

Programming Guide

Event Handler

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1 Introduction

The Event Handler makes it possible to set up actions on incoming events. An event can be mobile data, an alarm, activation of an input, etc. received by for example an Alarm Management Server (AMS). The Event Handler will then perform different actions depending on the incoming event. Actions can be both internal, i.e. start other Actions after a delay, and external, i.e. send a message, start a siren, or present information about the alarm in the Alarm Management Client (AMC).

The 900 Proxy converts system specific data format in System 900 to the internal Unite communication protocol.

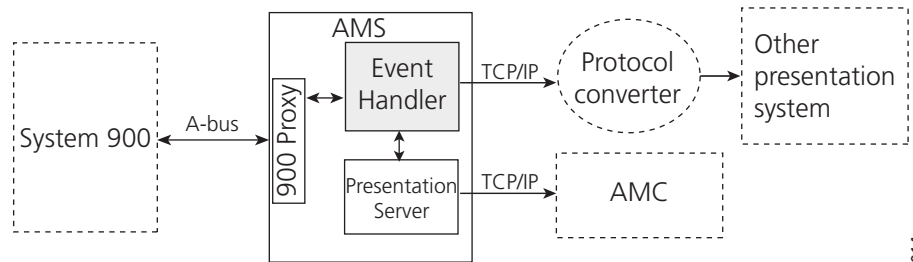


Figure 1. This example shows the event's way through an AMS.

1.1 Communication with System 900

In the example in [figure 1](#), data blocks sent on the System 900 A/B-bus are converted to the Unite communication protocol by the 900 Proxy. Examples of blocks that are recognized are alarm calls, mobile data, messages, acknowledge of messages, and activation of inputs on Alarm Modules in the system. Status on sent messages and activated outputs in the system are also recognized. Refer to [Appendix B](#) for more information about data blocks.

1.2 Requirements

- Ethernet (10baseT or 100baseT¹)
- Microsoft Internet Explorer. For version refer to *Data Sheet, Alarm Management Server, TD 92046GB*.

1.To be able to connect a 100baseT Ethernet the hardware ELISE2 is required.

1.3 Nomenclature

Block

The Event Handler receives/sends blocks that consists of elements and groups of elements. A block can inherit another block, for example the Alarm System 900 has inherited the Alarm block.

Element

The Elements are the information carriers in the Event Handler. There are five different types of elements:

in

Incoming blocks with elements and groups of elements.

out

Blocks that can be sent from the Event Handler with elements and groups of elements.

local

An element that is a local variable can be used to store data during the processing of an event.

persistent

Elements that carry data valid for all Events. These elements will keep their value at a restart.

system

Special elements that can be used to get unique block ID's, current date and time, etc. An element for writing to the log is also available.

Event Trigger

An Event Trigger is a set of conditions that has to be fulfilled in order to process the event and take action.

Delay Action

Delay Actions are used to start other actions after a delay.

External Action

An External Action is to send data to an external system, for example System 900 or the AMC. If there is a demand for a response on the data sent, a Response Trigger is activated. If no response has arrived before time-out, other actions can be taken.

Action Group

An Action Group is several actions grouped together. Action Groups are used when several actions are to be taken on an incoming event.

Response Trigger

A Response Trigger is a set of conditions that has to be fulfilled in order to take action. The difference from an Event Trigger is that the Response Trigger is active only when a response to an Action is expected. The local elements from the Event are available.

Translation Table

A Translation Table can be used to translate the data in an element to another value, for example to translate a location code to text.

Assignments

There are four different types of assignments:

Translation

A Translation is used when the value of an Element should be translated using a Translation Table.

Element Definition

An Element Definition can be used to gather data from several elements, for example to create a display message. It can also be used to give an element a value. Element Definitions are also used to write information to the log file, see [5.5.4 System Elements](#) on page 17 for more information.

Copy Block

Copy Block is used when the contents of a complete block should be copied, for example to include an Alarm block in a Presentation block that is sent to the Alarm Management Client (AMC). The attached "Delivery" block within the block will not be copied.

Selection of Elements

A Selection of Elements can be used to select one or several elements out of a multiple block. The selected elements can also be sorted, for example to sort locations in time order.

External Interface

The External Interfaces keep information about where each block should be sent. Each block has a default External Interface. It is also possible to create your own External Interfaces.

2 Database Administration

2.1 Configuration Database

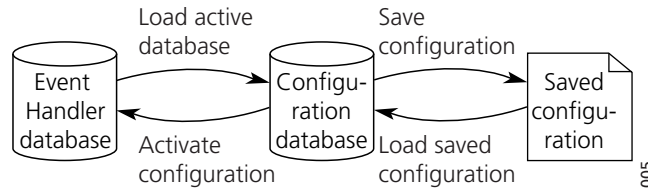


Figure 2. Administration of the Event Handler and Configuration databases.

From the configuration, the contents of the Configuration database can be loaded into the Event Handler database. When updating the database, one can select to update the Persistent elements or to leave them untouched. Before the Event Handler database is overwritten, the configuration will be checked so that it is valid. If any errors are discovered, an error message will be displayed and the Event Handler database will not be changed. The event "Configuration Status" indicates when the database has been exchanged. It is also possible to save the contents of the Configuration database to a backup file.

From AMS Home and XGate Advanced Setup, it is possible to load backup and sample databases, and also the contents of the Event Handler database to the Configuration database. The "Default database" can be used as an example or to get a quick start into configuration of the AMS and the XGate.

Note: Make a backup copy of the configuration database before another database is loaded. The current database will be overwritten.

2.2 Block Database

The blocks that the Event Handler can receive and send are in a separate database. This makes it possible to upgrade the module with new functionality without having to re-program it completely. The Block databases can be updated from the Database administration page. It is also possible to make a backup copy of the current Event Handler Block database from the Database administration page. There is also a possibility to load the Block database that was installed on delivery, the "factory Block database".

Before updating the Block databases:

- always take a backup copy of the existing Event Handler Block database.

When a new block database is loaded, it will be checked that the programming is valid. If any errors are discovered, a warning message will be displayed.

3 Event Log File

The maximum size of a log file is 100 kB. When a log file is full, another is created. The module has capacity to store 50 log files. When the limit is reached, the log is rotated. The event 'User Log Overflow' will be sent when the 50th log file is created, giving the opportunity to backup the log files before the first log file is overwritten. When the log files have been backed up, delete the complete log to avoid repeated 'User Log Overflow' blocks.

Every time the configuration of the module is changed, information about the changes are written to the log. It is also stated when the changes are activated and whether the activation was successful or not.

When a backup copy of the configuration is created, information about it is written to the log. The same applies when the configuration is restored with help of a backup copy.

It is also possible to write information to the log about how an Event is processed in the Event Handler. The information is defined during the configuration of the Event Handler and can include the value of incoming data etc.

The log files are password protected. The users that have access to the log files are; *user* and *loguser* - the default password is "password" for both, *admin* and *sysadmin* - the default passwords are "changeme" and "setmeup". The passwords can be changed on the module administration page or from http://xxx.xxx.xxx.xxx/admin/public/user_chpass.shtml and http://xxx.xxx.xxx.xxx/admin/public/loguser_chpass.shtml respectively.

3.1 Customizing the View of the Log

The Log page can be customized to meet the demands from the users, for example giving possibility to search the text field in the log files and selecting from which dates the log should be displayed. An example of the Log page is shown in [figure 3](#) below.

The screenshot shows a web interface titled "Log". It contains a search and filter section with the following elements:

- Search for:** A text input field.
- in column:** A dropdown menu with "1" selected.
- Start time (yy:mm:dd:hh:mm:ss):** A text input field.
- End time (yy:mm:dd:hh:mm:ss):** A text input field with a note below it: "Double click to set current time."
- View:** A dropdown menu with "DefaultDB" selected.
- Max no of rows:** A text input field with "50" entered.
- Buttons:** "Reset" and "Submit".

Below the search section, there are two links: "Delete log" and "Download log". A note below the "Download log" link reads: "(Right click and 'Save as...' if the link doesn't work.)".

Figure 3. The default Log page.

- Search for:* A regular expression to search for.
- in column:* Search in column, 1-5. The number of columns depends on what is selected from the drop-down list under *View*:
 DefaultDB: 2 columns to search in - one *Action* list and one *Info* list.
 Full: 5 columns to search in - *Text 1 - Text 5*, user defined information.
 Short: 1 column to search in - *Text 1*, user defined information.
- Start/End Time:* The time interval for the search result. See also [Information about Event Log page](#) on page 7.
- View:* There are three selections to choose from, see "in column" above.
- Max no of rows:* 1- 50. Refer to [Information about Event Log page](#) on page 7.

Date	Time	Logged by	Session ID	Action	Info
2000-03-26	01:50:57	EH-Programming		'Event Trigger' 'Test trigger' created	
2000-03-06	01:19:35	EH-Programming		Translation from text:A1 to text:Bed 1 added to Translation table:Locations	
2000-03-06	01:12:24	EH-Programming		Translation from text:A1 deleted from Translation table:Locations	
2000-02-27	22:42:58	EH-Programming		activated: Configuration successfully activated	

Figure 4. An example of a search result where the default view "DefaultDB" was selected. The two columns are, Action = column 1, and Info = column 2 .

In the "View" field it is possible to select how much information that should be displayed. These views are created with help of stylesheets written in XSL (Extensible Stylesheet Language). When the "Submit" button is clicked, a CGI script will be called that creates an XML (Extensible Markup Language) file of the log.

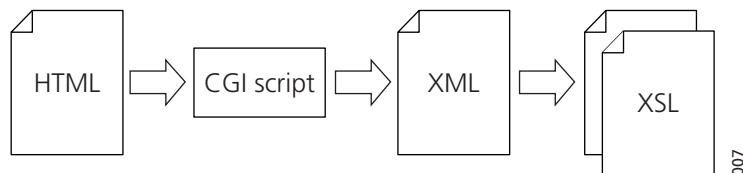


Figure 5. The flow of information

The Log page (index.html) can be edited with any editor, text or HTML. Basic HTML, JavaScript and CSS knowledge is recommended. The stylesheets can be edited with a text editor, and basic XML and XSL knowledge is recommended.

To edit the Log page and upload new stylesheets:

- 1 Log on to the module with an ftp client using the module host name (ftp://xxx.xxx.xxx.xxx). The user name is *ftpuser*, and the default password is "*changemetoo*".

The password can be changed from the module Administration page or on the page http://xxx.xxx.xxx.xxx/admin/public/ftpuser_chpass.shtml.

- 2 It is recommended to take a backup copy of all files that are used. This makes it possible to recover the looks and behaviour for the log files if the software of the module is replaced/upgraded.

Information about Event Log page

The index.html should contain a form that calls a CGI script. The code looks as follows:

```
<FORM Action= "/cgi-bin/amslogger/amslogger" METHOD= "POST" >
```

The CGI script has the following options:

xslName	The name of the stylesheet that should be used when the log is displayed.
maxNoOfPosts	How many log entries that should be displayed (maximum)
maxNoOfFiles	How many log files that are searched (maximum). The value should be 1-50. The default value is 20. It takes about 60 seconds to search 50 files, and about 25 to search 20.
contains	A regular expression that is searched for in the selected column
containsCol	The column in which the regular expression should be used
genericData	Used to submit data to the CGI script, for example formatting information to the stylesheet
startTime	Start date when only part of the log is of interest. The time should be on the format YY:MM:DD:hh:mm:ss
endTime	End date when only part of the log is of interest. The time should be on the format YY:MM:DD:hh:mm:ss

The CGI script is also called when the log should be deleted or downloaded from the module. The calls look as follows:

```
/cgi-bin/amslogger/amslogger?logdelete
```

```
/cgi-bin/amslogger/amslogger?logdownload
```

Information about stylesheets

The CGI script will create an XML file that looks as follows:

```
<basic>
  <genericData>xx</genericData>
  <noOfRows>xx</noOfRows>
  <logfile title="Log" type="amslog">
    <logRow>
      <year>xx</year>
      <month>xx</month>
      <day>xx</day>
      <time>xx</time>
      <appName>xx</appName>
      <sessionID>xx</sessionID>
      <logText1>xx</logText1>
      <logText2>xx</logText2>
      <logText3>xx</logText3>
      <logText4>xx</logText4>
      <logText5>xx</logText5>
    </logRow>
    <logRow>...</logRow>
  </logfile>
</basic>
```

The element noOfRows is returned by the CGI script and contains information about how many log entries that have been returned. The elements sessionID and, logText1..5 can be omitted.

3.2 Information in the Log File

It is possible to download the log file from the module. The log file will be compressed. Each line in the log file corresponds to a log entry. The information is separated by a space. The format of the log file is as follows;

'Date' 'Time' 'Identity' 'Application' 'log type' 'Application identity' 'File' 'Log info'

Date	The date (local date) when the log entry was written.
Time	The time (local time) when the log entry was written.
Identity	The host name of the module.
Application	The application in the module that generated the log entry. Examples of applications are EH-programming, Event Handler, and Pres. Server.
Log type	Indicates the seriousness of the log entry.
Application identity	The application has an identifying nname.
File	If the application is EH-programming, this is the file that the log entry concerns .
Log info	A text string within apostrophes. The text string can be divided into columns. Each column is separated by a carriage return character.

3.3 Interpreting the Log File

This chapter includes examples of the log and how the information is to be interpreted. All examples are based on the stylesheet "defaultdb".

Configuration changed

In the example below, a condition has been added to the trigger 'Test Message Subscription 111'.

9/12	13:30:06	EH-Programming		Trigger:'Test Message Subscription from 111' upd. Condition on Element'[in Message/Delivery:Destination address/User', CondType:integer, Condition:111,	008
------	----------	----------------	--	---	-----

Configuration successfully activated

The configuration has been successfully updated with the changes made.

9/12	13:28:00	EH-Programming		activated: Configuration database successfully updated	009
------	----------	----------------	--	--	-----

Configuration activation failed

The activation of the configuration failed. Information about the problem is also written to the log.

17/12	12:27:06	EH-Programming		activated: Failed to validate Configuration database: Illegal number of conditions (0) for trigger Alarm from PU	010
-------	----------	----------------	--	--	-----

Backup copy of configuration created

A backup copy of the configuration has been created. The file name and location is also written to the log.

6/12	16:17:15	EH-Programming		Successful backup of file:'/tmp/backup'. Suggested filename:'ConfigDatabaseBackup.sql'	011
------	----------	----------------	--	--	-----

Configuration database restored from file

The configuration database has been restored from file. The location and name of the file that was used is also written to the log.

6/12	16:32:17	EH-Programming		Database restored from file:'/tmp/phpcJcfae'	012
------	----------	----------------	--	--	-----

User defined information in the log

User defined information that is written to the log file from the Event Handler.

2003-07-09	17:16:43	EventHandler	237	Send Alarm Presentation to AMC started	003
2003-07-09	17:16:43	EventHandler	237	Alarm started.	

Information can be written several times within the same session.

3.4 Writing User Defined Information to the Log File

During the processing of an event, it is possible to write user defined information to the log file. By defining the system element 'User log', information is added to the log. The information can be divided into five columns. By entering a line break, a new column is created.

4 Activity Logging

The Event Handler sends an Activity Log to an address configured in the System Setup > Other > Logging > System Activity log for every received Unite block. For more information about system activity log messages, refer to *Function Description, Activity Logging in Unite, TD 92341GB*. For information about how to address the receiver of the System Activity log messages, refer to *Installation and Operation Manual, Enhanced System Services, ESS, TD 92253GB*.

During the process of an event it is possible to send activity logs of the type Customised Log by defining the system element 'Activity Log'. Line break result in a new text-element that is added into the block. Up to 10 text-elements can be sent. By specifying [TAG] first on the row it is possible to set up a category on the log.

User logs can also be sent as Activity logs. The configuration is done in the System Setup > Event Handler. There are two parameters to configure:

- Send User Logs to
User logs can be sent as Activity logs of type Customised Logs. It can be set to be sent; to the Activity Log and to the Event Log, to the Activity Log only, or to the Event Log only.
- Application Name
The text that is entered will be included in the Activity Log to identify the application that sent the log.

5 Configuration of the Event Handler

5.1 Event Handler

This chapter will describe how to setup the Event Handler. See also the examples in [Appendix A](#).

5.2 Event Flow

When the Event Handler receives an incoming Event, it will match it to the Response Triggers that are set up and activated in the Event Handler. If there is no match with a Response Trigger the Event Handler will proceed matching the block to the Event Triggers. Upon a trigger condition match, actions will be taken according to the incoming Event. The value of other elements, for example persistent elements, can also be taken into account. See the [figure 6](#) on page 11 to get an overview of an event's way through the Event Handler.

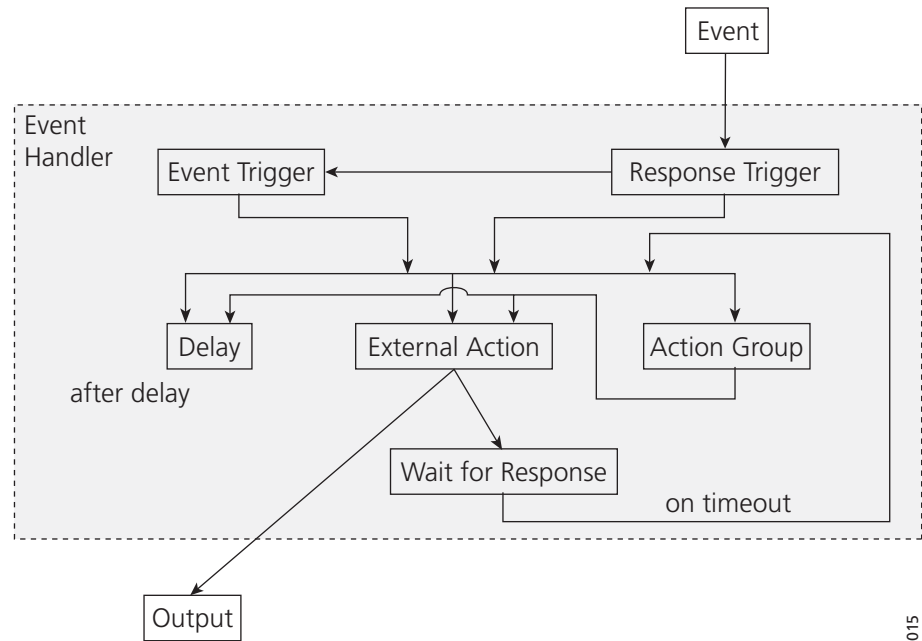


Figure 6. The event's way through the Event Handler.

