The **static zone** represents the portion of the bandwith allocated to **static services**, with display of both bit rate types: **leased line** (LL) and **static IP** (ATM) bit rate.

The **dynamic zone** represents the portion of the bandwidth allocated to the **dynamic services**: the dynamic IP services.

Note : *The available bit rate depends on the traffic type allocated: leased lines, static or dynamic IP.*

Note : *The dynamic zone is the zone remaining available, corresponding to the total bandwidth minus the static zone; the static zone corresponds to the static IP service bit rate.*

The **overbooking factor limit** (OFL) is a value **defined by the operator** (until 10 as maximum) and can be modified at any time depending on radio resource requirements: if the operator wishes to offer more services than the system can physically provide **simultaneously** on the available bandwidth, he defines this value which will represent a risk level of dynamic degraded service.

Note : *When OFL = 1 (default value), it corresponds to the system physical limit assigned to the dynamic zone (= width of bandwidth).*

If OFL = 2, double the dynamic zone physical bandwidth can be used for dynamic IP services.

Overbooking limit

Current overbooking (orange zone): < 1 means that there is no overbooking
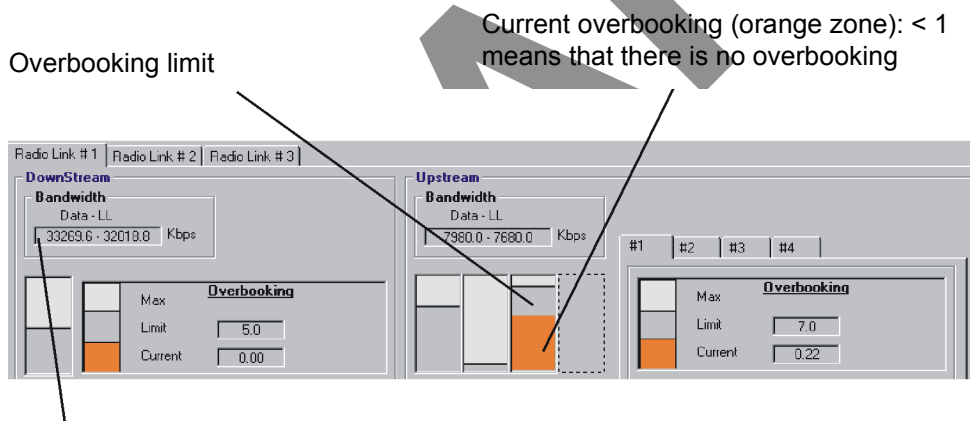
IP traffic is measured according to «ATM» Rate = 66.5 Kbps,
whereas LL is measured with rate = 64 Kbps

Dotted overbooking: dynamic traffic is not allowed in
this upstream, therefore the overbooking has not sense
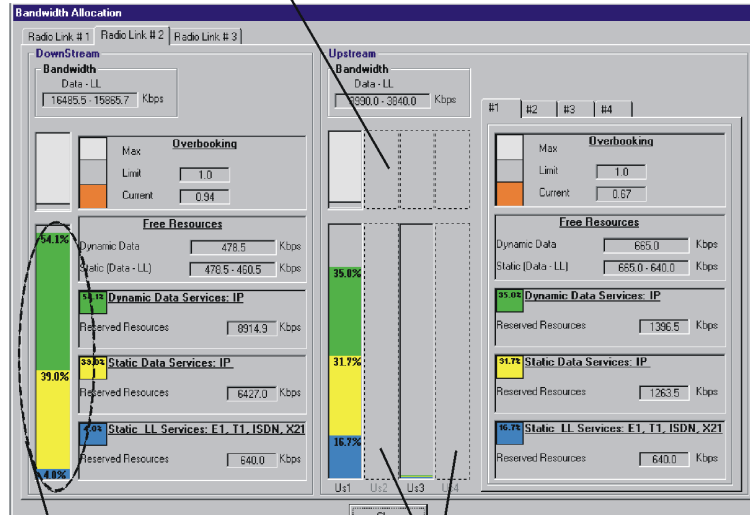
Dotted upstream: it is not activated, then
traffic is not possible in this upstream

Resources rate is calculated according
to the total physical bandwidth.

When the dynamic traffic (green color) is overbooked, green is changed to orange (see next screen).
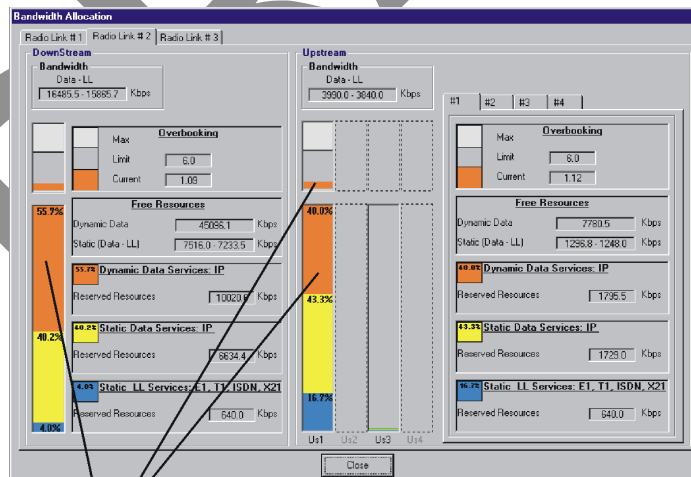
Orange zone: the available physical bandwidth has been exceeded.
However, since overbooking limit > 1 has been defined,
it is possible to use more bandwidth

4.8 – NE management

As soon as the 7390LT is connected to the NE, it keeps a log of all the events taking place between the Agent (NE) and the Manager (7390 LT) for the corresponding part of the supervised NE. This supervision tool is mainly used as a log file to be used for maintenance purpose (see *Chapter 6 – Operation and maintenance*).
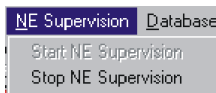
4.8.1 – NE Supervision

To **Start or Stop the supervision** of the NE:

Click on the icon to **start** the supervision of the NE.

Click on the icon to **stop** the supervision of the NE.

Or else, open the **NE Supervision** pull-down menu and choose the item **Start NE Supervision** or **Stop NE Supervision**.

NE supervised means that the agent sends to the manager all the events related to the network element. When the **NE is supervised,** the "Start NE Supervision" button is disabled.

When the **NE is not supervised,** the "Stop NE Supervision" button is disabled. The manager has lost its synchronization with the agent. BS and NT are not supervised and events are not received.

Starting the NE supervision implies a total NE upload, because it is the only way to align again the LT and the MIB agent.
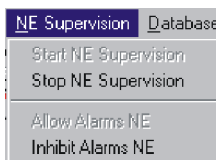
To **Allow or Inhibit the alarms** of the NE:

Click on the icon to **allow** receiving the alarms of the NE.

Click on the icon to **inhibit** receiving the alarms of the NE.

Or else, open the **NE Supervision** pull-down menu and choose the item **Allow Alarms NE** or **Inhibit Alarms NE**.

NE Alarms allowed means that all the alarms present in the NE equipment will be reported to the LT manager.

When the **NE alarms are allowed,** the "Allow Alarms NE" button is disabled.

When the **NE alarms are inhibited,** the "Inhibit Alarms NE" button is disabled. Moreover, neither alarm window is present in the 7390LT nor alarm code colour is showed in the main window.

4.8.2 – Events log

Note: the events log (in read only) is presented in reverse chronological order. The most recent event is at the top of the list. The circular list can contain up to 5000 events.

To access the *events log*:
– click on the button shown here (on the 7390 LT main screen),
– or, open the *Management* pull-down menu and choose *View Event Log*.

Click here to **print** the events log on the default printer (see § 4.1.4 – Printing)

Event Log

Events List

Index	Start Date	Trans. ID	Object	Type	Alarm ID	Probable Cause	Request Status
50912	03/01/1970 22:13:52	334	amdBoardEntry # 5	SC			OK
50911	03/01/1970 22:13:52	333	amdBoardEntry # 5	AI	59	Hardware failure	OK
50910	03/01/1970 22:13:51	332	ibsBoardEntry # 5	AVC			OK
50909	03/01/1970 22:13:51	331	ibsBoardEntry # 5	SC			OK
50908	03/01/1970 22:13:51	330	ibsBoardEntry # 5	AI	55	Communications	OK
50907	03/01/1970 22:13:51	329	amdBoardEntry # 5	SC			OK
50906	03/01/1970 22:13:51	328	amdBoardEntry # 5	AI	59	Hardware failure	OK
50905	03/01/1970 22:13:51	327	upstreamEntry # 5.4	SC			OK
50904	03/01/1970 22:13:51	327	upstreamEntry # 5.3	SC			
50903	03/01/1970 22:13:51	327	upstreamEntry # 5.2	SC			
50902	03/01/1970 22:13:51	327	upstreamEntry # 5.1	SC			
50901	03/01/1970 22:13:51	327	downstreamEntry # 5	SC			
50900	03/01/1970 22:13:51	327	upstreamConfigEntry # 1.4	AVC			
50899	03/01/1970 22:13:51	327	upstreamConfigEntry # 1.3	AVC			
50898	03/01/1970 22:13:51	327	upstreamConfigEntry # 1.2	AVC			
50897	03/01/1970 22:13:51	327	upstreamConfigEntry # 1.1	AVC			
50896	03/01/1970 22:13:51	327	downstreamConfigEntry # 1	AVC			
50895	03/01/1970 22:13:51	326	amdBoardEntry # 5	SC			OK
50894	03/01/1970 22:13:48	325	amdBoardEntry # 5	AVC			OK
50893	03/01/1970 22:13:48	325	amdBoardEntry # 5	AVC			
50892	03/01/1970 22:13:48	324	amdBoardEntry # 5	AI	58	Communications	OK

[View Legend] [Close]

Key of the differents event types
(see § 4.8.4 – Event log legend)

Click here to **quit** the events list

Index: this is the event number: an incremental cyclic counter is activated each time an event takes place.

