incoming” and “PABX number outgoing”. If no “PABX number outgoing” is entered, the data from the “PABX number incoming” is always used.

Under **PABX number** you can define which numbers are transferred to callers:

- the first field is used to enter the **country code** (e.g., 1 in the USA, 49 in Germany)
- the second field is used to enter your own **local area code** (e.g., 89 for Munich)
- the final field is used to enter the **PABX number** (i.e., your company’s primary telephone number)

The **No. and type, outgoing** field in the Routing parameters mask determines how many digits will be sent. The actual digits are specified in the PABX number mask. Depending on the PABX number entered under “PABX number outgoing”, either the outgoing PABX number data or the incoming PABX number data is used. When the outgoing data is sent, the CO is signaled that no screening is to be performed.

As of HiPath 3000/5000 V5.0, the node number is no longer placed before the DID automatically, regardless of whether the recipient is a local CO or tie trunk. The node number must therefore be entered as the PABX number. There are two ways to do this:

1. By entering the complete ISDN call no. (local area code+PABX number+node number) as the PABX number-outgoing and setting the call number type to local area code.
2. By entering only the node number as the PABX number-outgoing and setting the call number type to unknown.

PABX number

For an incoming call on an ISDN line, the PABX number is blanked out to the left of the incoming call number. The remaining portion of the call number is interpreted by the communication system as a DID number. When call numbers are transferred to the ISDN system, the PABX call number is automatically used as the leading portion of the call number. This does not apply to dialing information (destination address).

In Germany, the PABX call number programmed for the PRI or Basic BRI must omit the area code and the extension number.

Example:

Call number of the ISDN PRI interface: 0221-4711-0.
The PABX call number that must be programmed for this is 492.

Note that when an open numbering scheme is used in a networked system, the system number - incoming of the last route 16 (HXG route) must match the node number.

If optiClient Attendant is used in a networked system, the PABX number of the routes used for networking may not exceed eight digits.

Country code, Local area code

Callback in the CO will not work unless the call number is entered with the area code and country code. The zero must be omitted for the country code.

For example:

	Example 1:	**Example 2:**
ISDN call number:	49-221-4711	+1(408) 4711 1234
The PABX call number that must be programmed as follows:		
Country code:	49	1
Local area code:	221	408
PABX number	4711	4711

In North America, the PABX call number programmed for the PRI or Basic BRI must be specified without the area code and the attendant code.

Example:

Call number of the ISDN PRI interface: (408) 4711 1234.
The PABX call number that must be programmed for this is 492.

Location number current

Here, the route for the current location number (main station) selected in the **Routes** list can be defined.

Suppress Stn. Call No.

In order to enable flexible customization for various customer applications, this routing parameter can be used in combination with the outgoing PABX number to set whether the internal extension included in the OAD (=originating address) on the trunk (OAD = <outgoing PABX number> + <station DID>) or whether only the configured outgoing PABX number is sent in the OAD.

For example, let us assume that a service employee who can be reached centrally via a general service number should not be directly accessible to his or her customer. In such a case, the DID number of the service employee could be suppressed by entering the general service num-

ber as the outgoing PABX number and enabling the “Suppress Stn-Call-No” flag. All called subscribers would then only see the service number as the CLIP (calling party information presentation).

In a Centrex environment, by contrast, it may be meaningful to enter the call number of the Centrex group as the outgoing PABX number and to leave the Suppress Stn-Call-No disabled. All called subscribers would then see the Centrex call number plus the station DID as the CLIP

This flag works as a toggle with the flag **outreach call number transparent** under **Display**.

10.4.8.5 Area: Seizure code

Input

The assignment codes for each route are entered here. See also the Routing parameters tab and the **Routing flags** and **Digit repetition** fields for the meaning of the seizure codes for closed numbering.

The IVM needs all seizure codes. These are set up as before and loaded into the communication system.

After the loading procedure, a download of the seizure codes to the IVM is automatically triggered.

The routing codes entered must be collision free, both mutually and within the communication system’s entire call number plan. Use the **Check** button to test for collisions.

Seizure code, Change, Delete, Check

The seizure code is the code that causes the switching system to provide a line to the station that dialed the code. An example of a commonly used seizure code is the number 9 to get an outside line. You can assign up to ten different seizure codes for each route.

The **Seizure code** list box displays the default seizure code for each of the routes listed in the **Routes** list.

Setup	To add another seizure code, select the route name, click on a free space in the **Seizure code** list box, type in the new code in the Seizure code input field, and click the **Change** button. The new code will then appear in the **Seizure code** list.
Change	To change an existing seizure code, click on the route name, select the seizure code that you want to change, type the new code in the input field, and press **Change**. The old code will be replaced with the new code in the **Seizure code** list.

Delete	To delete an existing seizure code, click the route name, select the seizure code that you want to delete, and click **Delete**. The code will be removed from the **Seizure** list.
Check	If **Check** is activated, the codes of the routes are checked to ensure that they are unique (i.e., not assigned twice). Non-unique codes are displayed in a separate window.

In the case of a digital network, the LCR dial plan should be used to define the access codes.

To ensure that you have not assigned the same seizure code to two or more routes, click the **Check button.** If any duplicates are found, you will see an error message.

The **Check** button is only active if the LCR (Least Cost Routing) flag is deactivated.

10.4.8.6 Direction Prefix area

This input field is used for the incoming Direction Prefix when LCR is activated. All routes can have the same prefix.

10.4.8.7 Area: Overflow route

Overflow is traffic that is beyond the capacity of a specific trunk group and is therefore offered to another trunk group or line. The **Overflow route** field allows you to assign an overflow route for each route. For example, if all BRI trunks are busy, you can choose to route calls to analog lines. You select an overflow route from the drop-down list box.

If all trunks in the overflow route are also busy, no further overflow takes place (no cascading). If LCR is active, the overflow must be programmed in the Dial plan.

The following settings must be carried out using extreme care since they cause changes at the ISDN D-channel protocol level!

The default settings depend on the country.

10.4.8.8 Area: Numbering plan

Called Party Number

Setting of the parameter “Numbering Plan Identification” in the information element “Called Party Number” of the D-channel protocol.

Default value in Germany: **System check**

All others

Setting of the parameter “Numbering Plan Identification” in all address information elements except “Called Party Number” of the D-channel protocol.

Default value in Germany: **System check**

10.4.8.9 Area: Site

Setting of the “Location” parameter in the information elements “Cause” and “Progress indicator”.

Default value in Germany: **System check**

10.4.8.10 Area: Switch

COLP (Connected Line Identification Presentation) flag

If this flag is set, the number of the called party will be shown to the caller in the case of an external incoming CO connection. The calling party can see if the call has been forwarded or picked up by somebody else. This feature needs to be turned on by the central office as well. This feature is only available on digital Lines (BRI or PRI).

If the flag is set and an external incoming call is forwarded or intercepted, the updated call number is signaled to the CO in the connect message output by the communication system. If the COLP feature is activated in the CO, the updated call number is also displayed for the caller.

If an external outgoing call is forwarded or queried at the CO in the communication system, then the incoming connect message with the updated call number has no impact on the display of the caller, regardless of the “COLP” switch setting.

Without CLIP flag (Netherlands only)

If this flag is set, the communication system will not transfer the calling party information to the public network on a BRI or PRI line. This flag can be activated or deactivated on a per route basis. In addition, the station has the option to suppress the called party information on a per call basis via an access code or the system telephone menu.

This switch can be used to suppress the calling party number of station A in the outgoing SET-UP message.

no DIV.LEG-Info flag

If this flag is set, the standard diverting LEG information signal is not sent to the CO. The DIV. LEG info contains the call number of the A user. The DIV. LEG info should be suppressed if problems occur in the case of external call forwarding (CF ext.).

Always use DSP flag

If this flag is set, a connection to the Internet telephony service provider is only possible via a DSP (digital signal processor). If this flag is not set, then there is a Direct Payload connection to the Internet telephony service provider.

This flag must be set for the route of the OpenScape Voice network.

This flag may not be set in the case of fax transmissions (T.38) via an external device (AP 1120).

“Intern call like extern” flag

If this flag is set, network-internal calls are acoustically signaled in the same way as external calls.

“Notify send” flag

This message is used for notification of the ring status. The message can be sent from the network as well as the subscriber side to notify the other party (network or subscriber) about an interrupted connection, for example, or that call forwarding is active.

If the notify feature is not supported by the CO, the notify message can be suppressed by re-setting this flag.

If this option is activated, a “Notify” message is transmitted if a call is e.g., on hold or parked.

Notify send is only evaluated in the DSS1, NI1 and MCI protocols. In the CorNet-N and CorNet-NQ and QSIG the notification is always sent.

No SETUP ACK. flag (Singapore only)

If requested by the central office, the ’Setup Acknowledgement’ message can be suppressed by the communication system.

Some COs do not recognize the **setup acknowledge** message. In such cases, transmission of the ’setup acknowledge’ message must be suppressed. Example: Fujitsu’s Fetex150 COs.

Without CCNR flag

If this flag is set, an incoming ISDN call with CCNR (Call Completion on No Reply) is signaled so that the system can accept a callback request. This means the caller can initiate a callback if the HiPath station does not reply. In some cases the message is not supported by the ISDN provider In this case the switch must be activated to prevent the system from sending CCNR.

“With sending complete” flag

If this flag is set, the optional message “All digits sent” is output by the system when all dialed digits are transmitted via the ISDN primary multiplex access. This flag is always set for the New Zealand country code.

10.4.8.11 Digit Transmission area (from HiPath 3000/5000 V8, HiPath OpenOffice EE V1 R2)

The type of digit transmission is determined here for the selected route and is displayed as static (e.g. route table 6: en-bloc sending) text under Settings | Least Cost Routing | Dial plan after selecting the route table (see Route table drop-down list).

Digit-by-digit

The digits are transmitted in sync with dialing.

En-bloc sending

During en-block digit transmission (block dialing per route), the dialed digits are buffered by the communication system. Dialing only takes place when a timer has elapsed after the last digit has been dialed, when the end-of-dial code # has been entered or if an exact match in the dial rule is found. In the case of PRI in the USA block dialing to the central office is mandatory.

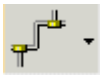
LCR must be activated to be able to select en-bloc digit transmission.

The type of digit transmission is automatically set to en-bloc digit transmission in the route table if at least one route of the LCR route table is configured with en-bloc digit transmission.

See also:

– Section 10.4, “Settings | Lines/networking”, on page 10-49
– Section 10.4.9, “Routing parameters”, on page 10-83
– Section 10.5.2, “Dial plan”, on page 10-109
– Section 10.5.1.3, “Area: LCR - flags, Activate LCR”, on page 10-107
– HiPath 3000/5000 feature description, block dialing

10.4.9 Routing parameters



Settings | Lines/networking | Routing parameters

Routing parameters can be used to set the parameters for each of the routes listed under Routes. Depending on your requirements, you can turn on individual flags, choose options, and change default values here.

10.4.9.1 Routes list

Routing parameters, like the Routes, contain a list of the routes in the communication system. The names that you assign to the routes, are displayed via **Routes**. To select a route, click on the route name (or the number) in the appropriate list box.

10.4.9.2 Area: Routing flags

Digit Repetition On flag

If an outgoing route is seized and digit repetition has been activated, the routing code is automatically included as the initial portion of the call number. This only applies if LCR is deactivated (see Settings | Least Cost Routing). If LCR is activated, closed numbering is only implemented via the LCR tables.

This feature is used with networked communication systems with a closed numbering system to reach a station always with the same call number. The communication system used to set up the call is irrelevant.

In order to use digit repetition for closed numbering, the call numbering plans of the other networked communication systems must be coordinated to ensure that their call numbers begin with codes that are stored in the **Routing codes** field for the corresponding route in the present communication system (see Routes). To achieve a higher level of flexibility, up to ten routing codes can be defined for each route.

In case of a digital network, the LCR dial plan should be used to define the different access codes and digit repetition.

Analysis of Second Dial Tone flag

Analysis of Second Dial Tone alerts the communication system to detect an additional dial tone. This feature is used with tandem communication system applications. This evaluation is country-dependent, e.g., in Belgium after 00 and in France after 16 or 19. This is not relevant in Germany. This only applies to network providers who send a second dial tone for international calls.

Intercept Per Direction flag

This flag is necessary for QSIG networking. When this flag is set, the communication system checks whether a diversion request has been received by the remote station, or whether the communication system has implemented forward switching to the central intercept position. The remote station receives a message which advises whether or not a diversion should be implemented for this call.

If intercept is activated for a route, all calls forwarded to this route are intercepted at this intercept position.

To implement this feature, day and night numbers must be configured for each route (see Ringing assignment per line). Furthermore, an intercept position should **not** be entered for the day/night service (see Intercept / Attendant).

Over. service 3.1 kHz audio flag

For all outgoing calls on ISDN, **Over. service 3.1 kHz audio** is the default setting. This is the standard transmission type for outgoing calls on an Integrated Services Digital Network (ISDN) line. A connection from the communication system to a digital CO with an analog modem must be identified as a data service.

This flag should be set to avoid problems during FAX operation.

The default setting should not be changed without consulting the respective network operator.

Trk Grp. – Add Routing Prefix Incoming flag

When this option is activated on system telephones with incoming seizure, the call number display is supplemented by the route code. When the option is deactivated, address information elements are forwarded transparently from the CO to the S_0 station.

Trk Grp. – Add Routing Prefix Outgoing flag

When this option is activated on system telephones with outgoing seizure, the call number display is supplemented with the access code.

This flag should only be deleted for an LCR dial plan configuration in which all dial plan entries begin with '-' and for a CO connection in which the connect message does not include any call number information (for example, VPN Arcor / Deutsche Bahn).

Ring-back-tone to CO flag

If this flag is set, a 'Ring-back tone' will be sent to the ISDN central office on an incoming call.

This is a special protocol handling required for the provider Global One and Sovintel.

Keypad Dial flag

Indicates whether this route supports carrying out of stimulus procedures to the ISDN CO.

A subscriber who would like to carry out these procedures needs the correct authorization to do so (see Station view: Flags).

LIN activated flag (only for the USA)

Here, the user enters whether the route of sending from LIN (Local Identification Number) is supported. If the communication system determines during the first attempt that this route does not support the LIN, this flag is automatically reset.

This flag is only relevant for primary multiplex connections (TMST1).

Adaptation to DMS100 CO flag

Activating this option adapts the communication system to the behavior of the DMS100 CO in Israel. All incoming calls (CdPNr) with the code “type of number (TON) = unknown” are evaluated in the communication system as call numbers with the code “TON = subscriber”. This flag is not configured in the default setting.

Deactivate UUS per Direction flag

User-to-User Signaling (UUS) can be deactivated with this flag. This suppresses the transmission of the name and phone number of the A station in the UUI element (user-to-user information, UUI) for external call forwarding (FWD ext.). This flag must be manually deactivated for Telefonica.

Name in CO

The name of the calling party is sent to the Central Office in the “user to user information (UUI)” element. This flag must be manually deactivated for Telefonica.

10.4.9.3 Area: Segmentation

This area defines the system behavior when sending ISDN messages in which the maximum Layer 2 user data length (260 bytes) is exceeded.

yes	The message to be sent is split into 260-byte segments and sent individually. The receiving communication system must support the segmentation and collect and arrange the individual segments into a message.
no	Segmentation is not needed, since the underlying Layer 2 can transport messages of any length.

Truncate Message	The message to be sent is truncated to less than 260 bytes by eliminating the less important portions (such as names, for example) and then sent.

Segmentation is only significant for trunks with the CorNet-NQ, ISO-QSIG (QSIG V2) and ECMA-QSIG (QSIG V1) protocols.

10.4.9.4 Area: Analog trunk seizure, no pause

Here various times can be selected which determine when dialing begins when using analog dial-up lines (MSI). If **no pause** is set, the communication system waits until it recognizes a dial tone.

Note for Brazil

When using DTMF signaling from analog terminals in conjunction with analog trunks (TLAx and TML8W) and digit outpulsing after dial tone detection, there might be problems with the toll restriction when the country code is set to Brazil. In this case, the DTMF signals from the analog terminals go directly to the analog trunks (“1A procedure” is not used). Because of this, the DTMF signals which are dialed before the dial tone is received are lost.

Here, Least cost routing (LCR) must be activated for proper functionality of the terminal dialing process and toll restriction.

10.4.9.5 Area: Trunk call pause

The **Trunk call pause** field refers to the trunk call ring cycle. The CO call pause determines the period of time that elapses before a call is recognized as being completed once the user has hung up.

This option applies only to MSI lines.

For a trunk call with, for example, 1 second on and 4 seconds off, a trunk call pause of 6 seconds should be configured. In some COs, however, a 10-second ring pause applies. In such cases, a trunk call pause of 13 seconds must be programmed. Otherwise, no call diversion can be implemented.

In the United States, this cycle is two seconds on, two seconds off, for a total of six seconds. The six-second option is the default, so you will not need to make any changes here.

Setting range: 2 to 13 seconds.

10.4.9.6 Area: Type of Seizure, Cyclic, Linear

This field specifies the criteria that apply if the communication system needs to seize an outgoing line.

Cyclic	The communication system starts its cyclical search for a free line with the next line number based on the last outgoing line seized in this route.
Linear	The communication system always begins its search with the lowest line number assigned to this route.

TMANI/TLANI boards are reinitialized if this flag changes.

10.4.9.7 Area: Route type, CO, PABX

There are two options for **Route type**. The type of route can be set either as **CO** (Central Office) or as **PABX** (Private Automatic Branch Exchange).

CO	Lines assigned to this route are subject to toll restriction. When LCR is active, the toll restriction is regulated by Dial plan (COS column).
PABX	Toll restriction is only performed if there is a second CO code assigned to this route. When LCR is active, the toll restriction is regulated by Dial plan (COS column). The route type also has a bearing on the default text of the route name (see Routes) as well as on the procedure used for recognizing the dial tone on MSI lines.

10.4.9.8 Area: No. and type, outgoing ...

In a PRI environment, in the **No. and type, outgoing** area, you can specify the number and type of the digits that will be sent to the CO and the receiver according to the different prefixes and requirements. In the USA, the entry commonly used for PRI is **Local area code**.

The settings in the **No. and type, outgoing** area also affect calls which are sent from a remote station that is connected to a networked node. The number of the caller which is received from the networked node and forwarded to the CO, is upgraded based on this setting for the outgoing route.

Unknown	This setting is the default selection. If this option is selected, the DID number assigned to the station will be sent. It may include 7, 10, or 11 digits.
PABX number	If you select PABX number, the communication system will send seven digits to the CO. These digits include a three-digit PABX code and a four-digit DID extension number.
Local Area Code	If you select **Local Area Code**, the communication system will send ten digits to the CO. These digits include a three-digit area code and a seven-digit number, which includes a PABX code plus a station number.
Country Code	If you select **Country Code**, the communication system will send eleven digits to the CO. These digits include a one-digit country code and a ten-digit number, which includes a local area code, a PABX number, and an DID extension number.
Internal	This setting is essential for a networked system. Number prefixes may not be added for closed numbering plans. If this setting is selected, call number prefixes are suppressed.

10.4.9.9 Area: Call number type, ...

This field allows you to specify the call number information which is transmitted from the calling station to the destination station.

Internal	In this case, only the internal call number is transmitted. If the destination is an external station, either no number is transmitted of only that of the attendant. The internal call number can be displayed when the destination is an internal station.
Direct inward dialing (DID)	In this case, only the DID number is transmitted. The internal call number is not provided for display at internal destinations in other nodes. The call number is sufficient for external destinations.

Internal / DID	This setting is useful for networking purposes. Both the internal call number and the DID call number are transmitted to the destination station. If an internal station is called within the network, the internal call number of the caller can be displayed for this station. If the internal destination station has activated call forwarding to an external destination, for example, a DID number can also be transmitted in this case.

10.4.9.10 Area: Rerouting

To optimize use of the B-channel, call forwarding can be performed on the basis of the protocol in accordance with the specification “Call Forwarding/Partial Rerouting”. If partial rerouting is rejected, forward switching is used.

This option is only available for CorNet networking, and must be activated in the same way in both networked communication systems.

Change route

When this flag is turned on, it is also possible to route D-channel information via other routes.

This option enables alternative routing via other routes. The option may be activated only when the call number plan is unambiguous (closed numbering or unique seizure codes in a network. The system making the request must also support this.).

If rerouting is implemented, rerouting with change route active must also be set for the corresponding route.

10.4.9.11 Area: Rerouting active

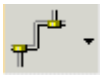
No	When you select this option, **Rerouting** is deactivated. For call forwarding, the connection is always set up via two B-channels.
If route is known	When you select this option, rerouting is only active if the route is known and a successful “handshake” procedure takes place between the two networked communication systems.
Always	If the setup for the incoming call is coming in on the same route as the call forwarding destination route, the call will be rejected by the communication system if this option is activated.

This option **Always** is only available for CorNet networking, and must be activated in the same way in both networked communication systems.

See also:

- Section 8.2.1, “Station view: Flags”, on page 8-5
- Section 10.4, “Settings | Lines/networking”, on page 10-49
- Section 10.4.8, “Routes”, on page 10-73
- Section 10.5, “Settings | Least Cost Routing”, on page 10-106
- Section 10.5.2, “Dial plan”, on page 10-109
- Section 10.6.2, “Ringing assignment per line”, on page 10-127
- Section 10.8.4, “Intercept / Attendant”, on page 10-203

10.4.10 ISDN parameters



Settings | Lines/networking | ISDN parameters

The Reference Clock synchronizes procedures across trunks within a given network or CO. Specific trunks are selected and used by the communication system as points of reference for the clock. Under most circumstances, you will not have occasion to change the reference trunk assignments. However, if the reference clock trunk is missing or malfunctions, then you must assign the reference clock to one or more other trunks using the **ISDN parameters**.

10.4.10.1 Clock tables

Normally, the communication system automatically selects the trunk to be used as a reference for all of the communication systems within a given network or CO. The communication system chooses the trunks in the order of preference shown below:

a) PRI/S_{2M} CO trunk

b) BRI/S_0 CO trunk

c) PRI/S_{2M} tie trunk (only slave configuration)

d) BRI/S_0 tie trunk.

To override this selection order, you complete the **Allowed Nos. List** and **Denied Nos. List** accordingly. The automatic search for the reference clock source can be controlled so that the priority for the search is as shown below.

a) Allowed Nos. List

b) PRI/S_{2M} CO trunk

c) BRI/S_0 CO trunk

d) PRI/S_{2M} tie trunk (only slave configuration)

e) BRI/S_0 tie trunk.

To add trunks to the Allowed or Denied Nos. Lists, use the respective lists. When you add trunks to these lists, the communication system first searches for the reference clock trunk in the Allowed Nos. List. The trunks in this list override the communication system's automatic choices. Trunks on the Denied Nos. List are considered ineligible and are disregarded.

Position

Positions 1-4 reflect the priorities 1-4 (for the Allowed nos. list) and 1-16 (for the Denied nos. list).

Allowed Nos. List

The Allowed Nos. List contains the preferred ISDN ports for reference clock allocation.

Denied Nos. List

The Denied Nos. List contains the ISDN ports which should mot be used for reference clock allocation.

10.4.10.2 Area: USBS

The USBS feature makes it possible to transfer messages between telephones (USBS=User to User Signaling Bearer Service).

Meaning CDB	Parameter	Default
Maximum number of packets allowed per time interval	x parameter	200
Maximum number of packets allowed per time interval	Y parameter	200
Time interval in receive direction (application > system)	USBS timer interval	10 s
Time interval in transmit direction	(system > application)	cannot be changed - 10 s

The max. transfer rate on the interface is defined by the parameters as follows:

Transfer rate in receive direction (application > system)

Per time interval (adjustable using the USBS timer interval), the maximum transfer rate is:

Number of packets per interval	Number of packets in last interval
$(X - P_{(t-1)}) + Y$	P >= Y
X	P < Y

- X = Initializing value of packet counter, burst parameter
- Y = Max. number of packets per time interval, replenishment parameter
- P(t-1) = Number of packets received in last time interval

Transfer rate in transmit direction (system -> application)

Per time interval (fixed at 10 seconds), the maximum transfer rate is:

Number of packets in last interval	Number of packets per interval
X	0< P< X

Reference:
ETS 300 716
User Signalling Bearer Service
Annex A

x and y parameters

The designation is an ETSI standard (ETS 300 716).

These parameters can be used to limit the data transfer rate in the D channel. This is necessary to distribute the limited transmission capacity on the respective interface or on a board.

The following values are recommended for the reliable functioning of the interface and, as a rule, should not be increased:

Connection to	x	y	Comments
TA-S0	16	8	
STMD/STLS	64	8	With additional telephone on bus (max. 2)
STMD/STLS	128	8	No additional telephone on bus

Internal call number
DID call number

The call number over which a connected PC application reaches the USBS access in the communication system, either internally or externally, is entered here.

10.4.10.3 Area: National/international prefix

The appropriate national/international code for the prefix numbers is entered here and is used to prepare the call for ISDN traffic.

10.4.10.4 MSN assignment to lines table

This is for the assignment of ports to MSN (Multiple Subscriber Number) for call forwarding in the central office where there are several PMP lines (PMP = Point to Multi Point). The multiple call number feature makes it possible to assign several call numbers to one basic public access.

An MSN with up to 11 digits can be entered as the DID number for each station in the communication system. The entry of the assignment must agree with the entry under Settings | Lines/networkingSettings | Set up station and the MSN's must be assigned in the DID table (see).

MSN column

The MSN for the respective line is assigned here.

Trunks column

The line to be configured in selected in line list.

The main MSN of the PMP port must be entered at the first position for the appropriate trunk in order to enable a FWD-Activated/Deactivated to be performed in the CO for the entire port (for stations under *64...).

10.4.10.5 Area: UUS

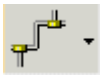
The access number that starts the UUS service (UUS: User to User Signaling) of the communication system is defined in the”Dial-in number” input field. If the UUS service has been started, the name and phone number of the calling party is entered in the UUI element (User to User Information). This enables the name and phone number of the calling party to be shown on the display of the called party within an ISDN network of communication systems.

The behavior when call forwarding is enabled is described in the HiPath 3000/5000 Feature Description.

See also:

- Section 10.2, “Settings | Set up station”, on page 10-11
- Section 10.4, “Settings | Lines/networking”, on page 10-49
- HiPath 3000/5000 Feature Description

10.4.11 LCOSS



Settings | Lines/networking | LCOSS

In the CorNet protocol, the communication system of the partner system is informed of the station's access in the CLASSMARKS information element.

When networking with Hicom 150/HiPath 3000 systems, the access is handed over in Octet 4 of the Classmark-IE in standardized form (refer to the table). No entries for the **LCOSS** index are required here.

The communication systems used in the USA (9005, 9006 and H300/USA) don't evaluate this standardized access. In this case, the LCOSS index for the respective HiPath system access must be defined. This LCOSS index helps the partner system to determine the access table and is therefore also given by the partner system.

H150 access in the system	**Translation of the system area to CorNet values for Octet 4**	**Translation of Octet 4 in LCOSS index of the H300/HiPath 4000 in Octet 8**
Only internal	0x00 Unknown class of service	can be set in CDB
Incoming ext.	0x02 Can access public network	can be set in CDB
Allowed/denied list	0x06 Can access local public network	can be set in CDB
Full access	0x0E Can access long distance public network	can be set in CDB

10.4.11.1 HiPath classes of service, HiPath 4000 - LCOSS Index

Since the Classes of service in the communication system (call privileges 0-14 of Allowed/Denied tables) don't match the LCOSS in the 9006, the call privileges of the communication system can be matched to the LCOSS in the HiPath 4000 in this table.

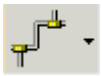
- **Only internal** (call privilege 0) matches the LCOSS XX in the 9006/9005
- **External incoming** (call privilege 1) matches the LCOSS XX in the 9006/9005
- **Allowed/Denied Lists** (call privilege -13) matches the LCOSS XX in the 9006/9005
- **Unrestricted trunk access** (call privilege 14) matches the LCOSS XX in the 9006/9005

HiPath 4000 has an LCOSS table that cross references the respective LCOSS numbers of the communication system. The 9005 has a CNI_COS table that converts our LCOSS number with their class of service number.

See also:

– Section 10.4, “Settings | Lines/networking”, on page 10-49

10.4.12 PRI (US only)



Settings | Lines/networking | PRI

Slot / port field

Here you can select the slot / port of a PRI card.

Protocol field

In this field the adjusted protocol is shown.

Frame / Line / Encode field

Here it can be selected the Layer 1 parameters for physical encoding of the line. There are only two choices because mixing the parameters is NOT allowed. Most new lines support ESF (Extended Superframe Mode) with a max. data throughout of 64 kbit/sec.

Older equipment and some special installations work in SF (Superframe Mode) with a max. data throughout of 56 kbit / sec.

ISDN provider informs customer whether or not a line can operate in ESF mode.

The meanings of the other abbreviations are the encoding type (B8ZS: Bipolar 8 Zero Substitution or ZCZ: Zero Code Suppression) and the D - channel encoding (normal or inverted).

B-channels field

Here is shown the used number of B-channels.

Inwats Duwa field

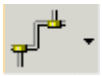
Dependent on a trunk group an INWATS DNIS (Dialed Number Identification Service) port is assigned to a DID port. This DID port should be configured as a pseudo port, this means that it is locked for basic DID. The entries in the CM tables are valid for the INWATS DNIS port.

CBC-trunk group field and CBC-pool field

These fields allow to install a CBC-pool. One CBC pool can consist of up to eight services. The different CBC access codes can be configured in the CBC trunk group field. In the field CBC-pool the according service can be configured.

See also:
– Section 10.4, “Settings	Lines/networking”, on page 10-49

10.4.13 QSIG features (not in the USA)



Settings | Lines/networking | QSIG features

In a network consisting of several communication systems, any connection information that occurs (CDRC data) in the PABX satellite systems is sent to a fixed communication system in the network. For this purpose, the call number of the destination system (call number of central recording system) to which the connection data is sent is configured in each communication system.

10.4.13.1 Area: Own system data

This data identifies your own communication system in the network. The data applies to both busy signaling and for connection data routing.

System number

In a network consisting of several communication systems, each communication system has its own system number. If the communication system is networked with such communication systems, and you wish to use the QSIG features, the system numbers (1-255) must also be administered here for compatibility reasons.

Group number

Stations can be divided into groups in the communication systems. They are assigned a unique group number. This type of grouping does not exist in the communication system. However, for compatibility reasons, the group numbers (1-40) must also be administered here.

10.4.13.2 Area: Inter-system busy signaling

This data defines a communication system where centralized busy signaling is used. The system can be either the PABX or a PABX satellite system.

System no. target system

The system number (1-255) of the target system is defined here.

Call no. target system

Call number of the communication system that is set up as a central recording system.

Only the PABX number needs to be entered here, i.e., without any station number, and the fact that no extension is entered for this PABX number must be taken into account in the LCR dial plan!

Example:
If the call number of the destination system is: 999
The dial plan entry must then be: -999 (and not -999XXX or -999Z)

10.4.13.3 Area: Connection data routing

This data defines a communication system where centralized connection data recording takes place. The system can be either the PABX or a PABX satellite system.

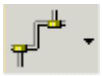
Call no. target system

Call number of the communication system that is set up as a central recording system (see also Call no. target system further above).

See also:

– Section 10.4, “Settings | Lines/networking”, on page 10-49

10.4.14 IP trunks for HG 1500



Settings | Lines/networking | IP Trunks

IP Trunks is used to configure the trunks for the inserted HG 1500 boards.

10.4.14.1 Area: Selection

Gatekeeper HG 1500

Under **HG 1500 Gatekeeper**, select the HG 1500 board plugged into the communication system that is configured as a gatekeeper (see also Settings | Set up station | Gatekeeper).

Enable gateway resources flag

This flag is used to free up the gateway resources from the gatekeeper card for the system.

10.4.14.2 Trunks table

The table shows all the lines that have been set up for the HG 1500 board.

Number, Add

The number of trunks to be newly configured are specified here. In total, up to 8, 16 or 64 trunks can be configured depending on the board. A higher number of trunks will be ignored.

These trunks must be assigned to the last route. See Settings | Lines/networking

Options:

- In HiPath 3000 V5.0 and higher, trunks are no longer assigned on a group basis but on a system basis
- In HiPath 3000 V6.0 SMR09 and later, you can choose between the following options when adding trunks:
  - SIP Provider 1 ... 4
  - Trunking
  - Ext. Registrar
  - Ext. Gatekeeper

Each of these options is assigned a separate route.

The Ext. Registrar option is needed when using the SIP protocol to connect to a communication system.

The Ext. Gatekeeper option is needed when using the H.323 protocol to connect to a communication system.

Selected line, Delete

All selected lines are deleted by pressing **Delete**.

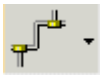
Configured line

This field shows the number of trunks configured for the HG 1500 board.

See also:

- Section 10.4, “Settings | Lines/networking”, on page 10-49
- Section 10.4.15, “IP trunks for SIP providers and OpenScape Office”, on page 10-102
- Section 10.10.15, “Gatekeeper”, on page 10-330
- Section 11.1.1, “Cards”, on page 11-3
- Section 11.1.2, “Card Configuration | T1 Configuration”, on page 11-6
- Section 11.1.3, “Card Configuration | Card data”, on page 11-7
- Section 10.2.11, “Gateway (V5.0 and Later)”, on page 10-35

10.4.15 IP trunks for SIP providers and OpenScape Office



Settings | Lines/networking | IP Trunks

The following are configured via **IP Trunks** :

- IP trunks for SIP providers of the inserted HG 1500 boards
- IP Trunks for OpenScape Office

See also Section 10.4.14, “IP trunks for HG 1500”.

10.4.15.1 Area: Selection

Gatekeeper HG 1500

Under **HG 1500 Gatekeeper**, select the HG 1500 board plugged into the communication system that is configured as a gatekeeper (see also Settings | Set up station | Gatekeeper).

Enable gateway resources flag

Activating this flag enables gateway resources.

10.4.15.2 Trunks table

The table shows all the lines that have been set up for the HG 1500 board.

Number, Add

The type and number of new trunks that should be configured are specified here. In total, up to 8, 16 or 64 trunks can be configured depending on the board. A higher number of trunks will be ignored. In the HiPath systems, trunks with particular routes are assigned to the SIP providers. These routes are:

HiPath	Routes
2000/OpenOffice EE	2, 3, 4 and 5
3500, 3550, 3700, 3750 and 3800	12, 13, 14 and 15
5000	60, 61, 62 and 63

The trunk with the last route is automatically assigned to IP networking.

The number and the “IP Trunking” type of the IP trunks are specified here for OpenScape Office.

Trunk column

This is the physical CO trunk that is connected to the communication system. You select the trunk (line) by clicking on the appropriate line number.

Code column

This is the number that tells the communication system to seize a specific trunk. It is used to test the trunk or to program a line key.

Route column

This is the route (number or name) to which the specified line is assigned. These are the same names and numbers that appear in the **Routes** field under Routes and Routing parameters. You use this field to assign a line to a particular route.

Selected line, Delete

All selected lines are deleted by pressing **Delete**.

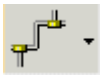
Configured line

This field shows the number of IP trunks/trunks configured for the HG 1500 board.

See also:

– Section 10.4, “Settings | Lines/networking”, on page 10-49
– Section 10.4.14, “IP trunks for HG 1500”, on page 10-100
– Section 10.10.15, “Gatekeeper”, on page 10-330
– Section 11.1.1, “Cards”, on page 11-3
– Section 11.1.2, “Card Configuration | T1 Configuration”, on page 11-6
– Section 11.1.3, “Card Configuration | Card data”, on page 11-7
– Section 10.2.11, “Gateway (V5.0 and Later)”, on page 10-35

10.4.16 E.164 table



Settings | Lines/networking Trunks | E.164 Table

Incoming seizure

Purpose of E.164 numbering:

- Abbreviate call numbers in the HiPath 5000 RSM network to the station number.
- Provide a list of connection numbers containing all ISDN call numbers for all nodes in the HiPath 5000 RSM network.

The call numbers of nodes outside the RSM network (e.g. HiPath 4000) are not specified. These call numbers are abbreviated to an optimal format containing the site number.

E.164 table

The tab E.164 table is a call number table for maximum 64 call numbers. This table is divided into the columns described below. The values for country code, local area code and PABX number are configured by selecting the individual fields.

All fields are mandatory.

Column: Country code

Enter the country code (e.g. 49 in Germany)

Column: Local area code

Enter the local area code (e.g. 89 for Munich)

Column: PABX number

Enter the PABX number (central company call number)

Delete

Delete is used to delete the table entries.

Synch. CDB

After clicking on the button **Synch. CDB**, the location numbers are automatically imported from all open CDBs. This must be repeated in each CDB.

See also:
– Section 10.8.1, “Flags”, on page 10-178

10.5 Settings | Least Cost Routing

Settings | Least Cost Routing

Settings | Least Cost Routing can be used to determine LCR parameters.

The Automatic Least cost routing (LCR) function enables the communication system to automatically control via which route the outgoing call will be routed. The call may be routed via the public network, various network providers or via a private network. This ensures that the most cost-effective connection is always automatically used in relation to the dialed destination.

The dialed call number is used as the criterion for the connection path to be used. The communication system can evaluate up to 24 digits of the digit sequence plus up to 9 field separators. The digit sequence that can be dialed can consist of up to 32 digits. The evaluation can be carried out both destination-dependently and time-dependently and in dependence on the station's LCR classes of service.

Tabs and Dialog boxes
• Flags and COS • Dial plan • Schedule

See also:
– HiPath 3000/5000 Feature Description, Least Cost Routing

10.5.1 Flags and COS

Settings I Least Cost Routing Flags and COS

The automatic LCR is activated via **Flags and COS** and the LCR authorization for each individual station determined.

10.5.1.1 Class of service table

Call No. (call number) column

All call numbers in the communication system are listed in this column.

Name column

The station names that are allocated to the call numbers are listed here.

Class of service column

An LCR class-of-service (1-15) can be assigned to each station which is evaluated by means of the route table when a route is being seized. The assigned level must be equal to or greater than the level associated with the Route group selected to gain access to the service.

10.5.1.2 LCR authorization codes table

The authorization codes or P.I.N (Personal Identification Number) allocated to the individual network providers are transmitted together with the call number.

Index column

Consecutive digits are entered here in accordance with the respective network provider. In the dial rule, the entries M1-M16 refer to index 1-16.

P.I.N. column

Sixteen authorization codes of not more than 16 characters (ASCII characters) can be entered for the various network providers.

10.5.1.3 Area: LCR - flags, Activate LCR

Automatic least cost routing can be activated with **Activate LCR**.

10.5.1.4 Digit Transmission area (HiPath 3000/5000 V7 R4)

The type of digit transmission is established here throughout the system.

Digit-by-digit

The digits are transmitted in sync with dialing.

En-bloc sending

During en-block sending digit transmission, the digits are cached by the communication system. Dialing only takes place when a timer has elapsed after the last digit has been dialed, when the end-of-dial code # has been entered or if an exact match in the dial rule is found. In the case of PRI in the USA block dialing to the central office is mandatory.

See also:
– Section 10.6, “Settings	Incoming calls”, on page 10-125 – Section 10.5.2, “Dial plan”, on page 10-109

10.5.2 Dial plan

Settings | Least Cost Routing | Dial plan

For external connections, each call number including the code (up to a maximum of the 30th. character incl. field separators) is checked in the dial plan. The **dial plan** then determines a route table for the station; the station is assigned this table for the connection setup. Up to 16 routes are created via a single **route table**. The **Dialing rules table** defines how the digits selected by the station are converted and dialed by the communication system.

The station can cancel automatic selection by seizing a line directly (Carrier Select Override - CSO). If Internet telephony is set up via one or more ITSPs, a connection via the Internet is set up with the CO code, “0”. In this case a connection via ISDN or the analog trunk connection is possible using the special CO code, “80”.

The LCR class-of-service cannot be transferred between CorNet-networked communication systems.

Important:
When configuring a HiPath 3000 system for E.164, at least the following dial plans must be set up:

- Dial plan 0CZ with outdial rule A
- Dial plan 0C00<*country_code*>Z, with outdial rule E3A (e.g., 0C0049Z)

10.5.2.1 Table above (Call number evaluation for external connections)

Name column

The **Name** column can be used to assign a name to each profile, e.g., local call, long-distance call, international, etc. Depending on the version of the communication system, the Name column may or may not be displayed.

A meaningful name should be selected when assigning names. Multiple instances of the same name may be used. Appropriate names are automatically assigned via the Dial Rule wizard.

Dialed digits column

The **Dialed digits** column specified the call number evaluation. Call numbers should be defined using the Digit Analysis wizard. To open the Dial Rule wizard, double-click the corresponding entry in the Dialed digits column or select an entry and then click the **Dial rule wizard** button. A description of the Dial rule wizard can be found in Section 10.5.2.3, “Digit Analysis Wizard”, on page 10-113.

Route table column

The **Route table** column is used to specify which route table is to be used for the profile. The definition of the route tables then occurs via the table below (Route table).

Acc. code (Account code) column

The **Yes**/**No** setting in this column determines whether or not an account code entry is mandatory after the seizure code (in the USA: after end-of-dialing). If the **No** is selected, the account code is not required until the dial plan has been dialed completely if it has been configured for the route Call charges.../Account codes (see Account codes). An appropriate user prompt appears on telephones with a display.

ACCT entries must completed with **Apply** only if the entry is “unverified”. The entry is saved automatically for “list verification” Call charges.../Account codes (see (Account codes) or “digit verification” Call charges.../Account codes (see Account codes).

For LCR configuration, note that all digits illustrate the Access Code (field E1) up to the first separator.

Example: Station dials 2xx

a) Dial plan “2XX”, dialing rule “A” => AccessCode=”2xx”, rest of dialing=”” => “” is dialed!

b) Dial plan “2XX“, Dial rule “E1“ => AccessCode=“2xx“, rest of dialing=““ => “2xx“ is dialed

c) Dial plan “-2XX“, Dial rule “A“ => AccessCode=““, rest of dialing=“2xx“ => “2xx“ is dialed

d) Dial plan “2-XX“, Dial rule “E1A“ => AccessCode=“2“, rest of dialing=“xx“ => “2xx“ is dialed

The splitting up of the dialed digits in Access Code and rest of dialing is only changed by an alteration of the LCR - dial plan.

COS column (toll restriction)

The **COS** (toll restriction) controls activation of the toll restriction. This applies to networking, as well as to standalone communication systems. With this, individual call numbers can be removed from the toll restriction. If the toll restriction should be applied, the known rules regarding the Allowed / Denied Lists apply (see Allowed/Denied numbers).

Emergency Column

If a number that was configured as an emergency number (dialed digits, emergency column=**yes**) is dialed, and no free line is available, then a line that is being used for a non-emergency number (emergency column =**no**) is disconnected and then made available automatically for the emergency number.

UUS Networking flag

This flag determines whether User to User Signaling (UUS) is to be used in an ISDN network for the profile assigned to the table row. User to User Signaling causes the name and station number of the A station to be transmitted in a User to User Information (UUI) element. The default value is “Yes”.

10.5.2.2 Lower table (Route table)

Each path/route is described by a combination of routes, dial rules, LCR class-of-service, schedule and the designation of an expensive route. The LCR class-of-service is evaluated hierarchically for LCR. The route table is searched from top to bottom. If the route located is seized, or if the station does not have the necessary authorization, the next route is tried.

If the use of an entry fails because the route is not available, insufficient classes of service or not matching schedule, the next entry will be used, until all criteria match and the call can be established. When moving from one entry to the next, a warning about a more expensive connection may be announced if this has been configured for the overflow entry.

Route table drop-down list

The Route table drop-down list is used to select the appropriate route table, which can then be edited in the table.

After selecting the route table, the type of digit transmission (see also Digit Transmission area (from HiPath 3000/5000 V8, HiPath OpenOffice EE V1 R2)) is displayed as static text (e.g., route table 6: en-bloc sending) at the bottom right end of the second table.

Route column

The route is selected here.

Dial rule column

The dial rule is selected here. Dial rules should be defined by using the Dial rule wizard. To open the Dial Rule wizard, select an entry in the Dial rule column and then click the **Dial rule wizard** button. A description of the Dial Rule wizard can be found in Section 10.5.2.4, “Dial rule wizard”, on page 10-115.

min. COS column: (Class of Service)

The min. COS describes the minimum LCR class-of-service needed by a station in order to use the associated route. It is thus possible to stipulate, for example, that one station is only permitted to place calls via a specific carrier or during certain times, while other stations have the option of using alternative routes.

Schedule column

A time zone is entered here which is compared with the LCR schedule (see Schedule) If the comparison does not yield a match, the route is not enabled. Instead, the next route (next line) in the route table is tried. If a time zone has not been entered, the route is used without referring to the LCR time plan.

Warning column

You define here whether a warning is to be output if an expensive connection (route) is being set up, and which warning should be selected. The warning **Expensive connection** is only displayed if a name has not been configured for the associated dial rule. If a name has been configured, it is displayed.

See also:

– Section 10.6, “Settings | Incoming calls”, on page 10-125
– Section 10.5.2.3, “Digit Analysis Wizard”, on page 10-113
– Section 10.5.2.4, “Dial rule wizard”, on page 10-115
– Section 10.5.3, “Schedule”, on page 10-123
– Section 10.5.2.4, “Network provider’s method of access”, on page 10-116
– Section 10.7.3, “Allowed/Denied numbers”, on page 10-162
– Section 11.2.6, “Account codes”, on page 11-34

10.5.2.3 Digit Analysis Wizard

The Digit Analysis wizard is used to define call number evaluation for external connections.

To call the wizard, click **Settings | Least Cost Routing | Dial plan** and then:

- double-click in the **Dialed digits column**
- or select the **Dialed digits** column and click the **Dial rule wizard** button
- or select it via the context menu (right mouse click) of the **Dialed digits** column

Profiles

Some profiles are already predefined. You can use the options to select for which connections a call number evaluation is to occur, e.g., **City** for all local calls.

The **User-defined** option can be used to create profiles in addition to those already predefined.

Name

The name for the profile is specified via **Name**. The predefined profiles are already assigned names.

Dialed digits

Dialed digits specifies to which call number(s) the dial rule applies.

The following entries are permitted for the call number(s):
- 0...9 (permitted digits)
- - (field separator)
- X (any digit between 0...9)
- N (any digit between 2...9)
- Z (one or more digits follow up to end-of-dialing)
- C (simulated dial tone (cannot be entered more than 3 times))

within a dial string indicates end-of-dialing or switching of the signaling method; therefore * and # are not taken into account as entries here.

In order to access all available functions, a field separator, “-”, must be placed between the route code and the number you wish to dial.

When configuring LCR for a network, the dial plan for internal network call numbers should always be configured without access codes.

Except

Except is specify exceptions, i.e., to which of the call numbers specified under Dialed digits the dial rule should not be applied.

Example using City:

Dialed digits: 0CZ
Except: 0C0Z

The dial rule applies only to local calls. If the value 0C0Z were not specified under Except, the dial rule would apply to all external calls, i.e., even long-distance calls, for example.

Set Route table, Acc. code, COS and Emergency to Standard

If this option is activated (Standard), the values in the corresponding columns are reset to default values, i.e., no route table, Acc. code: no, COS; yes, emergency call: no

If the option is deactivated, a further dialog box is displayed in which the appropriate values can be selected.

