Technical Specification Group Services and System Aspects
Meeting #18, New Orleans, USA, 9-12 December 2002

TSGS#18(02)0753

Source: **SA5 (Telecom Management)**

Title: **Rel-5 CR 32.111-4 (Alarm IRP: CMIP SS) : Addition of Security Alarm Support (align with 32.111-2 Alarm IRP: Information Service)**

Document for: **Approval**

Agenda Item: **7.5.3**

Doc-1st-	Spec	CR	R	Phase	Subject	Cat	Version	Doc-2nd-	Workitem
SP-020753	32.111-4	014	-	Rel-5	Addition of Security Alarm Support to the Alarm IRP CMIP SS (Alignment with Information Service in Rel-5 32111-2)	F	5.2.0	S5-027010	OAM-NIM

3GPP TSG-SA5 (Telecom Management) **S5-027010**
Meeting #32, Vienna, Austria, 18-22 November 2002

CR-Form-v7

CHANGE REQUEST

⌘ **32.111-4** **CR** **014** ⌘**rev** **-** ⌘ Current version: **5.2.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☒ Core Network ☒

Title:	⌘	Addition of Security Alarm Support to the Alarm IRP CMIP SS (Alignment with Information Service in Rel-5 32111-2)
Source:	⌘	SA5
Work item code:	⌘	OAM-NIM
Date:	⌘	22/11/2002
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	The Alarm IRP: IS provides support for security alarms. The CMIP SS has to be aligned with respect to this functionality
Summary of change:	⌘	The mapping table for the notification reporting security alarms is added.
Consequences if not approved:	⌘	The CMIP SS of the Alarm IRP is not aligned to the Alarm IRP: IS with respect to the support of security alarms

Clauses affected:	⌘	4.2.5			
Other specs affected:	⌘	**Y**	**N**		⌘
			X	Other core specifications	
			X	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

Change in Clause 4.2.5

4.2.5 Mapping of Parameters of each notification

In the CMIP Solution Set, all the notifications originated within the Agent are reported to the Managers by means of the CMISE "M-EVENT-REPORT" primitive, which is implemented by means of the "m-EventReport OPERATION" (see [2] and[3]). The argument of m-EventReport OPERATION is defined in [3] as follows:

```
EventReportArgument         ::= SEQUENCE {
        managedObjectClass          ObjectClass,
        managedObjectInstance       ObjectInstance,
        eventTime                   [5] IMPLICIT GeneralizedTime OPTIONAL,
        eventType                   EventTypeId,
        eventInfo                   [8] ANY DEFINED BY eventType OPTIONAL
        }
```

where eventInfo is further specified, for each specific notification, by means of specific GDMO/ASN.1 definitions.

In the following tables, for the notifications defined in [9], all parameters are mapped to their CMIP SS equivalents. Note that the parameter mapping for the notification notifyChangedAlarm is not given. This is because in the CMIP SS the notifications notifyClearedAlarm and notifyNewAlarm are emitted instead of the notification notifyChangedAlarm,.

The IS parameter systemDN defined in [9] (Alarm IRP: Information Services) is conditional and not used in the CMIP SS.

Except for the notification *notifyComments* the IS parameter *alarmType* has no direct CMIP SS equivalent. Instead the value of this parameter is reflected by the type of the emitted notification. More specifically

- If the event type is equal to ‘Communication Alarm’ the notification *communicationsAlarm* is emitted;
- If the event type is equal to ‘Processing Error Alarm’ the notification *processingErrorAlarm* is emitted;
- If the event type is equal to ‘Environmental Alarm’ the notification *environmentalAlarm* is emitted;
- If the event type is equal to ‘Quality of Service Alarm’ the notification *qualityofServiceAlarm* is emitted;
- If the event type is equal to ‘Equipment Alarm’ the notification *equipmentAlarm* is emitted.

Also the IS parameter *alarmId* is not mapped directly to a parameter in the CMIP SS. This is not required because an alarm is identified unambiguously by the notification identifier of the notification reporting the alarm the first time and, if the notification identifier is not unique across the IRPAgent, by the instance of the managed object emitting this notification. Notifications referring to an alarm already reported (e. g. *notifyClearedAlarm*, *notifyAckStateChanged*, *notifyComments*) do so by specifying in the M-EVENT REPORT parameter ‘Event information’: *correlatedNotifications* (X.721 [4] and X.733 [5]) the notification identifier of the notification having reported the new alarm and, if required, the instance of the object having emitted this notification.

