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Nokia UltraSite EDGE BTS, Rel. CX5, Product Documentation, v.1

UltraSite EDGE BTS Software Descriptions

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Contents

1 Summary of changes in UltraSite EDGE BTS Software Descriptions

There are no changes in *UltraSite EDGE BTS Software Descriptions* document.

2 Network Management System (NMS)/ NetAct and BSC software

NMS/NetAct software manages the entire GSM/EDGE network, including UltraSite EDGE BTS, using the BSC. This remote software minimises the need for on-site BTS management. NMS/NetAct software incorporates a full range of functions — from fault, performance and configuration management to transmission, trouble and security management.

Software updates are delivered via Nokia Online Services (NOLS).

For more information, see Nokia NMS/NetAct documentation.

3 Nokia SiteWizard software

3.1 Contents

Nokia SiteWizard is a collection of software used to manage UltraSite EDGE BTS on-site. The applications run under Windows NT 4.0, Windows 98, Windows 2000 or Windows XP. For detailed system requirements, see *Release Notes* document.

Nokia SiteWizard is an application package for the commissioning and maintenance of Nokia UltraSite and MetroSite GSM base stations. The CD-ROM contains manager applications for the BTS and related transmission equipment on a BTS site.

Nokia SiteWizard includes the following applications related to UltraSite EDGE BTS:

- Nokia BTS Manager for managing UltraSite EDGE BTS

- Nokia BTS Hardware Configurator for configuring the UltraSite EDGE BTS cabinet

- Nokia RRI Manager for FXC RRI transmission unit and connected Nokia MetroHopper and FlexiHopper Radio

- Nokia E1/T1 Manager for FC E1/T1, FXC E1, and FXC E1/T1 transmission units

- Nokia Hopper Manager for FIU19(E) and connected Nokia MetroHopper and FlexiHopper Radio

- Nokia UltraSite BTS Hub Manager for commissioning/administration of the FXC transmission unit in the BTS hub

- Nokia STM-1 Manager for FXC STM-1 transmission unit

- Nokia SCF Editor

- Nokia PSM Manager

- Nokia Bridge Manager

➡ **Note**

The Nokia SiteWizard software package also contains manager applications for other Nokia BTS products. These applications are not included in the previous list.

Only BTS HWConfigurator, UltraSite BTS Hub Manager and BTS Manager are directly used in the commissioning.

➡ **Note**

Only one application can be communicating with the BTS at a time. Close BTS HW Configurator before starting UltraSite BTS Hub Manager, and close Hub Manager before starting BTS Manager.

3.2   Installation

The installation program of Nokia SiteWizard installs the applications on the PC hard disk and creates the *Nokia Applications* submenu in the **Start** | **Programs** menu in Windows. You can launch the applications from this menu. For more information on the installation, see instructions on the Nokia SiteWizard CD-ROM case.

Software updates are delivered via Nokia Online Services (NOLS).

For further information, refer to the SiteWizard Product Description (also available in NOLS).

4   Contents of Nokia SiteWizard

Contents of Nokia SiteWizard 4.15

Nokia SiteWizard 4.15 is needed for the Nokia ITN C3 release.

The following managers and other components are included on Nokia SiteWizard 4.15:

- Nokia BTS Manager CX(M) 4.1 CD1.0

- Nokia BTS HW Configurator CX(M) 4.1 CD1.0

- Nokia MetroHub Manager C4.0

- Nokia E1/T1 Manager C4.0

- Nokia RRI Manager C4.0

- Nokia UltraSite BTS Hub Manager C4.0

- Nokia STM-1 Manager C2.0

- Nokia FC STM-1 Manager C2.0

- Nokia Bridge Manager C2.0

- Nokia Hopper Manager C4.8

- PSM Manager 4.07

- GCS R4.2 SP3 CD1

➡ Note

The SCF Editor is no longer supported.

The transmission element managers on the Nokia SiteWizard 4.15 CD-ROM are compatible with ITN C2.0, C2.1, and C2.2 managers. Furthermore, ITN C3 node managers work also with ITN C1.2, C2.0, C2.1, and C2.2 hardware, but not all features or functions are supported.

Nokia SiteWizard is delivered updated and on two CD-ROMs. The product code is 469958A.

5 BTS software

The UltraSite BTS software supports EDGE functionality from CX3.3 onwards. Some software features are:

- Auto-detection that automatically identifies the active BTS hardware. This feature reduces the number of required system data entries.

