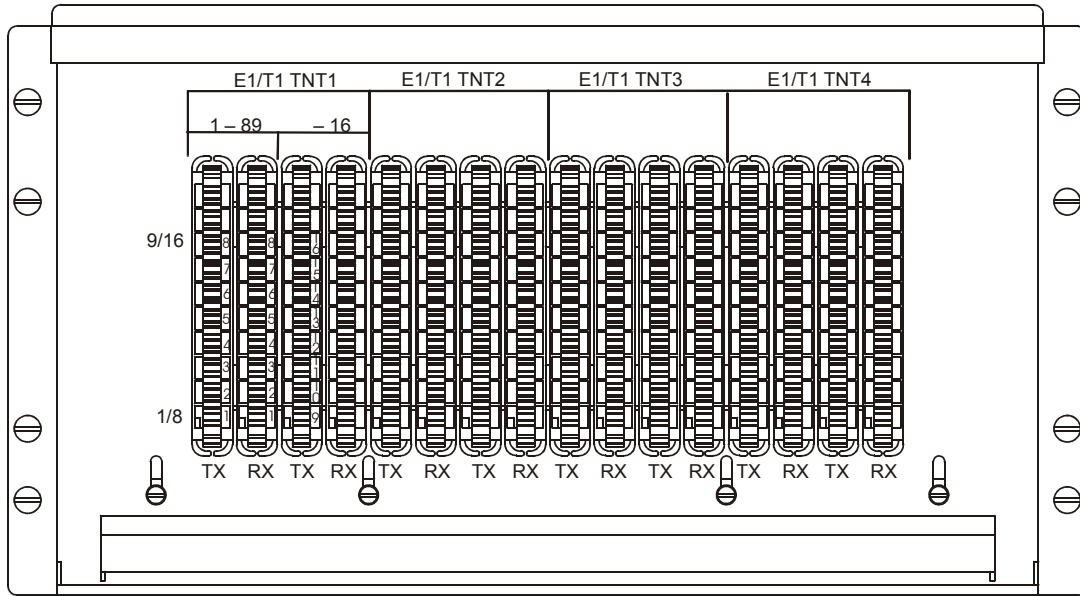


3.4.3.3 – Connections to 120 ohm distributors

- Connections to 120 ohm (E1) or 100 ohm (T1) distributor of the TNT connectors (J105 to J112) of the top panel of the DBS subrack with (n) 3CC11238AAxx cable(s).