Start date: time-stamping of the event (format: day/month/year, hour/minute/second).

Trans ID: transaction number allowing the action which occurred on the system and the different events resulting from it, to be linked; in the example above, the action corresponding to event number 294 corresponds to 5 events (see groups ID Trans. 165).

Object: indicates the part of the system affected by the event (format: designation#equipment ID followed by port number).

Type: abbreviation (which key is permanently displayed at the bottom of the window) of the event type: alarm, deletion, creation, etc.

Alarm ID (if the event *type* is an alarm): alarm identifier corresponding to its coming out number (chronological).

The line is displayed in the color related to the alarm: when the alarm ends, the same line will be displayed (with an incrementing *Index*) in green to symbolize the end of alarm.

Probable cause (field associated with the alarm): description of the cause of the problem from the ASAP (giving the severity for a given probable cause).

Request status: request status in the form of abbreviation whose legend is displayed at the bottom of the screen. This is to identify the way a group of events has been terminated (same ID Trans.); the transaction status of the **last** event of a same group is therefore **ok** if the action succeeded.

Note: ends of alarm are displayed in green.

4.8.3 – Historical Event log

This function allows all or certain events, listed in the events log since the last connection, to be retrieved.

4.8.3.1 – Accessing the historical event log

To access the **historical event log**:

– click on the button shown here (in the **7390 LT** main screen),

– or, open the *Management* pull-down menu and select the *Historical Event Display* section.

The screen below is displayed:

Click here to access **search** of items to be retrieved from the historical event log (cf:§ 4.8.3.2 –)

Click here to **refresh the historical display** of the event log according to the selection criteria displayed at the bottom of the screen

Click here to **print** the event list on the default printer (cf: § 4.1.4 –)

Click here to **save** the historical event log file (cf: § 4.8.3.3 –

Historical Event Log

Events List

Index	Start Date	Trans. ID	Object	Type	Alarm ID	Probable Cause	Request Status
328	01/01/1970 00:00:33	83	amdBoardEntry # 4	AI	35	Hardware failure	OK
327	01/01/1970 00:00:32	82	amdBoardEntry # 2	AI	33	Hardware failure	OK
326	01/01/1970 00:00:32	81	amdBoardEntry # 4	AVC			OK
325	01/01/1970 00:00:32	81	amdSoftwareEntry # 4.2	AVC			
324	01/01/1970 00:00:32	81	amdSoftwareEntry # 4.1	SC			
323	01/01/1970 00:00:32	81	amdSoftwareEntry # 4.1	AVC			
322	01/01/1970 00:00:32	81	amdBoardEntry # 4	AVC			
321	01/01/1970 00:00:32	80	amdBoardEntry # 4	AI	36	Version mismatch	OK
320	01/01/1970 00:00:32	79	amdBoardEntry # 3	AI	31	Hardware failure	OK
319	01/01/1970 00:00:32	78	amdBoardEntry # 4	AI	35	Hardware failure	OK
318	01/01/1970 00:00:31	77	amdBoardEntry # 2	AVC			OK
317	01/01/1970 00:00:31	77	amdSoftwareEntry # 2.2	AVC			
316	01/01/1970 00:00:31	77	amdSoftwareEntry # 2.1	SC			
315	01/01/1970 00:00:31	77	amdSoftwareEntry # 2.1	AVC			
314	01/01/1970 00:00:31	77	amdBoardEntry # 2	AVC			
313	01/01/1970 00:00:31	76	amdBoardEntry # 2	AI	34	Version mismatch	OK
312	01/01/1970 00:00:31	75	amdBoardEntry # 2	AI	33	Hardware failure	OK
311	01/01/1970 00:00:31	74	amdBoardEntry # 4	AI	15	Communications	OK

Current Selection

From 01/01/1970 00:00:01; to 01/01/1970 00:10:00

View Legend   Close

Key of the different possible types of event (cf: § 4.8.4 –

Click here to **quit** the **Historical Event Log** screen

4.8.3.2 – Searching for items in the historical event log

To access the events **search**, click on the button shown here (in the *Historical event log* screen).

The following screen is displayed:

Click here to **start searching** with the defined criteria

Click here to **cancel** the **search process** with the defined criteria

Click here to **close the events search window**

Note: The search process can take several minutes to start after launch depending on the number of events listed.

Two types of search criteria are available to retrieve the events in question from the entire historical event log since the last connection:

– event **attributes**: object, event type and transaction status linked with the event.

Click on the arrow to scroll down the object list, then select the event required from the list of objects available.
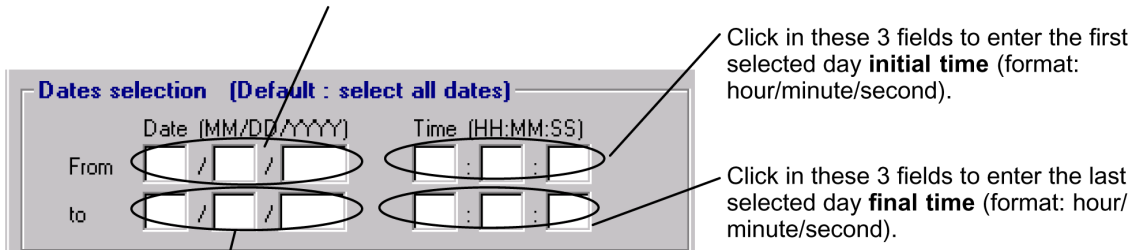
Click on the arrow to scroll down the available event type list, then select the **event type** desired.

Click on the arrow to scroll down the available request status list, then select the **transaction status** desired.

Note: The selection of a star in the "attribute selection" fields allows all the items of the list for the section concerned to be taken into account (no defined criteria).

– **Time periods**.

Click in these 3 fields to enter the **date from** which events must be considered:
e.g.: 07 then, 02, then 2000 to begin on 2 July 2000.

Click in these 3 fields to enter the first selected day **initial time** (format: hour/minute/second).

Click in these 3 fields to enter the last selected day **final time** (format: hour/ minute/second).

Click in these 3 fields to enter the **last day** to consider events: e.g.: 07 then, 10, then 2000 to stop searching on 10 July 2000.

Note: By default, no date is selected: all dates are taken into account.
The tabulation key also allows you to move from one field to another.

Note: The chosen selection criteria are permanently displayed at the bottom of the Historical Event
Log screen.

4.8.3.3 – Historical event log item backup

To perform backup of events corresponding to the defined search criteria (see § *4.8.3.2 – Searching for items in the historical event log*), click on the button shown here (in the **Historical Event Log** screen).

The following screen is displayed:

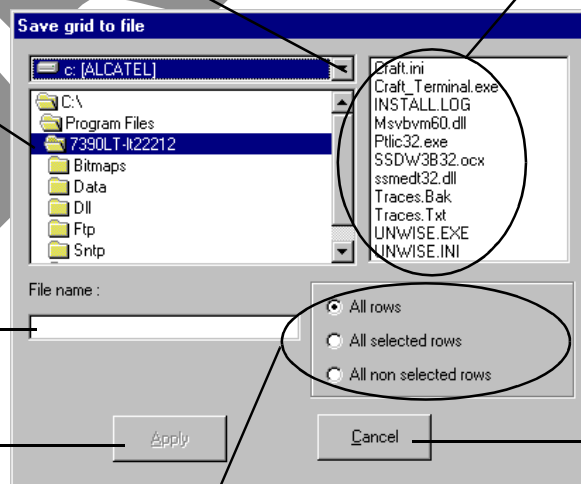1- Click on the arrow to select the **disk** on which the event file is to be saved

Display of file names already present in the selected directory

2- Select the **directory** where the event file is to be saved

3- Click in this field to enter the backup file **name**

Click here to **start** the back up
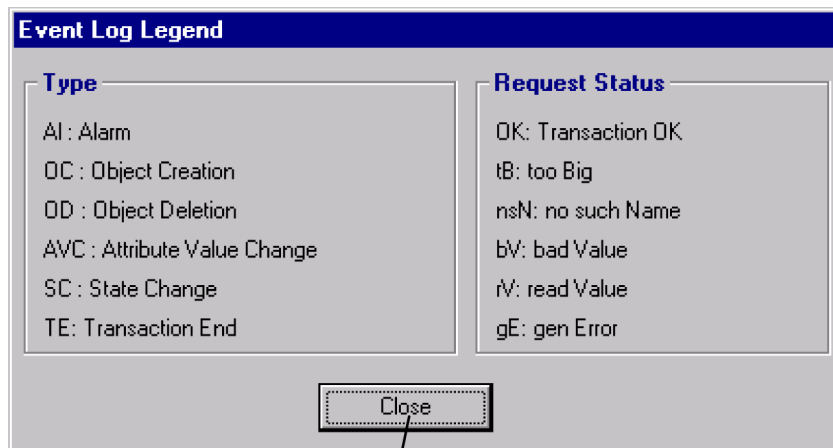
Click here to **cancel** the **backup**

Check one of the 3 sections to define the backup content with regard to the history displayed in the **Historical Event Log** screen (cf: § 4.8.3.1 –). This filter is added to the previously defined criteria (cf: § 4.8.3.2 –)

4.8.4 – Event log legend

[View Legend]

To access the legend of events listed in the *Event Log screen*, click on the button shown here (at the bottom of the **Event Log** and *Historical Event Log* screens).