When the Event Handler configuration is started, a simplified overview of the Event Handler parts will be shown. By clicking one of the buttons in the figure, information about related part will be opened in a new window. Information about blocks can be reached from the information about Elements.

5.3 Navigation

A tree like the one in [figure 7](#) is shown to the left in the Event Handler configuration window. It is used for navigation between the different parts that are to be configured in the Event Handler.

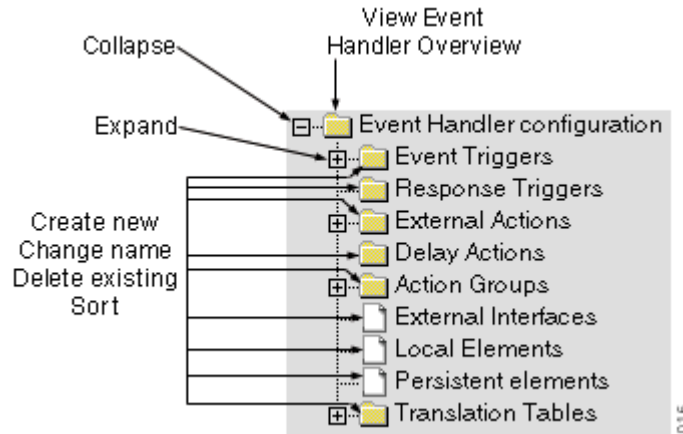


Figure 7. The Event Handler configuration navigation tree.

To return to the same view that is shown when the Event Handler configuration is started:

- click the Event Handler configuration folder.

A folder is expanded/collapsed when the plus/minus is clicked. All folders can be expanded/collapsed by clicking the texts expand all/collapse all below the tree.

By clicking the parts name in the tree, a new part can be added to the configuration. It is also possible to change the name, copy, or delete an existing part. The Event Triggers can be ordered and that is also done on this page.

5.3.1 Short-cuts

In several places, there are short-cuts to facilitate creation of new Elements, Action Groups etc. Short-cuts are shown in [figure 8](#).

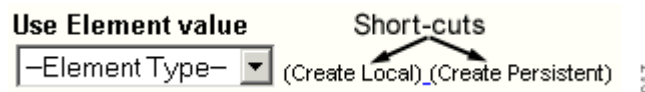


Figure 8. Short-cuts to creation of a new Local or Persistent Elements.

A new window such as the one in [figure 9](#) will open when the link is clicked.



Figure 9. A pop-up window where a new Local Element can be created.

- 1 Enter the name of the element to be created, and click "Submit".
- 2 Close the window and proceed with the configuration.

5.4 Activating a new Configuration

The Event Handler has a separate database used for configuration only.

To activate a new configuration:

- 1 Click the "Activate configuration" button.

The configuration will be checked before it is updated. When the configuration is updated it is indicated with the event "Configuration Status". It is possible to select whether the Persistent elements should be updated or keep their value.

For large configurations the activation can time out if it is completely checked. The parameter 'Check Configuration on Activation' can then be set to 'No'. If it is set to 'No', it is recommended to check the configuration manually by clicking 'Check Configuration' before activation. This is done in the System Setup > Event Handler.

5.5 Elements

There are five different types of elements; in, out, local, persistent, and system. Refer to [1.3 Nomenclature](#) on page 2 for a short description of the elements.

The *in* elements contain the information that is included in an Event and are read-only. The *out* elements are information carriers for external actions and are both read and write enabled. These elements are described further in [Appendix B](#). The local elements can be used to store data during the processing of an Event, for example the value of a translation. The persistent elements contain information that should be valid for all incoming events, for example information about current shift. Local and persistent elements are created during configuration and are both read and write enabled. System elements are special elements that contains, for example counters and information about current date and time. System elements are described further later.

The different types of elements will only be visible in the configuration where they can be used.

5.5.1 Selecting elements

Elements have to be selected in several places during configuration of the Event Handler.

First a type has to be selected and then the element has to be specified. Element type is indicated within brackets ([]). For In and Out elements only the block name is pointed out, for example Alarm or Message. To further specify the element click "Cont...", see [figure 10](#) below.

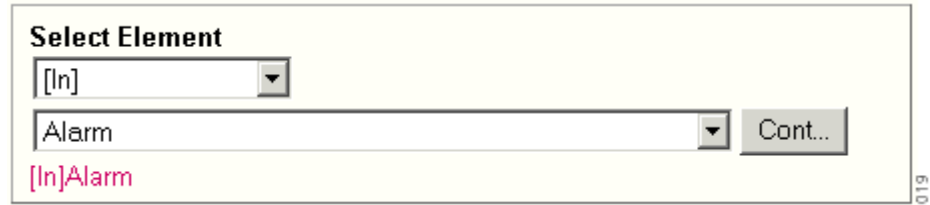


Figure 10. Select an element in an Alarm event.

A new window will open, where the element has to be specified further. In a select box, all available elements and groups are listed. The characters that indicate this are described in the table below:

- [] The element type is within brackets.
 - :
 - / The slash indicates that it is a group that has been selected.
 - +
 - { }
- The element/group can appear one or several times within the same block. An order number, pointing out the element/group, or all elements has to be specified.
- The order number is added within {} after the element. A * indicates that all elements have been selected.

Refer to [Appendix B](#) for more information about available elements and groups for each block.

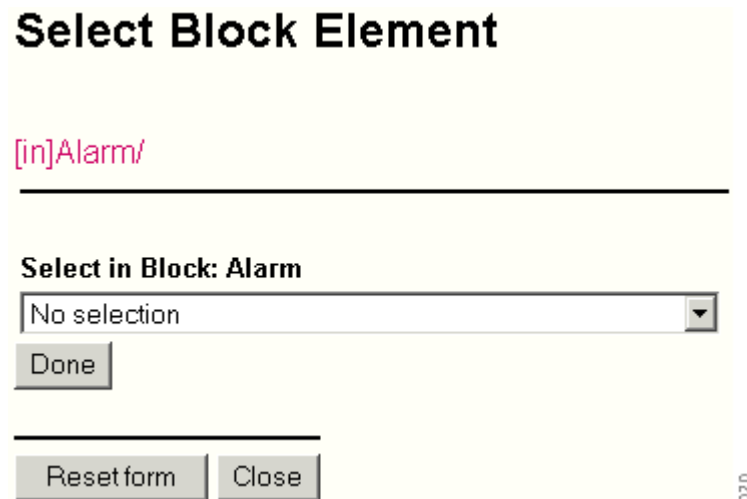


Figure 11. Specify a block element.

For incoming blocks, it will work to only select the inherited block, i.e. when selecting an element in the block [in]Alarm the Event Handler will also find the element in [in]Alarm System 900/Alarm. In this way it is not necessary to create different triggers for alarms from different systems.

When creating a selection of elements, it is necessary to select all occasions of a multiple element. Mark the "Select All" check-box, see [figure 12](#) to select all elements.

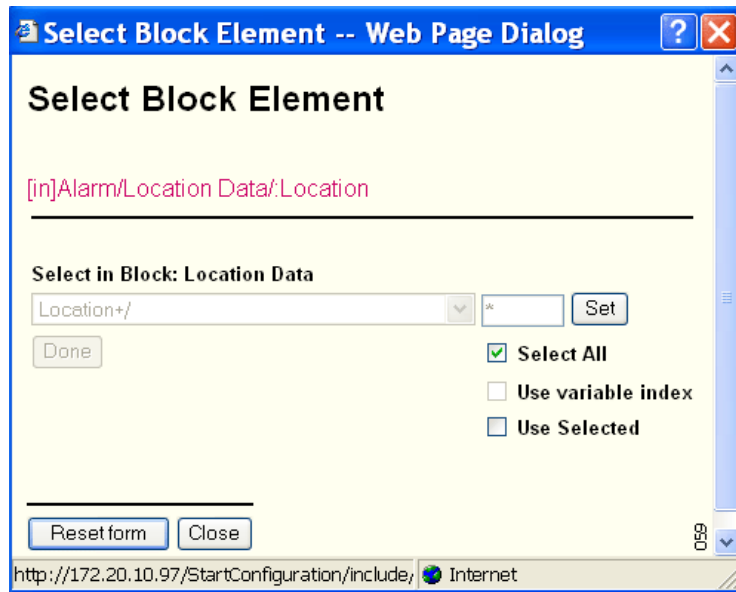


Figure 12. Selecting all occasions of a multiple element.

If a selection has been made, it is possible to use that selection instead of the original elements (see [5.7.4 Element Assignments for an Event Trigger](#) on page 23 for more information about selections). This is done by marking the "Use Selected" check-box, see [figure 12](#) on page 15. It is also possible to use the value of a system element as index, by marking the "Use variable index" check-box. It will then use the value that is set up in the "Block element index".

5.5.2 Creating, renaming, and deleting Local elements

- 1 Click the text "Local elements" in the navigation tree to the left. The view will be as shown in [figure 13](#).

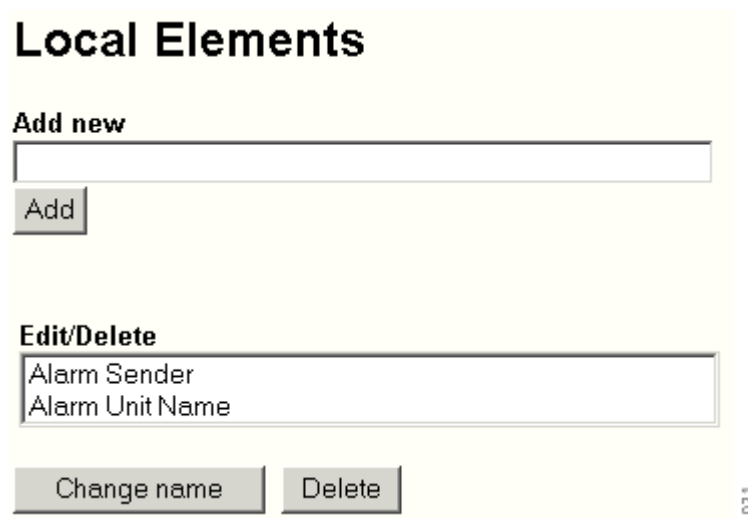


Figure 13. The view for the document Local elements.

Creating

- 1 Enter the name and click "Add" to create a new local element.

Renaming

- 1 Select the Local element that should be renamed. Click "Change name".
- 2 Enter the new name and click "OK".

Deleting

- 1 Select the Local element to be deleted and click "Delete".
Before the element is deleted, a list of where the element is used is displayed.
- 2 Click "OK", if it is alright to delete the element.

5.5.3 Creating, renaming and Deleting Persistent elements

- 1 Click the text "Persistent elements" in the navigation tree to the left. The view will be as shown in [figure 14](#).

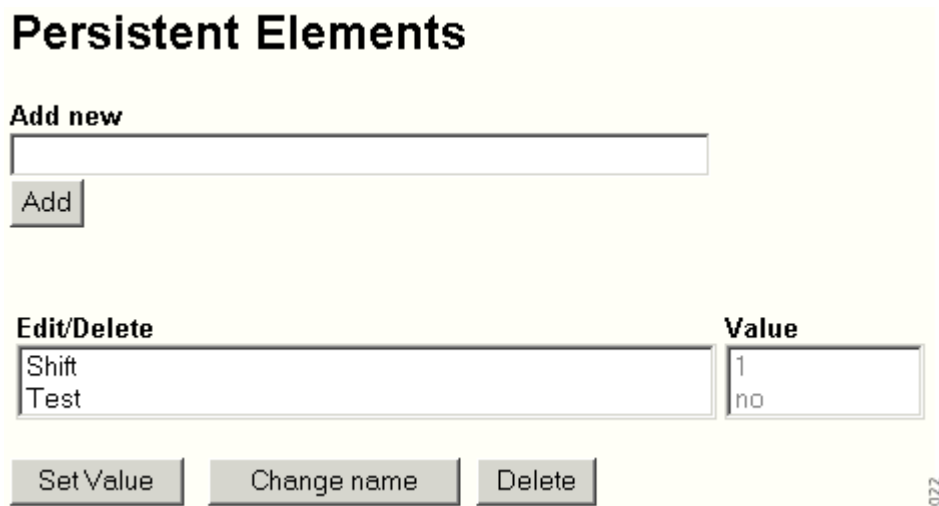


Figure 14. The view for the document Persistent element.

Creating

- 1 Enter the name and click "Add" to create a new Persistent element.
- 2 Select the element and enter a value, then click "Set Value".

Renaming

- 1 Select the element that should be renamed. Click "Change name".
- 2 Enter the new name and click "OK".

Deleting

- 1 Select the Persistent element to be deleted and click "Delete".
Before the element is deleted, a list of where the element is used is displayed.
- 2 Click "OK", if it is alright to delete the element.

If the value of a persistent element has been set from an event, the value will not show in the value field. To be able to get the current value, one can create a trigger on mobile data that returns the value to the handset. It is also recommended to write the new value of the persistent element to the log when it is changed by using the element "User log".

When a configuration is updated, one can select to keep the value of the persistent elements or to update them to the values given in the configuration database.

5.5.4 System Elements

There are two categories of system elements in the Event Handler, readable and writeable.

Readable

8-bit Counter	A counter that can be used in the programming. Every time the counter is read it is increased by one.
ASCII table	Returns an ASCII table. Allowed values on Unite: number 32 – 255 (decimal) and control characters 13 (CR), 10 (LF) and 9 (TAB).
Date	Current data according to ELISE clock. The date will be on the format year-month-date (yy-mm-dd)
Day of week	The current day 1 - 7, where 1 = Monday and 7 = Sunday.
Delivery ID	When a block is sent, it gets a delivery ID (note that this is not the same ID as the block ID). This element is used in Response Triggers to identify "Send Status" blocks. When read in an External Action, this element returns the Delivery ID for the block to be sent.
Global map	Returns the corresponding value for the entry set in 'Key'.
IP Address	Returns the module's IP address.
Session Time	How long this session has been going on. The time is in milliseconds.
System Time	The module's date and time on the format YY:MM:DD:hh:mm:ss (year:month:day:hour:minutes:seconds)
Text paste details	Returns the information of the latest cut and paste operation. The information includes the ASCII value for the first character in hexadecimal-format followed by : start position : stop position in the text that was cut.
Time	Current time according to ELISE clock. The time will be on the format hour:minutes:seconds (HH:MM:SS)
Unique ID	A counter that can be used to create unique ID's in the programming. By using this element, problems with equal ID's are avoided as the Event Handler uses this counter when creating ID's.

Writable

Activity Log	When this element is given a value, the value will be sent as a System Activity Log of type Customised Log.
Block element index	Used when selecting block elements with variable index.
Clear content	Used to delete block or part of block, see 5.18 Clearing Content in Blocks on page 43.
Global map	Sets the value for the entry set in 'Key'.
Global map (session)	Same as 'Global map' except that the entry is removed when the session is finished.
Key	Set the key that is later used with the 'Global map' and the Translation table.

Translation table	Updates the translation table in runtime. What is written in the first row of 'Key' gives the name of the table and the rest of 'Key' gives the 'Source Text'. What is written in the 'Translation Table' is used as the 'Destination Text' .
User Log	When this element is given a value, the value will be written to the log.

5.6 Translation Tables

An elements value can be translated to another value, for example a position code to a text. The translations form a table. A Translation Table can be used in different occasions. Which element that are to be translated and in which element the translation should be stored, are specified for each occasion.

5.6.1 Creating, renaming and Deleting and copying Translation tables

- 1 Click the text "Translation Tables" in the navigation tree to the left. The view will be as shown in [figure 15](#).



Figure 15. The view for the folder Translation Tables.

Creating

- 1 Enter the name and click "Add" to create a new table.

Renaming

- 1 Select the Translation Table that should be renamed and click "Change name".
- 2 Enter the new name and click "OK".

Deleting

- 1 Select the Translation Table to be deleted and click "Delete".
Before the table is deleted, a list of where the table is used is displayed.
- 2 Click "OK", if it is alright to delete the Translation table.

Copying

- 1 To make a copy of an Translation Table, select the table to be copied and click "Copy".
- 2 Enter a name and click "OK".

5.6.2 Configuration of the Translation Table contents

- 1 Click the name of the Translation Table in the menu tree to the left. The view will be as shown in [figure 16](#). All existing translations are shown below the controls

Translation Table: Location table

Change Name Delete

Create/Edit Translations in table

Text to translate After Translation

Get data

Add Change Delete

Existing Translations

Source Text	Destination Text
1001	Entrance
1002	Basement
1003	First floor
1004	Second floor

Delete All

Import / export entries

Separator character :

Line end character \10

Export

Browse... Import

024

Figure 16. The view for a Translation Table document.

- 2 Enter the text to be translated, i.e. the data of the source Element.
- 3 Enter the text that it should be translated to, i.e. the destination Element data.
- 4 Click "Add". If a Translation for the source Element data already exists, you'll be notified.

Note: The source text, for example a location code, is case sensitive.

To change an existing translation

- 1 Click the source text in the list of existing translations.
- 2 Enter the new translation and then click "Change", or click "Get data" to enter the current translation in the "After Translation" field.
The text can then be edited and will be changed when "Change" is clicked.

To delete an existing translation

- 1 Click the source text link and then click "Delete".
All translations are deleted when "Delete all" is clicked.

5.6.3 Importing/Exporting Entries

In addition to modify individual entries it is possible to import and export entries using .csv files.

Importing

- 1 Click the name of the Translation Table in the menu tree to the left.
The view will be as shown in [figure 16](#).
- 2 Enter delimiter and line end character used in the file you want to import, in the *Separator character* and *Line end character* text boxes.
- 3 Click "Browse...", select the file and click the "Import" button.
The imported entries will be shown in the *Existing Translations* list.

