

D.N.A. 5.4 END USER APPLICATIONS



The D.N.A. suite of applications is composed of end user applications and management specific applications. The end user applications allow users to access corporate data efficiently, and they are available to colleagues and customers in a variety of ways thus increasing the company's profitability. The end user applications are:

- Operator Workstation 5.4
- Ericsson Communication Client 1.4 (VoIP softphone)
- Ericsson Communication Assistant 1.4 (web based product)
- Mobile Executive 5.4 (WAP based product)

D.N.A. Operator Workstation 5.4

- Full call handling and integration directory search functionality on a standard PC
- Access to all directory information
- Progressive search on all directory search fields
- Message and diversion handling
- User-customizable workspace
- External directory read access using LDAP V3
- Operator Supervisor Utility to monitor “real time” operator performance
- Operator Workstation VIP for visually impaired operators

D.N.A. Operator Workstation (OWS) is a powerful, easy-to-use application for switchboard operators. It provides integrated Operator Console and Directory Services for the MD110 and MX-ONE™ network. All call handling and directory access functions, combined with advanced diversion handling and message handling, are integrated on a single PC interface.

With the added functionality of an IP enabled operator for MX-ONE™ Version 3, the operator positions become much more flexible.

Operator Workstation can be adapted to the personal requirements of any operator, enhancing productivity and customer satisfaction. Based on Microsoft Windows 2000 or Windows XP, D.N.A. Operator Workstation provides the ultimate in fast, flexible and powerful call handling. The Windows user interface guarantees maximum user friendliness, and is easy to operate.

D.N.A. Operator Workstation is fully integrated with other D.N.A. applications and functions as a D.N.A. Server client. All directory information that is entered from Directory Manager is shared with the Operator Workstation. It also offers advanced features such as viewing user details, photos and sending messages to paging and e-mail systems.

The D.N.A. Operator Workstation can also be equipped for use by visually impaired operators by adding a soundcard and/or Braille keyboard.

To provide visually impaired operators with accurate information, all workstation traffic is automatically interpreted by the OWS VIP program and converted into Braille and/or speech output that is required for efficient handling of all phone traffic.

User benefits

For the Operator: Rapid location of people for quick processing of calls. A new operator can learn this application faster than learning from a traditional console.

For your customers: Fast, efficient call handling allows you get to the right person the first time. Your customer feels like they are dealing with a professional company who cares about their customers.

For the organization: Improved service for callers which results in increase satisfaction from their customers.

Features

Subscriber Search

- Search window field customized to suit customer requirements

- Combined search of multiple directory fields
- Alternative spelling search of subscriber names
- Progressive search in all fields which are defined as searchable
- All directory data fields can be searchable
- Global directory search across multiple D.N.A. Servers
- Search by keyword (unlimited number of keywords per subscriber)
- Search for subscribers in same department, room, keyword
- External directory search using LDAP access
- Changes in directory database immediately available to operator

Subscriber Display

- All details from a directory entry for a subscriber available at the single touch of the key
- Confidential data option for specific data fields presented if the operator has the appropriate user access
- Photo bitmap display of subscriber when required

Message and Diversion Handling

- Notepad for message-taking during call
- Single key activation for detail, message and diversion screens
- Types of diversion:
 - Multiple diversions
 - Active/future diversion
 - Repeated/scheduled diversion
 - Soft diversion (without call forwarding)
 - Department diversion
- Integrated with third-party time card systems
- Presentation of return-time on search screen
- Message can be sent to WAP phones with D.N.A. Mobile Executive.
- Messages can be sent to the SMS DECT phones
- Messages can be printed or e-mailed (through MAPI) to GSM/SMS or other mail systems
- Absence time entered from external applications (e.g. in MS Outlook™) will be forwarded to the D.N.A. Server

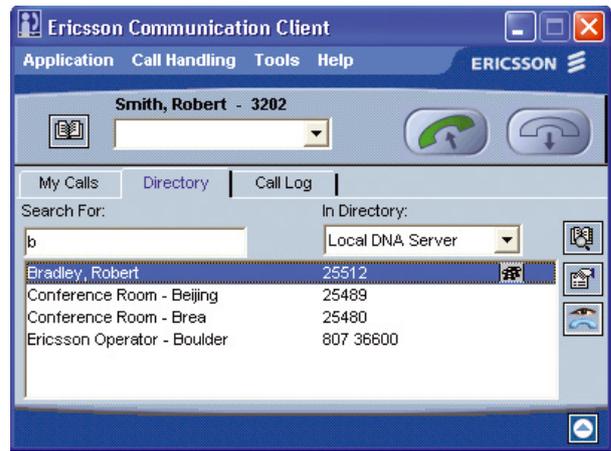
Call Handling

Single key access for regular call handling:

- Answer
- Extending
- Call splitting
- Serial marked calls
- Parking
- End-to-end DTMF
- Intrusion
- Call retrieve
- Call offer
- Console present/absent marked