- Advanced BTS diagnostics system that considerably reduces the number of alarms. This system makes alarm information easily accessible and understandable.

- Storage for two SW applications in BTS memory: newest and old. The BTS Manager shows the states, running package, newest in flash, and oldest in flash.
  - Newest in flash describes the newest BTS SW package. After SW download, the newest SW package is taken into use during the next BTS reset. In case the BTS is not connected to the BSC, it will reset itself automatically after the SW download is complete.
  - Running package describes the currently used BTS SW version (runtime SW).
  - Oldest in flash describes the second SW package that exists in the BTS's flash memory. Oldest in flash SW package can be taken into use by loading a masterfile describing that package (other files do not need to be downloaded).

  The software loads either locally with Nokia BTS Manager or remotely from the BSC or NMS (through the BSC). When downloading from the BTS Manager, the service is interrupted.

  For BSC\NMS, the operator can choose to download the software as a background operation (without interrupting the BTS operation) and activate the new software at any time.

Software updates are delivered via Nokia Online Services (NOLS).

6 Technical description of software licensing

Nokia UltraSite EDGE BTSNokia MetroHub Transmission Node supports software licensing. The features under licences are modulation and Flexbus capacity.

The optional feature allows the operator to use the following features with FlexiHopper Plus:

- 16-state modulation

- Flexbus capacity of 8x2M

- Flexbus capacity of 16x2M

To activate features, the user needs to order a secure licence file from Nokia and install the licence. The file is delivered through Nokia software delivery channels and can easily be installed either locally or remotely over the Q1 management channel using the Nokia Hopper Manager version C4.7 or newer.

The licence is implemented using secure plain text files generated and authorised by Nokia. In case the licence file is lost or corrupted, the valid licensed user can get a replacement from Nokia without paying for the feature twice. The licence is bound to the unit's serial number and cannot be used in another unit. If radio hardware is swapped by Nokia in a hardware failure case, a new licence file is generated.

Using the **Licence Manager** dialogue box, you can maintain software feature licences in the network element. For more information, see *Using the licence manager*. The dialogue box contains a list of all licensable features in the network element. A list of features contained in the licence file is displayed for each licence file.

There are short-term and long-term licences. If the licence installed is time-limited, the remaining time is displayed in the **Licence Manager** dialogue box.

Short-term licence is an introductory, time-limited licence (60 days) for Nokia FlexiHopper family customers. During that time customers can test, for example, 16-state modulation in practice. When taken into use, short-term licence generates a warning when the licence is about to expire and an alarm when it has expired.

Long-term licences are permanent and once installed, they will not expire. When you have bought a long-term licence, it can be activated or deactivated as often as needed.

7 Technical description of user access levels

In Windows XP, Windows 2003 server, and Windows 2000, ITN C3 element managers offer two access levels, 'Read only' and 'Read/write' when remotely connected to a Nokia MetroHub or UltraSite BTS Hub. The feature can be enabled when the managers are installed by using Nokia SiteWizard, in which case a UALC user group is added to the Windows operating system.

The user group determines a user's access rights. When the application starts up, if the feature has been enabled, the membership of the current user is checked. Based on the access rights, certain application actions are restricted.

A user must have Windows administration rights to add users to the UALC user group, or to alter current privileges.

The user access level functions can be disabled when re-installing the element manager applications with Nokia SiteWizard.

➡ Note

It is not possible to enable the read/write mode when a user with read only access rights is logged into the system.