Out put DBS C RX access
 In put DBS C TX access

Figure 99 – Connection panel beneath the roof of the standard rack

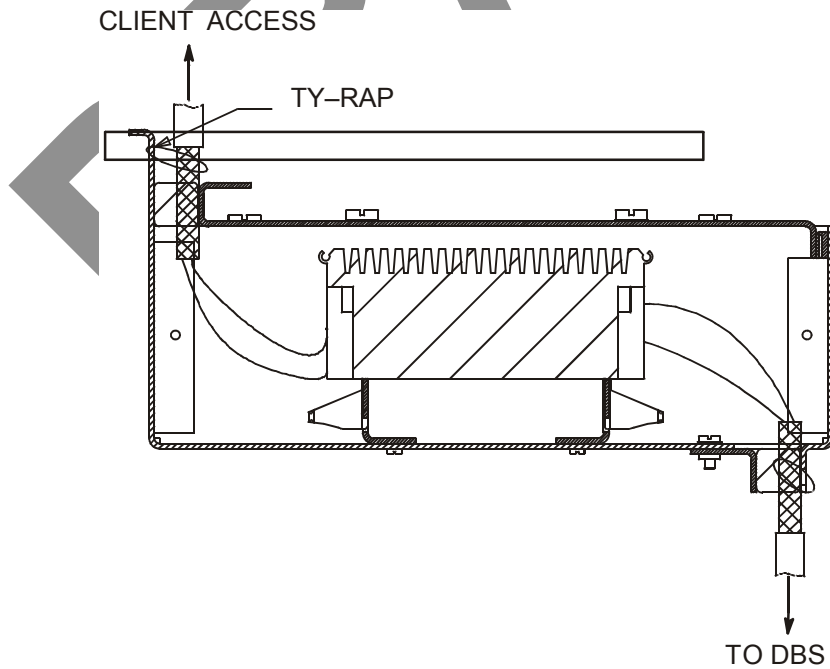


Figure 100 – Cable mounting and grounding

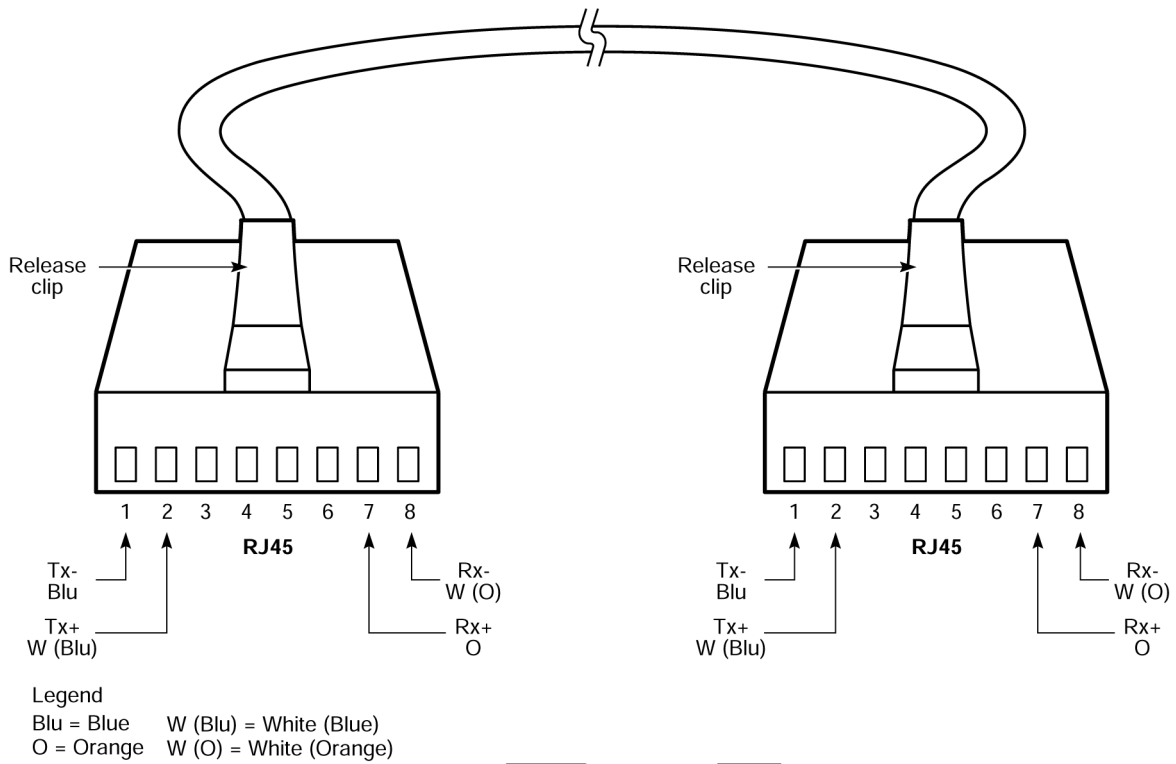


Figure 101 – RJ45 Connector pin and signal assignment

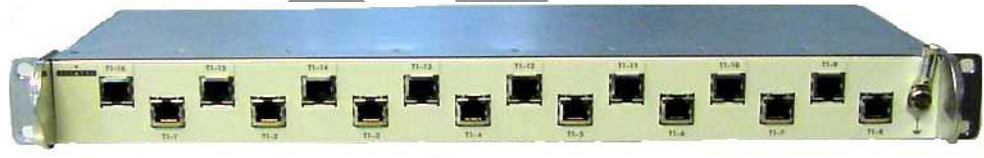


Figure 102 – Patch panel T1 (RJ45)

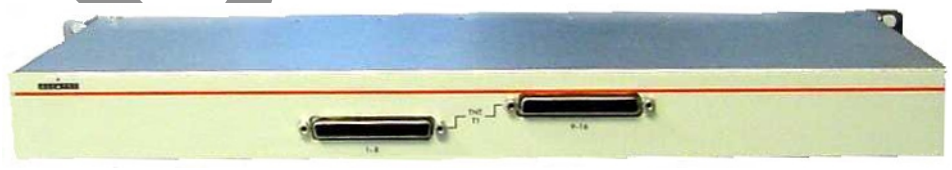


Figure 103 – Repartiteur RJ45

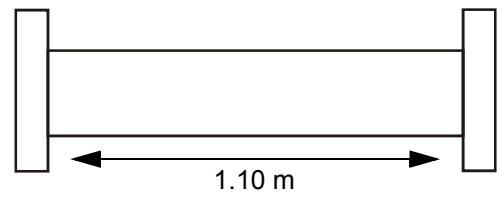


Figure 104 – Cable length ACC 11687 Axxx

3.4.4 – Client access connections (ATM network interface)

3.4.4.1 – Optical interface 155 Mbit/s

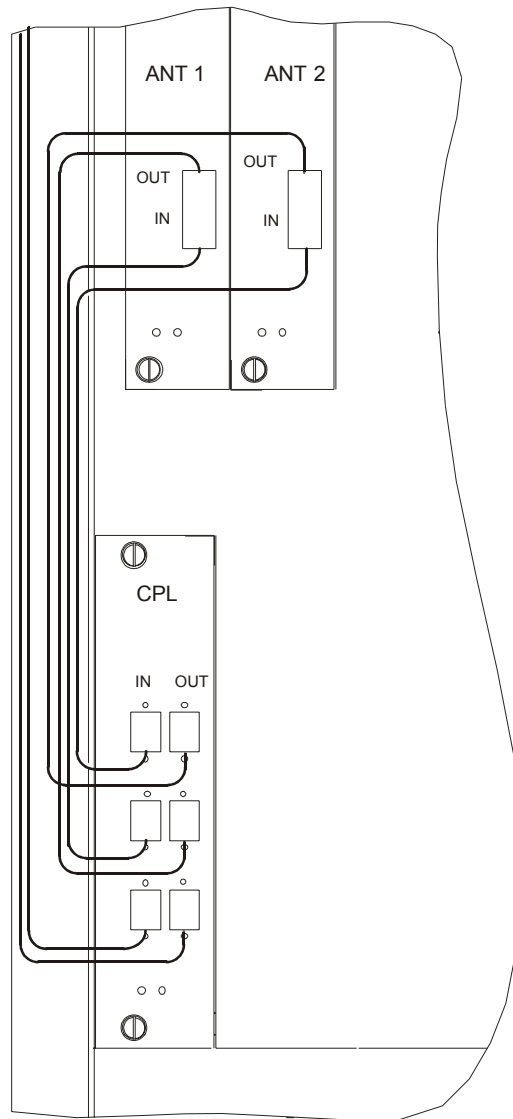


Figure 105 – Fiber optic cables connection

- use the fiber optic connection cables on the ANT and CPL board front panel.
- To avoid damaging the fiber optic cables:
 - insert the jumpers in the direction indicated in *Figure 106 – Fiber optic cables wiring*,
 - connect the fiber optic connection cable, fitted with its SC/PC connector, to the optical coupler board by passing it through the top of the rack and along the cable run provided.
- Use a winding cassette when connecting one or more fiber optic cables of over 10 meters in length.