Ericsson Communication Client



Directory search

- Page
- Privacy (mute)
- Manual ring
- Identification request
- Conference
 - Automatic or manual answer selection
 - Automatic or manual extend selection
 - Loop detail display for parked calls

Usability

- Menu bar access for mode settings and other features
- Easy view icons for all call, message and diversion information
- The following items can be customized by each Operator Workstation user:
 - Screen size (if used in combination with other Applications)
 - Choose between the traditional or modern display look
 - Font, size and color
 - Function key assignment
 - Search delimiter
 - Name display order, in left and right display boxes
 - Department search display order
 - Contents of directory window
 - Typing speed
 - Optional traffic keyboard available for dedicated operator positions
 - Operator user-profile can limit access to confidential information
 - Online help

Interworking

Read access to external directories using LDAP V3 interface. OWS can search both the D.N.A. directory and other LDAP servers.

Operator Workstation Supervisor

In order to manage a productive group of operators a supervisor needs to know if there is sufficient coverage for the call volume. This application allows supervisors the

ability to see the number of calls in the common call queue in real-time and the number of operators on and off duty.

Ericsson Communication Client 1.4

IP Softphone

With Ericsson Communication Client you can make and receive calls directly from your PC just as easily as from your office phone.

All you need is to be connected to your corporate network. An easy to use graphical interface with plug and play functionality provides access to the corporate directory and allows users to manage their personal number profiles and message diversions/absence information.

An essential component of the Ericsson Mobile Enterprise offering

For organizations looking to prepare for future convergence technologies while leveraging existing communications assets, the Ericsson Communication Client is the perfect solution.

Key Benefits

Ericsson Communication Client offers many benefits that directly address the business needs of today's enterprises:

- Enabling a mobile work force by allowing employees to work effectively in the office, at remote locations, or from home using the same extension and business-class telephony features
- Business travelers make calls from hotels, etc. to eliminate roaming charges on their mobile phone.
- Accelerating productivity by providing single-source access to telephony, directory, and messaging features
- Dialing is performed by 'Click-to-dial', that is by simply clicking on the name of the person to be called. Increasing communication between employees and customers through single number access, regardless of where you are working
- Reducing costs by centralizing administration, reducing the number of desktop phones and reducing internal

Message	Divert to	Starting	Ending	Recurring	
Absent	25600	6/8/2002 11:52:00 AM	6/9/2002 11:52:00 AM	No	Add
Lunch	25600	6/8/2002 12:00:00 PM	6/8/2002 1:00:00 PM	Yes	Edit...
					Delete
					Close

Message diversion management

traffic to the operator, thus greatly improving the level of service offered to customers and other external callers

- Building customer loyalty with effective communication tools allowing employees to be more efficient and responsive to customer demands

The power of corporate communications in your PC

Ericsson Communication Client is a software-based IP phone. In addition to VoIP (Voice over IP), it provides easy access to a wide range of the MD110, MX-ONE™, and Dynamic Network Administration (D.N.A.) Application Suite features.

Connecting to the MD110 or MX-ONE™ IP extension, the Ericsson Communication Client offers business-class telephony features and a single number access point to employees. Now employees can stay connected whether working in the office, at a branch site, though remote location, or even from the home through a VPN connection. Using IP-telephony through the corporate LAN/WAN allows employees to access all the same features as if they were in the office, while reducing telephone charges.

Ericsson Communication Client provides the following functionality:

- VoIP
- Business-class telephony
- Corporate Directory Search and Dial
- Message Diversion/absence information management
- Personal Number Profile Management

The Ericsson Communication Client not only offers secure access to your corporate network but also the ability to automatically detect and connect to the MD110 and MX-ONE™ gatekeeper. When used in a branch office, it also can be configured to automatically connect to a backup gatekeeper if the main gatekeeper connection is lost.

Business Class telephony features

This is not simply a matter of making and receiving calls over IP. In their daily work, most people use such features as call back, call transfer and redialing of external numbers. They also expect notification when a message is waiting. Ericsson Communication Client offers all these features.

Search and Dial From the Corporate Directory

With Ericsson Communication Client together with D.N.A. Directory, the user always has access to the corporate directory and can easily search by first or last name or specific data entries. Dialing is performed by 'Click-to-dial', that is by simply clicking on the name of the person to be called.

Manage Your Message Diversion/Absence Information

The Ericsson Communication Client supports Message Diversion, which allows the user to divert incoming calls while displaying an absence information to the caller. Using D.N.A. Directory, message diversions can be added, deleted or edited. Without the directory, message diversions can still be set using the MD110 or MX-ONE™ dialing procedure.