7.1 NetAct and user access level control function

When launching Nokia MetroHub ManagerNokia UltraSite BTS Hub Manager via the Nokia NetAct Top Level user interface, the application is started in the node manager server. Nokia NetAct uses an internal service user for authenticating itself to the node manager server. For being able to differentiate between different users in the node manager server, it is necessary to add an additional service user and a user group to the Nokia NetAct management system.
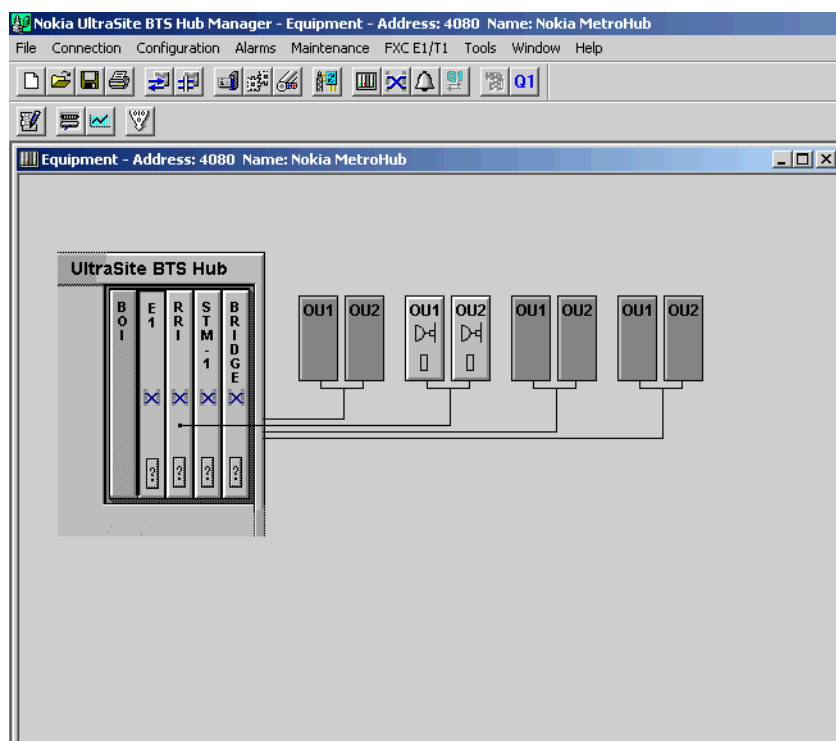
Afterwards, it is possible to assign one of the service users to the *Nokia BTS_Admins* user group. All users belonging to the user group bound to this service user, get 'Full Control' rights. All users belonging to the user group bound to the second service user, get 'Read Only' rights.

For information on how to add a service user and a user group, see Nokia NetAct documentation in Nokia Online Services (NOLS).

8 Technical overview of manager software

The transmission node is managed with Nokia UltraSite BTS Hub Manager or Nokia MetroHub Manager. Manager Equipment views present the cabinet with the different units. You can access the radios via the RRI element manager.

➡️ Note

The equipment view looks slightly different for MetroHub.

The UltraSite BTS and MetroHub can contain various combinations of units. The images in this document show different possible configurations for both, to give you an impression of the equipment.

Figure 1.   Nokia UltraSite BTS Hub Manager Equipment view

Clicking on a transmission unit in the **Equipment view** window starts the related manager program for the unit. Unit-specific menus for the different transmission units appear before the **Tools** menu of Nokia UltraSite BTS Hub Manager or Nokia MetroHub Manager on the menu bar. For example, the menu of FXC Bridge manager is displayed in the following figure:
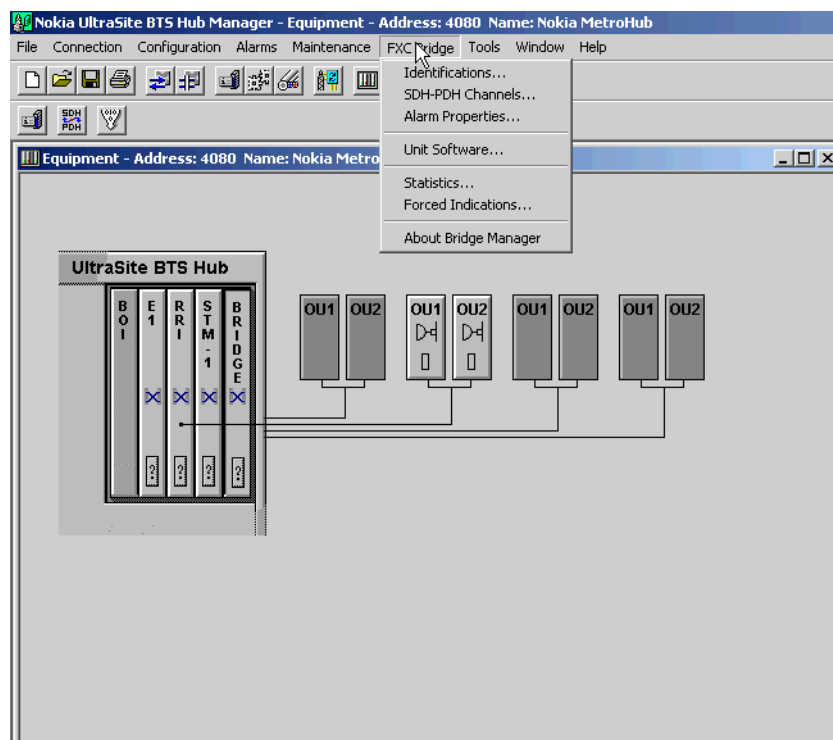