Exporting

- 1 Click the name of the Translation Table in the menu tree to the left.
The view will be as shown in [figure 16](#).
- 2 Enter the delimiter and line end character you want to use in the *Separator character* and *Line end character* text boxes.
- 3 Click the "Export" button. The *File Download* window opens.
- 4 Click "Save". The *Save As* window opens.
- 5 Select where to download the file and click "Save".
- 6 Click "Close" when *Download complete* window opens.

5.7 Event Triggers

The incoming event will be matched with active Event Triggers. The order that the triggers should be matched in can be specified in the configuration. If all conditions in an Event Trigger are fulfilled, the Event will be processed, i.e. Element Translations and Definitions will be made and one or more actions started. When an Event Trigger has been triggered, no further matching will take place.

5.7.1 Creating, sorting, renaming, deleting, and copying Event Triggers

- 1 Click the text "Event Trigger" in the navigation tree to the left. The view will be shown as in [figure 17](#).

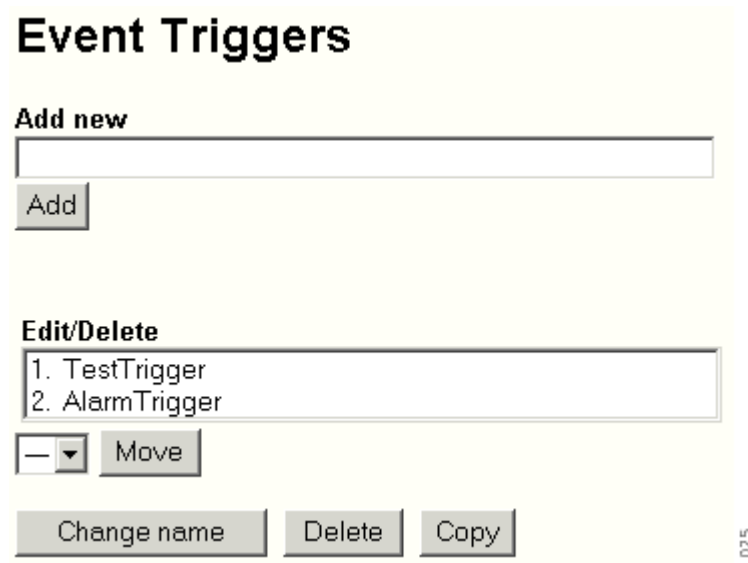


Figure 17. The view for the folder Event Triggers.

Creating

- 1 Enter the name and click "Add" to create a new Event Trigger.

Sorting

To change the order of the Event Triggers

- 1 select the one to be moved, select its new position in the list and click "Move".

Renaming

- 1 Select the Event Trigger that should be renamed. Click "Change name".
- 2 Enter the new name and click "OK".

Deleting

- 1 Select the Event Trigger to be deleted and click "Delete".

Copying

- 1 To make a copy of an Event Trigger, select the one to be copied and click "Copy".
- 2 Enter a name and click "OK".

5.7.2 Getting an overview of an Event Trigger

- 1 Click the name of the Event Trigger in the navigation tree to get an overview of it.

5.7.3 Match Conditions for an Event Trigger

- 1 Click the document "Match Conditions" in the navigation tree to the left. The view will be shown as in [figure 18](#).

Figure 18. Match Conditions for an Event Trigger

An Event Trigger has two different states, activated and deactivated. An active Event Trigger will be matched to incoming events. The default state for a new Event Trigger is deactivated.

When the trigger has been triggered, it can be blocked for a period of time. It is also possible to limit the time an Event can be handled in the Event Handler by defining a session life-time.

In [figure 19](#) it is shown how conditions are entered for an Event Trigger.

Figure 19. Setting Conditions for an Event Trigger

Conditions on Elements have to be matched for an Event Trigger to continue processing the Event.

- 2 Select the Element to put a condition on, see [figure 19](#) on page 22. The condition is constructed with different expression types. The types are listed below:

Expression type	Description
Integer	The Element data shall be equal to the entered value.
Integer Interval	The Element data shall be within the interval.
String	The Element data shall be equal to the string.
String Interval	The Element data shall be within the interval.
Part of String	The string shall be a substring of the Element data.
Hexadecimal Value	The Element data shall be equal to the entered value.
Hexadecimal Interval	The Element data should be within the interval.
Regular Expression	The Element data shall match the regular expression.
Regexpr. matching part of String	A part of the Element data shall match the regular expression.
Exists	The Block/Element exists. Set condition to 'No' if an element to check that a block/element does not exist.

- 3 Enter the condition and click "Add Condition". Conditions can be set on several Elements.

Removed a condition

- 1 click "Delete" button to the right of the condition.

5.7.4 Element Assignments for an Event Trigger

- 1 Click the document "Assignments" in the navigation tree to the left. The view will be shown as in [figure 20](#).

Figure 20. Adding an element assignment to an Event Trigger

There are four different types of assignments; translations, definitions, copy block, and selections.

To add a new assignment

- 1 Click the respective add button, see [figure 20](#), and follow instructions further on in this document.

Several different assignments can be added to an Event Trigger. An existing assignment can be edited by clicking "Edit" directly below the overview of the assignment, and then follow the same instruction as for adding.

To delete an existing assignment

- 1 Click "Delete" directly below the overview.

To change the order of the assignments

- 1 select an order number for the assignment to be moved and click "Move".

5.8 Translations

By applying a Translation Table, the value of an Element can be translated to another value and stored. The value can then be used to create for example display messages and alarm presentations.

- 1 Click the "Add Translation" button. A new window, such as the one in [figure 21](#) opens.

Add Translation

Source Element
 -Element Type- (Create Local)_(Create Persistent)
 No selection Cont...
 No selection

Translation Table
 No selection (Create Table)

Destination Element
 -Element Type- (Create Local)_(Create Persistent)
 No selection Cont...
 No selection

Figure 21. Applying a Translation Table.

- 2 Select the element value to be translated.
- 3 Select the Translation Table to be used.
- 4 Select the Element to be defined, i.e. where the translated value should be stored.

If there is no match for the translation, a default value can be used.

- 5 Enter a text and select whether the source value, that there were no translation for, should be included or not.

Default Translation

Value to use if no Source Element value matches the one wished to translate.

Use text	Use Source Value
<input type="text"/>	<input type="text" value="No"/>

0310

Figure 22. Defining a default translation.

5.9 Definitions

The Element data can be modified by adding more data to an Element. Several Elements can also be combined and stored in an Element. This can, for example, be used to create display messages. It is also possible to create a new Element with user defined data.

- 1 Click the “Add Definition” button. A new window, as shown in [figure 23](#) opens.

Add Definition

Create/Edit definition by writing text and adding parts of Element values to the Definition string

Definition string

Numeric evaluation

Use Element value

No selection

-Element Type- (Create Local) (Create Persistent)

No selection

Cont...

Part of Element	Separator / Expression	From - To (Int)
-Part of Element-		

Add

Destination Element

No selection

-Element Type- (Create Local) (Create Persistent)

No selection

Cont...

Submit Close

Figure 23. Adding a Definition.

- 2 Enter the Definition string. The Definition string consists of text and Elements.

Text is written directly in the “Definition string” field. Elements can easily be added by using the fields and buttons below the field.

Note: When you enter something in *Separator / Expression* you will have to add backslash before these characters: (\), (<), (>) and (.). This concerns; regular expression, regular expression separator, and xpath. See example below.

Create/Edit definition by writing text and adding parts of Element values to the Definition string

Definition string

<[in] Message/ :Body, xpath/bookstore/book [position() \<3] >

Numeric evaluation

Use Element value

No selection

[out] (Create Local) (Create Persistent)

~Message/

Cont...

Part of Element	Separator / Expression	From - To (Int)
xpath	xpath/book[position()\<3]>	

Add

Figure 24. A (\) is added before the (<) character in the xpath expression.

Part of Element	Description
character	Returns specified characters from the string.
complete	Returns the whole Element.
regular expression	Returns the part of the string that matches the expression.
regular expression separator	The element value can be divided into parts by separating it using a regular expression. The first part has the integer value 1.
separator	The element value can be divided into parts by separating it using a specific character. The first part has the integer value 1.
xpath	Returns the content in the Element specified by the xpath expression. The XML syntax in received data must be correct for the xpath in part of elements. If received data includes non-XML data it must first be removed. It is possible to separate expressions in different ways, you can add applicable characters between the expression in the <i>Definition string</i> . If nothing is added to the string it will by default separate the expression with a semicolon. This is done in the Definition string field, see example in figure 25 where colon is added.

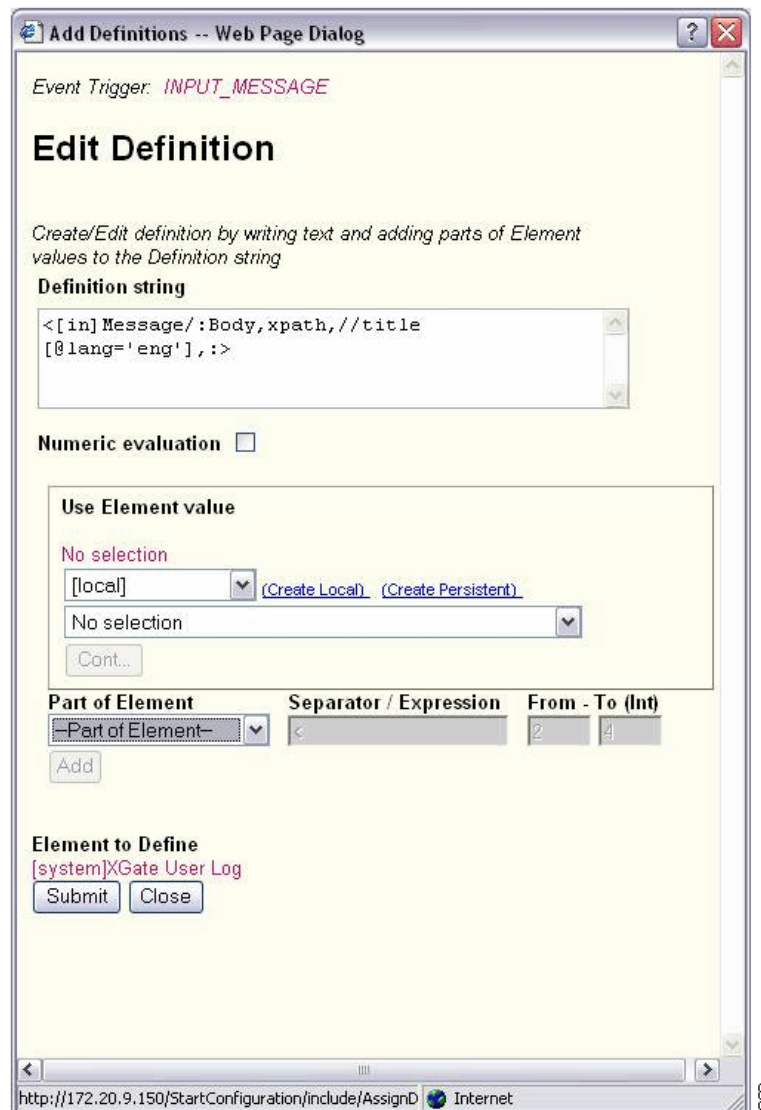


Figure 25. In the Definition string field, colon is added to separate the expression.

- 3 Click "Add" for each Element that should be added.

By marking the "Numeric evaluation" check-box, the entered information will be evaluated, for example the value of the destination element will be 3 if the definition string is 1+2. If the check-box is not marked, the entered information will not be evaluated, i.e. the value of the destination element will be "1+2".

- 4 Click "Submit" to apply it to the Event.

Here, the system element Unique ID can be used to create a unique block ID.

- 5 Select the Element to be defined, i.e. where the new data should be stored.

When some of the elements are chosen a combobox with predefined values appears over the Destination Element box.

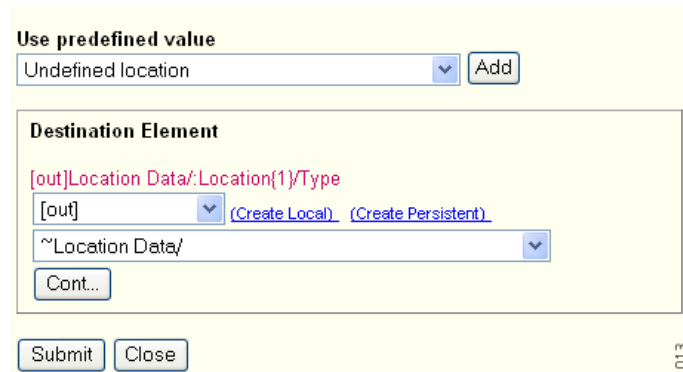


Figure 26. Predefined values for some of the elements.

5.10 Copy Block

It is possible to copy a complete block to another block.

- 1 Click the "Copy Block" button. A new window, such as the one in [figure 27](#) opens

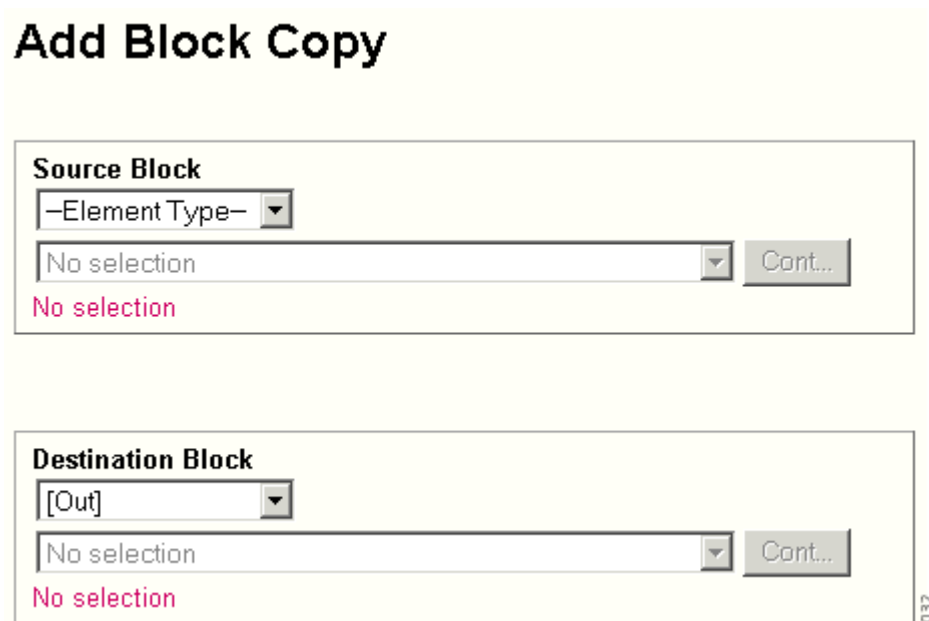


Figure 27. Copy the content in one block to another.

- 2 Select the block to be copied and then where it should be stored.
- 3 Click "Submit".

Note: The attached delivery block will not be copied from one block to another.

Note: Inherited blocks in incoming blocks will be copied, for example when copying the block `[in]Alarm` to `[out]Presentation/Alarm` the block `[in]Alarm System 900/Alarm` will be copied if it was an alarm from System 900. Other elements and groups in `[in]Alarm System 900` will not be copied.

5.11 Add Selection

It is possible to select one element that are included in multiple blocks. It is also possible to set a condition on the element value when making the selection. The selected elements can then be sorted. The order can depend on another value in the same multiple block.

- 1 Click the "Add Selection" button. A new window, such as the one in [figure 28](#) opens.

Add Selection of Elements

Select a multiple Element

No selection

-Element Type-

No selection

Cont...

Comparison type No selection

Expression
Enter the condition to match in the field below.

Figure 28. Selecting one or several elements from a multiple block.

- 2 Select the multiple elements that should be in the selection.
- 3 Mark the "Select All" check-box to get all multiple elements/blocks.
- 4 Then, set a condition that has to be fulfilled to include the element in the selection. Conditions are set in the same way as for the triggers, see [5.7.3 Match Conditions for an Event Trigger](#) on page 22. If all elements should be included in the selection, the "Comparison type" should be "Exists".

The selected elements can then be sorted. The order can depend either on the selected element or another element within the same multiple block.

Sort selected element by other element

No selection

-Element Type-

No selection

Cont...

Define how the element above shall be used when sorting the selected multiple elements.

Type of element	Sort order
Integer	Lowest value first

Check this box if this selection shall be added to an existing selection.

Add to existing selection

Submit Close

058

Figure 29. Sorting selected elements.

- 5 If the order should depend on another element, select it.
- 6 Set the type of element value, 'integer' or 'string'.
- 7 Select if the order should be 'Lowest value first' or 'Highest value first'.

The selected elements can also be added after the elements in an existing selection, by checking the "Add to existing selection" check-box. This can be used to order elements when there is no possibility to sort them with only one sort condition.

Example: Add to existing selection

Different location types should be in order of importance, for example that the DECT beacon locations are considered as more important than a DECT base station location. If all locations were selected and sorted in time order, either the base station should be first in the selection or the beacon locations should be in reversed time order (base station location will always have the time 0). Instead, first create a selection where the DECT beacon locations are selected and sorted in time order. After that create a new selection where the DECT base station location is selected, and add that selection to the existing selection.

5.12 Activations for an Event Trigger

It is possible to activate an External action, Delay action, or Action Group from the Event Trigger. Both a default, and conditioned activation can be specified. It is possible to set conditions on two different elements for the conditioned activation. The default activation will take place when the conditions are not fulfilled, or when no conditions are set.

- 1 Click the document "Activations" in the navigation tree to the left.

The view for the default activations will be as shown in [figure 30](#).

Event Trigger: *Example event trigger*

Default Activation
Action Group: User command group 1

Set Default Activation

Figure 30. Configure default activation

- 2 Select the Activation Type, and then select an Action or Action Group.
- 3 Click "Submit".

To change, make a new selection, click "Submit" again. The activation can be removed by clicking "Delete".

The conditioned activation is specified by first selecting one or two Elements to put conditions on.

- 4 Select one or two Elements to put conditions on.

Select Elements to have conditions on

No selection

[\(Create Local\)](#) [\(Create Persistent\)](#)

Comparison type

Figure 31. Select which element(s) that should be used for conditions.