Manage Your Personal Number

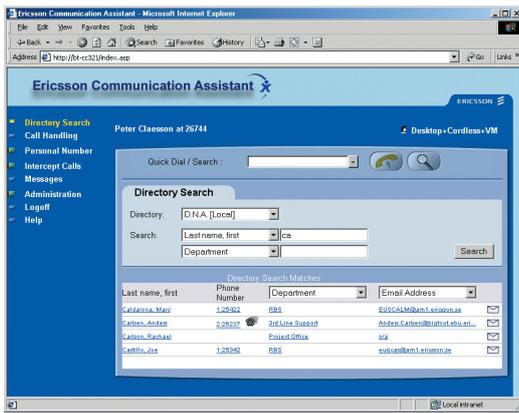
The excellent graphic user interface of Ericsson Communication Client makes it easy to manage the Personal Number feature provided by MD110 and MX-ONE™. Personal Number determines how your calls will be routed according to your current profile (one of 5 profiles), which can be set to direct the call to your office phone, home phone, mobile phone or voice mailbox either directly or in a pre-determined sequence.

Administrative Assistant support – Monitor feature

Answering and managing your Manager's communication is made easy through the Ericsson Communication Client. Through an extended dialogue interface Administrative Assistants can monitor up to 30 extensions and answer the incoming calls through an extension. The Administrative Assistant is also able to set, change or delete the message diversion/absence information and personal number for the monitored person all through one easy to use interface.

Business Class Telephony Features

- Make call
- Answer call
- Hang up call
- Call back
- Last number redial
- Transfer call
- Conference



Directory search

- Park/retrieve call
- Message Waiting indication
- DTMF signaling
- Multiple calls
- Call Log/Call List
- Monitor (Administrative assistant)
- Message diversion/absence information management
- Personal number/profile management
- Call status display
- Volume control
- Secure log-on towards gatekeeper
- Automatic Gatekeeper (discovery and registration)
- Automatic Backup Gatekeeper (registration and deregistration)

Ericsson Communication Client Standalone

The standalone version is available as a Softphone for customers that would like basic call handling such as make call, answer call with no connection to the D.N.A. directory and server services listed above. The standalone client will provide basic IP Telephony services without the need for a server installation and maintenance.

Capacity

- One instance of the Ericsson Communication Client can be running at a time on a PC
- Up to 6 simultaneous calls are supported
- A list of the 10 last dialed numbers are maintained
- The progressive directory search shows up to 100 entries
- Up to 100 calls are logged in the Call Log/Call List

Ericsson Communication Assistant 1.4

- Ericsson Communication Assistant equips your employees with the tools to conduct business from their desktop as well as remote locations.
- Ericsson Communication Assistant reduces internal traffic to the operator that greatly improves the level of service offered to customers and external callers.

- Ericsson Communication Assistant improves access to information and resources, which translates to increased efficiency and improved customer service.

Ericsson Communication Assistant is about making information accessible to everyone!

Ericsson Communication Assistant is a browser-based solution that provides easy access to a wide range of the MD110, MX-ONE™, and Dynamic Network Administration (D.N.A.) Application Suite business features. Your in-house, remote, mobile and home office work force will be empowered with directory accessibility along with a host of business features from an Internet Explorer or Netscape browser interface.

With this browser-based solution, there is no requirement to deploy and administrate client applications. It uses the familiar browser interface from Microsoft's Internet Explorer or Netscape's Navigator. Ericsson Communication Assistant provides instant access to current corporate directory information, including alternate numbers, message diversion, and personal number management.

User Benefits

- Ericsson Communication Assistant can improve internal and external communication, as well as your company's overall productivity
- User-friendly GUI that is customizable and easily updated eliminating the need for "paper" directories
- Optional "call handling" capability
- Message diversion management
- The Ericsson Communication Assistant enables companies to publish real time corporate-wide phone directories on their Network (Intranet) or publish the service on their external Web page (Internet) as an added service to their customers. This product does not require any client set-up. Installation and administration tasks are limited to the server side only
- Ericsson Communication Assistant empowers your workforce by giving them remote access to the most current directory information
- Empowers the desktop worker by keeping them better informed and more efficient

Features

- Ability to search the D.N.A. internal and external directory, Outlook personal contacts on Exchange Server, and LDAP compliant directories
- Administrate and manage message diversion
- Administrate and manage the MD110 and MX-ONE™ Personal Number feature
- Display pictures stored in the D.N.A. directory
- Localization (translation into local language) possible by distributor/customer
- Customization of the GUI possible by distributor/customer
- Initiate/View/Delete D.N.A. messages
- Send messages to other subscribers
- Call control with ApplicationLink
- Initiate a call
- Answer calls
- Transfer a call
- Set/delete call backs
- Make conference calls
- Hang up a call
- Show outgoing and incoming calls
- Send DTMF signaling
- Handle multiple calls
- Administrate Follow Me, Call diversion, and Message diversion

D.N.A. Mobile Executive 5.4

Working from Home or on the road and never miss a call or a message.

The D.N.A. Mobile Executive brings power and flexibility to the mobile work force by providing access to critical communication tools. Many "road worriers" find it increasingly difficult to stay in touch with the fast paced corporate environment. With the D.N.A. Mobile Executive all employees can have access to the corporate directory, message diversions, personal number profiles, and D.N.A. messages through their standard WAP telephone.