The following legend is displayed:

Event Log Legend

Type

AI : Alarm

OC : Object Creation

OD : Object Deletion

AVC : Attribute Value Change

SC : State Change

TE : Transaction End

Request Status

OK: Transaction OK

tB: too Big

nsN: no such Name

bV: bad Value

rV: read Value

gE: gen Error

[Close]

Click here to **quit** the **Event Log Legend** screen

4.9 – Interface parameters

4.9.1 – ATM

To access the parameters of the **ATM** link, click on the button shown here (in the *BS details* screen toolbar).
The following screen is displayed:

For the **155 Mbit/s** version:

To make the ATM operational, click on the arrow to scroll down the list and select the **medium type used** for the ATM link: **sdh** or **sonet** (by default unknown)

- **ATM** port number
- **ATM** transport medium type
- medium bit rate
- Line coding
- Line type
- unused parameter
- **ATM** port states
- **ATM** cell coordinates

The numbers of bytes respectivelly allow the Vci and the Vpi to be encoded (Vci bytes fixed to 10 and vpi bytes fixed to 6)

For the **34 MBit/s** version:

- **ATM** port number
- **ATM** transport medium type
- medium bit rate
- Line coding
- Line type
- unused parameter
- **ATM** port states
- **ATM** cell coordinates

The numbers of bytes respectivelly allow the Vci and the Vpi to be encoded (Vci bytes fixed to 10 and vpi bytes fixed to 6)
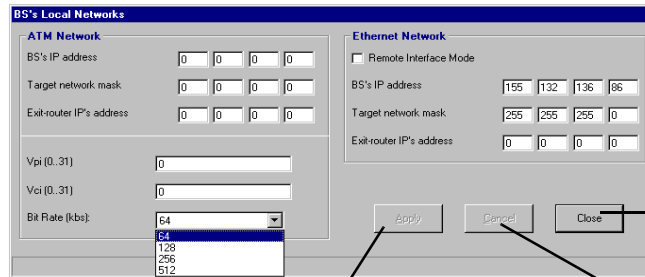
Note: *For the 34Mbit/s version, the Medium Type configuration cannot be modified.*

ALCATEL

4.9.2 – IP addresses

To access the parameters of the **IP addresses** of the BS, click on the button shown here (in the *BS Details* screen toolbar).
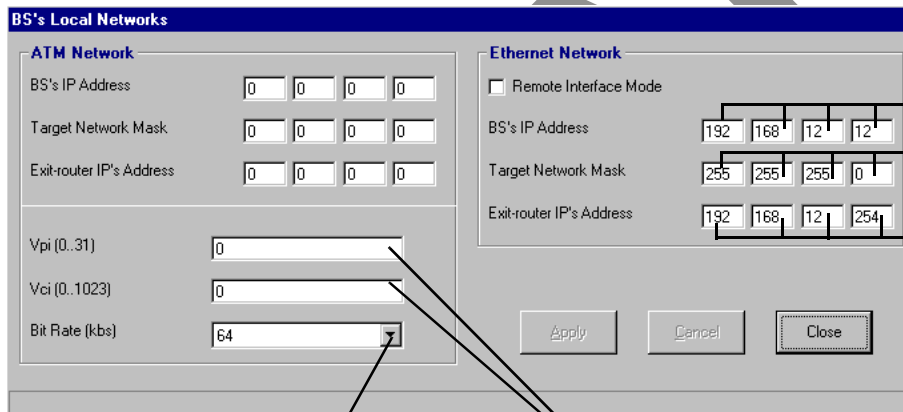The following configuration screen is displayed, then its two main parts detailed below:

Click here to **return** to the *BS details* screen

Click here to **apply** the modifications

Click here to **cancel** the modifications

Note: *To configure IP addressing on all the interfaces for connection to the manager (OS or LT), the BS has two physical interfaces to choose from: the ATM port (fiber optic) and Ethernet port (10bT: J102).*

Click here to enter the 4 bytes of the **IP address** of the **BS at the ATM interface**

Click here to enter the 4 bytes of the BS Interface **IP Mask at the ATM interface**

Click here to enter the 4 bytes of the address of the **router of the BS at the ATM interface**

Click here to select the VCL Bit Rate (64, 128,256, 512 kbps)

Click here to enter the VCL coordinates (supplied by the provider) for the management link between a manager and the BS

The Vpi and Vci values must be respectively selected in ranges 0-30 and 0-1023 (except 1 to 4 values for Vpi)

Note: *The router is the first equipment to be connected to the BS, at the external network side.*

Note: *The encapsulation type for the management link is IP over ATM. The IP cross-connection service uses a different type of encapsulation.*

Click here if the system is in **WAN** network type to lock the IP address modification

Ethernet Network

Remote Interface Mode

Click here to enter the 4 bytes of the **IP address of the BS at the Ethernet Interface**

BS's IP address 155 132 136 86

Click here to enter the 4 bytes of the BS interface IP mask **at the Ethernet Interface**

Target network mask 255 255 255 0

Exit-router IP's address 0 0 0 0

Click here to enter the 4 bytes of the IP address of **the router of the BS at the Ethernet Interface**

4.9.3 – Network addresses

To access the settings for configuring the interfaces, click on the button in the *BS Details* screen toolbar, shown here.
This involves informing the system of the interfaces used by the managers.
The manager is the network supervision software (7390 LT or NSM).

⚠ **FOR REMOTE LT: INTERFACE ROUTE MUST BE DEFINED IN "IP ADDRESS" DIALOG BOX (§ 4.9.2 –) BEFORE ENTERING THE MANAGER IP ADDRESS INSIDE THE "NETWORK ADDRESS" WINDOW**

Both addresses together define the subnetwork the manager connected to route 1 belongs to

IP address of manager connected to route 1

IP address of manager connected to route 2

Target Network mask used on route

Target Network mask used on route 2

Target Networks

Route 1

Target Network Prefix 0 0 0 0

Target Network Mask 0 0 0 0

BS's Exit-network None

Route 2

Target Network Prefix 0 0 0 0

Target Network Mask 0 0 0 0

BS's Exit-network None

Apply Cancel Close

Click here to scroll down the list and select the **type of interface** used on the BS to connect the l**ocal manager** (ETH) (no by default)

Click here to scroll down the list and select the t**ype of interface** used on the BS to connect the r**emote manager** (ATM)

*Note: In order to allow modifications in this **Network address** screen the "Remote Interface Mode" box of the **IP addresses** screen (see § 4.9.2 – IP addresses) must not be selected.*

4.10– Environment and equipment incident management

4.10.1– Alarms

Alarms allow incidents occuring on the equipment managed by the 7390 LT to be reported to the supervisor.

For complete alarm management and, in particular, the corrective actions to be performed, refer to § *6.4 – Corrective maintenance* of this manual.

4.10.1.1– Current alarms synthesis

The current alarms synthesis window is opened automatically for the first connection and remains active as long as the connection to the NE is supervised.

Current Alarms Synthesis	
Critical	2
Major	1
Minor	0
Warning	0
Indeterminate	0
Total	3

This window offers a view of the **number of active alarms** in the system in terms of critical levels. There are five levels: **Critical / Major / Minor / Warning / Indeterminate**.

Note: the highest level of criticality is displayed at the bottom right of the general status bar (see § *4.2.2 – Accessing and running 7390 LT*).

The final line, "***Total***", totalizes the number of active alarms.

By double-clicking on one of the levels, the list of same level alarms is displayed; by double-clicking on the last line, the list of all the alarms is displayed (see § *4.10.1.3 – Alarms list*).

4.10.1.2– Alarms color code

A color code has been adopted to symbolize the **five** critical levels:

–   **red**: critical alarm;

–   **orange**: major alarm;

–   **yellow**: minor alarm;

–   **light blue**: warning alarm;

–   **mauve**: indeterminate alarm.

*Note: **Green** is used to symbolize no alarm or end of alarm in several screens: BS representation, Alarms list and Event log.*

Note: There is one color per line in accordance with the ASAP data table (see § 4.10.2 – Alarms correspondence tables (ASAP)).

4.10.1.3– Alarms list

To display the alarms list at any time:

– click on the button shown here (in the 7390 LTmain screen),

– or, open the **_Windows_** pull-down menu and choose the line **_Current alarms synthesis_**,

– or, open the **_Alarms_** pull-down menu and choose the item **_Alarms List_**.