The *Comparison Type* has predefined types to chose of. The condition is constructed with expression types listed in the scroll list. It can for example be a string, or part of a string that the condition should be compared to. For a description of the expression types, see page 22.

- 5 Select comparison type in the scroll list.

- 6 Enter which value or element value that each element should equal.

Enter Condition on Element 1: [Local]Test event element

Equals value OR

Equals value of

-Element Type-

No selection

No selection

035

Figure 32. Enter the condition for the element. Element 2 looks exactly the same.

- 7 Select which action/action group that should take place when the conditions are fulfilled.
- 8 Click "Submit".

Activate when conditions are matched

Set Activation

-Activate Type-

No selection

036

Figure 33. Select the type of action that should be started and then select the action.

Several conditions can be set. To delete an activation, click "Delete" to the right of the condition in the overview.

5.13 Response Triggers

Incoming events will be matched with all active Response Triggers. If all conditions in an Response Trigger are fulfilled, the Event will be processed, i.e. Element Assignments will be made and one or more actions started.

5.13.1 Creating, sorting, renaming, deleting, and copying Response Triggers

A Response Trigger is created, sorted, renamed, deleted, and copied in the same way as an Event Trigger.

5.13.2 Getting an overview of a Response Trigger

- 1 Click the name of the Response Trigger in the navigation tree to get an overview.

5.13.3 Match Conditions for a Response Trigger

There are some differences between the match conditions for Event Triggers and Response Triggers. The Response Triggers are not activated on the match conditions page, but when a response to an External Action is expected. There is not any possibility to block the Response Trigger or limit its lifetime. When setting the conditions, it is also possible to use

Local, Persistent, and System elements. Selection is done in the same way as for Element Definitions. The view will be as shown in [figure 34](#).

Enter Condition

Select Element

 No selection

Comparison type

Enter the condition to match in the field below.

Add data from Elements to the condition field by using the input rows below.

Use Element value

 No selection

Part of Element	Sep.	From	To (Int)
<input type="text" value="-Part of Element-"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

037

Figure 34. Elements in the response can be compared to Local Elements created in the Event that initiated the Action that expects a response, or Persistent elements, or System elements.

5.13.4 Element Assignment for a Response Trigger

Assignments for Response Triggers work in the same way as for Event Triggers, see [5.7.4 Element Assignments for an Event Trigger](#) on page 23 for more information.

5.13.5 Activations for a Response Trigger

Activations for Response Triggers work in the same way as for Event Triggers, see [5.12 Activations for an Event Trigger](#) on page 32 for information about how to set conditions and start actions.

5.14 Delay Actions

This Action starts one or several Actions, or an Action Group after a delay. The delay is set in seconds.

5.14.1 Creating, renaming, deleting, and copying a Delay Action

- 1 Click the text "Delay Actions" in the navigation tree to the left. The view will be as shown in [figure 35](#).

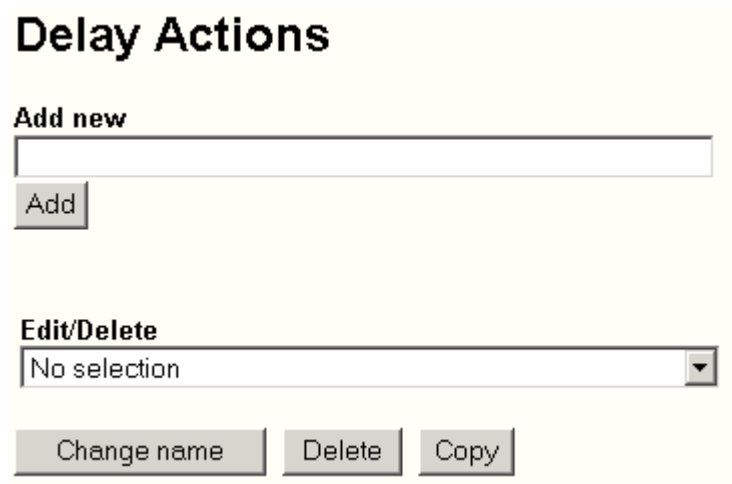


Figure 35. The view for the folder Delay Actions.

Creating

- 1 Enter the name of the action, then click "Add" to create a new Delay Action.

Renaming

- 1 Select the name of the action to be renamed. Click "Change name".
- 2 Enter the new name and click "OK".

Deleting

- 1 Select the name of the action to be deleted, and click "Delete".

Copying

- 1 Select the one to be copied, and click "Copy". Enter a name on the copy and click "OK".

5.14.2 Getting an overview of a Delay Action

- 1 Click the name of the Action in the navigation tree to get an overview of it.

5.14.3 Element Assignments for a Delay Action

Assignments for Actions work in the same way as for Event Triggers, see [5.7.4 Element Assignments for an Event Trigger](#) on page 23.

5.14.4 Activation for an Delay Action

- 1 Click the document "Activation" in the navigation tree to the left. The view will be shown as in [figure 36](#).

Figure 36. Configure the activation after the delay.

- 2 Enter how long the delay should be in seconds. After the delay, another action or action group should be started. It is possible to set conditions in the same way as for an Event Trigger, see [5.12 Activations for an Event Trigger](#) on page 32 for more information.
- 3 Click "Submit".

5.15 External Actions

An External Action sends data to an external system. A Response Trigger can be activated and time out behaviour specified if a response is requested. Information needed when the Response Trigger is activated must be stored in Local elements.

5.15.1 Creating, renaming, deleting, and copying an External Action

- 1 Click the text "External Actions" in the navigation tree to the left. The view will be shown as in [figure 37](#).

Figure 37. The view for the folder External Actions.

Creating

- 1 Enter the name of the action, then click "Add" to create a new External Action.

Renaming

- 1 Select the name of the action to be renamed. Click "Change name".
- 2 Enter the new name and click "OK".

Deleting

- 1 Select the name of the action to be deleted and click "Delete".

Copying

- 1 Select the one to be copied and click "Copy".
- 2 Enter a name and click "OK".

5.15.2 Getting an overview of an External Action

- 1 Click the name of the Action in the navigation tree to get an overview of it.

5.15.3 Element Assignments for an External Action

Assignments for External Actions work in the same way as for Event Triggers, see [5.7.4 Element Assignments for an Event Trigger](#) on page 23 for more information.

5.15.4 Selecting what to send for an External Action

- 1 Select the block to be sent.

Set/Change Block

Select which Block to send

[out]

No selection

No selection

Cont...

Select External Interface or use default

Default

041

Figure 38. Settings for which block to be sent from an External Action.

Each block that can be sent to the external system has a default External Interface. If another External Interface is to be used, it has to be specified.

5.15.5 Response Handling for an External Action

As default, no response is requested for an Action. If a response is requested the response handling has to be configured.

- 2 Click the document "Response Handling".

- 3 First enter the Response Trigger(s) to be used for this External Action.

Response Handling

Existing Response Triggers

Add Response Triggers to match

(Create Response Trigger)_

042

Figure 39. Select Response Triggers for the Action.

- 4 Select the Response Trigger to be matched on response, then click "Add".
- 5 Click "Delete" to remove the Response Trigger from the Action.

If the response has not arrived within a specified time, another action or action group can be started.

Timeout behaviour

Enter Timeout Time (s)

043

Figure 40. Setting timeout for the response.

- 6 Set a timeout in seconds, then click "Submit".

On a timeout, another action or action group should be started. It is possible to set conditions in the same way as for an Event Trigger, see [5.12 Activations for an Event Trigger](#) on page 32 for more information. Click "Submit".

5.16 Action Groups

An Action Group is a set of Actions that will be activated together.

5.16.1 Creating, renaming, deleting, and copying an Action Group

- 1 Click the text "Action Groups" in the navigation tree to the left. The view will be as shown in [figure 41](#).

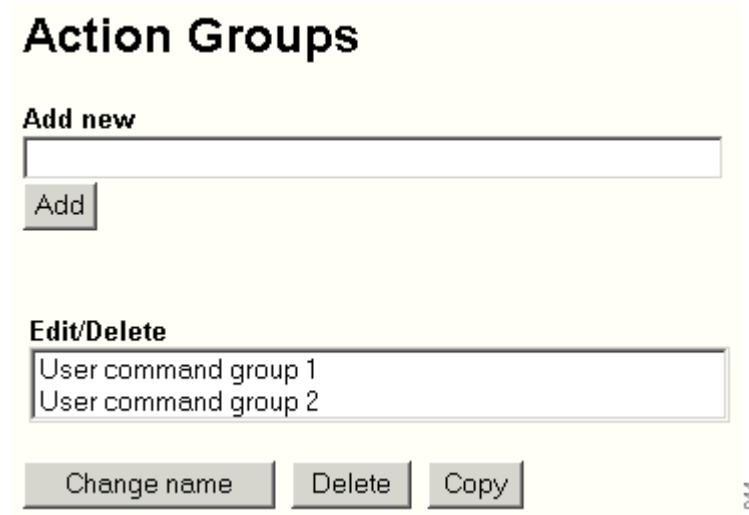


Figure 41. The view for the folder Action Groups.

Creating

- 1 Enter the name and click "Add" to create a new group.

Renaming

- 1 Select the Action Group to be renamed. Click "Change name".
- 2 Enter the new name, and click "OK".

Deleting

- 1 Select the Action Group to be deleted, and click "Delete".

Copying

- 1 Select the Action Group to be copied and click "Copy".
- 2 Enter a name and click "OK".

5.16.2 Configuration of the Action Group contents

- 1 Click the name of the Action Group in the navigation tree to the left. The view will be shown as in [figure 42](#). All existing Actions are shown below the controls.

Action Group: User command group 1

Change Name

Delete

Group Actions that shall be run together into an Action Group

Add/Remove Actions to/from Action Group

External Actions

Delay Actions

Add

Existing Actions in selected Action Group

Move Remove

045

Figure 42. The view for an Action Group document.

- 2 To add an Action to the group, select it, then click "Add".
- 3 The order of the actions in the group can be sorted. To change the order, select the action to be moved, enter the order number and click "Move".
- 4 To remove an Action from the group, select it in the list, then click "Remove".

5.17 External Interfaces

The External Interface is the specification of where information should be sent. To be able to send data to an external system, the destination has to be specified. The destination can either be specified with IP address and service or that the Unite Name Server (UNS) should be used to get a destination. In the setup of the External Interfaces, transmission parameters, for example number of transmissions, can also be set up.

Each block that can be sent has a default External Interface. All default External Interfaces that handle messages, i.e. Message, Message with Confirmation, Interactive Message, and Erase Message, use the UNS to get information about the destination. The UNS is set up in the administration pages of the module. It is also possible to make your own interfaces, for example if some messages should be sent without using the UNS.

The default External Interface cannot be used when sending Output Activity blocks to the module outputs. Therefore an User Defined External Interface called "AMS Output

Activity" has been created in the default database that can be used when activating these outputs.

5.17.1 External Interface Parameters

The status messages that can be received is on the USD level (USD means Unite Service Delivery) if nothing else is stated.

The table below gives an overview and description of all parameters in the External Interfaces.

Parameter	Description
IP Address	The IP address of the module that should handle the block. If it is this module, the IP address can be set to 127.0.0.1 (localhost). The IP address should not be entered if the UNS is used.
Service	The service in the module that should transmit the block. See <i>System Planning, Unite , TD 92258GB</i> for information about services. The Service should not be entered if the UNS is used.
Service address	Optional additional addressing information to the service, for example a System 900 module address.
User	The ID of the receiver, for example a portable device Call No. To minimize the number of External Interfaces, the User is normally stated in the Delivery block.
UNS	The UNS can be used to get the destination of the User. If the UNS is not used, the block will be sent according to the information in the "IP Address" and "Service" fields.
Accept / Completion	Request for "Acceptance" and "Completion" status from receiving application.
Availability	Request for "Availability" status from receiving application.
Redirection	Request for information about redirection, i.e. the block is redirected to another destination than stated.
Delivery receipt	Request for delivery receipt, i.e. the block has reached its final destination.
Not to absent	The block will not be transmitted to a unit that has reported absence. This feature is interface dependent.
Summary status	Request status that indicates if the block has been transmitted successfully or if an error occurred.
Priority (1-5)	The USD priority of the block. 1=alarm and 5=low.
Time to live (seconds)	The USD TTL i.e. how long time the block should be handled and statuses be sent as response. Up to 999999 seconds. Default is 900 seconds (15 minutes).
Transmissions	How many times one should try to transmit the block to the Unite destination.
Retry delay (seconds)	How many seconds it should be between each transmission retry.

5.17.2 Creating, changing, and deleting an External Interface

- 1 Click the text "External Interfaces" in the navigation tree to the left. The view will be shown as in [figure 43](#). All existing interfaces, both user defined and default, are listed below here.

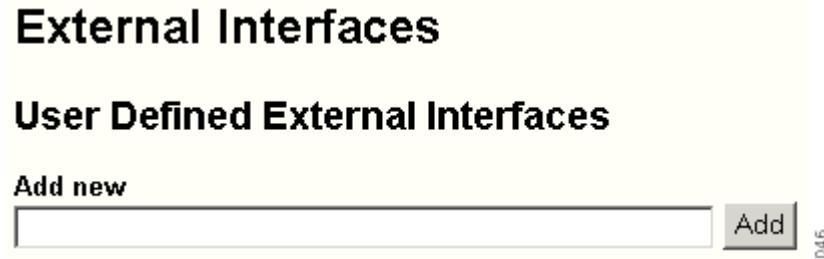


Figure 43. The view for the folder External Interfaces.

Creating

- 1 Enter the name and click "Add" to create a new External Interface.

Changing

- 1 Enter the new value and click "Change".
By clicking "Cancel" the settings that are stored in the database will be shown again.

Deleting

- 1 Click "Delete" below the External Interface to delete it.

To facilitate programming the delivery information can be added in the External Interface. In that case, either an IP address and which service that should be used have to be specified or else the UNS check-box has to be marked. If the UNS is used, the user always has to be specified, either in the Delivery Block or in the External Interface, else the block will not be transmitted. See *Installation and Operation Manual AMS, TD92047GB* or separate service documentation for more information about services.

5.18 Clearing Content in Blocks

The whole content, or part of the content, in existing blocks can be cleared. The procedure to do so is to add a new definition on desired *Element Assignments* page.

The "Use element value" wizard could be used to get the correct syntax for the expression copied to the "Definition string" text field.

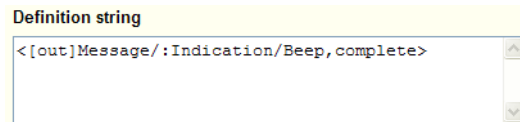
- 1 Open the *Element Assignments* page and click "Add Definition".
- 2 Enter an expression selecting which block or part of block that should be cleared, in the *Definition string* text field.

Example:

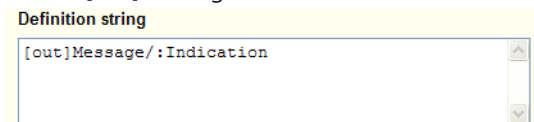
All content in the *Indication* part of a *Message block* shall be cleared.

To get the correct syntax the wizard in "Use Element value" is used. In the wizard any element located inside the indication group can be selected, for example Beep. In "Parts of Element" any option can be selected, but "complete" requires no additional input fields.

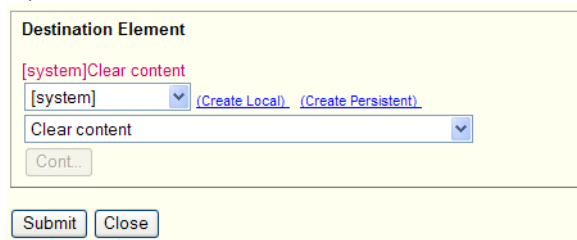
After the wizard is run, "<[out]Message/:Indication/Beep, complete>" has been added to the "Definition string" text field.



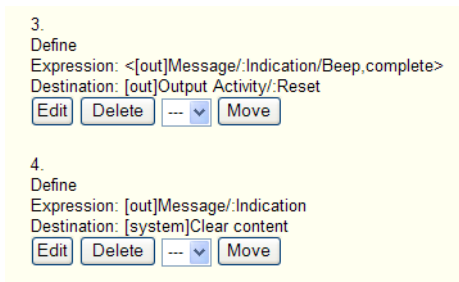
First, the "Part of element" method should always be deleted together with the leading and trailing angle brackets, leaving the text "[out]Message/:Indication/Beep". Since the whole indication group of the Message should be cleared and not only the Beep part, the "/Beep" part of the text is also removed and the final text will be "[out]Message/:Indication".



- 3 Select *Element Type* "System" and "Clear content" in the *Destination Element* drop-down lists.



- 4 Click "Submit". The new definition is in this case added below the original definition in the Existing Element Assignments list.



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5.19 Limitations

- Max. 1000 activities
- 20 seconds in total time

A session will be removed if the limitation is reached, a fault log is then sent to notify about the removed session.

Example of activities are:

- translations
- definitions
- copy block
- selections
- every activation
- every sent block
- every added response trigger

6 Troubleshooting

Fault Log

In a complex configuration where too many activities are added, it can result in time out during runtime which leads to a removed session. This fault log will then appear:

ERROR LOG: *Too many commands in activation, command group 'name' discarded*

ESS: *Too many commands in one activation (circular loop?)*

Or

ERROR LOG: *Timeout in activation, command group 'name' discarded*

ESS: *Timeout in one activation (circular loop?)*

Refer to [5.19 Limitations](#) on page 44 for maximum number of activities.

Time out during Activation of Large configurations

Refer to [5.4 Activating a new Configuration](#) on page 13 on how to prevent time out during configuration.

7 Related Documents

Data Sheet, Alarm Management Server	TD 92046GB
Data Sheet, Alarm Management Client	TD 92144GB
Function Description, Interactive Messaging (IM)	TD 92168GB
Installation Guide, ELISE (first version of ELISE hardware)	TD 92020GB
Installation Guide, ELISE2	TD 92232GB
Installation and Operation Manual, Alarm Management Client	TD 92145GB
Installation and Operation Manual, Alarm Management Server	TD 92047GB
Function Description Push-To-Talk (PTT) in Ascom VoWiFi System	TD 92493GB

8 Upgrade Information

For details in the latest version, see change bars in the document..