Additionally, IP desk phones interface with the D.N.A. directory via the WAP interface. This provides the users simple menu driven search and dial functionality.

For the user, the Mobile Executive provides a simple user-friendly interface that will assist the user to lookup information in the corporate D.N.A. directory. It also offers personal features including, initiate, cancel, and setup message diversion/absence information, select a personal profile, and read D.N.A. message sent by the operator all from your WAP telephone. There is no longer a need for the mobile worker to carry outdated directories with them. Further, the mobile worker has options to select how and when they can be contacted without having to miss any important information, thus keeping the mobile worker on top of the industry and ahead of the competition. The Mobile worker can also initiate a call from a directory search result if the Mobile Extension feature is used.

The D.N.A. Mobile Executive is a member of the D.N.A. Application Suite family of products. Any changes to the D.N.A. Directory Manager or other D.N.A. applications are

immediately made available to the D.N.A. Mobile Executive.

For the organization the D.N.A. Mobile Executive can reduce traffic to the enterprise operator, keep the mobile worker in touch with the organization, allow callers options of how to contact the mobile worker, and provide the mobile worker with important messages.

Features:

- Search the D.N.A. Directory database from WAP enabled phone (mobile or IP desk phone)
- Show real time information, such as current message diversions with absence information
- Initiate, set and cancel message diversions with absence information
- Select a personal number profile
- Access to D.N.A. messages
- Initiate a call via Mobile Extension feature
- Search the D.N.A. Directory and initiate a call though the Ericsson IP Phone with WAP interface
- Supports the wireless application protocol (WAP) 1.1, 1.2, 2.0 browser

Technical information

Server Software Requirements (ECC, ECA, DME servers)

- Microsoft Windows 2000 server or Windows 2003 server
- WWW Server: Microsoft Internet Information Server (IIS) version 5.0 and IIS 6.0
- WAP Gateway (in-house or provided through local network operator) (DME only)
- Pentium IV 2.4 GHz or better
- 512 MB RAM or better
- Network Card and TCP/IP network protocol

Client Software Requirements (ECC, ECA, OWS, DME clients)

- Microsoft Windows 2000, Windows XP or Windows 2003 Server
- Browser: Microsoft Internet Explorer 5.5 or later or Netscape 4.6 or later
- OWS: SQL Client Access License to SQL Server
- DME: WAP 1.1, 1.2 or 2.0 enabled phone
- Pentium III 800 MHz or better
- 512 MB RAM
- Minimum 800x600 SVGA monitor (1024x768 for OWS modern display)

Compatibility

The end user applications are compatible with:

- D.N.A. 5.4 management applications. EMG is necessary for ECA and ECC for Personal Number and Message Diversion functionality
- MD110 BC 12.1, MX-ONE™ Telephony Switch, and MX-ONE™ Version 3
- OWS: Dialog Digital Telephone for voice communication (Dialog 4222 with integrated headset, other D4 series phones can be used)
- OWS VIP: recommended Braille devices: The Braille Star 40 or 80 by Handy Tech Elektronik GmbH
- OWS: The Ericsson CT-Adapter for call handling interconnects the telephone, PC and the MD110 or MX-ONE™ Telephony Switch system, which provides the foundation for the OWS application (for MX-ONE™ Version 3, OWS is IP enabled eliminating the need for the CT adaptor)
- ApplicationLink 4.0 (for ECA call handling, ECC monitor feature)
- ECC: NetMeeting version 3.01
- ECC: Windows-compatible full duplex sound card. It is recommended to use either a USB full duplex headset with microphone or USB full duplex handset
- ECC: Protocols: H.323 and ESSP (Ericsson Supplementary Service Protocol)
- ECC: Voice Codec: G.711, G.723, G.729a and G.729ab coder/decoder (codec)

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D.N.A. 5.4 MANAGEMENT APPLICATIONS



The D.N.A. suite of applications is composed of management specific applications and end user applications. The management applications allow administrators to maintain, monitor, and adjust configurations and data to maximize the company's efficiency. The management key components are:

- D.N.A. server
- Directory Manager
- Extension Manager
- Performance Manager



D.N.A. Server 5.4

At the heart of a D.N.A. network, the D.N.A. Server provides services, a common data storage medium, and communications interface handler for all D.N.A. applications. A set of common utilities including logon/security, site set-up, and installation are provided to complement the basic database services. Multiple D.N.A. Servers can be connected within a network to allow customers to support a distributed system.

Management databases are built up by co-installing a D.N.A. Server with a Microsoft SQL Server. It can serve as a 'stand-alone' server or co-reside with other applications such as D.N.A. Directory Manager and D.N.A. Operator Workstation. Each of these D.N.A. applications can either be used 'standalone' or in combination with other D.N.A. applications.