Alarm number: number increases incrementally in order of appearance

Time-stamping of the alarm (format: day / month/year/hours/minutes/seconds)

The part of the system **affected by the alarm** (format: name and number)

Number of the **equipment** to which the alarm is assigned

Click here to **prin**t the list of alarms on the default printer (cf: § 4.1.4 –)

Probable cause of the alarm

Alarm type

	Al ID	Start Date	Object	Eqt ID	Probable Cause	Type
▶	56	03/01/1970 22:11:44	radioBaseStationEntry # 5	BS	Communications Subsystem Failure	Communication Alarm
	53	03/01/1970 06:21:46	amdBoardEntry # 3	BS	Configuration error	Processing Error
	45	03/01/1970 06:12:56	atmPortEntry # 1	BS	Loss of frame	Communication Alarm
	34	03/01/1970 05:09:55	tmClientEntry # 1	BS	Time server loss alarm	Equipment Alarm
	33	03/01/1970 05:09:53	amdBoardEntry # 4	BS	Configuration error	Processing Error
	28	03/01/1970 05:09:47	radioBaseStationEntry # 4	BS	Communications Subsystem Failure	Communication Alarm
	27	03/01/1970 05:09:47	radioBaseStationEntry # 3	BS	Communications Subsystem Failure	Communication Alarm
	26	03/01/1970 05:09:47	radioBaseStationEntry # 2	BS	Communications Subsystem Failure	Communication Alarm
	25	03/01/1970 05:09:47	radioBaseStationEntry # 1	BS	Communications Subsystem Failure	Communication Alarm
	14	03/01/1970 05:09:46	ibsBoardEntry # 4	BS	Communications Subsystem Failure	Communication Alarm
	13	03/01/1970 05:09:46	ibsBoardEntry # 3	BS	Communications Subsystem Failure	Communication Alarm
	8	03/01/1970 05:09:46	bsExtInputPointEntry # 8	BS	Minor House Keeping	Environment Alarm
	7	03/01/1970 05:09:46	bsExtInputPointEntry # 7	BS	Minor House Keeping	Environment Alarm
	6	03/01/1970 05:09:46	bsExtInputPointEntry # 6	BS	Minor House Keeping	Environment Alarm
	5	03/01/1970 05:09:46	bsExtInputPointEntry # 5	BS	Minor House Keeping	Environment Alarm
	4	03/01/1970 05:09:46	bsExtInputPointEntry # 4	BS	Minor House Keeping	Environment Alarm
	3	03/01/1970 05:09:46	bsExtInputPointEntry # 3	BS	Minor House Keeping	Environment Alarm
	2	03/01/1970 05:09:46	bsExtInputPointEntry # 2	BS	Minor House Keeping	Environment Alarm
	1	03/01/1970 05:09:46	bsExtInputPointEntry # 1	BS	Minor House Keeping	Environment Alarm

Close

4.10.1.4– Sound adjustment of alarms

It is possible to associate or disassociate the emission of a sound warning for alarms corresponding to a certain critical level:
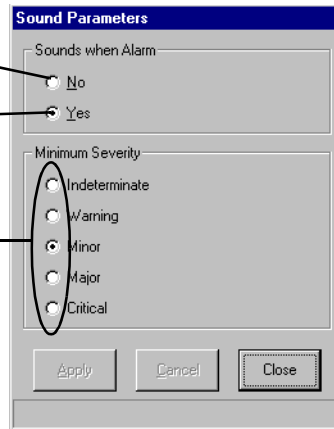
To access the **alarm sound parameters**:

– click on the button shown here (on the 7390 LT main screen),

– or, open the **_Alarms_** pull-down menu and choose the item **_Sound Parameters_**.

Check **No** to **deactivate** the sounds associated with the alarms

Check **Yes** to **activate** the sounds associated with the alarms

Choose the critical level starting from which the sound warning should be emitted

Sound Parameters

Sounds when Alarm
- ○ No
- ● Yes

Minimum Severity
- ○ Indeterminate
- ○ Warning
- ● Minor
- ○ Major
- ○ Critical

[Apply] [Cancel] [Close]

4.10.2– Alarms correspondence tables (ASAP)

The correspondence between the alarms and the severity levels is managed by an ASAP table. There are two types of correspondence tables:

– *one table for alarms relating to the BS ("BS ASAP"),*

– *one or several tables for alarms of the NTs ("NT Default" and customized tables).*

To view the correspondence tables:
- click on the button shown here, in the 7390 LT main screen,

or
- open the Alarms pull-down menu and choose the item Alarm list,

The following screen appears:

Click here to **modify** an ASAP table

Click here to **delete** an ASAP table

Click on the arrow to **select the ASAP table** to be displayed: «BS ASAP», NT Default or the table created by the operator

Click here to **create** a customized NT ASAP table

ASAP List

BS ASAP

Quick search possibility (cf: § 4.1.2.4 –)

ASAP Content

ID	Label	Severity
14	Enclosure Door Open	Major
16	Excessive Vibration	Critical
18	Fire Detected	Critical
19	Flood Detected	Critical
21	Heating Ventilation or Cooling	Critical
22	Humidity Unacceptable	Critical
26	Leak Detected	Critical
35	Power Problem	Major
36	Pressure Unacceptable	Critical
50	Temperature Unacceptable	Critical
53	Toxic Leak Detected	Critical
126	Board missing	Critical
127	Communications Subsystem Failure	Critical
128	Type mismatch	Critical
129	Configuration error	Minor
130	Temperature unacceptable	Critical
131	Version mismatch	Critical

I**D number** of alarms

Alarm severity assigned to each probable alarm cause

Alarm designation corresponding to the «Probable cause» column of the alarms list (cf:§ 4.10.1.3 –) and the list of events (cf:§ 4.8 –)

[Apply] [Cancel] [Close]

Click here to **quit** the correspondence tables display window

ASAP Content - BS ASAP

4.10.2.1– Creation of ASAP table for NT

To create a personalized **ASAP table** for alarms of the NTs, click on the button shown here (on the **ASAP Lis**t screen).

The following screen appears:

Click here and enter the **name** for the new customized ASAP table

Click here to **confirm** the new ASAP name

Click here to **cancel** the ASAP table creation
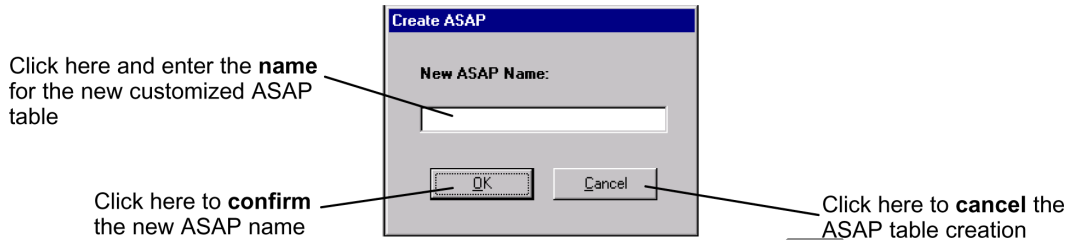
By default, the new table has the same characteristics as the "NT Default" table. To modify the severity levels, (see § *4.10.2.2 –4.10.2.2 – Modification of alarm severity profile*).

Note: *You can only create ASAP tables for **alarms of the NTs**. The maximum number of ASAP NT tables is 10 including "ASAP NT Default".*

Note: *You can assign a customized ASAP table to NTs (see § 4.6.2 – Declaring a new NT or § 4.6.3 – NT Details)*

Note*: The name of the new asap table must be shorter than 36 characters*

4.10.2.2– Modification of alarm severity profile

To modify the severity levels of a customized **ASAP table**, click on the button shown here (on the **ASAP Lis**t screen).
The following screen appears:

Click on the severity cell in the selected line then click on the arrow to choose the **severity level** you want to assign to the alarm

Click here to **confirm** the modifications

Click here to **cancel** the modifications
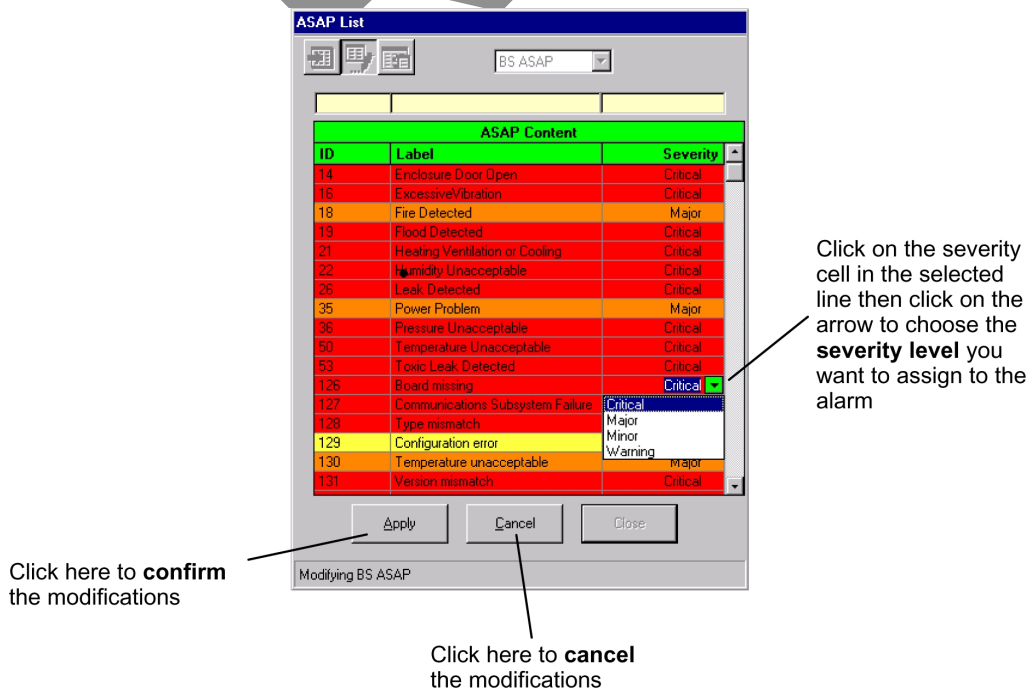
4.10.2.3– Deletion of ASAP table for NT

To delete a customized **ASAP table**, click on the button shown here (on the **ASAP List** screen).