Figure 2.   FXC Bridge manager menu

Under the unit-specific menus you can:

- manage unit identifications and installation data

- manage alarm properties information

- enable/disable alarm monitoring states

- view and reset statistics and statistics history

- view measurements

- manage interface loops

- manage forced indications

- download and activate new software

Under the **FXC STM-1** menu you can also:

- manage STM-1 interface settings (Optical Section, Regenerator Section, Multiplex Section, and Virtual Container 4 settings) for interfaces 1 and 2

- manage SDH-PDH channel settings (Trail Trace Identifier, Performance Collection, VC-12 Path Label settings, and VC-12 Mapping Mode)
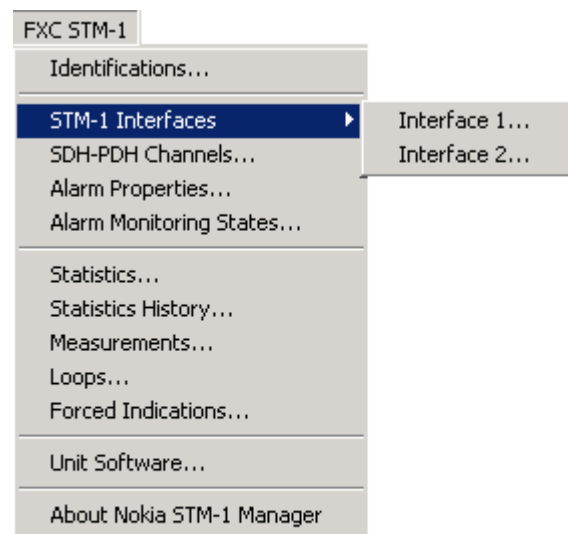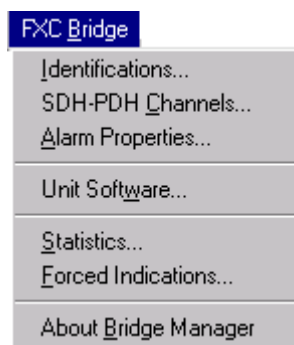