Ver.	Date	Description
A	Dec. 2005	See Upgrade Information in the <i>Installation and Operation Manual, Alarm Management Server, TD 92047GB</i>
B	Mars 2006	<ul style="list-style-type: none"> • 'Tag' has been added to the Elements in some of the Blocks. • The AMS Status Blocks has been renamed to Event Handler Status Blocks. In general, AMS is renamed since the Event Handler is used by other modules as well. • Activity Log has been added to the System Elements. • Some new chapters have been added, which been removed from the <i>AMS Installation and Operation Manual, TD 92047GB</i>, see also the upgrade information in that document.
C	Sept. 2006	<ul style="list-style-type: none"> • Xpath information regarding XML data has been added. • Description of <i>Delivery ID</i> in System Elements has been clarified. • A note about expressions and characters has been added regarding Regular Expression. • Modal Display is renamed to Sticky mode. • Appendix A is updated with an example with exclude address. • Appendix B is updated. • The reference <i>Installation and Operation Manual, AMS, TD 92047GB</i> has been replaced with <i>System Planning, Unite, TD 92258GB</i> – where information about System Services is found.
D	Feb. 2008	<p>Changes in Appendix B</p> <ul style="list-style-type: none"> • New Call Handling blocks in database: – Location Request (no elements), – Location Response (no elements), – Device Property Request with elements; Type and Device profile. <ul style="list-style-type: none"> – Device Property Response with the group Device profile. – Call Setup Response with elements: Priority and Status. • New elements to Call Setup block; Priority, Time to live, Answer mode, Disconnect mode, Speaker mode, Microphone mode, Call number and Request response. • "Update" element in IM block changed to a group with elements; Method and Request status. • Two elements in On Selection (in IM block) changed to groups: <ul style="list-style-type: none"> – "User response" group with elements; Data type and Text label. – "Call number" group with elements; Digits, Method and Microphone mode. • New elements to IM Response block; Update status and Priority. • The Action Status block has been added to XGate blocks. <p>Note: The changes applies for AMS ver. 5.30 and XGate ver. 2.20</p> <p>Added <i>Function Description Push-To-Talk (PTT) in Ascom VoWiFi System, TD 92493GB</i> to Related Documents. Added information about ASCII values, see under 5.5.4 System Elements on page 17.</p>
E	April 2008	The Status element added to B.6.2 Input Activity on page 90.
F	May 2009	<ul style="list-style-type: none"> • New element "Clear content" in 5.5.4 System Elements on page 17. • New chapters: 5.6.3 Importing/Exporting Entries on page 20 and 5.18 Clearing Content in Blocks on page 43. • New element and groups in B.1.1 Delivery on page 64. • Information in B.5.3 Availability Response on page 85.
G	Nov. 2010	New elements, "Intensity" and "Colour", in B.3.1 Message on page 72, and Indication group added to B.4.1 Call Setup on page 80.

Appendix A: Programming Examples

For all examples, the default database is installed.

To get the complete system to work the translation tables that are defined in the default database have to be specified. All location codes and a description of the location have to be added to the table 'Location descriptions'. Also all call numbers and the respective user have to be added to the table 'Alarm units'.

A.1 Trigger for Manual Alarms

When a manual alarm (push button) is sent, a message should be sent to the guard. The message should include the position of the alarming unit. It should also be written to the log who sent the alarm and from where it was sent.

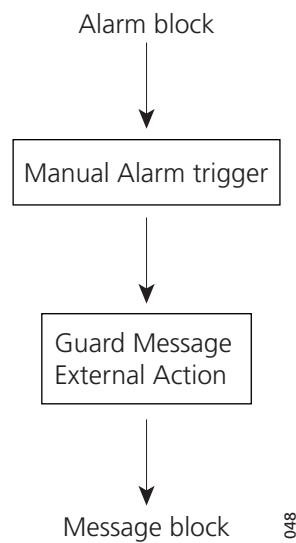


Figure 44. Overview of how an incoming alarm can be handled

A.1.1 The Event

The event that should be triggered is an incoming alarm block that includes several elements, some are of interest for this application.

```

[in]Alarm/Delivery/Source address/User      : 143
[in]Alarm/Type                              : 03
[in]Alarm/Location Data/Location{1}/Code   : 024A
[in]Alarm/Location Data/Location{1}/Time   : 0005
[in]Alarm/Location Data/Location{2}/Code   : 024B
[in]Alarm/Location Data/Location{2}/Time   : 0025
  
```

The block can include several more elements, refer to [Appendix B](#) for more information.

A.1.2 Manual Alarm trigger

An Event Trigger with name Manual Alarm is created and then defined as described below.

Conditions

First the trigger conditions have to be set up. The only condition for the trigger is that it is the correct type of alarm that has been sent.

Element	Comparison type	Value
[in]Alarm/Type	Integer	03

Assignments

Translation

In the event, the number of the alarming unit and its current position are available. To facilitate for the guard and make the log more readable these two elements should be translated to text instead of digits.

Translation Table name	Source Element	Destination Element
Location descriptions	[in]Alarm/Location Data/ Location{1}/Code	[local]Location Text
Alarm units	[in]Alarm/Delivery/ Source Address/User	[local]Alarm Unit Name

Define

When an alarm is received information should be written to the log. This is done by defining the System element 'User log'. For this alarm a text including who sent the alarm and from where, should be written to the log.

```
[system]User log = Alarm: <[local]Alarm Unit Name> (<[in]Alarm/Delivery/  
Source Address/User>) in position <[local]Location Text>  
(<[in]Alarm/:Location Data/Location{1}/Code>.)
```

The text inside angle brackets (< and >) are the value of an element. The text that will be written to log is: 'Alarm: John Smith (143) in position Building A Room 0367 (024A)'.

The element 'User log' will not be added to the Event, its contents will only be written to the log file.

Activations

When an alarm is received, a message should be sent to the guard. There are no conditions on any element for the action to take place, so a default activation should take place. We create an External Action by clicking 'Create' and enter the name 'Guard Message'. Then select it in the list and click "Submit".

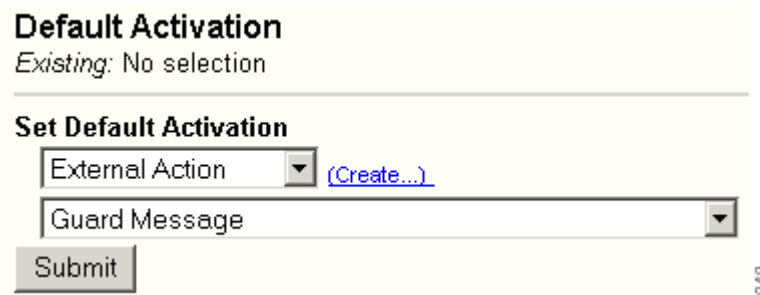


Figure 45. Click the 'Create' link to create an External Action.

A.1.3 Guard message, External Action

When the alarm is received a message should be sent to the guard. Here follows the definition of the action that was created earlier.

Assignments

Define

First the address of the Guard, for example 200, has to be defined. Prefix needed for messages to System 900 should not be specified here, it is added automatically.

[out]Message/Delivery/Destination Address/User = 200

The message text that should be sent also has to be defined.

[out]Message/Subject = Manual Alarm in <[local]Location Text>

The message that will be sent is 'Manual Alarm in Building A Room 0367'.

Send Block

Select that the block [out]Message should be sent. The default External Interface should be used.

Now most of the specifications and assignment are made, but the Translation Tables that we created earlier are not yet specified.

A.1.4 Exclude Address

When a guard sends an alarm message to a group he does not want to get the alarm himself. You can then exclude that device when sending to a group.

Assignments

Define

The content of the excluded address is copied from the address of the received alarm.

[out]Message/Delivery/:Exclude address{1}/User = <[in]Alarm/Delivery/:Source address/
User,complete>

[out]Message/Delivery/:Exclude address{1}/Service = <[in]Alarm/Delivery/:Source address/
Service,complete>

[out]Message/Delivery/:Exclude address{1}/Service address = <[in]Alarm/Delivery/:Source
address/ Service address,complete>

[out]Message/Delivery/:Exclude address{1}/IP address = <[in]Alarm/Delivery/:Source
address/ IP address,complete>

A.2 Trigger for Mobile Data

A door can be opened by sending data with a specific code. After 20 seconds, the door should be closed again. The trigger for mobile data is made general so that it can be used for many different purposes. If the data is not associated with an action in the trigger, a message should be sent to the sender with information that the data was not recognized.

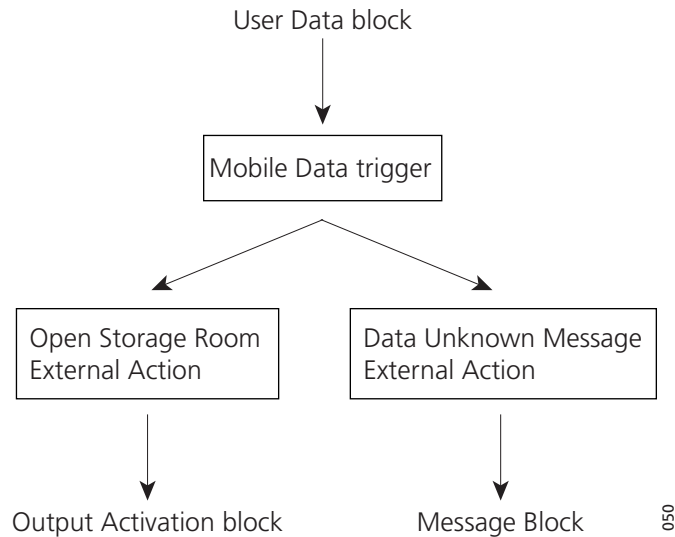


Figure 46. Overview of how mobile data can be handled in the Event Handler.

A.2.1 The Event

The event that should be triggered is a "User Data" block. The elements that are of interest in this case are listed below.

[in]User Data/Delivery/Source Address/User	143
[in]User Data/Data	230

A.2.2 Mobile Data trigger

An Event Trigger with name Mobile Data is created, and then defined as described below.

Conditions

First, the trigger conditions have to be set up. The condition for the trigger is that it is an "User Data" block that has been received.

Element	Comparison type	Value
[in]User Data	Exists	

Activations

It should be possible to perform different actions depending on the mobile data. This means that a Conditioned activation with conditions on the element '[in]User Data/Data' have to be specified. If the data is unknown to the trigger a message should be sent back to the unit that sent the data that it was not recognized.

Conditioned Action Group activation

Conditions are set on the element '[in]User Data/Data'. Select the element and click 'Set Element 1'.

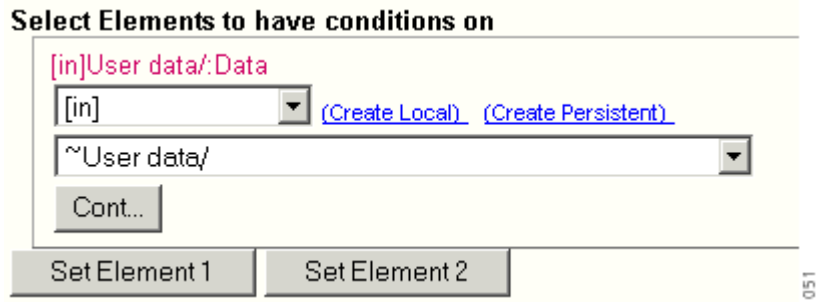


Figure 47. Select the element to put conditions on

Enter 230 as condition on element 1.

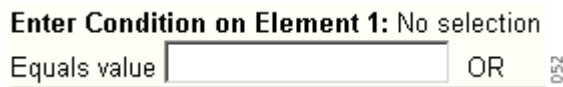


Figure 48. Conditions on elements.

If the data is 230, the storage room door should be opened. As there is no Action that does this, it is created by clicking 'Create' and then selecting External and entering the name 'Open Storage Room'.

Then select which action that should be started and click 'Submit'.

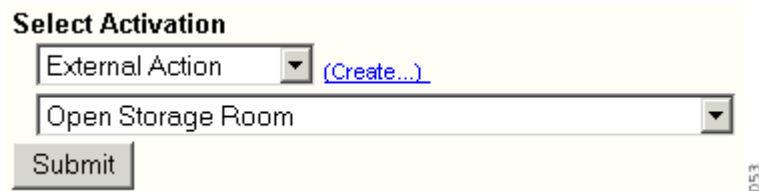


Figure 49. Creating and adding an Action to run from the Event Trigger.

Default Action Group

The mobile data was not recognized and a message is sent back to the sender. As no Action is created yet, we just create it by clicking 'Create' and enter the name 'Data Unknown Message'. Then select it in the list and click "Submit".



Figure 50. Creating and adding an Action Group to run from the Event Trigger.

A.2.3 Open Storage Room, External Action

First the storage room door should be opened. After 20 seconds it should be closed again.

Assignments

Define

The door is opened when an output on an Output Module is activated. The module address of the specific Output Module has to be specified.

[out]Output Activity/Delivery/Destination Address/Service Address = 07

The Output Module has address 07 in the system.

Which output that should be activated, how it should be activated, and for how long also have to be specified.

[out]Output Activity/Activation/Output = 02

[out]Output Activity/Activation/Type = 01

[out]Output Activity/Activation/Duration = 20

The second output on the Output Module should be activated for 20 seconds.

Send Block

Select that the block [out]Output Activity should be sent. The default External Interface should be used.

A.2.4 Data Unknown Message, External Action

If mobile data is not recognized, a message should be returned to the sender with information about the failure.

Assignments

Defines

[out]Message/Subject = Mobile data (<[in]User Data/Data>) not recognized.

The text inside angle brackets (< and >) are a reference to the element value. The message that will be sent is 'Mobile data (data that was sent) not recognized'.

The address that the message should be sent to also has to be defined.

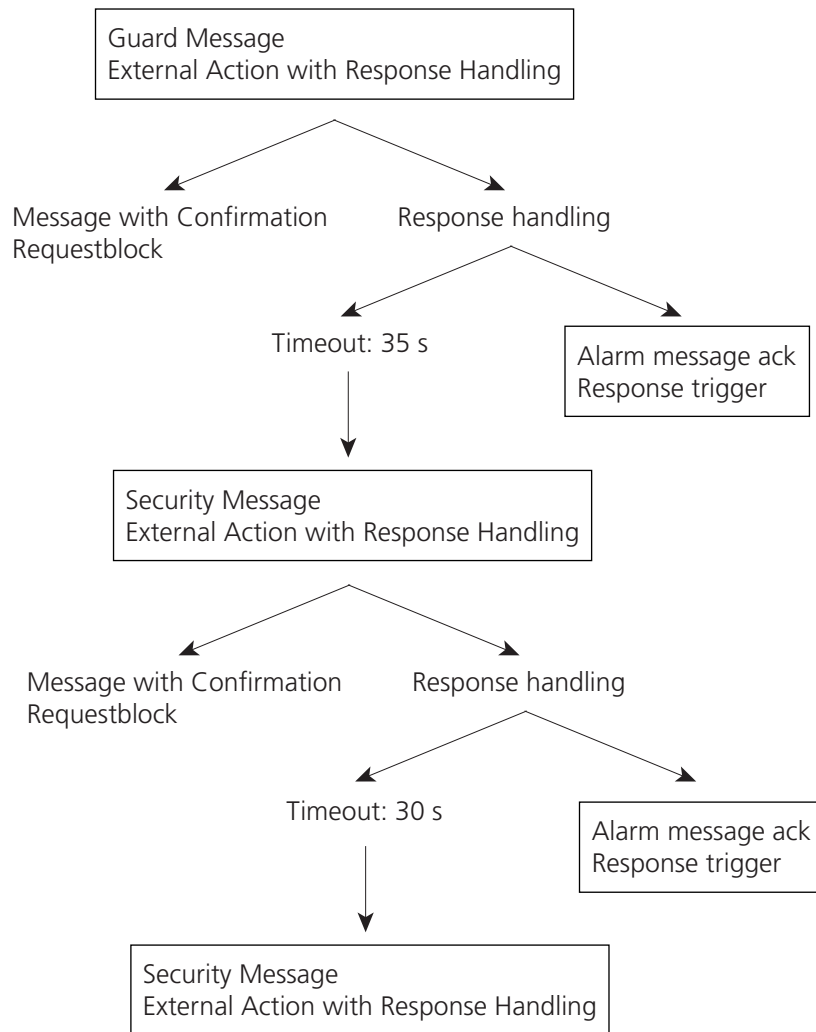
[out]Message/Delivery/Destination Address/User = <[in]User Data/Delivery/
Source Address/User>

Send Block

Select that the block '[out]Message' should be sent. The default External Interface should be used.

A.3 Sending a Message Requiring a Response

Use the configuration from chapter [A.1 Trigger for Manual Alarms](#) on page 47 and extend it as described below.



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Figure 51. Overview of how response handling for a message can be handled in the Event Handler.

A.3.1 Guard Message, External Action

The message that is sent has to request a response and response behaviour has to be specified. To get a response on a message, a 'Message with Confirmation Request' block has to be defined.

Assignments

Block Copy

We still want to send the message that was created earlier to the same address.

[out]Message with Confirmation Request/Delivery = [out]Message/Delivery

[out]Message with Confirmation Request/Message = [out]Message

Define

To be able to recognize the response we have to specify the Block ID manually.

[local]Block ID = <[system]Unique ID>

[out]Message with Confirmation Request/Delivery/Block ID = <[local]Block ID>

Response Handling

In the response handling it is specified which Response Trigger that should handle the response. It is also specified what should happen if the response hasn't arrived within a specified time. No Response Triggers are available at the moment so one with the name 'Alarm message ack' is created and chosen. If a response hasn't arrived within 35 seconds, an Action that sends a message to a group of guards with number 299 should be activated. This Action does not exist yet so it is created with the name 'Security Message' and selected, the specification is saved for later.

A.3.2 Security Message, External Action

Also the 'Security Message' requires response, but it is enough if one guard has responded. If the response hasn't arrived within 30 seconds the message will be sent again.

Assignments

Define

The address of the group of guards has to be specified.