See also:

- Section 10.5.2, “Dial plan”, on page 10-109
- HiPath 3000/5000 Feature Description, Least Cost Routing

10.5.2.4 Dial rule wizard

The Dial rule wizard is used to define dialing rules for the call number evaluation for external connections.

To call the Dial rule wizard, click **Settings | Least Cost Routing | Dial plan** and then:

- Double-click in the column **Dial rule**
- or select the **Dial rule** column and click the **Dial rule wizard** button
- or select it via the context menu (right mouse click) of the **Dial rule** column

The appropriate method for dialing different network providers (carriers) depends on their technical specifications. To determine which method is supported and which parameters need to be specified for it, please contact the network carrier or refer to their relevant intranet pages.

Examples for network providers in Germany:

Network provider:	**Deutsche Telekom**
Network provider's method of access	Main network supplier
Access code:	
Dial rule format:	A

Network provider:	**Arcor**
Network provider's method of access	MCL single-stage
Access code:	01070
Dial rule format:	C,01070A

Edited dial rule

Here you select which dial rule is to be edited. The displayed dial rule name (by default, Dial rule 1...254) can also be edited here. To do this, select the dial rule first and then enter a new name for it.

Network provider's method of access

The method used by individual network providers is entered here.

Procedure	Description	Example
Unknown		
Main network supplier	When seizing a line via the main network provider, simple dialing is carried out either block-by-block or by dialing individual digits into the public network.	A
MCL single-stage	With this type of LCR, the desired network provider is dialed with a prefix, followed by the phone number. Dialing occurs in the D channel for ISDN or as normal dialing for MSI.	C123A
MCL two-stage	With two-stage LCR, the required network provider is also selected with a prefix. Following a synchronization phase a configurable authorization code is first transmitted, followed by the destination call number (DTMF).	C131SP6M1A
Corporate Network (CN)	In the case of the Corporate Network, the alternative network is directly connected to the Hicom 150 E Office/HiPath 3000. This refers to the internal network of the company. The LCR function establishes the relevant route from the number dialed by the station and routes the call either via the trunk group of the public CO or via the trunk group with the corporate network. Both an open and a closed numbering system can be implemented using this method by means of digit manipulation.	E1A
Dial-in control server (DICS)	With this type of LCR the required network provider is dialed with a prefix via a Dial In Control Server (DICS) and in the process the call number and a configurable authorization code is transmitted in the subaddress. The number is dialed via the D channel.	UM2A
Primary rate interface (PRI)	In the case of Primary Rate Interface, the carrier or the calling service is selected in the SETUP via the information elements Network Specific Facility, Operator System Access and Transit Network Selection.	A

If **Main network supplier** is selected as the procedure in the dialing rules table, forwarding in the Route table will not work for the entries after the route programmed as the main network provider.

Normally in a **Primary Rate Interface** (PRI) environment, the central office does not require the 1 for long distance calls or 011 for international calls to be sent before the dialed number. In cases where the public network provider requires the 1 for long distance calls or the 011 for international calls, additional dial rules need to be created for long distance calls (D1A) and for international calls (D011A).

Access code, Pause (max. 12 sec.), Authorization code

Depending on the procedure of the network provider, further parameters required for the dial rule must be specified.

Dial rule format

The dial rules make it possible to actually access the various carriers by manipulating the digits. The dial rules address the fields of the dial plan directly in order to retry, suppress, exchange or insert digits. Other operations include the insertion of pauses, switching the signaling method or identification of the dial tone.

The dial rules are defined via the following special characters:

Parameter A A ensures that all subsequent digit fields are transmitted. The reference point is the last field indicator preceding A. A can occur more than once in the string and can be placed in any position. The AA combination is meaningless and has the same effect as A.	All	repeat remaining fields (transmit)
Parameter D (n) D (n) can occur more than once in the string and can be placed in any position. D (n) can be surrounded by any other parameters.	Dial	Dial digit sequence (1 to 25 digits)
Parameter E (n) E (n) can occur more than once in the string and can be placed in any position. E (n) can be arranged in any order, depending on n. A determining field can be addressed more than once, even consecutively. With the exception of the E1 A combination, E (n) can be surrounded by any other parameters.	Echo	retry field in dial plan (Number 1 to 10)

Parameter P (n) P(n) can occur more than once in the string and can be placed in any position. P (n) can be surrounded by any other parameters.	Pause	Pause (1 to 60 times the system-wide pause unit)
Parameter M (n) M (n) can occur only **once** in the string. M (n) should **not** be placed in the final position in the string.		Authorization Code (1 to 16)
Parameter S S can occur only **once** in the string. S should **not** be placed in the final position in the string. After using S in the string, the C parameter may not be used.	Switch	Switch signaling method from DP to DTMF
Parameter U U can occur only **once** in the string. U should **not** be placed in the final position in the string. The subsequent characters are re-selected in INFO. After U the parameters S, P, C and M may **not** be used.		Use of the signaling method SUBaddress
Parameter C C can occur only **once** in the string. After C the following digits are sent without dial pause. C is used for carrier access with single stage, two stage, DICS and PRI.	Carrier	Access code

USA only:

Parameter N (n) N can occur only **once** in the string. N should not be placed in the first position in the string. Depending on the service to be used, N designates the SFG.	Network-specific facility	SFG (1 to5) or Band Number (1)
Parameter L L can only occur at the end of a string of characters. L causes the call to be handled as an emergency call.	Location Identification Number	The call is treated as an emergency (E911)

min. COS Time slots, Warning

This drop-down list corresponds to the respective columns in the route table (see Section 10.5.2, “Dial plan”, on page 10-109).

Type of Number [TON]

For each dial rule, the following types of number from “Called Party Number” can be selected from the drop-down list:

- PABX number
- Local area code
- Country Code

“Unknown” is the default entry.

Sample options:

- Example:

  If the rule format “D492302667…” is entered, the TON “Country code” must be set. For the TON “Local Area Code” the rule format “D2302667…” should be configured, for example.

- Example - Called number supply:

  The called number (DAD) is configured via LCR, PABX number incoming:

  The number 0-089-722-4711 is dialed. The following should be sent: 49 89 722 4711. The dial plan contains 0C0-89722Z. The dial rule contains D49E3A and the type of number - country code (international).

In a conventional network, parameters are set to “Unknown”.

Rule for forwarding within the route table depending on the procedure configured in the route table

- Connection release in all cases:

CAUSE VALUE	Description	Type
VT_CALL_REJECTED	Rejected	internal
VT_NO_ACCESS	No authorization, e.g. CON	internal
VT_NICHT_MOEG	Not available	internal
DERR_LINEBUSY	Line busy	internal

If an entry is made in the MCL single stage or MCL two stage route table, external connections are forwarded for all CAUSE values. (Note: this refers to standard causes in accordance with the ISDN standard ETS 300 102-1/2)

- Entry # in the Corporate Network route table:

CAUSE VALUE	Description	Type
CAU_03_NO_ROUTE_TO_DESTINATION	Invalid route	external
CAU_06_CHANNEL_NOT_ACCEPTABLE	Unknown B-channel	external
CAU_34_NO_CHANNEL_AVAILABLE	No B-channel available	external
CAU_38_NETWORK_OUT_OF_ORDER	Network is not available	external
CAU_41_TEMPORARY_FAILURE	Temporarily out of service	external
CAU_42_SWITCHING_CONGESTION	Connection is overloaded	external
CAU_44_CHANNEL_NOT_AVAILABLE	Channel is not available	external
CAU_47_RESOURCES_UNAVAILABLE	Service is not available	external
CAU_52_OUTGOING_CALL_BARRED	Route is blocked	external
CAU_63_SERVICE_NOT_AVAILABLE	Service is not available	external
CAU_82_CHANNEL_NOT_EXISTENT	Channel does not exist	external

CAUSE VALUE	Description	Type
CAU_102_RECOVERY_ON_TIMER_EXPIRY	Security timer has expired (layer 3)	external

- Entry in the dialing rules table (recommended for use in Germany):

CAUSE VALUE	Description	Type
CAU_03_NO_ROUTE_TO_DESTINATION	Invalid route	external
CAU_21_CALL_REJECTED	Call is rejected	external
CAU_28_INVALID_NUMBER_FORMAT	Invalid call number format	external
CAU_34_NO_CHANNEL_AVAILABLE	No B-channel available	external
CAU_38_NETWORK_OUT_OF_ORDER	Network is not available	external
CAU_41_CHANNEL_NOT_AVAILABLE	Channel is not available	external
CAU_66_CHA_TYP_NOT_IMPLEMENTED	Channel type is not supported	external
CAU_88_INCOMPATIBLE_DESTINATION	Invalid route	external
CAU_102_RECOVERY_ON_TIMER_EXPIRY	Security timer has expired (layer 3)	external

- Entry in the dialing rules table for the main station:

CAUSE VALUE	Description	Type
CAU_03_NO_ROUTE_TO_DESTINATION	Invalid route	external
CAU_34_NO_CHANNEL_AVAILABLE	No B-channel available	external
CAU_38_NETWORK_OUT_OF_ORDER	Network is not available	external
CAU_41_CHANNEL_NOT_AVAILABLE	Channel is not available	external
CAU_44_CHANNEL_NOT_AVAILABLE	Channel is not available	external

See also:
– Section 10.5.2, “Dial plan”, on page 10-109

10.5.3 Schedule

Settings | Least Cost Routing | Schedule

A **schedule** (with up to 8 time slots per day) may be configured for controlling the LCR. You can configure these time slots for every day of the week. The first time slot of any given day begins at 00:00 and ends with the entry in the time limit. A time zone is assigned to each time slot. The next time slot begins when the previous one ends.

Example for a time plan:

Monday	12:30 A	16:45 B	23:59 A	---	---
Tuesday	23:59 A	---	---	---	---
:					
Sunday	23:59 A	---	---	---	---

Selection of the route is unsuccessful if the time zone in the route table in the dial plan does not match the time zone of the current time slot.

10.5.3.1 Schedule table

Time slots can be entered into the schedule by “drawing” them with a mouse or via a dialog box. If the maximum number of time slots allowed is exceed for a given day, the time slots are not created.

To “draw” a time slot in the schedule, first mark an area in the schedule and then select a time zone by clicking on one of the buttons (A-H) to the right of the schedule.

To insert a time slot via a dialog, double-click on the area in the schedule where the time slot is to be inserted. A dialog box in which you can enter the start and end time and select the time zone is displayed.

Existing time slots - even across multiple days - can be marked and moved to another position in the schedule (if possible). If moving an area results in the creation of an undefined gap, the preceding time slot is extended accordingly.

10.5.3.2 Context menu

Copy Paste	Existing time frames - even over multiple days - can be marked and then copied. To do this, simply mark the desired area and select **Copy**from the context menu. The copied area can then be inserted (pasted) at the current position by using the **Paste** function. Instead of using the context menu to copy and paste, you can also use the standard keyboard shortcuts Ctrl+C and Ctrl+V, respectively.
Copy to all weekdays	The copied area is copied to all weekdays. If the time slots cannot be copied for any particular day (because other time slots already exist, for example), then that day is omitted.
Delete this weekday	All time slots of the marked weekday are deleted.
Clear all	The entire schedule is deleted.
Set resolution	Defines the chronological resolution (units of 1, 15, 30 or 60 minutes).
A-H	Sets a time zone.

See also:

– Section 10.6, “Settings | Incoming calls”, on page 10-125
– Section 10.5.2, “Dial plan”, on page 10-109

10.6 Settings | Incoming calls

Settings | Incoming calls

Settings | Incoming calls can be used to set the parameters for **Call Management (CM)**. Call numbers can be administered in the Call Management. These call numbers can be assigned to extensions or groups. Each extension, independent of the telephone type, receives one station number. The trunk connections can be reserved for analog lines (MSI) or ISDN connections. If S_0 lines are inserted, then one line per B channel is counted in the Call Management, i.e., an S_0 connection has two lines for the Call Management.

Tabs and Dialog boxes
• Call Pickup • Ringing assignment per line • Call forwarding • Groups/hunt groups – Groups/Hunt groups	Station parameters – Groups/Hunt Group	Group Membership – Groups/Hunt groups	External destinations • Team/top – Edit team/top • UCD parameters • UCD groups

See also:
– Section 10.6.2, “Ringing assignment per line”, on page 10-127 – Section 10.8.4, “Intercept / Attendant”, on page 10-203 – HiPath 3000/5000 Feature Description, Call management

10.6.1 Call Pickup

Settings | Incoming calls | Call pickup

Call pickup groups can be created via **Call pickup**. When stations are collected into call pickup groups, a call to any member of the group is signaled to all members. However, the extension that is being called is the only station that will actually ring. The call is signaled to other members initially by a flashing LED next to the pickup key and, on display-model system telephones, by a display message. Then, if the call is not answered after a specified period of time, a tone sounds at all of the member stations. (Provided the tone has not been deactivated via Settings | System Parameters | Flags with the **Warning signal for call pickup groups** option).

10.6.1.1 Call pickup group

They are numbered Group 1, Group 2, Group 3, and so on. You select the group number by clicking on the number you want to use in the **Call Pickup Group** list.

10.6.1.2 Selection and Members table

Selection contains the stations of the communication system.

Members contains the stations of the selected call pickup group. A station can only be a member of one call pickup group.

To assign a station to a call pickup group, select the relevant station in the **Selection** table and add it to the **Member** table with the **->** button. The group membership is then displayed in the **Group** column of the **Selection** table.

To delete a station from a call pickup group, select the relevant station in the **Member** table and delete it with the **<-** button from the **Member** table.

See also:
– Section 10.6, “Settings	Incoming calls”, on page 10-125 – Section 10.6.4, “Groups/hunt groups”, on page 10-134 – Section 10.8.1, “Flags”, on page 10-178 – HiPath 3000/5000 Feature Description, Call pickup

10.6.2 Ringing assignment per line

Settings | Incoming calls | Ringing assignment per line

Ringing assignment per line can be used to determine which stations (or groups) are assigned to each of the communication system trunks. Different call numbers can be assigned for day and for night service. The entries are used to inform the communication system that incoming calls received at the corresponding ports should not be signaled at the station, but according to the Call Destination List (Call forwarding) for that station. For example, if the trunk is the first TMGL4 port, and the Day Call No. is 11, an incoming call to this port would be routed, not to Call Number 11, but to whatever Call Destination List has been assigned to Call No. 11 in the Call Destination List table. By default, this would be Call Distribution List 14.

Analog vs. Digital Trunks field

In general, the call allocation for digital trunks starts at the Call forwarding where a match is found in the DID number, and the call is routed accordingly. However, if there is no DID information on a digital trunk, call allocation begins at the **Ringing assignment per line**. If the call comes through an analog DID, the call allocation always begins at the Call forwarding.

ISDN BRI Environments

In an ISDN BRI environment, routing determined through this table is overridden by the CAID or PDID coding in the BRI table. This means that if the communication system you are programming is exclusively ISDN BRI, this table is irrelevant. The sequence for a BRI connection would be BRI > Allocation of Call References to Hunt Lists > Call destination lists.

10.6.2.1 Selection table

The **Selection** list contains the stations of the communication system. To assign a station to a line, you can drag the relevant station from the **Selection** list into the **Day Call No.** or **Night Call No.** columns. Atlernatively, you can overwrite the values in the respective column. Either way, the communication system will automatically change the name to match the number.

10.6.2.2 Stations/Group table: Assignment to lines

Incoming calls that are pending on an analog or digital trunk connection are first assigned a call number in the **Station /groups: line assignment** table. This call number can be the internal call number of an active/inactive station or a group. The assigned call number is given for both

the day and night service. S_0 lines are evaluated only when no day/night intercept position (see Intercept / Attendant) has been set up. For example, this is the case for communication systems with different ISDN trunk connections/call numbers and different attendant consoles.

To delete an entry from the **Station/groups: line assignment** table, select a station and then drag it to the Recycle Bin.

Access column

This is the name of the card associated with the trunk.

Day Call no. column

During business hours, the communication system refers to the Call Destination List assigned to this station to see which station number to ring.

The entry of the call number for the day or night service is independent of the intercept position and can be seen as a direct dialing of the station with an S_0 connection.

The intercept for day and night service is defined in the **Intercept Position** field via Intercept / Attendant. If this entry is deleted, the intercept position is assigned using the Ringing assignment per line table (day or night).

Name of the day column

This is the name associated with the call number in the **Day Call no.** field.

Night Call no. column

When night answer (assign night answer) is activated, the communication system refers to the Call Destination List assigned to this station to see which station number to ring. For most businesses, night answer is activated during weekends, as well as during non-business hours throughout the week.

Night destinations to be reached via analog trunks are entered here. However, these destinations are only activated if “no destination” is entered for the intercept destination in the schedule under Settings | Classes of service | Autom. night service.

The entry of the call number for the day or night service is independent of the intercept position and can be seen as a direct dialing of the station with an S_0 connection.

The intercept for day and night service is defined in the **Intercept Position** field via Intercept / Attendant. If this entry is deleted, the intercept position is assigned using the Ringing assignment per line table (day or night).

Night Name column

This is the name associated with the call number in the **Night Call no.** field.

Code column (Code)

The access code for this trunk.

See also:

- Section 8.2.6, “Station view: BRI (only in the USA)”, on page 8-26
- Section 10.6, “Settings | Incoming calls”, on page 10-125
- Section 10.6.3, “Call forwarding”, on page 10-130
- Section 10.8.4, “Intercept / Attendant”, on page 10-203

10.6.3 Call forwarding

Settings | Incoming calls | Call forwarding

Call forwarding (RNA) can be used if the station does not respond to a call within a given time (this time can be set). The call is then automatically forwarded to the call forwarding destination that has been entered. Calls can be forwarded to another station or hunt group, for example.

A call destination list may be assigned to multiple stations/groups.

Changes made to the entries in specific call destination list will thus affect all the stations/groups to which it was assigned.

If a Groups/hunt groups (hunt group) is entered as a CFW destination, this hunt group is fully processed (i.e., each member is called consecutively) before the next destination of the CFW is evaluated. A hunt group can therefore be described as a form of call forwarding within a forwarding operation.

If call forwarding has been set up (i.e. if more than one call destination is entered) and the call cannot be forwarded to the next forwarding destination, the call is transferred to the following entry on the destination list. If no additional call can be allocated, the call stays at the last configured entry.

If a call destination list with an external RNA destination is called by an internal station that has no authorization for such a call, this destination is passed over.

If a call reaches the end of the RNA table, the system checks whether the “intercept on no answer” feature should be activated. If no intercept has been configured, the call stays at the last RNA station. The hunt group is an exception. If the last entry is a hunt group, the call is forwarded to hunt group members until it is canceled by the caller or answered by a station in the communication system.

As of HiPath 3000/5000 V5.0, the “Call dest. list” is no longer followed for an H.323 client. In other words, if an H.323 client calls a station where call forwarding has been configured, the call will be signaled only at the dialed station. Call forwarding will not occur. An H.323 client can. however, still have call forwarding.

As of HiPath 3000 V9, H.323 clients are no longer supported.

Example:

- Scenario 1: An H.323 client (station A) calls station B. The first destination in the call dest. list of station B is station C. In this case, the physical station B is called.
- Scenario 2: Station A (system telephone) calls station B (H.323 client). The first destination in the call dest. list of station B is station C. In this case, station C is called.

10.6.3.1 Call destination lists - Definition table

The call destination lists define how incoming calls for the assigned station or assigned group are handled. Different entries are possible for internal and external calls (day or night).

No. column

Number of the Call destination list.

Target 1 > Target 4 column

All four columns of the CFW destinations have the same classes of service. Blank fields are ignored. An asterisk (*) is identical to the entry for the selected call number. The entry # refers to a system search of all stations except for the 'executive'-extension.

The fields of the call forwarding destinations (Target 1 - Target 4) can each contain the entries listed below:

- non entry
- an external destination (see Entering external targets)
- * (asterisk), identical to called station
- **, identical to user defined (call forwarding after time)
- #9, system search run through all stations except for the 'executive'-extension
- targeted call number of a station or a group
- #201 - #260 or #450, call distribution group (UCD group)
- #801 - #816 or #864, Ann. device

Target 1 cannot be changed in Manager C.

Entering external targets

External targets are also entered via the Target 1 - Target 4 columns. If you want to enter an external destination, select the entry **External destination** in the corresponding column. A window in which you can enter the external destination appears. Enter the external destination:

- Either: with a preceding trunk or seizure code (if LCR (Least Cost Routing) is activated)
- Or: with a preceding CO code and specifying a route (if LCR is not activated).

Cycles column

The CFW time is defined in the **Cycles** column. This time is only measured in multiples of 5 seconds; the **Cycles** entry specifies the multiplier. The communication system is preset to 3 ring cycles, i.e., a call is forwarded after 3 x 5 seconds = 15 seconds.

If the destination involved is a UCD, this column is not used. Instead, call forwarding is based on the mechanisms of the primary and secondary call cycles (see UCD groups).

SR (second ringer) Target column

An additional station can be called by means of the **SR Target** entry. This entry supports the “common ringer” function. An actuator (relay) of an actuator/sensor option or an additional station number at which a call is also to be signaled is entered here.

SR (second ringer) Type column

The **SR Type** column defines when ringing assignment takes place. The options are: immediate call connection or connection after CFW timeout.

It is not possible to link the CFW. i.e., if a station is listed in a CFW destination and has a call allocation with CFW of its own, only the originally selected CFW is performed.

CFW column

The **CFW** column can be used to select whether or not call forwarding on busy should be implemented.

It is not possible to link the CFW. This means that if a station listed as a CFW destination has also activated ringing assignment with CFW, only the original forwarding operation is performed.

10.6.3.2 Area: Call dest. list - Station assignment

In this table, call destination lists are assigned for the stations and groups. Here you can select to display either all stations/groups or only the stations/groups which are already assigned in the **Call dest. list - Definition** table of the selected call destination lists.

Three call destination lists can be assigned to each station or station group in the communication system:

- an internal call (also for networked systems)
- an external call during day service
- an external call during night service

It is important not to confuse call destination list numbers with call numbers. The call destination list number is the number of the call destination list assigned to the station. The call number is the station number or group number of the station.

Call No. column

The station number or the group number are entered here.

Name column

This is the name associated with the station or group number. Symbols are used to identify whether an entry as a station or a group:

- – Symbol for Stations
- – Symbol for hunt group

Day column

The call destination list number that is to be used for incoming external calls during business hours. Call destination list 14 is set as the default in the communication system.

Night column

This is the number of the Call destination list that is to be used for incoming external calls when night answer is in effect. Call destination list 15 is set as the default in the communication system.

Internal column

This is the number of the call destination list that is to be used for all internal calls. Call destination list 16 is set as the default in the communication system.

See also:

- – Section 10.6, “Settings | Incoming calls”, on page 10-125
- – Section 10.6.4, “Groups/hunt groups”, on page 10-134

10.6.4 Groups/hunt groups

Settings | Incoming calls | Groups/Hunt groups

Groups/Hunt groups is used to create groups and hunt groups for which multiple stations can be reached under one call number each. This call number can be also a code. Within each communication system, certain call numbers are reserved for groups or hunt groups, and cannot be used for individual stations. The last 60 groups can also be used for UCD applications.

A single station can belong to several groups/hunt groups, but groups cannot be entered as members of other groups (exception: Basic MULAP and Executive MULAP groups can be added as members of hunt groups). External call numbers can be entered, too.

DECT Light

Note that if both system telephones as well as mobile telephones are configured in a group, the mobile phones must be configured first in the case of Dect-Light (e.g., in a HiPath 3300/3500).

Rules/Restrictions for IVM hunt groups

A single IVM hunt group must comply with the following rules:

- The IVM hunt group is the first group (index 1 in the “Group” table; see below).

  Important: With HiPath Xpressions Compact Mobility, the IVM hunt group must have the index 1, i.e., must be the first group in the “Group” table.
  The appropriate number of ports of an IVM board with up to 24 channels is supported only for the first group.

- All members of the IVM hunt group are ports that belong to IVM slots. Not all ports need to be added, but no ports of other boards may be included.
- “Linear” or “Cyclic” must be set for the IVM hunt group.
- Only groups of type MULAP (Basic MULAP or Executive MULAP) can be added to IVM hunt group.
- A MULAP group in which a Mobile Connect user is included should not be added to the IVM hunt group.
- Once the MULAP group has been added to the IVM hunt group, the members of the MULAP group cannot be changed.

After a hunt group has been set up with IVM stations, download to the IVM is started automatically after the CDB has been transferred to the communication system.

10.6.4.1 Group table

Group contains the parameters for the groups/hunt groups.

Index column

Index of the group. The index is also displayed when checking for potential conflicts (**Check** button).

Call No. column

The call number for the respective group can be specified here.

DID column

You can enter a direct inward dialing call number for each call number in the **DID** (Direct Inward Dialing) column. In this case, direct inward dialing means that an external station reaches a hunt group with its call number + the direct inward dialing call number.

Name column

You can define a name for the group in the **Name** column. Groups / hunt groups are frequently named for some aspect that the stations have in common. Examples: “Sales”, “Support”, “Logistics”. When there is a call, the name of the called hunt group appears on the display panel of the telephones.

Type column

Linear	Incoming calls ring first at one station and then another in the sequence in which the members were entered in the group table. Incoming calls always start at the first group station and are passed along to the next station until a free station is found. The time between the calls is the same as the RNA time.
Cyclic	Incoming calls ring first at one station and then another in the sequence in which the members were entered in the group table. In this case, each new call starts at the location where the last call ended.
Group	Incoming calls are signaled at all available stations simultaneously. (An available station is one that is not busy.)

RNA	(Call forwarding) - Incoming calls ring simultaneously at all stations. If a station in the RNA group is busy, the group is marked as busy. The next caller receives a busy signal. Hunt group / group calls are only signaled at free stations. If a station is busy, it is skipped. Call waiting is implemented for all stations in the hunt group/ group only when the entire hunt group / group is busy and call forwarding is not possible.
Basic MULAP	Incoming calls are signaled visually to all stations simultaneously. Signaling occurs on the MULAP key. It is also possible to specify whether each station is to also receive an acoustic signal. If the MULAP is busy, the entire group is identified as busy. The next caller receives a busy signal. If the Basic MULAP group belongs to the team/top, the group is not displayed here anymore. To provide support for MULAP groups in CTI applications, a virtual station is configured for each MULAP group and is then assigned to the corresponding MULAP group. By doing this, “normal” stations are configured as master stations. The virtual station is configured with an audible ringing tone and not as the master station.
Executive MULAP	Same as Basic MULAP. However, acoustic signaling takes place at the executive or secretary telephone, depending on the intercept key. If the Executive MULAP group belongs to the top, the group is not displayed here anymore.
Call waiting	Incoming calls ring simultaneously at all available stations of the group. (any station that is not busy is considered to be available). If a station belonging to the **call waiting** group is busy, the waiting call is nonetheless signaled at that station.
Voicemail	A voicemail group allows a special group of stations to access voicemails. If a call is directed to the call number of a voicemail group, the call (i.e., the voicemail) is forwarded directly to the voicemail box of the group and not to the group members. Once the voicemail has been stored in the voicemail box of the group, it is forwarded to the voicemail boxes of the group members. All group members receive the voicemail simultaneously. If a group member deletes the voicemail in his voicemail box, the voicemail is also deleted in the voicemail boxes of all group members and in the voicemail box of the group. This does not affect the personal voicemails of the individual group members. However, every group member can also be reached under his own call number.

Ring Type column

When using the **Ring type** entry, the call can be acoustically signaled in the group/code number with a double ring (1), a triple ring (2) or with short/long/short (3). The set **Ring type** applies only to external calls.

Changes to the setting have no meaning for analog stations.

Tel. directory column

This option determines whether the call number of the group is recorded in the telephone directory.

Check

Note that this mask also offers a **Check** button so that after you have finished defining your group, you can check to see if there are any conflicts.

External destinations

The Groups/Hunt groups | External destinations dialog box is displayed in order to set up external destinations.

10.6.4.2 Selection and Members table

Selection contains the stations of the communication system.

Members contain the stations of the selected group.

To assign a station to a group/hunt group, select the relevant station in the **Selection** table and add it via the **->** button to the **Member** table. In the **Selection** list box, an asterisk (*) next to the station number indicates a port that did not yet have a station attached when the customer database was downloaded.

To rearrange the stations in the **Members** list, use the up arrow or down arrow buttons (**up** or **down**) that are to the right of the Members list). For MULAPs, the order is only relevant in connection with call pickups. When multiple members of a MULAP also belong to a call pickup group, then the last member of the MULAP is displayed to the members of the call pickup group on calling the MULAP.

To remove a station from a group/hunt group, select the relevant station in the **Member** table and delete it via the **<-** button from the **Member** table. A MULAP must have at least one master or executive. This is why the last master/executive cannot be removed unless it is the last remaining member of the group. Members in this MULAP originating in a team/top cannot be deleted here. They must be deleted from the Team/top.

In MULAPs, master or executive stations are indicated by a + sign. The first member to be added becomes master or executive automatically.

Parameter column

The **Parameters** column shows the parameters for the MULAPs in abbreviated form:

- M : Master
- C : Executive
- R : Acoustic call

- A : Automatic seizure outgoing
- K : No automatic incoming call acceptance
- P: Automatic privacy release

Double-clicking in this column opens the Groups/Hunt groups | Station parameters dialog box, where the parameters can be changed.

Group membership

Group membership causes a jump to the Groups/Hunt Group | Group Membership dialog. This button can only be selected when an entry in the **Selection** or **Member** table is selected.

See also:

- Section 10.6, “Settings | Incoming calls”, on page 10-125
- Section 10.6.5, “Groups/Hunt groups | Station parameters”, on page 10-139
- Section 10.6.6, “Groups/Hunt Group | Group Membership”, on page 10-142
- Section 10.6.7, “Groups/Hunt groups | External destinations”, on page 10-144
- Section 10.6.8, “Team/top”, on page 10-145

10.6.5 Groups/Hunt groups | Station parameters

Settings | Incoming calls | Groups/Hunt groups | Station Parameter

Station parameters is used to administer the parameters of a station for the MULAP (Multiple Line appearance) group selected in Groups/hunt groups.

10.6.5.1 Area: Stations, Previous member, Next member

The station's name and call number, as well as the MULAP name and call number, are displayed here. The **Previous member** and **Next member** buttons can be used to scroll through the members of the relevant MULAP.

10.6.5.2 Area: Station parameters

Master (M)

In the case of 'Call forwarding off', all MULAPs for which the terminal is the master are forwarded with the **Master** option. Callback is activated when the master telephone becomes free; messages are only signaled at the master. In a basic MULAP, at least one station must be defined as a master.

If stations have been defined as masters several times, it may happen that this master flag can no longer be set. The following rule applies: If multiple MULAPs with the same masters exist, the masters of a MULAP must always be the same as, a subset of or a set including subsets of the masters of the other MULAPs.

The Team/topMaster **option cannot be changed for members who have come to this MULAP from a** .

Executive MULAP (C)

In addition to the Master, the **Executive** option also determines acoustic call signaling. If Call forwarding has been activated, the calls come in to the executive or non-executives (secretaries). A conference corner telephone must now be defined as the second executive.

A station can only be defined once as a executive.

Automatic seizure outgoing (A)

This option means that when the receiver is lifted, all calls are automatically dialed via the MULAP. If a station has not been set up for the **Automatic seizure outgoing** option, he/she must press a MULAP key to enable dialing. This is why a station can only set 'Automatic seizure outgoing' for one MULAP. When the option has been set for one MULAP, it is deactivated automatically for all other MULAPs.

The rule that all masters/executives in a MULAP have the same automatic seizure outgoing also applies (this is adjusted automatically).

If MULAPs with the same master exist, only the MULAP with the set including subsets of masters can obtain automatic seizure outgoing. This is why it may not be possible to set this option.

This option is set automatically for the master of a newly-created MULAP.

Acoustic call (R)

The acoustic call can be switched on or off.

No automatic incoming call acceptance (K)

When a MULAP call is signaled acoustically, the call is usually answered when the receiver is lifted. If this option is set, the call must be requested by pressing the MULAP key.

This option is always the same for a station in all MULAPs. The option cannot be set for terminals without a MULAP key (e.g. NOFEs, Cordless, S_0).

Automatic privacy release (P)

If this option is set, a member of a MULAP group can join the call. In other words, a conference is initiated in this case.

Default values: the option is automatically enabled for the USA, but disabled by default for all other countries.

This option only applies to optiPoint 500, optiPoint 600 and OpenScape Personal Edition.

10.6.5.3 Area: Member keys

MULAP key set up

Offers the option to:

- check whether a MULAP key has been created on the device or the console of the device,
- delete or add a MULAP key.

The key is set up automatically when a MULAP is created.

10.6.5.4 Close button

The **Close** button closes the dialog and returns you to the called dialog. It is only on this tab that any changes that were made can be actually applied.

See also:

- Section 10.6.4, “Groups/hunt groups”, on page 10-134
- Section 10.6.6, “Groups/Hunt Group | Group Membership”, on page 10-142
- Section 10.6.8, “Team/top”, on page 10-145

10.6.6 Groups/Hunt Group | Group Membership

Settings | Incoming calls | Groups/Hunt groups | Group membership

The **Group membership** button provides an overview of the groups to which a Groups/hunt groups station belongs.

10.6.6.1 Stations

The name and call number of the selected station are displayed here.

10.6.6.2 Group membership table

This table displays all the groups to which a station belongs. The table can be sorted by **Call no.**, **DID**, **Name** and **Group type**.

A double-click on one of these fields opens the corresponding group.

The **Station parameters** column shows the parameters for the MULAPs in abbreviated form:

- M : Master
- C : Executive
- R : Acoustic call
- A : Automatic seizure outgoing
- K : No automatic incoming call acceptance
- P: Automatic privacy release

Go to

The **Go to** button causes a jump to the Groups/Hunt groups | Station parameters dialog, where the parameters of the selected group can be modified.

10.6.6.3 Close button

The **Close** button closes the dialog and returns you to the Groups/hunt groups tab. It is only on this tab that any changes that were made can be actually applied.

See also:
– Section 10.6.4, “Groups/hunt groups”, on page 10-134 – Section 10.6.5, “Groups/Hunt groups	Station parameters”, on page 10-139

10.6.7 Groups/Hunt groups | External destinations

Settings | Incoming calls | Groups/Hunt groups | External destinations

External destinations is used to enter call numbers in a subsystem and a CO. If group stations are also external stations, this group can be called by a station without CO call privileges. However, the external stations will be excluded.

External destinations can be included in a cyclical or linear hunt group, and entered in a no answer group. UCD groups and MULAPs cannot be used for this purpose.

A route must be entered for each external destination (call number). Otherwise, the applicable hunt group cannot be reached by call forwarding from an internal subscriber.

10.6.7.1 Area: Group

The name and call number of the selected group is displayed.

10.6.7.2 Members table

All internal and external stations in a group are listed.

10.6.7.3 Area: External destinations

The external destination can be entered here, where the call number may contain up to 6 digits for seizing the line and 25 digits for dial information.

10.6.7.4 Close button

The **Close** button closes the dialog and returns you to the Groups/hunt groups tab. It is only on this tab that any changes that were made can be actually applied.

See also:
– Section 10.6.4, “Groups/hunt groups”, on page 10-134

10.6.8 Team/top

Settings | Incoming calls | Team/top

Team/top simplifies the creation of MULAPs. Top groups with up to 3 executives/3 secretaries and symmetrical teams with up to 10 stations can be set up.

- A **Team** is a collection of basic MULAPs. There are as many basic MULAPs as there are different members. Therefore, each member is a master of a basic MULAP.
- A **Top** is a collection of executive MULAPs and basic MULAPs. There are as many executive MULAPs as there are executives. Therefore, each Executive is a master of an Executive MULAP. There are also as many basic MULAPs as there are secretaries. Therefore, each secretary is a master of a Basic MULAP.

A station may only belong to one team/top group. A station that is already a master or executive in a MULAP may not be also included in the team/top group.

A standard team/top group can be created. The basic MULAP group(s) and the direct call keys are configured automatically in this process. The basic MULAP groups receive the station numbers of the masters and the masters receive a pseudo station number (examples: 4711 becomes **4711, 12345 becomes **2345, and 654321 becomes **4321). When an optiPoint 400 or an OpenScape Personal Edition client becomes a member in a team/top, the station number is automatically prefixed with **.

A Team/Top Group created here cannot be processed further via Groups/hunt groups.

10.6.8.1 Team/top group table

Team/top Group contains the parameters for the teams and the tops.

Name column

The Name of the team/top group exclusively serves to identify the group.

Type column

The team or top can be selected here as a type.

10.6.8.2 Area: Key assignment to team/top group

To first/second console button

Add-on devices are added automatically as necessary and the keys are assigned to fixed positions. This means that all keys are always set up and any already-existing keys are overwritten. This makes it possible to always return to a fixed starting position.

For members of a team, MULAP keys and direct dial keys are created for every MULAP in the team, and a group call on/off key is also created.

For members of a Top, MULAP keys and direct call keys are created for every MULAP, and intercept keys are also created for every executive MULAP. A group call on/off key is also created for the secretaries.

Note:

The key assignments on the system telephones are not the same. In order to have the proper assignment, it is necessary to first read the CDB (System -> PC) or to select the correct device type under Key programming. If the terminal is subsequently swapped or modified under “Key programming”, this button can be used to always revert to the correct status.

The use of this button for optiPoint 500 Advance phones up to and including HiPath 3000 V3.0 SMR1 is not recommended. It results in unusable key assignments, which can, however, be corrected manually.

To first free key button

Free keys on the basic device and on the add-on devices are assigned. Add-on devices are added automatically if necessary. Only the newly-added keys are assigned. The same keys are assigned as for **First/second console**.

Note:

The key assignments on the key modules are not the same for system telephones. In order to have the proper assignment, it is necessary to first read the CDB (System -> PC) or to select the correct device type under Key programming. If the terminal is subsequently swapped or modified under “Key programming”, the assignment may need to be to the adapted manually.

The use of this button for optiPoint 500 Advance phones up to and including HiPath 3000 V3.0 SMR1 is not recommended. It results in unusable key assignments, which can, however, be corrected manually.

10.6.8.3 Edit team button

Edit team is used to edit the call numbers, the name of the MULAPs, or the parameters of the individual members in the MULAP. The Edit team/top dialog box is displayed.

10.6.8.4 Selection and Members table

Selection contains the stations of the communication system.

Members contains the stations of the selected Team/Top Group.

To assign a station to a Team/top Group, select the relevant station in the **Selection** table and add it to the **Member** table with the **->** button.

To delete a station from a Team/top group, select the relevant station in the **Member** table and delete it with the **<-** button from the **Member** table.

When the first station for a particular **Type** is added, a MULAP group is created. The MULAP takes over the properties of the station. This is how the call number of the station (internal and DID) becomes the MULAP call number. The name of the station becomes the MULAP name. The internal call number of the station is shortened to four digits, if required, and assigned the prefix ******. Existing references to the stations are also reassigned to the corresponding MULAP group.

The following references are reassigned:
- destinations of call forwarding keys and call forwarding MULAP keys
- destinations of call number keys
- destinations of night service keys
- destinations of send info keys
- call assignment of MSI lines
- call diversion destinations (Call Management)
- intercept position day/night
- destination entrance telephone of door systems
- members of a hunt group

These changes are not canceled if a team or a member of a team is deleted.

Type column

Stations 1 to 10 can be selected for a team. Executive 1 to Executive 3 and Sec. 1 to Sec. 3 can be selected for a top. These types must be regarded as “people”. If a person has several terminals (e.g. system telephone and cordless), these terminals are to be assigned to the same type (or person).

This field cannot be changed unless no stations have yet been added. If the type needs to be modified, the assigned station must be deleted first.

Call no., Name columns

The name and call number of the station.

MULAP call no. column

Corresponding MULAP call no. Every person (or different type) becomes a master or executive in a MULAP. This MULAP is displayed here; however, the station is also a member of all other MULAPs. The MULAP call number cannot be changed here.

See also:

- Section 10.6, “Settings | Incoming calls”, on page 10-125
- Section 10.6.4, “Groups/hunt groups”, on page 10-134
- Section 10.6.9, “Edit team/top”, on page 10-149

- HiPath 3000/5000 Feature Description, Team/Top

10.6.9 Edit team/top

Settings | Incoming calls | Team/top | Edit Team

Edit team/top can be used to edit the parameters of MULAPs of a team/top group.

10.6.9.1 Edit team table

The table also provides an overview of the MULAPs in a team/top group.

MULAP call no. column

The call number of the MULAP. The default call number is that of the first station added.

MULAP DID column

The direct dial number of the MULAP. The default call number is that of the first station added.

MULAP name column

The name of the MULAP. The default name is that of the first station added.

Ring Type column

When using the **Ring type** entry, the call can be acoustically signaled in the MULAP with a double ring (1), a triple ring (2) or with short/long/short (3). The set **Ring type** applies only to external calls.

Changes to the setting have no meaning for analog stations.

Tel. directory column

This option determines whether the call number of the team/top group is recorded in the telephone directory.

Call number of the station column

There are as many columns in the table as there are stations in the MULAP. The station parameters are displayed in abbreviated form:

- M : Master
- C : Executive
- R : Acoustic call
- A : Automatic seizure outgoing
- K : No automatic incoming call acceptance

– P: Automatic privacy release

When you double-click in this column, the Groups/Hunt groups | Station parameters dialog box opens. Parameters may be changed here (with the exception of master and executive parameters).

10.6.9.2 Close button

The **Close** button closes the dialog and returns you to the Team/top tab. It is only on this tab that any changes that were made can be actually applied.

See also:
– Section 10.6.8, “Team/top”, on page 10-145 – Section 10.6.5, “Groups/Hunt groups	Station parameters”, on page 10-139

10.6.10 UCD parameters

Settings | Incoming calls | UCD parameters

Universal call distribution can be set up via **UCD parameters**. To do this, UCD parameters are used to set up UCD groups in such a way that incoming internal or external calls are automatically put through to the group member that has been idle for longest.

General, i.e. group-wide settings are configured in the **UCD parameters** tab. These include, in particular, releasing and blocking UCD, which is not possible at a terminal using system administration. Group-dependent data can be configured in the UCD groups tab.

10.6.10.1 Area: UCD flags

Print UCD data flag

This option can be used to output UCD data via the V.24 interface. The **Print UCD data** function is used for external calls. Internal UCD calls are not logged.

Allow UCD applications flag

With this option it is possible to permit the enabling of UCD applications.

Agents permanent Available flag

With this option, UCD agents who do not accept the call are no longer set to “not available”. These agents are thus called again on the next call.

10.6.10.2 Area: Automatic wrap-up time

Wrap-up time (cycles)

Values from 0 to 9 cycles (5 second periods) can be set for automatic wrap-up after each UCD call.

10.6.10.3 Area: Priorities for internal calls

Priorities, internal

A priority of 1 to 10 is allocated for the classification of internal calls. The communication system then distributes the queued calls to the UCD group depending on the priority and queue time, i.e. a queued call with a high priority may be answered sooner than a call queued for longer with a lower priority.

10.6.10.4 Priorities for external calls table

The system divides incoming calls for this UCD group within the queue according to the type of call into TOC groups (TOC = Type of call). In this regard, a distinction is made between 10 priority levels, i.e. priorities between 1 and 10 can be allocated to the trunk circuits in relation to the trunk (per B-channel).

Slot / line column

The respective slot and line number is displayed here.

Priority column

Allocation of a call priority.

See also:

- Section 10.6, “Settings | Incoming calls”, on page 10-125
- Section 10.6.11, “UCD groups”, on page 10-153
- HiPath 3000/5000 Feature Description, Universal Call Distribution

10.6.11 UCD groups

Settings | Incoming calls | UCD groups

Agents are assigned to workgroups via **UCD group**. Each agent can only be allocated to one group.

The last hunt groups are used in UCD to set up a master call number, a DID number and a group name for the individual UCD groups. Each UCD group is assigned a virtual address number beginning from #201 (to #260 or #450) under Call forwarding. The UCD group 1 (#201) can therefore be called by dialing the default call number for Groups/hunt groups.

When an agent logs on to myAgent, he is automatically logged on to the UCD (Universal Call Distribution) of HiPath 3000. If OpenScape Office crashes, and myAgent with it, UCD deals with incoming calls and therefore ensures the continued functioning of the call center. If myAgent has already crashed when an agent wants to log on, he can log on to the UCD via his telephone.

10.6.11.1 Selection, Members table

Agents can be assigned to the UCD groups with the **Selection** and **Members** lists. In order to do this, drag that respective ID from the **Selection** list into the **Members** list. Each ID can only appear in one group.

10.6.11.2 UCD groups table

The **UCD groups** table enables the group-specific configuration of UCD parameters. The table is divided into the following columns:

UCD group column

The **UCD group** column contains a list of the available groups.

Prim. ring cycles, Sec. ring cycles columns

The primary and secondary ring cycles can be set up for each group. The behavior depends on whether or not further UCD groups have been configured as destinations in the respective call destination list.

Scenario 1: A UCD group is configured only for the first destination
The Universal Call Distribution (UCD) is set up to route a call to an available agent depending on the longest idle phase. If additional agents are available and the call was not accepted, the call is forwarded to the next available agent after the number of cycles (5 second intervals)

specified under **Primary Ring Cycle** has expired. The timer for the second free agent, i.e., the **Secondary ring cycle** is then started. Depending on the configuration, the agents called via the call forwarding to the next agent are set to “not available”.

Scenario 2: One UCD group each has been configured for both the first and second destinations, and free agents are available in both groups
The available agents in the first group are called as described under scenario 1. The call is then forwarded to the next group. Call forwarding within the second group occurs here in accordance with the **Secondary ring cycle** timer.

Scenario 3: One UCD group each has been configured for both the first and second destinations, and no free agent is available in the first group
The call remains in the queue of the first group for the duration of the **Primary ring cycle** and is then forwarded to the second group. The **Secondary ring cycle** timer is started, and a search for available agents in both groups is performed. The first available agent receives the call.

Queued calls column

The maximum number of queued calls can be set in the **Queued calls** column (max. value = 30).

For the last group the maximum number is 72.

AICC column

The **AICC** column (Automatic Incoming UCD Call Connection) is used to activate the automatic setup of UCD calls. An acoustical signal will be transmitted to the UCD agent’s headset and the call is automatically connected.

This feature can be activated if a headset and the Disconnect key are configured for the relevant telephone.

Change announcement column

In this column, it is possible to specify how the recorded announcements are changed. Changes can be made **once** or **cyclically**. The announcement is pleyed back to the caller in the configured order. If the **cyclic** option is selected, the last announcement and the previous one are connected cyclically.

Overflow time column

If the external application (e.g. HPCO) does not accept the waiting call within the time period specified here, the call is taken back by the communication system. The call is then no longer processed in the external application but in the CM of the system.

Valid value range: 0-600s or 0-15240s as of HiPath 3000 V1.2/Hicom150 H V1.2.

Announcement delay column

This timeout parameter is used to configure the delay before a queued call is switched to the recorded announcement device. Each call to a UCD group is assigned an announcement. If no announcement device is configured, the communication systems internal music-on-hold is activated for the calling party. To suppress the announcement, the Ann. delay time should be configured to the maximum value, assuming that the call will be answered within this time.

Valid value range: 0-600s.

10.6.11.3 Group parameters table

Destination index column

Seven Wait dest. (index 1-7) for announcement devices can be configured per group.

The internal MoH (MoH = Music on Hold) cannot be configured as the first UCD announcement (index 1). This setting can result in problems in scenarios involving IP network connections.