Figure 3.   FXC STM-1 menu

Figure 4.   FXC Bridge menu on the MetroHub menu bar

9 Technical overview of Nokia BTS Hub or MetroHub Manager menus

All Nokia BTS Hub and MetroHub Manager functions can be accessed through the application menus. The main functions under the menus are briefly described in the figure below. You can also use the toolbar short-cuts to access the menu items.
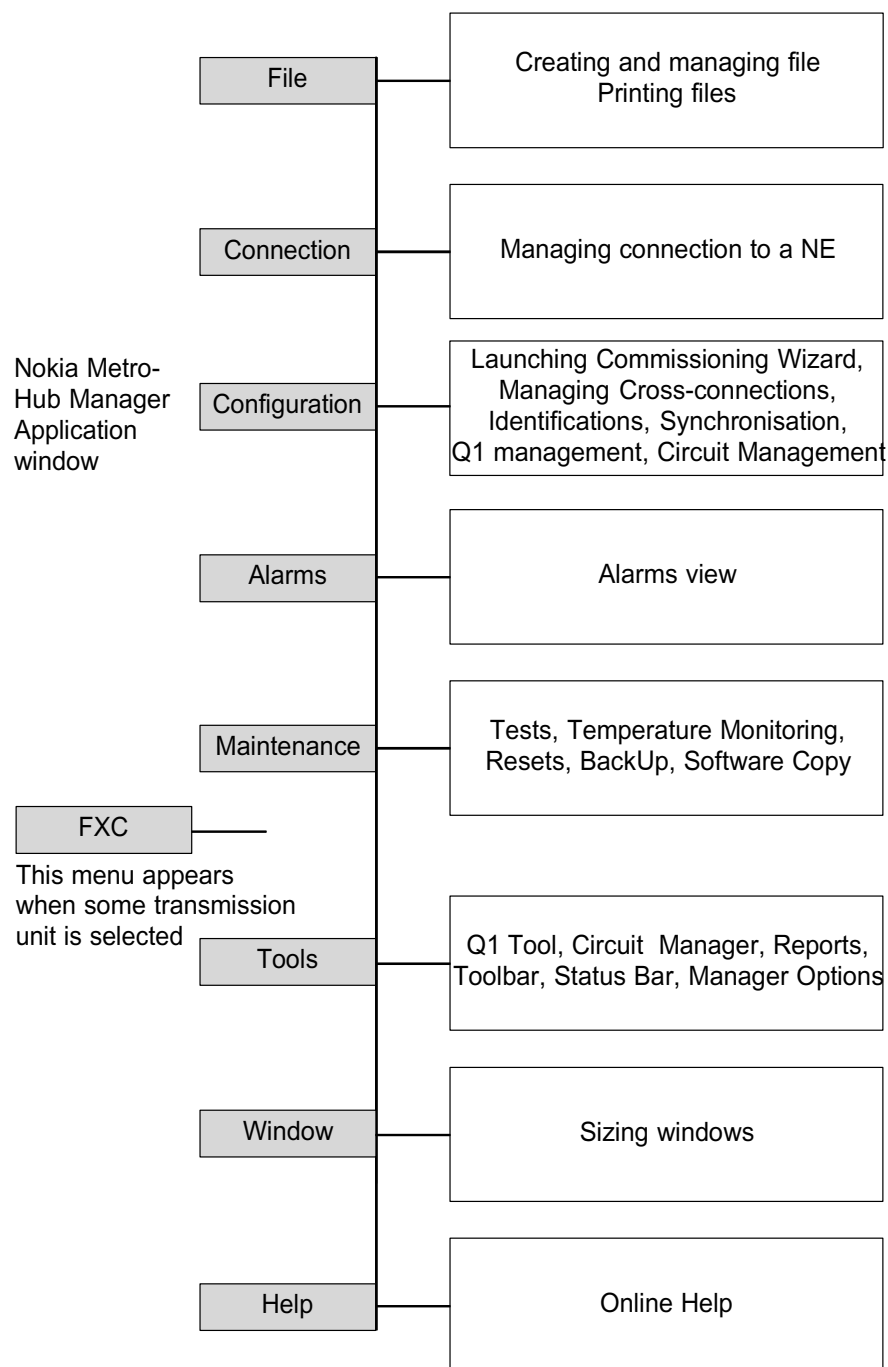
Nokia Metro-Hub Manager Application window	**File**	Creating and managing file Printing files
	Connection	Managing connection to a NE
	Configuration	Launching Commissioning Wizard, Managing Cross-connections, Identifications, Synchronisation, Q1 management, Circuit Management
	Alarms	Alarms view
	Maintenance	Tests, Temperature Monitoring, Resets, BackUp, Software Copy
FXC This menu appears when some transmission unit is selected	**Tools**	Q1 Tool, Circuit Manager, Reports, Toolbar, Status Bar, Manager Options
	Window	Sizing windows
	Help	Online Help

Figure 5.   Overview of UltraSite BTS Hub or MetroHub Manager menus

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The following tasks are performed under the Nokia BTS Hub Manager or MetroHub Manager menus:

- Commissioning the node (Configuration → Commissioning Wizard)

- Managing PDH and SDH synchronisation settings (Configuration → Synchronization)

- Managing Embedded Operations Channel (EOC) settings (Configuration → Q1 Management)

- Making cross-connections (Configuration → Cross-connections)

- Managing service interface settings (Configuration → Service Interface)

- Viewing current alarms (Alarms → View)

- Performing tests (Maintenance → Tests)

If you try to make changes that are not possible, you are notified and the previous settings are restored. To send the changes to the node, click Apply. To send the changes to the node and to close the window or dialogue box, click OK. In dialogues with related menu activitie, for example, Modify or Refresh, you can use the dialogue button to access the related menus or use the pop-up menus (right-click on the mouse).

Related Topics

Network Management System (NMS)/NetAct and BSC software

References

Compatibility between HW and SW

Compatibility between BTS, BSC, NetAct, SiteWizard and LMU SW

Compatibility between new features of BTS SW CX4.1 and other network elements

Technical description of user access levels

Instructions

Administering user access level control