A large D.N.A. network can be built up using multiple D.N.A. Servers. In this scenario, each server provides services to a defined subset of nodes within the network.

A client application is then able to select one of the servers at logon and manage the associated nodes, depending on authority level. This distributed architecture enables network traffic and response times to be optimized. This is of particular importance for large national and international networks.

D.N.A. Server contains flexible processes and routines that facilitates inter-application communication. It also provides the capability for external applications to integrate with the D.N.A. system.

- Enables unique Directory configurations for each customer
- Flexible configurations possible from single PC installations to a distributed system with multiple servers over LAN/WAN, supporting multiple clients
- Based on Microsoft Windows 2000 server or Windows 2003 server
- Uses Microsoft SQL Server or MSDE database
- Shared management databases
- Uses de facto and industry standards for communication within and outside D.N.A. environments

Features

Services provided by D.N.A. Server

- Common database services available to integrated D.N.A. applications
- Common security and user access services to configure individual users of D.N.A. applications
- Connectivity between multiple D.N.A. Servers
- Dial-up client connections via remote access service
- Simplified database access (ODBC) for third-party report generators
- Multiple, simultaneous application connection to MD110 and MX-ONE™
- Re-configuration of managed MD110 and MX-ONE™ nodes by adding new nodes

The following can be configured by the D.N.A. Server:

- Directory
- Trunk
- Time system interface
- Voice system interface
- Message and diversion
- Tenant group
- Name identity conversion
- MD110 and MX-ONE™
- User Name and Privileges

Application	Department	Subcode	External	Data	Job	Zone	Ext	Ext
19070	DOUGLAS	DS	MR	10051629	ERISSON	487	DESIGN	BLD&ELECTR/ITC
19072	DOUGLAS	D	MR	10052513	ERISSON	5110	WHITE CITY	HEAD OF EMPVAC
19073	DOUGLAS	D	MR	10052513	ERISSON	5110	WHITE CITY	HEAD OF EMPVAC
19074	DOUGLAS	D	MR	10052513	ERISSON	5110	WHITE CITY	HEAD OF EMPVAC
19075	DOUGLAS	D	MR	10052497	ERISSON	2209	WHITE CITY	DIRECTOR
19076	DOUGLAS	D	MR	10052497	ERISSON	2209	WHITE CITY	DIRECTOR
19077	DOUGLAS	D	MR	10052497	ERISSON	2209	WHITE CITY	DIRECTOR
19078	DOUGLAS	D	MR	10052497	ERISSON	2209	WHITE CITY	DIRECTOR
19079	DOUGLAS	D	MR	10052497	ERISSON	2209	WHITE CITY	DIRECTOR
19080	DOUGLAS	D	MR	10052497	ERISSON	2209	WHITE CITY	DIRECTOR
19081	DOUGLAS	D	MR	10052497	ERISSON	2209	WHITE CITY	DIRECTOR
19082	DOUGLAS	D	MR	10052497	ERISSON	2209	WHITE CITY	DIRECTOR
19083	DOUGLAS	D	MR	10052497	ERISSON	2209	WHITE CITY	DIRECTOR
19084	DOUGLAS	D	MR	10052497	ERISSON	2209	WHITE CITY	DIRECTOR
19085	DOUGLAS	D	MR	10052497	ERISSON	2209	WHITE CITY	DIRECTOR
19086	DOUGLAS	D	MR	10052497	ERISSON	2209	WHITE CITY	DIRECTOR
19087	DOUGLAS	D	MR	10052497	ERISSON	2209	WHITE CITY	DIRECTOR
19088	DOUGLAS	D	MR	10052497	ERISSON	2209	WHITE CITY	DIRECTOR
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19090	DOUGLAS	D	MR	10052497	ERISSON	2209	WHITE CITY	DIRECTOR
19091	DOUGLAS	D	MR	10052497	ERISSON	2209	WHITE CITY	DIRECTOR
19092	DOUGLAS	D	MR	10052497	ERISSON	2209	WHITE CITY	DIRECTOR
19093	DOUGLAS	D	MR	10052497	ERISSON	2209	WHITE CITY	DIRECTOR
19094	DOUGLAS	D	MR	10052497	ERISSON	2209	WHITE CITY	DIRECTOR
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19096	DOUGLAS	D	MR	10052497	ERISSON	2209	WHITE CITY	DIRECTOR
19097	DOUGLAS	D	MR	10052497	ERISSON	2209	WHITE CITY	DIRECTOR
19098	DOUGLAS	D	MR	10052497	ERISSON	2209	WHITE CITY	DIRECTOR
19099	DOUGLAS	D	MR	10052497	ERISSON	2209	WHITE CITY	DIRECTOR
19100	DOUGLAS	D	MR	10052497	ERISSON	2209	WHITE CITY	DIRECTOR

D.N.A. Directory Manager 5.4



D.N.A. Directory Manager 5.4

D.N.A. Directory Manager provides a user-friendly graphical user interface (GUI) for the management of directory data. The simple interface provides a single point of entry to manage directory data.