Stages

1. According to the site configuration, prepare the connection cables and fit them with the required connectors.

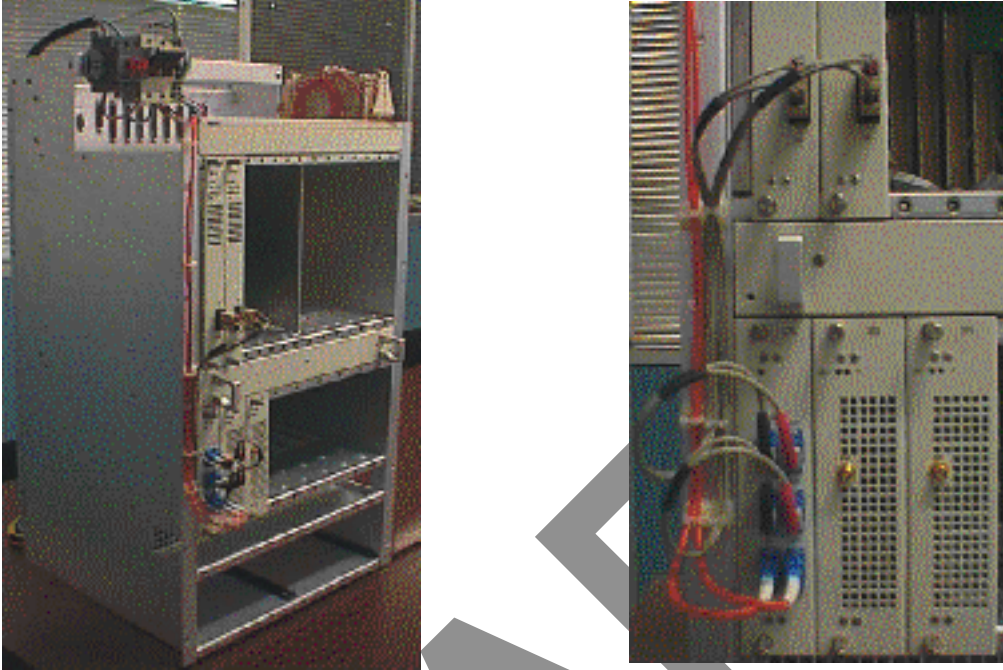


Figure 106 – Fiber optic cables wiring

2. Connect the fiber optic jumpers (see [Figure 105 – Fiber optic cables connection](#) and [Figure 106 – Fiber optic cables wiring](#)) and the main cables.



**DO NOT SET THE FIBER OPTIC IN FRONT OF THE VENTILATION PLUG-IN UNIT:
SET IT AS SHOWN IN FIGURE 113**

3.4.4.2 – Interface 34 Mbit/s

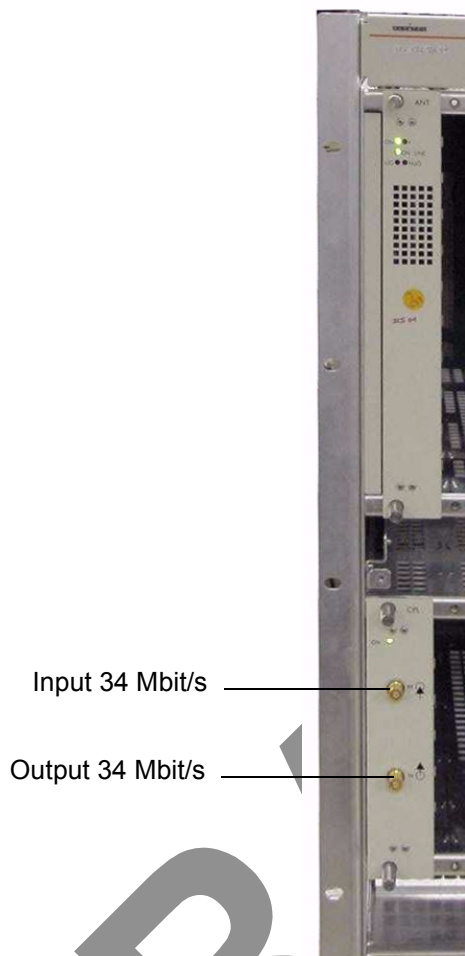


Figure 107 – 34 Mbit/s cables connection

3.4.5 – Place of the board into the rack

Slots	Type of the elements	Configuration main (1+0)
1	ANT board	x
2	ANT board	
3	TNT boards	x
4		
5		
6		
7	AMD boards	x
8		
9		
10		
11		
12		
13		
14		
15	FAN	x
16	CPL board	x
17	IBS-TLX boards	x
18		
19		
20		
21		
22		
23		
24		
25	Supply assembly PSU 1	x
26	Supply assembly PSU 2	x