Wait destination column

The **Wait dest.** column is used to assign the **Dest. index** to the recorded announcement devices in the communication system. Two types of announcement device can be configured: devices with a fixed beginning and end (announcements) and tape loops (music).

These announcement devices can be configured via **Announcement**.

For consultation calls in a UCD group (e.g., for unscreened transfers), announcement devices are not connected until after the call has been transferred. The transferring station is not given an announcement connection.

Wait time column

This option can only be used for terminals with tape loops.

A queue time can be programmed for each target. After this timeout the next configured announcement is sent to the calling party.

See also:

- Section 10.6, “Settings | Incoming calls”, on page 10-125
- Section 10.6.3, “Call forwarding”, on page 10-130
- Section 10.6.4, “Groups/hunt groups”, on page 10-134
- Section 10.6.10, “UCD parameters”, on page 10-151
- Section 10.9.3, “Announcement”, on page 10-250
- HiPath 3000/5000 Feature Description, Universal Call Distribution

10.7 Settings I Classes of service

Settings I Classes of service

Settings I Classes of service can be used to restrict external calls. The types of calls that can be made from each station are defined for this purpose. Some of the tabs are not directly related to classes of service, but have a similar function, since they can be used to restrict a station's access to other stations and CO lines.

Setting up Classes of Service involves several steps:

Font	Action
1.	Station is used to assign stations for day and for night to the service groups 1 to 15.
2.	Individual COS groups are assigned classes of service from via Day or Night. The classes of service range from highly restricted to totally unrestricted access. Each group and route (trunk group) is allocated its own classes of service for day and night operation.
3.	Create lists of allowed and denied telephone numbers (Allowed/Denied numbers). These lists are referenced by the classes of service "Allowed list 1-6" and "Denied list 1-6".
4.	If toll restriction should not be activated (other than in the basic settings) for individual call numbers, this can be set up in the Dial plan. This also applies to networking.

The above mentioned steps can be completed in any order. You may prefer to compile your lists or define your groups before you assign your stations to groups. These functions are highly interactive. You should have an general plan before you begin.

Tabs and Dialog boxes
• Station • Day or Night • Allowed/Denied numbers • CON matrix • Group assignment • Overview • Autom. night service • Special days • autom. COS changeover

10.7.1 Station

Settings | Classes of service | Stations

Stations is used to restrict access to external call numbers by assigning them to COS groups. This is achieved by assigning the individual stations to a COS group.

10.7.1.1 Assignment of Stations to Classes of Service Groups table

To assign class of service groups, select a class of service group number from the **Day** and **Night** drop-down list boxes. You can select one group for the **Day** and a different group for the **Night**.

The selection that you make in the **Day** column will refer to the **CO Call Privilege Day** table (see Day or Night), where the COS group is linked to the actual classes of service. The selection that you make in the **Night** column will refer to the **CO Call Privilege Night** table (see Day or Night), where the COS group is linked to the actual classes of service.

There are fifteen numbers available for COS groups, but you can have more than fifteen groups because COS Group 1 for Day and COS Group 1 for Night can be defined differently.

If the **autom. COS changeover** feature has been activated, then the table header changes to "Assignment of stations to Profiles/Classes of service groups", and profiles are used instead of class of service groups in the Day **column.**

It is important to remember that the number you assign to the station here is the number for the COS group and not the number for the COS. A class of service can be found under class of service with active codelock.

See also:

– Section 10.7, “Settings | Classes of service”, on page 10-157
– Section 10.7.2, “Day or Night”, on page 10-159
– Section 10.7.6, “Overview”, on page 10-169
– Section 10.7.9, “autom. COS changeover”, on page 10-174

10.7.2 Day or Night

Settings | Classes of service | Day
Settings | Classes of service | Night

You use **Day** or **Night** to continue the process by assigning CO call privileges per route (trunk group) to the individual COS groups.

The stations can be restricted in their access to external call numbers by assigning class of service groups on the Station tab. The individual class of service groups for day and night modes can be assigned appropriate authorizations on the Day or Night tab.

Default settings for the CO call privileges per COS group

- Germany and Greece:

COS group 1:	Internal (for all routes)
COS group 2:	Outward-restricted (for all routes)
COS group 3:	Denied list 1 (for all routes)
COS group 4:	Allowed list 1 (for all routes)
COS group 5:	Denied list 2 (for all routes)
COS group 6:	Denied list 3 (for all routes)
COS group 7-15:	Unrestricted (for all routes)

- Other countries:

COS group 1-15:	Unrestricted (for all routes)

Access for networked systems:

Class of service in the subsystem	**Authorization that accesses the subsystem in the main system for the station**
Internal (0)	internal (0)
Outward-restricted (1)	Outward-restricted (1)
Allowed list (2-7)	Denied list 1 for the main system (8)
Denied list (8-13)	Denied list 1 for the main system (8)
Unrestricted (14)	Unrestricted (14)

The Internal, Outward-restricted or Unrestricted Classes of service are adopted in the main system. If allowance or denial is assigned to a subscriber in the sublevel, the denied list always accesses denied list 1 in the main device during a CO connection.

10.7.2.1 Selection table

All class of service groups of the communication system are displayed in this list. When you select one of the class of service groups, the assigned **CO call privileges Day/Night** as well as the assigned stations (**Members**) are displayed for each route.

10.7.2.2 CO call privileges Day/Night, Route, Class of Service table

The CO call privileges are assigned in this table. A total of 15 Classes of service groups are possible.

Route, Class of service columns

A distinction is made between the following classes of service:

Class of service	Description
Internal (0)	– The station can make internal calls. – Central speed dialing is allowed. – External incoming calls cannot be answered.
Outward-restricted (1)	– The station can make internal calls. – Central speed dialing is allowed. – External incoming calls can be answered.
Allowed list 1-6 (2-7)	– The station can make/answer the types of calls listed for Code 1 (Allowed list 1-6). – Only the numbers entered in Allowed/Denied numbers can be dialed.
Denied list 1-6 (8-13)	– The station can make/answer the types of calls listed for Code 1 (Denied list 1-6). – All call numbers, except the entries in the Denied list, can be dialed.
Unrestricted (14)	– The station has unrestricted access for both incoming and outgoing calls.

All restrictions are effective only for the lines for a route of the type **CO** (see Routing parameters).

The digits entered in this list can be dialed from a station with the authorization level **2**. The suffix dialing of additional digits is not subject to any restrictions.

10.7.2.3 Members table

This list shows the stations assigned to the COS group selected in the **Selection** list (see Station).

See also
– Section 10.4.9, “Routing parameters”, on page 10-83 – Section 10.7, “Settings	Classes of service”, on page 10-157 – Section 10.7.1, “Station”, on page 10-158 – Section 10.7.3, “Allowed/Denied numbers”, on page 10-162 – HiPath 3000/5000 Feature Description, CO Call privileges

10.7.3 Allowed/Denied numbers

Settings | Classes of service | Allowed/Denied numbers

You use **Allowed/Denied Numbers** to build tables with call numbers that users are permitted or not permitted to call. This step is only needed if you assigned the classes of service “Allowed list 1-6” or “Denied list 1-6” to one of your COS groups.

10.7.3.1 Area: Allowed list

The **Allowed list** can be used to create tables with call numbers that can be called by the station.A maximum of six Allowed lists can be created. Your first list can have up to one hundred entries, and the remaining five lists can have a maximum of ten entries.

Numbers can contain up to seven digits, which can include the numbers 0 through 9 and the symbols * and #. The complete telephone number does not need to be listed. For example, to permit users to dial any 800 number, you would need to enter the standard code **1** (for out-of-area) and then **800**.

10.7.3.2 Area: Denied list

In the **Denied list**, you can create tables with call numbers that users are not permitted to call. A maximum of six Denied list can be created. Your first list can have up to fifty entries, while the remaining five lists can have a maximum of ten entries.

A # sign at the start of the Denied list ensures that the system telephone toll restriction is applied, where an analog CO line is to be seized using DTMF signaling, or switched to DTMF during dialing.

Numbers can contain up to seven digits, which can include the numbers 0 through 9 and the symbols * and #. The complete telephone number does not need to be listed. For example, to prohibit users from dialing charge-per-minute 900 numbers, you would need to enter the standard out-of-area prefix **1** followed by **900**.

Since these lists are only for outgoing external calls, it is not necessary to include the trunk seizure with the numbers you enter (see also Settings | Lines/networking).

10.7.3.3 List no.

Switches between the Allowed lists or Denied lists.

10.7.3.4 Input, Change, New, Delete

To **Change** a number:

1. Select the number that you want to change in the Allowed/Denied list. The number is displayed in the **Input** field.
2. Overwrite the number in the **Input** field with the new number.
3. Click the **Change button.**

To create (**New**) a new list or to add a number to an existing list:

1. Select the list number (**List no.**).
2. Enter the new number in the **Input** field.
3. Click the **New** button. The new number will be added to the list.

To **Delete** a number:

1. Select the number that you want to delete in the Allowed/Denied list.
2. Click the **Delete** button. The number will be removed from list.

10.7.3.5 Area: Filter

Exceptions for any **Denied list** can be defined in **Filter**. With this filter, you define which dialed digits are not to be compared with the corresponding Denied Numbers list (the selected digits are hidden before evaluation begins). The character to be hidden is specified in the **Character** field.

It is also possible to configure the position range (1-7) within which the filter should be active. The starting position of the range is selected via the **From digit** drop-down list and the end position via **To digit**.

See also
– Section 10.4, “Settings	Lines/networking”, on page 10-49 – Section 10.7, “Settings	Classes of service”, on page 10-157 – HiPath 3000/5000 Feature Description, CO Call privileges

10.7.4 CON matrix

Settings | Classes of service | CON matrix

The connection matrix supports the ITR (Internal Traffic Restriction) feature via the **CON matrix**. You use the CON matrix to permit or suppress traffic between stations and trunks within the same system. This matrix is configured system-wide.

Through this matrix you can indicate:

- whether or not a station is allowed/denied to call or receive calls from other stations
- whether and how a station is permitted to seize a CO trunk, i.e., incoming only, outgoing only, or for both

ITR Example

To restrict a group of station numbers from making calls on long distance trunk lines, the stations and trunks could be assigned as shown below:

- Group 1: Stations with access to local and long distance trunks.
- Group 2: Stations with access to long distance trunks only.
- Group 3: Local lines.
- Group 4: Long distance lines.

The connection matrix would contain:

- A double arrow between members of the same group to insure that the stations within each group can call one another, and that a conference with two trunks can be established.
- A double arrow between Group 1 and Group 2, so that the stations in Group 1 can call the stations in Group 2 and vise versa.
- A double arrow between Group 1 and Group 3, so that stations with local and long distance trunk access can make and receive calls through the local lines.
- A double arrow between Group 1 to Group 4, so that stations with local and long distance trunk access can make and receive calls through the long distance lines.
- A double arrow between Group 2 to Group 3, so that stations with only local trunk access can make and receive calls through the local lines.
- An arrow pointing from Group 4 towards Group 2, so that stations with local trunk access can receive but not make calls through the long distance lines.
- A double arrow between Group 3 to Group 4, so that a conference call between a local and a long distance trunk can be established.

10.7.4.1 Area: Connection matrix

To use the connection matrix, you must first assign each station to a group via Group assignment. By default all stations and all trunks are in Group 1. Since Group 1 is coded with unlimited access, by default, every station has access to every other station and to all trunks.

Note that the matrix shows one list of groups vertically across the top and another list of groups horizontally down the left-hand side. At each conjunction there is a box. The type of arrow in this box indicates the relationship of the two groups to one another.

Double arrow	To create a double arrow, click once on an empty field. See ITR Example for meaning.
Up arrow	To create an up arrow, click twice on an empty field. See ITR Example for meaning.
Left arrow	To create a left arrow, click three times on an empty field. See ITR Example for meaning.
(empty field)	To return to an empty field, click four times on an empty field. See ITR Example for meaning.

In a field that points to the same group in both directions, the only options are the double arrow and the empty field.

An empty field means that no connection is possible. A connection matrix with no arrows results in a totally disabled communication system.

10.7.4.2 Area: Reset

Block All button

This button is used to delete all entered connection arrows.

Click this button if you want to block all calls so that no stations can call any other stations.

Release All button

This button is used to enter connection arrows to all fields.

Click this button if you want all stations to be able to connect to all other stations and to use all trunks.

Group-Internal Only button

Click this button if you want each group to be able to connect only with members of that group.

See also

- Section 10.7, “Settings | Classes of service”, on page 10-157
- Section 10.7.5, “Group assignment”, on page 10-167
- HiPath 3000/5000 Feature Description, Traffic restriction groups

10.7.5 Group assignment

Settings | Classes of service | Group assignment

Group assignment supports the ITR (Internal Traffic Restriction) feature, which allows you to determine which communication system stations can connect to which other communication system stations. You can also determine which trunks each station can access for both incoming and outgoing calls. To use this feature, the appropriate codes must be entered here and also in the CON matrix mask.

This function (which is also known as the **Tenant Service**) is implemented in two steps:

Step #1: Forming Groups

Group assignment is used to assign an ITR connection group to the individual stations and trunks in the communication system. Later, when you code the Connection Matrix (Con matrix) you can refer to these groups to determine which stations can connect to which other stations and which stations can access which trunks.

You can create a maximum of 16 groups for stations and trunks together. With these groups, if you assign a trunk and a station to Group 6, they will be in the same group.

The default is Group 1 for both stations and trunks. The default connection for Group 1 is unlimited access, which means that all stations can connect to all other stations, and all stations have unlimited access to all trunks for both incoming and outgoing calls.

Step #2: Creating the Matrix

CON matrix is used to create a connection matrix.

10.7.5.1 Stations, Trunks tables

Stations and trunks can be divided into up to 6 16 traffic restriction groups (ITR groups).

10.7.5.2 SDS groups table

Every ITR group is assigned a range of speed dialing system numbers. If a user selects a speed dialing system number, the system determines whether or not this user is authorized to select that speed dialing system number by determining the associated ITR group. The number is dialed if this speed dialing system number belongs to the range of speed dialing system numbers assigned to the relevant ITR group. An error message is issued if the speed dialing system number does not belong to the assigned group.

Speed dialing system number ranges can overlap in the ITR groups. Individual speed dialing system numbers may not be entered in the ITR groups and multiple speed dialing system number groups may not be entered in an ITR group.

Permitted are:

SDS groups	SDS range
ITR 1	0-99
ITR 2	50-150
ITR 3	200-500

Not permitted are:

SDS groups	SDS range
ITR 1	0, 5, 10
ITR 2	50-100, 300-500

See also:

- Section 10.7, “Settings | Classes of service”, on page 10-157
- Section 10.7.4, “CON matrix”, on page 10-164

10.7.6 Overview

Settings | Classes of service | Overview

Overview can be used to set up service groups and classes of service (e.g., night service).

10.7.6.1 Authorized station for night service table

When the communication system is switched to night service, all stations use the **for night service** table. In addition, all incoming calls are switched to **Night** in the Assignment table. If you want particular stations to have the ability to switch the communication system to night mode, you must enter these stations to the list of stations in the **Authorized Station for Night Service** list.

The maximum number of stations that can be authorized for night service is five.

10.7.6.2 Mobility supervisor table

For authorized stations, the station flags **Associated dialing/services** (see Station view: Flags) and **Relocate** (see Flags) must be activated.

Only system clients are authorized.

10.7.6.3 Stations, Change, New, Delete

To **Change** a number:

1. Select the number that you want to change in the list. The number is displayed in the **Stations** drop-down list.
2. Select the new station from the **Stations** drop-down list.
3. Click the **Change** button.

To create (**New**) a new list or to add a number to an existing list:

1. Select the new station from the **Stations** drop-down list.
2. Click the **New** button. The new number will be added to the list.

To **Delete** a number:

1. Select the number that you want to delete in the list.
2. Click the **Delete** button. The number will be removed from list.

10.7.6.4 Area: Switched trunk authorization

In this field, you must configure a station with unrestricted trunk access, otherwise **Deflect Call** to an external destination will not be possible.

10.7.6.5 Area: Class of service with active codelock

The **Class of service** drop-down list box is used to define which COS is to apply to stations that have been blocked. This COS will usually be a very restricted level, thus preventing unauthorized calls from being made in the absence of the station's authorized user.

One of the 15 system-wide CO call privileges (see Day or Night) can be configured here. These are valid when a station has an activated codelock. The class of service sequence corresponds to that of the drop-down list.

The COS can only be reduced when the codelock is active.

See also

– Section 10.7, “Settings | Classes of service”, on page 10-157
– Section 10.7.1, “Station”, on page 10-158
– Section 10.7.2, “Day or Night”, on page 10-159

10.7.7 Autom. night service

Settings | Classes of service | Autom. night service

The **Autom. night service** is used to define the appropriate CO call privileges per route (trunk) via the individual class of service groups for the switchover between the day and night service.

The manual night service overrides the automatic night service,

which is configured via the schedule. The schedule covers the entire week (Monday through Sunday) as well as special days. Special days are public holidays or special days such as company holidays of the customer (see Section 10.7.8, “Special days”, on page 10-173). Each day of the week can be assigned one of the 8 possible and specifiable daily profiles (Monday = 1, Sunday = 7, Special day = 8). These daily profiles can, in turn, be split into at least 4 time intervals for the switchover between the day and night services. Every daily profile includes the start and end times and the call numbers for the night stations.

The schedule for a day can be split into 4 time intervals.

These intervals can be defined sequentially and without gaps, i.e., the end time of the first interval may be identical to the start time of the second interval, for example.

However, an interval cannot have the same start and end times. The minimum length of an interval is 15 minutes.

If the last interval for a day ends at 24.00 hours (12 p.m.), the end time must be entered as 23:59 (11:59). If the first interval for a day begins at 0.00 hours, then the start time must be entered as 0:00.

Editing the schedule

You can select any field in the schedule by clicking in it with the left mouse button. When you then click on the **Night** button to the right of the schedule, you can assign the appropriate night call number for that field.

You can the double-click on the desired field to open the **Night service** dialog, in which you can select the night call number and change the start and end times on a minute basis.

A left mouse click in a column header of the schedule, e.g., the column title Saturday, selects the entire Saturday column. When you then click on the **Night** button to the right of the schedule, you can assign the appropriate night call number for that column.

If **none** is entered for the night call number, night service per line is activated in the system. The destinations for this are entered under Settings | Incoming calls | Ringing assignment per line as usual.

The timers entered via the automatic night service apply for all trunks.

Clicking the **Day** button on the right of the schedule switches off the automatic night mode for the selection.

10.7.7.1 Context menu

The context menu is activated by using the right mouse button.

Copy Paste	Existing time frames - even over multiple days - can be marked and then copied. To do this, simply mark the desired area and select **Copy** from the context menu. The copied area can then be inserted (pasted) at the current position by using the **Paste** function. Instead of the context menu, you can also use the standard keyboard short-cuts of Ctrl+C and Ctrl+V to copy and paste, respectively.
Delete	The marked areas are deleted.
Delete this weekday	All time frames of the marked weekday are deleted.
Set resolution	Defining the time resolution (1, 15, 30 or 60 minutes).
Day	Cancels the automatic night service for the selection
Night	Assigns the automatic night service to the selection

See also

- Section 10.7.8, “Special days”, on page 10-173
- Section 10.7.9, “autom. COS changeover”, on page 10-174
- HiPath 3000/5000 V6.0 Feature Description, CO Call privileges

10.7.8 Special days

Settings | Classes of service | Special days

The **Special days** option can be used to define certain days such as public and company holidays as "special", i.e., days which need to be handled differently. Up to 50 special days can be defined. All special days have the same fixed assigned profile.

The calendar of the current month is displayed. The current date is circled in red. If you want to define December 25 as the special day of Christmas, for example, you would proceed as follows:

1. First mark the first free entry in the table under the Day **column.**
2. Then scroll through the calendar until the month of December is displayed.
3. Click on the 25th. This adds the entry into the table.
4. Enter the term Christmas under the Name **column of the table.**

The special days defined here will be taken into account for both the **autom. night service** and for the **autom. COS changeover**.

See also
– Section 10.7.7, “Autom. night service”, on page 10-171 – Section 10.7.9, “autom. COS changeover”, on page 10-174 – HiPath 3000/5000 Feature Description, CO Call privileges

10.7.9 autom. COS changeover

Settings | Classes of service | autom. COS changeover

The **autom. COS Changeover** feature is used to switch classes of service during the day. This is achieved by assigning specific profiles such as Management, Purchase, Warehouse, etc., to stations. For each profile, you can configure a separate schedule in which you define what class of service belongs to a specific segment of the day.

The assignment of a profile to a station is described in Section 10.7.1, “Station”, on page 10-158. The assignment of a class of service to a COS group is described in Section 10.7.2, “Day or Night”, on page 10-159.

10.7.9.1 All database equal button

This button is used to transfer the schedule for all profiles to all other open CDBs.

10.7.9.2 Automatic COS Changeover flag

If the **autom. COS Changeover** flag is not set (the default), the assignment of the class of service groups to the stations is not changed. A station can have different class of service groups for the day and night.

If the **Autom. COS Changeover** flag is set, a profile is assigned to a station instead of a COS group. Every profile has a different schedule in which the class of service groups are defined for specific time periods. The schedule can only be edited if the flag is activated.
Please note, however, that the station is still assigned a COS group for the night. The automatic COS changeover has no effect here.

The automatic night service feature overrides the automatic COS changeover feature. The schedule for the automatic COS changeover is only relevant during the day.

Note that a manual activation of the code lock disables the automatic COS changeover for the corresponding station.

10.7.9.3 Area: Select profile

You can select one of the 15 possible profiles here. The corresponding entries in the schedule for that profile will then apply.

10.7.9.4 Area: Edit profile name

The selected profile can be assigned an appropriate name here such as Management, Purchase or Warehouse, for example.

10.7.9.5 Schedule

Different class of service groups can be assigned to a profile for specific time periods in the schedule. The schedule covers the entire week (Monday through Sunday) as well as special days. Special days are public holidays or special days such as company holidays of the customer (see Section 10.7.8, “Special days”, on page 10-173).

The schedule for a day can be split into 4 time intervals.

These intervals can be defined sequentially and without gaps, i.e., the end time of the first interval may be identical to the start time of the second interval, for example.

However, an interval cannot have the same start and end times. The minimum length of an interval is one minute.

Only one time zone is supported by the system. Remote user groups who are working in different time zones are automatically switched over to the system time.

Editing the schedule with the left mouse button:

You can select any field in the schedule by clicking in it with the left mouse button. When you then click on one of the **Board1** to **Board15** buttons to the right of the schedule, the appropriate class of service group is assigned to this field.

10.7.9.6 Context menu

The context menu is activated via the right mouse button:

Copy Paste	Existing time frames - even over multiple days - can be marked and then copied. To do this, simply mark the desired area and select **Copy** from the context menu. The copied area can then be inserted (pasted) at the current position by using the **Paste** function. Instead of the context menu, you can also use the standard keyboard shortcuts of Ctrl+C and Ctrl+V to copy and paste, respectively.
Delete	The marked areas are deleted.
Set resolution	Defining the time resolution (1, 15, 30 or 60 minutes). If the selected resolution is too low, the entry will not be visible and will be shown with an "*" prepended to the COS group (e.g., "*Board4"). You can display the complete contents by double-clicking on the field.
Properties	This function can only be called when exactly one field has been selected. The **Properties** dialog box opens: – COS group: selection from class of service groups 1 through 15 – Start: The start time can be changed on a minute basis. – End: The end time can be changed on a minute basis. If multiple fields were selected, the Properties function will be disabled. Double-clicking on a field has the same effect as calling the Properties function via the context menu.

See also

– Section 10.7.1, “Station”, on page 10-158
– Section 10.7.2, “Day or Night”, on page 10-159
– Section 10.7.7, “Autom. night service”, on page 10-171
– Section 10.7.8, “Special days”, on page 10-173

10.8 Settings | System Parameters

Settings | System Parameters

All system-wide parameters are configured via **Settings | System Parameters**.

Tabs and Dialog boxes
• Flags • LDAP • System settings • Intercept / Attendant • Display • Flexible menus • Speed dialing system • Service codes • Texts • Time parameters • Tones and ring types • Daylight saving time/DISA • Plus Products Flags/MW

10.8.1 Flags

Settings | System Parameters | Flags

Flags contain system flags, which you can use to activate system functions.

10.8.1.1 Area: Switch

System flags are also called **switches** (turning functions on/off). With flags, there are only two possible choices; no fine-tuning is possible. The individual flags are described below:

Through Connection for External FWD On

When this flag is set, the B channel is put through immediately for a FWD external call, regardless of whether a call from an MSI or ISDN central office is involved. The important thing here is that the consequences of the FWD occur via an ISDN trunk and that the destination station (FWD external destination) is located in another network (e.g., GSM network, satellite connection). This connection setup is reported by the CO with a PROGRESS indicator (Leaving ISDN). The connection setup (to the calling station) occurs immediately with a CONNECT status and thus results in the accumulation of charges for the A-Stn.

Call Forwarding to Main Station Interface Permitted

This flag determines whether an incoming external call can be diverted to a Main Station Interface (MSI).

Hunting To External Call Forwarding Destination

If a station within a call destination list has activated an external FWD, then the call forwarding is interrupted or not, depending on this flag. If the flag is not set, the call forwarding ends at the external FWD destination. If the flag is set, call forwarding also follows the external FWD to the next station listed in the call destination list.

The flag works for FWD on MSI lines only when 1 ring cycle is entered for forwarding.

Conference Tone

When this flag is on, it causes a special tone to sound at about 20 second intervals throughout the duration of a conference call to remind users that they are participating in a conference. The regular warning tone for conferences can be activated and deactivated here; however, the alert tone at the beginning of the conference cannot be turned off.

Warning Signal for Call Pickup Groups

When this flag is on, it causes a special tone to sound when someone is ringing a member of your call pickup group. This allows you to pick up the call rather than let it go unanswered. If this flag is deactivated, only a display message is shown. On non-display telephones there is no indication that a phone is ringing within the call pickup group.

Increase volume for system telephones

If this flag is activated, the system telephones are switched to the alternative, louder attenuation plan. (This feature is not available on all system telephones; availability depends on the manufacturing date of the telephone)

Room monitor

When this flag is turned on, the system allows the use of the Room Monitor feature system wide. If this feature is allowed, a station with a system telephone can dial the access code for Room Monitoring (default setting *88) and then establish a connection to a station without that phone ringing.

Important:: If a system telephone is being monitored by an application such as myAgent or myPortal, for example (i.e., CSTA monitoring is active), the room monitoring cannot be activated for that system telephone.

All telephones, including several simultaneously, can be used for room monitoring (microphone). Listening in to a room can only take place from internal telephones. If a consultation call is added to a room monitor from an external call on a line with backwards release criteria from an internal station, the external call can be handed over to the room monitor by a release or by a menu option.

Terminal Exchange Allowed

This flag is used to physically switch terminals without changing the logical configuration (call number, name, key assignment, activated features, etc.).

Conference with external destinations

When this flag is on, the system allows/denies five-party conferences with four external stations.

Trunk reservation, automatic

When this flag is activated, if a station is not assigned a free trunk after the usual trunk seizure procedures (random or specific), the B tone is signaled at the station.

After a defined period of time see(Time parameters), a positive acknowledgment tone is applied and the trunk is reserved, provided the station has the appropriate CO call privilege.

> ⚠ Trunk reservation is not possible in hands-free mode. In this case, the communication system interrupts call setup when it recognizes that the line is seized. A second reservation overwrites the first.
>
> Trunks cannot be reserved when LCR is active.

Automatic Customer Database Printout After Remote Administration

If this flag is activated, the customer database is automatically printed out on completion of remote administration.

No. redial with a/c code

If this **flag is set**, besides the dialed call numbers, the account codes are also stored in the redial memory of HiPath 3000. If a call number that was dialed together with an account code is dialed again with the redial function, the communication system recognizes the account code and the call number from the dialed digits.

> ⓘ ***Important:*** This behavior is not supported for DECT handsets, because the redial memory of the handset is used instead of the redial memory of HiPath 3000 for the redial function, and HiPath 3000 cannot recognize the account code from the dialed digits.

If this **flag is not set**, only the dialed call numbers are stored in the redial memory of HiPath 3000. If a call number is dialed again via the redial function, the communication system requests an account code, if it was set for the affected route.

Automatic BRI Configuration (USA only)

If this flag is set, CACH numbers are set automatically. Manual setup of these numbers is then no longer needed. This flag is automatically reset after the **Automatic** BRI configuration is made.

Simplified Dialing

Important: If “Simplified dialing” (Prime Line) to the central office is activated, then LCR (Least Cost Routing) is not available. These features are not mutually compatible.

If the flag is activated, the trunk to the CO is automatically seized when the first digit of a call number is selected and the call number entered is dialed. Dialing an access code (CO code, seizure code) is not required. In order to call an internal station on the other hand, the following must be performed:

- Either: Press the “Internal” key and then dial the call number of the internal station.
- Or: Press the corresponding DSS key.

The “Simplified dialing” feature is only possible if only one route (see Routes) is configured.

Use only default number for MSN

If this field is activated, no more call numbers are installed which are based on **Calling party numbers** of an ISDN device. Only the originally installed call numbers by the service technician can be used. This might be necessary for security reasons and for exact call charging (for hotel solutions, for example).

Path Optimization

Two lines are tied up when A telephones B, and B forwards the call to C if the CorNet Path optimization feature is not activated. When this feature is activated, the communication system automatically switches the call to one line from A to C. The feature must be released in both communication systems in the network.

DTMF Automatic

If this flag is turned on, it causes DTMF mode to be activated each time an outgoing call is set up. This is useful, for example, for remote retrieval of answering machine messages. In order to activate the features during a call, the user must always use the **S**key (Service).

This feature can only be used if the **Speed extending** flag is deactivated at the intercept position (see Intercept / Attendant).

Broadcast with connection

A system flag is provided for controlling which announcement variant is used.

The new feature 'Broadcast with connection' should make it possible to set up a 2-way connection from an existing announcement. This occurs when one of the addressed subscribers answers the call by lifting the handset. If the feature is not enabled, the announcement works as in the previous version of the communication system, i.e., if subscribers lift the handset, they stop the ongoing announcement at their station.

Tone from CO

If this flag is set, the connection to the CO/remote system is switched through even if no PI is sent by the CO. The assumption is made that the remote system generates the ringing tone.

Ringback protection

The system default can be set for ringback protection in the case of MFC-R2/SMFC DID with this flag.

Euro impedance

In Europe, when this flag is activated Euro impedance is set as follows:

	SLA	TLA
Input impedance	270 Ohm + 750 Ohm || 150 nF	270 Ohm + 750 Ohm || 150 nF
Second ringer impedance	270 Ohm + 750 Ohm || 150 nF	270 Ohm + 750 Ohm || 150 nF
Rel. level A/D	0 dBr	-6 dBr
Rel. level D/A	-7 dBr	-1 dBr

Different PhoneMail messages Day/Night

This flag can be used with Phonemail systems to activate different Phonemail announcements for a subscriber by sending different call numbers for that subscriber to the Phonemail system.

In the default setting (flag is not set), the call number of the dialed station is always sent to the Phonemail system. If the flag is set, the call number of the first station entered in the CFW (Call Forwarding) table is always sent to the Phonemail system if this number is a station number or group number. Virtual port numbers can also be used.

In addition, different RNA tables for Day/Night must be set up for a station.

Example 1:
Extension 110 is called
Day service call dest. list 1 and Night service call dest. list e
350 is the hunt group for Phonemail

No.	Dest 1	Dest 2	Dest 3	Dest 4	Cycles	SR Type	RNA
1	*	350			3	immediate	
2	120	350			3	immediate	

When the flag is set, the call numbers 110 and 120 are sent to the Phonemail system for Day and Night service, respectively.

Example 2:
Extension 110 is called
Day service call dest. list 1 and Night service call dest. list e
350 is the hunt group for Phonemail

No.	Dest 1	Dest 2	Dest 3	Dest 4	Cycles	SR Type	RNA
1		351	350		3	immediate	
2		351	350		3	immediate	

Regardless of whether or not the flag is set, the call number 110 is sent to the Phonemail system during Day and Night service.

Display international / national code number

This flag is used to specify the display format for incoming calls that are saved in the SDS memory without a name. In the case of outgoing calls, the call number is always shown on the display as entered.

If this flag is not set, only the PABX number including the caller DID is displayed.

If this flag is set, the complete call number including the local area code is displayed.

Example 1:

An SDS with the call number: 06671234 is configured without a name.
02302 = prefix, 667 = PABX number, 1234 = extension

Behavior if the flag is not activated: SDS not shown. In the display: 06671234 is displayed. Incoming call from 6671234. In the display: 6671234 is displayed.

Behavior if the flag is activated: SDS not shown. In the display: 06671234 is displayed. Incoming call from 6671234. In the display: 023026671234 is displayed.

Example 2:

An SDS with the call number: 0023026671234 is configured without a name.
02302 = prefix, 667 = PABX number, 1234 = extension

Behavior if the flag is not activated: SDS not shown. In the display: 0023026671234 is displayed. Incoming call from 6671234. In the display: 6671234 is displayed.

Behavior if the flag is activated: SDS not shown. In the display: 0023026671234 is displayed. Incoming call from 6671234. In the display: 023026671234 is displayed.

Line change for direct call

This flag is set for the USA by default, and is not set for all other countries.

If the flag is not set, consultation hold is initiated instead of line change. In the case of a line change, the call takes place and can only be canceled at this terminal.

If the direct call is terminated by both subscribers, the MULAP line held switches to hold on both sides.

Automatic redial

This system-wide flag defines whether or not automatic redial should be activated when a station is busy. The timeout period after which automatic redial should be activated can be set with **Timer for automatic redial** under Time parameters.

Open numbering

If open numbering a station is identified by the node number, followed by the call number or the DID number. This makes it possible to assign the same call number to stations in different nodes. In a networked system, this flag is always set identically for all systems.

Node call number for Voice Mail

This flag is set individually for each node and refers to only the Voice Mail server connected to that node.

This flag is only available for voice mail servers connected directly to the system port (see Settings | Set up station | Stations | Type: Voice Mail (5-digit call. no) or Voice Mail (6-digit call no.).

For central Voice Mail servers, the system flag must only be set for the node at which the Voice Mail server is connected. It causes the node call number to also be transmitted to the Voice Mail server. (The flag has no meaning for nodes at which no Voice Mail server is connected). Central Voice Mail servers must always be configured together with the node call number.

For decentralized Voice Mail servers, this flag can be used to control whether or not the node call number is also to be supplied with the identification. When configuring the server, the node call number must be taken into account in accordance with the setting.

In the case of CorNet-N networking and the external application (HPCO=HiPath Procenter Office), the application is handled in the same way as a connection to another node. In this case, all internal numbers are extended by the local node number.

Node number

If open numbering is set, the call number of the node must be entered here. A station can be reached from other nodes only by dialing this node call number, followed by the station number.

If the total number of digits of the node call number and the station number exceeds 7, a corresponding warning is issued.

Note that when an open numbering scheme is used in a networked system, the system number - incoming of the last route 16 (HXG route) must match the node number.

Call pickup after automatic recall

By setting this flag, automatic recalls that are signaled at the originating station can also be answered by other stations via call pickup.

Configurable CLIP

If this flag is set, the CLIP number is included as the “originating address” (Calling Partner Number). If no CLIP number was configured for the station, the included Calling Partner Number is supplied (as before; see also Subscriber).

If the CLIP number is more than 10 characters long, only the last 10 characters will be shown on the analog terminal display.

Configurable CLIP and LIN (Location Identification Number; only in the USA) are mutually exclusive. By default, LIN is activated for the USA, and CLIP for all other countries. If Configurable CLIP is activated for the USA, LIN is automatically disabled.

Caller list at destination in case of Forward Line

Normally, a caller list entry is displayed at the desired station. Setting Configurable CLIP causes the caller list to be displayed at the destination when forwarding occurs.

Direct Media Connection (DMC)

This flag is used to enable and disable support for the “DMC Interworking with HiPath 4000 Systems” (abbrev. DMC) feature. When networked with HiPath 4000, DMC enables better voice quality between IP components (terminal devices, gateways).

From HiPath 3000 V8 and HiPath 4000 V5 only the SIP-Q V2 protocol is used and for TDM networking the CorNet-NQ protocol is used for the IP networking of both these systems. The CorNet-IP protocol is no longer supported.

DMC should be disabled in a homogeneous HiPath 3000/5000 network. If a network includes any HiPath 4000 systems (Version 2.0 or later) in which DMC has been configured, then DMC should also be enabled in the HiPath 3000/5000 systems.

The HFA terminal devices registered on the HiPath 3000, HiPath 5000 and the HiPath 3000 system itself will then be able to accept DMC connections set up by the HiPath 4000 and its HFA terminals. HiPath 3000/5000 systems do not intercommunicate using DMC when activated.

Note that enabling DMC results in a reduction of DSP channel resources. This means that only about 80% of the channels will be available for connections per DSP in a HiPath 3000 system (for example, 6 channels instead of 8, 12 channels instead of 16, 48 channels instead of 60).

Call forwarding after Deflect call / Single step APS transfer

This flag only makes sense if the flag **Determine dest. via call dest. list with Deflect call / Single step APS transfer** has also been activated.

If the flag **Call forwarding after Deflect call / Single step transfer** is activated, and if a Deflect call is performed for a Station (A) to a Station (B), which in turn has a Station (C) entered as its first destination and a Station (D) as the second destination, then the call will be signaled at Station (C) and then at Station (D) after the call forwarding interval has expired.. If the flag is not activated, no call forwarding to Station (D) occurs.

Example
Station 101 refers to call destination list 1. In Call dest. list 1, Station 102 is entered as the first destination, and Station 103 is entered as the second destination. Station 100 calls station 110. The call for station 110 is deflected to station 101.
If the flag is not activated (the default), Station 102 will be called, and no call forwarding to Station 103 will occur.
If the flag is activated, Station 102 will be called, and call forwarding to Station 103 will occur.

Determine Dest. via Call dest. list with Deflect call / Single step APS transfer

If a Deflect call is performed for a Station (A) to a Station (B), which in turn has a Station (C) entered as its first destination in its call destination list, then the call will be signaled at Station (B) when the flag is not activated.

If a call for station A is deflected to station B and station C is listed as the first entry in station B's call destination list, the call is signaled at station C if the flag is activated.

Example:
Station 101 refers to call destination list 1. In call destination list 1, station 102 is entered as the first destination. Station 100 calls station 110. The call for station 110 is deflected to station 101.
If the flag is not active (default setting), the call is signaled at station 101.
If the flag is active, the call is signaled at station 102.

Warning tone during voice recording

If voice recording (Live Call Record) is activated during a call, a corresponding advisory tone is output if the flag is set.

Enhanced key functionality

This flag is not configured by default.

The programmable function keys on certain telephones and key modules on the optiPoint 410-, optiPoint 420-, optiPoint 500- and the OpenStage- family can be programmed with a second feature (see Service Manual). Please note that the following differences in functionality depend on the HiPath 3000 version:

- Up to and including V6.0 SMR-05:

  A second function can be programmed if only numbers with no LED support are saved on the first level. The second level can be programmed only with numbers with no LED support. These can be internal or external numbers or numbers from a HiPath network.

- As of V6.0 SMR-06:

  Using HiPath 3000 Manager E (Settings menu: System Parameters (Flags)), one of the two following options can be set:

  – - Flag “Enhanced key functionality” is not set (default setting).
  This produces the same behavior up to and including V6.0 SMR-05.

  – - Flag “Enhanced key functionality” is set.
  As soon as a key is defined as the shift key, only numbers with no LED support can be saved on the second key level. Any key function can be programmed on the first key level. LED signaling applies exclusively to the first key level.

  > ***Important:*** LED signaling applies exclusively to the first key level. In other words: The same key may be assigned a call number X on the first key level and a call number Y on the second key level. If the user switches to the second key level, the LED signaling will now still apply to call number X and not to call number Y.

When this flag is activated, pressing *91 during key programming on the telephone adds the entry “+=next level” to the next menu. This allows you to configure level 2 directly at the telephone.

You may only program general call keys on level 2.

HiPath 4000 Network: Early DMC

This flag can only be activated/deactivated if HiPath 4000 systems are networked. This flag is used to enable or disable support for the “Early DMC” feature. If the flag is not active, Early DMC (Direct Media Connection) is automatically run when the corresponding SETUP is received from the HiPath 4000 system and DMC is activated in the system. This only works when the CO is in the HiPath 4000 system.

The flag must be active if you want to perform Early DMC in the HiPath 4000 direction. This only works when the CO is in the HiPath 3000 system.

The “A” call number in AUN groups / group ringing / forwarding destination / CFW destination

This flag affects the features call pickup group, group ringing and call forwarding. The following is displayed on the terminal screen of the called station for these features:

- When the flag is activated: In the first display line: “For:_*<name or number>*“ or “Call for:_*<name or number>*“, in the second display line: “From:_*<name or number>*“.
- When the flag is deactivated: In the first display line: “For:_*<name or number>*“ or “Call for:_*<name or number>*“, in the second display line: Empty.

E.164 numbering

This flag is used to activate or deactivate CDB networking of cross-location or worldwide customer systems. Stations can be reached via a public number (the E.164 call number) in national or international format (for example, internal calling party number in ISDN format), without dialing a node number first. Each station is represented by its E.164 call number, which can be displayed in an optimized format. If the flag is activated, the internal call number is transferred in E.164 format.

SIP stations are configured with their “short” extension number (like HFA stations) but represented with the E.164 call number which is generated by the communication system.

If an Internet Telephony Service Provider is used and the Internet Telephony Service Provider call numbers are available on a E.164 network, then the station assignment must be specified under **Settings | Network | Ext. SIP-RG**. The shortest number that can be dialed in the assignment is always used here.

With E.164 Numbering enabled, you can dial a number stored in canonical format directly from directories, favorite lists and the journal of the Communications Clients myPortal for Desktop, myPortal for Outlook, etc.

Automatic OpenStage TDM telephone software update

If this flag is activated, any OpenStage TDM telephones connected are automatically updated at a preset point in time.

SPE support

When this flag is activated, the Signaling & Payload Encryption (SPE) feature is supported. In other words, the signaling and voice data and the data for authentication are encrypted

A change to the **SPE Support** flag setting only takes effect after a system reset.

SPE advisory tone

This flag and the **payload security** flag are activated, an advisory tone (beep) will alert the station of changes in the encryption status. At the beginning of the call, the display on the phone briefly shows the status of the call: “Secure Call” or “Standard Call” (not for analog terminals).

SIP Prov. to SIP Prov. transit

If the flag is not set (default setting), transit connections are prevented in ITSP auxiliary equipment.

A connection is a transit connection when a single call occupies two lines in the same system.

Example: An external call is routed to a HiPath 3000 station via an ITSP. The HiPath 3000 station then transfers the call to an external destination again via an ITSP. This causes a transit connection in the HiPath 3000 system.Two lines are occupied for the duration of the call. When the “SIP Prov. to SIP Prov. Transit” flag is activated, transit calls are permitted to form.

Dialing from * and # on line interfaces

Several network operators provide central services which can be activated/deactivated via SIP or ISDN (DSS1) trunks using codes. These codes are composed as follows: * or #, digit sequence 0... 9 and # (example: *123456789#).

The code is transferred to the network provider during connection setup. Transfering is not possible during a call.

Activating this system-wide flag allows you to use the characters * and # when setting up a connection from U_{pN}, SIP and NoFe terminals via SIP provider trunks (on separate nodes) and ISDN trunks (separate CO lines). These characters cannot be used during a call. The connection setup on other line types is not actively prevented, incorrect dialing is therefore possible.

The flag is deactivated by default, i.e., dialing * and # on line interfaces ist not possible. E.164 numbering must not be active. Programing on keys is permitted.

The feature is supported:

- without LCR
- with LCR - for digit-by-digit dialing and block dialing (call ending with # is not possible, end-of-dialing only after a timeout)

  If the first dialed character after the access code (E1 in the LCR; Trunk code; Trunk group code) is the character * or # it is not interpreted as an end-of-input symbol, instead as a dialed digit.

Blocking indirect connections between routes depending on ITR

If a company has branches in several cites, then each branch can have a line to the local (national) telecom provider. These branches can also be connected to one another via private tie trunks.

For reasons of national regulations (e.g., in India) it can be illegal to make the following connection: A station uses the private tie trunk from their communications system to a private communications system in another city and then a national telecom provider trunk to reach the other station in the PSTN. Instead a national telecom provider trunk must also be used for calls between cities. This requirement is implemented as follows:

- Direct tie trunks can be disabled by configuring the ITR matrix.
- For tie trunks which involve the “Call forwarding” (CFU, Call Forwarding Unconditional), “Caller list” (CDL, Call Destination List), “Blind transfer or transfer on answer” (blind transfer or transfer on answer) and “Conference” features, the “Block indirect calls between routes” flag was introduced. Activating/deactivating this flag has the following effects:
  - Activated: Private tie trunks are forbidden for calls between cities, i.e., between two private communications systems,
  - Deactivated: Private tie trunks are permitted.

The flag is deactivated by default.

CMI MWI ringer

This flag activates or deactivates the information tone of the Message Waiting Indication (MWI) for cordless handsets (CMI: Cordless Multicell Integration). If this flag is activated and new messages are stored on the voice mailbox, the information tone will be sent.

This flag is deactivated by default. However, if a communication solution such as HiCall is to be used, this flag has to be activated.

10.8.1.2 Area: Node number

The node number (independent of the status of the “Open numbering scheme” station flag) is specified here. This number is not automatically copied to the “PABX number incoming” field of the last route (e.g. route 8 for H2K). The node number is entered here instead of the incoming PABX number.

10.8.1.3 Area: CO features (transfer/conf./drop) (only available for the USA)

It is used to indicate whether or not the central office features “transfer, conference and drop” have been released. If they have been released, the corresponding feature indicators (FIN) have to be entered (0-16383).

10.8.1.4 Area: Transit permission

The transit flags allow you to set up trunk-to-trunk transfers or, in the case of a networked environment, trunk-to-tie-line transfers.

Feature Transit	If this flag is activated, transit connections that result from a system feature within the same system are permitted.That means that a transit resulting out of, for example, an external call forwarding, a call transfer by a user, or trunk-to-trunk connections resulting from a DISA applications are generally allowed, even if it is a trunk-to-trunk connection.
Tie traffic transit	If this flag is activated, the system allows transit traffic via direct inward dialing to a remote location. This flag is set by default.
External traffic transit	If this flag is turned on, the system allows transit traffic via direct inward dialing to a trunk line in the same system. This flag is not configured in the default setting.
Transit on	This option can be used to forward external calls to MSI lines. In this case, a timer is started after which the line is automatically activated once the warning tone has been played.

10.8.1.5 Area: CMI data (up to Hicom 150 H V1.0)

As of HiPath 3000 V1.2/Hicom 150 H V1.2., the CMI parameters are configured on the Settings | Cordless | System-wide tab. A description of the CMI parameters can also be found on that tab.

Cordless is not available in the USA.

See also:

- Section 10.2.5, “Terminal hw sw version”, on page 10-25
- Section 10.4.16, “E.164 table”, on page 10-104
- Section 10.4.8, “Routes”, on page 10-73
- Section 10.8, “Settings | System Parameters”, on page 10-177
- Section 10.8.4, “Intercept / Attendant”, on page 10-203
- Section 10.8.10, “Time parameters”, on page 10-223
- Section 11.2.6, “Account codes”, on page 11-34

10.8.2 LDAP

Settings | System Parameters | LDAP

LDAP is used to configure access to directory information (call no. and name) provided by an LDAP server. Only LDAP servers that do not require authorization can be accessed.