- Administration tool for structuring, populating, and maintaining your corporate telephone directory
- Single point of entry for all directory data
- Operator Workstation changes in directory data are automatically reflected in the Ericsson Communication Assistant, D.N.A. Mobile Executive or Ericsson Communication Client
- Setup, configure, and modify MX-ONE Messaging™ user accounts

Directory services available with D.N.A. Directory Manager are:

- Interworking (Read/Write access) with external directories using LDAP V3 and D.N.A. interfaces
- Connection to other Ericsson products such as MX-ONE Messaging™, Voice Activated Assistant™ and Solidus eCare™

Designed as a dedicated networking application, Directory Manager (DMG) allows multiple users to simultaneously access the directory database, and provides the means for simplified viewing, editing, adding and deleting of directory data. Directory Manager provides the capability to define unique directory structure for any organization. It also allows directory access to a wide range of other applications. The data stored in the directory databases can be accurately and securely passed to Operator Workstation, Ericsson Communication Assistant, D.N.A. Mobile Executive and Ericsson Communication Client.

User benefits

- Single point of entry for user-data in the enterprise from any location
 - DMG can act as master and export data to other database applications
 - DMG can act as slave and import data from other database applications

- One source of information for:
 - Accounts department, human resources, IT-related directory information
 - Central operator directory services
 - Call accounting and internal billing
- Directory information centrally distributed to many other Ericsson applications
- Central updating retains accuracy of data which helps keep directory data up to date

Features

Subscriber data

- Full Microsoft Windows graphical user interface with common D.N.A. “look and feel”
- Tested for up to 200,000 directory entries
- Storage for people, functions, rooms and information files
- External numbers contact list
- Multiple first and last names, extensions and departments
- Alternative name spellings
- 40 user-definable fields
- Unlimited keywords
- Stored bitmap picture of subscribers can be viewed in Operator Workstation or Ericsson Communication Assistant
- Variable security level for viewing of data fields
- Activate/Deactivate Message Diversions/absence information for subscriber
- Message and diversion data stored for each subscriber
- Subscriber data available for printing by 3rd party office applications
- Visitor Registration enables operators access and printing of visitor information



Usability

- Spreadsheet-like user interface for directory data
- Sort by column
- Multiple select/change
- Find/replace for data update
- Drag-and-drop support for data change
- Directory Populate Utility enables bulk import into the D.N.A. system
- Directory Populate Utility enables bulk export into other systems
- 64 level department hierarchy tree

Interfaces

- Directory Link Interface enables directory data to be configured from external applications. With an OCX (OLE Custom control) based interface, it is possible to enable manipulation of subscriber and department data from non-D.N.A. applications.
- LDAP V3 interface enables external directory systems to read/write D.N.A. directory data. LDAP is an industry standard, allowing non-D.N.A. applications read/write access to the directory database.
- Directory "change log" enables directory data to be collected by external applications like call accounting packages and/or desktop applications or other Ericsson CTI applications.
- Interworking with Extension Manager using the transaction register to maintain accurate and synchronized information between the two applications.
- The Directory database can be used by:
 - D.N.A. Operator Workstation, Ericsson Communication Assistant and Ericsson Communication Client to read directory information, set message diversion and personal number
 - Mobile Executive to access Corporate Information, select personal profile, view and delete short D.N.A. messages and set message diversion (via your WAP enabled phone)
 - Call accounting systems (read directory information)
 - Time systems (set message diversions upon entry/exit)

- MX-ONE Messaging™ (message diversion integration)
- Outlook (message diversion integration)
- Lotus Notes (message diversion integration)

Directory Interworking

- D.N.A. Operator Workstation
- Ericsson Communication Assistant
- Ericsson Communication Client
- D.N.A. Mobile Executive
- Solidus eCare™ Desktop Manager

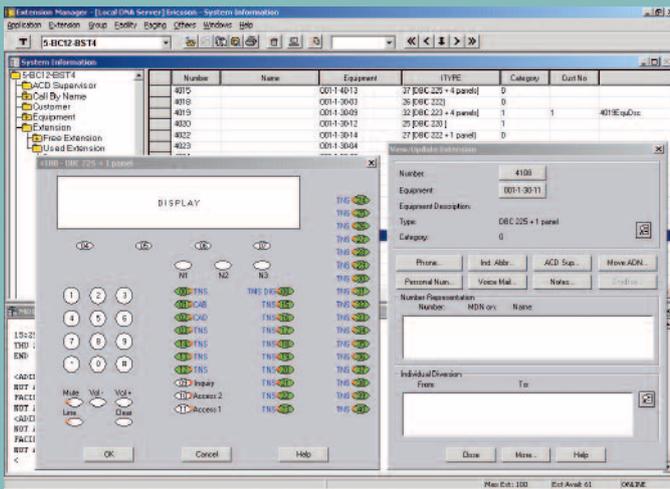
D.N.A. Extension Manager 13.1

D.N.A. Extension Manager is an application which enables the simplification of day-to-day moves, adds, and changes of telephony switch extensions and facility data.