The following screen appears:

Delete ASAP

Delete ASAP NTperso ?

Click here to **confirm** the deletion of the personalized ASAP table "NT perso"

OK   Cancel

Click here to **cancel** the deletion
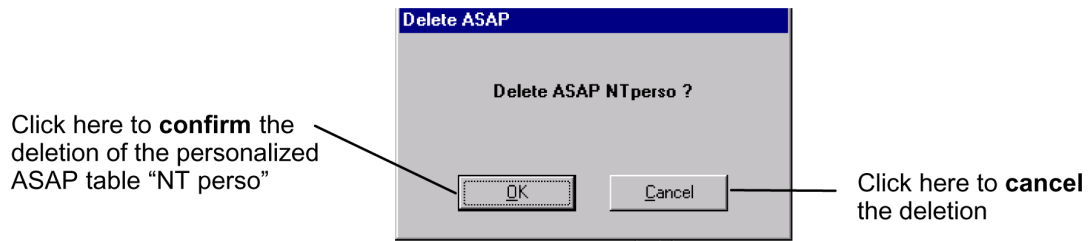
Note: *You can only delete customized ASAP tables (you **cannot** delete the "BS ASAP" or the "ASAP NT default" tables).*

Note: *You cannot delete a table assigned to at least one NT. You have to assign another table to this NT before (see § 4.6.3 – NT Details).*

4.10.3– Alarms and remotes

In addition to **alarms** reporting problems for the system and occuring on the **equipment** (see § *4.10.1 – Alarms*), two configurable types of device are available to the operator for **notification** and remote **solving** of problems linked to the cabinet **environment** (DBS).

These devices are: **sensors** (fire detection, etc.) and **remote controls** (extinguisher, etc.) present in the vicinity of the cabinet.

Sensors are used for problem **detection** (see alarms § *4.10.1 – Alarms*), and **remote controls** for problem **correction**.

To access the alarms (sensors) and remotes list, click on the button shown here (**BS Details** screen toolbar) (see § *4.5 – Base Station Supervision*).

Designation of alarms and remotes

External Point List

Name	User Label	External State
Alarm 1		ON
Alarm 2		ON
Alarm 3		ON
Alarm 4		ON
Alarm 5		ON
Alarm 6		ON
Alarm 7		ON
Alarm 8		ON
Remote 1		OFF
Remote 2		OFF
Remote 3		OFF
Remote 4		OFF

Close

Select a line and click on this button (remote details) or double click on a line to display the **details** of the selected equipment.

Alarms and remotes external state

– alarms: see § *4.10.3.1 – Alarm characteristics*

– remotes: see § *4.10.3.2 – Remote characteristics*

Note: *Default external state is ON for alarms and OFF for remotes.*

4.10.3.1 – Alarm characteristics

Click here to **indicate** alarm **location**

Click here to **modify** the alarm **designation**

Click here to **choose** the **probable cause** which will be affected to this alarm when its state is set on ON (see External state section): (see Note below)

External Points Details :ALARM 1

Characteristics

Location

User Label   Door open

Probable Cause   Minor House Keeping

Polarity   Active High

States

External   ON

Apply   Cancel   Close

Sensor polarity: active if the signal front is hight or low (not subject to change from the 7390LT)

Alarm external state reminder: ON /OFF

Click here to **apply** changes to sensor characteristics

*Note: The operator must choose the **probable cause** from the list of alarms relevant to the BS. This list includes **three types of alarm**:*

- X721 standard environment alarms,
- A7390 system specific alarms,
- environment generic alarms:
  - Environment: critical,
  - Environment: urgent,
  - Environment: not urgent.

The operator will therefore choose from the first group of alarms and, if necessary, from the last group of alarms.

4.10.3.2– Remote characteristics

Click here to **indicate** remote **location**   Click here to **modify** the remote **designation**

Sensor **polarity**: active if the signal front is hight or low (not subject to change from the 7390LT)

Remote control **external state** reminder: ON /OFF can be changed in the **External Points List** screen (cf: § 4.10.3 –)

Click here to **apply** changes to remote characteristics

4.11– Performance

4.11.1– Radio Performance

The Radio Performance feature gives the quality of the internal radio transport.

To access the radio performance:
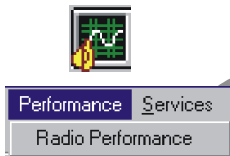
– click on the button shown here (in the main screen toolbar),

– or else, open the Performance pull-down-menu and choose the first item: *Radio Performance*
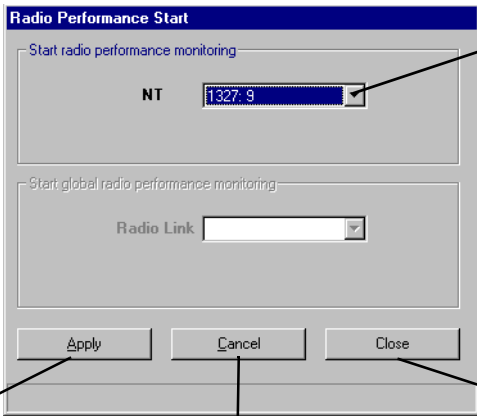
Click here to monitor the NT and Radio Link
Click here to stop the monitoring over the NT and Radio Link

No Radio Performance Data Available ...

Click here to return to the **BS Details** screen

4.11.1.1– Start Radio Performance

Start Radio Performance for a NT

Click here to scroll down the list and **select** the **NT**
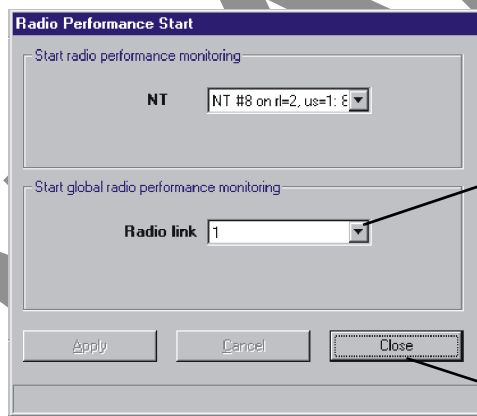
Click here to **apply** the modifications

Click here to **cancel** the selections

Click here to **quit** the *Radio Performance Start* screen

Once you have applied monitoring on one NT, you can close the screen.

Start radio performance for a radio link

Click here to scroll down the list and **select** the **Radio Link**

Click here to **quit** the *Radio Performance Start* screen

Once you have applied monitoring on one radio link, you can close the screen.

4.11.1.2– Monitoring the Radio Performances

Monitoring the Radio Performance for a NT

Click on these tabs to display the chosen **Radio Link**

Click on these tabs to display the chosen **NT**
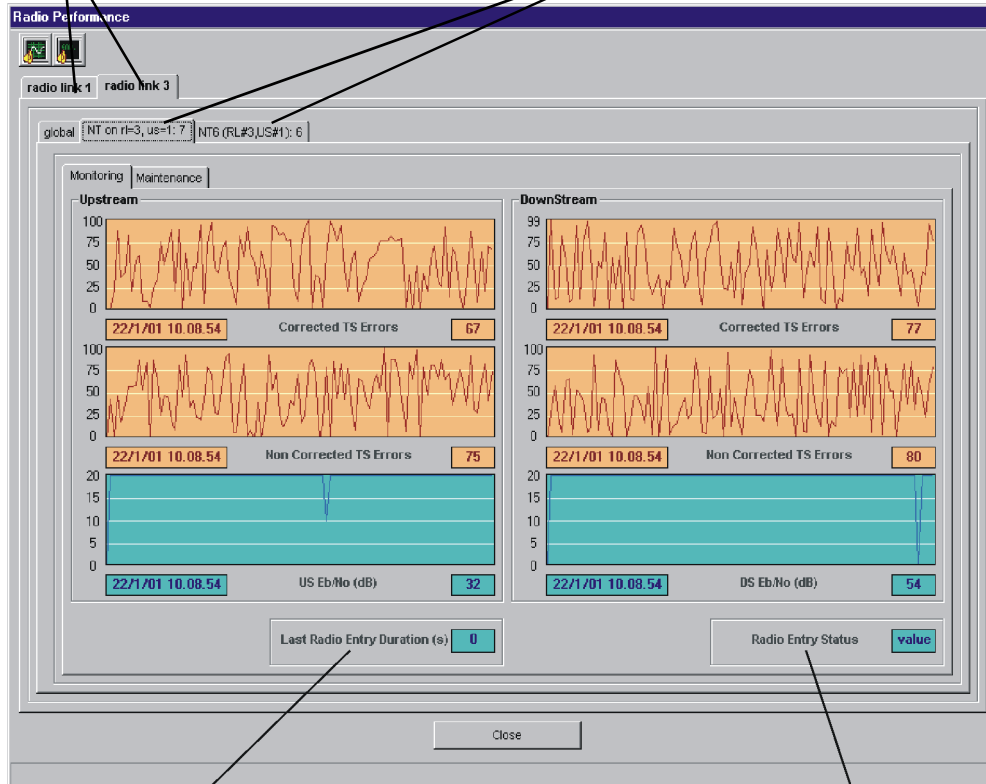
Last radio entry duration is the number of seconds the NT takes to become operational