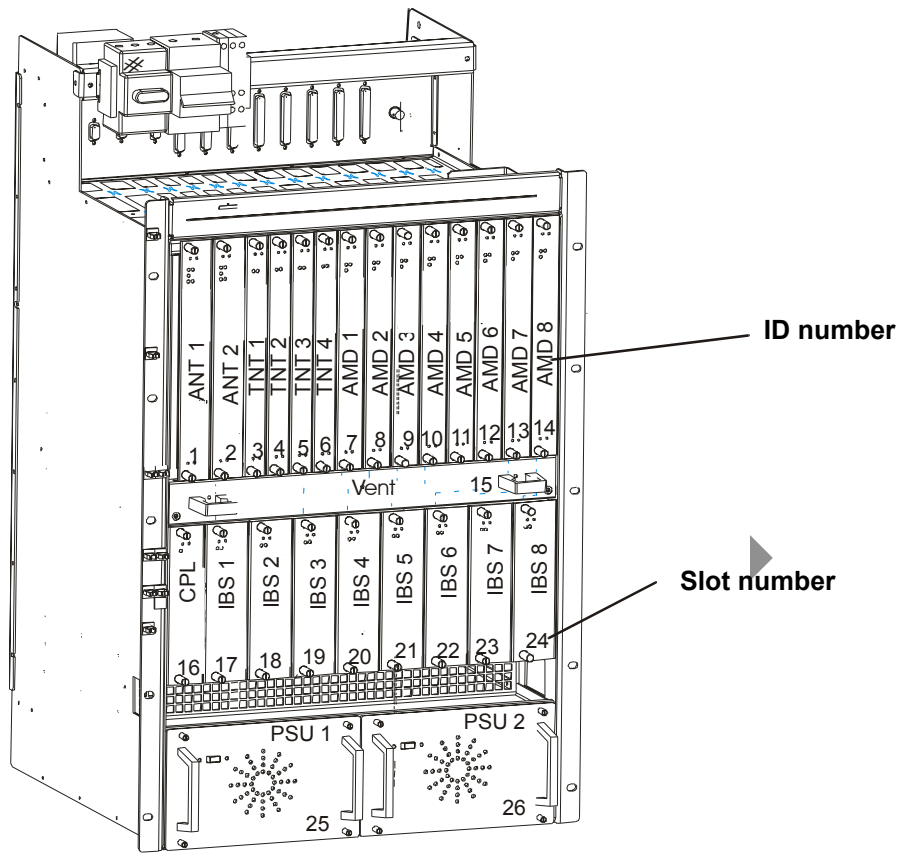


Figure 108 – Place of the boards into the DBS

3.4.6 – End of the installation

Replace the (removable) top cover of the rack and secure it.

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4 – 7390LT software overview

4.1 – General information

The purpose of this chapter is to **present** the different **screens** of the 7390LT software supplied with the Base Station. The following chapters will make reference to this presentation each time the user needs to access the software for a particular action (commissioning, maintenance or evolution of the configuration). The same screen may apply for several types of action.

4.1.1 – Functionalities

The 7390 LT software enables:

- supervision of both the system assembly as a whole (the NE (Network Element)), and of its sub-assemblies (BS, NT);
- configuration of the sub-assemblies (DBS, X-Pol RBS, etc.) (used when Commissioning, *Chapter 5 – Commissioning the Base Station (7390BS)*);
- setting up services (E1 leased lines, T1 and X21, ISDN, IP cross-connection including VoIP, circuit emulation), (used when Commissioning, *Chapter 6 – Operation and maintenance*);
- downloading, NE configuration back-up and restoration (used in Maintenance, *Chapter 6 – Operation and maintenance*);
- display of the system redundancy state;
- management of external points;
- radio performances.





Note: the 7390LT software exchanges no information with the radio part of the terminal station (7390RT). These generate no alarms, and therefore require no other configuration apart from the installation configuration.

4.1.2 – Principles of the Man-Machine Interface (MMI) of the 7390LT

The user of the 7390LT software is expected to be familiar with the operation of software in the Windows NT^{MT} environment. There follows a description of some of the basic principles of the Windows NT^{MT} MMI along with others, more specific to the 7390LT.

4.1.2.1 – Opening, closing and resizing a window

Here is a reminder of how the boxes at the top right of an active window are used:

Click on...	To.....
	... minimize the active window to place the application on the taskbar. Click on the taskbar icon to restore the window.
	... maximize the window to full-screen size.
	... restore a window which was in full-screen size to its original size.
	... close the active window.

4.1.2.2 – Entry fields



The **grayed out** fields are for **consultation only**: their content cannot be modified.



The **fields on a white background** can be **modified**: left-click to make the cursor appear inside the field, then enter the character string required.



According to the same principle, the buttons, icons and items in the pull-down menus become **grayed out** when they are **inactive**.

4.1.2.3 – Confirmation, closing a window, canceling an entry

In the lower part of the windows there may be **buttons** (which may or may not be active; cf. § 4.1.2.2 – *Entry fields*), the principle of which is as follows:

Click on...	To.....
	... confirm the data entry, while keeping the window open.
	... close the active window, thereby cancelling any unconfirmed data entries.
	... cancel the data entry, while keeping the window open.

4.1.2.4 – Sorting and searching in a list

Some screens contain lists which may contain many lines; a sort and/or search tool is therefore available via the MMI, in order to facilitate data management:

Eqpt ID	Name	Terminal Station
2	NT #2	0
3	NT #3	0

Left-click once on any column **title** in order to **sort** the alphanumeric entries in **increasing order of magnitude**; click a **second time** to sort in the **opposite order** (and so on).

Eqpt ID	Name	Terminal Station

When the lists have **empty boxes above the titles**, it is possible to carry out a search to display the line required:

click on the box above the title under which to be searched, then enter the **first characters** of the sequence in question: the first line to correspond is selected.

4.1.2.5 – Selecting lines on a list

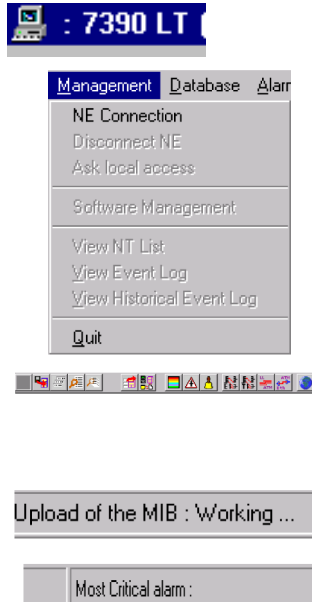
To select **a line**, click on it and it is highlighted in blue.

To select quickly **a zone**, click on the first line then select and hold down the 'Shift' key, then click on the last line of the desired zone. The zone becomes highlighted in blue.