Unsuccessful attempts at accessing phonebook information or the server are displayed as follows:

- No result
- Server not available
- Server busy
- Server error

10.8.2.1 Area: LDAP access

For access to the LDAP server, a (node-internal) HG 1500 card that communicates with the LDAP server over a LAN is needed.

IP address of the LDAP server

The IP address of the LDAP server from which the directory information is to be retrieved is entered here.

Port number for LDAP access

Port number for LDAP access.

Default: 389

HG1500 for server access

The (node-internal) HG 1500 card via which the LDAP server is connected is selected here.

User name/password

Under Windows 2000 ADS, anonymous access is not supported. In this case, enter your user name and password for the LDAP connection here via ADS. For current CDBs the user name can be up to 48 characters long and for the old CDBs it can be 20 characters long.

10.8.2.2 Area: LDAP server parameters

Basic DN

Search basis for the search query to the LDAP server (ASCII, 100 characters).

e.g., ou=com, cn=unify, cn=de

Search query

Pattern for the search query to the LDAP server (ASCII, 50 characters). The **$** character must be entered as a placeholder for the names to be found.

Result attribute, Name

The result attribute Name may consist of up to 24 characters of the ISO-8859-1 character set. The supported characters are all characters with code values in the range from 0x20 to 0x80 (ASCII characters), and the characters Ä, Å, Æ, Ñ, Õ, Ö, Ø, Ü, ß, ä, õ, ö, ü. The display of characters depends on the language setting of the station and the phone being used.

Result attribute for search query. Name.

Value range: ASCII, 25 characters

Default: cn

Result attribute, Station number

Up to 25 dialed digits (0...9, *, #) and 6 characters for formatting (+,(), spaces, -) may be returned in the result attribute Station Number. The station number must be in the canonical call number format (e.g., +49 (89) 7220).

Result attribute for search query. Name.

Value range: ASCII, 25 characters

Default: telephoneNumber

Sort search results

Select this option if you want the results of the search to be sorted alphabetically by name.

10.8.2.3 Area: LDAP Call Number Evaluation

LDAP seizure code

The seizure code matches the corresponding routing code.

Default: 0 (default routing code of the first route

LDAP call number prefix

The prefix specified here is placed before the found call number.

Value range: ASCII, 5 characters

See also:
– Section 10.8, “Settings	System Parameters”, on page 10-177 – Section 10.8.5, “Display”, on page 10-209

10.8.3 System settings

Settings | System Parameters | System settings

System settings differ from system-wide Station view: Flags in that system settings provide more than the on/off options.

10.8.3.1 Areas: Customer name, Contract number

This is the name of the customer who operates communication system. In addition, a contract number or any other identification number that is useful as a reference can be entered under **Contract number**.

10.8.3.2 Area: System name

On system telephones, the system branding HiPath appears on the display. This text can be changed here if required.

10.8.3.3 Area: Central codelock

The station number that has the capability of turning telephone locks off and on can be selected here. This extension is usually assigned to an operator, who will unlock telephones in conference and other public rooms as necessary.

A codelock can be activated and deactivated for an internal station centrally by an authorized station without a password. The effect on the terminal is the same as for individual codelock.

10.8.3.4 Area: Key click

The tones that sound when telephone keys are pressed (key beeps for system telephones) can be turned on or off here. You can also control the **volume**.

10.8.3.5 OpenStage Logo Area

Here, you can select the logo that should be loaded into OpenStage 40, OpenStage 60 and OpenStage 80 TDM connection terminals.

The following options are available:

OpenStage Logo	Description	Caution
Do not download logo	No logo is downloaded to the OpenStage terminals. All terminals maintain the present logo.	This setting makes it possible to operate OpenStage terminals with different logos in one system. Example: Part of a system's OpenStage terminals should be loaded with Logo A, and the other part with Logo B. First, the customer-specific Logo A is transferred to the system and loaded onto all OpenStage terminals. Afterwards, all of the terminals intended for Logo A are separated from the system. Then, Logo B is transferred to the system and loaded onto all of the terminals that are still connected. In order to prevent the logos from being overwritten in the future, the setting "Do not download logo" must be selected. The terminals with Logo A are again connected to the system.
Empty logo	An empty logo is loaded onto the OpenStage terminals.	For example, using this setting, you can overwrite an incorrect logo.
Customer Logo	The customer-specific logo in the system is loaded onto the OpenStage terminals.	If there is no customer logo in the system, an empty logo is transferred.
Unify	The Unify logo is loaded onto the OpenStage terminals (part of the default logo file).	If there is no Unify logo in the system, an empty logo will be transferred.
Deutsche Telekom	The Deutsche Telekom logo is loaded onto the OpenStage terminals (part of the default logo file).	If there is no Deutsche Telekom logo in the system, an empty logo is transferred.

OpenStage Logo	Description	Caution
Logo 3	The 3rd logo is loaded onto the OpenStage terminals (part of the default logo file).	This is a preparation for future default logos. At the moment, these logos are empty.
Logo 4	The 4rd logo is loaded onto the OpenStage terminals (part of the default logo file).	
...		
Logo 15	The 15rd logo is loaded onto the OpenStage terminals (part of the default logo file).	

10.8.3.6 Area: DP pulse pause

The two options presented here represent the two internationally recognized pulse/pause ratios for rotary telephones. The ratio is set to 60/40 in Germany and the USA.

10.8.3.7 OSO Access Number area

By clicking on the **Set OSO Access** button the “OSO Access Number” window is displayed. The route to access OpenScape Office is selected in this window. And the number is entered defined in the dial plan.

10.8.3.8 Area: Hotline

The **Hotline** feature allows you to program one hotline number(s). For stations which are programmed with a particular index, an internal or an external number is automatically dialed when the handset is lifted.

In order for this feature to work, the Hotline function must be set up for the selected station(s) under Station view: Activated features.

Hotline

Selection of one of the hotline destinations.

Off-hook alarm time

If a subscriber lifts the receiver, the hotline is automatically called once the off-hook alarm time has expired. However, this only happens if the subscriber does not enter any digits during this time. The off-hook alarm time is specified in seconds.

If the hotline configured here is to be dialed directly after the receiver is lifted for a particular station, the following must be observed:

- Correct setting, the hotline is called: The off-hook alarm time is “0” and the “Hotline” option is configured at the same time for the station (**Stationview: Activated features / Area: Hotline / Hotline mode**).
- Incorrect setting, the hotline is not called: The off-hook alarm time is “0” and the “Off-hook alarm time” option is configured at the same time for the station (**Stationview: Activated features / Area: Hotline / Hotline mode**).

Destination call number

A call number can be allocated to each hotline destination.

10.8.3.9 Area: DTMF pulse pause

The four options presented here allow you to select the appropriate pulse/pause ratio for a DTMF system. These options define the duration of the DTMF tone sent to the public network. In the USA, the standard setting is 70/70 ms.

10.8.3.10 Area: DID MFC-R2, Number

The number of DID codes can be entered in this field. This system-wide parameter is saved to the loadware to ensure that the loadware can react to the CO in accordance with the protocol.

Possible digits are 1 to 6.

10.8.3.11 Area: Advisory call

This call only occurs if a MULAP is busy and a second MULAP is called. This call is offered at a lower volume (which can be set on the terminal).

It is possible to differentiate between a **Warning call** (default) and a **Normal call cadence**.

TMANI/TLANI boards are reinitialized when this flag changes.

See also:
– Section 8.2.1, “Station view: Flags”, on page 8-5 – Section 10.4.5, “Trunks	Parameter/General Flags”, on page 10-65 – Section 10.8, “Settings	System Parameters”, on page 10-177 – Section 10.8.12, “Daylight saving time/DISA”, on page 10-235

10.8.3.12 Area: Toll restriction

Digit-by-digit is selected if the line should be seized directly. If you select **Digit-by-digit**, the communication system sends the dialed number to the CO one digit at a time.

If you select **en-bloc sending**, the communication system waits until dialing is complete, and then sends the number as a unit.

If you are using the LCR (Least cost routing) function, the **en-bloc sending** option must be selected if required. With the en-bloc method, the line is only seized after positive digit evaluation in the toll restriction Allowed/Denied List and/or after a time out.

10.8.3.13 Area: Cancel consultation

With analog telephones, a consultation call can be canceled with Retrieve. Depending on the option selected, the signal key is pressed either once or twice.

This feature allows users with non-display telephones to toggle between a caller and someone to whom the call is to be forwarded, or to establish a conference call. When forwarding a call, a user must first press the dial pulse (rotary) key and then dial the station number.

Press signal key once	If this option is selected, an analog extension which is in consultation mode transferring the call to another extension and needs to return to the held line, must press the consultation key once and wait for the timeout (standard two seconds) to return to the held call. During the timeout a feature access code, e.g., Conference, toggle can be activated.
Press signal key twice	If this option is selected, an analog extension that is in consultation mode transferring the call to another extension and needs to return to the held line, must press the consultation key once to activate a feature, e.g., Conference, toggle. To return to the call on hold, the user needs to press the consultation key again.

10.8.3.14 Area: Music On Hold

The **Music On Hold** feature allows you to choose among three possible options. The music for this feature can be supplied internally or externally. The three available options are described below:

No Music On Hold	If this option is selected, the Music on Hold feature will be deactivated completely. This does not apply when an external call is transferred by a transfer before answer; the caller then hears the ring tone.
MOH without ringing tone	If this option is selected, in the case of an unmasked transfer, the caller will hear Music on Hold while the transfer takes place, as well as while the call is being transferred by the transferring party and the external connection is ringing at the transferred destination.
MOH with ringing tone	If this option is selected, in the case of an unmasked transfer, the caller will hear Music on Hold while the transfer takes place. As soon as the call is transferred through by the transferring party and the external connection is ringing at the transferred destination, the caller will hear a ring tone. The MOH with ringing tone option should always be set in a network system in order to provide the customer with a uniform environment.

10.8.3.15 Area: Common hold

In this field, you can define system-wide whether a station is only transferred to **Common hold** when the call is released, or while the call is still in progress.

with release	This option allows the user to put the call on exclusive hold by pressing the Hold key. The following appears on the display menu: Return to held call? It is only if the user then immediately replaces the handset that the call will be placed on Common Hold and can be picked up by another telephone. In the case of a MULAP call, the MULAP LED flashes slowly for all stations in the MULAP.
without release	Once the Hold key is pressed, the station is transferred to the digit input state. If the handset is replaced, the station reverts to the idle state. The call on hold is placed immediately on common hold and another station can immediately pick up the call.

As before, it is still possible to put external calls or trunks on common hold. To pick the call from common hold, depress the blinking Trunk key, or select “Retrieve Line” via the service menu followed by the trunk access code.

A MULAP call can be re-established by means of the MULAP key.

10.8.3.16 Analog Station with CLIP

Selecting the CLIP (Calling Line identification Presentation) protocol for analog ports. If “None” is selected, the feature is disabled system-wide.

This area is only visible if there are analog ports in the system. Note the following restrictions:

- In the case of HiPath 33XX and 35XX, this feature is only supported for the control cards CBCC and CBCR as of A301 and Z301.
- In the case of HiPath 37XX, this feature is not supported.
- In the case of HiPath 38XX, this feature is only supported for the analog card S3080010-Q2191-C300.
- This feature is not supported on extension boards

CLIP protocols are country dependant.

CLIP Protocol	Description
ETSI FSK Type 1	Data transfer with FSK tones between the first and second ring. Protocol most widely-used worldwide for transferring numbers and names. Countries: Germany, Austria, Switzerland and many others. Reference: ETSI EN 300 659-1, Chapter 6.1.1
ETSI FSK Type 2	Data transfer with FSK tones before the first ring. Boot sequence with special ring. Countries: France Reference: ETSI EN 300 659-1, Chapter 6.1.2 b)

CLIP Protocol	Description
ETSI DTMF Type 1	Data transfer with DTMF tones between the first and second ring. “DC” start-stop signal. Countries: India and others Reference: ETSI EN 300 659-1, Chapter 6.1.1 and Annex B
ETSI DTMF Type 2	Data transfer with FSK tones before the first ring. Boot sequence with reversal and special dual tone. Countries: Netherlands Reference: ETSI EN 300 659-1, Chapter 6.1.2 c)
DNK DTMF	Data transfer with DTMF tones before the first ring, boot sequence with special dual tone. Countries: Denmark Reference: TS 900-301-1E2
BRA DTMF	Data transfer with DTMF tones before the first ring, boot sequence with special dual tone. Countries: Brazil Reference: NET Nº 001/92
Bellcore MDMF	Data transfer with FSK tones between the first and second ring. This (multi-data) protocol can transfer both the call number and names. Countries: USA, Canada, Hong Kong Reference: TIA/EIA-777A
Bellcore SDMF	Data transfer with FSK tones between the first and second ring. This (single-data) protocol can only transfer the call number. Countries: USA, Canada, Hong Kong Reference: TIA/EIA-777A

See also:

– Section 8.2.1, “Station view: Flags”, on page 8-5

10.8.4 Intercept / Attendant

Settings | System Parameters | Intercept / Attendant

The attendant is configured via **Intercept / Attendant**. When an incoming call cannot be completed, either because the number is incorrect or because the called party does not answer, the call is forwarded in accordance with the criteria established in the Call Management (see Settings | Incoming calls). The call is then diverted to the intercept position.

10.8.4.1 Area: Intercept position

The call number of the intercept position is defined here. The intercept position can be a single station or group. A UCD group may not be selected as an intercept position. The handling of the call forwarding occurs via Settings | Incoming calls. Then the intercept is made to the intercept position.

On S_0-lines, an evaluation takes place only when **no** day/night intercept position has been set up.

As of Hicom 150 E Office Rel. 2.0, default key assignments are automatically given for the intercept places (both day and night) that are defined here. This happens only when the intercept position is a telephone, not when it's a group. In the latter case, the same functionality can be achieved by defining the telephone as an intercept position for a short time. The default key assignment has also the **Number of calls** key. This can be assigned to only 6 telephones. If the limit has been reached, no more default key assignments are made. The assigned default keys are not canceled when a device is no longer defined as an intercept position.

In order to reach the same destination from both the DID trunks and the MSI trunks while the standard night service is active, the entry for Night Station number under **Intercept / Attendant** must be identical to the **Night Number** in Ringing assignment per line.

Day, Night

The intercept position can be defined separately for **Day** and **Night**. In addition, it is also possible to enter any destination when activating the night service (variable night service).

10.8.4.2 Area: Central intercept position (not in the USA)

This is a European feature that is not in use in the United States.

It is possible to define a central intercept position. The central intercept position defines the (common) intercept position for QSIG- and CorNet networked communication systems. It is necessary to add a trunk group index to the call number first. Note that when the digit repetition between the trunk group index and the call number is active, a valid seizure code should be inserted for the trunk group selected.

A central attendant console can be programmed for CorNet-N and CorNet-NQ using LCR. However, no intercept to this attendant console occurs.

10.8.4.3 Area: Intercept to intercept position

Six different intercept conditions exist. You can choose which of these criteria should be active. You can select any number of criteria.

On RNA

When **on** RNASettings | Incoming calls (Ring No Answer) is activated, the call follows the defined procedure (see). If the end of the table is reached and does not answer, the system checks to see whether or not intercept after timeout applies. In this case, the intercept position is called after the number of rings specified under Call forwarding.

A call is not intercepted from a hunt group. The call is forwarded again to the first hunt group station and continues to remain in the hunt group.

On Busy

If a line is **on** Busy, the system first checks to see whether or not a waiting call can be signaled. If it is not possible to signal a waiting call (call waiting rejection or intercept criterion), then the call follows the Call Management procedure (see Settings | Incoming calls).

If the call cannot be signaled at any station, the system checks to see whether intercept or clear-down applies (B signal to CO). If an analog telephone with call waiting rejection is busy, the call is cleared down, regardless of trunk type. In the case of DTMF direct inward dial and MSI, the call is always intercepted.

On Invalid

If this flag is on, when a wrong number is dialed, the system checks to see whether intercept or clear-down applies. In the case of DTMF direct dial, the call is always intercepted.

On Incomplete

If the station number dialed is incomplete, the intercept position is called at the end of the time defined in the **End-of-Selection for Incomplete Dialing** field under **Time parameters**.

On Unanswered Recall

If an external call is not picked up by the B subscriber after the A subscriber implements Transfer before answering to the B subscriber, and the call is still not picked up after a recall to the A subscriber is implemented, the intercept position defined in the **Intercept time for recall** field under **Time parameters** is called after a defined period.

If this flag is not set, the call is cleared down after the defined period.

On More Than Two Calls to P.O.T. (France only)

This feature is available only in **France**.

If call waiting is signaled during an ongoing call with an analog telephone, any further call is rejected.

10.8.4.4 Area: Codelock intercept

If the telephone lock for a station is active and a trunk group code is dialed from that station, the call is immediately forwarded to the intercept destination entered here. This means that if a user dials a number that is not authorized, the call will be signaled on the station number assigned here. The **Codelock intercept** function is set individually for each station via Station view: Flags.

10.8.4.5 Area: Attendant code

The intercept defined under system parameters can be reached using both the internal extension number or the DID number and the console code (internal and external calls).

Call Number Internal

This is the number used by internal devices to reach the Intercept position.

After changing the internal call number of the attendant and transferring the CDB, a download to the IVM is triggered automatically.

Call Number External

This is the number used by DID or network (CorNet-N or CorNet-NQ) to reach the Intercept position.

10.8.4.6 Area: Attendant

There are several parameters regarding the attendant.

Queued Calls

In the Queued Calls field, you define the maximum number of calls that can wait in the Attendant queue. If the number of stations waiting in the queue of the attendant reaches this numerical value, the calls are forwarded to a Configurable overflow destination.

Wait Time

Here you enter the number of seconds that a call can wait in the queue. When calls exceed this time, they are diverted to Call forwarding defined via the Call Management (see Settings | Incoming calls).

Speed Extending

If this flag is set, the attendant can transfer the call to another party by entering the station number for that party. This speed call transfer can only be used when the system flag **DTMF automatic** is deactivated.

Extend undialed lines (up to Release 1.0)

If the 'extend undialed lines' flag is set, an undialed trunk can be transferred to a subscriber via the local attendant console (AC) so that this subscriber is able to conduct an external call.

The subscriber to whom an undialed trunk is transferred also receives the toll restriction of the attendant console for this call. This means:

1. If, for example, the attendant console has unrestricted local area access, then this access is also assigned to the subscriber to whom a trunk is transferred.
2. If a trunk is transferred to a subscriber, this transferred trunk is valid for only one dialing operation.

The feature can be used from the local attendant console (not for the entire network) or from any attendant console, from an attendant console group, or from the night station.

Extend undialed lines (as of Release 2.2)

An authorized subscriber (attendant console AC) can transfer an undialed trunk to an internal subscriber who does not have sufficient direct trunk access so that this subscriber can conduct exactly one external call.

After the trunk is transferred to the subscriber without sufficient direct trunk access, toll restriction takes place based on an additional direct trunk access for transferred trunks. The outgoing external call is allowed only if this additional direct trunk access is sufficient, for example, if the subscriber dials a valid number according to the denied or allowed list for transferred trunks.

The subscriber must dial the seizure code on a transferred trunk.

A CO call privilege can be configured in the communication system for each trunk group via a reference subscriber. The default reference subscriber is the first logical subscriber port or the attendant console. The default setting is set to **unrestricted trunk access** for all trunk groups.

10.8.4.7 Area: Other criteria

Call Waiting on Busy

This flag activates the **Call Waiting** feature for all stations in the communication system. The following are two examples of how the call waiting feature operates (see also Station view: Flags).

Example 1:

When **Call waiting on busy** is activated, an external caller (A) hears the ring tone when calling the busy station (B). Station B is notified by a display message that a call is waiting and hears the call waiting tone on the voice channel. Station B can now answer the waiting call using the **Accept call waiting** function. This action automatically places the existing call on exclusive hold.

Example 2:

If the station is busy and intercept on busy is active, the caller will be intercepted at the attendant which can then call the destination station and signal call waiting in order to switch the call. This only works if the destination station has not activated Call waiting rejection.

Call waiting only for intercept

This flag is only relevant for CorNet networked systems.

- If the flag is set, call waiting is only allowed when an attendant console (system A) calls station B (system B). All other stations of system A cannot reach system B via call waiting. For the stations in System B, the condition for call waiting rejection (see Station view: Flags) applies to the respective stations.
- If the flag is not set, all calls to busy stations in another system are switched through via call waiting, provided the station has not turned on the call waiting rejection option.

This flag must be set if you want to place the calling intercept on hold immediately and enable call waiting when a station is busy. If this flag is not set, the intercept receives the busy signal and is only placed on hold after a few seconds.

Intercept with serial FWD (Call forwarding)

It is not possible to chain calls for forwarding; an attempt to initiate this procedure is rejected on activation. For example, if a station has activated external call forwarding and the call destination has also forwarded its calls, you have a chained calls situation. This is not allowed by the

communication system. If this flag is turned on, these calls are intercepted. As of Hicom 150 E Office Rel. 2.2 (Version 159; SMR-J), this flag has been deleted. A chain of call forwarding instances is now possible.

See also:

- Section 8.2.1, “Station view: Flags”, on page 8-5
- Section 10.4.13, “QSIG features (not in the USA)”, on page 10-98
- Section 10.6, “Settings | Incoming calls”, on page 10-125
- Section 10.6.2, “Ringing assignment per line”, on page 10-127
- Section 10.6.3, “Call forwarding”, on page 10-130
- Section 10.8, “Settings | System Parameters”, on page 10-177
- Section 10.8.1, “Flags”, on page 10-178
- Section 10.8.10, “Time parameters”, on page 10-223

10.8.5 Display

Settings | System Parameters | Display

Display allows you to determine how data is displayed to the end-user.

10.8.5.1 Area: Display name / call number

This area can be used to configure which of the following data is to appear on the displays of all connected telephones for incoming calls:

- “Calling ID only”, *or*
- “Name” only (if available), *or*
- “Name and calling ID” simultaneously

If a telephone does not support one of these settings, instead of displaying the name and the calling ID at the same time, only the calling ID may be shown, for example. The OpenStage telephones support the simultaneous display of the name and calling ID.

Overview of the information shown on the display:

	Calling ID only	**“Name” (if available),** [1]	**Name and calling ID**
optiPoint	Displays the calling ID	Displays the name	• During the ring tone: displays the name • During the call: displays the calling ID and the name
OpenStage	Displays the calling ID	Displays calling ID and name	Displays calling ID and name

1 If the name is not available, the calling ID is displayed instead.

10.8.5.2 Area: Transfer before answer

If a call is **transferred before it has been answered**, either the number of the party **transferring** the call or the number of the party **placing** the call can be displayed at the receiving station. A call which was switched by “Transfer before answer” cannot be rejected by the called party.

Transferred by

If **Transferred by** is selected, the display will show the transferring party before the connection is established and after the call is released.

Transferred to

If **Transferred to** is selected, the display will show the transferring party as long as the transferring party is connected to the receiving station. After the transferring party releases the call and there is a connection, the display will change from the transferring party to the transferred party.

10.8.5.3 Area: Automatic recall

If a call is transferred and then recalled, either the number of the party transferring the call or the number of the party recalling the call can be displayed at the receiving station.

An internal B station displays the call transfer. C receives a ring tone until either B answers or A recalls. This item can be used to configure what is to be displayed as the B transfer destination: either station A (**Caller**) or C (**Transferred destination**). If an automatic recall is started from station A, both stations receive the display **no reply**.

10.8.5.4 Area: Date format

The date can be displayed in the following formats:

Europe:	20.JUN 02
USA:	JUN 20.02
International:	20 JUN 02
International2:	20.06.02

10.8.5.5 Area: Caller list, mode

If the **Missed Calls List** has been activated, this area can be used to select which calls are to be stored in the missed calls list.

- Unanswered internal and external calls
- Only external calls
- All external calls whether answered or not

If **Internal and external calls** or **Only external calls** is activated, all calls that were not accepted are saved in a list whose contents can then later be retrieved using a system procedure. If **All external calls whether answered or not** is activated, then calls that have been accepted are also saved in the caller list. No call numbers are removed from the caller list, either for incoming or outgoing calls. If all of the memory locations in the caller list have already been used, the oldest entry is overwritten when an additional call number is saved.

Calls that have not been accepted are displayed in the manner already described in the Missed Calls List feature. Calls that have been accepted are displayed in the same manner as for the ”Save call number” functionality of the caller list.

If an external incoming call is routed via the automatic attendant to an internal station and the station is currently busy or has call forwarding activated, no entry is made to the missed calls list.

10.8.5.6 Area: Call number suppression

Call number suppression on

If this option is on, the calling number is not displayed in ISDN, i.e. the called party does not see the calling number (this feature also needs to be activated at the telephone company). Similarly, the name of the calling party is suppressed in networks with additional communication systems.

Call number suppression override

There are call scenarios in which a calling party via the CO was set to "presentation restricted". If this flag is activated, the calling party's number is displayed to the called party. If this flag is deactivated, the text "Number unknown" is displayed.

The flag always depends on the CO settings of each provider.

Display Route Name instead of "Number Unknown".

If this option is on, the calling number and/or the caller name or the route (route name or number) is displayed instead of "unknown number".

10.8.5.7 Area: Internal Phonebook

Users can access a system-wide online directory (phone book) that includes names and call numbers for all internal extensions. System-specific display terminals allow users to scroll through the directory, to display all available internal stations with their names and call numbers, and then dial any of the stored numbers. Terminal devices with alphanumeric keypads can use this to search for a specific number.

Select the appropriate option from the list.

- **no**: No access to the directory is possible
- **internal**: Access to the internal directory (stations, groups and speed-dial destinations) is possible
- **LDAP**:Access to the directory information of the LDAP server. LDAP access via LDAP must be configured for this purpose.
- **all**: Users can choose between accessing the internal phone book or the LDAP directory.

10.8.5.8 Area: Switch

Call timer display

When the option is enabled, no call charge information is displayed for outgoing external calls. For $U_{P0/E}$ terminals with a display, the current call duration is displayed. For analog lines, time recording is started by a timer (five seconds after the end-of-dialing) and for digital trunks with CONNECT. The communication system does not support call duration display for S_0 devices.

DTMF closed display

If this option is set, the input of PIN codes on system telephones with a display is hidden (i.e., shown using asterisks (*)).

Status display for info message

When this option is activated, any info messages are displayed on the system telephone's display.

Outreach call number transparent

If this option is set, and a forwarding to an external station is involved, the number of the calling station is displayed at the called station.

In a networked system, the option must be set in the node at which a trunk connection is activated.

This feature is contingent on the explicit release of the chargeable function "Clip No Screening" in the CO.

This flag works as a toggle with the flag **Suppress station number** under **Routes**.

See also:
– Section 10.8, "Settings | System Parameters", on page 10-177 – Section 10.8.2, "LDAP", on page 10-192

10.8.6 Flexible menus

Settings | System Parameter | Flexible menus

The **Flexible menu** option can be used to define whether the menu structure of HiPath 3000 or HiPath 4000 should be displayed at the system telephones.

HiPath 4000 - Menu Structure

Enabling this option in a networked system with HiPath 4000 causes the menu structure of HiPath 4000 to also be displayed at system telephones connected to a HiPath 3000.

For the HiPath 4000 menu structure, the texts for **German(2)** and **English(2)** must have already been loaded.
When switching the language of the menu structure, all telephones are automatically switched to German(2) or English(2). The language of the menu structure can be set via Station view: Flags.

Masking list

Here you can select which features are to be hidden in the menu structure. You can hide a menu by enabling the corresponding option.

See also:

– Section 8.2.1, “Station view: Flags”, on page 8-5
– Section 10.8, “Settings | System Parameters”, on page 10-177

10.8.7 Speed dialing system

Settings | System Parameters | Speed dialing system

The **Speed dialing system** allows you to program telephone numbers which can then be speed-dialed from all terminals in the communication system.

The speed dialing destinations can be both station-individual speed dialing numbers (SDI) as well as speed dialing system destinations (SDS). These call numbers are not subject to toll restriction and can be dialed from every extension. If the speed dial number authorization is restricted via LCR, the number cannot be dialed.

Some users program this feature to execute additional functions. For example, it is possible to program a **DTMF switchover** and a **dial pause** by entering the following key codes within the speed dialing number:

- # = DTMF switchover
- P = Dial pause (Redial key).

Example:
dialable number (ext. number) # P + DTMF digits = 0123456#P123

10.8.7.1 Speed Dialing System Destinations table

This table is used to enter the call number to be dialed by the communication system when a speed dial number is entered and the name associated with that call number. Note that both the speed dialing number and the call number must be specified for the speed dialing destination to be valid. A name can also be specified (optional).

Speed-dialing column

The number that you enter here is also called the Speed Dialing Index. This is the number that the station will dial. The speed dialing index numbers must be three-digits, so leading zeros are used when necessary. These numbers do not have to match the numbers in the left-most column.

Each speed dial number can only be assigned once. The number of destinations which have already been configured and those still available is displayed at the bottom of the status bar.

Call number column

In this column, you enter the call number of the desired destination. These telephone numbers (destinations) can contain a maximum of up to thirty-two digits. All entries must begin with the digit 9 or another route or line code (e.g., 81 or 801). (See also Settings | Lines/networking.)

When the LCR feature is active and there are deleted trunk group codes, the entries in this column are **not** subject to digit analysis.

The call number is always entered with seizure and/or route codes.

“Automatic suffix dialing” can be achieved by entering the character ‘-’. This means that a decision is made when configuring the SDS whether only the configured call number is sent or whether the option of adding a suffix manually or automatically exists. The automatic suffix can also comprise multiple digits. A call number can include a maximum of one ‘-’. A ‘-’ after a ‘#’ is not allowed.

Example for ISD entries:

- entered number to send: 7220
- Manual and automatic suffix: 722-0
  If the subscriber does not manually dial a DID thereafter, the digit 0 is automatically dialed after 4 seconds.

With the system configuration “LCR with Dial rule and Block dialing”, the existing block dialing timer (LCR: Timer for simulated end of dial) is used. In this case, the timer is set to 5 seconds.

Name column

Names entered in this column are saved in the internal phone book and are displayed on dialing the associated speed-dialing destination. Up to sixteen characters can be accepted.

A name can be assigned to each speed-dialing destination; this name is saved in the internal phonebook. Incoming calls (via S_0) are compared to the stored speed-dialing destinations and displayed as the name of the speed-dialing destination, as long as the parameter Name or Name and calling ID is activated via Display.

10.8.7.2 Area: Status

Seized SDS, Available SDS

Depending on the expansion level of the communication system, the number of speed dialing destinations available in each case will differ. **Seized SDS** therefore shows the total number of all entered speed dialing destinations, and **Available SDS** shows the total number of destinations still available.

10.8.7.3 Importing and exporting entries into and from the telephone directory

The following functions are available to import/export telephone directory entries from or to a CDB in addition to the usual Copy and Paste functions

Assign Indexes... button

The **Assign Indexes...** button can be used to automatically number the entered speed-dial destinations.

Clicking the **Assign Indexes...** button opens a dialog box with the following parameters:

- **Reassign all indexes** and **Assign free indexes** (default value). When you click on one of these two options, the dialog box closes, and the indexes are assigned to the telephone book entries.
- **Start Index** input field (default value: first unused index). You can specify the index at which the assignment should begin here.

The indexes are assigned in the order that is visible in the table and depend on the sorting algorithm being used.

Import... button

Clicking the **Import ...** button opens a dialog box in which the path and file name of the file to be imported must be specified. The default path is **C:\Documents and Settings\<User>\Application Data\Siemens\Manager E**, where <User> stands for the user name with which the user has logged on at the PC. The file ass_150e.ini is also located under this path. The default file name is “kwz.csv”.

In addition, a further input field in which the number of the route (empty by default) can be entered is displayed. This number is automatically prepended to every number of the imported list. Semi-colons, commas, and tabs are allowed as delimiters. Multiple delimiters in sequence are not interpreted as delimiters, but represent an empty field. The “Import” function is then executed with empty fields. The selected fields are not relevant.

The “Import” and “Paste” functions are subject to the following restrictions:

- the index must lie between 0 and 999. Invalid and duplicate indexes are ignored. Corrections can be made later via the **Assign Indexes...** button.
- The call numbers can have a maximum length of 32 characters (including special characters and the trunk seizure code). Longer numbers are truncated.
- The permitted characters in the call number are: 0-9, P, # and “-”; all others characters are deleted.
- Call numbers that are invalid based on the rules above are deleted. Invalid means that they cannot be entered manually.
- The names can have a maximum length of 16 characters. Longer names are truncated.
- Names that are invalid (i.e., cannot be entered manually) are deleted.
- If the Import list contains too many entries, the extra entries at the end are skipped.

Export... button

Clicking the **Export ...** button opens a dialog box in which the path and file name of the file to be exported must be specified. The default path is **C:\Documents and Settings\<User>\Application Data\Siemens\Manager E**, where <User> stands for the user name with which the user has logged on at the PC. The file ass_150e.ini is also located under this path. The default file name is “kwz.csv”.

The fixed delimiter “;” (semi-colon) is used. Tabulators can be used via the Copy/Paste function.

The **Export** function always exports all the data.

10.8.7.4 Area: Merge speed

All database equal button

This button is used to provide all speed dialing system lists in all communication systems in a networked system with uniform speed dialing destinations.

In a networked system, or if multiple CDBs are loaded, the current speed dialing destinations of the CDB being displayed are copied to all other CDBs.

The maximum number of destinations provided depends on the communication systems used in the networked system and is equal to the number provided by the smallest communication system.

If the button is grayed out, this means that the networked communication systems support a different number of speed dial destinations (e.g., a Pro supports 1000 speed dial destinations, but a Point supports only 300). Please note, however, that if speed dial destinations are entered in the Point, it is possible to match them against the Pro.

See also:

- Section 10.4, “Settings | Lines/networking”, on page 10-49
- Section 10.5.1, “Flags and COS”, on page 10-107
- Section 10.8, “Settings | System Parameters”, on page 10-177
- Section 10.8.5, “Display”, on page 10-209

- HiPath 3000/5000 Feature Description, Speed dialing system

10.8.8 Service codes

Settings | System Parameters | Service codes

In the communication system, each of the system's end-user features has been assigned a unique one- to four-digit access code. These codes are used to turn the features on or off. If required, you can change the default **service codes**.

10.8.8.1 Codes table

If the code is preceded by an asterisk (*), it usually activates the feature. If the code is preceded by a pound sign (#), it usually deactivates the feature.

10.8.8.2 Area: Substitution

The codes that replace * and # on IWV standard analog telephones and ISDN telephones are entered here. The default values are 75 for * and 76 for #.

Dial pulse (rotary) telephones and ISDN devices are digit-only; they do not recognize asterisks and pound signs. If your communication system has either rotary telephones or an ISDN device instead of a modem, digits must be substituted as a prefix to the service code.

10.8.8.3 Buttons

All database equal

This button is used to provide all speed dialing system lists in all communication systems in a networked system with uniform speed dialing destinations.

In a networked system, or if multiple CDBs are loaded, the current speed dialing destinations of the CDB being displayed are copied to all other CDBs.

The maximum number of destinations provided depends on the communication systems used in the networked system and is equal to the number provided by the smallest communication system.

If the button is grayed out, this means that the networked communication systems support a different number of speed dial destinations (e.g., a Pro supports 1000 speed dial destinations, but a Point supports only 300). Please note, however, that if speed dial destinations are entered in the Point, it is possible to match them against the Pro.

Check

The communication system will not allow you to upload a database that contains duplicate service codes. The **Check** button can be used to check the uniqueness of the codes. Conflicts are displayed in a separate window. If relevant, a list of the duplicate assignments is also displayed.

See also:
– Section 10.8, “Settings	System Parameters”, on page 10-177 – HiPath 3000/5000 Service Manual, Service codes

10.8.9 Texts

Settings | System Parameters | Texts

The texts of the text messages can be edited via **Texts**.

Two types of text messages are supported:
- **Info texts** (notifications), which can be sent from one station to another
- **Answer texts**, which can be sent to callers when the extension being called does not answer

10.8.9.1 Area: Reset, to default values

Here you can reset the messages and answer texts to the predefined values for a given language. A reset occurs by selecting a language from the drop-down list box.

10.8.9.2 Area: Info texts

Information texts are short messages that one station can send to another. The communication system supplies ten standard Info texts. Each of these standard texts can be overwritten. There are only ten possible messages available at any time. Informational texts can contain up to twenty-four alpha or numeric characters.

Users access these information texts via the **Send Message?** menu item on their system telephones. Stations with which have an alphanumeric keypad also have the option of creating their own messages; however, they can not change these default messages.

10.8.9.3 Area: Answer texts

Answer texts are short messages that users can arrange to have callers receive in their absence. Ten standard texts are available. Each of these standard texts can be overwritten. Answer texts can contain up to twenty-four alphanumeric characters.

Stations with which have an alphanumeric keypad also have the option of creating their own messages; however, they can not change these default messages. For many situations, users will only need to add individual information to the existing messages.

Texts with a colon give the station the opportunity to complete the message by adding a number or a date. Users access these answer texts via the **Advisory Message On?** menu item on their system telephones.

See also:
– Section 10.8, “Settings	System Parameters”, on page 10-177 – HiPath 3000/5000 Feature Description, Message Texts

10.8.10 Time parameters

Settings I System Parameters I Time parameters

The adjustable time parameters can be edited via **Time parameters**.

10.8.10.1 Table

All adjustable time parameters are listed in the table (**Description** column). The timer value for each time parameter can be set via the **Base** and **Factor** columns. The actual time = Base x Factor.

If the value 255 is entered in the **Factor** column, this timer is inactive.

Certain time parameters (see the time parameter table below) were moved to other tab pages as of Hicom 150 H. Note that changes made to these timers via **Time parameters** have **no** effect in the new communication systems.

Time parameters	Effective in the CP status:	Timer range
P.O.T suffix dialing time code/Receiver activation time The timer controls the duration of the connection of the code receiver with DTMF terminal units and therefore the ready-to-dial condition. After expiry of this timer the code receiver will be released.	Dialing	5 – 15 s
Time for activation of P.O.T features This timer will be activated if the signal key is pressed. The signal key helps to distinguish whether a subscriber wants to resume a consultation hold or whether he wants to activate a feature such as conferencing.	Dialing	2 – 4 s
Reseizure blocking time This timer is started after trunk release and bars an immediate outgoing seizure during this time.	Release at:	0 – 5 s

Time parameters	Effective in the CP status:	Timer range
Callback delay time This timer is started, if a subscriber changes into idle. Once this time has expired, a check is made to see whether automatic callback is to be implemented. This gives the user an opportunity to make further calls.	Idle	0 – 60 s
Length of call back In case an automatic callback is not answered within this time, the call is finished and the callback is postponed.	Call signaling of callback	15 – 60 s
Intercept time for automatic recall If an automatic recall of a blind transfer is not answered within this time, it is intercepted to the attendant console, if this intercept criterion has been configured.	Automatic recall	20 – 600 s
Calling time transfer before answer on busy station If a blind transfer (to a busy station) is not answered within this time, the recall is forwarded to the extension that transferred the call.		30 – 600 s
End-of-selection for incomplete dialing (Austria) Supervisory timer for direct inward dialing. In case no selection occurs during this time, the direct inward dialing is recognized as incomplete or as no dialing. (Austria only)	Direct inward dialing	10 – 30 s
End-of-selection time (no dialing) In case selection is not started within a certain time, an end-of-selection is automatically generated.	Direct inward dialing	5 – 15 s
Time for parking + change to hold Reactivation of a parked call must occur within a timeout. In case the parked call is not answered (resumed) within this time, the station, which has parked the call, will be recalled. With the automatic recall, the hold status reverts to an active status.	Common Hold	60 – 255 s
End-of-selection for incomplete dialing In case dialing is not continued within a certain time, an end-of-selection is automatically generated.		10 – 20 s

Time parameters	Effective in the CP status:	Timer range
P.O.T. Minimum flash time (ineffective as of Hicom 150 E Office Rel. 1.0 SW version H) (as of SW version H, this timer is set via Station view: Template Editor) Defines a minimum time for the recognition of a flash within which the loop must be broken.		
P.O.T Maximum flash time (ineffective as of Hicom 150 E Office Rel. 1.0 SW version H) For the recognition of the flash a maximum time is determined, in which the loop must be opened.		
Wait time for LCR analog Queue timeout for LCR analog		0 – 20 s
Time for activation of automatic recall at attendant console In case an automatic recall at the attendant console is not answered during this time, the call will be released.		30 – 180 s
End-of-dialing for 1A dialing This timer indicates the time after which the last digit will be dialed out for the 1A procedure. The outdialing of a digit occurs after input of the next digit. The last digit is dialed after expiry of the timer or if it is marked with the end of dialing indication (#) by the station.	Dialing	4 – 4.5 s
Additional charge time (ineffective as of Hicom 150 E Office Rel. 1.0 SW version H) (as of SW version H, this timer is set via Trunks | Parameter/Template Editor) When a trunk is released, incoming call charge information (call charge pulses) on analog trunks can be analyzed by the communication system during this time. The trunk is blocked for outgoing connections during this time.	Release of analog trunks	

Time parameters	Effective in the CP status:	Timer range
Dial tone monitoring time This is the waiting time for dialing tone. In case this timer expires, the system assumes a failure of the trunk. The trunk will be marked as “failed”.		
Flash time for PBXs (ineffective as of Hicom 150 E Office Rel. 1.0 SW version H) (as of SW version H, this timer is set via Station view: Template Editor) Time for the signaling of the flash.		
MOH delay timer In case a connection is held, music on hold is applied, if configured. However, MOH is only activated after this time has expired, in order to make sure that activation of features such as conferencing is not hindered by MOH.	(Call) hold	0 – 5 s
Pause before dial (only for Development) If dial tone detection is not possible or desired for analog trunks, dialing can be automatically initiated after this time period.		
Release if no dialing In case of a trunk seizure and no dialing within a certain time, the connection is released. The subscriber will get busy tone.		5 – 30 s
Flash settling time (only for Development) Time between trunk flash and transmission of dialing.		
Dial pause length This timer indicates the length of the pause to be implemented between two digits, if a pause mark is detected.		1 – 5 s
Artificial end-of-selection With external dialing, received digits after artificial end-of-selection are interpreted as consultation hold.		5 – 15 s

Time parameters	Effective in the CP status:	Timer range
Timer for automatic redial If the station is busy, the relevant number is automatically redialed when the timer elapses. This feature does not work unless the option **Automatic redial** is selected under Flags.		10 – 650 s
Delay for announcement prior to answer This timer adjusts the delay time, after which the announcement device answers.		1.5 – 30 s
Time between HAT analysis and dialing of trunk main station interface This timer determines the time between the audible tone recognition and the dialing of the first digit via analog trunks.		0 – 2 s
Pause length after dialing 2nd discrim. digit This timer determines the pause length, which is made after dialing the 2nd route seizure code or the international code number. Transfer to the next switching node		1 – 5 s

Time parameters	Effective in the CP status:	Timer range
Time until warning tone in main station interface transit connection Transit connections are monitored depending on the type of protocols. This is to avoid, that a connection remains endlessly. If at least one trunk in this transit connection has release recognition, the time is not monitored (see the exceptions in the table below). There is no release recognition for analog trunks. However, there is a hardware option for silent reversal. This makes release recognition possible for analog trunks. The Table for transit monitoring (The following is valid for the trunk types specific to the US:) shows the trunk types where a monitoring timer is implemented. The length of the monitoring can be configured. However, when using an analog trunk with silent reversal, note that there are call numbers where it's possible that there is no answer and therefore where no release can be recognized. As a rule, these call numbers are for announcement services. This must be explicitly pointed out to the operator of the communication system.		120 s – 42 min
Time from warning tone until release In the case of monitoring the time for transit connections, a warning tone occurs after the monitoring timer expires. So that the call can be ended, the connection is only cleared down after this timer has expired, and not immediately.	Transit	10-650
Release time for MSI A call to an MSI line via direct inward dialing (DID) is released after this time if no call was connected.		30 s – 254 min
After holding, a warning tone is switched (Italy) After expiry of this time, camp-on occurs with the held connection at the subscriber who held the call (ITL).	Hold connection	30 – 180 s

Time parameters	Effective in the CP status:	Timer range
Monitoring a UCD call to an analog line (only for Development) Time for activation of an MSI call to a UCD group when no connection has been set up.		10 – 3810 s
Monitoring transfer to a UCD group prior to answer (only for Development) If a transfer to a UCD group occurs prior to an answer, the timer is started. If the transferred call is not answered, an automatic recall occurs following the timeout.		10 – 3810 s
USBS timer interval For access via S_0 port, TA-S_0, TA-RS232 and TA-API, the User Signaling Bearer Service (USBS) based on ETS 300 716 is used.		1 – 60 s
Timer for Toll Fraud Monitoring When this timer expires, an active transit connection is signaled at the display of the attendant console. The attendant will be able to release the transit call. This enables the monitoring of transit traffic.		0 – 650 s
Special busy tone, if destination doesn't answer the call After expiry of this timer, the calling subscriber gets the special busy tone.		30 – 120 s
Special busy tone, if trunk is seized without dialing In case a subscriber seizes an outgoing trunk without dialing, he will get a special busy tone after expiry of the timer.		20 – 60 s
Calling time transfer before answer on busy station After expiry of this timer, subscriber A, which has been transferred from subscriber B to a busy subscriber C, is transferred back to subscriber B.		15 – 180 s

Time parameters	Effective in the CP status:	Timer range
Error signaling interval The error signaling time defines an interval in the value range 1 to 15 minutes. Decimal places are rounded up to full minutes, values under 1 min. or above 15 min. are evaluated as 15 min. The current Class B error entered in the event log is transferred cyclically to the remote center when the interval has elapsed.		60 – 900 s
Delay of busy signaling messages For the Inter-system busy signaling feature (see QSIG features (not in the USA)), the states of selected stations are sent to the central communication system via QSIG. Message sending can be delayed using this timer, in order to avoid bottlenecks at the QSIG interface. The timer is started when a message is sent. The next message is not sent until the timer has expired.		
HiPath 4000 Network: Early DMC This timer defines when the DMC (Direct Media Connection) procedure is started. This timer is started when an alerting message is received via the network trunk. This timer is only used for fine adjustment so that switchover can be implemented as far as possible when tones are not being output.		0

Table for transit monitoring

A side	B side	Monitoring timer
MSI	MSI	yes
MSI	MSI with silent reversal	yes
MSI	ISDN	no
MSI	CorNet (int.)	no
MSI	CorNet (ext.)	yes
Analog trunk with silent reversal	Analog trunk	yes
Analog trunk with silent reversal	Analog trunk with silent reversal	no
Analog trunk with silent reversal	E&M	no
Analog trunk with silent reversal	CorNet	no
Analog trunk with silent reversal	ISDN	no
ISDN	Analog trunk	no
ISDN	Analog trunk with silent reversal	no
ISDN	ISDN	no
ISDN	E&M	no
ISDN	CorNet	no
CorNet	CorNet	no
CorNet (ext)	Analog trunk	yes
CorNet (ext)	Analog trunk with silent reversal	no
CorNet (int)	Analog trunk	no
CorNet	E&M	no
E&M	Analog trunk	yes
E&M	Analog trunk with silent reversal	no
E&M	ISDN	no
E&M	CorNet	no

The following is valid for the trunk types specific to the US:

US line type	Handled like
T1/Loop Start	MSI
T1/Ground Start	ISDN
T1/E&M	ISDN
TMGL/LS	MSI
TMGL/GS	ISDN

See also:

- Section 8.2.7, “Station view: Template Editor”, on page 8-27
- Section 10.4.7, “Trunks | Parameter/Template Editor”, on page 10-72
- Section 10.4.13, “QSIG features (not in the USA)”, on page 10-98
- Section 10.8, “Settings | System Parameters”, on page 10-177
- Section 10.8.1, “Flags”, on page 10-178

10.8.11 Tones and ring types

Settings | System Parameters | Tones and ring types

The **Tones and ring types** parameters are set to industry standards by default and can only be changed with “Development” privileges. Apart from a few exceptions, the fields are grayed out here.