Radio Entry Status can have two values: **Tracking** (when the NT is active and enabled) or **Acquisition** (when the NT is out of service)

This screen is read only.

The **Radio Performance counters** are sent by the agent to the LT each 5 seconds. When the data are not received, the counter are colored in white.

When the mouse is positioned over, the **graphical boxes** indicate the hour and value for this time. In any case the edit-boxes indicate the hour and value of the last data received.

The **graphic scales** are dynamic (they change depending on the coming values), but they are symmetrical (they always show the same value, positive or negative).

Click on these tabs to display the chosen **Radio Link**

Click on these tabs to display the chosen **NT**

Radio Performance

radio link 1 | radio link 3

global | NT on rl=3, us=1: 7 | NT6 (RL#3,US#1): 6

Monitoring | Maintenance

Long Loop Control

| 22/1/01 10.11.49 | Synchronization Offset (TS/4) | 10 |

| 22/1/01 10.11.49 | Frequency offset (100 Hz) | 79 |

| 22/1/01 10.11.49 | Power Offset (dB) | 74 |

Mean NT Power

| 22/1/01 10.04.56 | NT Input Power (dBm) | 23 |

| 22/1/01 10.07.27 | NT Long Loop Power Offset (dB) | 73 |

| 22/1/01 10.11.49 | NT Frequency Offset (100 Hz) | 41 |

| DBS NT Distance (m) | 0 |

Close
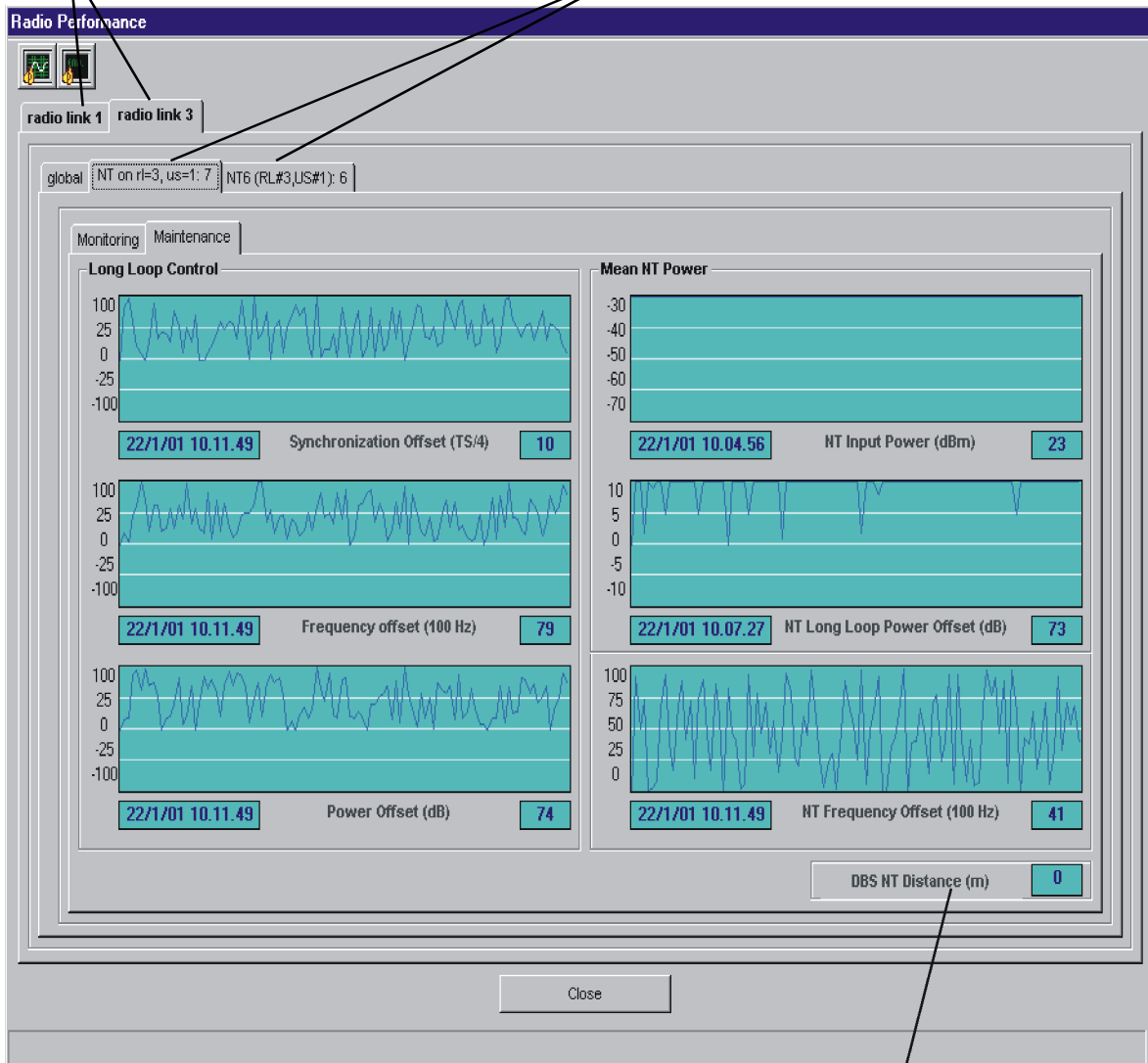
DBS distance NT indicates the distance between the DBS and the NT, in meters

Monitoring the Radio Performance for a Radio Link
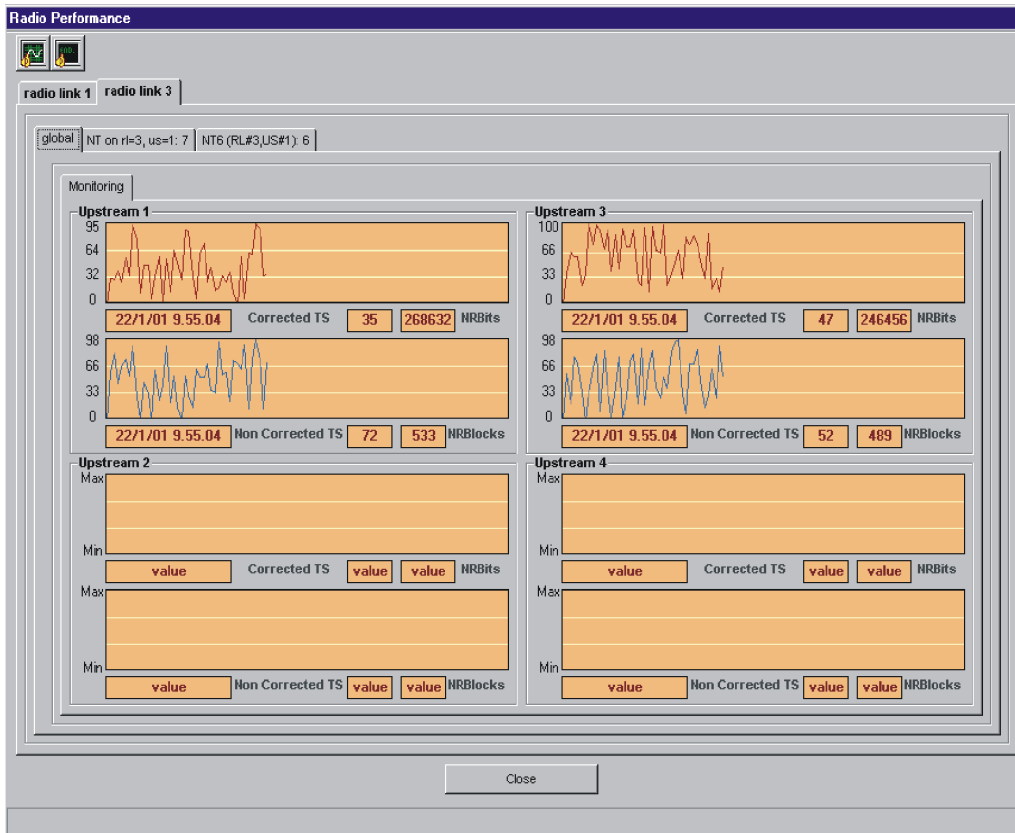
This screen is read only.

