Technical Specification Group Services and System Aspects **TSGS#13(01)0474**

Meeting #13, Beijing, China, 24-27 September 2001

Source: **SA5**

Title: **Rel-4 CR32.111-2 & 32.111-3 on thresholdInfo in Alarm IRP**

Document for: **Approval**

Agenda Item: **7.5.3**

Doc-1st-Level	Doc-2nd-Level	Spec	CR	Rev	Phase	Subject	Cat	Version Current	Version-New	Workitem
SP-010474	S5-010569	32.111-2	009		Rel-4	Definition of thresholdInfo in Alarm IRP: IS	F	4.0.0	4.1.0	OAM-FM
SP-010474	S5-010570	32.111-3	011		Rel-4	Definition of thresholdInfo in Alarm IRP: CORBA SS	F	4.0.0	4.1.0	OAM-FM

3GPP TSG-SA5 (Telecom Management) **S5-010569**
Meeting #22, Paris, France, September 2001 **S5C010352**

CR-Form-v3

CHANGE REQUEST

⌘ **32.111-2** **CR** **009** ⌘ rev **-** ⌘ Current version: **4.0.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☐ Radio Access Network ☐ Core Network ☒

Title:	⌘	Definition of thresholdInfo in Alarm IRP: IS
Source:	⌘	SA5
Work item code:	⌘	**OAM-FM** ***Date:*** ⌘ 07/09/2001
Category:	⌘	**F** ***Release:*** ⌘ REL-4

Use one of the following categories:
F *(essential 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)

Reason for change:	⌘	To re-use ITU-T X.733 thresholdInfo definition.
Summary of change:	⌘	Remove current definition of thresholdInfo and make reference to ITU-T definition specified in X.733.
Consequences if not approved:	⌘	3GPP's thresholdInfo is different than that defined in X.733. There is no justification/reason/rationale for such difference.

Clauses affected:	⌘	All clauses.
Other specs affected:	⌘	☐ Other core specifications ⌘ ☐ Test specifications ☒ O&M Specifications 32.111-3 ("Child" to this CR32.111-2-009)
Other comments:	⌘	Only if this "Parent" CR is approved, the "Child" CR32.111-3-011_S5-010570 can also be approved.

`thresholdInfo`	It indicates the direction of threshold crossing.	See definitions in ITU-T Recommendation X.733 [2] clause 8.1.2.7.
`stateChange Definition`	It indicates MO attribute value changes. See definition in ITU-T Recommendation X.733 [2] clause 8.1.2.10.	
`monitored Attributes`	It indicates MO attributes whose value changes are being monitored. See definition in ITU-T Recommendation X.733 [2] clause 8.1.2.11.	

3GPP TSG-SA5 (Telecom Management) **S5-010570**
Meeting #22, Paris, France, September 2001 **S5C010353**

CR-Form-v3

CHANGE REQUEST

⌘ **32.111-3** **CR** **011** ⌘ rev **-** ⌘ Current version: **4.0.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☐ Radio Access Network ☐ Core Network ☒

Title:	⌘	Definition of thresholdInfo in Alarm IRP: CORBA SS
Source:	⌘	SA5
Work item code:	⌘	**OAM-FM** ***Date:*** ⌘ 07/09/2001
Category:	⌘	**F** ***Release:*** ⌘ REL-4

Use one of the following categories:
F *(essential 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)

Reason for change:	⌘	To re-use ITU-T X.733 thresholdInfo definition.
Summary of change:	⌘	1. Change the definition type for the value of the NV pair of thresholdInfo of Table 8. The definition type is now thresholdInfo instead of thresholdIndication. 2. Add necessary IDL specification for thresholdInfo in Annex A. Leave IDL specification for thresholdIndication alone since it is a member of thresholdInfo.
Consequences if not approved:	⌘	3GPP's thresholdInfo is different than that defined in X.733. There is no justification/reason/rationale for such difference.

Clauses affected:	⌘	A) 5.3 (the table 8). B) Annex A.
Other specs affected:	⌘	☐ Other core specifications ⌘ ☐ Test specifications ☒ O&M Specifications 32.111-2 ("Parent" to this CR32.111-3-011)
Other comments:	⌘	The approval of this "child" CR is depending upon the approval of the "parent" CR32.111-2-009_S5-010569

5.3 Notification parameter mapping

…

Table 8: Mapping for `notifyNewAlarm`

…

`thresholdInfo`	One NV pair of `filterable_body_fields`	O	Name of NV pair is the THRESHOLD_INFO of interface `ParameterNameValue` of `module AlarmIRPConstDefs`. Value of NV pair is a `ThresholdInfoType`.
`stateChangeDefinition`	One NV pair of `filterable_body_fields`	O	Name of NV pair is the STATE_CHANGE_DEFINITION of interface `AttributeNameValue` of `module AlarmIRPConstDefs`. Value of NV pair is an `AttributeChangeSetType.`
`monitoredAttributes`	One NV pair of `filterable_body_fields`	O	Name of NV pair is the MONITORED_ATTRIBUTES of `interface AttributeNameValue` of `module AlarmIRPConstDefs.` Value of NV pair is an `AttributeSetType`.

Annex A (normative):
IDL specification

…

…

```
/*
It indicates if the threshold crossed was in the up or down direction.
*/
enum ThresholdIndicationType {Up, Down};



/* FloatTypeOpt is an optional type.
   If the discriminator is true the value is present.
   Otherwise the value is null.
*/
union FloatTypeOpt switch (boolean)
{
   case TRUE: float value;
};


/* ThresholdLevelIndType describes multi-level
   threshold crossings.
   Up is the only permitted choice for a counter.
   If indication is “up”, low value is optional.

   @member indication: indicates up or down direction
     of crossing.
   @member low: the low observed value.
   @member high: the high observed value.
*/

struct ThresholdLevelIndType
{
       ThresholdIndicationType indication;
       FloatTypeOpt low;
       float high;
};

/* ThresholdLevelIndTypeOpt is an optional type.
   If the discriminator is true the value is present.
   Otherwise, the value is null.
*/

union ThresholdLevelIndTypeOpt switch (boolean)
{
      case TRUE: ThresholdLevelIndType value;
};


/* ThresholdInfoType indicates some guage or counter
   attribute passed a set threshold.
```

```
   @member attributeID: identifies the attribute that
     crossed the threshold.
   @member observedValue: attributes that are of type
     integer will be converted to floats.
   @member thresholdlevel: This parameter is for
     multi-level threhsolds. Optional.
   @member armTime: May contain empty string.
*/

struct ThresholdInfoType
{
      string attributeID;
      float observedValue;
      ThresholdLevelIndTypeOpt thresholdLevel;
      string armTime;
};


/*
It indicates if some observed condition is getting better, worse,
or not changing.
*/
enum TrendIndicationType {LessSevere, NoChange, MoreSevere};

/*
It is used to report a changed attribute value.
*/
struct AttributeValueChangeType
{
   string attribute_name;
   any    old_value;  // type depends on attribute
   any    new_value;  // type depends on attribute
};
```