To select **several non consecutive lines**, hold down the 'Ctrl' key then select line by line the desired elements.

4.1.2.6 – Title, menu, button and status message bars

The various information and functionalities of the 7390LT are accessible in several forms of MMI:



Title bars (at the top of the main window): for information only; this is the title of the window.

Menu bar (below the title bar): each menu contains **items**. To access, open the pull-down menu by left-clicking on the title, then click on the desired item (for execution it must be active, cf. § 4.1.2.2 – *Entry fields*).

Button bar (below the title bar): certain menu functionalities are also directly accessible by clicking on the buttons displayed at the top of the window.

Message bar (at the bottom of the active window): messages linked to current events are displayed on the fly in certain windows

Status bar (at the bottom of the 7390 LT main window), divided into 2 areas:

- on the left: global user's messages (states of progress, error messages, etc.)
- on the right: Local access: information about write access: cf. § 4.4.2 – *Local access requests*
- Number of NTs: displays the number of NTs declared in the NE.
- Most critical alarm: displays the color of the most critical alarm (see alarm color codes, § 4.10.1.2 – *Alarms color code*).

4.1.2.7 – Dynamic keys

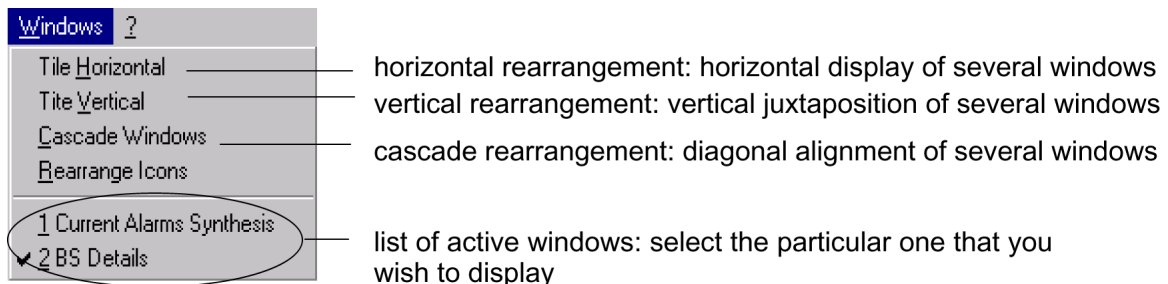


Each time the cursor will stay a few seconds on a button (and on specific field), a textual key on a yellow background defining this button (or field) is displayed.

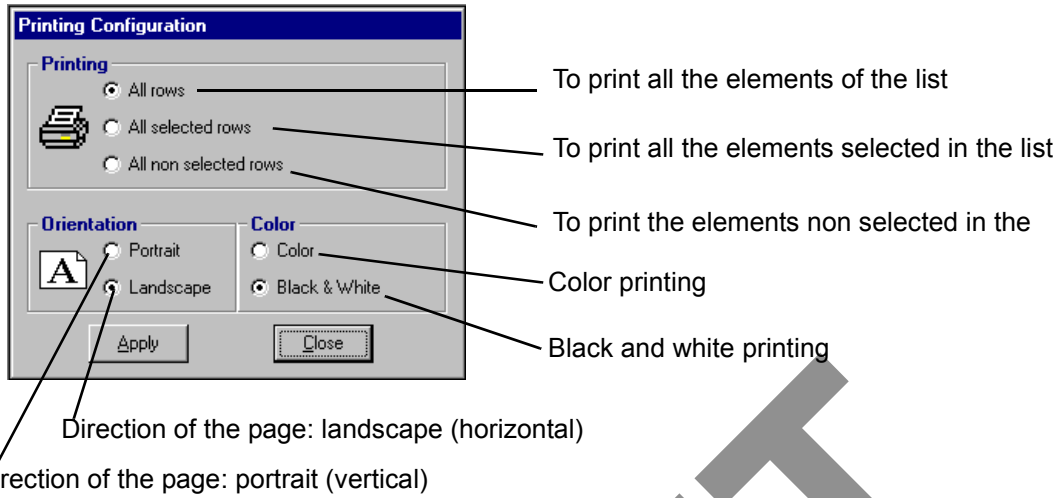
4.1.3 – Rearrangement of active windows

During the use of the 7390 LT software, several windows may be active simultaneously. The MMI allows you to rearrange them to optimize their visibility, in classic Windows fashion.

Access this function by opening the **Windows** pull-down menu:



4.1.4 – Printing



Note: to know how to select lines in lists, see § 4.1.2.5 – *Selecting lines on a list.*


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4.2 – Running and quitting the software

4.2.1 – Installation of the 7390 LT software

The 7390 LT is either loaded on the PC which came with the BS, or comes on an installation medium (e.g., CD-ROM).

If you need to install the 7390 LT software, refer to the [Appendix 2 – Installation of 7390LT software](#); otherwise, go directly to the next paragraph to run the already installed software.