4.12– Client services: leased lines

There are three types of service: **Leased Lines** (LL), **IP lines** (see § *4.13 – Client services: IP links*) and **Circuit Emulation Services (CES)**: see § *4.12.6 – Circuit emulation (CES)*.

For service **traffic supervision**, refer to § *4.7 – Radio supervision and parameters*. For **synchronization**, refer to § *4.5.4 – Clock synchronization parameters*.

The leased lines cross-connections managed by the 7390 LT are declined in 4 types: **E1** traffic (see § *4.12.1 – Leased lines E1*), **X21** (see § *4.12.2.2 – Access to the X21 link management*), **T1** (see § *4.12.3 – Leased lines T1*) and ISDN (see § *4.12.4.2 – Presentation of the ISDN link management screen*).

4.12.1– Leased lines E1

A **E1** cross-connection is a link between a **TNT** board of the BS linked to the TDM network (or ATM if the CES is used: see § *4.12.6 – Circuit emulation (CES)*) and the **NT** terminal (E1 port) linked to the user peripheral devices.

The maximum **flow** offered on a **E1** link is a symetrical **2.048 Mbit/s**.

4.12.1.1– Procedure of creation of an E1 link (E1 cross-connection)

The implementation **steps** for an **E1** cross-connection are as follows:

1. Selection and configuration of the ports for cross-connect: BS side (TNT board) (see § *4.12.1.4 – Ports configuration of TNT board (BS))*;

2. Selection and configuration of the ports for cross-connect: NT side (see § *4.12.1.5 – Configuration of NT ports)*;

3. Cross-connect between time-slots of selected ports: (see § *4.12.1.6 – Cross-connect)*;

4. Creation of an E1 link: (see § *4.12.5 – Principles of management common to all types of leased lines)*;

4.12.1.2– Access to the E1 link management

To access E1 lines management:

    – click on the button shown here (in the main screen toolbar),

or else,

    – open the *Service* pull-down menu and choose the first item: *E1*.

4.12.1.3– Presentation of the E1 link management screen

Click here to access the T**NT ports configuration** of the selected equipment

Click here to access the **NT ports configuration**

E1 cross-connection **creation**

Delete the chosen link

List of E1 links (cf: § 4.12.5.1 –)

Allow to **modify the name** of the
selected cross-connetion (cf: § 4.12.5.4 –)

Quick search
(cf: § 4.1.2.4

Cancel the current cross-connect

Locking / unlocking the administrative state (cf: § 4.12.5.5 –

Input / output
characteristics of the
selected TNT board

Cross-connect zone

1 IT = 64 kbps

Indicator of **cross-connect**
position

Quick search
(cf: § 4.1.2.4 –)

Display of the 16 E1
ports of the chosen **TNT**:

- «E1» port: not configured
- «G703» port: unstructured
- «G704» port: structured
(cf § 4.12.4.3 – and § 4.12.3.5

Display of the 2 E1 **ports** of
the chosen **NT** (the grayed
out ports are not accessible
to the leased lines)

4.12.1.4– Ports configuration of TNT board (BS)

BS
Board TNT 1
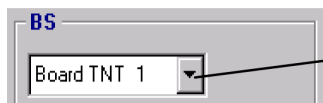
On the E1 cross-connection screen (see § 4.12.1.3 – Presentation of the E1 link management screen), **select** <u>first of all</u>, the **TNT board** concerned by the cross-connect by scrolling

Next, access the **ports configuration** of the TNT board selected by clicking on the first button, shown here (on the toolbar of the E1 cross-connections screen).

The screen listing the E1 ports of the TNT is displayed:

The port labels are to be entered in the **TNT Ports Configuration** screen: (cf: § 4.5.3.2 –)

Check box to **lock / unlock** the port's administrative state. By default, the port is locked. Port configuration modification is only possible when the port is locked

Board TNT 1 : E1 ports configuration

Port n°	User Label	Type	Administrative State	Line Code	Operational State	Configuration State	Crc4 Mode
1		G704	☑ locked	hdb3	Enabled	structured	☑ ON
2		G703	☑ locked	hdb3	Disabled	unstructured	
3		G704	☑ locked	hdb3	Enabled	structured	☑ ON
4		G704	☑ locked	hdb3	Disabled	structured	☑ ON
5		G703	☑ locked	hdb3	Disabled	unstructured	
6		G703	☑ locked	hdb3	Disabled	unstructured	
7		E1	☑ locked	hdb3	Disabled	not configured	
8		E1	☑ locked	hdb3	Disabled	not configured	
9		E1	☑ locked	hdb3	Disabled	not configured	
10		E1	☑ locked	hdb3	Disabled	not configured	
11		E1	☑ locked	hdb3	Disabled	not configured	
12		E1	☑ locked	hdb3	Disabled	not configured	
13		E1	☑ locked	hdb3	Disabled	not configured	
14		E1	☑ locked	hdb3	Disabled	not configured	
15		E1	☑ locked	hdb3	Disabled	not configured	
16		E1	☑ locked	hdb3	Disabled	not configured	

Apply   Cancel   Close

Port type: G703, G704 (initially E1)

Scroll down the list **to configure** the **port**: structure or unstructured (initially: not configured)

Type of **line code**: hdb3 (one choice)

Appears if the configuration state is structured; to be checked if the corresponding hardware uses CR4

Note: The modification of the port configuration is possible if the port state is locked.

Note: Unlocking a TNT port state is only possible when you have configured it.

4.12.1.5– Configuration of NT ports

NT

Ve

Velizy

On the E1 cross-connection screen (see § 4.12.1.3 – Presentation of the E1 link management screen),
Click on the arrow to scroll down the NT list declared, then **select** the **NT** concerned by the cross-connect.

<u>Next</u>, access the **ports configuration** of the chosen NT by clicking on the second button, shown here (on the toolbar of the **E1 cross-connections** screen).

The ports label is to be entered in the **NT Details** screen (see § 4.6.2

Type of line code: hdb3

Check box to l**ock / unlock** the port's administrative state; by default, the port is locked

Scroll down the list to **configure** the port: structured or unstructured

Board NT 2 : E1 ports configuration

Port n°	User Label	Type	Administrative State	Line Code	Operational State	Configuration State	Crc4 mode
3		G703	☐ locked	hdb3	Disabled	unstructured	
4		G704	☑ locked	hdb3	Disabled	structured	☑ ON

Apply   Cancel   Close

Click here to **confirm** a modification

Click here to **cancel** modifications

See § 4.11.1 –

Port type: G703, G704

Click here to **return** to the **cross-connections** screen

Note: The modification of the port configuration is possible if the port state is locked.

Note: Unlocking a NT port state is only possible when you have configured it.

4.12.1.6– Cross-connect

Cross connection consists in matching the time-slots (TSs) of a configured port of the TNT board with those of a configured port of the NT.

Note: To make an E1 "cross-connection", E1 type TNT ports can be cross connected with E1 or X21 type NT ports.

There are **two types** of cross-connect: between structured ports and between unstructured ports.

If the operator wants to offer a 2 Mbps contract, the cross connnection must be **unstructured**: using a **G703** TNT port (32 available TSs, global selection of TSs).

If the operator wants to offer a **less than 2 Mbps** contract, the cross connection must be **structured**: using a **G704** TNT port (31 available TSs, individual selection of TSs).

– *Unstructured case:*

In this case, the maximum bit rate is supplied because all the selected TNT port time-slots are connected to the NT port time-slots.

1 Select the unstructured ports that you wish to connect

2- Select the block of time slots at the TNT by pressing a time slot of the of the time slot block at the TNT
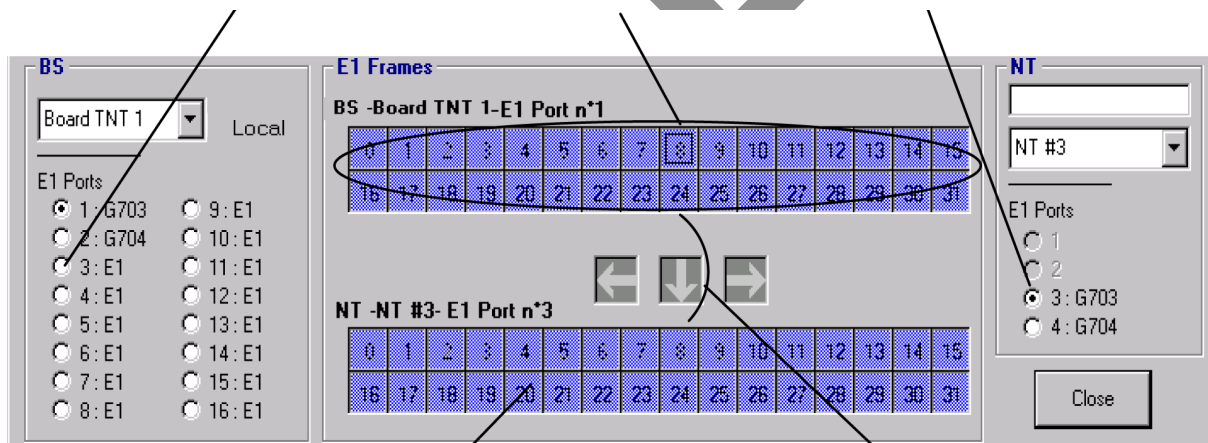
4- **Release** the buttons: all the slots are selected