10.8.11.1 Tones/ring types table

The tone or ring type that is to be displayed or changed is selected from this list. Depending on which item is selected, different fields are displayed. The following appear in the list:

- TCO dial tone
- Call waiting Executive/ Sec.
- Call waiting doorbell
- Call waiting tone
- Warning call
- Warning tone
- Intrusion tone
- Busy signal
- Exec. 1/sec. 1 call
- ETD error tone
- External call CO
- External call CO 2
- External call CO 3
- Fax call
- Congestion tone
- HFA tone
- Internal dial tone
- Internal call
- Internal Call 2
- Internal Call 3
- Internal Call 4
- Internal Call 5
- Internal Call 6
- Internal Call 7
- Internal Call 8
- Conference Tone
- Menu end tone
- Negative ack. tone
- Emergency call[1]
- Paging tone
- Positive ack. tone
- Positive ack. tone (Italy)
- Callback
- Ring tone
- Special busy tone (>J-SW)
- Special dial tone
- Doorbell ring
- Door opener
- Automatic recall

1 Emergency call for OScAR-Eco (OpenScape Alarm Response Economy Server). The phones used for emergency calls must not be configured with an audio file for the ring tone and must not have the Do Not Disturb feature enabled.

10.8.11.2 Area: Settings

Continuous tone

For a continuous tone, rather than a sequence of tones, the **Continuous tone** flag must be set.

Tone sequence

This setting makes the distinction between a tone sequence that is **repeated** at intervals and a **one-off** tone sequence.

Attenuation index

The **Attenuation index** allows you to change the volume level for the various tones. Each tone can have its own volume level. For example, the warning tone louder can be set louder than the busy signal. The range is from zero to three with the volume becoming louder as the numbers get higher.

Frequency Indices (F1, F2, F3)

The max. 3 generators that generate the individual frequencies are entered here.

Mode

The frequencies F1, F2, F3 that the individual pulses consist of are specified here.

Pulse

The timeouts for pulses and pauses are entered in these fields in milliseconds.

Extension of the first ring pause when using CLIP Analog

When using the feature “CLIP Analog” together with a protocol that transfers the CLIP information between the first and second tone, the first ring pause may be extended in comparison with the value set in Manager E. CLIP information transfer takes approximately 3.5 seconds. If a shorter value is configured for the ring pause in Manager E (e.g. 2 seconds), only the first ring pause is extended. Subsequent pauses will correspond to the values entered. If the feature “CLIP Analog” is deactivated, signaling is implemented as configured in Manager E. This is defined by the CLIP protocol.

See also:
– Section 10.8, “Settings	System Parameters”, on page 10-177

10.8.12 Daylight saving time/DISA

Settings | System Parameters | Daylight saving time/DISA

The date and time for the switchover to **Daylight saving time** can be defined in this dialog. The day and month when daylight saving time begins and ends is defined for each year. The communication system switchover occurs between 02.00 am and 03.00 am in both cases.

External features for the communication system can be activated from an external telephone via **DISA** (Direct Inward System Access). This proves to be useful whenever external stations want to access features, such as call forwarding. Furthermore, with DISA, it is possible to make an outgoing external connection via the incoming external connection.

10.8.12.1 Area: Set daylight saving time dates

Starting Year

The communication system allows you to define the switchover date for a ten-year period. The starting year determines when this period begins.

If there is no daylight saving time in your country and the current year was set as the starting year, the communications system miscalculates the time. To solve this problem enter a starting year that does not match the current year and is in the distant future, e.g., 2050.

Start, End, Year columns

The table contains the corresponding start (last Sunday in March; in the US first Sunday in April) and end information (last Sunday in October) for the years 1990 through to 2079.

The start information usually entered to this table (last Sunday in March) does not apply to the US. The start date must be set to the first Sunday in April in this case. Otherwise the switchover to daylight saving time in the communication system will be implemented a week early.

10.8.12.2 Area: Remote use of services, DISA

In PRI and BRI, a station number is assigned to this feature via the **DID Number** field.

PRI environments work with a communication system with a primary rate connection via TMS2M/TS2. **BRI** environments work with a communication system with a basic rate connection realized via STMD/STLS.

In the USA, this is not relevant to BRI.

DISA, DID no.

DISA is dialed with a DID number (**DID No.**) or via call assignment (MSI).

In order to be able to use the DISA functions, the user must enter a password. With the **Security mode** options, one can establish whether the user must wait after entering the password or whether he/she must enter the hash symbol (#).

With Mobility Entry: The authentication via password is not required if a call recognized as a mobility number is made externally to a DISA DID number. In this case the internal dial tone is directly connected. The terminal of the external station must transmit it´s number. This number is then checked against the mobility entry list.

The feature DISA is not supported by HiPath 5000

CAID (only for USA)

Subscribers can receive multiple calls for the same call number via multiple ISDN lines by using the line identifier (CAID = Call Appearance Identifier) assigned to that call number. With this feature, the Central Office (CO) can offer a call at multiple interfaces, since the Call Appearances for call numbers can be shared. This enables HiPath 3000 to accept the call at an unused interface.

CAID values can be set for the CO type AT&T or EWSD. These values consist of one or two digits, which are assigned by the CO to the primary and secondary system numbers. A CAID value represents a connection path between a voice subscriber or a data terminal and a BRI channel. For each extension, at least one line ID (CAID) must be programmed so that external calls can be initiated or received there without any intervention from the Attendant.

Each station can be assigned a maximum of four CAID numbers.

In order to allow an extension to use external phone functions, e.g., to accept call waiting or conference calls, it must be assigned multiple line IDs. This CAID enables various answering machine functions to be simulated at a single extension. In other words, each of the CAID numbers simulates an additional extension (i.e., a line) without an actual external line being present for these additional extension numbers.

Some COs do not assign any CAID to the ISDN data terminals. If you do not know whether CAID numbers were assigned to the system, please contact your BRI provider.

Security mode

Log-on to the communications system occurs via a password. This password consists of the internal station number and the lock code password. The password entry is only acknowledged after a timeout or after the end-of-input symbol # is detected. The acknowledgement procedure **After timeout** or **After input #** can be selected here.

DISA internal

The **DISA in a HiPath 5000 RSM/AllServe environment** (Direct Inward System Access Internal) feature allows easy activation and implementation of specific features in another node. This DISA procedure can only be used within a networked system and serves to activate and execute some features in another node. Please note, however, that before the DISA procedure can be used, this must be activated by entering the service code DISA internal (*47). To activate this feature, each node has a unique DISA call number throughout the system. **DISA internal** does not support trunk seizure. Authorization levels are not checked when DISA internal is implemented.

DISA internal, Internal call number

After entering the DISA internal procedure (*47), features are activated via a unique DISA call number (DID no.) + DISA station + password for the feature to be activated + optional suffix.

Example on how to activate the LM`s DISA internal feature:

1. Activate the DISA internal procedure via the service code *47
2. Enter the DISA call number (DID no.) of the appropriate node, e.g., 7777
3. Enter the appropriate station at which the service/feature is to be executed, e.g., 100
4. Enter the password for the service/feature to be activated, e.g., *1 (for call forwarding)
5. Enter a suffix if required, e.g., 1 (for all calls)

Mobility Callback, DID no. (from HiPath 3000/5000 V8, HiPath OpenOffice EE V1 R2)

“Mobility Callback” is used together with the “Mobility Entry” feature, see Section 10.2.8, “Mobility Entry (not for U.S.)”. The “Mobility Callback” feature can be used for home office jobs.

If a teleworker calls a special DID number from their private telephone, the call is then automatically terminated before the connection is established and a callback is immediately carried out.

The requirements are:

- The external number of the calling telephone is registered and configured on the communications system.

- The DID number is configured.
- Together with the call, the CLIP information, i.e., the external number is transmitted.

After the callback no further authorization is necessary. Via the communications system, the teleworker can make internal and external calls as well as use all mobility features.

If the number is not registered on the communications system, the call is terminated and no callback is made.

See also:

- Section 8.2.1, “Station view: Flags”, on page 8-5
- Section 10.2.8, “Mobility Entry (not for U.S.)”
- Section 10.4.5, “Trunks | Parameter/General Flags”, on page 10-65
- Section 10.8, “Settings | System Parameters”, on page 10-177

10.8.13 Plus Products Flags/MW

Settings | System Parameters | Plus product flags/MW

Plus product flags/MW is used to set the parameters if additional applications are running in the communication system.

10.8.13.1 Area: Plus Products Flags

CSTA applications active flag

This is a flag which can be set if an application on the communication system is active via the CSTA interface (e.g. OpenScape Contact Center).

The flag does not affect functionality. It is only useful for the system administrator, particularly in the case of remote administration.

OpenScape Contact Center flag

This flag must be set if OpenScape Contact Center is being operated on the communications system. If the flag is not set, OpenScape Contact Center cannot distribute any calls.

The flag implements special adaptations to the CSTA interface for OpenScape Contact Center.

This flag must not be set for any other CSTA applications.

The flag is deactivated by default.

Direction prefix sent via CSTA flag

After this flag has been activated, external call numbers are supplemented with a direction prefix via CSTA – Event – Report. Certain digits which correspond to the direction are used as prefixes.

Extended CSTA-CAUSE handling activated flag

This flag affects cause handling in the CSTA event report. The flag is activated by default and should only be deactivated for applications that do not support the full Cause scope.

In addition, when the flag is set, a V.24 acknowledgment timer of level 2 is reduced from 40s to 20s.

CSTA with CSP

This flag must be set when an application is connected to the communication system via CSP. CSP functionality is supported as of TAPI 170 V2.

Setting this flag causes the CSTA device IDs to be additionally supplied with an internal/external identification. TAPI 170 V2 also uses this mode. However, when connecting older versions of TAPI 170 or other CSTA applications that do not support this mode, the flag must not be set.

Blind Transfer

If this flag is set, a call switched via OpenScape Xpressions will be transferred using Transfer before answer. Once the transfer has occurred, the call can no longer be influenced by OpenScape Xpressions, i.e., will not be visible to OpenScape Xpressions. A call which was switched by “Blind Transfer”/”Transfer before answer” cannot be rejected by the called subscriber.

MULAP monitoring

From HiPath 3000/5000 V8, CSTA interface of HiPath 3000 supports the monitoring of MULAP and MULAP devices.

If OpenScape Office is connected to HiPath 3000 the “MULAP monitoring” checkbox must be activated! This ensures the monitoring of MULAP and of MULAP devices. After activating the checkbox error messages can appear if applications are available which have not not yet been updated.

The checkbox is deactivated by default.

Networked CTI domain

This flag enables IP trunks to be monitored for networking and allows applications to forward and to transfer a call. It is recommended that individual trunk IDs be defined.

CSTA Park monitor, Call number

Using CSTA Park monitor, CSTA applications can configure call event reporting for a park queue.

Inactive, analog stations can only be configured if they have already been assigned the station type **Answer machine** (also see Station view: Activated features).

10.8.13.2 Message waiting parameter

Acoustic message signaling

The options can be used to select the signal to be implemented on the telephones when there is an message; this is valid throughout the system.

The following options can be selected independently of one another for system telephones and other telephones:

- **by announcement**
- **special dial tone**
- **none**

See also:

- Section 10.8, “Settings | System Parameters”, on page 10-177
- Section 8.2.2, “Station view: Activated features”, on page 8-16

10.9 Settings | Auxiliary equipment

Settings | Auxiliary equipment

Settings | Auxiliary equipment allows you to configure system ports (trunks) to support a wide range of auxiliary equipment (modules).

Tabs and Dialog boxes
• Ext. connection • Actuators • Announcement • Announcement	External destinations • Paging • Sensors • PhoneMail • Integrated Voice Mail (IVM) (only if an IVM card is plugged-in) – IVM	Parameter/Mailbox Parameters – IVM	Parameter/COS – IVM	Additional Settings/General – IVM	Additional settings/Network parameters – IVM	Additional settings /Automatic attendant – IVM	Additional Settings/Calendar – IVM	Additional Settings/Central distribution list – IVM	Additional Settings/Group mailbox • EVM (Entry Voice Mail) – EVM	Additional settings/General – EVM	Additional settings / Automatic attendant:

10.9.1 Ext. connection

Settings | Auxiliary equipment | Ext. connection

Ext. connection can be used to set up stations for:
- one external music-on-hold device, and
- a maximum of four entrance telephone relays

Note that for an a/b port of the entrance telephone, all station flags must be first deleted, and the station type must be configured. This step must be completed before an entrance telephone can be configured.

10.9.1.1 Selection table

All stations in the communication system are listed in the **Selection** list by call number and name.

The setup is implemented by selecting the extension from the list and dragging it to the desired position (**External MOH** or **Door relay**). To delete an entry, select the entry and drag and drop it onto the Recycle Bin.

10.9.1.2 Area: External MOH

External MOH allows you to connect music-on-hold inputs from sources such as a CD player or corresponding services (e.g., Muzak). The device connects to the station's port. The port type must be set to **P.O.T** (for details on determining the port type, see Subscriber).

It is also possible to use an IVM as the external MOH. Up to six different MOH ports (for the ITR groups 1-16) can be configured in the IVM. Up to six different MOH ports (for the ITR groups 1-6) can be configured in the IVM. These ports are defined as MOH ports by activating the appropriate COS class (value 17). When an IP telephone is placed on hold, only the MOH of ITR 1 is played back on that phone.

ITR Group, Call no.

To configure a station for an external MOH device, you drag that station from the **Selection** list to the **ITR Group: Call no.** field in the External MOH area.

A maximum of 6 MOH modules (Music on Hold) can be connected, whereby each MOH module can be assigned to one or more ITR groups.

For calls that cannot be assigned to an ITR group (e.g. UCD), the MOH that is assigned to the first ITR group is connected.

10.9.1.3 Area: Door relay

Four entrance telephones/door openers can be configured in this table. To configure a station for an external MOH device, you drag that station from the **Selection** list to the **Station** or **Destination** field in the External MOH area.

You can also set up to three flags (**Opener**, **DTMF** and **FWD**).

Station, Destination columns

The **Station** port type must be **P.O.T** or **No Port**. A station number or a group number can be specified as the **Destination** at which a special ring is signaled when the doorbell button is pressed. The call is signaled in accordance with the call forwarding algorithms defined in Settings | Incoming calls.

Opener

The door opening system is set up via an analog interface with this configuration. The relevant TFE adapter box must be connected to the entrance telephone for this purpose.

The TFE adapter box is not available in the USA.

DTMF (Dual Tone Multi Frequency)

This flag defines whether the door opening system can be activated remotely with a DTMF transmitter.

FWD (Call Forwarding)

This option must be activated if the doorbell ring should follow destination external call forwarding and if call forwarding is to be signaled at the external destination. Internal call forwarding is always followed, regardless of this option.

See also:

- Section 10.2.1, “Subscriber”, on page 10-12
- Section 10.6, “Settings | Incoming calls”, on page 10-125
- Section 10.9, “Settings | Auxiliary equipment”, on page 10-242
- HiPath 3000/5000 Feature Description, Actuators

10.9.2 Actuators

Settings | Auxiliary equipment | Actuators

With Hicom 150 E Office Point, Hicom 150 E Office Com and HiPath 3300 to 3550, the optional control relay module can be implemented with 4 control inputs and outputs each for functions such as monitoring, alarm, control and adjustment. This can be used in security systems or building management systems.

The signal input function (control input) is triggered by closing any of the external floating contacts. The external electric circuit is supplied by the control relay module and electrically isolated from the system controller by means of an opto-coupler.

10.9.2.1 Actuator list table

The actuators to be administered are displayed in the list. When you select an actuator in the list, the parameters for that actuator are displayed in the Actuator area and can be modified.

10.9.2.2 Area: Actuator

Actuator type

Various functions can be assigned to the actuators (relays).

Type	Function	Switching time
No function	The relevant actuator is either not operating or is entered as a common ringer under Settings	Incoming calls, call destination lists.	
Manual on/off	The relay can be activated or deactivated for switching purposes by means of the codes 'Activate or deactivate selected switch'. In the case of key terminals this function can also be programmed on a key. A specific station, a group or all stations can be allocated to this relay type by selecting 'NONE'. In the case of this relay type, shutdown can be delayed if a value greater than 0 has been entered in the 'Switching time' field.	a multiple of 100 ms.

Type	Function	Switching time
Auto off on timeout	The relay can be activated or deactivated as a time switch by means of the code 'Activate selected switch' (see above). In the case of key terminals this function can also be programmed on a key. A specific station, a group or all stations can be allocated to this relay type by selecting 'NONE'.	a multiple of 100 ms.
Door opener	Refer to type **Auto off on timeout.** The text "Door opener" is displayed for the allocated terminals.	
Speaker amplifier	The relay is activated when connected to the entrance telephone. The relay is deactivated when disconnected from the entrance telephone or entrance phone/loudspeaker. This makes it possible to control an entrance telephone amplifier so that it is only activated when required. An entrance telephone or the loudspeaker port must be allocated to this relay type.	

Type	Function	Switching time
Engaged display	The relay is activated if the allocated station ceases to be in the idle condition. In other words: The handset has been picked up, the loudspeaker is activated or the extension is being called. The relay is deactivated if the allocated station resumes the idle condition. This means that the handset has been replaced, the loudspeaker has been deactivated and the extension is not being called. The relay can also be activated directly by means of the code 'Activate/deactivate selected switch'. In the case of system telephones this function can also be programmed on a key. If the relay was activated by means of a code or a key, the status of the allocated station is ignored and the relay can only be deactivated again by means of a code or a key. Practical application: Door busy indicator "Do not disturb", "Meeting", "Conference", PC connection for data transmission (power management). A specific station must be allocated to this relay type. In the case of this relay type, shutdown can be delayed if a value greater than 0 has been entered in the 'Switching time' field.	a multiple of 100 ms.
Music On Hold	The relay is activated if at least one station or a line in the communication system is not in the idle state. The relay is deactivated if all stations and lines in the communication system are in the idle state. Practical application: activation of a tape device, CD player, PC connection power management etc. 'NONE' must be entered as allocated station for this relay type and it must only occur once in the communication system. In the case of this relay type, shutdown can be delayed if a value greater than 0 has been entered in the 'Switching time' field.	a multiple of 100 ms.

Type	Function	Switching time
Second ringer	(Second ringer (W2)) The relay is activated for the allocated station if it is being called. This relay is deactivated when the called party answers or the call is terminated. This relay is not clocked. A specific station must be allocated to this relay type. In the case of this relay type, shutdown can be delayed if a value greater than 0 has been entered in the 'Switching time' field.	a multiple of 3 seconds.
Call charge pulse	The relay is clocked in accordance with the number for the allocated station on the basis of the incoming call charge pulses or call charge signals. A specific station must be allocated to this relay type. The switching time is not taken into consideration in this case.	always 150 ms pulse and 150 ms break.
Station active	The relay is activated if the allocated station is active. This means that the handset has been picked up or the loudspeaker has been activated. The relay is deactivated if the allocated station resumes the idle condition. This means that the handset has been replaced or the loudspeaker has been deactivated. A specific station must be allocated to this relay type. In the case of this relay type, shutdown can be delayed if a value greater than 0 has been entered in the 'Switching time' field.	a multiple of 100 ms.

Actuator name

Any name (up to 16 characters in length) can be assigned to the actuators to be administered.

Allocated station, call number

A station that is to be allocated to an actuator can be selected here.

Switching time, factor

Timeouts can be entered here as factors to yield multiples of 100 ms.

See also:

- Section 10.6, “Settings | Incoming calls”, on page 10-125
- Section 10.9, “Settings | Auxiliary equipment”, on page 10-242
- Section 10.9.6, “Sensors”, on page 10-256

- HiPath 3000/5000 Feature Description, Actuators

10.9.3 Announcement

Settings | Auxiliary equipment | Announcement

Announcement equipment to analog station ports can be connected via **Announcement**. Depending on the communication system, up to 16 devices can be supported.

In Hicom 150 E Office Pro/HiPath 3700, 3750, E&M tie-line ports can be used in addition to analog (a/b) ports. Up to thirty-two stations can be switched to an announcement device at the same time.

For UCD, announcement before answer, and DTMF DID, up to sixteen announcement devices can be connected to the a/b interface on the station side in addition to the MOH sources.

Hicom 150 E Office Pro/HiPath 3700,3750 can also be connected to E&M. Start/stop can be indicated via relay and sensors or via E&M.

10.9.3.1 Announcement equipment table

The call numbers for the individual announcement devices (ports available for connection) and the announcement type can be selected in this table.

Ann. device column

The announcement device number is specified by the communication system.

Analog ports that are set up as announcement ports must be assigned the value Station view: Activated featuresAnswering Machine **under** Extension Type.

Access column

The connection is defined via **Access**. Here you select the port to which this device is connected.

Type of ann. column

The device type connected to the communication system is selected via **Type of ann.**.

For Hicom 150 E Office Com/Pro and HiPath 3300 to 3750, this equipment list refers to the **Wait dest.** under UCD groups.

A number of different announcement types can be set for announcement equipment:

None	Announcement equipment is not connected.
Announce-ment	Enables the connection of only one external announcement device via SLA ports, via the TIEL card or via IVM. The announcement provided by the activated announcement device must have a fixed beginning and end. This device should not forward the call after the end of the announcement (a switching destination should not be entered). The corresponding announcement device port is entered under **Access**.
Music On Hold	An announcement or music is repeated continuously. Queued calls can also be connected while the music or announcement is being played. Connection is possible either via SLA ports, via the TIEL card or via IVM. The corresponding announcement device port is entered under **Access**.
Internal Music On Hold	Activates the system-internal music-on-hold in the communication system. For this option, **none** should be entered under **Access**. External MOH is heard if defined as a destination in the communication system. Entries under Access have no effect on either variant.
Media PC	This setting is predefined. The media PC or controlling application controls whether the caller hears the announcement from the beginning or is connected to an on-going announcement.

External destinations button

The Announcement | External destinations dialog box is displayed in order to set up external destinations.

10.9.3.2 Announcement prior to answer table

The **Announcement prior to answer** feature allows you to play announcements for both analog and digital trunks via externally connected announcement devices. This table can be used to allocate different announcement devices (**Ann. device** column) to different CO lines (**Slot / line** column).

A corresponding timer, i.e. **Delay for announcement prior to answer**, exists for this feature (see Time parameters).

10.9.3.3 Area: Selection

HG 1500 Card

Under **HG 1500 Board**, select an inserted HG 1500 board in the communication system that is not configured as a gatekeeper (see also Settings | Network | Gatekeeper).

10.9.3.4 Area: MOH sources

In an IP network, DSP resources can be defined for a gateway to turn on MOH (Music On Hold) at IP clients. Up to five DSPs can be reserved for MOH activation per gateway. For each MOH source (DSP), the appropriate Codec can also be set.

Number of sources

Select the number of MOH sources here.

Audio Codec

For each MOH source, select the Codec to be used here. The Codec determines the type of PCM (coding of languages packets).

See also:

- Section 8.2.2, “Station view: Activated features”, on page 8-16
- Section 10.6.11, “UCD groups”, on page 10-153
- Section 10.8.10, “Time parameters”, on page 10-223
- Section 10.9, “Settings | Auxiliary equipment”, on page 10-242
- Section 10.9.4, “Announcement | External destinations”, on page 10-253

- HiPath 3000/5000 Feature Description, Announcements

10.9.4 Announcement | External destinations

Settings | Auxiliary equipment | Announcement | External destinations

External destinations can be used to address announcement devices in another HiPath node. To do this, the announcement device is identified as external, and the call number is entered under “external destinations”.

10.9.4.1 Area: Ann. device

The **<- previous** and **next ->** buttons can be used to scroll through the announcement devices. The settings of the announcement devices are displayed in the process.

10.9.4.2 Area: DID call number

Route, Call no.

Call number of an announcement port in another HiPath node.

See also:
– Section 10.9.3, “Announcement”, on page 10-250

10.9.5 Paging

Settings | Auxiliary equipment | Paging

The **Paging** tab is used to set parameters for activated paging functionality.

10.9.5.1 Area: Paging system

PSE port

Here the port is selected to which the paging system equipment (PSE) is connected.

Type

This option defines the PSE type:

Single	via a/b port A Basic PSE is connected via analog a/b ports and a ring converter. The ring converter creates an indication for the PSE which it then uses to call the required station.

10.9.5.2 Area: Operating mode

There are three operating modes. They are set with a 3-digit code + end symbol.

Urgent ring, Normal ring

The operating modes are distinguished by different acoustic signals; these signals can differ depending on the manufacturer.

Text

Only text is displayed as information in this item.

See also:

- Section 8.2.2, “Station view: Activated features”, on page 8-16
- Section 10.9, “Settings | Auxiliary equipment”, on page 10-242
- HiPath 3000/5000 Feature Description, Paging system

10.9.6 Sensors

Settings | Auxiliary equipment | Sensors

Sensors is used to configure the control inputs which trigger the corresponding functions in the communication system.

10.9.6.1 Sensor list table

The sensors to be administered are listed in the list.

10.9.6.2 Area: Sensor

Sensor type

The sensors can be assigned to different types in accordance with the above functionalities.

Entry in Error History

Allows you to select whether or not error 1/19 is to be entered in the error history.

Only active for the sensor type ALARM.

Destination call number

An associated a/b port is programmable for the sensors. This port is called by the communication system once a setup signal has been received. The calling party then overrides this connection. A recorded announcement can be activated via an answering machine connected to this port, which informs the dialed station of the response of the sensor. An a/b port programmed in this way cannot be contacted from the outside.

If an external phone number or an EVM was programmed for a sensor instead of an a/b port, the connection is established, but no acoustic information is transmitted regarding the sensor response.

Important: This feature is not implemented for an external phone number and an EVM.

If the phone number is external, the called station can at least - if CLIP is active - see the origin of the call.

Announcement equipment, call number

Input of the port to which the announcement device, answering machine or PhoneMail device is connected.

Message texts box control data

Input of the control string with a maximum of 24 characters for the PhoneMail system (mailbox call number).

If the connection has been established, the control string is transmitted to the recorded announcement port. If a recorded announcement port is not available, the control string is transmitted to the destination.

Application example for HiNet VS1600

The failure of the fan is detected by a temperature sensor and is signaled via a LED on the front panel. If Entry in Error History is activated, this alarm is stored additionally in the error history.

Sensor name/signaling text

Name of the sensor, max. 16 characters

In the case of internal destinations, the sensor name appears in the display.

If **Entry in Error History** is activated, only up to 10 characters can be entered for the sensor name.

Number of calls

The number of attempts that are to be made to contact the destination station are entered here.

Timer multipliers

Field	Description	Multiplier
Call duration	The sensor's tone is signaled for the time specified here (multiple of 5 seconds).	1 … 255
Call pause	The time for the interval between two sensor tones in multiples of 10 mins.	1 … 255
Block time	The time after the response of a sensor in which an indicator change is not forwarded (multiple of 10 mins.).	1 … 255

See also:

- Section 10.9, “Settings | Auxiliary equipment”, on page 10-242
- Section 10.9.2, “Actuators”, on page 10-245
- HiPath 3000/5000 Feature Description, Sensors

10.9.7 PhoneMail

Settings | Auxiliary equipment | PhoneMail

The settings for **PhoneMail** are only required for networked communication systems with central PhoneMail (both CorNet-N or CorNet-NQ and QSIG). There must be a homogeneous call numbering plan. These settings need only be made in the PABX satellite systems.

Comment: This procedure replaces the solution using pseudo ports which was generally implemented for callback access to date. The pseudo port for call forwarding to PhoneMail is still required.

Valid for Rel. 1.0 and Rel. 2.2:
- A port which performs callback must be set up under Stations.
- A port which performs call forwarding to PM must be set up under Stations.
- A port which performs callback must be set up under Stations.

Valid for Rel. 3.0:
- A port which performs callback must be set up under Stations.
- A port which performs call forwarding to PM must be set up under Stations.
- A port which performs callback must be set up under Stations or the callback number is entered under Connection--> PhoneMail.

Valid for a networked system:
- A port which performs callback must be set up under Stations.
- A port which performs call forwarding to PM must be set up under Stations or the external entries in Call Management under Auxiliary Equipment... > PhoneMail can be used.
- A port which performs callback must be set up under Stations or the callback number is entered under Call forwarding.

Caution
When using a Phonemail system, the ports of the EVM for voice mail usage must be decommissioned (see Section 10.9.18, “EVM (Entry Voice Mail)”, on page 10-291 for details).

10.9.7.1 Area: Callback access PhoneMail

Call number

If there is a message from a PhoneMail, the Mailbox key sets up a connection to the call number specified under ’Call number’ when the message is requested.

In homogeneous networks, this call number is the same as the **Callback Access Number** from the PABX. This call number must be forwarded to the PABX by means of LCR (Least cost routing).

Name

The name entered here appears on the display of the system telephone when the Mailbox key is pressed.

10.9.7.2 Area: Live Recording Device

Call Number

If the recording of calls (Live Call Record) has been enabled, the active call will be recorded on the device whose call number is specified here.

See also:
– Section 10.9.3, “Announcement”, on page 10-250 – Section 10.9.18, “EVM (Entry Voice Mail)”, on page 10-291

10.9.8 Integrated Voice Mail (IVM) (only if an IVM card is plugged-in)

Settings | Auxiliary equipment | Integrated Voice Mail (IVM)

IVM is started with 8 or 24 B-channels by default.

The parameters and maintenance settings needed for IVM can be read out and administered with the HiPath 3000 Manager.

IVM is only available if an IVM card is plugged into the communication system.

The start-up of the IVM ports is analogous to the start-up of a digital station port. In addition, the station flags are used to set the station port type to Phonemail (5-digit call number).

In the ISDN port flags, the Layer 3 CHI format is set by default to interface type: other interface, and the call reference length is set to 2.

When configuring a Groups/hunt groups, note that in order to support IVM cards with up to 24 channels, the first group must be used, since the corresponding number of ports is only supported for the first group. Furthermore, 24 channels are only possible if the type of the group is set to cyclic or linear. If a cyclic or linear group with 24 channels was created and if this group is later reconfigured as a normal group, then all channels in the group will be deleted.

Caution
When using an IVM, the ports of the EVM for voice mail usage must be decommissioned (see Section 10.9.18, “EVM (Entry Voice Mail)”, on page 10-291 for details).

10.9.8.1 Mailboxes table

All mailboxes are shown in the table. Every mailbox must be uniquely identified via the index (=row header).

Column	Type	Default value	Range
Mailbox ID	Read only	Consecutive number	1-500

Mailbox call no.

The call numbers of the individual mailboxes are entered and assigned to the corresponding index here.

Column	Type	Default value	Range
Mailbox call number	Edit control	-	1–8 places

When a mailbox is assigned to a station, it is essential that the mailbox has the same call number as that station.

Name

The **Name** belonging to the mailbox is entered here. It can be a person's name, the name of a department or an other suitable entry. The name can contain a maximum of 16 characters. Only uppercase and lowercase letters from A-Z, digits, commas, periods and blanks may be used.

The station for which a mailbox should be configured can be copied over via the Add station mailbox data button from the station dialog or from an Excel table into the mailbox dialog using the Copy and Paste technique.

Column	Type	Default value	Range
Mailbox name	Edit control	-	ASCII

COS

A defined COS class (**COS 1** through **COS 17**) can be assigned per mailbox, or the IVM | Parameter/Mailbox Parameters dialog can be used to freely assign individual COS bits to a mailbox. Up to 254 different combinations (Type 1 to Type 254) are possible as new COS classes. These 17 fixed and 254 free COS combinations can be assigned to mailboxes via the **COS** drop-down list. All further combinations are just identified as "user-defined" and cannot be assigned by using the COS drop-down list.

Column	Type	Default value	Range
Mailbox COS	Selection box	COS 4	COS 1 to COS 17 Type 1 to type 254 (user defined)

Param

The **Param** column in this dialog functions exactly as in the subscriber dialog. If it is selected with a double-click, the submenu IVM Parameter opens with the tab:

Tabs
– IVM | Parameter/Mailbox Parameters – IVM | Parameter/COS

As in the station dialog, the modified settings can be stored temporarily as a template and copied to additional mailboxes. The template is identified by "**" in the Parameter column.

Name selection

You can define here whether or not name selection is to be possible for a particular station. Requirements: name selection must be allowed in general (see IVM | Additional Settings/General) and the station must have a recorded name.

10.9.8.2 Buttons

Additional settings

Using this button, you can reach **Additional settings** for setting the IVM via tabs.

Tabs
– IVM	Additional Settings/General – IVM	Additional settings/Advanced – IVM	Additional settings/Network parameters – IVM	Additional settings /Automatic attendant – IVM	Additional Settings/Calendar – IVM	Additional Settings/Central distribution list – IVM	Additional Settings/Group mailbox

Add station mailbox data

So long as no entries have been made in the table, the stations that are active or have been provided with a name can be taken over in this dialog via Subscriber.

After the values are transferred, the function of the button changes to **Apply template settings**. On pressing this button, the temporarily stored settings of the mailbox that is identified with a "**" in the table are copied to one or more other mailboxes.

Check

With **Check**, the mailbox call numbers are checked for call number band overlap and corresponding warnings are displayed.

The IVM settings are checked for consistency either manually with **Check**, or automatically with **Apply**. In this process, the following errors are checked:

- Two mailboxes have the same call number or overlap one another in their call numbers (e.g., "123" and "1234").
- The call number of a mailbox is longer than allowed (see the **Max. mailbox no. length** parameter in IVM | Additional Settings/General).

In addition, warnings are issued with the following actions:

– A mailbox that was present in the source data record was deleted.
  The user must confirm this action since in this case, all parameters belonging to this mailbox are reset to the default values; the mailbox itself is deleted from the IVM and thereby all messages, greetings, etc. belonging to this mailbox are also deleted.

The following actions are checked during input. In the status bar, an appropriate warning results immediately after the input.

– The COS of a mailbox was decreased.
  The user must confirm this action since in this case, all parameters that belong to the features that are now no longer accessible for this mailbox are reset to the default values.
– A mailbox call number is assigned repeatedly.

See also:

– Section 10.9.9, “IVM | Parameter/Mailbox Parameters”, on page 10-265
– Section 10.9.10, “IVM | Parameter/COS”, on page 10-269
– Section 10.9.11, “IVM | Additional Settings/General”, on page 10-274
– Section 10.9.13, “IVM | Additional settings/Network parameters”, on page 10-282
– Section 10.9.14, “IVM | Additional settings /Automatic attendant”, on page 10-284
– Section 10.9.15, “IVM | Additional Settings/Calendar”, on page 10-286
– Section 10.9.16, “IVM | Additional Settings/Central distribution list”, on page 10-288
– Section 10.9.17, “IVM | Additional Settings/Group mailbox”, on page 10-289
– Section 10.9.18, “EVM (Entry Voice Mail)”, on page 10-291

10.9.9 IVM | Parameter/Mailbox Parameters

Settings | Auxiliary equipment | IVM | Parameters

The **Mailbox parameter** is used to copy certain parameters to the Mailboxes table, depending on the selected **COS** parameter (see Integrated Voice Mail (IVM) (only if an IVM card is plugged-in)).

To access the dialog, double-click in the column Integrated Voice Mail (IVM) (only if an IVM card is plugged-in)Param **on the** tab.

10.9.9.1 Area: Mailbox

Number or Index

The index or call number for the selected mailbox is shown here. If the mailbox has not been assigned a call number as yet, the index is shown.

Name

The name of the selected mailbox.

Use as template

The settings carried out for this mailbox can be temporarily stored and then transferred to one or more mailboxes using the template function. In connection with the button **Apply template settings** (see Integrated Voice Mail (IVM) (only if an IVM card is plugged-in)), the same mailbox parameters can then be configured without having to set up the individual features.

Previous, Next

Shows the mailbox with the index value incremented or decremented by one.

10.9.9.2 Additional Parameters

Depending on which **COS** parameters are selected in the Mailboxes table (see Integrated Voice Mail (IVM) (only if an IVM card is plugged-in)), additional parameters are displayed.

Information on the mailbox	The **Information on the mailbox** parameter is set for each mailbox with the **COS 1**. An activated option identifies the mailbox as an information mailbox and allows the caller to navigate within the greeting or to listen to it repeatedly.
Automatic hang up after announcement	If a mailbox has been set up as an **Information mailbox**, the **automatic hook on after announcement** option can be used to specify whether the mailbox should hang up independently after it is played back once.
Hunt group code	The hunt group code with which this mailbox can be reached can be selected here. The value “Standard” in this field means that the mailbox is assigned the hunt group code of the first hunt group in which an IVM station is a member. If the IVM station is assigned to multiple hunt groups (multi-customer systems), the mailbox must be assigned a different hunt group code than the standard. A selection can be made in such cases from the list of all hunt groups in which an IVM station is a member. For this reason, the hunt groups should be configured first.
Route code	The route code (trunk group code) with which this mailbox can seize specific routes (trunk groups) for outgoing communications can be selected here. Without an entry in this field, the first route code of the system is used (to be found under Trunk/Network * Routes). If you want to deviate from the standard, you must enter the associated route code of the mailbox if the mailbox has the Message Call class of service. Note that the first route code of all routes can be selected in each respective case.

Attendant console	The number of the attendant console at which this mailbox is to be intercepted can be entered here. Setting range: 1 to 8 places. Without an entry in this field, the number of the intercept position of the system is used (to be found under System Parameters | Intercept / Attendant). If a multi-customer system is involved, the number of the associated Attendant (Intercept position) for the selected mailbox can be entered here.
Language	The user may choose between languages 1, 2 or 3. By default, language 1 is selected. The language involved can be determined via Maintenance	IVM (only if an IVM card is plugged in)
Fax intercept	For each mailbox that has set the corresponding COS bit **Fax intercept**, the Fax number at which incoming faxes are to be intercepted can be entered here.

Greeting control	**Day/night system** **In** COS 6, the connected greeting can be controlled using the IVM calendar (not available in Rel. 1.0) or the night service status of the communication system. If **Day/night system** is selected, the day and night greeting (greeting 1 or 2) are automatically connected by the IVM, depending on the night service status of the communication system. **manual** If **manual** is selected, the 4 possible greetings are activated manually by the user. **Type of call** If **Type of call** is selected, a distinction is made between internal and external calls. Greetings 1 and 2 of the IVM are then converted to the internal and external greeting. If the **Greeting selection** flag is selected in COS 17 for MOH, **Type of call** is deactivated. **IVM calendar** A calendar function can be added to all announcement mailboxes. If the **Greeting selection** flag is selected in COS 17, **IVM calendar** can be selected and activated.

See also:

- Section 9.19.13, “Maintenance | IVM (only if an IVM card is plugged in)”, on page 9-57
- Section 10.9.8, “Integrated Voice Mail (IVM) (only if an IVM card is plugged-in)”, on page 10-261
- Section 10.9.10, “IVM | Parameter/COS”, on page 10-269

10.9.10 IVM | Parameter/COS

Settings | Auxiliary equipment | IVM | Parameter

For each mailbox, **COS** can be used to create the individual variants of COS classes that deviate from the standard.

To access the dialog, double-click in the column Integrated Voice Mail (IVM) (only if an IVM card is plugged-in)Param **on the** tab.

The COS 2 (outward-restricted) is defined for all IVM ports. For Germany and Greece, the predefined COS 2 is used. For all other countries, the COS 2 was changed to the setting “outward-restricted”.

10.9.10.1 Area: Mailbox

Number or Index

The index or call number for the selected mailbox is shown here. If the mailbox has not been assigned a call number as yet, the index is shown.

Name

The name of the selected mailbox.

Use as template

The settings carried out for this mailbox can be temporarily stored and then transferred to one or more mailboxes using the template function. In connection with the button **Apply template settings** (see Integrated Voice Mail (IVM) (only if an IVM card is plugged-in)), the same mailbox parameters can then be configured without having to set up the individual features.

Previous, Next

Shows the mailbox with the index value incremented or decremented by one.

10.9.10.2 COS, COS, Status table

Mailbox variant consisting of the COS features. Every individual feature can be released in the **Status** column.

Info/minimum mailbox

Setting this COS bit allows you to set up this mailbox as an info mailbox. This COS bit cannot be set at the same time as the Auto Attendant Mailbox COS bit. The **Number of Greetings** setting must be set to 1. If not, corrections will be made when setting this COS bit.

Auto Attendant Mailbox

Specifies whether this feature is activated for the mailbox. This COS bit cannot be set at the same time as the Info/Minimum Mailbox COS bit.

Group mailbox

Specifies whether the mailbox is a group mailbox.

Number of Greetings

This parameter specifies the number of greetings for the mailbox. The number of greetings plays a role in the following features:

- Greeting selection
- Week plan
- Personal week plan

Recording and sending message

Specifies whether the mailbox owner may record a message in his or her own message block and send it to another (other) mailbox(es). As a recipient, you may choose **system-wide distribution list** and **broadcast** in addition to **Mailbox** as long as the mailbox has the appropriate class of service.

The message is only delivered if message recording is activated in the target mailbox.

Send messages

Specifies whether the mailbox owner can forward the last message heard on to another mailbox. When doing so, he or she can record a commentary that is attached to the message. As a recipient, you may choose **system-wide distribution list** and **broadcast** in addition to mailbox, if the mailbox has the appropriate class of service.

The message is only delivered if message recording is activated in the target mailbox.

Callback to message originator

Specifies whether the mailbox owner can call the person who left the message back if his or her call number was transferred. In this case, the callback is started using a key combination (“*8 or “70”, depending on the **User interface switchover** to Xpressions V3 interface setting).

Save messages

Specifies whether this mailbox supports message saving.

Skip to next TUI function

Specifies whether it is possible to skip all of the messages in this mailbox and go straight to the mailbox administrator. Skipping to the next TUI function is initiated using the key combination “*” / “79” in the **User interface switchover** to Xpressions V3 interface.

Private message

Specifies whether this feature is activated for the mailbox.

Greeting selection

Specifies whether the mailbox has greeting control.

message call

Specifies whether this feature is activated for the mailbox.

Substitute function

Specifies whether this feature is activated for the mailbox. This flag is deactivated by default for every IVM COS.

FAX number

Specifies whether the mailbox can set its own fax intercept.

Switch mailbox language

Specifies whether the user language for this mailbox can be selected or changed.

Personal mailbox user name

Specifies whether the mailbox has a user name.

Broadcast

This COS bit is used to grant a mailbox authorization to send broadcast messages. Broadcast is a special case when sending voice messages. If a station is authorized to send broadcast messages, this will be indicated as an optional destination on the TUI. When the mailbox has received a broadcast message, an MWI notification is sent automatically.

This procedure takes a long time, depending on the usage of the HiPath 3000 system and the number of MWIs to be set. The receipt of a broadcast message does not trigger a “User Outcall”.

System-wide distribution list

Specifies whether messages sent from this mailbox from distribution lists are offered as a destination.

Speed dial destinations for 4 segments of the day

If this COS bit is set in an **auto attendant mailbox**, this mailbox can be assigned speed dial destinations that depend on the IVM calendar.

Disable direct dialing

If this COS bit is set, no further call numbers may be dialed in an **auto attendant mailbox** . To connect further, the caller must use preset speed dial destinations.

Agile Mailbox Attendant

By setting the **Agile Support** COS bit, a switchboard procedure will be carried out with another timing (except with fax tone recognition).

This COS bit may only be set when the auto attendant mailbox is used in an agile environment. In a standard environment, setting this COS bit can cause a loss of auto attendant functions.

E-mail notification

Specifies whether this feature is activated for the mailbox.

No recording of greetings in the TUI

If this COS bit is set, no further greetings may be recorded in the TUI. The only way to change the default greeting is to upload a WAV file via the HiPath Manager or WEB.

Automatic Forwarding

Specifies whether this feature is activated for the mailbox.

Mobility Mailbox

Specifies whether this feature is activated for the mailbox.

See also:

- Section 9.19.13, “Maintenance | IVM (only if an IVM card is plugged in)”, on page 9-57
- Section 9.19.26.3, “Greetings, PC->IVM Delta”, on page 9-75
- Section 9.19.23, “Maintenance | IVM: Mailbox configuration: Personal week plan”, on page 9-69
- Section 10.9.8, “Integrated Voice Mail (IVM) (only if an IVM card is plugged-in)”, on page 10-261
- Section 10.9.9, “IVM | Parameter/Mailbox Parameters”, on page 10-265
- Section 10.9.11, “IVM | Additional Settings/General”, on page 10-274
- Section 10.9.13, “IVM | Additional settings/Network parameters”, on page 10-282
- Section 10.9.15, “IVM | Additional Settings/Calendar”, on page 10-286
- Section 10.9.16, “IVM | Additional Settings/Central distribution list”, on page 10-288
- Section 10.9.17, “IVM | Additional Settings/Group mailbox”, on page 10-289

10.9.11 IVM | Additional Settings/General

Settings | Auxiliary equipment | IVM | Additional settings | General

The menu item **General** is used to make general settings that are common to all mailboxes.

To access the dialog box, double-click the Integrated Voice Mail (IVM) (only if an IVM card is plugged-in)Additional settings **button on the** tab.

10.9.11.1 “General parameters” area

Max. mailbox no. length

Here the maximum length of the mailbox number can be defined.

Setting range: 1 to 8 places.

The default value is 3 places.

Max. message length (sec)

This is the length that is available to the caller to have a message recorded (maximum length of the arriving message in seconds).

Setting range: 1 to 1200 seconds.

The default value is 120 seconds.

Min. message length (sec)

The minimum connection time needed for a message to be recorded.

Setting range: 1 to 10 seconds.

The default value is 1 second.

Max. messages per mailbox

The number of messages that the station can save on the telephone for further processing.

Setting range: 1 message to 255 messages.

The default value is 5 messages.

Length of mailbox password

The length of the mailbox password states how many characters the user must enter when changing the password.

Setting range: 3 to 8 places.

The default value is 6 places.

Help announce. timeout (sec)

This is the time after which the help announcement is switched on when the user calls the mailbox and activates no other input.

Setting range: 1 to 5 seconds.

The default value is 3 seconds.

Help announce. repeats

The help announcement is repeated as often as is set here.

Setting range: 0 to 5 repetitions.

The default value is 3 repetitions.

Attempts to send message

If the user has configured a message service, the IVM tries to send a message, with the corresponding number of repetitions, to the call number input.

Setting range: 1 to 255 repetitions.

The default value is 3 repetitions.

Attempt to send notification every (min)

The IVM tries to send the set number of repetitions for messages in the time input here.

Setting range: 1 minute. to 60 minutes.

The default value is 15 minutes.

It should be kept in mind that the setting of the two values (the number of attempts to send the message and the time to attempt to send the message) should result in a combination that makes sense.

General fax intercept

The Fax intercept destination to which the IVM should normally send incoming faxes must be specified here. Mailboxes with the COS 5 or 6 may have a different fax intercept destination; for all others, the destination defined here is used.