	ON THE ETHERNET PORT IT IS RECOMMENDED TO CONFIGURE ONLY ONE IP ADDRESS
---	--

4.2.2 – Accessing and running 7390 LT

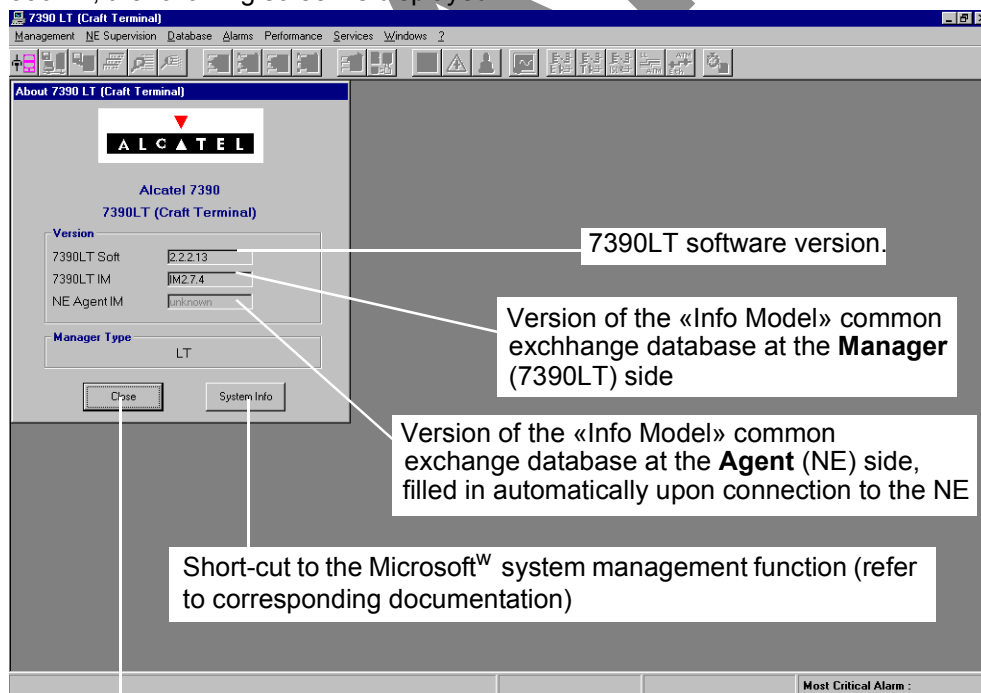
To run 7390 LT, go to the Windows® taskbar and left-click on the Start button: the Start menu is displayed. Next, select the Programs menu followed by the line Craft_Terminal.

or:



Click on the icon shown here which is on the Windows desktop.

To run the 7390 LT, the following screen is displayed:



Version	
7390LT Soft	2.2.2.13
7390LT IM	IM2.7.4
NE Agent IM	unknown

Manager Type: LT

Buttons: Close, System Info

Click here to **close** the *About* window and work on the main window of the 7390 LT. You can access it again by selecting the heading **About 7390 LT (Craft_Terminal)** in the ? menu.

Note: After NE connexion (cf. § 4.3.1 – NE Connection), the database versions at the Manager and Agent sides must be identical.

If the LT session cannot open, check if there is any other LT open session.

On the screen displayed, only **one** icon is **active**: the choice of language and the NE connection icon:



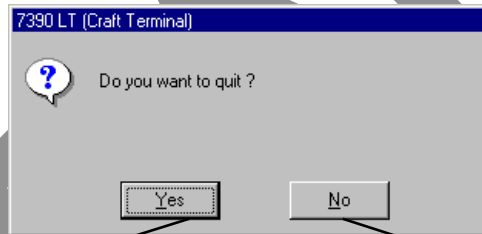
...click on the icon to access the **NE connection** (cf. comments in § 4.3.1 – *NE Connection*)

4.2.3 – Quitting the 7390 LT



To quit the 7390LT, open the **Management** pull-down menu and click on **Quit**

A confirmation dialog box is displayed:



Click here to **confirm** quitting the 7390LT


Click here to **cancel** the request to quit the 7390LT and return to the previous window

This operation includes the **NE disconnection** (cf. § 4.3.2 – *Disconnecting the NE assembly*).

4.3 – Connection and Disconnection

4.3.1 – NE Connection

The NE connection process consists partly in the NE "Agent" identifying the "Manager" and partly in the retrieval of data for the NE assembly on the 7390 LT software by manual request: this involves the **updating of site information**.

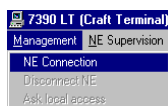
	ONLY ONE LT SESSION IS OPERATIONAL ON ONE NE. FOR EXAMPLE, A LOCAL LT CONNECTION AND A REMOTE LT CONNECTION AT THE SAME TIME ON THE SAME BS IS NOT POSSIBLE
---	--

There are two possible ways of accessing the **NE Connection**:



- click on the first button (provided that it is active; cf. § 4.1.2.2 – *Entry fields*) of the main menu button bar,

or else,



- open the Management pull-down menu and select the first item: **NE Connection**.

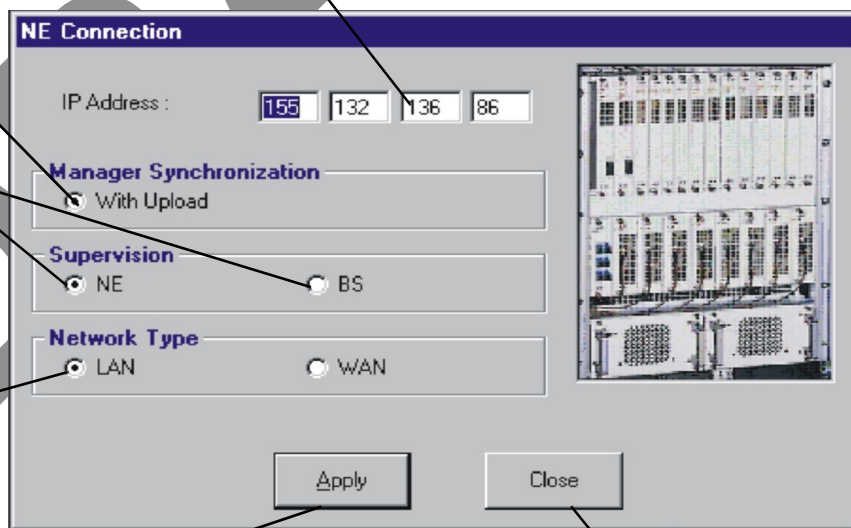
The following screen is displayed:

IP Address of the **NE** to be connected: click in a byte field to modify the value (local IP default address value must be: 192.168.99.1).