5- **Confirm** the cross-connect by creating the cross-conection (see § 4.12.1.3 –)

3- Press the CTRL key while clicking on the left button of the mouse on a TNT time slot and slide the mouse pointer towards NT
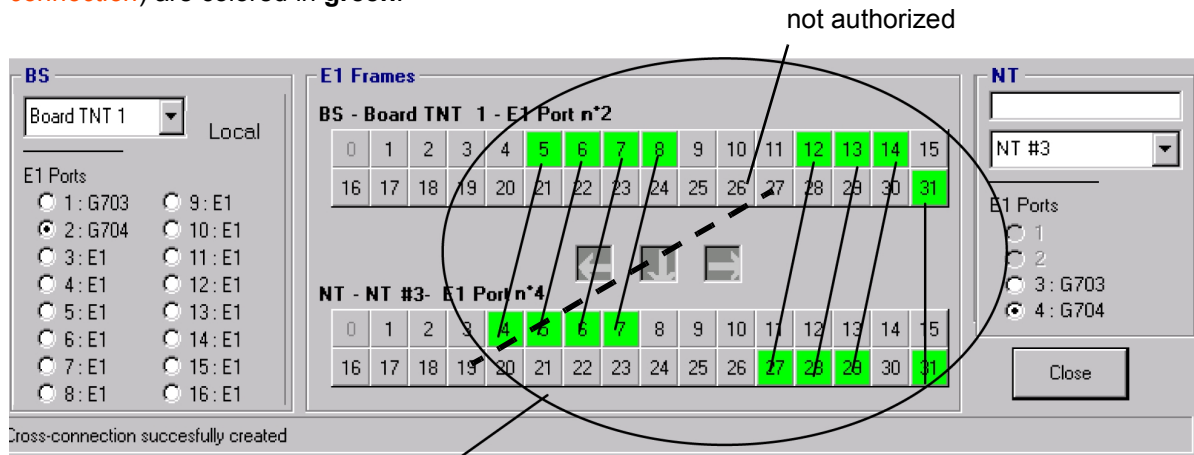
– *Structured case:*

To implement the cross-connect in structured case, proceed in the same way as for non-structured ports, but this time select the time-slots **individually**.

Thirty one time-slots can be brought into play in a E1 cross-connection (the first time-slot (grayed out) is not accessible because reserved for synchronization). The maximum bit rate is 31*64 kbps.

The **cross-connect** arrows offer you guidance for dragging the TNT slots to the available NT slots; if the current cross-connect corresponds to "unauthorized" ones, an error message is displayed at the bottom of the window and the cross-connect arrows indicate the NT time-slots to which the cross-connect is directed.

The slots of a real cross-connection (following the creation phase: see § *4.12.5.3 – Creation of a cross-connection*) are colored in **green**.

not authorized

Structured cross–connect illustration

Note: It is not mandatory to create cross-connections with consecutive time slots. In that case, you must match the first group of TNT time slot with a group of NT time slot, and then match the second group and so on.

Note: It is not possible to «cross» the links between TNT and NT time slots. Example on the above configuration link between TNT-TS 10 and TNT-TS 3 not authirized.

4.12.1.7– Grooming

Several NTs can be fed from a single TNT board and a single E1 port. This is known as "grooming".

"blue" slots (inactive): correspond to another NT
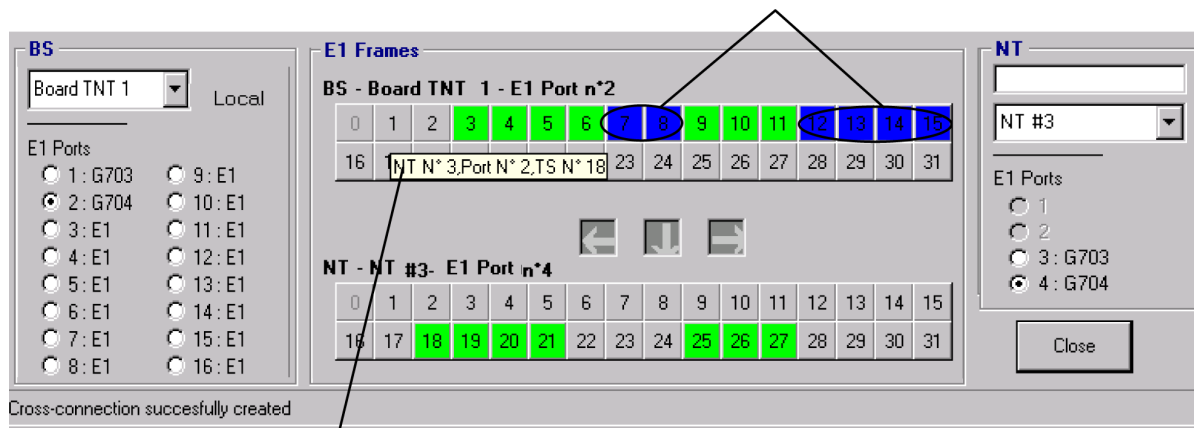
A textual key describes the links between time–slots

4.12.2– Leased lines X21

A **X21** cross-connection is a link between a **TNT** board of the BS linked to the TDM network (or ATM if the CES is used: see § *4.12.6 – Circuit emulation (CES)*) and the **NT** terminal (X21 port) linked to the user peripheral devices.

The maximum **flow** offered on an X21 link is 2 Mbps.

4.12.2.1– Creation procedure of an X21 link

The implementation stages for an X21 cross-connection are as follows:

1. Selection and configuration of the ports for cross-connect: BS side (TNT board): see § *4.12.2.4 – Ports configuration of TNT board (BS)*;

2. Selection of NT ports for cross-connect: see § *4.12.2.5 – Port selection on the NT side*;

3. Cross-connect between time-slots of selected ports: see § *4.12.2.6 – Cross-connect*;

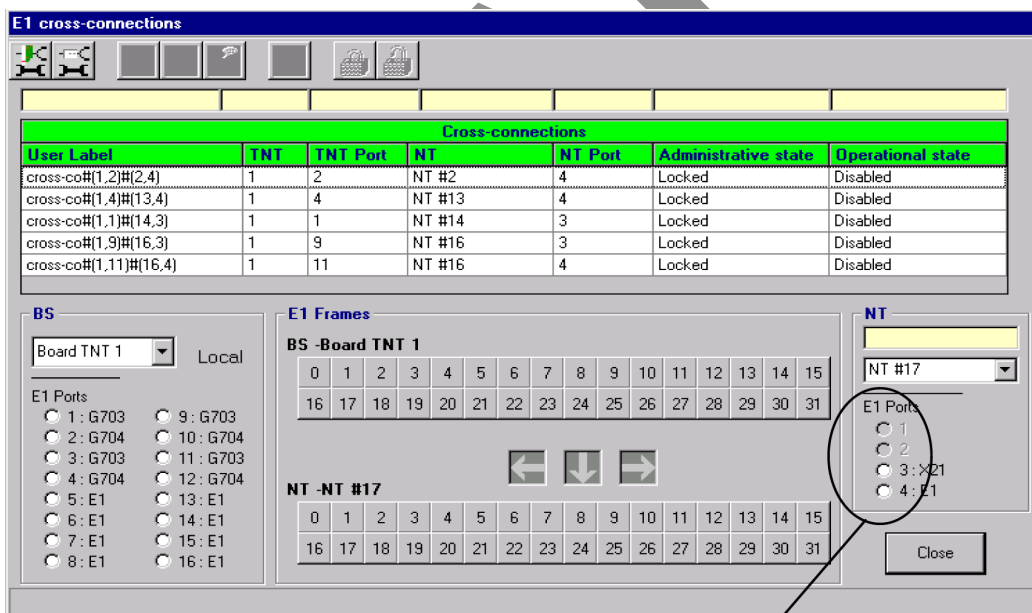4. Creation of an X21 link: see § *4.12.5.3 – Creation of a cross-connection*;

4.12.2.2– Access to the X21 link management

To access X21 line management:
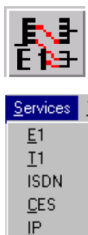
– click on the button shown here (in the main screen button bar),

or else,

– open the **_Service_** pull-down menu and choose the item: **_E1_**.

4.12.2.3– Presentation of the X21 link management screen

Display of the X21 and E1 **ports** of the chosen **NT**:
(the grayed out ports are not accessible to the leased lines)

As the other sections are the same as that of the E1 leased lines screen, refer to § *4.12.1.3 – Presentation of the E1 link management screen*.

4.12.2.4– Ports configuration of TNT board (BS)

As the TNT board port configuration principle is the same as that of E1 leased lines, refer to § *4.12.1.4 – Ports configuration of TNT board (BS)*.

In case of 32 TS transmission, the TNT port has to be unstructured.