Setting range: Valid internal Fax number

Default value: none

Standard lang.

The standard language selected here is transmitted to the settings of the individual mailboxes.

Language 1, 2 and 3 are available for selection. You can determine which language is involved via Maintenance | IVM (only if an IVM card is plugged in).

Message length live recording

Maximum length for voice recording (Live Call Record).

Setting range: 1 - 60 minutes

Default value: 5 minutes

Sorting messages

Controls the announcement of new, i.e., undeleted messages. On selecting **LiFo** (Last in - First out), the most recent messages are announced first. On selecting **FiFo** (First in - First out), the oldest message is announced first.

Autom. deletion of old messages after number of days:

This involves the automatic deletion of all or only retrieved mailbox messages that have not been saved following a definable period of time. To delete mailbox entries, checkmark the checkbox (to the left). You can now enter the time in the Edit field (to the right).

In the drop-down list, you can define whether **all** or **only heard** mailbox entries should be deleted.

In IVM2.0, only the default value **all** can be selected.

Setting range: 1 - 90 days

Transfer behavior

This defines the transfer behavior of the IVM. The following can be selected: **Blind transfer**, **Wait for ring** or **Wait for answer**.

Transfer behavior	Description
Blind Transfer	Blind Transfer is the unmonitored attendant console. The call is switched as quickly as possible (Transfer before answer). It is not possible to switch to a busy destination with call waiting rejection. In this case, the call is sent to the mailbox of the destination station (if available) or returned back to the transferring mailbox. A call which was switched by “Blind Transfer”/”Transfer before answer” cannot be rejected by the called station.
Ring	Ring is the partially monitored attendant console. The call is switched as soon as the destination is called (Transfer before answer). If the destination station is busy and no call waiting is possible, “Ring”, in contrast to “Blind Transfer”, offers the option of either being switched again after a timeout (30 sec) or, in the case of an AutoAttendant mailbox, dialing another destination.
Answer	Answer is the fully monitored attendant console. The call is only switched if the destination station accepts the call (Transfer after messaging). The options in cases where no switching was possible analogous to those for “Ring”. The waiting time for the call to be accepted can be configured via a time parameter in the range of 10 to 60 seconds (default: 20 seconds).

The default setting is **Blind Transfer**.

Regardless of this parameter, switching for a callback to the caller and for Fax calls always occurs with **Answer** and **Blind Transfer**, respectively.

User interface switchover to Xpressions V3 interface

Here you can define whether the IVM should respond with the Xpressions 450 interface or the Xpressions Compact interface.

Name selection

Here you define whether or not the “Name selection” feature is to be generally allowed.

Caller no. announcement

If the station is monitoring the mailbox, the call number of the caller is either announced or suppressed.

The default setting is that the station doesn’t get the number announced.

Call number length delimitation

If a call number length restriction has been activated, only call numbers up to the length of the mailbox call number can be dialed from the IVM for outgoing calls (AutoAttendant speed dialing, substitute call, message call). In cases where longer call numbers have been configured, no connection is established.

The parameter is activated by default.

Repetitions of Announcement at AutoAttendant

The greetings in an AutoAttendant mailbox are repeated as often as defined.

Setting range: 0 - 5 repetitions.

The default value is 3.

Time until announcement of AutoAttendant

Time after which the announcement of an AutoAttendant mailbox is repeated.

Setting range: 1 - 5 seconds

The default value is 3.

Announcement before voice recording

Specifies whether the start of voice recording (Live Call Record) should be signaled with a **voice prompt** or warning tone (**Beep**) or whether no signaling (**none**) should occur before the voice recording.

10.9.11.2 “Recording quality” area

This area controls in which quality greetings and messages are to be saved. This depends on the amount of memory space used. The following options are available:

- Memory-optimized greetings and messages (less memory space required)
- Greetings in HiQuality and memory-optimized messages (medium memory space required)
- Greetings and messages in HiQuality (more memory space required)

10.9.11.3 “AutoAttendant announcement behavior” area

This area determines which voice files are played for a caller by the EVM Auto Attendant (EVM: Extended Voice Mailbox). The following checkboxes can be activated or deactivated:

Checkbox	Default	Announcements
VP before transfer[1]	deactivated	• "Please wait, you will be connected..."
VP transfer result	activated	One of the following announcements are played: • "The station number does not exist." • "The station is busy." • "The station is not responding."
VP intercept	activated	One of the following announcements are played: • Two combined announcements: "You are being connected with the operator." "Please wait." • "You are being connected with the mailbox of the station." • "Please wait, you will be connected..."
VP before release	activated	One of the following announcements are played: • "Please call later." • "Thank you. Goodbye." • "The mailbox number is invalid."

1 VP: Voice prompt

See also:

– Section 9.19.13, "Maintenance | IVM (only if an IVM card is plugged in)", on page 9-57
– Section 10.9.8, "Integrated Voice Mail (IVM) (only if an IVM card is plugged-in)", on page 10-261
– Section 10.9.13, "IVM | Additional settings/Network parameters", on page 10-282
– Section 10.9.14, "IVM | Additional settings /Automatic attendant", on page 10-284
– Section 10.9.15, "IVM | Additional Settings/Calendar", on page 10-286
– Section 10.9.16, "IVM | Additional Settings/Central distribution list", on page 10-288
– Section 10.9.17, "IVM | Additional Settings/Group mailbox", on page 10-289

10.9.12 IVM | Additional settings/Advanced

Settings | Auxiliary equipment | IVM | Additional settings | Advanced

Under **Advanced**, you can make settings that apply to all mailboxes.

To access the dialog box, double-click the Integrated Voice Mail (IVM) (only if an IVM card is plugged-in)Additional settings **button on the** tab.

10.9.12.1 Area: General parameters

Number of remote login attempts

Here you can set the number of incorrect attempts permitted.

Setting range: 0 to 3 attempts

The default values are:

- IVM2.0: 1
- IVM3.0: 0

Number of characters in a search term

You can set the number of characters permitted in a search term here.

Setting range: 3 to 6 characters

The default value is 3 characters.

First name/surname search

You can use the drop-down list to specify whether the search should be performed according to first name or surname.

Message info after message

Here you can define whether message information should be configured before or after the message.

Immediate help announcement

Here you can define whether a help announcement should be played immediately when the mailbox is accessed or after a configurable time period (in seconds).

See also:

- Maintenance | IVM (only if an IVM card is plugged in)
- Integrated Voice Mail (IVM) (only if an IVM card is plugged-in)
- IVM | Additional Settings/General
- IVM | Additional settings /Automatic attendant
- IVM | Additional Settings/Calendar
- IVM | Additional Settings/Central distribution list
- IVM | Additional Settings/Group mailbox

10.9.13 IVM | Additional settings/Network parameters

Settings | Auxiliary equipment | IVM | Additional settings | Network parameters

Network parameters is used to configure network access to the IVM.

To access the dialog box, double-click the Integrated Voice Mail (IVM) (only if an IVM card is plugged-in)Additional settings **button on the** tab.

IP address

IP address of the IVM.

The default value is 192.168.1.2.

The IP address must be unique within the network. Any new IP address to be configured should therefore be “pinged” before it is assigned. If the IP address responds, it should not be assigned again.

Subnet mask

The subnet mask addresses subnets by masking IP address bits. It indicates the size of the subnet. You can transfer data directly from processor to processor within a subnet without having to establish a connection via a router or a gateway.

The default value is 255.255.0.0.

Gateway IP address

The gateway is the next router (computer) via which the desired destination (defined by the IP address) can be reached.

The default value is 192.168.1.1.

Area: E-mail notification

When new voice mail messages arrive in the mailbox, an email notification is created and sent. The user can then check the message from a phone and also from a PC via his or her email mailbox. Furthermore, the presence of the notification in the form of a file also makes it easy to create an electronic archive of such messages.

Host name

Host name of the IVM card.

IP address of the DNS server

IP address of the DNS server. The DNS server is the server to which the email is to be sent.

The default value is 192.168.1.3

DNS name

DNS domain name.

Allowed LAN accesses, FTP access, TFTP access

Here it can be selected if direct **FTP access** and/or **TFTP access** via LAN should be allowed.

The default setting is in both cases No (not selected).

See also:

- Section 9.19.13, “Maintenance | IVM (only if an IVM card is plugged in)”, on page 9-57
- Section 9.19.24, “Maintenance | IVM: Mailbox configuration: E-mail notification”, on page 9-70
- Section 10.9.8, “Integrated Voice Mail (IVM) (only if an IVM card is plugged-in)”, on page 10-261
- Section 10.9.11, “IVM | Additional Settings/General”, on page 10-274
- Section 10.9.14, “IVM | Additional settings /Automatic attendant”, on page 10-284
- Section 10.9.15, “IVM | Additional Settings/Calendar”, on page 10-286
- Section 10.9.16, “IVM | Additional Settings/Central distribution list”, on page 10-288
- Section 10.9.17, “IVM | Additional Settings/Group mailbox”, on page 10-289

10.9.14 IVM | Additional settings /Automatic attendant

Settings | Auxiliary equipment | IVM | Additional settings | Automatic Attendant

The **Automatic attendant** can be used to configure the relevant mailbox features that provide automatic attendant functionality (COS 5, COS 6, COS 14 and COS 15). By selecting the digits 0 to 9, a caller can be forwarded to specific destinations defined here. These dialing options must, of course, be explained with a corresponding announcement. It is also possible to configure intercept destinations to which the caller will be redirected if he or she fails to enter a digit or enters an invalid (i.e., unassigned) digit.

To access the dialog box, double-click the Integrated Voice Mail (IVM) (only if an IVM card is plugged-in)Additional settings **button on the** tab.

Automatic Attendant Mailbox number/name

In the drop-down list box, only the relevant mailboxes with the authorizations COS 5, COS 6, COS 14 and COS 15 are shown for selection.

Provide DTMF menu independent of call type

Here you can define whether or not a DTMF menu should be provided, regardless of call type.

Time between key depressions (sec)

You can set the period between two key depressions using the drop-down list.

Setting range: 1 to 10 seconds (0.5 second increments)

Default: 2.5 seconds

10.9.14.1 Stations table

Displays all stations that are
- are set up (active or provided with a name) and
- are not defined as phone mail ports

10.9.14.2 Configured mailboxes table

List of all configured mailboxes.

10.9.14.3 Speed dial/Intercept destinations

Up to 10 speed-dial destinations (from 0 through 9) and two intercept destinations (day and night) can be configured here. Callers are redirected to the intercept destinations in cases of “no response” or “no dialing”. In the COS 6, when greeting control (day/night) by the communication system is activated, the corresponding destination is selected; otherwise, only the first intercept destination (day) is always used. The destinations themselves can be selected from the **Station** and **Configured mailboxes** lists and dragged & dropped onto the table. The destination type is automatically set to Call no. or Mailbox. If desired, you can also enter the speed-dial destination directly. The destination type must then be set accordingly to **Mailbox**, **Call No.** or **CO (ext.)**. For the type **CO (ext.)**, a trunk group (route 1) is seized by the IVM before dialing the specified call number. Incomplete entries are not accepted. To delete speed dial destinations, mark the entry in the table and drag it to the Recycle Bin.

If the call number of an additional mailbox with the function ”Automatic attendant” was entered as a speed dial destination, you can jump directly to this mailbox by double-clicking in this field.

See also:

- Section 9.19.13, “Maintenance | IVM (only if an IVM card is plugged in)”, on page 9-57
- Section 10.9.8, “Integrated Voice Mail (IVM) (only if an IVM card is plugged-in)”, on page 10-261
- Section 10.9.11, “IVM | Additional Settings/General”, on page 10-274
- Section 10.9.13, “IVM | Additional settings/Network parameters”, on page 10-282
- Section 10.9.15, “IVM | Additional Settings/Calendar”, on page 10-286
- Section 10.9.16, “IVM | Additional Settings/Central distribution list”, on page 10-288
- Section 10.9.17, “IVM | Additional Settings/Group mailbox”, on page 10-289

10.9.15 IVM | Additional Settings/Calendar

Settings | Auxiliary equipment | IVM | Additional settings Calendar

Calendar can be used to define the work hours and pause times (break) for the switchover of announcements.

To access the dialog box, double-click the **Additional settings** button on the Integrated Voice Mail (IVM) (only if an IVM card is plugged-in) tab.

Week plan table

For each weekday, the start and end of the work hours (day announcement) and the start and end of the pause (pause announcement) must be entered.

A further differentiation and time-based control of announcements can be achieved by entering the start and end times for a special announcement.

During any period outside the work and pause times, the night announcement is active.

By default, the table is filled for the weekdays from Monday through Thursday with the values 08:00-17:00 for work hours and 12:00-12:30 for the pause, and for Friday with the values 08:00-15:00 as work hours and 12:00-12:30 as the pause.

The start and end times for the special announcement are not set by default.

On Saturday and Sunday, the night announcement is active by default.

Settable range: 00:00-23:59 hours.

Priority	Time	Announcement
1	Special time	Special announcement
2	Length of pause	Pause announcement
3	Work hours	Day announcement
4	other	Night announcement

Monthly overview

From this monthly overview, up to 50 days can be transferred to the Special Days table.

Special days (year) table

The start and end times for the work hours, pause times and special times must be defined for the days in this table.

The Table is empty by default.

The following priorities apply if the times in the two tables overlap:

Priority	Time	Announcement
1	Special time	Special announcement
2	Length of pause	Pause announcement
3	Work hours	Day announcement
4	other	Night announcement

See also:

- Section 9.19.13, “Maintenance | IVM (only if an IVM card is plugged in)”, on page 9-57
- Section 9.19.23, “Maintenance | IVM: Mailbox configuration: Personal week plan”, on page 9-69
- Section 10.9.8, “Integrated Voice Mail (IVM) (only if an IVM card is plugged-in)”, on page 10-261
- Section 10.9.11, “IVM | Additional Settings/General”, on page 10-274
- Section 10.9.13, “IVM | Additional settings/Network parameters”, on page 10-282
- Section 10.9.14, “IVM | Additional settings /Automatic attendant”, on page 10-284
- Section 10.9.16, “IVM | Additional Settings/Central distribution list”, on page 10-288
- Section 10.9.17, “IVM | Additional Settings/Group mailbox”, on page 10-289

10.9.16 IVM | Additional Settings/Central distribution list

Settings | Auxiliary equipment | IVM | Additional settings Central distribution list

The **Central distribution list** can be used to configure up to 20 destination mailboxes or lists for the distribution of messages in 20 lists.

To access the dialog box, double-click the Integrated Voice Mail (IVM) (only if an IVM card is plugged-in)Additional settings **button on the** tab.

Lists

In lists 1 through 20, several different selected mailboxes or lists can be stored.

Destinations

List of all configured mailboxes and lists.

Dest. in list

Selected targets of the selected list (1-20).

The destinations are selected by “dragging and dropping” them from the **Destinations** list. Deletion is performed by dragging and dropping into the recycling bin.

Edit Name

This field can be used to edit the name of the central distribution list that was just selected. The name can contain a maximum of 16 characters. Only uppercase and lowercase letters from A-Z, digits, commas, periods and blanks may be used.

By default, the names are defined with “List 1” to “List 20”.

See also:
– Section 9.19.13, “Maintenance	IVM (only if an IVM card is plugged in)”, on page 9-57 – Section 10.9.8, “Integrated Voice Mail (IVM) (only if an IVM card is plugged-in)”, on page 10-261 – Section 10.9.11, “IVM	Additional Settings/General”, on page 10-274 – Section 10.9.13, “IVM	Additional settings/Network parameters”, on page 10-282 – Section 10.9.14, “IVM	Additional settings /Automatic attendant”, on page 10-284 – Section 10.9.15, “IVM	Additional Settings/Calendar”, on page 10-286 – Section 10.9.17, “IVM	Additional Settings/Group mailbox”, on page 10-289

10.9.17 IVM | Additional Settings/Group mailbox

Settings | Auxiliary equipment | IVM | Additional settings GroupMailbox

Group mailbox can be used to enter up to 20 group members per group mailbox with the classes of service COS 7 or COS 16.

To access the dialog box, double-click the Integrated Voice Mail (IVM) (only if an IVM card is plugged-in)Additional settings **button on the** tab.

Automatic Attendant Mailbox number/name

In the drop-down list, only the relevant mailboxes with the classes of service COS 7 or COS 16 and the MULAP group numbers are offered for selection.

Setting range: 1 to 8 places

Shared group mailbox

Here you can define if a mailbox is a shared group mailbox.

Mailboxes may only belong to one shared mailbox group. A “normal group” can only be identified as “shared” if it does not contain any members that belong to another shared mailbox group.

Stations

Here, all subscribers are displayed that

- are set up (active or provided with a name),
- are not defined as phone mail ports,
- do not have an own mailbox yet, and
- are also not a member of a group mailbox.

Members

All members of the group mailbox are shown here.

The stations may be selected by dragging and dropping (or via the **New** button) them from the internal list of **Stations** or directly entered in the **Member** field. Members of a group mailbox are deleted by dragging and dropping them into the Recycle Bin.

See also:

- Section 9.19.13, “Maintenance | IVM (only if an IVM card is plugged in)”, on page 9-57
- Section 10.9.8, “Integrated Voice Mail (IVM) (only if an IVM card is plugged-in)”, on page 10-261
- Section 10.9.11, “IVM | Additional Settings/General”, on page 10-274
- Section 10.9.13, “IVM | Additional settings/Network parameters”, on page 10-282
- Section 10.9.15, “IVM | Additional Settings/Calendar”, on page 10-286
- Section 10.9.16, “IVM | Additional Settings/Central distribution list”, on page 10-288
- Section 10.9.14, “IVM | Additional settings /Automatic attendant”, on page 10-284

10.9.18 EVM (Entry Voice Mail)

Settings | Auxiliary equipment | EVM

The parameters and maintenance settings needed for EVM can be read out and administered.

EVM is only available if an EVM card is plugged into the communication system.

The start-up of the EVM ports is analogous to the start-up of a digital station port. In addition, the station flags are used to set the station port type to Phonemail (5-digit call number).

Caution
When using another voice mail application such as IVM (HiPath Xpressions Compact) or Phonemail, the ports of the EVM for the voice mail usage must be decommissioned. To do this, the ports must be set to the extension type “Standard” and removed from the hunt group of the active voice mail. In addition, the number of mailboxes for autoconfiguration must be set to “0”. This prevents inadvertent changes to the Call Management by the user.

10.9.18.1 Mailboxes table

The table shows all the mailboxes. Every mailbox must be uniquely identified via the index (=row header). There are 24 rows (corresponding to the maximum number of EVM mailboxes).

For group mailboxes (groups and MULAP), new messages are signaled in the display of only the first station in the group.

Mailbox call no.

The call numbers of the individual mailboxes are entered here. A mailbox is identified by means of the call number.

If a mailbox is to be assigned to a station, the mailbox must have the same call number as the station.

- **Setting up the Common Greeting Mailbox**

  The phone numbers belonging to the **Common Greeting Mailbox**for the EVM hunt group containing the EVM ports are entered here.

  Default: 351

Name

The **Name** associated with the mailbox is entered here . The name is taken from the station dialog (see also Subscriber). In the case of a group, the group name is displayed.

The station for which a mailbox should be configured can be taken over from the station dialog or from an Excel table into the mailbox dialog using “Copy and Paste”.

Greeting

Use the drop-down list to select the defaults for the mailboxes. On selecting **Day/night**, the greeting control occurs automatically. **Greeting 1** is then played for the day service and **Greeting 2** for the night service.

- **Greetings on activated Common Greeting Mailbox**
  - Common company name announcement

    The first greeting from the Common Greeting Mailbox is used as a common greeting for all (non-AA) mailboxes, e.g. “Welcome to Unify”. The mailbox greeting is then output as a name, e.g., “John Smith”.

    The second greeting from the Common Greeting Mailbox is likewise a common announcement, e.g. “is currently unavailable, please leave a message”.

  - Name announcement

    If the first greeting of the Common Greeting Mailbox is not available, the voice prompt “Here is the mailbox of “ is output. The mailbox greeting is then output as a name, e.g. “John Smith”.

    If the second Common Greeting Mailbox announcement is not available - which would make sense in this case - it is replaced by 250 ms of “silence”.

Recording, AutoAttendant

For each mailbox, you can select whether it that mailbox is to be used as a standard mailbox (**Recording**) or an attendant mailbox (**AutoAttendant**). It is not possible to enable **Recording** and **AutoAttendant** simultaneously. A maximum of 4 mailboxes can be configured as Attendant mailboxes.

If neither **Recording** nor **AutoAttendant** is selected (Standard), a mailbox is created without enabling the recording function. In such cases, the subscriber must enable the recording when checking the mailbox for the first time. This ensures that no messages can be recorded before the mailbox has been activated by the user.

When a standard mailbox is converted to an **AutoAttendant** mailbox, all existing messages of the mailbox are deleted.

Password Reset

Select this option for any mailboxes for which the associated passwords are to be reset at the next transfer of the CDB to the communication system. The password is reset to the value 1234.

10.9.18.2 Buttons

Additional settings

Using this button, you can reach **Additional settings** for setting the EVM via tabs.

Tabs
– EVM	Additional settings/General – EVM	Additional settings / Automatic attendant:

See also:
– Section 9.19.28, “Maintenance	EVM”, on page 9-78 – Section 10.9.19, “EVM	Additional settings/General”, on page 10-294 – Section 10.9.20, “EVM	Additional settings / Automatic attendant:”, on page 10-297

10.9.19 EVM | Additional settings/General

Settings | Auxiliary equipment | EVM | Additional settings/General

The **General** tab allows you to define the settings that are common to all mailboxes.

To access the dialog box, click theEVM (Entry Voice Mail) Additional settings **button on the** tab.

10.9.19.1 Area: General parameters

Max. mailbox no. length

Here the maximum length of the mailbox number can be defined.

Setting range: 2 to 8 places

Default value: 2 or 3 places (depending on the communication system)

Maximum message length (min)

This is the length that is available to the caller to have a message recorded (maximum length of the incoming message in minutes).

Setting range: 1 to 5 minutes

Default value: 2 minutes

General fax intercept

The Fax intercept destination to which the EVM should normally send incoming faxes must be specified here. If no fax intercept destination is specified, the fax tone detection is also disabled. If a fax tone detection is desired, but no forwarding is to occur, an invalid destination must be entered here.

Setting range: Valid internal Fax number

Default value: none

Call number length delimitation

If a call number length restriction has ben activated, only call numbers up to the specified length can be dialed from the EVM for outgoing calls (AutoAttendant suffix dialing and AutoAttendant speed dialing). In cases where longer call numbers have been configured, no connection is established.

Setting range: 1 to 30

By default, the call number length restriction corresponds to the (internal) call number length of the mailbox, so only internal dialing is allowed.

Standard lang.

The standard language selected here is applied to the settings for all mailboxes.

If a language in which the EVM is not loaded is selected, then the language UK English (enuk) is activated. If UK English is not loaded either, then the first language loaded on the EVM is activate automatically.

No. of mailboxes for AutoConfiguration

Mailboxes up to the number specified here can also be configured automatically by subscribers. No further settings are required for the automatically configured mailboxes. If the number of mailboxes specified here is exceeded, no further automatic mailbox assignment can be performed by dialing the EVM.

If mailboxes have already been configured via the HiPath 3000 Manager, then fewer mailboxes will be available for the autoconfiguration. For example, if the value for the **No. of mailboxes for AutoConfiguration** is set to 12, and if 10 mailboxes are configured via the HiPath 3000 Manager, then only 2 more mailboxes may be configured by the user.

Setting range: 0 to 24 mailboxes

Default value: 12 mailboxes

Call dest. list for AutoConfiguration

The call destination list (see Call forwarding) specified here is assigned to the automatically configured mailboxes. Call dest. list 18 is configured by default so that call forwarding to the EVM works without any additional settings.

Setting range: 1 to 500 (depending on the communication system)

Default value: 18

10.9.19.2 “Recording quality” area

This area controls in which quality greetings and messages are to be saved. This depends on the amount of memory space used. The following options are available:

- Memory-optimized greetings and messages (less memory space required)
- Greetings in HiQuality and memory-optimized messages (medium memory space required)
- Greetings and messages in HiQuality (more memory space required)

10.9.19.3 “AutoAttendant announcement behavior” area

This area determines which voice files are played for a caller by the EVM Auto Attendant (EVM: Extended Voice Mailbox). The following checkboxes can be activated or deactivated:

Checkbox	Default	Announcements
VP before transfer[1]	deactivated	• “Please wait, you will be connected...”
VP transfer result	activated	One of the following announcements are played: • “The station number does not exist.” • “The station is busy.” • “The station is not responding.”
VP intercept	activated	One of the following announcements are played: • Two combined announcements: “You are being connected with the operator.” “Please wait.” • “You are being connected with the mailbox of the station.” • “Please wait, you will be connected...”
VP before release	activated	One of the following announcements are played: • “Please call later.” • “Thank you. Goodbye.” • “The mailbox number is invalid.”

1 VP: Voice prompt

See also:

– Section 9.19.28, “Maintenance | EVM”, on page 9-78
– Section 10.9.18, “EVM (Entry Voice Mail)”, on page 10-291
– Section 10.9.20, “EVM | Additional settings / Automatic attendant:”, on page 10-297

10.9.20 EVM | Additional settings / Automatic attendant:

Settings | Auxiliary equipment | EVM | Additional settings/Automatic attendant:

Automatic attendant is used to configure the corresponding features for mailboxes that were configured as attendant mailboxes. By selecting the digits 0 to 9, a caller can be forwarded to specific destinations defined here. These dialing options must, of course, be explained with a corresponding announcement. It is also possible to configure intercept destinations to which the caller will be redirected if he or she fails to enter a digit or enters an invalid (i.e., unassigned) digit.

To access the dialog box, click the EVM (Entry Voice Mail)Additional settings **button on the** tab.

Automatic Attendant Mailbox number/name

The drop-down list offers a selection of the appropriate mailboxes for which the **AutoAttendant** option was selected.

Stations table

Displays all stations that are

- configured (active or provided with a name) and
- not defined as phonemail (call number, 5 digits)

Speed dial/Intercept destinations

Up to 10 speed-dial destinations (from 0 through 9) and one intercept destination can be configured here for the day and night service, respectively. Switching to the intercept destinations occurs when no digit or an invalid (i.e., unassigned) digit is pressed. If a **Day/night** greeting is activated, the corresponding destination is selected; otherwise, only the first intercept destination (day) is always used.

The destinations can be selected from the **Stations** table and dragged & dropped onto this table. You can also enter the destinations directly. To delete a destination, mark the entry in the table and drag it to the Recycle Bin.

Intercept after announcem.

If this option is activated, the call is redirected to the call number specified under **Intercept** (e.g., the attendant console) immediately after the announcement.

When the "**intercept after announcem.**" flag is activated, the greeting text is played once, followed by the intercept. No speed-dialing destination can be dialed during the announcement of the greeting.

When the **Intercept after announcem.** flag is deactivated, the announcement is played and then the EVM transfers the caller to the number specified under **Intercept**.(e.g. attendant console). During the announcement of the greeting, speed-dialing will also work.

no suffix-dialing

If this option is activated, the caller can only be redirected to other destinations via the speed-dial destinations (choice of digits 0 to 9). No (multi-digit) call number can be selected by the AutoAttendant.

See also:

- Section 9.19.28, "Maintenance | EVM", on page 9-78
- Section 10.9.18, "EVM (Entry Voice Mail)", on page 10-291
- Section 10.9.19, "EVM | Additional settings/General", on page 10-294

10.10 Settings | Network

Settings | Network

Settings | Network is used to define the settings required to connect the communication system to a LAN.

The path to the LAN can be implemented by the following hardware:
- V24.E board/Com-Server (not valid for HiPath 3000)
- HXGM(2)/HXGS(2)/HXGSR card (HiPath HG 1500)
- LAN Interface Module (LIM) (valid only for HiPath 3000)

Tabs and Dialog boxes
• Basic settings • IP parameters • SNMP Data • SNMP partner/Communication Partner • PSTN partner • Edit PSTN partner • Firewall – Firewall	Edit IP firewall – Firewall	Edit application firewall • Routing – Routing	Edit IP routing • Mapping – Mapping	Edit IP mapping • HiPath 5000 RSM/AllServe Parameters • Gatekeeper • Ext. H.323-GK • Ext. SIP • IP Ports • Resource Management

See also:
– HiPath 3000/5000 Feature Description, LAN Network

10.10.1 Basic settings

Settings | Network | Basic settings

The **Basic settings** are only valid as of HiPath 3000 V1.2. For other versions/variations, similar settings can be made under IP parameters.

10.10.1.1 Area: IP access

Protocol

IP access is used to configure IP access in the communication system. Note that this IP access has no significance for VoIP functionality, but only enables assess for administration, call charge output and applications over CSTA.

The following protocols can be selected:

Inactive	There is no connection available to the communication system via IP.
LIM	In this mode, the LIM sub-board on the control board is used as a LAN access to the communication system (only HiPath 3000).
HIP	In this mode, the HG 1500 card is used instead of the LIM sub-board as the LAN access. The HG 1500 works in the bridging mode, that is, the HG 1500 and the central board of the communication system have separate IP addresses that share a physical LAN interface.
SLIP	In this mode, IP access is enabled via the V.24 interface. Either the router or the CommServer (V.24/IP box) can be connected here. This mode is currently used only in connection with HiPath 500, where the HiPath is connected with the HXGO card via a V.24 interface. The selection of this IP access method sets default values for SLIP, which should generally not be changed. SLIP is set by default for HiPath 3150 to 3250 On starting up the system, a test (ping) is performed to verify that the IP connection is working. If it is not, the V.24 interface is initialized with the with the usual V.24 parameters.

Block IP Access Manager

The IP Access Manager (see Start IP Access Manager) handles the configuration of IP access data of one or more communication systems (incl. the HG 1500 card) directly via the LAN. If such direct configurations need to be prohibited due to special security requirements, this flag must be set.

10.10.1.2 Area: Router call no.

Call no. test

The **Call no. test** is effective globally, i.e., if it is activated, only calls with a calling party number for which there is also an ISDN partner (cf. routing) defined are accepted. All calls without a calling party number are rejected.

Router call no.

this is the number under which the communication system can be dialed from outside. The router functionality of the communication system is accessible from outside under this direct inward dialing.

Check DID

The entered call number for the router is checked for consistency against the call numbers in the communication system. The number must be unique.

10.10.1.3 Area: Connection control

Number redials

Gives the maximum number of **Number redials** for a call number from the PSTN partner structure (relevant only if the communication system initiates the call over PSTN).

Pause

Specifies the **Pause**, in seconds, between the number redials.

10.10.1.4 Areas: LAN interface/PSTN interface

The communication system is provided with 2 network interfaces. These are the LAN interface (LAN), which is connected to the corporate network, and the Public Switching Telephone Network (PSTN) interface.

The following parameters can be set up for both interfaces:

IP address

IP address of the interface.

The IP address must be unique within the network. Any new IP address to be configured should therefore be “pinged” before it is assigned. If the IP address responds, it should not be assigned again.

Subnet mask

The subnet mask addresses subnets by masking IP address bits. It indicates the size of the subnet. You can transfer data directly from processor to processor within a subnet without having to establish a connection via a router or a gateway.

MTU

The maximum packet length, in bytes, for IP protocol. It can lie within the range of values from 500 to 1500.

10.10.1.5 OSO IP Address area

The IP address of the OpenScape Office Server in the LAN is entered in the “OSO IP Address” input field. OpenScape Office is then connected to HiPath 3000.

10.10.1.6 Area: TFTP server for APS transfer

Using the protocol TFTP (Trivial File Transfer Protocol), files can be transported from one computer to another computer. You can operate the communication system in either the server mode or the client mode when transporting.

- The communication system in TFTP server mode: The APS is stored on the remote computer and this APS is loaded into the communication system using a “tftp -i <IP address> put <source file name> hicom.fli” on the remote TFTP client. I.e., the client starts off the APS transfer.
- The communication system in TFTP client mode: Upon activation via the private SNMP-MIB with “TFTP Download Action”, the communication system loads an APS from the administrated TFTP server on its own accord.

The switchover to the transferred APS is realized via SNMP, or in TFTP client mode, at the entered **Switchover time**.

IP address

IP address of the TFTP server (TFTP = Trivial File Transfer Protocol) that provides the APS (Application Program System) for the communication system.

Path

Enter the path here where the APS is stored on the remote processor. The complete path is to be entered.

Switchover time

Enter the switchover time at which the communication system should switch to the transferred APS. The **Time** is set in the first input field and the **Date** of the switchover in the second input field. An initiation via SNMP is necessary to trigger an immediate or time-controlled switchover after the TFTP transfer.

10.10.1.7 Area: Interface

If SLIP is configured as the **IP access**, then the baud rate of the V.24 interface on the central board can be set here in the same way as for the connected device.

See also:

- Section 10.10, “Settings | Network”, on page 10-299
- Section 10.10.2, “IP parameters”, on page 10-304
- Section 12.3, “Start IP Access Manager”, on page 12-5

10.10.2 IP parameters

Settings | Network | IP parameters

The **IP parameters** are only valid up to HiPath 3000 V1.2. For other versions/variations, similar settings can be made under Basic settings.

10.10.2.1 Area: IP interface

IP address

The IP address according to the LAN environment is entered here. The IP address is downloaded to the COM server and activated. Then the communication system can be reached within an IP network via the IP address of the Com server.

The IP address must be unique within the network. Any new IP address to be configured should therefore be “pinged” before it is assigned. If the IP address responds, it should not be assigned again.

Subnet mask

The subnet mask addresses subnets by masking IP address bits. It indicates the size of the subnet. You can transfer data directly from processor to processor within a subnet without having to establish a connection via a router or a gateway.

Gateway IP address

The gateway is the next router (computer) via which the desired destination (defined by the IP address) can be reached.

MTU

Enter the maximum Ethernet frame length. Do not change the preset value of 544 if possible!

10.10.2.2 Area: IP access

Inactive	The connection from the V.24/E board to the communication system is deactivated. The IP network access is then no longer available.
Slip Forwarding	(The default setting for the IP access via V.24/E board (also called COM server)) The IP address of the Com server is the same as the IP address for the communication system. The Com server works in the transparent mode, that is, all IP packets are forwarded to the IP protocol stack of the communication system via SLIP.
SLIP Routing	In this mode, the V.24/E board works as a router between the LAN and SLIP interface. The IP packets are not forwarded transparently, but according to the routing configuration.
HIP Forwarding	In this mode, the HG 1500 is used as the LAN port instead of the V.24/E. The HG 1500 works in the bridging mode, that is, the HG 1500 and the main board of the communication system have separate IP addresses that share a physical LAN interface.

10.10.2.3 Area: Hicom 150 E Office

IP address

Enter the IP address with which the V.24/E board addresses the communication system. Normally, you select the default configuration for SLIP, i.e., 1.0.0.1 as the IP address.

Subnet mask

This field describes the subnet mask at the interface between the communication system and the Com server.

MTU

This field shows the maximum Ethernet frame length on the highway between the communication system and V.24/E board. You should not change the preset value!

10.10.2.4 Area: Routing table

Network

You should not change the set values.

Subnet mask

You should not change the set values.

Gateway IP address

You should not change the set values.

Station type

You should not change the set values.

10.10.2.5 Area: TFTP server

Using the protocol TFTP (Trivial File Transfer Protocol), files can be transported from one computer to another computer. As a result, Hicom 150 E Office can be operated in both server mode and in client mode.

- Communication system in TFTP server mode: The APS is saved on the remote processor and loaded on the communication system using a “put_file” of the remote TFTP client. I.e., the client starts off the APS transfer.
- Communication system in the TFTP client mode: When the Hicom 150 E Office is activated with “Transfer Start” via SNMP, the communication system loads an APS from a remote processor on its own accord.

IP address

Internet protocol address of the TFTP server (TFTP = Trivial File Transfer Protocol) that provides the APS (application program system) for the communication system.

Path

Enter the path here where the APS is stored on the remote processor. The complete path is to be entered.

Switchover time

Enter the time when the communication system should switch to the transferred APS. The time of day is set in the first text box and the date of the switchover in the second text box. An initiation via SNMP is necessary to trigger an immediate or time-controlled switchover after the TFTP transfer.

10.10.2.6 Area: Interface

If SLIP is configured as the **IP access**, then the baud rate of the V.24 interface on the central board can be set here in the same way as for the connected device.

See also:

- Section 10.10, “Settings | Network”, on page 10-299
- Section 10.10.1, “Basic settings”, on page 10-300

10.10.3 SNMP Data

Settings | Network | SNMP Data

SNMP Data is used to enter the data for the default MIB´s. This information can then be sent to the management station per MIB read (GET).

10.10.3.1 Area: System identification

Enter the data for the default MIB ”RFC 1213” (MIB-2) here. This information can then be sent to the management station per MIB read (GET). There are no restrictions on the content of the entries, which are used simply to identify the communication system better to an SNMP management station.

Contact person

Enter the name of the person who is responsible for technical issues of the communication system.

System name

Enter the name of the communication system. Usually, the domain name is entered in the SNMP world.

Location

Description of the communication system´s location.

10.10.3.2 Trap Flags table

For every type of error that can be signaled via SNMP error message (trap), you can set whether only one entry is made in the event log or whether a trap is also initiated.

Error class	Displays the class of the (Class B) error.
Error no.	Displays the (Class B) error number.
Meaning	This column describes the error in plain text.

Value	This column can be edited, and it determines what should happen when a Class B error occurs in the communication system: – **Log** = The error is saved only in the error history, which can be read per maintenance. – **Log+trap** = The error is saved in the error history and is also sent as an SNMP error message (trap). – **Log+multiple trap** = The error is saved in the error history and is sent multiple times as an SNMP error message (trap).

10.10.3.3 Area: Multiple Trap

If error events are configured for **Log+multiple trap** in the **Trap Flags** table, then these errors are signaled multiple times per SNMP trap when a corresponding error event occurs. The number of times a trap is signaled is specified in **Multiple Trap**.

10.10.3.4 Area: SNMP Flags

Enable SNMP

This option activates the SNMP (Simple Network Management Protocol) of the communication system.

CDR Notification Traps

This option is used to generate a trap for CDR applications when the call charge output stack exceeds a threshold value. Please note, however, that this applies only to CDR applications that read the call charge stack via TFTP

Port Status Notification Traps

This option causes a trap to be generated whenever a change in the hardware occurs (e.g., when cards/telephones are plugged or unplugged). These traps are evaluated by the HiPath FM to update the hardware tables.

See also:

– Section 10.10, “Settings | Network”, on page 10-299

– HiPath 3000/5000 Feature Description, LAN Network

10.10.4 SNMP partner/Communication Partner

Settings | Network | SNMP partner

The SNMP communications partners (IP remote stations) that receive access rights for the SNMP functionality of the communication system, are configured via **SNMP partner**.

10.10.4.1 SNMP Community table

In Hicom 150 E Office Rel. 2.2, other applications (e.g. HiPath 3000 Manager, Telnet or TFTP) have access only if the corresponding IP addresses of the processor appear in this table.

As of Hicom 150 H V1.0 (Hicom 150 E Office Rel. 3.0), application access will be controlled via the firewall.

SNMP Transport Label column

Data is managed in this column by double-clicking the corresponding table cell. The following values can be used:

- a wildcard (**Nobody** = none, **Everybody** = all)
- a specific IP address (**Specific**)

SNMP Community Name column

The community name is used in Version 1 of the SNMP protocol as the access password. When users of the management station access the communication system using SNMP, they must specify the community name. For security reasons, it is advisable to change the default communities in accordance with the customer's instructions.

If the DB Feature Server cannot access the communication system, it reports a „node offline" status. In this case, the community name „private" must be entered in the second row. The SNMP authorization (see next column) for this entry must be set to „read/write".

SNMP Access column

read	The associated IP address has the right to read only.
read / write	The associated IP address has the right to read and write.
none	The associated IP address has no access rights. This option is used to temporarily deactivate entries without having to delete them.

Traps are sent depending on the activation of SNMP in the firewall.

10.10.4.2 SNMP Trap Community table

The destinations for SNMP error messages (traps) are configured in this table. If a trap destination is configured, all associated fields should always be filled in.

SNMP Community Name column

This field is used to identify the community to which the trap is assigned. The community also serves as the access password.

SNMP Address column

Enter the IP address of the trap destination here. Wildcards are not allowed for traps. You can configure five target addresses for the corresponding management stations in the communication system.

Target Owner column

You may store a description of the trap destination in plain text.

Target Status column

You can activate or deactivate the configured trap destinations. This means you can temporarily deactivate configured, known destinations.

10.10.4.3 IP Applications table

As of HiPath 3000 V1.2, this table is kept under Firewall.

The applications that are available in the Hicom 150 E Office are activated or made available here.

- **As of Hicom 150 E Office Rel. 2.2:**
  The possible applications are released under the IP Applications parameter for the transport label entered under Administration Community.
- **As of Hicom 150 H V1.0 (Hicom 150 E Office Rel. 3.0):**
  In the first column, enter the IP addresses from which the applications are to be started.
  Max. 5 IP addresses can be entered.
  If the IP address 0.0.0.0 is entered in the first line, only the HiPath 3000 Manager has access authorization (default) from all computers on the network.

IP address (as of Hicom 150 H V1.0, Hicom 150 E Office Rel. 3.0)	In this column, enter the IP addresses from which the applications are to be started.
Telnet	Telnet access is permitted (the Assistant T functionality is offered via Telnet). This means that access to the Hicom 150 E Office is possible from each processor in the network that supports the Telnet functionality. Then you can view and use the menu interface of the Asst T in the Telnet application window.
SNMP (up to Hicom 150 H V1.0, Hicom 150 E Office Rel. 3.0)	SNMP accesses are allowed.
CSTA (as of Hicom 150 H V1.0, Hicom 150 E Office Rel. 3.0)	CSTA over TCP/IP is allowed.
APS	APS transfer over TFTP is allowed.
CDB	CDB reading over TFTP is allowed.
HiPath 3000 Manager (as of Hicom 150 H V1.0, Hicom 150 E Office Rel. 3.0)	HiPath 3000 Manager access over TCP/IP is allowed.
Log	Reading the log file over TFTP is allowed.
Call detail recording	Outputting charges via TFTP is permitted.
ASCII	Reading the system's basic configuration over TFTP is allowed.

You can enter the TFTP path names for the LOG file, the CDB, and the ASCII file under Options/ Program Settings/General via Program options General.

See also:

- Section 10.10, “Settings | Network”, on page 10-299
- Section 10.10.7, “Firewall”, on page 10-319
- Section 13.1.1, “Program options General”, on page 13-3

- HiPath 3000/5000 Feature Description, LAN Network

10.10.5 PSTN partner

Settings | Network | PSTN partner

Up to 20 partners can be configured via **PSTN partner**. This data structure describes a PSTN remote station that dials into the customer network via the communication system or that should be reached from the customer network.

10.10.5.1 PSTN partner data table

In this table, information is displayed only. To change or insert a PSTN partner, double-click the corresponding table cell. The Edit PSTN partner dialog box, via which parameters can be edited, is displayed.

See also:
– Section 10.10, “Settings	Network”, on page 10-299 – Section 10.10.6, “Edit PSTN partner”, on page 10-315

10.10.6 Edit PSTN partner

Settings | Network | PSTN partner | Edit PSTN partner

To change or insert a PSTN partner, double-click the corresponding table cell in PSTN partner.

10.10.6.1 Area: PSTN partner data

Name

A PSTN partner's name may occupy up to any 14 characters and must be unique.

IP address

The PSTN partner's IP address. The IP address 0.0.0.0 is not allowed. The value 255.255.255.255 is a special case. With it, the IP protocol for this partner is deactivated.

The IP address must be unique within the network . Any new IP address to be configured should therefore be "pinged" before it is assigned. If the IP address responds, it should not be assigned again.

Short hold (sec)

The short hold parameter describes the length of time, in seconds, after which a PSTN connection should be cleared down upon inactivity. If new data packets for transmission arise, the connection is set up again (transparent to the user). This mechanism is also called background connect/disconnect. If new data packets for transmission arise, the connection is set up again (transparent to the user).

Direct inward dialing (DID)

The DID number serves to identify the caller when it cannot transmit a call number (e.g., analog line). The identification of the caller and selection of the accompanying PSTN partner structure take place by calling this DID number instead of the system router call number.

Check DID

The entered DID number is checked for consistency against the call numbers of the PSTN partner list. The call number must be unique.

Short hold mode

The short hold mode can be activated or deactivated in this location.

Callback

A remote station that is calling must transmit its calling party number in the D channel of the PSTN connection. If callback is activated, then the connection is rejected by the communication system, and the administered partner is then called back immediately. This prevents a non-authorized remote station from calling in. The call back function works without a connection at the initial call, so that costs arise only for the side calling back.

Remote analog modem

This point must be activated if the partner is an analog modem.

IP mapping

This parameter indicates whether IP mapping should be carried out.

10.10.6.2 Area: Security

User ID

The identification for PAP, CHAP or the corresponding user identification of the service provider is entered in this location.

PAP activated / CHAP activated

For the use of the PAP and/or CHAP security mechanism within the PPP protocol, PAP or CHAP must be activated in this location.

PAP Host / CHAP Host

This point determines whether the remote station or the communication system should begin the authentication.

- Host activated means: the calling partner must authenticate itself with the communication system.
- Host deactivated means: HiPath 3000 can authenticate itself with the calling partner.

Password

The appropriate password for either PAP or CHAP is entered here.

10.10.6.3 PSTN partner table

A PSTN partner consists of a maximum of 5 call numbers. If the partner is to be reached from the communication system, then a connection attempt is first initiated to the first call number marked as outgoing. If this fails (according to the number of administrated redials, see Basic settings), the next entries marked as outgoing are dialed one after another, until either the connection can be made or until no additional numbers are available.

Call number

The PSTN call number at which the partner can be reached. It must be unique within the overall configuration and can consist of up to 22 decimal digits (0-9). In addition, a hyphen may be inserted for separating the necessary trunk seizure digits.

Call direc.

This is used to lay down the characteristic of a connection.

Blocked	The number is not used
Incoming	This call number is taken into account during the call number test of incoming calls (this entry is not used for the determination of the outgoing connection).
Outgoing	This entry is used to determine the call number of the outgoing connection (but is not taken into account during the call number test of incoming calls).
In+Out	This entry is used for the determination of the call number of the outgoing connection and is also taken into account during the call number test of incoming calls.

10.10.6.4 Area: Record no.

Record no.

The number of the entry is displayed next to **Record no.:**.

<, >

The buttons **>** and **<** can be used to scroll between the PSTN partner entries that are already configured.

New

A new entry is set up using the button **New**.

10.10.6.5 Back button

Back returns you to PSTN partner, where the data entered can be finally applied or rejected.

See also:
– Section 10.10.5, “PSTN partner”, on page 10-314

10.10.7 Firewall

Settings | Network | Firewall

Different security mechanisms exist to give protection from undesired connections. These security mechanisms are administered via **Firewall**.

10.10.7.1 Area: IP firewall

This category can have up to 40 entries. The table determines whether a LAN PC is allowed to send IP frames into another network via the communication system or if an external computer or external network has access to the local LAN or to the communication system. This allows or prevents routing into the PSTN and thus into remote networks, for example.

The IP addresses added to the firewall are displayed in the table.

To edit the parameters, double-click the corresponding table cell. The Firewall | Edit IP firewall dialog box is displayed.

Activate

The IP firewall is activated or deactivated.

All IP addresses are initially blocked when the IP firewall is activated.