[out]Message with Confirmation Request/Delivery/Destination Address/User = 299

The same message as before is used and the response type is also the same. Therefore, only the address of the message has to be changed.

To avoid problems with identical Block ID's a new one has to be defined.

[local]Block ID = <[system]Unique ID>

[out]Message with Confirmation Request/Delivery/Block ID = <[local]Block ID>

Response Handling

In the response handling it is specified which Response Trigger that should handle the response. It is also specified what should happen if the response hasn't arrived within a specified time. The Response Trigger Alarm Message Ack is selected. If a response hasn't arrived within 30 seconds, the same group of guards should get the same message, i.e. the Action 'Security Message' is selected.

A.3.3 Alarm message ack, Response Trigger

When a response has been received, a message should be written to the log and the session should be ended.

The Event

The response is sent in a "Message Confirmation Response" block.

[in]Message Confirmation Response/Delivery/Source address/User 200

[in]Message Confirmation Response/Status Accepted

[in]Message Confirmation Response/Delivery/Block ID

AA234

Conditions

First the trigger conditions have to be set up. The condition for the trigger is that the Block ID of the block is the same as for the message that was sent.

Element	Comparison type	Value
[in]Message Confirmation Response/ Delivery/Block ID	String	[local]Block ID

Assignments

Define

When the response is received information should be written to the log. For this response, a text including who sent the response and which alarm it is a response to should be written to the log.

```
[system]User log = Response: <[in]Message Confirmation Response/Delivery/  
Source Address/User>, Alarm: <[local]AlarmUnitName>  
(<[in]Alarm/Delivery/Source Address/User>)
```

The text inside angle brackets (< and >) are the value of an element. The text that will be written to log is: 'Response: 200, Alarm: John Smith (143)'.

The element 'User log' will not be added to the Event, its contents will only be written to the log file.

A.4 Managing Presentations on the Alarm Management Client

In this chapter it is described how to send a Presentation to the Alarm Management Client (AMC), and how to manage the acknowledge and reset requests from the AMC. It is also described how a Presentation can be acknowledged and reset from a portable device within the system. To be able to do this the device has to support Interactive Messaging. It is also necessary to define an External Interface to be able to send Interactive Messages.

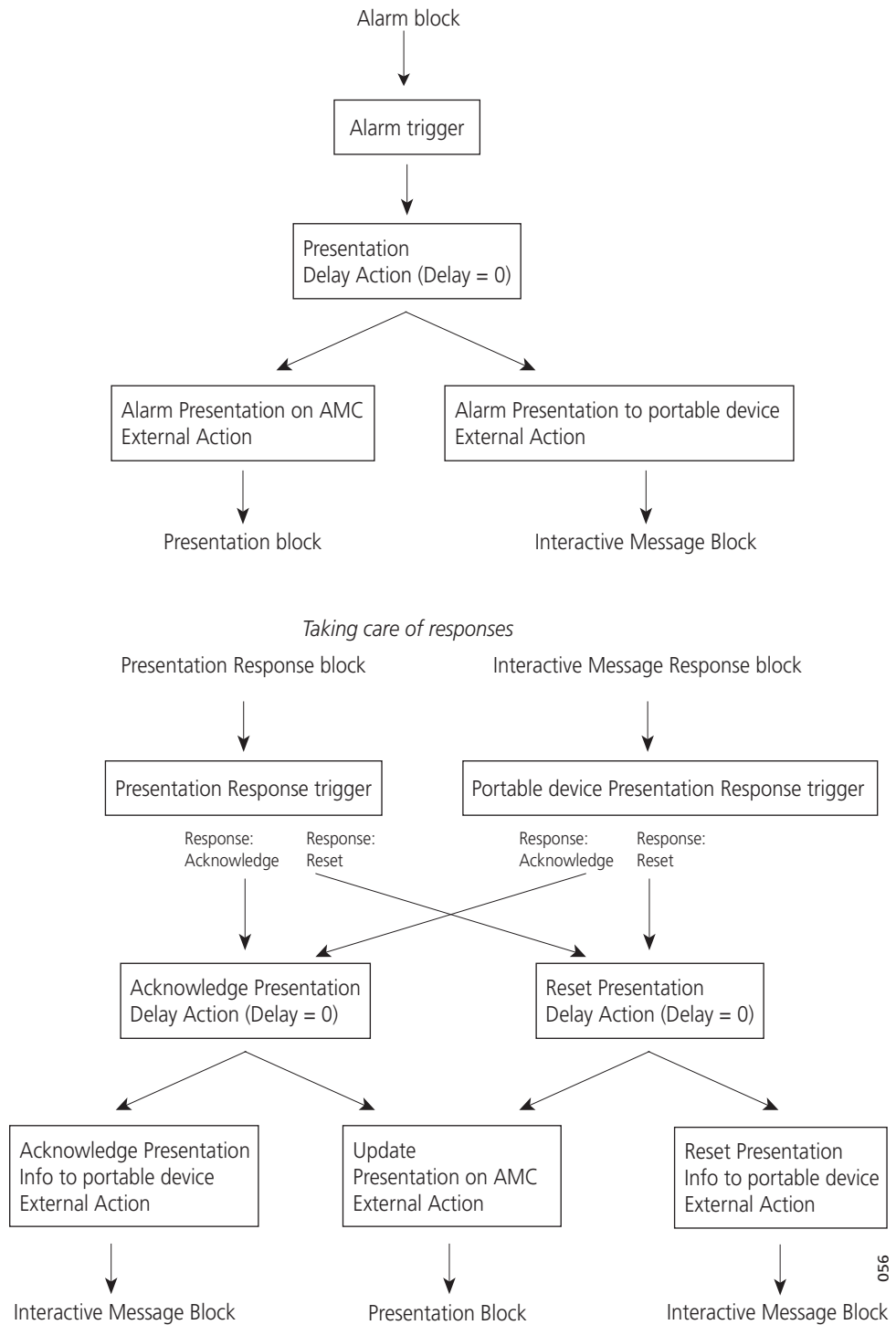


Figure 52. Overview of how a presentation can be handled in the Event Handler.

A.4.1 External Interface for Interactive Message

It will not work to send an Interactive Message with the Default External Interface so an User Defined External Interface has to be created. The definition of the External Interface is as follows:

IP Address: The IP address of the Integrated Message Server (IMS) within the system.

Service: DECT

A.4.2 Alarm trigger

The alarm trigger will process the data in all Alarm blocks and send information about the alarm to the AMC.

Conditions

If the block that has been received is an Alarm block, then the assignments in the trigger should be done and one or several actions started.

Element	Comparison type
[in]Alarm	Exists

Assignments

All information that we need is stored in local elements. Some of the information is also translated.

Define

The portable device identity of the alarm sender is stored in a local element.

[local]Alarm sender = <[in]Alarm/Delivery/Source address/User>

Translation

The last received location code is translated and stored in a local element.

Translation Table name	Source Element	Destination Element
Location descriptions	[in]Alarm/Location Data/ Location{1}/Code	[local]Alarm location

Activation

Default activation

Activate the Delay Action 'Presentation'.

A.4.3 Presentation, Delay Action

In this action the Interactive Message block is defined.

Assignments

Define

A message text with information about the alarm sender and the location of the alarm is stored in a local element. This is needed as we want to update the message text to the portable device but not to the Presentation.

[local]Message text = Alarm from <[local]Alarm sender>, <[local]Alarm location>

The response alternative has to be defined

[out]Interactive Message/Option{1}/ID = 1

[out]Interactive Message/Option{1}/Text = Acknowledge

[out]Interactive Message/Option{1}/On selection/Data Response = Acknowledge

The Interactive Message should be included in a Presentation and also sent to a portable device. The Block ID for these two has to be identical. A unique ID is stored in a local element for this purpose.

[local]Block ID = <[system]Unique ID>

Activation

Delay time = 0

Default activation

The Action Group 'Send Alarm Presentation' is started. The actions 'Alarm Presentation on AMC' and 'Alarm Presentation to portable device' are included in the group.

A.4.4 Alarm Presentation on AMC, External Action

In this action the Presentation block is defined and sent to the AMC.

Assignments

Block copy

The complete Alarm block should be included in the Presentation.

[out]Presentation/Alarm = [in]Alarm

The Interactive Message that was created earlier should also be included in the Presentation.

[out]Presentation/Interactive Message = [out]Interactive Message

Define

Define the message text of the Interactive Message with help of the local element that was created in the action Presentation.

[out]Presentation/Interactive Message/Message/Subject = <[local]Message text>

The identity number of the alarm sender has to be stored in the Presentation block as the incoming Delivery will not be available in the Presentation block.

[out]Presentation/Identity number = <[local]Alarm sender>

The last received location was translated in the action Presentation. The local element is used to define the correct element in the Presentation block.

[out]Presentation/Alarm/Location Data/Location{1}/Description = <[local]Alarm location>

The local element Block ID is used to define the block ID of the Presentation block.

[out]Presentation/Delivery/Block ID = <[local]Block ID>

Translation

Some information from the Alarm block has to be translated to display correctly in the AMC.

Translation Table name	Source Element	Destination Element
Location descriptions	[in]Alarm/Location Data/Location{2}/Code	[out]/Presentation/Alarm/Location Data/Location{2}/Description
Alarm units	[local]Alarm sender	[out]Presentation/Identity
Alarm types	[in]Alarm/Type	[out]Presentation/Alarm/Description

Send block

Select to send the block [out]Presentation. Use default external interface.

A.4.5 Alarm Presentation to Portable Device, External Action

Assignments

Define

Define the address that the message should be sent to, for example 4532.

[out]Interactive Message/Delivery/Destination address/User = 4532

Also define the message text of the Interactive Message.

[out]Interactive Message/Message/Subject = <[local]Message text>

The local element Block ID id used to define the block ID of the Interactive Message block.

[out]Interactive Message/Delivery/Block ID = <[local]Block ID>

Send block

Select to send the block [out]Interactive Message.

A.4.6 Presentation Response trigger

This trigger will be activated when a Presentation Response block is received.

Conditions

If the block that has been received is a Presentation Response block, then the assignments in the trigger should be done and one or several actions started.

Element	Comparison type
[in]Presentation Response	Exists

Assignments

All information that we need is stored in local elements.

Define

The Block ID of the Presentation Response block is needed to be able to update the presentation on the AMC and also to update the Interactive Message in the portable device.

[local]Block ID = <[in]Presentation Response/Delivery/Block ID>

The information included in the block, i.e. the user that was logged on and comments, need to be stored in local variables that are used later.

[local]Presentation user = <[in]Presentation Response/User>

[local]Presentation comments = <[in]Presentation Response/User comments>

Conditioned activation

Use the element [in]Interactive Message Response/Data Response for the conditions.

Element equals Activate

Acknowledge Acknowledge Presentation, Delay Action

Reset Reset Presentation, Delay Action

A.4.7 Portable Device Presentation Response trigger

This trigger will be activated when a Interactive Message Response block is received from a portable device as an answer to a prior Interactive Message.

Conditions

If the block that has been received is an Interactive Message Response block, then the assignments in the trigger should be done and one or several actions started.

Element	Comparison type	Condition
[in]Interactive Message Response/ Data Response	Regular Expression	Acknowledge Reset

Assignments

All information that we need is stored in local elements. Some of the information is also translated.

Define

The Block ID of the Interactive Message Response block is needed to be able to update the presentation on the AMC and also to update the Interactive Message in the portable device.

[local]Block ID = <[in]Interactive Message Response/Delivery/Block ID>

Information about the sender of the response has to be sent to the AMC.

[local]Sender = <[in]Interactive Message Response/Delivery/Source address/User>

Translation

The portable device ID is translated.

Translation Table name	Source Element	Destination Element
Alarm units	[local]Sender	[local]Sender name

Define

The information is stored in local variables that are used later.

[local]Presentation user = <[local]Sender name> (<[local]Sender>)

[local]Presentation comment = <[in]Interactive Message Response/Data Response>
from portable device.

Conditioned activation

Use the element [in]Interactive Message Response/Data Response for the conditions.

Element equals	Activate
Acknowledge	Acknowledge Presentation, Delay Action
Reset	Reset Presentation, Delay Action

A.4.8 Acknowledge Presentation, Delay Action

In this action the Interactive Message block is updated.

Assignments

Define

Set that this is an update of an existing Interactive Message by defining the element 'Update'.

[out]Interactive Message/Update = OnlyExisting

The response alternative has to be updated

[out]Interactive Message/Option{1}/ID = 1

[out]Interactive Message/Option{1}/Text = Reset

[out]Interactive Message/Option{1}/Data Response = Reset

Activation

Delay time = 0

Default activation

The Action Group 'Acknowledge Presentation' is started. The actions 'Update Presentation on AMC' and 'Acknowledge Presentation Info to portable device' are included in the group.

A.4.9 Reset Presentation, Delay Action

In this action the Interactive Message block is updated.

Assignments

Define

Set that this is an update of an existing Interactive Message by defining the element 'Update'.

[out]Interactive Message/Update = OnlyExisting

The message text to the portable device is updated.

[local]Message text = Presentation has been reset.

The response alternative has to be updated as there should be no answering alternatives.

[out]Interactive Message/Option{1}/ID = 1

Activation

Delay time = 0

Default activation

The Action Group 'Reset Presentation' is started. The actions 'Update Presentation on AMC' and 'Reset Presentation Info to portable device' are included in the group.

A.4.10 Update Presentation on AMC, External Action

In this action the Presentation block is defined and sent to the AMC.

Assignments

Block Copy

The Interactive Message that was created earlier should be included in the Presentation.

[out]Presentation/Interactive Message = [out]Interactive Message

Define

The local element Block ID id used to define the block ID of the Presentation block.

[out]Presentation/Delivery/Block ID = <[local]Block ID>

Some information about the acknowledge should also be added to the Presentation block.

[out]Presentation/Action/Type = <[in]Interactive Message Response/Data Response

[out]Presentation/Action/User = <[local]Presentation user>

[out]Presentation/Action/User Comments = <[local]Presentation comment>

[out]Presentation/Action/Time = <[system]System Time>

Send block

Select to send the block [out]Presentation. Use default external interface.

A.4.11 Acknowledge Presentation Info to Portable Device, External Action

Assignments

Define

Define the address that the message should be sent to, for example 4532.

[out]Interactive Message/Delivery/Destination address/User = 4532

The block ID that was read from the Interactive Message Response block and stored in the local element Block ID is used to define the block ID of the Interactive Message.

[out]Interactive Message/Delivery/Block ID = <[local]Block ID>

Send block

Select to send the block [out]Interactive Message.

A.4.12 Reset Presentation Info to Portable Device, External Action

Assignments

Define

Define the address that the message should be sent to, for example 4532.

[out]Interactive Message/Delivery/Destination address/User = 4532

Also define the message text of the Interactive Message.

[out]Interactive Message/Message/Subject = <[local]Message text>

The block ID that was read from the Interactive Message Response block and stored in the local element Block ID is used to define the block ID of the Interactive Message.

[out]Interactive Message/Delivery/Block ID = <[local]Block ID>

Send block

Select to send the block [out]Interactive Message.

Appendix B: Blocks

The blocks that the Event Handler receives/sends are described below. The blocks consists of elements and groups of elements. A block can inherit another block and then that block will be shown as a group. Some groups and elements can occur multiple times within a block. These elements/groups are marked with a plus sign (+) in the description below.

B.1 Addressing Blocks

Blocks that are used for addressing of the blocks.

B.1.1 Delivery

The delivery block specifies the address that a block was received from or should be sent to.

Elements

Block ID	Running number. Up to 8 hexadecimal characters.
Priority	The USD priority of the block. 1=alarm and 5=low. Overrides the priority in external interfaces.

Groups

Destination address

If information is included in the "Destination address" elements, that information will override information specified in the External Interface that is used for delivery, i.e. if user, IP address or service is included in the delivery block that information will override the information stated in the External Interface.

User	The ID of the receiver, for example receiver number.
IP address	The IP address that the block should be delivered to.
Service	Which service to be used for delivery.
Service address (optional)	Addressing information to the service, for example a module address within System 900. 5 hexadecimal characters (ss/B/mm), ss = system address, B = bus (A=1/B=2), mm = module address. Only modules within the same system can be addressed. It is enough to specify the module address, i.e. mm.

Source address

The "Source address" includes information about where a response to an incoming block should be sent. It can also be used to specify that responses to an outgoing block should be sent to another destination than the Event Handler. The addressing information has to be complete, i.e. at least "IP address" and "Service" or "Service port" have to be specified, else the Event Handler will automatically set itself as receiver of responses to the block.

User	The ID of the sender, for example an application.
IP address	The IP address that the block was delivered from.

Service (optional)	Which service that was used for delivery.
Service address (optional)	Addressing information from the service, for example a module address within System 900. 5 hexadecimal characters (ss/B/mm), ss = system address, B = bus (A=1/B=2), mm = module address. Only modules within the same system can be addressed. It is enough to specify the module address, i.e. mm.
Service port (optional)	Addressing information that is used by applications that expect a response but do not correspond to a service. In this case, the port has to be used for addressing.
Call ID	The call ID of the sender.

Exclude address+

A member in a group can be defined as excluded, i.e. all members in the group, except the excluded member, will receive the paging.

User	The device number/address, see example Exclude Address in Appendix A. Note that Call ID must not be used.
IP address	The IP address that the block should be delivered to.
Service	Which service to be used for delivery.
Service address (optional)	Addressing information to the service, for example a module address within System 900. 5 hexadecimal characters (ss/B/mm), ss = system address, B = bus (A=1/B=2), mm = module address. Only modules within the same system can be addressed. It is enough to specify the module address, i.e. mm.

B.1.2 Delivery Response

The delivery response block will be sent as a reply to a delivery block.

Elements

Response ID	An ID that together with the senders address identifies the block. Up to 20 characters.
-------------	--

Groups

Sender address

User	The ID of the sender.
IP address	The IP address that the block was delivered from.
Service	Which service that was used for delivery.
Service address (optional)	Addressing information to the service.