Using a graphical user interface (GUI), Extension Manager reduces complex functionality to provide system administrators with a highly effective administrative tool. Administrators can perform tasks related to extensions more easily, quickly, and efficiently than using a standard command line interface.

- Window-based GUI configuration, with drag and drop, point and click features
- Extension and mobility feature configuration for BC12.1, MX-ONE™ Telephony Switch, and MX-ONE™ Telephony System version 3
- View, add, delete and change:
 - Extensions, groups, abbreviated numbers,
 - Categories, authorization codes, hot lines, ACD/ANCD
- Create custom templates for standardized phone set-up
- Setup, configure and modify MX-ONE™ Messaging users
- Perform changes on-line or via batch job
- Extension configuration possible from other applications via Extension Link interface

D.N.A. Extension Manager supports analog, digital, generic, ISDN, data and cordless extensions as well as IP and Mobile extensions. It automatically keeps track of both free and used extension data as well as feature and



Extension Link interface



group information. Performing moves, adds and changes is simply a matter of dragging and dropping features and parameters onto the relevant data fields. Extension Manager also supports administration of MX-ONE Messaging™ voicemail and unified messaging accounts all through one single interface providing a central point of administration.

D.N.A. Extension Manager is a true multi-user application allowing multiple sessions to be opened towards one or more MD110 and MX-ONE™ nodes. An Extension Manager user is also able to access several D.N.A. Server databases one at a time.

User benefits

- Perform adds, moves and changes immediately or when needed via batch jobs
- No external costs needed for moves, adds and changes
- Uses a simple graphical user interface (GUI) instead of specific MD110 and MX-ONE™ command syntax
- Provides an overview of occupied and free resources for early planning
- Lower total cost of ownership with centralized management for MD110 and MX-ONE™ nodes

Features

Usability

- Full Microsoft Windows (GUI) with common D.N.A. look and feel
- Spreadsheet interface for information viewing
- Drag-and-drop support for data manipulation
- Online documentation for switch parameters
- Online display of command feedback from the switch
- Easy-to-use dialog boxes
- Tree hierarchy display of system information
- Templates may be defined for common configurations
- Simultaneous multiple-user access
- User-privilege definition to enable specific functionality for different users
- Ability to access and update data on multiple D.N.A. Servers
- Daily system activities held in log files
- Multiple switch node configuration from any Extension Manager client
- Complete printout of system information

Switch interworking

- Data Synchronization of single LIMs, single boards and single extensions from the MD110 Support (MDS) and D.N.A. Extension Manager
- Online and offline mode towards MD110 and MX-ONE™
- Batch mode for offline configuration of the switch
- Displays board suffix and revision when information is viewed
- File transfer capability

MD110 and MX-ONE™ feature configuration

Extensions

View/change/add/delete:

- Digital Extensions, including function key assignments
- Analog Extensions
- Data Extensions
- Generic Extension
 - Mobile Extension
 - IP Extension
 - Short Message Service
- DNIS data configuration
- Dial by Name support for display in Digital Telephones
- Leading Zero extensions
- Choice of Language

MX-ONE™ Messaging

View/change/add/delete:

- Mailbox Number
- Set message waiting indicator
- Clear Message Waiting Indicator
- Message Retention – Unlimited or Number of days
- Callouts – In house, Local and Long Distance
- Message Management Access
- Setup Tutorial Required
- Name and Department
- Primary Extension
- Alternate extensions – Secondary Voice Extension, Fax Extension, Operator Extension, Unknown Extension
- E-mail parameters – Type (User e-mail type, none, access, store), Name (User display name), Address (User address), Logon ID, Logon Password, Server ID (e-mail server ID)
- Distribution lists that the subscriber is a member of
- Message Presentation Options

Groups

View/Change/Add/Delete:

- Common Bell
- Group Hunting
- Call Pickup
- Data
- Group Do Not Disturb
- ACD Agent groups
- ANCD groups

Facilities

View/Change/Add/Delete:

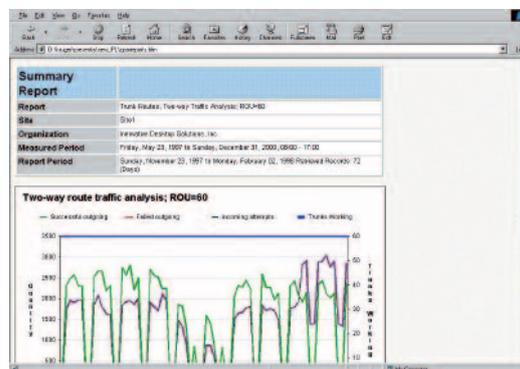
- Common Abbreviated Number
- Common Categories
- Individual Categories
- Authorization Codes
- Account Codes