10.10.7.2 Area: Application firewall

This category can have up to 10 entries. This firewall is effective at the system application level. The table determines which external computers are allowed to access the individual system applications.

The following applications can be enabled or blocked: Telnet, CSTA, APS, CDB, HiPath 3000 Manager, Log, Call detail recording, ASCII.

To edit the parameters, double-click the corresponding table cell. The Firewall | Edit application firewall dialog box is displayed.

Activate

The application firewall is activated or deactivated.

Application Firewall can only be administered as of HiPath 3000 V1.2. The application firewall is always activated in older systems.

See also:

- Section 10.10, “Settings | Network”, on page 10-299
- Section 10.10.8, “Firewall | Edit IP firewall”, on page 10-321
- Section 10.10.9, “Firewall | Edit application firewall”, on page 10-323

10.10.8 Firewall | Edit IP firewall

Settings | Network | Firewall | Edit IP firewall

To edit the parameters, double-click the corresponding table cell Firewall.

Source IP addr.

The **Source IP address** to which the firewall should react. If this exact entry does not also turn up in the IP routing table, the remote station is classified as an individual host. If a routing entry exists for the IP address, the address type of the entry (network or host) is assumed.

Dest. IP addr.

The **Dest. IP address** determines the network or host to which a connection may be made. A value of 0.0.0.0 authorizes a connection to any given IP address.

10.10.8.1 Area: Protocol

IP protocol

This setting allows the IP packet that should pass through the firewall to be more precisely specified according to its protocol.

- All IP protocols
- TCP (Transmission Control Protocol)
- UDP (User Datagram Protocol)
- ICMP (Internet Control Message Protocol)

In order to be able to reach the applications in the communication system, the following table must be taken into account on activating the IP firewall:

Application	IP protocol/IP port	Command
Telnet	TCP, Port 23	
HiPath 3000 Manager	TCP, Port 7000	
CSTA	TCP, Port 7001	
Log	UDP, Port 69 (TFTP)	GET -i log.arc
APS (APS transfer)	UDP, Port 69 (TFTP)	GET, PUT -i Hicom.fli
Call detail recording	UDP, Port 69 (TFTP)	GET -i gez.txt, gel.txt, get.txt
CDB	UDP, Port 69 (TFTP)	GET -i kds.txt

Application	IP protocol/IP port	Command
ASCII	UDP, Port 69 (TFTP)	GET -i ascii.txt

IP port, All ports allowed

Which port is allowed can be indicated for TCP or UDP. It is also possible to select (and thus activate) **All ports allowed**.

ICMP type, All types allowed

Which ICMP type is allowed can be indicated for ICMP. It is also possible to select (and thus activate) **All types allowed**.

ICMP code, All codes allowed

Which ICMP code is allowed can be indicated for ICMP. It is also possible to select (and thus activate) **All codes allowed**.

10.10.8.2 Area: Record no.

Record no.

The number of the entry is displayed next to **Record no.:**.

<, >

The buttons **<** and **>** can be used to scroll between the IP firewall entries that are already configured.

New

A new entry is set up using the button **New**.

10.10.8.3 Back button

Back returns you to Firewall, There the data entered can be finally applied or rejected.

See also:
– Section 10.10.7, “Firewall”, on page 10-319 – Section 10.10.9, “Firewall | Edit application firewall”, on page 10-323

10.10.9 Firewall | Edit application firewall

Settings | Network | Firewall | Edit application firewall

To edit the parameters, double-click the corresponding table cell Firewall.

10.10.9.1 Area: Source IP addr.

The source IP address of the client application is to be entered here. By declaring a network address (Class A, B or C), the corresponding network is released.

For the server IP address entered via HiPath 5000 RSM/AllServe Parameters, all system applications are accessible without an explicit entry in the application firewall.

Specific, Everybody

Determines whether only the entered IP address (**Specific**) or every IP address (**Everybody**) is enabled in the firewall. If “Everybody” is set, no IP address can be entered.

10.10.9.2 Applications table

By marking the desired application with a cross, it is released to the IP addresses entered.

Telnet	The Assistant T functionality is offered via Telnet.
CSTA	CSTA over TCP/IP is allowed.
APS	APS transfer over TFTP is allowed.
CDB	CDB reading over TFTP is allowed.
HiPath 3000 Manager	HiPath 3000 Manager access over TCP/IP is allowed.
Log	Reading the log file over TFTP is allowed.
Call detail recording	Picking up call charges over TFTP is allowed (CDRS,CDRT,CDRC).
ASCII	Reading the system’s basic configuration over TFTP is allowed.
IVM FTP	Board access is enabled via IVM FTP.
IVM TFTP	Board access is enabled via IVM TFTP.
IVM SSH	Board access is enabled via IVM SSH.
IVM HTTP	Board access is enabled via IVM HTTP.

10.10.9.3 Area: Record no.

Record no.

The number of the entry is displayed next to **Record no.:**.

<, >

The buttons **<** and **>** can be used to scroll between the application firewall entries that are already configured.

New

A new entry is set up using the button **New**.

10.10.9.4 Back button

Back returns you to Firewall, where the data entered can be finally applied or rejected.

See also:
– Section 10.10.7, “Firewall”, on page 10-319 – Section 10.10.8, “Firewall	Edit IP firewall”, on page 10-321 – HiPath 3000/5000 Feature Description, LAN Network

10.10.10 Routing

Settings | Network | Routing

Up to 40 entries can be defined via **Routing**. These entries determine which IP network or which individual IP computers can be reached via which gateway. The networks (LAN, PSTN) that are directly connected to the communication system are known to the internal router. Consequently, no routing entries are evaluated for them.

10.10.10.1 Table

The routing entries are displayed in the table. To edit the parameters, double-click the corresponding table cell. The Routing | Edit IP routing dialog box is displayed.

See also:
– Section 10.10, “Settings	Network”, on page 10-299 – Section 10.10.11, “Routing	Edit IP routing”, on page 10-326

10.10.11 Routing | Edit IP routing

Settings | Network | Routing | Edit IP routing

To edit the parameters, double-click the corresponding table cell Routing.

IP address

This is the **IP address** of the destination system or network. If the associated **Subnet mask** is 255.255.255.255, then a single system is assumed; otherwise, the IP address is interpreted as part of a network. In the latter case, the IP address 0.0.0.0 is also authorized. Using this setting, the accompanying **Gateway** is classified as a default gateway.

Net mask

The subnet mask addresses subnets by masking IP address bits. It indicates the size of the subnet. You can transfer data directly from processor to processor within a subnet without having to establish a connection via a router or a gateway.

Gateway

The gateway is the next router (computer) over which the desired destination (described by the IP address) can be reached.

Record no. , <, >, New, Back

The number of the entry is displayed next to **Record no.:**.

The buttons **<** and **>** can be used to scroll between the routing entries that are already configured.

A new entry is set up using the button **New**.

Back returns you to Routing. There the data entered can be finally applied or rejected.

See also:
– Section 10.10.10, “Routing”, on page 10-325

10.10.12 Mapping

Settings | Network | Mapping

The corporate networks of most customers are set up on the basis of the private IP address space (RFC1597).This results in the problem that the same IP addresses can exist at several customers. In order to make it possible for the remote center to make a unique assignment of the IP addresses in the different customer LANs, the functionality of address mapping is necessary. This enables a destination or source IP address (for IP traffic over the PSTN interface of the communication system) to be mapped to any ”virtual” IP address.

Up to 20 entries can be configured via **Mapping**.

10.10.12.1 Table

This table shows the mapping between the customer LAN and the virtual LAN.

- For IP packets from the LAN over the PSTN interface to the remote center: **IP cust. LAN** is mapped to **IP virtual LAN**.
- For IP packets from the remote center over the PSTN interface into the customer LAN: **IP virtual LAN** is mapped to **IP cust. LAN**.

To edit the parameters, double-click the corresponding table cell. The Mapping | Edit IP mapping dialog box is displayed.

Mapping mask

This is used to lay down the relevant portion of the IP address that is to be converted.

See also:

- Section 10.10, “Settings | Network”, on page 10-299
- Section 10.10.13, “Mapping | Edit IP mapping”, on page 10-328

10.10.13 Mapping | Edit IP mapping

Settings | Network | Routing | Edit IP mapping

To edit the parameters, double-click the corresponding table cell Mapping.

IP cust. LAN

Identifies a specific IP address or a network address in the customer LAN.

IP virtual LAN

Identifies the corresponding specific IP address or network address on the PSTN side.

Record no. , <, >, New, Back

The number of the entry is displayed next to **Record no.:**.

The buttons **<** and **>** can be used to scroll between the Mapping entries that are already configured.

A new entry is set up using the button **New**.

Back returns you to Mapping. There the data entered can be finally applied or rejected.

See also:
– Section 10.10.12, “Mapping”, on page 10-327

10.10.14 HiPath 5000 RSM/AllServe Parameters

Settings | Network | HiPath 5000 RSM/AllServe Parameters

HiPath 5000 RSM/AllServe Parameters is used to specify the parameters for a networked system.

10.10.14.1 Area: Server

IP address

The IP address of the server is entered here.

The IP address must be unique within the network . Any new IP address to be configured should therefore be “pinged” before it is assigned. If the IP address responds, it should not be assigned again.

10.10.14.2 Area: Node

Node ID

Each node in a networked system must be assigned a unique node ID. This enables the individual nodes in a networked system to be uniquely identified. Practical experience has shown that it is best to assign node ID = 1 to n.

See also:

- Section 10.10, “Settings | Network”, on page 10-299
- Section 10.10.9, “Firewall | Edit application firewall”, on page 10-323

10.10.15 Gatekeeper

Settings | Network |Gatekeeper

The **Gatekeeper** menu item is used to specify parameters for the gatekeeper.

A gatekeeper must be configured for each node in a network system. In addition, an SNTP server must be specified to synchronize the time of the individual nodes and all IP clients. For standalone systems, the SNTP server data is configured here. For a network system, by contrast, the SNTP server data is only displayed here. The configuration of the SNTP server data occurs via **Settings** | Netwide Data.

Security as of HiPath 3000/5000 V5.0

In order to prevent the operation of unauthorized IP clients and gatekeepers, a security mechanism was implemented starting with HiPath 3000/5000 V5.0. Every H.225 message from IP clients or gatekeepers can be optionally checked for validity via a **realtime stamp** (= crypto token). These crypto tokens are generated by the IP client and entered in the sent packets. The gatekeeper on the other side checks these crypto tokens for validity and discards the message if the token is invalid. The security functionality is defined by the parameters set under **Gatekeeper** and **Security**.

10.10.15.1 Area: Gatekeeper

HG 1500 Board

Shows in which slot the HG 1500 board that is assigned as a gatekeeper is inserted (see also Gatekeeper (V5.0 and Later).

Identity

This parameter is used for authentication purposes when the gatekeepers communicate with one another. The gatekeeper **Identity** is an alphanumeric value that identifies the gatekeeper and is sent along with H.225 communications.

In the communication system, if the security is set to **Reduced Security** or **Full Security**, the identities of all gatekeepers and all IP clients of a HiPath domain must be set identically in order to enable communications between the gatekeepers.

Password

The password is used for authentication purposes when the gatekeepers communicate with one another. It is also used to compute the crypto tokens for the H.225 send and receive packets.

In the communication system, if the security is set to **Reduced Security** or **Full Security**, the passwords of all gatekeepers of a HiPath domain must be set via HiPath 3000 Manager to be identical in order to enable communications between the gatekeepers.

10.10.15.2 Area: SNTP Server

IP address

IP address of the network-wide Time server. In order to use the H.235 security protocol, a central SNTP Time server and a time reference must be available for all IP clients and the gatekeeper, respectively.

Polling Time

Multiple of 10 minutes.

The **Polling Time** defines how often the IP clients and the gatekeeper access the SNTP Time server to read the current time reference. The polling time depends on the accuracy of the internal clocks of the IP devices. Practical experience has shown that a value of 72 is appropriate (72x10=720 minutes = 12 hours = twice a day).

Timezone

The time zone in which the gatekeeper is located is set here (local time zone of the communication system).

After setting the IP address and the polling time, these values are configured in all loaded CDBs via the **All KDS equal** button. The time zone is not affected by this, since a node-specific date is involved here.
If an external SNTP server exists, then these settings will be OK in all nodes. If an internal HG1500 board is to be used as the SNTP server, then either an external SNTP server must be specified in the node in which this HG1500 board is installed or - as in the case of Germany - no IP address should be specified so that the ISDN time is used. In both cases, the time is then made available to the SNTP server on the HG1500 board via downloads.

10.10.15.3 Area: Security

No Security, Reduced Security, Full Security

Activation of the H.235 security protocol is configured here:

- **No Security**: The security protocol is not used, i.e., no crypto tokens are sent by the IP clients.
- **Reduced security**: The IP clients send crypto tokens, and the HG 1500 verifies these tokens. However, the HG 1500 itself does not send any crypto tokens.
- **Full security**: Both sides send and verify crypto tokens.

Identity

The global gatekeeper identity is specified here.

Password (only for trunking) / Confirm password

Enter the password here and confirm it by repeating the entry.

Security time

This setting configures monitoring for the lifetime of IP packets. This means that a check is then performed in the communication system to ensure that the incoming IP packets are not older than the current time plus the time specified in the **Security time** field. This prevents IP packets from being potentially traced by a sniffer, for example, and then being resent to the original addressee after manipulation. The size of the **Security time** depends on the dynamic runtimes in the customer LAN. If the selected time is too small, and long runtimes occur, disruptions may occur in the VoIP traffic. A value of 90 seconds should work without problems in most cases.

In order to ensure that H.235 operates correctly, whenever any changes are made to the corresponding parameters (Gatekeeper and Security), the individual components must be restarted.

See also:

- Section 10.10, “Settings | Network”, on page 10-299
- Section 10.10.16, “Ext. H.323-GK”, on page 10-333
- Section 10.10.17, “Ext. SIP”, on page 10-335
- Section 10.2.10, “Gatekeeper (V5.0 and Later)”, on page 10-33

10.10.16 Ext. H.323-GK

Settings | Network | EXT H.323-GK

Ext. H323-GK (external H.323 gatekeeper) is used by the HiPath system to register itself via the H.225 RAS as a gateway for an external gatekeeper.

10.10.16.1 External H323 Gatekeeper Mode flag

Parameters for operation with an external H.323 gatekeeper can only be specified if this flag is activated.

Project-specific release is required for the “External H.323 Gatekeeper Mode” flag. An exception to this rule is made for simplified configuration of a third-party node (for example, HiPath 4000) without registration (“Perform Registrar” must be deactivated).

10.10.16.2 Area: Gateway

Environment

Since an external gatekeeper may involve various signaling options, the external gatekeeper is specified via this parameter. You can choose between

- HiPath 4000
- a CISCO Gatekeeper (enabling is exclusively project-specific)
- a connection to SURPASS
- or one OpenScape Voice

Trunking Mode

The trunking mode affects the H225 call signaling, i.e., the transmission of feature-specific information . You can choose between

- H323 Native: no transfer of feature-specific information
- H323 Annex: Feature-specific information is transferred

Station number

The “Public Directory number” is configured here as in the case of the system number. The gateway in the own system can be reached under this number.

Time to Live

Validity period for the registration, specified in seconds. Within the time period set here, the gateway registers itself cyclically at the external gatekeeper.

10.10.16.3 Area: H.323 Security

This area is currently not yet supported by the system.

10.10.16.4 Areas: Primary/Secondary Gatekeeper

The gatekeeper identity (GK-ID) of the external gatekeeper must always be entered. If it is omitted or is subject to errors, the registration of the gateway is rejected.

IP address

IP address of the external gatekeeper.

Port

Port number of the external gatekeeper.

GK-ID

Name of the external gatekeeper.

10.10.16.5 Perform Registrar

The system registers at the gatekeeper if this flag is activated. If this flag is deactivated, registration is not performed (for simplified configuration of a third-party node, such as, HiPath 4000).

See also:

– Section 10.10, “Settings | Network”, on page 10-299
– Section 10.10.15, “Gatekeeper”, on page 10-330
– Section 10.10.17, “Ext. SIP”, on page 10-335
– Section 10.2.10, “Gatekeeper (V5.0 and Later)”, on page 10-33

10.10.17 Ext. SIP

Settings | Network | Ext. SIP-RG

Ext. SIP is used to define the parameters for an external SIP (SIP= Session Initiation Protocol) Registrar.

10.10.17.1 External SIP Registrar Mode flag.

The parameters for operation with an external SIP Registrar can only be entered if this flag has been activated.

Project-specific release is required for the “External SIP Registrar Mode” flag.

10.10.17.2 Area: Gateway

Environment

Selecting the environment (e.g., “HiPath 8000”, “HiPath 4000”)

Trunking Mode

The trunking mode affects the H225 call signaling, i.e., the transmission of feature-specific information . You can choose between

- SIP Native: no transfer of feature-specific information
- SIP-Q: Feature-specific information is transferred

SIP-Q is the ECMA default; the tunneling of QSIG (reference point Q signaling) is defined via SIP.

Call number

The “Public Directory number” is configured here as in the case of the system number. The gateway in the own system can be reached under this number.

Registration Expiry

Validity period for the registration, specified in seconds. Within the time period set here, the gateway registers itself cyclically at the external gatekeeper.

IP address

IP address of the gateway.

If under “Environment” the option **HiPath 8000** was selected, then the address of the main soft switch of the HiPath 8000 cluster is entered. A HiPath 8000 cluster consists of a main soft switch and a backup soft switch, i.e., two HiPath 8000. If a HiPath 3000 communicates with the HiPath 8000 cluster via a Survivable Proxy, then the address of the Survivable Proxy is entered here.

See also sections “TLS“ and “Alternate RG IP address“.

Port

Port number of the gateway.

TLS

Only visible if the option **HiPath 8000** was selected under “Environment”. By default this checkbox is not activated.

If the checkbox is activated, a secure TCP/TLS connection is used for:

- Registering HiPath 3000 on the HiPath 8000 cluster. A HiPath 8000 cluster consists of a main soft switch and a backup soft switch, i.e., two HiPath 8000.
- Call signaling between 3000 and the main HiPath 8000
- Call signaling from the backup HiPath 8000 to HiPath 3000

See also “Alternate RG IP address“.

Alternate RG IP address

Only visible if the option **HiPath 8000** was selected under “Environment”. The address 0.0.0.0 is entered by default.

The IP address of the backup soft switch of the HiPath 8000 cluster is entered in this input window A HiPath 8000 cluster consists of a main soft switch and a backup soft switch, i.e., two HiPath 8000.

See also “TLS“.

10.10.17.3 Security

Authentication Options

The following fields are enabled and must be filled only if **Authentication Required** has been selected.

SIP - Userid

User name

Password / Confirm password

Enter the password here and confirm it by repeating the entry.

Realm

Realm designates the zone and is a freely selectable name.

10.10.17.4 Perform Registrar

The system registers at the registrar if this flag is activated. If this flag is deactivated, registration is not performed (for simplified configuration of a third-party node, such as, HiPath 4000).

See also:

– Section 10.10, “Settings | Network”, on page 10-299
– Section 10.10.15, “Gatekeeper”, on page 10-330
– Section 10.10.16, “Ext. H.323-GK”, on page 10-333
– Section 10.2.10, “Gatekeeper (V5.0 and Later)”, on page 10-33

10.10.18 IP Ports

Settings | Network |IP Ports

IP Ports **can be used to display and modify the IP ports for the applications**. A change in the IP ports may be needed to adapt the ports to the customer-specific firewall, for example. Activation of the modified ports occurs with the next restart of the system/application.

If the port number for the HiPath 3000 Manager (Application ADM) was changed in the system, then the port number must be specified in addition to the IP address (IP-address:port) when transferring the CDB (see Transfer | Communication).

10.10.18.1 IP Ports table

The **IP Ports** table contains all applications for which the IP port can be modified. To change an IP port for an application, enter the value for the new IP port in the **Port no.** column.

Application	Port-no.
H225_CS	1720
RTP_MIN	29100
RTP_MAX	29259
H.323_DYN_MIN	12250
H.323_DYN_MAX	12950
H225_RAS	1719
VOPTISET	4060
IPNC	12051
MPH	12052
DSL_DIAG	12200
REG	12061
CAR	12062
CAR Server	12063
H225_CS_RESERVE	4711
ADM	7000
SYNCH	7024
FCT	7100

Table 10-7 IP ports default value

Application	Port-no.
Ressource Manager RM	9000
SIP Port	5060
H323-TLS	1300
SIP-TLS	5061
HFA-TLS	4061

Table 10-7 IP ports default value

Check button

The IP ports must be unique. If you have modified ports, you can check whether the specified ports are unique by using the **Check** button. If a value for a port has been specified more than once, a corresponding message is issued.

All KDS equal button

This button is used to provide all lists of IP ports in all communication systems of a network environment with uniform values.

In a networked system, or if multiple CDBs are loaded, the current ports of the CDB being displayed are copied to all other CDBs.

Set Default button

This button is used to assign changed IP ports back to the original default value.

See also:

- Section 10.10, “Settings | Network”, on page 10-299
- “HiPath 3000/5000 Service Manual” in the chapter on “IP Protocols and Port Numbers”.

10.10.19 Resource Management

Settings | Network | Resource Management

In an IP-network system, the IP addresses of the systems to be networked can be specified via **Resource Management**.

10.10.19.1 WAN Group for Node ID table

The IP addresses networked with the current nodes can be specified in the table.

No. column

Sequential numbering of the nodes.

Node IP address column

The IP addresses of the respective nodes with which the current node is networked using IP are specified here.

See also:
– Section 10.10, “Settings	Network”, on page 10-299

10.11 Settings | Licensing

Settings | Licensing

The **Settings | Licensing** option can be used to manage licenses for features that require them. In order to use this option, you will need a valid license file for the MAC address of the central board (CB) of the communication system for which licensing is required.

Licensing offers the option of accessing either a CLA that is installed on the local PC (on which the HiPath 3000 Manager is also running) or a CLA on another PC. An appropriate area is available in the ass_150e.ini file (see also Section 2.6, “File ass_150e.ini”, on page 2-17) to set the CLS target.

```
[License]
Cla_Host=127.0.0.1
```

On invoking the License dialog, the IP address under Cla_Host is copied to the .ccf file. This .ccf file requires the CLC in order to find the appropriate CLA. If this entry is not available when Licensing is invoked for the first time, it can be entered directly in cases where a CLA target is not the same as the local PC.

More details on licensing can be found in the “HiPath 3000/5000 Service Manual” in the chapter on “Licensing”.

Tabs
• Licensing – HXG • Licensing – Base Station (not in the USA) • Licensing – S2M • Licensing – IVM • Licensing – System-wide

10.11.1 Licensing – HXG

Settings | Licensing | HXG

The **HXG** option is used to manage licenses for HG 1500 boards as of V5.0 (HXG3). The licenses for HG 1500 boards until V3.0 are still managed via the HG 1500 board.

10.11.1.1 Grace Period Configuration File table

The available licenses of the license file matching the MAC address are shown in the table.

Features subject to licensing requirements are shown in the **Feature** column.

The number of licenses purchased are displayed in the **Available** column.

The number of licenses already issued or assigned is shown in the **Used** column.

The expiration date for the licenses is displayed in the **Expiration date** column.

10.11.1.2 CDB table

The licenses assigned to the current CDB are displayed in the table. The Assigned column can be used to assign the licenses (from the above table) that are still free.

The **Type-Slot** column shows the type of board and in which slot it is inserted.

Column **Port** not relevant.

The **Feature** column shows the applicable features for the board in each case.

The number of assigned licenses appears in the **Assigned** column.

The expiration date for the licenses is displayed in the **Expiration date** column.

See also:
– Section 10.11, “Settings	Licensing”, on page 10-341 – Section 10.11.2, “Licensing – Base Station (not in the USA)”, on page 10-343 – Section 10.11.3, “Licensing – S2M”, on page 10-344 – Section 10.11.4, “Licensing – IVM”, on page 10-345 – Section 10.11.5, “Licensing – System-wide”, on page 10-346 – “HiPath 3000/5000 Service Manual” in the chapter on “Licensing”.

10.11.2 Licensing – Base Station (not in the USA)

Settings | Licensing | Base station

The **Base station** option is used to manage licenses for the Cordless (SLC16N) boards. Only the licenses as of BS4 are managed here.

10.11.2.1 License File for MAC Address table:

The available licenses of the license file matching the MAC address are shown in the table.

Features subject to licensing requirements are shown in the **Feature** column.

The number of licenses purchased are displayed in the **Available** column.

The number of licenses already issued or assigned is shown in the **Used** column.

The expiration date for the licenses is displayed in the **Expiration date** column.

10.11.2.2 CDB table

The licenses assigned to the current CDB are displayed in the table. The Assigned column can be used to assign the licenses (from the above table) that are still free.

The **Type-Slot-Port** column shows the type of board and in which slot it is inserted.

The **BS-Type** column shows the type of the base station.

The name of the base station is displayed in the **Name** column.

The **Feature** column shows the applicable features for the board in each case.

The number of assigned licenses appears in the **Assigned** column.

The expiration date for the licenses is displayed in the **Expiration date** column.

See also:
– Section 10.11, “Settings	Licensing”, on page 10-341 – Section 10.11.1, “Licensing – HXG”, on page 10-342 – Section 10.11.3, “Licensing – S2M”, on page 10-344 – Section 10.11.4, “Licensing – IVM”, on page 10-345 – Section 10.11.5, “Licensing – System-wide”, on page 10-346 – “HiPath 3000/5000 Service Manual” in the chapter on “Licensing”.

10.11.3 Licensing – S2M

Settings | Licensing | S2M

The **S2M** option is used to manage licenses for the TMS2 boards.

10.11.3.1 Grace Period Configuration File table

The available licenses of the license file matching the MAC address are shown in the table.

Features subject to licensing requirements are shown in the **Feature** column.

The number of licenses purchased are displayed in the **Available** column.

The number of licenses already issued or assigned is shown in the **Used** column.

The expiration date for the licenses is displayed in the **Expiration date** column.

10.11.3.2 CDB table

The licenses assigned to the current CDB are displayed in the table. The Assigned column can be used to assign the licenses (from the above table) that are still free.

The **Type-Slot** column shows the type of board and in which slot it is inserted.

The column **Port** is not relevant.

The **Feature** column shows the applicable features for the board in each case.

The number of assigned licenses appears in the **Assigned** column.

The expiration date for the licenses is displayed in the **Expiration date** column.

See also:
– Section 10.11, “Settings	Licensing”, on page 10-341 – Section 10.11.1, “Licensing – HXG”, on page 10-342 – Section 10.11.2, “Licensing – Base Station (not in the USA)”, on page 10-343 – Section 10.11.4, “Licensing – IVM”, on page 10-345 – Section 10.11.5, “Licensing – System-wide”, on page 10-346 – “HiPath 3000/5000 Service Manual” in the chapter on “Licensing”.

10.11.4 Licensing – IVM

Settings | Licensing | IVM

The **IVM** option is used to manage licenses for the IVM boards.

10.11.4.1 Grace Period Configuration File table

The available licenses of the license file matching the MAC address are shown in the table.

Features subject to licensing requirements are shown in the **Feature** column.

The number of licenses purchased are displayed in the **Available** column.

The number of licenses already issued or assigned is shown in the **Used** column.

The expiration date for the licenses is displayed in the **Expiration date** column.

10.11.4.2 CDB table

The licenses assigned to the current CDB are displayed in the table. The Assigned column can be used to assign the licenses (from the above table) that are still free.

The **Type-Slot** column shows the type of board and in which slot it is inserted.

The column **Port** is not relevant.

The **Feature** column shows the applicable features for the board in each case.

The number of assigned licenses appears in the **Assigned** column.

The expiration date for the licenses is displayed in the **Expiration date** column.

See also:
– Section 10.11, “Settings	Licensing”, on page 10-341 – Section 10.11.1, “Licensing – HXG”, on page 10-342 – Section 10.11.2, “Licensing – Base Station (not in the USA)”, on page 10-343 – Section 10.11.3, “Licensing – S2M”, on page 10-344 – Section 10.11.5, “Licensing – System-wide”, on page 10-346 – “HiPath 3000/5000 Service Manual” in the chapter on “Licensing”.

10.11.5 Licensing – System-wide

Settings | Licensing | System-wide

The licenses of the system-wide features are displayed via **System-wide**. These are in the above table for every purchased licence feature and in the table below each assigned CDB licence.

10.11.5.1 "Grace Period Configuration File" or "Licence File for Mac Address" table

If the communications system is in the grace period, this table is called "Grace Period Configuration File". If the communications system is in the licensed status, this table is called "Licence File for Mac Address".

Licences

Licenses are displayed for the following **HiPath 3000 features**:

- ComScendo IP Workpoint
- ComScendo Security
- IVM Announcement
- Central Admin H5000
- B-Channel S2M
- B-Channel HG1500
- Xpressions Compact Announcement
- BS4 Channel
- LWCA HG1500
- optiClient Attendant V8
- Xpressions Compact Mobility
- IVM Mobility
- Mobility Entry

Licenses are displayed for the following **OpenScape Office applications**:

- myPortal Client
- myPortal for Outlook
- myAttendant
- myAgent
- fax distribution in a call center group
- email distribution in call center group
- networked nodes
- call center reports server
- applications interface

Further information on the OpenScape Office applications can be found in the System Description.

The following licenses are displayed for the **OpenDirectoryServer feature of OpenScape Office HX**:

- "OSO V3 HX OpenDirectory Base" – This license is enabled together with the "OpenScapeOffice V3 HX Base Licence Package" and is applied system-wide. Therefore, only one license is required. It is used to activate the "OpenDirectoryServer" feature.

  The "OSO V3 HX OpenDirectory Connector" license requires the "OSO V3 HX OpenDirectory Base" license.

- "OSO V3 HX OpenDirectory Connector" – This license comprises the number of possible backend connectors for the OpenDirectoryServer. At most, there are 4 licenses.

Further information on the licenses of OpenScape Office HX can be found in the System Description.

Table columns

Features subject to licensing requirements are shown in the **Feature** column.

The number of licenses purchased are displayed in the **Available** column.

The number of licenses already issued or assigned is shown in the **Used** column.

The expiration date for the licenses is displayed in the **Expiration date** column.

10.11.5.2 CDB table

Licences

The licenses assigned to the current CDB are displayed in the table. A CDB, e.g., can be assigned as follows:

- Central Admin H5000
- optiClient Attendant
- Mobility Entry (at most 100)
- Licenses for the OpenDirectoryServer of OpenScape Office HX (see above)

The maximum number of licences that can be assigned for every feature is the number purchased.

Table columns

The features assigned by the CDB are displayed in the **Feature** column.

The number of assigned licenses for every feature is displayed in the **Assigned** column.

The expiration date for every license is displayed in the **Expiration date** column.

See also:
– Section 10.11, “Settings	Licensing”, on page 10-341 – Section 10.11.1, “Licensing – HXG”, on page 10-342 – Section 10.11.2, “Licensing – Base Station (not in the USA)”, on page 10-343 – Section 10.11.3, “Licensing – S2M”, on page 10-344 – Section 10.11.4, “Licensing – IVM”, on page 10-345 – “HiPath 3000/5000 Service Manual” in the chapter on “Licensing”.

11 System Status Menu

System-wide
Call charges

Table 11-1 System Status Menu

11.1 System-wide

The **System status | System-wide** option contains a number of tabs, which affect the communication system status in various ways. Some of these tabs are for information purposes only, while others allow you to make changes to the parameters displayed. The status of the communication system involved here is the status at the time when the customer database is downloaded.

Tabs and Dialog boxes
• Cards – Card Configuration	T1 Configuration – Card Configuration	Card data • Loadware • System • Flags • Forwarding • Line states • System texts • UCD Agents

11.1.1 Cards

System Status | System-wide | Cards

The **Cards** tab offers two primary functions:

- First, it provides an overview of the **System expansion hardware** (**HW expansion**), which allows you to view the layout of the communication system. Slot numbers and card numbers are displayed. To facilitate repairs, replacements, and upgrades, you can also display part code numbers for each card. Some users find it convenient to view this tab remotely to determine whether or not a new card is required before adding additional services to the communication system
- In addition, the overview provided via **System expansion software** (**SW expansion**) can be used to set up cards in the system software (**Card Config.**) before they are physically installed in the communication system.

11.1.1.1 Area: System type

Contains the possible system types.

11.1.1.2 Area: Country version

A country was selected at the time that the communication system was installed. That country is listed here. Different features are available with different country versions.
See also HiPath 3000 Service Manual.

11.1.1.3 Area: Software version

This is the release number of the operating system software. Note that this is not the system software number.

11.1.1.4 Card selection table

The Card Selection list box lists all of the cards that can be used with the system and which have not yet been plugged.

These cards can be plugged in or removed in the **System expansion software** view via the buttons **>** and **<** next to the card list. To do this, select the appropriate card in the card list, mark a slot in the **box**, and plug in the card using **>**. This feature is useful if you want to update the software before actually adding the physical card to the communication system.

Depending on the system type, certain cards can be plugged several times (e.g. SLC16).

Slot restriction for HiPath 3500 and HiPath 3550:
Two slots must be free for the TS2 and TMCAS (HiPath 3500 and HiPath 3550) boards.
HiPath 3500 and HiPath 3550: Slot 10 must be free for holding the TMCAS board, the TS2 board may be inserted in any of the slots 4 to 9.

11.1.1.5 Area: Switchover to

SW expansion, HW expansion

You can switch between the **System expansion hardware** and **System expansion software** views via the corresponding **SW expansion** and **HW expansion** buttons.

System expansion hardware

The **System expansion hardware** view shows the hardware actually installed in the communication system. This **Box** field displays the communication system's card assignments.

System expansion software

The **System expansion software** overview allows you to view the system configuration based on the available SW. The Software will automatically detect every card physically in the communication system.

Additional cards can be added in the communication system (see also Card selection table).

The only exception is the TST1 card, which must be manually assigned as either TST1 analog or TST1 digital. With this selection, the communication system will then assign the card with either 24 B-channels or 23 B-channels and 1 D-channel.

Card Config. (Card Configuration)

Card Config. can be only viewed in the **System expansion software** overview and when the corresponding boards are inserted. When you click on this button, further tabs are displayed via which you can configure the card.

The TMAMF card is not relevant for the USA.

Card Config. tabs
– Card Configuration	T1 Configuration – Card Configuration	Card data

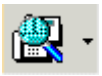
11.1.1.6 Area: Card data

When a particular card (**Slot**) is selected in the **Box**, corresponding data for this card is shown in **Card data**.

Slot:	Slot number for the selected card in the communication system.
Designation and code no.	The card name or number. The designation may deviate slightly for 19” cards (e.g. SLU8R is displayed as SLU8). For the SBSCS, SBSCO, CBCP, CBCC and CBCPR control cards, the code number (including variant and output status) is read out of the communication system. For all other cards, the code number is provided by the HiPath 3000 Manager itself. In addition, the submodules (CMS, CMA, LIM, IMODC, MPPI) inserted for the control cards referred to are also displayed in the form of a drop-down list.
Template	For several boards, (e.g. DIUT2 T1 S2, DIUT2 T1 Analog, DIUT2 T1, DIUN2, DIU2U, DIU2U Analog, IVMN8, IVMNL), which are selected in the **Card selection** list, settings can be changed in the **Template** drop-down list. These settings can be changed via the **Card Config.** button.

See also:
– Section 11.1, “System-wide”, on page 11-2 – Section 11.1.2, “Card Configuration	T1 Configuration”, on page 11-6 – Section 11.1.3, “Card Configuration	Card data”, on page 11-7 – HiPath 3000/5000 Service Manual, Cards

11.1.2 Card Configuration | T1 Configuration



System Status | System-wide | Card Config. | T1 Configuration

T1 Configuration is displayed by clicking on the **Card Config.** button in the Cards tab.

With **T1 Configuration**, port allocation to lines or stations can be performed for analog T1 cards plugged in the communication system.

11.1.2.1 Area: Card configuration, Slot

The **Slot** selection list contains the T1 cards (analog or digital) installed in the communication system together with the slot IDs.

11.1.2.2 Area: Port assignment, Port, Type

Assistant E Office supports port allocation of analog T1 cards to lines or stations. To do this, the corresponding ports are selected from the **Port** selection list and the **Type** line or station is allocated. The selected ports are then assigned by clicking **Assign**.

CAUTION: Configuration of an analog T1 card must be implemented very carefully because the card can be damaged by incorrect configuration. Consequently, reconfiguration can only be achieved in a roundabout way. Select Cards. You can now unplug the card from the communication system and insert it again from here. You can then reconfigure the ports. But remember, this will not be enough if the card was already configured in the communication system. If the card was already configured in the system, you must put it out of service via Assistant T and then back into service again **before** you generate the communication system's database. In addition, the option Transfer | CommunicationHardware **must be activated via** . This will cause a restart after generation and will set up the ports on the card correctly.

See also:

– Section 11.1.1, "Cards", on page 11-3
– Section 11.1.3, "Card Configuration | Card data", on page 11-7

11.1.3 Card Configuration | Card data

System Status | System-wide | Card Config. | Card data

Card data is displayed by clicking on the **Card Config.** button in the Cards tab.

Using **Card data**, settings can be adjusted for the choice template for TMST1 (analog or digital).

11.1.3.1 Area: Templates

The **Template** field can be used to select whether the template for TMST1 analog or digital needs to be modified. If the template is changed from TMST1 Digital mod. to TMST1 Analog mod., the flags in **T1 template** for layer 2 or 2 will also be changed accordingly.

11.1.3.2 T1 Template, Operating Mode Layer 1, 2

The **Layer 1** and **Layer 2** settings can be adjusted in **T1 template** if they are different to the standard settings for T1 analog or T1 digital (PRI or CorNet-N/CorNet-NQ).

SF/ESF

SF-Super Frame

ESF-Extended Super Frame

Layer 1 physical framing mode.

For PRI/CorNet, the setting needs to be implemented in PRI (US only). The setting here has to be adjusted accordingly.

AMI/B8ZS

AMI-Alternate Mark Inversion

B8ZS-Bipolar with 8-zero substitution. An encoding scheme is used for ESF lines to allow all null characters to be transmitted. Use of B8ZS allows to carry unrestricted data at 64Kbps.

For PRI/CorNet, the setting needs to be implemented in PRI (US only). The setting here has to be adjusted accordingly.

Bipolar violation detection

Two consecutive pulses of the same polarity in a bipolar bit stream. Normally indicates a Layer 1 transmission error, but may be intentionally sent in order to meet pulse density requirements. This can be selected or deselected depending if supported by the central office.

Contact closure

This option can be selected or deselected depending on the requirement from the central office.

Yellow Alarm if FS-Bit=1

Yellow Alarm is a Layer 1 alarm condition, signaling that the opposite side is not yet ready to send data. It is normally encountered when a line is being taken up or down. It should not occur during normal operation.

ISDN / CAS Mode 2

ISDN-Integrated Services Digital Network

CAS-Channel Associated Signaling

Can be adjusted based on the requirement of the central office.

CAS Mode 4 / 16

CAS-Channel Associated Signaling

Can be adjusted based on the requirement of the central office.

In/out priority

This parameter defines whether the incoming or the outgoing call has priority when a connection setup from both sides occurs at the same time.

Layer 2 active

Defines if the status of the Layer 2 is monitored.

Optical fiber

Defines if the link is connected via copper or via optical fiber.

CRC 6 check

CRC-Validity check used on ESF-lines. A 6-bit cyclic redundancy code used for error checking in T1 transmission. Can be selected or deselected depending if required from the central office or not.

TEI-verify

TEI-Terminal Endpoint Identifier

Can be selected or deselected depending if required from the central office or not.

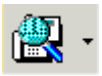
EOC

EOC-Embedded Operations Channel

EOC is a field encoded on ESF lines. In NI-2 lines it is used to carry performance data.

See also:
– Section 11.1.1, “Cards”, on page 11-3 – Section 11.1.2, “Card Configuration	T1 Configuration”, on page 11-6

11.1.4 Loadware



System Status | System-wide | Loadware

All Loadware versions available in the communication system can be displayed via **Loadware**.

See also:
– Section 11.1, “System-wide”, on page 11-2

11.1.5 System

System Status | System-wide | System

System allows status information for the communication system to be displayed, for example system-wide flags or the software version.

11.1.5.1 Area: System-wide flags

These entries shows whether FWD to the ISDN CO is activated or deactivated.

The destination call number is also displayed if FWD is activated.

The night service status is also displayed.

11.1.5.2 Area: Optional cards

Data from optional cards with a processor is displayed here (GEE12/16/50, STRB cards). An ALUM is not displayed here.

The data serves the identification of the options and the output status.

Option slot	Slot location of the option
Option type	The type of the option inserted in the slot
SW code number	Code number of the option card (if available).
HW ID	Option card code Option card code serves to differentiate between HW variants of an option (e.g., 0x for GEE12/16; 0x1 for GEE50).

11.1.5.3 MSN or CFW status table

The Call forwarding to CO feature is organized into 3 types of call forwarding:

- CFU Call Forwarding Unconditional
  This is unconditional, immediate call forwarding; all calls intended for an MSN are forwarded directly by the carrier, regardless of their status.
- CFNR Call Forwarding No Reply
  Call forwarding to CO is implemented only when the incoming call is not answered within a given time (15 s).
- CFB Call Forwarding Busy
  Call forwarding is implemented only if the selected MSN is busy.

All three types of call forwarding can be realized for any other external connection (ISDN network, analog network, radio telephone network, global). This service is always activated for the basic services ”telephony”, ”speech” and ” 3.1 kHz audio”.

Only one forwarding destination can be entered per MSN and forwarding type.

Call forwarding can be activated/deactivated from any telephone to which an MSN is assigned and which has the authorization to initiate external call forwarding. The other MSN’s are not affected by this call forwarding. If an MSN is assigned to a group, every station in the group can activate/deactivate the call forwarding. The destination call number of the call forwarding must be entered without trunk group code since the call forwarding is implemented in the central office.

There is a common procedure for all three types of call forwarding. In this procedure, the type of the call forwarding, the MSN to be forwarded and the forwarding destination must be entered. It is absolutely necessary to enter the **MSN** since a station can be assigned to several MSN’s under group configuration. The activation of the feature can be initiated using expert codes, menus, or key functionality.

Call forwarding can be deactivated at any time, independently of the activation.

The Call forwarding to CO for each MSN feature is limited to 10 MSN’s and is valid only for multidevice connections.

An activated CFU is signaled by a special dial tone and a display by which the stations assigned to the MSN.

For each MSN, the line where the call forwarding is to be activated is configured, since each MSN is given a basic connection.

The system status displays for which MSN, on which line and to which call number, a call forwarding to CO has been activated. In addition, the type of the call forwarding (CFU/CFNR/CFB) is displayed.

11.1.5.4 Area: Software version

The software version and/or binder number of the communication system is displayed in this field.

The country version is also listed.
See also HiPath 3000 Service Manual.

11.1.5.5 Area: HW data

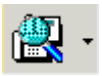
Hardware data from the communication system is displayed here.

Serial no. = MAC addr

The MAC address of the LAN Interface Module (LIM) is displayed here). This MAC address is also simultaneously used as the unique serial number of the control board. This information is available only for HiPath 3000.

See also:
– Section 11.1, “System-wide”, on page 11-2

11.1.6 Flags



System Status | System-wide | Flags

The activated features of individual stations can be queried via **Flags**.

11.1.6.1 Stations/MULAP table

All stations available in the communication system are entered in the **Stations/MULAP** table (also MULAPs as of Hicom 150 H V1.0/Hicom 150 E Office Rel. 3.0).

11.1.6.2 Area: Stations/MULAP, Station/MULAP flags

If a station is selected in the table **Stations/MULAP**, the features that were modified and entered by the station are listed under **Stations/MULAP flags**.

11.1.6.3 Area: Mark deletions

Set, Remove

The features shown in **Stations/MULAP flags** can be deactivated for each station. To do this, select the relevant stations in the table and then press the **Set** button (Mark deletions, Set) The stations whose features are to be deleted at the next upload (see Transfer) are shown in the table (indented). Mark deletions can be canceled by pressing the **Remove** button (Mark deletions, Remove). Mark deletions cannot be set in an AllServe system.

See also:
– Section 9.19, “Transfer”, on page 9-25 – Section 10.6.5, “Groups/Hunt groups	Station parameters”, on page 10-139 – Section 11.1, “System-wide”, on page 11-2

11.1.7 Forwarding

System Status I System-wide I Forwarding

Forwarding only displays station-specific (no system-specific) status information. Under **Call forwarding** you can see whether the station has been forwarded to another station or is itself a call forwarding destination. As of Hicom 150 H V1.0/Hicom 150 E Office Rel. 3.0, forwarding for MULAPs is also displayed.

11.1.7.1 Stations/MULAP table

All stations available in the communication system are entered in the **Stations/MULAP** table (also MULAPs as of Hicom 150 H V1.0/Hicom 150 E Office Rel. 3.0). When stations are selected in the table, any relevant call forwarding information for them will be displayed under **Call forwarding** or **Ringing group on**.

11.1.7.2 Area: Call forwarding

Status, Forwarding destination from

One of three call forwarding types may be set in the station. The three types are:
- External
- Internal
- All

The type selected at this station/MULAP is displayed in **Status**. If forwarding has not been activated at that station/MULAP, the status is indicated as **Off**.

The **Forwarding destination from** text box lists the stations/MULAPs that are forwarded to this station/MULAP, if these stations are internal.

11.1.7.3 Area: Ringing group

All stations to which the station selected earlier in the **Stations/MULAP** table transferred calls (**Stations included**), and stations which also transferred calls to the selected station (**Connection of**), are displayed.

Group ringing with external destinations

Example:
In a HiPath 5000 PCS, there are registered IP telephones that dial into the CO via a HiPath 3800 hub. When the **group ringing** flag is activated (on), the external telephone should ring in parallel.

In order to be able to use this feature, another **CO code**, other than 0, must be created in the transit hub (HiPath 3800). In the **least cost routing** of the HiPath 5000 PCS, the 0 CO code dialed there must be converted using a dialing rule into the additional CO code for the HiPath 3800.

Also, the flag **External traffic transit** must be set in the transit hub (HiPath 3800).

Stations included

The user can forward calls to up to five stations. If another station has forwarded calls to this station, then that station is shown here too.

Connection of

Shows whether or not calls were transferred to this station, and if so, from what device.

See also:

– Section 10.4.8.3, “Area: CO code (2nd. CO code)”, on page 10-74
– Section 11.1, “System-wide”, on page 11-2
– Section 11.1.6.2, “Area: Stations/MULAP, Station/MULAP flags”, on page 11-14

11.1.8 Line states

System Status | System-wide | Line States

Out of Service can be used to display all station and line ports available in the communication system. Unavailable lines or lines that are not ready for operation are preceded with an *(asterisk), i.e., they are unavailable.

11.1.8.1 Trunks table

All trunks available in the communication system are entered in the **Trunks** table. The line number is the number assigned to the trunk by the system software. The next number is the slot/port location within the system. The final number is the dial number for the trunk.

When you select a particular line, the line parameters for that trunk are displayed in the fields on the right. The values cannot be changed here. You can, however, change individual parameters via Settings | Lines/networking.

Code

The code number is the number you dial to get access to this specific trunk to place a call. This number can be changed via Settings | Lines/networking.

Trunk

This is the trunk number assigned by the communication system.

Route

The route number shows which of the eight (or sixteen) routes this trunk has been assigned to.

Type

This is the trunk type, such as CO or CO DTMF.