Connection type: with data upload (default selection)

Subject of supervision: NE system or BS

Network Type: there are two types of network: **local** (LAN) or **remote** (WAN): check the button for the type of network corresponding to the system configuration

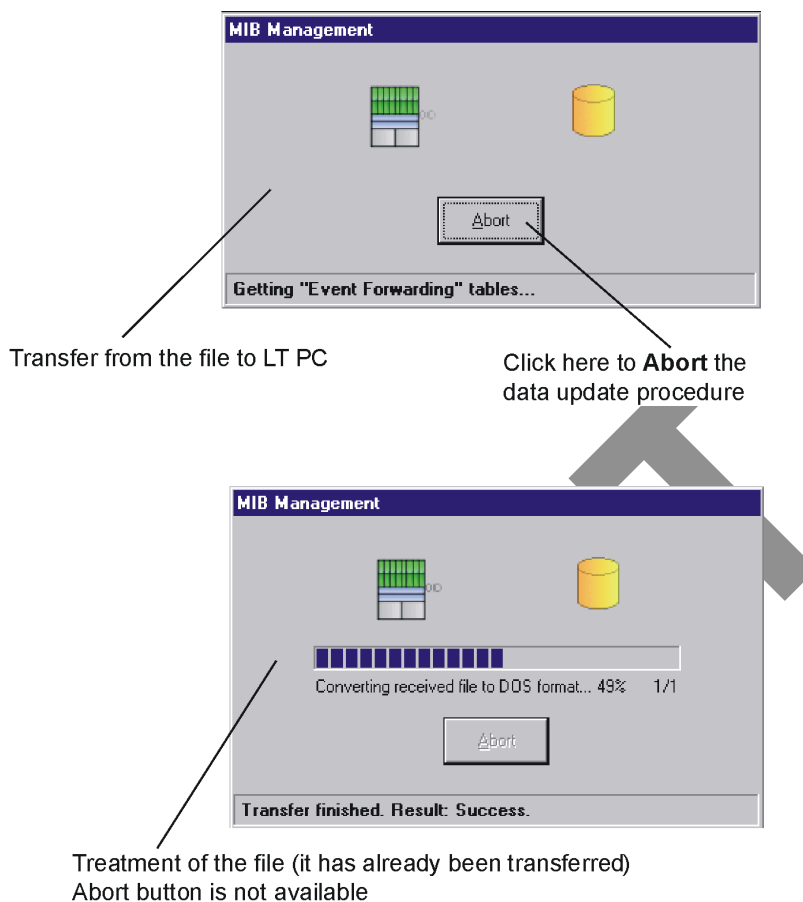


Click here to **run** the data update procedure

Click here to **return** to the previous screen

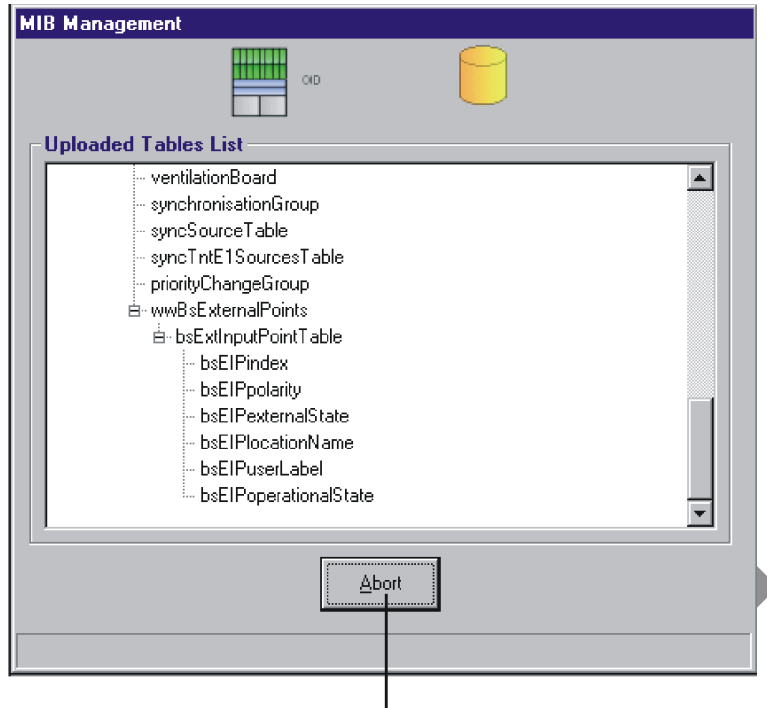
In case several interface boards are installed in the PC, the window offers you a choice of board.

By default, the update is done via FTP. The next screens will be displayed:



Note: In order to start the FTP process, there must not be any other FTP service or application running in the PC. Windows NT includes a FTP service that is, by default, deactivated; if it were activated, the operator must stop it from the Services window through the Control Panel.

If there were any problem with the FTP process, the craft.ini file must be opened. Change the **UploadThruFTP** value, it must be: UploadThruFTP=No. Throughout the update, an animated display indicates to the user that data transmission is underway, with on-screen indication of the progress of the processed files. In this case, the next screen would be displayed:



Click here to **Cancel** the data update procedure

Note: While updating, if the database versions at the Manager and Agent sides are not identical, the animation stops and an error message is displayed to notify it. (cf. corrective actions in appendix A.6.1 – Error messages for 9900LT software).

Once the update is completed, two new windows are displayed:

- one screen providing a global view of the **base station** (cf. § 4.5 – Base Station Supervision);
- and one screen summarising the **current alarms** (cf. § 4.10.1 – Alarms).