Most parameters are mapped to the M-EVENT report parameter ‘Event information’. For the notifications *notifyNewAlarm*(when reporting alarms not related to security), *notifyClearedAlarm* and *notifyAckStateChanged* the~~The~~ syntax and semantics of this structured parameter are defined in ITU-T X.721 [4] by the ASN.1 definition *AlarmInfo*. In case *notifyNewAlarm* reports a security alarm, the ‘Event information’ parameter is described by *SecurityAlarmInfo*, defined in ITU-T X.721 [4] as well. For the other notifications (*notifyAlarmListRebuilt*, *notifyComments*, *notifyPotentialFaultyAlarmList*) the ‘Event information’ parameter is described by ASN.1 definitions defined in this document.

Table 12: Parameter mapping of the notification~~Mapping of Parameters of "~~*notifyNewAlarm*~~"~~ for alarms not related to security

IS Parameter	CMIP SS Equivalent	Qualifier
objectclass	M-EVENT-REPORT parameter 'Managed object class'	M
objectInstance	M-EVENT-REPORT parameter 'Managed object instance'	M
notificationId	M-EVENT-REPORT parameter 'Event information' (AlarmInfo): notificationIdentifier	M
eventTime	M-EVENT-REPORT parameter 'Event time'	M
systemDN	This IS parameter is conditional and not used in the CMIP SS.	--
notificationType	M-EVENT-REPORT parameter 'Event type'	M
probableCause	M-EVENT-REPORT parameter 'Event information' (AlarmInfo): probableCause	M
specificProblems	M-EVENT-REPORT parameter 'Event information' (AlarmInfo): specificProblems	O
perceivedSeverity	M-EVENT-REPORT parameter 'Event information' (AlarmInfo): perceivedSeverity	M
alarmType	The semantics of this parameter is conveyed by the notification type.	--
backedUpStatus	M-EVENT-REPORT parameter 'Event information' (AlarmInfo): backedUpStatus	O
backUpObject	M-EVENT-REPORT parameter 'Event information' (AlarmInfo): backUpObject	O
trendIndication	M-EVENT-REPORT parameter 'Event information' (AlarmInfo): trendIndication	O
thresholdInfo	M-EVENT-REPORT parameter 'Event information' (AlarmInfo): thresholdInfo	O
correlatedNotifications	M-EVENT-REPORT parameter 'Event information' (AlarmInfo): correlatedNotifications	O
stateChangeDefinition	M-EVENT-REPORT parameter 'Event information' (AlarmInfo): stateChangeDefinition	O
monitoredAttributes	M-EVENT-REPORT parameter 'Event information' (AlarmInfo): monitoredAttributes	O
proposedRepairActions	M-EVENT-REPORT parameter 'Event information' (AlarmInfo): proposedRepairActions	O
additionalText	M-EVENT-REPORT parameter 'Event information' (AlarmInfo): additionalText	O
alarmId	M-EVENT-REPORT parameter 'Event information' (AlarmInfo): notificationIdentifier M-EVENT-REPORT parameter 'Managed object instance'	M

Table 12a: Parameter mapping of the notification *notifyNewAlarm* for alarms related to security

IS Parameter	CMIP SS Equivalent	Qualifier
objectclass	M-EVENT-REPORT parameter 'Managed object class'	M
objectInstance	M-EVENT-REPORT parameter 'Managed object instance'	M
notificationId	M-EVENT-REPORT parameter 'Event information' (SecurityAlarmInfo): notificationIdentifier	M
eventTime	M-EVENT-REPORT parameter 'Event time'	M
systemDN	This IS parameter is conditional and not used in the CMIP SS.	--
notificationType	M-EVENT-REPORT parameter 'Event type'	M
probableCause	M-EVENT-REPORT parameter 'Event information' (SecurityAlarmInfo): securityAlarmCause	M
perceivedSeverity	M-EVENT-REPORT parameter 'Event information' (SecurityAlarmInfo): securityAlarmSeverity	M
alarmType	The semantics of this parameter is conveyed by the notification type.	--
correlatedNotifications	M-EVENT-REPORT parameter 'Event information' (SecurityAlarmInfo): correlatedNotifications	O
additionalText	M-EVENT-REPORT parameter 'Event information' (SecurityAlarmInfo): additionalText	O
serviceUser	serviceUser	M
serviceProvider	serviceProvider	M
securityAlarmDetector	securityAlarmDetector	M
alarmId	M-EVENT-REPORT parameter 'Event information' (SecurityAlarmInfo): notificationIdentifier M-EVENT-REPORT parameter 'Managed object instance'	M

End of Change in Clause 4.2.5