Status

Type	<p>Possible values: Acceptance = the responder has received the message Trying = the responder is processing the message Completion = processing ready Redirection = responder has made a redirection Availability = new availability information regarding address DelivReceipt = message arrived to final destination</p>
Code	<p>Status code for message <i>Acceptance, Trying, and Completion codes:</i> 200 – 299 = job completed 200 : job completed 300 – 399 = try again 300 : unknown error 320 : congestion 400 – 499 = message not delivered, message deleted 400 : Unknown error 401 : general communication error 402 : transport error (no UTP acknowledge received) 410 : message not understood 411 : address not understood 412 : delete not possible 413 : licence error 414 : service not supported 415 : login required 420 : addressee unknown 421 : addressee absent 422 : addressee diverted 423 : addressee not reachable 424 : addressee diversion failed 425 : addressee not configured 430 : deleted, too old 431 : remotely deleted 440 : sender not permitted, not in number plan <i>Availability codes:</i> 200 : present 400 : general absent 401 : do not disturb 402 : manual absent 403 : in meeting 404 : in storage rack 405 : out of range <i>Redirection codes:</i> 200 : no diversion 400 : general diversion 401 : always diversion 410 : is absent <i>Deliverance Receipt codes:</i> 200 : delivered</p>
Description (optional)	<p>Text description of reason. Up to 160 characters</p>

Status address

The Status address block is a subgroup to Status.

This block includes information about the responder.

User	The ID of the responder.
IP address	The IP address that the Status block was delivered to.
Service	Which service that was used for delivery.
Service address (optional)	Addressing information to the service.

Redirection address

The Redirection address block is a subgroup to Status.

This block is only valid for the status type "Redirection".

New address+

The New address block is a subgroup to Redirection address.

This block includes information about to which address the responder has diverted.

User	The ID of the responder diverted to.
IP address	The IP address that the Status address block was diverted to.
Service	Which service that was used for delivery.
Service address (optional)	Addressing information to the service.

B.2 Portable Device Blocks

Blocks that primarily are used for information from portable devices.

B.2.1 Alarm

The Alarm block indicates that an alarm from a portable device has been received.

Elements

Type (optional)	The alarm type. Up to 3 decimal characters. The following applies: 0 : Monitor receiver alarm 1 : Test alarm 2 : No new location alarm 3 : Push button alarm 1 4 : Push button alarm 2 5 : Man down alarm 6 : Pull-cord alarm 7 : External alarm 8 : Emergency phone call alarm ¹ 10 : Special location ² 128 : Verification alarm
Data (optional)	Data included in the Alarm block, for example manual location in System 900. Up to 50 characters.
Time (optional)	Time when this alarm was triggered. 17 characters, YY:MM:DD:hh:mm:ss (year:month:day:hour:minutes:seconds)
Confirmation Request (optional)	A confirmation that the alarm has been received is requested.
Description (optional)	Description of the alarm type. Will appear as 'Alarm Type' in the AMC. Up to 160 characters.

¹ An alarm event will automatically be triggered when an emergency call is dialled i.e. an alarm can automatically be sent when the user dials the emergency number (911 in US and 112 in European countries).

² From AMS version 4.00 this alarm type is reported as a Location Data block. Refer to [B.2.3 Location Data](#) on page 70 for more information about groups and elements.

Attached blocks

Delivery

Refer to [B.1.1 Delivery](#) on page 64 for more information about elements.

Location Data

Refer to [B.2.3 Location Data](#) on page 70 for more information about elements.

B.2.2 Alarm System 900

The Alarm System 900 block indicates that an alarm from an alarm transmitter in System 900 has been sent.

Elements

Signal Quality (optional)	Signal quality from Receiver Interface in System 900. Range 1 – 4 (1 = lowest quality, 4 = highest quality)
------------------------------	--

RI Input (optional)	Which input on the Receiver Interface that was used. 0 undefined input. 1 – 4 RI input number.
Low battery	This flag is set to indicate that the handset has sent low battery indication together with the alarm.

Attached blocks

Delivery

Refer to [B.1.1 Delivery](#) on page 64 for more information about elements.

Inherited blocks

Alarm

Refer to [B.2.1 Alarm](#) on page 67 for more information about elements.

B.2.3 Location Data

The Location Data block includes location information, for example when an alarm has been sent this gives the location of the alarming unit. From AMS version 4.00, "Special location"-alarms will be reported as a single Location Data block.

Groups

Location+

Code	Location code. Up to 50 characters. System 900 (IR/LF): The location code from IR/LF is 4 hexadecimal characters. 0-9, A-F. System 900 Receiver Interface location: The location code is 6 hexadecimal characters (ssBmml), ss = system address, B = bus (A=1/B=2), mm = module address, l = input number. 0-9, A-F.
Type	The type of location. 3 decimal characters. The following applies: 1 : undefined location 2 : System 900 location (IR or LF) 3 : Ascom 9d base station location 4 : Ascom 9d beacon location 5 : Manual location 6 : System 900 Receiver Interface location 7 : Fixed location 8 : WiFi access point location 9 : teleCARE WP LF location 10 : teleCARE WP Receiver location
Time (optional)	Time in seconds since location code was received. 6 decimal characters.
Data (optional)	Description of the location type. Up to 50 characters.
Description (optional)	Description of the location. Will appear as 'Location' in the AMC. Up to 160 characters.

B.2.4 User Data

The User Data block will be sent when mobile data is transmitted from a portable device.

Elements

Data	Keypad data from portable device. Up to 255 characters
------	---

Attached blocks

Delivery

Refer to [B.1.1 Delivery](#) on page 64 for more information about elements.

B.2.5 User Data System 900

The User Data System 900 block will be received when mobile data is transmitted from a portable device within System 900.

Elements

Signal Quality (optional)	Signal quality. 1-4 where 1 is the lowest quality
RI Input (optional)	Which input on the RI that was used. 0 undefined input. 1-4 RI input
RI Address (optional)	Module address of the RI that reported the mobile call. 5 hexadecimal characters (ssBmm), ss = system address, B = bus (A=1/B=2), mm = module address.

Attached blocks

Delivery

Refer to [B.1.1 Delivery](#) on page 64 for more information about elements.

Inherited blocks

User Data

Refer to [B.2.4 User Data](#) on page 70 for information about elements.

B.3 Messaging Blocks

Blocks that primarily are used for messages to portable devices.

B.3.1 Message

The Message block makes it possible to send a message to a portable device and also to receive messages as events, see *Installation and Operation Manual, Alarm Management Server, TD 92047GB*.

Elements

Subject (optional)	The subject of the message. Up to 1000 characters. The text in the subject and body elements will be concatenated before transmission to portable devices within System 900. If the text is too long it will be truncated before transmission.
Body (optional)	The body of the message. Up to 5000 characters. The text in the subject and body elements will be concatenated before transmission to portable devices within System 900. If the text is too long it will be truncated before transmission.
Time to live (optional)	The time that a message is valid after it has arrived to its destination. 6 decimal characters specifying time in seconds.
Priority (optional)	Priority of the Message. Range: 0-9 Default value: 6 1 : alarm priority (should be used with special care) 2-4 : high priority 5-7 : normal priority 8-9 : low priority
Allow erase	If this element is included the message can be deleted by sending an Erase message block.
Tag (optional)	A text that categorises the sent block. The category is primarily used when analysing data in the System Activity Log. In AMC the category can be used to filter the received information. Used for showing desired information when several AMCs are connected to the same AMS. Max. 25 characters.

Attached blocks

Delivery

Refer to [B.1.1 Delivery](#) on page 64 for more information about elements.

Groups

Indication

This group is optional.

Beep (optional)	Beep characteristics. Up to 2 decimal characters. Within System 900 the value can be: 0-7. Default: 2.
Intensity (optional)	Defines the intensity of the beep. Possible values: Normal Silent None Low Medium High Max Default: Normal
Urgent (optional)	The message is defined as urgent and will break through silent mode.
Colour (optional)	The message will be displayed with the selected colour. Possible values: Red Green Blue Yellow Orange Cyan Purple Brown

B.3.2 Message with Confirmation Request

This block makes it possible to send a message with request for answer.

Elements

Reject (optional)	This element specifies that the receiver is allowed to give a negative acknowledge to the message.
----------------------	--

Attached blocks

Delivery

Refer to [B.1.1 Delivery](#) on page 64 for more information about elements.

Inherited blocks

Message

Refer to [B.3.1 Message](#) on page 72 for more information about elements.

B.3.3 Message Confirmation Response

This block includes the confirmation on a message i.e. the message sent back after a user has chosen to accept (or reject if allowed).

Elements

Status	The answer from the portable device the confirmation was requested from. Possible values: Accepted Rejected
--------	--

Attached blocks

Delivery

Refer to [B.1.1 Delivery](#) on page 64 for more information about elements.

B.3.4 Interactive Message

This block makes it possible to send an interactive message (IM). IM extends the basic messaging and enables an application to send messages to users with a set of responses included. When the user selects an option from the received message the response is transmitted back to the interacting system for interpretation.

The IM is active for a specified time or until the user selects an option. The application can initiate updates of the complete message or specified parts during the active period. Only specified elements are then changed or removed.

Note that there are elements in the block that are not supported by all portable devices. See considerations for interactive messaging, found in the *Function Description, Interactive Messaging (IM), TD 92168GB*.

Elements

Has data response (optional)	Defines that at least one action results in a response message to the system.
Sticky mode (optional)	Defines if one option has to be selected before leaving the message. 0 = Off 1 = On
Request device ID (optional)	Defines that the unique response ID has to be included in the response message. Currently not used by any device.

Attached blocks

Delivery

Refer to [B.1.1 Delivery](#) on page 64 for more information about elements.

Inherited blocks

Message

Refer to [B.3.1 Message](#) on page 72 for more information about elements.

Groups

Reminder

This group is optional.

Attention (optional)	Defines the interval between indications for the message. 1-255 seconds.
Session (optional)	Defines how long time after an option in the message has been selected until the message is deleted. 1-255 minutes.

Update

Used to update options in an existing IM or to repeat a complete IM to make sure it exists in the device. Note that also elements in the paging part of the message can be updated. This group is optional

Method	<p>Defines how the message update shall be handled.</p> <p>Alternatives:</p> <p>OnlyIfNotExist : update only if the message has not been received. Normally used to send repeated number of messages for device restart handling.</p> <p>OnlyExisting : update only if a message with the same block Id exists in the device.</p> <p>Normally used to update protocol elements. For example to remove an option or restart the indication. Changed elements will be updated and empty elements will be removed.</p>
Request status (optional)	<p>Defines the request for status.</p> <p>Alternatives:</p> <p>OnlyOnFail : request status if the update failed. Note: It is not considered a failure if a device discards a message that already exists in the device and was sent with the method "OnlyExisting".</p> <p>None : no request back regarding status of update.</p> <p>Default: OnlyOnFail</p>

Option+

List order (optional)	<p>Order number in list of options.</p> <p>Decimal number between 1-99.</p>
Display layer (optional)	<p>Number identifying which layer the option belongs to.</p> <p>Decimal number between 1-99.</p>
ID (optional)	<p>Identification number for the option.</p> <p>Decimal number between 1-99.</p>
Text (optional)	<p>The text that indicates the option in the portable device.</p> <p>Up to 100 characters.</p>
Call request number (optional)	<p>Defines the number to be used for a call connection after a Call Request.</p> <p>1-32 digits.</p>

On Selection

This block is a subgroup to Option. The elements contain information about the action when an option is selected, and sometimes also predefined data. The subgroup is optional.

Data response (optional)	Send a predefined response. Defines the data to be sent as response. Up to 255 characters. This element is used for the communication of acknowledge and reset of AMC presentations. See example in Appendix A for a detailed description of how it is done.
Data response address (optional)	Specifies the address to be used for data response. Up to 255 characters.
Call disconnect data (optional)	Send a response when the call is disconnected. Defines the data to be sent as response when the call is disconnected. Up to 255 characters.
Display text (optional)	Show display text. Defines the text to be displayed. Up to 25 characters.
New time to live (optional)	Update time to live. See B.3.1 Message on page 72 for information about the Time to live element. Up to 6 decimal characters.
New priority (optional)	Change message priority. See B.3.1 Message on page 72 for information about message priorities.
Show next layer (optional)	Show next layer of options on selection. Decimal number between 1-99.
Close message (optional)	Close the currently displayed message.
Erase message (optional)	Erase the message on selection.
Erase option (optional)	Erase an option on selection. Specify the option to be deleted. If option not specified, the selected option will be deleted. Decimal number between 1-99.
Disable option (optional)	Disable the option after selection.
Enable option (optional)	Enable disabled option(s) on selection. Specify the option to be enabled. If option not specified, all disabled options are enabled. Decimal number between 1-99.
Mark option (optional)	The option will be marked after selection.
Unmark option (optional)	Unmark previously marked option(s) on selection. Specify the option to be unmarked. If option not specified, all options are unmarked. Decimal number between 1-99.
Request data (optional)	Request more data from the system on selection.
Call request (optional)	Request number from system to use for call connection. This element cannot be used together with Call Number.
Disconnect call (optional)	Disconnect call that has been started from this message.

Sticky mode (optional)	Change the Sticky mode to On or Off. 0 = Off 1 = On
---------------------------	---

User Response

This block is a subgroup to On Selection. It allows the user to manually enter data to send back in a response. The subgroup is optional.

Data type (optional)	Expected type of data in response (can be changed in device): numeric : data input is digits alphanum : data input is text Default: alphanum
Text label	Text prompt i.e. predefined text displayed when data shall be entered. Up to 32 characters

Call Number

This block is a subgroup to On Selection. It defines a phone call that will be made when the option is selected. The subgroup is optional.

Digits	Defines the call number to be dialled. Up to 32 characters For DECT GAP systems the following characters have certain meanings: P : Pause T : DTMF on - : DTMF off R : Register-recall Note! The operation is depending of PBX support.
Method (optional)	Defines which method to use for the call. first : connect the call and dial the digits (the call must manually be disconnected). once : connect the call, dial the digits and then disconnect. more : the digits are dialled during an ongoing call. last : dial the digits during an ongoing call and then disconnect. Default: first
Microphone mode (optional)	Defines how the microphone shall operate during the call. PTT : Push-To-Talk i.e. a button must be pressed when talking MicOn : Microphone is on Default: MicOn

B.3.5 Interactive Message Response

This block defines a response on an interactive message. It can contain status of interactive message updates and information about selected options.

Elements

Data response (optional)	Predefined data that is sent as a response on selection. This is the same data as the <i>Option/On selection/Response</i> element in the original IM. Up to 255 characters.
User response (optional)	The data manually entered by the user after selecting an IM option. See also <i>Option/On selection/User Response</i> element in the IM block. Up to 255 characters.
Device ID	Unique device ID. Currently not used by any device. Up to 255 characters.
Update status (optional)	Defines how the update of an IM was carried through. Allowed value: failed : Update status will only be sent if the update failed.
Priority	The same priority as the originally sent IM.

Attached blocks

Delivery

Refer to [B.1.1 Delivery](#) on page 64 for more information about elements.

B.3.6 Erase Message

This block specifies a previous message to be deleted. When this block is sent with the same block ID and portable device address as a previously sent message, that message will be erased. The "Allow erase" element must be included in the original message block to make it possible to erase the message, see [B.3.1 Message](#) on page 72 for more information.

Attached blocks

Delivery

Refer to [B.1.1 Delivery](#) on page 64 for more information about elements.

B.4 Call Handling Blocks

These blocks are used to initiate calls in the system. For example a conference call between a group of users, to start a PTT call between portable devices or to support shared lines in a system.

The Call Setup block defines the call and the behaviour in the device during the call. If the application wants a response from the device it must be set here.

Refer to *Function Description Push-To-Talk (PTT) in Ascom VoWiFi System, TD 92493GB* for more information about PTT.

B.4.1 Call Setup

Elements

Priority	Defines the priority of the message. See B.3.1 Message on page 72 for information about message priorities.
Time to live	The time that a message is valid after it has arrived to its destination. 6 decimal characters specifying time in seconds.
Text (optional)	Text that is displayed in the receiving device. Up to 1000 characters.
Beep (optional)	Beep characteristics. Up to 2 decimal characters. Within System 900 the value can be: 0-7. Default: 2.
Call type	Defines how the call should be initiated for portable devices within system 900. Should be set to "normal" for all other systems. Up to 2 decimal characters (0 to 99). The following applies: 0 : Normal (e.g. calls initiated by a PX-module or shared lines). 1 : Conference Call with individual member initiation 2 : Conference Call initiation (Mobile to mobile speech controlled by the system) <i>Explanation for Call type 1 & 2:</i> If a group number is used when initiating the conference call, the "Call Type" should be set to "2". If individual member initiation is used, the last member should be initiated with "Call Type" set to "2" in order to let the system control the call.
Speech monitoring (optional)	Defines how the microphone should be turned on so other units can "listen in", for portable devices within system 900. Up to 2 decimal character The following applies: 0 : Passive i.e. the loudspeaker on the receiving device is turned off. 1 : Active, i.e. the loudspeaker on the receiving device is turned on after a time-out (the time-out is set in the receiving device)
Tag (optional)	A text that categorises the sent block. The category is primarily used when analysing data in the System Activity Log. Max. 25 characters.

Answer mode (optional)	Defines how the call should be answered in the receiving device. The following applies: 0 : Manual (the user presses a key to answer the call) 1 : Auto (the device answers the call automatically) Default: Manual
Disconnect mode (optional)	Defines how the call shall be disconnected. Numerical value 0 to 99. 0 : Manual (the user presses a key to disconnect the call – which key to press is defined by the device). 1 : Auto (the device disconnects the call automatically) Default: 0
Speaker mode (optional)	Defines how the speaker on the receiving device shall operate during the call. 0 : Off 1 : Normal 2 : Loudspeaking Mode Default: Off
Microphone mode (optional)	Defines how the microphone on the receiving device shall operate during the call. 0 : PTT (Push-to-Talk i.e. a button must be pressed when talking). 1 : Mic on (the microphone is on during the call). Default: Mic on
Call number (optional)	The number to dial when the device answers the call (Pick-up-call number). 1 - 32 characters text
Request response (optional)	Defines that progress information shall be reported back to the sender. This information is sent as "Call setup response" blocks.

Attached blocks

Delivery

Refer to [B.1.1 Delivery](#) on page 64 for more information about elements.