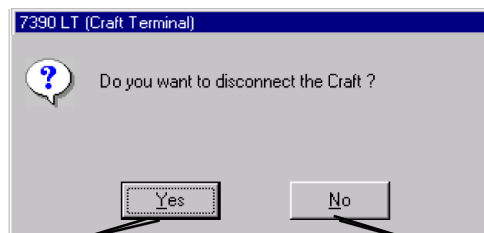
4.3.2 – Disconnecting the NE assembly

The NE disconnection process consists in closing the current session relating to a given NE in order to connect to another NE of the system.



To access the NE disconnection function, open the **Management** pull-down menu then select the item: **Disconnect NE**.

A confirmation screen is displayed:



Click here to **confirm** the disconnection

Click here to **cancel** the request to disconnect and return to the previous window

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4.4 – Supervision Principles

The 7390 LT can be used for **supervising** the whole A7390 Network Element (NE) system.

The **NE** comprises of:

- a **Base Station (7390BS)** which mainly includes a Radio unit (**X-Pol RBS**) and a MODEM rack (**DBS**),
- one or more **Terminal Stations (7390TS)** which mainly include a Radio unit (**X-Pol RT**) and a User connection unit (**NT**). Nevertheless the 7390 LT software does not manage X-Pol RT units.

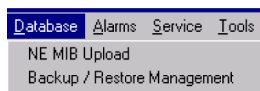
The display allows system **control**; alarms are activated in particular to signify any intervention.

The **supervision** items themselves are, by definition, **grayed out** and therefore unmodifiable, whereas those reserved for **configuration** can be configured by the user: they will be used in the following chapters concerning commissioning (*Chapter 5 – Commissioning the Base Station (7390BS)*), maintenance (*Chapter 6 – Operation and maintenance*) and configuration evolution (*Chapter 7 – Changes of configuration*). For the **modifications** to be taken into account, **writing** should be **enabled**: see § 4.4.2 – *Local access requests*.

4.4.1 – Data retrieval

According to the same principle as for starting up the 7390 LT (automatic data retrieval following connection), this update can be carried either for whole NE, or for each equipment: BS or NT.

To reach the **Data retrieval** function, two ways are possible:



- open the **Database** pull-down menu and choose the first item: **NE MIB Upload**,
- or click on one of the button in the screen of the equipment in question:

Click on.....

To.....



...**activate** the data recovery function for the NE, BS, and NT **respectively**.

Note: *These operations may take quite a long time (in particular for the NE) since they depend on the connection between NE and manager and on the round trip delay and the NE composition.*

4.4.2 – Local access requests

The general status bar (cf. § 4.1.2.6 – *Title, menu, button and status message bars*) displays in its central part the messages concerning write access rights on the NT configuration: "**Local Access : Denied / granted**". Where there are different system managers, these access rights are allocated by the OS manager, write access is authorized for the 7390 LT (local access set to granted) when no OS manager is connected to the NE (local access set to granted) when no OS manager is connected to the NE.

4.4.3 – Administrative statuses

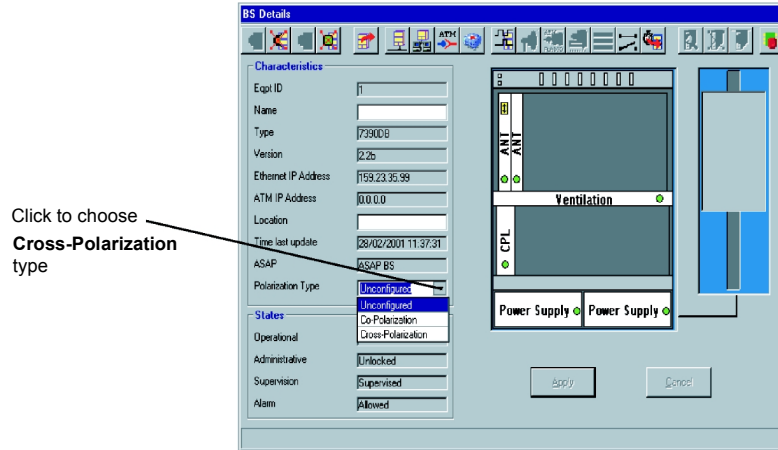
Locking the administrative status of sub-assemblies allows the maintenance operator to disable the sub-assembly manifesting an anomaly without disturbing the system.

Unlocking sub-assembly administrative status frees service use for the end user.

Operator is not able to modify the administrative state assembly. He can only change the ports and cross-connections.

4.5 – Base Station Supervision

When the LT is started up for the first time, the Manager has to define the type of polarization used, in this «Cross-polarization» type must be selected



⚠ AFTER CLICKING ON THE «APPLY» BUTTON, A WARNING WINDOW WILL APPEAR SINCE THIS PROGRESS IS IRREVERSIBLE, EXCEPT THROUGH AN ANT RAM-REINITIALIZATION. ONCE ACCEPTED, THE 7390LT STARTS TO RECEIVE EVENTS FROM THE SYSTEM

BS Supervision: cf.§ 4.5.1 –
Inhibit BS Alarms: cf.§ 4.5.1

BS Upload: cf.§ 4.4.1

Local IP addresses parameters: cf.§ 4.9.2

Configuration of the Network addresses: cf.§.4.9.3 –

ATM parameters: cf.§.4.9.1

Consultation of the redundancy state: cf.§.4.5.8 –

Synchronization parameters: cf.§.4.5.4 –

Radio parameters: cf.4.7.1

IP Data traffic configuration: cf.§ 1.

On demand service management: cf.§ 4.7.3 –§

Bandwidth allocation: cf.§ 4.7.4 –

List of external points: cf.§ 4.10.3 –

NE time setting: cf.§ 4.5.5

Memory initialization: cf.§ 4.5.6 –

Actions of the BS boards: cf.§ 4.5.3 –

X-Pol RBS display: cf.§.

DBS display: cf.§ 4.5.3

Become accessible when "Name" or "Location" fields are modified