- Individual Abbreviated Numbers
- Hot Lines
- ANCD Management
- ACD Supervisor management functions
- Personal Number

Interfaces

- ExtensionLink Interface to enable extension configuration from external applications. With an OCX (OLE Custom control) based interface, it is possible to enable manipulation of extension data from non-D.N.A. application
- Interworking with Directory Manager using transaction register to maintain accurate and synchronized information between the two applications

D.N.A. Performance Manager 5.4



- Graphical interface for managing and viewing the MD110 and MX-ONE™ performance
- Easy to read and customize traffic information from the MD110 and MX-ONE™
- Traffic analysis of major MD110 and MX-ONE™ components, including Radio Base Stations and IP extensions
- Multiple MD110 and MX-ONE™ Nodes can be managed from a single Performance Manager application

D.N.A. Performance Manager provides simplified measurement and analysis of performance data from MD110 and MX-ONE™. It also gives the MD110 and MX-ONE™ administrator information about the overall performance of trunks, routes, operators, individual extensions and common system resources. Performance Manager supports extended reporting or radio base station performance statistics. Performance data can be easily accessed from the MD110 and MX-ONE™ through the simple user interface. This data is automatically retrieved and stored in the D.N.A. Server.

Using the Performance Presentation Manager sub-modules the data can be easily viewed, modified and presented in either report or graphic formats for printing or distribution within the organization. Performance Manager 'Lite' provides an additional method of viewing reports via a Web browser. Performance Manager Lite makes it possible to access six pre-defined reports.

Using Performance Manager, potential bottlenecks in the MD110 and MX-ONE™ implementation can be avoided and system resources tuned to ensure maximum availability.

User benefits

- Optimized trunk routes or leased lines means optimized payments to your service provider
- Correct number of trunks means more calls staying on the corporate network for increased calls, faster access and reduced toll charges
- Insufficient incoming trunks means callers (customers) hang up and potential business is lost
- Graphical interface saves time by enabling customized reports specific to your organization
- More information available in your organization through effective distribution of traffic information
- Easy-to-use access to traffic information using PMG Lite
- Optimized call groups and operator configurations enable high level of service for incoming callers

Features

Performance Data Manager

- Full Microsoft Windows graphical user interface with common D.N.A. look and feel
- Up to 250 traffic measurements from the MD110 and MX-ONE™
- Manage up to 250 traffic measurements in total for:
 - Trunks
 - Extensions
 - Operators
 - PCM Lines
 - Common system resources
- Multi-user environment for local and remote connections
- Automatic or manual traffic data extraction from MD110 and MX-ONE™
- Back-up and restore of historical traffic measurement data for presentation access
 - Up to six months for primary database
 - Up to a year for auxiliary database
- Online display of the MD110 and MX-ONE™ feedback
- Drag and drop support for data manipulation
- Multiple MD110 and MX-ONE™ configurations
- Daily system log files

Performance Presentation Manager

- Macro Wizard for easy-to-design reports
- Simplified graphical user interface using Microsoft Excel
- Fully customizable report layouts
- Predefined reports for:
 - Operators
 - Trunk routes
 - Extensions
 - Hunt groups
 - PCM Lines
 - Cordless Extensions
 - IP Network Interface
- View reports in graphic, tabular or summary formats

- Manipulate chart data by editing existing traffic measurement data fields to create new reports
- All database fields available for customizable reports
- Task scheduler:
 - Automatic printing of reports
 - Automatic mailing of reports
- Capability to switch between accessing primary or auxiliary databases

PMG Lite

- Web access to 6 pre-defined reports using an internet browser

Technical information

Hardware/Software

Since each D.N.A. configuration has different storage and processing requirements, the following is a general guideline for a small D.N.A. installation:

- Pentium IV 2.4 GHz or better for the D.N.A. server
- Pentium III 800 MHz for client applications
- 512 MB RAM
- Minimum 1024x768 SVGA monitor
- Network Card and TCP/IP network protocol
- D.N.A. Server: Microsoft Windows 2000 or Windows 2003
- D.N.A. clients: Microsoft Windows 2000, Windows 2003, or Windows XP
- Microsoft SQL Server 2005, SQL Server 2005 Express, SQL Server 2000, MSDE 2000
- D.N.A. Performance Presentation Manager requires Microsoft Excel 2000, 2002 or 2003 to view reports.
- D.N.A. Performance Manager Lite requires Internet Explorer 5.5 or later

Communication

Connection to the MD110 and MX-ONE™ is achieved via Ethernet using the Network Interface Unit (NIU) or V.24 connections.

D.N.A. Performance Manager clients can connect to D.N.A. Server via Ethernet, TCP/IP or dial up RAS connection.

Compatibility

D.N.A. 5.4 is compatible with MD110 BC12.1, MX-ONE™ Telephony Switch, and with MX-ONE™ Telephony Server version 3

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