Groups

Indication

This group is optional.

Urgent (optional)	The message is defined as urgent and will break through silent mode.
Colour (optional)	The message will be displayed with the selected colour. Possible values: Red Green Blue Yellow Orange Cyan Purple Brown

B.4.2 Call Setup Response

Call setup response is sent back when *Request response* element is set in the Call Setup. Used if the sending application wants to log or use a specific status for some purpose, for example to send the message to another device if rejected.

Elements

Priority	The same priority as the originally sent message.
Status (optional)	<p>Possible values:</p> <p>accepted : received when call is accepted.</p> <p>rejected : received when call is rejected.</p> <p>completed : received when the call is completed, i.e. the call has been accepted and disconnected.</p> <p>failed : received when something in the process has failed i.e. unable to handle the call setup.</p> <p>Note: The status "failed" can also be received if an ongoing call cannot be interrupted, for example if the ongoing call has the same or higher priority than the new call.</p>

Attached blocks

Delivery

Refer to [B.1.1 Delivery](#) on page 64 for more information about elements.

B.4.3 Device Property Request

This block is used to set or retrieve properties in a device. Currently, the only property available is the current profile.

Elements

Type (Optional)	<p>Defines type of property request.</p> <p>Possible values:</p> <p>set : Set specified properties in the device according to the specified element.</p> <p>get : Get specified properties from device.</p> <p>Default: Set property</p>
Device Profile (Optional)	<p>Defines the device/user profile. Also called Mode in some devices.</p> <p>Value of new profile:</p> <p>0-9 (valid for set)</p> <p>(omitted for get)</p>

Attached blocks

Delivery

Refer to [B.1.1 Delivery](#) on page 64 for more information about elements.

B.4.4 Device Property Response

This is the response from the device on a Device Property Request.

Attached blocks

Delivery

Refer to [B.1.1 Delivery](#) on page 64 for more information about elements.

Groups

Device Profile

This group is optional.

Elements

Status	Possible values: failed : the request failed success : the request succeeded Default: success (if not included in block)
Value	Defines the device/user profile. Numerical value 0 - 9 stating the current profile (mandatory if Device property request/Type is "get", else optional)

B.4.5 Location Request

This is a request to the device to send a location response message back with current location.

Elements

The "Location request" message contains no element.

Attached blocks

Delivery

Refer to [B.1.1 Delivery](#) on page 64 for more information about elements.

B.4.6 Location Response

The same block ID as received with the "Location Response" message is used.

Elements

The "Location response" message contains no element, only attached *Location data* block.

Attached blocks

Delivery

Refer to [B.1.1 Delivery](#) on page 64 for more information about elements.

Location Data

Refer to [B.2.3 Location Data](#) on page 70 for more information.

B.5 Availability Blocks

Blocks that can be used to get availability information about a portable device in the system. This requires that the portable devices report absent when they are placed in a Charging/Storage Rack.

B.5.1 Availability Status

The Availability Status block will be sent to the Event Handler when the availability information has been updated. The interface that holds the information about absence has to be configured to distribute the availability information to the Event Handler.

Note that the availability status "200" only shows that the latest status is that the portable device is registered in the system. It does not necessarily mean that the portable device is available, i.e. the battery can be removed or it can be out of range etc.

Groups

Status+

Code+	Availability status code for the portable device. 3 decimal characters. The following applies: 200 : present 400 : general absent 401 : do not disturb 402 : manual absent 403 : in meeting 404 : in storage rack 405 : out of range
Description (optional)	Text description of the status code. 1-50 characters

Address

This block is a subgroup to Status. The elements contain the address of the portable device that has reported absence.

User	The ID of the portable device, for example portable device number.
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Storage Address

This block is a subgroup to Status. The elements contain information about which position in the Storage/Charging Rack that the portable device is stored. The subgroup is optional.

Position	The address of the position in the Storage/Charging Rack. For System 900 the following applies: The position is reported as 6 or 7 hexadecimal characters (ssBmmp), ss = system address, B = bus (A=1/B=2), mm = module address, p = position number (one or two characters). 0-9, A-F.
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Attached blocks

Delivery

Refer to [B.1.1 Delivery](#) on page 64 for more information about elements.

B.5.2 Availability Query

The Availability Query block is used to request information about the availability status for a portable device. The address of the portable device is stated in the Delivery block.

Attached blocks

Delivery

Refer to [B.1.1 Delivery](#) on page 64 for more information about elements.

B.5.3 Availability Response

The Availability Response block is sent as a response to a previously sent Availability Query. The address of the portable device is stated in the Delivery block.

Groups

Status+

Code+	Availability status code for the portable device. 3 decimal characters. The following applies: 200 : present ^a 400 : general absent 401 : do not disturb 402 : manual absent 403 : in meeting 404 : in storage rack 405 : out of range
Description (optional)	Text description of the status code. 1-50 characters

a. Refer to the information in [B.5.1 Availability Status](#) on page 84.

Storage Address

This block is a subgroup to Status. The elements contain information about which position in the Storage/Charging Rack that the portable device is stored. The subgroup is optional.

Position	The address of the position in the Storage/Charging Rack. For System 900 the following applies: The position is reported as 6 or 7 hexadecimal characters (ssBmmp), ss = system address, B = bus (A=1/B=2), mm = module address, p = position number (one or two characters). 0-9, A-F.
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Attached blocks

Delivery

Refer to [B.1.1 Delivery](#) on page 64 for more information about elements.

B.6 Fixed Unit Blocks

Blocks that include information to or from fixed units in the system. The blocks are sent when an application discovers an error or abnormality (internal or external) that may be of interest to other applications. It contains a generic description of the error and an application specific part that further refines the problem. It can also be sent with information that an error is cleared or that all is OK (no remaining errors).

B.6.1 Application Log Report

This block contains information about errors from an application or module.

Elements

Application name	The name of the application. 1-20 characters.
Host name (optional)	The network host name of the computer/ELISE module that the report was sent from. 1-50 characters.
Package name (optional)	The software package that the application is a part of. 1-100 characters.
Level	The seriousness of the error. 1 decimal character The following applies: 0 : All ok, no remaining errors, or individual reset 1 : Information (used for logging events and debugging) 2 : Debug 3 : Error (used if error effects the functionality e.g. lost message. 4 : Critical (used if error effects the system and technical assistance is needed).
Code	A code that classifies the error. 1-3 decimal characters. The following applies: 0 : No error 2 : Fault in module/component 3 : Supervision 4 : Communication 7 : Start of module/component 8 : Voltage 10 : Hardware 11 : Configuration 12 : Licence
Text	A text that describes the classification. 1-255 characters
Remaining (optional)	If this element exists the error will remain until the application has reported that no remaining errors exist.

Attached blocks

Delivery

Refer to [B.1.1 Delivery](#) on page 64 for more information about elements.

Groups

Application address

User	The ID of the sender, for example a portable device that reports battery warning.
IP address	The IP address of the module that reported the error.
Service	Which service in the module that generated the error.
Service address	Indicates the origin of the error if the error was generated in a sub system, for example a System 900 module address. The System 900 module address has the following format in this block: ss/B/mm. ss = system address, B = bus (A=1/B=2), mm = module address.

Application specific

Type of data	The type of data that the application sends. 1-3 decimal characters. Possible values: 0 : No specified type 1 : System 900 module status code 2 : Alarm presentation status 3 : Unite status 4 : DECT/PWT status 5 : teleCARE status 6 : Radio Exchange (REX) 7 : Open access Protocol (OAP)
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Code	<p>A code representing the error.</p> <p>The following applies when "Type of data" is 1: 0-2F are reserved for common errors.</p> <p>The following applies when "Type of data" is 2: LostClient means that communication between AMS and AMC is interrupted.</p> <p>The following applies when "Type of data" is 3: 1 : Failed to transfer Unite communication block 2 : Internal error in application when handling Unite communication block 3 : Transferred communication block not handled 4 : No connection to external UNS, local UNS used 5 : No connection status received within Time To Live (TTL) 6 : Database error 7 : Reoccurring application failure 8 : Application restarted 9 : UNS forwarding failure 10 : Module key failure 11 : Unite protocol error 12 : User login 13 : User logout 14 : Unexpected application behaviour 15 : Start of component 16 : Start of module 17 : Failed to transfer mail 18 : Module lost 19 : IP equipment lost 20 : Auxiliary equipment failure 21 : Module running in unlicensed mode 22 : All applications stopped 23 : Unite block rejected due to missing license 24 : Receive queue limit reached 25 : Capacity limit reached 26 : Illegal parameter value 27 : Log export failure 28 : Module restart 29 : Open Access App Specific 30 : Received SNMP Trap 31 : No connection to external database 32 : Failed to transfer message to external equipment</p>
Text	<p>A text that describes the code above. 1-255 characters.</p>
Data (optional)	<p>The application specific data. 1-255 characters.</p> <p>For System 900 the following applies: 0-2F are reserved for common errors. 30-FF can be defined locally on each module. This information will also be reported in the "Code" element</p> <p>For AMS the following applies: LostClient means that communication between AMS and AMC is interrupted. This information will also be reported in the "Code" element</p>

Information text (optional)	Text that gives more information about the error. 1-255 characters.
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B.6.2 Input Activity

This block indicates, for example, that an input on an Alarm Module in System 900 has been activated.

Elements

Input (optional)	Input number of the activated input. 1-2 decimal characters. Default: 1 The module Inputs have input numbers 1 and 2.
Input Status (optional) <i>(AMS specific element)</i>	The state of the input. Possible values: opened closed
Status (optional) <i>(Not available in AMS)</i>	The state of the input. Possible values: active inactive
Service Data (optional)	Data specific to the service that sent the block. 1-160 characters. For System 900 the following applies 0 = always inactive 1 = close contact 2 = open contact 3 = ring signal from PBX 4 = always active 5 = Nurse call 1 6 = Transceiver mobile call 7 = Nurse call 2 8 = Alarm transmitter 9 = Transceiver mobile call, one button press A = Transceiver mobile call, two button presses.

Attached blocks

Delivery

The System 900 module address is included in the Source Address of this block.

Refer to [B.1.1 Delivery](#) on page 64 for more information about elements.

B.6.3 Output Activity

With this block, it is possible to activate an output on an Output Module in System 900.

Elements

Reset	Demands the receiving unit to set all outputs to default.
Tag (optional)	A text that categorises the sent block. The category is primarily used when analysing data in the System Activity Log. Max. 25 characters.

Attached blocks

Delivery

The System 900 module address should be included in the Destination Address of this block.

Refer to [B.1.1 Delivery](#) on page 64 for more information about elements.

Groups

Activation+

Output (optional)	Defines which output that is to be activated. Default: Receiver decides which output to use. 1-50 characters. The module Outputs have output numbers 1 and 2. For Output Modules within System 900 the following applies: 00-16 (00 = reset all outputs)
Type	Definition of activity. Up to 3 characters. The following applies. 00 = Return to default/reset 01 = Output is activated (reverse of default) 02 = Output is low 03 = Output is high 11 = Switching with low frequency (System 900) 12 = Switching with normal frequency (System 900) 13 = Switching with high frequency (System 900)
Duration (optional)	How long the output should be active. Up to 6 decimal characters. Device specific if not specified. For Output Modules within System 900 the following applies: 2-254, 256-65534 seconds 255, 65535 = Active until new activity received for the output.

B.6.4 Output Activity Response

The output activity response block is sent as an reply to an output activity block.

Attached blocks

Delivery

The System 900 module address is included in the Source Address of this block.

Refer to [B.1.1 Delivery](#) on page 64 for more information about elements.

Groups

Activation

Output (optional)	Specifies output number for activated output. Up to 50 characters. Default: Receiver decides which output the response concerns.
Status	Status of the output activation. 200 : Accepted 400 : Bad request 401 : Request time out 402 : Output not found

B.7 AMC Communication Blocks

Blocks that are used for communication between the AMS Presentation Server and the AMCs.

B.7.1 Application Log Report

This block contains information about errors from an application or module. If the Alarm Management Server has lost its connection to the Alarm Management Client, it will be reported through this block.

Refer to [B.6.1 Application Log Report](#) on page 86 for more information about elements.

B.7.2 Presentation

This block includes information that are presented in the Alarm Management Client (AMC).

Elements

Identity (optional)	Text description of the sender of the alarm. Will appear as 'Name' in the AMC. Up to 255 characters.
Identity number (optional)	The identity number of the alarm transmitter. Up to 50 characters.

Attached blocks

Delivery

Refer to [B.1.1 Delivery](#) on page 64 for more information about elements.

Alarm

Refer to [B.2.1 Alarm](#) on page 67 for more information about elements.

Inherited blocks

Interactive Message

Refer to [B.3.4 Interactive Message](#) on page 75 for more information about elements.

Groups

Action

This group is optional.

Type	The type action that has been taken for the presentation. Possible values: Acknowledge Reset
Time	The server time when the action was taken. 17 characters, YY:MM:DD:hh:mm:ss (year:month:day:hour:minutes:seconds)

User	The user that was logged on when action was taken. Up to 50 characters.
User Comments (optional)	Comments entered by the user that took the action. Up to 1023 characters

B.7.3 Presentation Response

This block is used for communication between the Server and Client when a Presentation block has been sent.

Elements

User	The user that was logged on when action was taken. Up to 50 characters.
User comments (optional)	Comments entered by the user that took the action. Up to 1023 characters

Attached blocks

Delivery

Refer to [B.1.1 Delivery](#) on page 64 for more information about elements.

Inherited blocks

Interactive Message Response

Refer to [B.3.5 Interactive Message Response](#) on page 79 for more information about elements.

B.8 Event Handler Status Blocks

Blocks that are sent when the status of the Event Handler is changed.

B.8.1 User Log Overflow

This block indicates that the log files will be rotated. It can be used if the log files should be backed up before the rotation.

B.8.2 Configuration Status

This block indicates that a configuration has been activated/deactivated. When the configuration is updated, the current configuration will be reported inactive and the new will be reported active. This block can be used to start and stop chains of actions that are running continuously when a database is activated. Stop the chain of actions when the configuration is reported inactive and start the chain of actions when the configuration is reported active. This will work also for restarts as the configuration will be reported active on a restart.

Elements

ID	Identification of the configuration.
State	The state of the Event Handler. Possible values: Inactive Active

B.8.3 Send Status

When the Event Handler sends information, this block will indicate if the transmission was successful or if anything went wrong.

Elements

ID	The delivery ID of the block that was transmitted. This ID can be read from the system element 'Delivery ID'.
Status	The status of the transmission. Possible values: Success Error
Error location (optional)	Some more information where the error occurred. Possible values: <i>Block</i> – mandatory information in the block was missing or not understood. <i>Communication</i> – communication problems with the recipient of the block. <i>Queue full</i> – the module send queue was full.

B.8.4 Start up

This block will be sent when the Event Handler starts up. The block can be used to send error messages at restart.

B.8.5 Time Schedule

This is used in triggers. The triggers can be defined to set conditions on the elements below. For example, the condition is set: Day = 16, Month = 3, Hour = 12 and Minutes = 0 - The trigger will be activated 12 a.m. March 16th.

Condition must at least be set on 'Hour' and 'Minutes'.

Elements

Day	1-31 - The day when the trigger shall be activated.
Hour	0-23 - The hour when the trigger shall be activated.
Minutes	0-59 - The minutes when the trigger shall be activated.
Month	1-12 - The month when the trigger shall be activated.
Day of week	1-7 - Where 1 = Monday and 7 = Sunday.
Year	YYYY - The year when the trigger shall be activated.

Attached blocks

Delivery

Refer to [B.1.1 Delivery](#) on page 64 for more information about elements.

B.9 XGate Blocks

Note: These blocks applies for XGate only.

B.9.1 XGate Event

The XGate block contains Event elements carrying information to the Event Assignment Handler.

Groups

Event Elements

This group is optional.

Name	The name of the Event Element.
Value	The value of the Event Element.

Attached blocks

Delivery

Refer to [B.1.1 Delivery](#) on page 64 for more information about elements.

B.9.2 XGate Response

A block that generates an answer on an IM response from a portable to the XGate.

Event Elements

This group is optional.

System Response	The contents of the Interactive Message Data Response.
User Response	The contents of the Interactive Message User Response.
Call ID	The repliers Call ID.
Device Address	The address of the replying device.

Attached blocks

Delivery

Refer to [B.1.1 Delivery](#) on page 64 for more information about elements.

XGate Event

Refer to [B.9.1 XGate Event](#) for more information about elements.

B.9.3 XGate Action Status

A block that shows the status of the message action on each level in the XGate event's action chain.

Elements

Finished (optional)	The event's action chain has been finished. This is the last received action status about a specific action chain.
Undefined location (optional)	The XGate event does not match any location defined in the Duty Assignment.

Attached blocks

Delivery

Refer to [B.1.1 Delivery](#) on page 64 for more information about elements.

XGate Event

Refer to [B.9.1 XGate Event](#) on page 97 for more information about elements.

Groups

Current Level

The "Current Level" contains no elements.

Recipient

This group is a subgroup to Current level. The group is optional.

Call ID (optional)	The call ID of the receiving portable device (in current level of the action chain).
Name (optional)	The user name.
Status (optional)	The status of the action. Possible values: DeliveryFailed : message could not be delivered. DeliveryTimeout : message was not sent within the specified time, for example if the message queue was too long. UserTimeout : user did not answer within the specified time. UserSuccess : user has answered and the answer was defined as a success. UserFailed : user has answered but the answer was defined as a failure. Terminated : message has been terminated by the system.
Time (optional)	Actual time of this status.

Next Level

This group is optional.

Level (optional)	The next level in the action chain i.e. the next level to be executed. Possible values (numbers): 1--> n (n is the highest defined level in the action chain).
Path (optional)	Defines which branch in the action tree that led to this new level. Possible values: Root : the message is in the first level of the action chain (only occurs when no action has been executed). Success : message action succeeded in the preceding level. Failure : message action failed in the preceding level. Terminate: message was terminated in the preceding level.

Recipient

This group is a subgroup to Next level. The group is optional.

Call ID (optional)	The call ID of the receiving portable device in this level.
Name (optional)	The user name to send the message to in this level.