Trunk Type

This is the trunk dialing type, such as Analog or S_0. If the trunk is inactive, **No Port** is displayed in this field.

Trunk Status

This indicates whether the trunk is currently active or inactive.

See also:
– Section 10.4, “Settings	Lines/networking”, on page 10-49 – Section 11.1, “System-wide”, on page 11-2

11.1.9 System texts

System Status | System-wide | System texts

The languages that are currently loaded in the communication system are displayed in **System texts**.

11.1.9.1 Available languages table

The languages that are currently loaded in the communication system are displayed.

If the CDB was generated offline, a message is displayed instead of the languages.

If you want to load new languages, you can enter these in Transfer | Loadable texts.

See also:
– Section 9.19.39, “Transfer	Loadable texts”, on page 9-109 – Section 11.1, “System-wide”, on page 11-2

11.1.10 UCD Agents

System Status | System-wide | UCD Agents

UCD Agents is used to display the status and number of UCD agents configured in the communication system.

11.1.10.1 UCD Agents Status table

Call Number column

The **Call number** column shows the internal call number of each UCD agent.

Name column

The name assigned to the UCD agent is displayed here.

Status column

Shows the status of the agent.

11.1.10.2 Area: Number of UCD Agents

Total, Available

Shows the total number of configured UCD agents (Total) and the number of available UCD agents (Available).

See also:
– Section 11.1, “System-wide”, on page 11-2

11.2 Call charges

System status I Call charges includes the compilation and generation of data records for incoming and outgoing calls.

The CDR (Call Detail Records) and SMDR (Station Message Detail Records) functions provide information about trunk calls to and from the communication system. The call record format is determined using system-wide flags set via Output format.

Tabs and Dialog boxes
• Stations (Not in the USA) • Trunks (Not in the USA) • Output format – Output format I LAN settings • Factors (Not in the USA) • Account codes • Callbox (Not in the USA)

11.2.1 Stations (Not in the USA)

System Status | Call charges | Stations

The charges incurred per station are displayed under **Call charges | Stations**.

11.2.1.1 Call detail recording per station table

The charge units incurred for each station are displayed in the table.

11.2.1.2 Area: Call charges per station

Export, Delete

Station call charge data can be saved in a separate via **Export**. The file is saved in a format which can easily be edited and evaluated using MS Excel, for example.

If an entry in the **Call detail recording per line** table is marked, the call charges incurred can be reset via **Delete**.

See also:
– Section 11.2, “Call charges”, on page 11-21 – HiPath 3000/5000 Feature Description, CDR at Station (CDRS)

11.2.2 Trunks (Not in the USA)

System Status | Call charges | Trunks

The charges incurred per trunk are displayed under **Call charges | Trunks**.

11.2.2.1 CDR per line table

The call charges incurred per CO line are totaled in a sum counter.

11.2.2.2 Area: CDR per line

Export, Delete

Line call charge data can be saved in a separate file by using **Export**. The file is saved in a format which can easily be edited and evaluated using MS Excel, for example.

If an entry in the **CDR per line** table is marked, the call charges incurred can be reset via **Delete**.

See also:
– Section 11.2, “Call charges”, on page 11-21 – HiPath 3000/5000 Feature Description, CDR Per Trunk (CDRT)

11.2.3 Output format

System Status | Call charges | Output format

Output format is used to set parameters for call detail recording and the format for call records.

Call records, also known as CDR (Call Detail Records) or SMDR (Station Message Detail Records), provide accurate information about trunk calls into and out of the communication system.

For Call Detail Recording Central (CDRC), it is necessary to enter a trunk code for the QSIG trunks (see code Settings | Lines/networking). The codes are deleted when call numbers are deleted and a CDRC is then no longer possible.

11.2.3.1 Area: Format of Call Records

Parameters pertaining to call record format are determined through a series of system-wide flags that can be turned on or off. These parameters control the format of the call detail record for output via the serial interface.

Compressed Output flag

There are two basic formats:

- compressed display
  In compressed form, the data records are output without separating blanks, with a project code, and charge rate units are always specified in pulses. This format is particularly suitable for further processing data using a call charge computer or PC.
- long form
  In long form, the data fields are separated by blanks, the call charges are output in currency units, and a project code is not logged. This format is particularly suitable for printing.

If you want to print your data, leave this flag off.

Last 4 Digits Suppressed flag

The system can be configured to suppress the last four digits of the call number field and replace them with a **?**. This way individual calls remain private. This is a security feature.

Log Incoming Calls flag

With this flag on, both incoming and outgoing calls are recorded. If you want only outgoing calls to be logged, make sure this flag is turned off.

Call Duration flag

When this flag is activated, the communication system records the call duration in hours, minutes, and seconds. If this flag is turned off, the call duration data field remains blank.

On Ringing flag

When this flag is turned on, a data record is created as soon as an incoming call begins ringing. If you want to maintain a Missed Calls List, this feature must be turned on. This feature can also be used to transmit additional information about the call based on a PC evaluation of this data record.

Output MSN flag

This flag determines whether or not the MSN (Multiple Subscriber Number) used for a call is displayed (only for multi-device connections max. 11-digits, only in compressed form).

The MSN feature is only used with ISDN-BRI lines in Hicom 150 E Office Point, Hicom 150 E Office Com and HiPath 3300 to 3550 communication systems.

The MSN feature makes it possible to assign several call numbers (in full or only the n > 1 last digit) to an S_0 private or public basic rate connection (bus or MGA multi-device connection) from the ISDN call numbering system.

An MSN with up to 11 digits can be entered as the DID number for each station in the communication system.

Flag: Decimal format (not in the USA)

This parameter defines the call charge display format and is to be configured on a country-specific basis. The decimal format is always used in Germany. The decimal format also means that the multiplier is shown in hundredths.

Example:

– 0.06 EUR

The multiplier specifies the amount by which the charge rate unit is multiplied in order to obtain the currency value.

“Display amounts instead of units” flag

Monetary amounts are output instead of units (e.g. “4.50 EUR” instead of “75 units”).

Flag: Outgoing without connection

Outgoing calls that are not answered are displayed anyway. The caller can thus prove that he attempted to call, but was not successful.

Output LCR number outgoing or dialed number incoming

If this flag is activated, an additional phone number field is added to the call data record. It contains:

- for an outgoing call: the LCR phone number that was actually sent to the exchange following conversion by LCR or
- for an incoming call: the internal phone number of the station required, that is, the first station dialed.

A call record is then output, even if a call is made for a busy station. This call record has the same format as the data record created for a free station except that the ring/call duration is set to “0”.

11.2.3.2 Area: Connection data routing

As of Hicom 150 H V1.0 (Hicom 150 E Office Rel. 3.0), these parameters are administered under QSIG features (not in the USA).

The following new customer database data must be configured in the communication system for the connection data routing:

- Call number destination system (recording system)
- Separate system number for identification in the network
- Separate group ID for identification in the network

In a network consisting of several communication systems, any connection information that occurs (CDRC data) in the PBX satellite systems is sent to a fixed communication system in the network. For this purpose, the call number of the destination system (call number of central recording system) to which the connection data is sent is configured in each communication system.

11.2.3.3 Area: Port assignment

Which applications are supported on which V.24 interfaces can be configured using Port assignment.

As of Hicom 150 E Office Rel. 2.2:
In order to make the connection of a call detail printer or a call detail PC more flexible, the output can be made to a TP-AP12 adapter in addition to the V.24 ports. This adapter is operated as a bay option on system telephones. This makes it possible to output the charges to any $U_{P0/E}$ port with a TA-API2 adapter. Only one adapter per call detail output is supported in the communication system.

As of Hicom 150 H V1.0 (Hicom 150 E Office Rel. 3.0):
The call charges can be output via a LAN in 3 different modes. In this case, additional parameters can be set up under Output format | LAN settings.

Call Detail Recording Central (CDRC)

The parameters in this area are used for configuring the applications to be supported at the various V.24 (RS-232) interfaces. In the USA, there are a limited number of call charge recording features for which application interface parameters must be set.

Output format

The selection activates CDR and directs the call data to the appropriate port type.

V.24 port

In this field you specify which V.24 interface should be used for the CDR system output. You don’t need to set this specification unless you selected V.24 as the **Output format**.

UPN port

In this field, you specify which UPN (system telephone) interface should be used for the output of call detail recording. You don’t need to set this specification unless you selected UPN as the **Output format**.

Attendant P

In this field, you specify which system telephone should be used for the output of call detail recording. No setting needs to be made here unless Attendant P was selected as the **Output format**.

Call charges per station (not in the USA)

Charges that accumulate at a station are output to the port that is set up.

Call detail recording per line (not in the USA)

Charges that accumulate on the trunk are output to the port that is set up.

MRATT (not in the USA)

Charges accumulated by call box users are signaled on the appropriate target port when an MRATT **Call charges** key is set up. These charges can be viewed or printed out.

Customer Database Printout

This setting determines the port to which the printer is attached. Here you specify which V.24 interface should be used. This is the printer that will be used if you have elected to have the database printout automatically after remote administration. (See also Flags).

Call info

In this field you specify which V.24 interface should be used for the Call Info output. This output format is only relevant, if the **On Ringing** flag was activated.

LAN settings

As of Hicom 150 H V1.0 (Hicom 150 E Office Rel. 3.0), the call charges can be output via LAN in 3 different modes. In this case, additional parameters can be set up under Output format | LAN settings.

See also:

- Section 6.12, “Features for Call Detail Recording”, on page 6-27
- Section 10.4, “Settings | Lines/networking”, on page 10-49
- Section 10.4.13, “QSIG features (not in the USA)”, on page 10-98
- Section 10.8.1, “Flags”, on page 10-178
- Section 11.2, “Call charges”, on page 11-21
- Section 11.2.4, “Output format | LAN settings”, on page 11-29

11.2.4 Output format | LAN settings

System Status | Call charges | Output format | LAN settings

LAN settings are displayed by clicking on the **LAN settings** button in the Output format tab.

As of Hicom 150 H V1.0 (Hicom 150 E Office Rel. 3.0), the call charges can be output via LAN in 3 different modes. In this case, additional parameters can be set up via **LAN settings**.

11.2.4.1 Area: Call Detail Recording Central (CDRC)

Call charges can be recorded via LAN with three different output modes. The corresponding method is selected in accordance with the application connected.

TFTP client

Call charge data is sent to an external application by the TFTP client. Transmission is controlled by a centrally-adjusted timer (e.g. every 10 minutes) and a fixed threshold value (when around 80% of the internal call charge buffer is full). A connection to the TFTP server is set up at the appropriate time, all existing call charge data is transmitted in a file, and the connection is then terminated. If the server connection cannot be set up, an alternative server is addressed.

A new file name is used for each session.

The IP addresses of both servers (with a fixed Port 69) and the timer can be configured via **Server 1**, **Server 2** and **Cycle**.

TCP client

If call charges have been incurred, a TCP/IP connection to an external call charge server (external application) is initiated by the client. When the connection has been set up, the call charge data is transmitted. The connection remains permanently open, and any other charges that occur are transmitted. Each data record is therefore transmitted individually.

The TCP/IP address of the server can be configured via **IP address**.

TFTP Server

An external application requests output of call charge data via a TFTP client. In order to do this, the application must set up a connection and request the call charge data. All existing call charge data is then transmitted and the connection is terminated.

The application can request the call charge data either independently, or when triggered by an SNMP trap. The SNMP trap Data available is generated by means of the configurable threshold value monitoring of the internal call charge buffer. The value under **Threshold** indicates an approximate percentage.

The IP addresses of authorized clients can be configured under the SNMP partner/Communication Partner. The TFTP server port in the communication system is fixed (69).

11.2.4.2 Area: Output format

File format, Separator

You can choose between DOS mode with CR, LF at the end of a record or UNIX mode with only LF at the end of a record.

File format, Separator

You can configure the separator between logical elements of a call charge record here. This means that the data is no longer required to stay in fixed positions.

(This setting is only active for call charge outputs CDRS, CDRT, CDR via LAN.)

See also:
– Section 10.10.4, “SNMP partner/Communication Partner”, on page 10-310 – Section 11.2.3, “Output format”, on page 11-24 – HiPath 3000/5000 Feature Description, LAN Network

11.2.5 Factors (Not in the USA)

System Status | Call charges | Factors

Call charge factors per route can be configured under **Factors**. The accrued counting pulses are multiplied by the factors (price per counting pulse).

11.2.5.1 Call charge factors per route table

Call charge factors per route can be configured in this table.

Column: Multiplier

The AOC information can be provided in call charge units or currency units. Both forms are supported, but only currency units are displayed. If the information is received in the form of call charge units, a conversion factor is used. This factor is configurable in order to make call charge adjustments possible or - if there are several network providers - to make an adjustment to the providers of the individual location. Even if currency units are provided, the conversion factor may prove useful for giving the display more clarity.

You can use the **Multiplier** column to define how received currency amounts are converted to call charge pulses (division of the currency amount by the multiplier), and how charges to be transmitted can be converted from call charge pulses to currency amounts (multiplication by the multiplier).

Column: Multi-ISDN

The conversion factor is entered here. This parameter is only significant for routes (trunks) that use the CorNet-NQ and QSIG protocols.

You can use the **Multi-ISDN** column to define how received currency amounts are converted to call charge pulses (division of the currency amount by the Multi- ISDN), and how charges to be transmitted can be converted from call charge pulses to currency amounts (multiplication by the Multi- ISDN).

Column: Currency

This parameter is only significant for routes (trunks) that use the CorNet-NQ and QSIG protocols. This parameter is not applied for other protocols. The preset default setting must be retained in such cases.

You can use the **Currency** column to define the currency string to be transmitted during transfer to the connected communication system (e.g. EUR). This must be adjusted in line with the connected communication system. If a currency string is not available, an empty string is transferred. This can be useful if call charge impulses are to be exchanged or if a standard currency is used.

Currency string configuration is independent of the currency string shown on the telephone display.

Column: charges

This parameter is only significant for routes (trunks) that use the CorNet-NQ and QSIG protocols. This parameter is not applied for other protocols. The preset default setting must be retained in such cases.

You can use the **charges** column to define whether currency charges or call charge pulses are exchanged on the trunk. If this option is activated, the currency amount is sent and received (see the column **Multi-ISDN**). Otherwise, call charge pulses are sent and received. This must be adjusted in line with the connected communication system.

If call charge pulses are to be exchanged on the route, an empty string should be configured as the currency.

Column: Advice of charge

This parameter is only significant for routes (trunks) that do **not** use either the CorNet-NQ or the QSIG protocol. In other words, it is only applied when the CorNet-NQ/QSIG network has been exited, e.g. for CO lines or CorNet-N lines.

You can use the **Advice of charge** column to define whether call charges should be transmitted to the CorNet-NQ/QSIG network, and under what conditions this should occur:

- No charges
  No charges are received via this route (e.g. US CO lines)
- Interim
  Charges are only received while the connection is active, and not during cleardown.
- Final
  Charges are only received after the connection has been cleared down.
- Interim/Final
  Charges are received while a connection is active and during connection cleardown.

For CorNet-N routes, advice of charge must be set to **Interim/Final** if a trunk call can be conducted via this route.

11.2.5.2 Currency

Currency code for the call charge display on telephones.

11.2.5.3 Computing accuracy

The **Computing accuracy** parameter should be configured so that the communication system's output and the currency totals transmitted by the ISDN CO have the same number of digits. If the maximum of three decimal points does not suffice, the figure is automatically rounded off.

The following values are possible:

Computing accuracy	Minimum currency total	Maximum currency total
Via call charge pulse	to be selected for routes (lines) with the protocols CorNet-NQ and QSIG	
3 decimal points (for example for the English Pound Sterling)	$1 \times 10^{-3} = 0.001$	$1 \times 10^{-3} \times (2^{32} - 1)$ = approx. 4.3 million
2 decimal points	$1 \times 10^{-2} = 0.01$	$1 \times 10^{-2} \times (2^{32} - 1)$ = approx. 43 million
1 decimal point	$1 \times 10^{-1} = 0.1$	$1 \times 10^{-1} \times (2^{32} - 1)$ = approx. 430 million
No decimal points	$1 \times 10^{0} = 1$	$1 \times 10^{0} \times (2^{32} - 1)$ = approx. 4.3 billion

See also:

– Section 11.2, “Call charges”, on page 11-21

11.2.6 Account codes

System Status | Call charges | Account codes

Account codes (Acc. code) is used to assign call charges the account codes.

A checking procedure allows the communication system to check project codes entered by the user based on the number of digits entered, or by matching the code against a list that has been created.

The current units per station are displayed for each station or line in Stations (Not in the USA) and Trunks (Not in the USA).

11.2.6.1 Area: Checking procedure

You can use **Checking procedure** to determine whether or not the communication system requires users to enter valid account codes before their calls can be completed. You make your selection by choosing the appropriate option.

No check

With this selection, the account code is not checked at all. This option is not possible if there are routes with a mandatory entry procedure. (See also **Entry procedure**).

List check

With this selection, the account code is checked against a list of account codes that you create. Only valid entries are accepted (only possible for OfficeCom, OfficePro and HiPath 3300 to 3750).

Check number of characters

With this selection, only the number of characters entered is checked. You determine how many characters are permitted by using the **Characters to be checked** list. You can select from one to eleven.

11.2.6.2 Table: Entry procedure

Entry procedure is used to determine, route by route, whether entering an account code is optional or mandatory. For each of these you have the option of making account code entry optional or mandatory. The standard procedure is here **Optional**.

This item cannot be configured if LCR has been activated. The previous settings are retained.

The account code can then be configured as an **Optional** or **Mandatory** entry under Dial plan.

- Optional
  If you leave the Optional selection in place, users can enter an account code, but are not required to do so. An account code can be entered by all terminals ($U_{P0/E}$, a/b, Cordless, S_0) before the call begins, i.e., even before line seizure. Only a $U_{P0/E}$ can enter an account code during an incoming or outgoing external call.
- Mandatory
  requires in any case a check. If you change to the Mandatory selection, users cannot make an outgoing call using that route without entering a valid account code.
  An account code is optional for incoming calls; this will be checked in accordance with its programmed variants.

Keep in mind, however, that this is a system-wide setting. If you select **Mandatory** for a route, all stations are required to use account codes to dial out using that route. If you want some users to use account codes and other users not to use account codes, you must program different routes.

11.2.6.3 Account code lists table

If you select the **List Check** option in the **Checking procedure** area, you must create an Account code list with which the communication system can check the user-entered codes. The column on the left contains numbers 0 through 999, so you can enter up to 1000 account codes. Account codes can contain up to eleven digits; alpha characters are not permitted.

Note, however, this terminology may be a little confusing. You can enter up to 1000 account codes, each of which is called List 1, List 2, etc. This does not mean, that you can create 1000 account code lists.

11.2.6.4 Check button

The account codes entered are checked to ensure that they are unique.

See also:
– Section 11.2, “Call charges”, on page 11-21 – HiPath 3000/5000 Feature Description, Account code

11.2.7 Callbox (Not in the USA)

System Status | Call charges | Callbox

You can use **Callbox** to configure call numbers to which call charge data for the relevant callbox is transmitted.

11.2.7.1 CDR Call box table

The table **MRATT call box** lists all stations belonging to the communication system (columns **call box number** and **call box name**).

The column **Call charge destination** contains the call number where call charges per telephone box are sent.

See also:
– Section 11.2, “Call charges”, on page 11-21 – HiPath 3000/5000 Feature Description, CDR, Attendant

12 Tools Menu

Run Wizard (HiPath 3000)
Starting the S0 Wizard (HiPath 500)
Start IP Access Manager

Table 12-1 Tools Menu

12.1 Run Wizard (HiPath 3000)

Tools | Run Wizard

The **Start Wizard** menu item enables you to easily perform the initial generation of the communication system.

The Wizard can also be run more than once. Note that in such cases, the currently loaded CDB is taken into account in the Wizard. In other words, all features which were set up later using HiPath 3000 Manager and which are not handled via the input masks of the Wizard are retained.

See also:

- Section 2.4, “Wizard”, on page 2-14
- Chapter 3, “Operation”
- Section 9.19.1, “Transfer | Communication”, on page 9-26

12.2 Starting the S0 Wizard (HiPath 500)

Tools | Run S0 Wizard

The Wizard provides a guided dialog for entering the most important customer data. The customer data that is needed for an initial startup is collected here and then transferred to the customer database (CDB) of the HiPath 500. Please note, however, that the Wizard only collects the most important customer data that is needed for a fast startup. Detailed entries can be processed later in HiPath 3000 Manager.

During the initial setup, the Wizard deletes the standard key assignment of the first optiPoint. This was originally configured as an Attendant and now has the standard keys of a normal optiPoint 500.

The Wizard is automatically activated on initial installation.

If the Wizard is not called automatically at the first installation or was canceled for some reason, make sure that you start it manually.

Make sure that all terminals (system telephones or CMI devices) are connected before starting the Wizard.

Once you have started the Wizard, follow the instructions displayed on the user interface and note the following description:

1. The pre-defined data is now HiPath transferred to the HiPath 500. If you receive an error message, check if
   – the HiPath 500 is operational,
   – the administration PC is connected to HiPath 500 via an operational serial interface or the LIM.
2. The **PCPBX-Point-to-multipoint connection** type is set by default. The telecommunication provider generally supplies three MSN (CO numbers) for each S_0 port. In accordance with the available HiPath 500, one or two ISDN connections can be used for connecting to the public network.
3. Under Options, specify if you have a LAN connection and if you want to enter the IP setup at a later stage.

Entering the MAC and IP addresses

If you did not select the **Skip IP setup** option:

4. Enter the **MAC address** as described in the note in the dialog.
5. Enter the **IP address** and, if necessary, change the predefined subnet mask.

Configuring access

6. Select how the data should be transferred between HiPath 500 and the PC. After specifying an IP address, also select access via the LAN.
7. Then start the transfer of the CDB from the HiPath 500 communication system to your PC.

8. Once the Wizard has been completed, additional settings can be implemented in order to optimize the communication system to best meet your needs. You can do this for the communication system settings by using the functions of the **System view**. For customized settings, you will need to switch to the **Station view** (see also Chapter 3, “Operation”).
9. Once you have created the customer data, it is transferred back to the (see **Transfer | Communication**).

Your communication system is now operational.

The Wizard can also be run more than once. Note that in such cases, the currently loaded CDB is taken into account in the Wizard. In other words, all features which were set up later using HiPath 3000 Manager and which are not handled via the input masks of the Wizard are retained.

See also

– Section 2.4, “Wizard”, on page 2-14
– Chapter 3, “Operation”
– Section 9.19.1, “Transfer | Communication”, on page 9-26

12.3 Start IP Access Manager

Tools | Start IP Access Manager

The IP Access Manager is started via **Start IP Access Manager**. The IP Access Manager can be used to assign IP addresses to cards/modules (such as ComServer, LIM module or HG 1500). IP addresses are assigned only when configuring the cards for the first time. Following the initial assignment, the cards retain their IP addresses.

MAC-ID

This column is used to enter the 12-byte hexadecimal MAC address of the card. The first 4 bytes are preset with the value 08-00.

Type

Under **Type** you can select from a drop-down list whether the ComServer or an HG 1500 card is involved.

IP address

Enter the address according to the LAN environment.

The IP address must be unique within the network. Any new IP address to be configured should therefore be "pinged" before it is assigned. If the IP address responds, it should not be assigned again.

Net mask

This column is used to enter the subnet mask. The subnet mask addresses subnets by masking IP address bits. It indicates the size of the subnet. You can transfer data directly from processor to processor within a subnet without having to establish a connection via a router or a gateway.

Gateway

The gateway is the next router (computer) via which the desired destination (defined by the IP address) can be reached.

Start, Status

On pressing the **Start** button, the individual cards are assigned the entered IP addresses. The status "wait" appears in the **Status** column. The IP Access Manager now tries to reach the card. If the card is reached, the status "entered" is displayed. If the IP Access Manager cannot reach the card after 5 attempts, the status "error" is displayed.

13 Options Menu

Program Options
Password Level
Change Password
Delete Call Numbers
Call number presetting to two-digits/three-digits

Table 13-1 Options Menu

13.1 Program Options

Options | Program options

The **Options/Program options** dialog is used to set general program options for the HiPath 3000 Manager such as the language of the user interface, the paths for files to be saved, modem settings and ISDN parameters.

Tabs
• Program options General • Program options Save options • Program options Communication • Program options ISDN

13.1.1 Program options General

Options | Program options | General

The **General** tab can be used to set the general program options for the HiPath 3000 Manager such as the user interface language. for example.

13.1.1.1 Area: Error Signaling

This feature allows you to monitor the alarm history in the communication system. If the option **acoustic warning on** is set, and an error signal is received, a warning beep is issued.

After the error message is received, the data is saved in the file that was configured in the **Output file** window (default name: **errorsig.err**).

Use the **Browse** button to define the name, type (the default is .err) and storage location of the error file.

13.1.1.2 Area: Automatic backup of CDB

These settings allow you to automatically save your customer database at regular intervals to the PC's hard drive. The **Activated** option can be used to activate the function. The length of the interval can be defined by typing a value in the **Cycle** field. The default setting is sixty minutes.

The database in the communication system is backed up daily at midnight to the Flash Memory Card. During a power failure, the current database is maintained for approximately 100 hours through an alternate power supply. Still, it is a good idea to make sure that you keep a copy of the latest version of your database on your PC.

You might also want to back up your database to a floppy disk. The Hicom 150 E Office Point, Hicom 150 E Office Com and HiPath 3300 to 3550 communication systems come with a place to store a back-up floppy.

13.1.1.3 Area: Select language

This feature allows you to determine which language is used for the HiPath 3000 Manager.

13.1.1.4 Area: Language conversion

The options **Latin**, **Greek** or **Cyrillic** define which character set should be used in the communication system for the texts to be loaded. The distinction is necessary because these three PC character sets overlap in the upper 128 bytes of the ASCII character set. By selecting the option **Greek**, for example, a Greek info text about HiPath 3000 Manager can be loaded into a communication system with Greek country code running under a Russian version of Windows.

When doing this, the destination character set may not match the PC character set used by the operating system (Windows 95, etc.). This means that the input characters cannot necessarily be displayed by the PC character set being used. This does not have any implications for the conversion tool used.

13.1.1.5 Area: HiPath Manager HG 1500

The installation directory of Manager I can be entered here. This enables Manager I to be called by simply double-clicking an HG 1500 card in the menu tree of HiPath 3000 Manager.

13.1.1.6 Area: Default H.323 client

All H.323 clients are initially assigned the default IP address entered under **Default H.323 client**.

As of HiPath 3000 V9, H.323 clients are no longer supported.

13.1.1.7 Area: Preset Redundancy Destination

During configuration, all workpoint clients are assigned a redundancy IP address that is entered under **Preset Redundancy Destination**.

Under Settings | Set up station | Gatekeeper (V5.0 and Later), configure the system clients that should NOT support the Resilience Service Application (RSA) feature first as the redundancy IP address is set to 0.0.0.0 by default.
Then change the redundancy IP address and add the system clients that should support the Resilience Service Application (RSA) feature.

See also:

- Section 2.6, “File ass_150e.ini”, on page 2-17
- Section 13.1, “Program Options”, on page 13-2
- Section 13.1.2, “Program options Save options”, on page 13-5
- Section 13.1.3, “Program options Communication”, on page 13-8
- Section 13.1.4, “Program options ISDN”, on page 13-12

13.1.2 Program options Save options

Options | Program options | Save options

Save Options can be used to set the paths for saving files.

13.1.2.1 Areas: Automatic File Creation, File Name

These settings are used to set the options for saving the CDB and other files.

ASCII File	The ASCII file contains the station and trunk capacity of the communication system in tabular form. It can be used as an interface file for other network management tools. If the switch is activated, a file is created with the name of the CDB and the extension **.txt**.
Log File	A log file is created in any case. If the switch is activated, the file is created automatically for the changes made via the HiPath 3000 Manager. (Delta Log File) The number of log files can be changed via the ini file (see alsoFile ass_150e.ini). To do this, change the value for “MaxLogFile=20” under the “General Settings” section of the ini file. Between 1 and 999 log files can be created. The standard entry is 999 log files. The file name depends on the access of the communication system. The same mechanism is used as for the CDB. If the access is ISDN, for example, the name consists of the call number, the numbering (001 = current log file) and the ending LOG (e.g., call number = 879, log file: ”879.001.log”) If the switch isn’t activated, you will be prompted for the name of the LOG file after the data has been transferred. If the dialog box is terminated, the LOG file is created with the name “Delta.log”.
Last Load	If the switch is activated, a CDB loaded from a communication system is always named **lastload.kds** by default.

Customer name	If this switch is activated, each CDB loaded from the communication system is generated using the customer name entered in the “Customer name” field under “Settings	System Parameters	System settings”. Example: A customer called Unify is generated as **Unify.kds** . **Note**: If the “Customer name” field is empty, the name is set to the default **lastload.kds** .
Counter	If the switch is activated, each CDB that is loaded from the communication system is provided with a sequential counter: customer name.001.kds. 001 is always the most recent CDB. Depending on the access method, the customer name is as follows: – Access via V.24: **direct** – Access via IP: **139.255.255.255** – Access via ISDN/IMOD: **02302667879**
Counter and Last Load	This is the combination of the last load and counter, and the default CDB is then named **lastload.001.kds** .
Copies	If the counter reaches the number of **copies**, the CDB counting starts again at zero.

If option **Lastload** or option **Customer** name is active for **Filename**, the storage options are fixed and cannot be altered.

13.1.2.2 Area: Save options for paths

These settings are used to set the paths for saving the CDB and other files. You can select the appropriate path in each case via **...**.

Path for CDB	Path for saving and opening the CDB file (only when using the **Save as** and **Open customer database** functions). **Note**: If the **Save customer database** function is used, the CDB is always saved under the following path: C:\Documents and Settings\User\Application Data\Siemens\Manager E
Path for ASCII	Path for saving the ASCII file
Path for LOG	Path for saving the delta log file

ARP Request

(only for communication systems with connected V.24E COM server)

If this option is activated, an entry is made in the local ARP table of the PCs. The IP address under “IP Parameter/IP Interface” is linked with the MAC address of the communication system. The automatic update of the local ARP table makes initial configuration of the V.24E easier.

See also:

- Section 2.6, “File ass_150e.ini”, on page 2-17
- Section 13.1, “Program Options”, on page 13-2
- Section 13.1.1, “Program options General”, on page 13-3
- Section 13.1.3, “Program options Communication”, on page 13-8
- Section 13.1.4, “Program options ISDN”, on page 13-12

13.1.3 Program options Communication

Options | Program options | Communication

The **Communication** mask allows you to set parameters for the modem that connects your PC to the communication system (if you are using a modem).

13.1.3.1 Area: Modem Settings

The communication system will automatically assign the remaining values in the **Modem Settings** area after you have selected the Modem Type. When selecting **New Modem** as the modem type, the values must be entered manually.

The modem tested for the US is the US Robotics Sportster Flash.

Modem Type

The **Modem type** list can be used to select the defined modem types via the ini file (see also File ass_150e.ini).

When selecting **New Modem** as the modem type, the values must be entered manually.

13.1.3.2 Area: Modem control

Dialing

The suffix for the CO seizure code is entered via **Dialing**.

This parameter may be set for

- 1) the pulse dialing procedure ATDP (Attention Dial Pulse) or
- 2) the tone dialing procedure ATDT (Attention Dial Tone).

The default for all of the listed modem types is ATDT.Amtsbelegungskennziffer

Hang up

The command for switching the modem to command mode is entered here. The command entered under **Hang up** is transmitted one second after this command has been sent to the modem. This command should allow the modem to hang up. The standard value must, as a rule, not be changed.

Reset

The initialization command for the modem is entered here.

Init

The modem command that sets the modem to the required mode is entered here. The standard modem commands are preset. If you select one of the modem types listed in the **Modem types** list, this parameter will be set automatically. If you select the **New Modem** entry, you must enter the appropriate init string manually.

If the modem is to create a connection over a communications server, the parameter X3 in the init string must be included. It causes the modem to make a connection without a continuous dial tone.

Automatic answering must be deactivated for the PC modem (the factory setting of fax modems is usually set to automatic answering by default).

Depending on the modem installed, the init string should normally be changed to: AT&FS0=0

13.1.3.3 Area: Modem answer

Connection

This is the modem answer that is expected after a successful connection setup.

Busy

This is the modem answer that is expected if no connection is set up. As a rule, the default value does not need to be modified.

13.1.3.4 Area: Timers

Dialing

This parameter defines how long the modem will wait for the connection before it redials. This value depends on the basic configuration of the modem and the dialing method. Valid values range from 0 to 999 seconds. The default, appropriate for most circumstances, is 40 seconds.

Redial Pause

This parameter defines the length of the pause between dialing attempts. Valid values range from 0 to 999 seconds. The default is 10 seconds.

Number Redial

This parameter defines how many times the system should attempt to dial the number. Valid values range from 0 to 999 times. The default is 10 times.

Release at

This parameter defines the time after which the connection between the PC and the communication system is automatically released. The release time begins on completing the administration activity. The valid range is between 60 and 9999 seconds. If the value 0 is entered, then the connection is not automatically released depending on the time.

13.1.3.5 Area: Interface

Port

The Port drop-down list box is used to select the COM port number (COM 1 to COM 4) and to thus notify HiPath 3000 Manager to which port the connection cable to the communication system is attached or, in the case of a modem connection, which port is used by the modem. The default is COM 1.

Baud Rate

The appropriate baud rate is selected here. The default setting is 9600.

It is important that the baud rate set here matches the baud rate in the communication system.

13.1.3.6 Area: Own MSN (CAPI 2.0)

In the case of a CAPI 2.0 connection, the MSN (Multiple Subscriber Number) of the port at which the PC ISDN card is connected is entered in this field.

13.1.3.7 Area: HiPath 5000 RSM/AllServe Server

Name or IP address of the server on which the DB Feature Server is installed. This entry is the default setting for the Transfer | HiPath 5000 RSM/AllServe Server dialog.

13.1.3.8 Area: RMM Server, Server, Password

Server

The computer name of the server on which the RMM server application is running is entered under **Server**.

Password

The Windows password sent to the RMM server by the RMM client during connection setup is displayed under **Password**.

Find

If required, **Find** can be used to select the computer name from a network list.

Change

Change opens the Change Password dialog in which the password can be modified.

See also:

- Section 2.6, “File ass_150e.ini”, on page 2-17
- Section 13.1, “Program Options”, on page 13-2
- Section 13.1.1, “Program options General”, on page 13-3
- Section 13.1.2, “Program options Save options”, on page 13-5
- Section 13.1.4, “Program options ISDN”, on page 13-12

13.1.4 Program options ISDN

Options | Program options | ISDN

ISDN is used to set the parameters for ISDN.

For SIRA environments, HiPath 3000 Manager supports the “Remote Multi CAPI” function, i.e., several controllers (Bintec® router) can be connected using a Windows Terminal Server. See System Description.

13.1.4.1 Area: MSN Mapping

The options configured in this area only apply if a PC ISDN card which supports a CAPI Version 1.1 interface is used.

CAPI Version 2.0 is supported by default by standard ISDN cards.

MSN mask 0-9

If the PC ISDN card supports CAPI Version 1.1, up to 10 MSN (Multiple Subscriber Numbers) can be configured in the driver software of the ISDN card. These are used to identify the card in the case of incoming calls. The same MSN must also be activated in the HiPath 3000 Manager.

With a CAPI 2.0 connection, the MSN ports to which the PC ISDN card is connected must be entered under Program options Communication.

Global Call

All activated MSN in the “MSN Mapping” (MSN Mask 0 to MSN Mask 9) of the ISDN card are addressed.

13.1.4.2 Area: Call charges

If KDS (customer database) or APS files are transferred (if call charge pulsing is released), the costs incurred are displayed in the Transmission dialog.

Multiplier

The call charge multiplier (e.g., 6) is entered under **Multiplier**.

Currency

The national currency is entered under **Currency**.

See also:

– Section 13.1, “Program Options”, on page 13-2
– Section 13.1.1, “Program options General”, on page 13-3
– Section 13.1.2, “Program options Save options”, on page 13-5
– Section 13.1.3, “Program options Communication”, on page 13-8

13.2 Password Level

Options | Password level

Options/Password level can be used to enter the user data for identification and authentication on starting HiPath 3000 Manager (see also Password level and Start and Log-on).

Since the user names and passwords are in the communication system and not in the application, the entered data is not checked immediately, but only when a connection to the communication system is made.
This also means that you can start an action that will be broken off after the check because you do not have the necessary rights.

User name

Input field for the user name (as of Hicom 150 E Office) which identifies the user.

Password

Input field for the password, used for user authentication.

Group chip card

<currently without any function>

Indiv. chip card

<currently without any function>

See also:

- Section 2.3.6, “Password level”, on page 2-13
- Chapter 4, “ Start and Log-on”

13.3 Change Password

Options | Change password

Options/Change password is used to change a HiPath 3000 Manager password (no longer relevant as of Hicom 150 E Office Rel. 2.0).

You can use this dialog box to change the default password provided with the communication system. You must first enter the old password followed by the new password, and then verify the new password. As a security measure, none of the characters that you type appear on the screen. You will see only asterisks.

If you change the password, you will be the only person who knows what the new password is. You **cannot** reset a password that has been forgotten.

See also:

– Section 13.2, “Password Level”, on page 13-14

13.4 Delete Call Numbers

Options | Delete call numbers

The following call numbers are deleted via “Options | Delete call numbers”:

- Station call numbers (internal and direct dial)
- Line call numbers
- Routing codes (except code for Route 1)
- USBS call numbers (internal and direct dial)
- IMOD call numbers (internal and direct dial)
- Call numbers for digital modem (internal and direct dial)
- Group call numbers (internal and direct dial)
- Internal extension number
- Substitution for * and #

The following call numbers are reset to default values:

- Routing code for Route 1 (default value 0; 9 for USA)
- Direct dial extension number (default value 0; 9 for USA)

The service codes are never changed.

For Call Detail Recording Central (CDRC), it is necessary to enter a trunk code for the QSIG trunks (see code Settings | Lines/networking). The codes are deleted when call numbers are deleted and a CDRC is then **no** longer possible.

See also:

- Section 10.4, “Settings | Lines/networking”, on page 10-49

13.5 Call number presetting to two-digits/three-digits

Options | Call numbers: 2-digit

Options | Call numbers: 3-digit

As of HiPath OpenOffice EE V1 R2, the numbers for stations and group numbers are preset to two-digits as a default. The call number presetting can be changed to three digits if required.

If a change to the call numbers presetting is required, this should be carried out immediately after the offline generation or the reload.

14 Applications Menu

The **Applications** menu enables you to create shortcuts for the applications that you use often and then start these applications from there.

Creating a shortcut

The existing shortcuts (Windows 95 and later) are used for this function. For example, you can find shortcuts to programs on your Windows Desktop and on the **Start** bar in the **Programs** folder.

You can also create your own shortcuts for a program in **Windows Explorer**.

1. Open **Windows Explorer** from the **Start** bar.
2. Look for the program for which you want to create a shortcut. Click with the right mouse button on the program file (*.exe).
3. From the context menu, select **Create shortcut**.
4. The shortcut is created (**Shortcut to ...**).
5. Click with the right mouse button on **Shortcut to ...**.
6. Select **Cut** or **Copy** from the context menu.
7. In **Windows-Explorer**, open the following program folder of HiPath 3000 Manager:
   e.g., C:\Programs \Siemens \HiPath 3000 Manager E \Application
   If you selected some other folder during the installation, open that folder.
8. With the right mouse button, click in the **Application** folder and select **Paste** from the context menu.
9. You can rename the shortcut at any time. You can also learn how to create shortcuts in the **Windows Help**:
   Start | **Help**, **Find** tab, search term **Shortcut**.

15 Help Menu

Help Topics
Using Help
Info

Table 15-1 Help Menu

15.1 Help Topics

Help | Help topics
F1 key

Opens this Help.

15.2 Using Help

Help | Using Help

Opens the Using Help topic.

15.3 Info

Help | About...

Opens the About... dialog box, which shows the following details about the program:

- Program name
- Version number
- Company
- Copyright
- Supported communication systems

Index

A

A connection to the communication system is set up for online mode. 12
access code 19
account codes 34
Acoustic error warning 28
active logging 11
Administration area 9
AllServe 4, 7
AllServe node 3
append to APS 22
Application Processor System 16
Applications 1
Applications menu 7
APS 16
APS transfer 13
ass_150e.ini 17
Assistant E
  configure LCR 21
  create dialing rules table 22
  protocol allocation 20
attendant 2
AutoAttendant 284, 297
AutoAttendant announcement behavior 296
Automatic attendant 284, 297
Automatic BRI Configuration (USA only) 180
Automatic call forwarding 72
Automatic Customer Database Printout After Remote Administration 180
Automatic OpenStage TDM telephone software update 188
Automatic redial 184

B

base station status 42
Base stations 47
Blocking indirect connections between routes depending on ITR 190
Broadcast with connection 181
BS 47
Button bar 10

C

CAID (only for USA) 236
Calendar 286
call charges 21
Call destination lists 130
Call forwarding
  Allocation int./ext. calls 130
Call forwarding after Deflect call / Single step APS transfer 186
Call Forwarding to Main Station Interface Permitted 178
Call pickup after automatic recall 185
callback connection 107
callbox 37
Caller list at destination in case of Forward Line 185
CAPS 11
Card
  HXGS 18
card configuration 4
card data 7
card status 55
cards 3
CDB 16
central distribution list 288
change password 15
Class of service per station 107
Click and drag 11
Close Customer Database 15
CMI 38
CMI MWI ringer 190
Command 1, 3, 6, 7
Common Greeting Mailbox 292
communication 26, 8
compare 17
Conference Tone 179
Conference with external destinations 179
Configurable CLIP 185
configure routing parameters 21
configuring routes 20
Context menu 12
Context-sensitive help 15

Convert Customer Database 18
Copying entries 11
Cordless 38
COS 68, 69
Creating a shortcut 1
Customer 10
customer database 16

D

Daylight saving time/DISA 235
Default Logos 111
delete AllServe Node 6
delete call numbers 16
delete HiPath 3000 6
delete node 6
Deleting entries 11
delta mode 8
Determine Dest. via Call dest. list with Deflect call / Single step APS transfer 186
Dialing from * and # on line interfaces 189
Dialogs 1, 3, 6, 7
Different PhoneMail messages Day/Night 182
Digit Transmission 82, 108
Digit-by-digit 82, 108
Direct Media Connection (DMC) 185
directory 192
DISA 236
DISA internal 237
Display international / national code number 183
Drag & drop 11
DTMF Automatic 181

E

E.164 call number 104, 188
E.164 numbering 188
ECO Mode 41
EG station type 110
E-mail notification 70
Emergency 28
empty CDB 10
En-bloc sending 82, 108
Enhanced key functionality 187
entering call number ranges 24
Entry Voice Mail 291
Error Signaling 28
Euro impedance 182
Euro-ISDN Features (Not for the USA) 29
event log 37
EVM 291
Exit 112

F

F1 key 15
factors 31
file types 15
flags 14
Flags and COS 107
Flexible menu 213
forwarding 15

G

Gatekeeper 33
gateway 35
general 3
general procedure 8
Greeting selection 268
Groups 134
Groups/hunt groups 134

H

H.323 client 34
Hardware version station 25
Help 15
Help menu 7
Help topics 2
HiPath 3000 3
HiPath 4000 Network
Early DMC 187
HiPath 4000-Menu Structure 213
HiPath 5000 Server 4, 7
Hunt groups 134
Hunting To External Call Forwarding Destination 178
HXG - Remote initial startup 39
HXG Configuration 32
HXGM configuration 32

I

Increase volume for system telephones 179
Info 11, 2
Installation 19
intercept position 2
Invoking help 15
ISDN 12
IVM 57
IVM calendar 268
IVM Version 2 63

K

Key labels 16

L

Label 24
LAN settings 29
Languages 16
LCR 106
  activate 107
  authorization codes 107
  flags 107
LDAP 192
Least Cost Routing 106
least cost routing (LCR) 18
Line change for direct call 184
line states 17
Load APS Texts 21
loadable texts 16, 109
Loadware 10
Log on 1
Logo OpenStage 110

M

mailbox configuration 63
Maintenance 36
maintenance 9
Manager I
  set up HG 1500 board 23
MDF plan 24
Menu 1, 3
Menu bar 4
Menu reference 1
menu structure 213
message call 66
Mobile Connection 30
Mobile telephone 43
Mobility Callback 237
Mobility Entry 32, 30
modem settings 8
MSN 13

N

Navigation tree 7
Net view 7
Network 25
new 10
No. redial with a/c code 180
Node 3
Node call number for Voice Mail 184
Node number 185, 190
nodes
  adding 3
NUM 11

O

offline mode 11
Online mode 11, 12
online mode 9
Open Customer Database 11
Open numbering 184
OpenScape Office Ports 36
OpenStage
  Logo 110, 196
OpenStage Phones
  Event Log 85, 90
  SW distribution 86
  Trace 90
Options menu 7
optiPoint attendant 2
OScAR-Eco 233
OSO Ports 36
out of service 40
Output Customer Database 16
Output format 24

P

Paper labels 16
Password 1

password level 13, 14
password protection 14
Path Optimization 181
paths 5
Ports 36
Print 24
Print MDF cabling 24
print preview 23
printer options 23
printer setup 23
printing 23
procedure 8
program options 2
Program window 2

R

read/write database 8
Recording quality 296
Recycle bin icon 11
remote maintenance 9
restart/reload 39
Ringback protection 182
Room monitor 179
route allocation 20

S

S0 station 32
Save 13
save as 14
Save options 5
security 10
Security mode 237
Security protocol (log) 11, 105
select language 3
Selection according to call type 67
Server 4, 7
service 10
Settings 13
Settings menu 3
Signaling & Payload Encryption (SPE) 188
Simplified Dialing 181
SIP client 34
SIP Prov. to SIP Prov. transit 189
Small Remote Sites 28
Software version 25
Sorting tables 13
SPE (Signaling & Payload Encryption) 188
SPE advisory tone 189
SPE support 188
speed upgrade V8 -> V9 31
SRS concept 28
Start IP Access Manager 5
Starting the Wizard 2
Startup and log on 1
station parameters 3
Station selection 7, 8
station status 51
Stations
  Hardware version 25
  Software version 25
stations 22
Status bar 11
substitute 67
substitute mailbox 11
Supported communication systems 2
SW Transfer 110
system 11
system client 34
system expansion hardware 4
system expansion software 4
system info files 24
system requirements 18
System Status menu 6
system texts 19
System view, Station view 7
System-wide 2

T

T1 configuration 6
Table handling 13
Tables
  changing column width 14
  changing entries 13
Tabs 1, 3, 6, 7
Tabs bar 9
team 145
tenant service 21
Terminal Exchange Allowed 179
The “A” call number in AUN groups / group ringing / forwarding destination / CFW desti-

nation 188
Through Connection for External FWD On 178
Tone from CO 182
Toolbar 5
Tools menu 6
top 145
Trace 90
Trace Settings 96
Transfer 7
transfer 25
trunk error counter 46
Trunk reservation, automatic 180
trunk status 45
trunks 23
type of number 119

U

Uninstallation 19
Upgrade 18, 19
Use only default number for MSN 181
User administration 103
user administration 10
user group 10
User name 1
user name 10
Using help 2

V

V.24 status 53
Version number 2

W

Warning Signal for Call Pickup Groups 179
Warning tone during voice recording 186
Wizard 14