Source:	**SA5 (Telecom Management)**
Title:	**Rel-6 CR 32.353 Communication Surveillance (CS) IRP CORBA SS**
Document for:	**Approval**
Agenda Item:	**7.5.3**

Doc1stevel	Specific a	CR	R	Phase	Subject	Ca	VersCu	Doc2ndLev	WorkitemsI D
SP-040802	32.353	001	--	Rel-6	Correct mapping of IS-defined non-filterable parameters to SS-defined non-filterable fields - Align IDL style in CS IRP CORBA SS with IDL Style Guide in TS 32.150	F	6.0.0	S5-047122	OAM-NIM

CR-Form-v7

CHANGE REQUEST

| ⌘ | **32.353** CR **001** | ⌘ **rev** | **-** | ⌘ | Current version: | **6.0.0** | ⌘ |

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

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

Title: ⌘	Correct mapping of IS-defined non-filterable parameters to SS-defined non-filterable fields - Align IDL style in CS IRP CORBA SS with IDL Style Guide in TS 32.150	
Source: ⌘	**SA5** (edwin.tse@ericsson.com)	
Work item code: ⌘	OAM-NIM	***Date:*** ⌘ 19/11/2004

Category: ⌘ **F**	***Release:*** ⌘ Rel-6

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: ⌘	Correct the mapping of IS-defined non-filterable parameters to SS-defined non-filterable fields (instead of filterable fields). Add the mandatory exception operationNotSupported for set_heartbeat_period. Align IDL style with IDL Style Guide.
Summary of change: ⌘	Place IS-defined non-filterable parameters into remaining_body of CORBA structured event. Align IDL style with IDL Style Guide.
Consequences if not approved: ⌘	IRPAgent wastes CPU cycles on non-filterable parameters before emission of notification. CSIRP cannot throw the standard-defined exception when it does not support set_heartbeat_period. This non-standard behaviour can confuse IRPManager.

Clauses affected: ⌘	Table 8, A.1, A.2, A.3

	Y	N		
Other specs affected: ⌘		X	Other core specifications ⌘	
		X	Test specifications	
		X	O&M Specifications	

Other comments: ⌘	

Change in Table 8

Table 8: Mapping for `notifyHeartBeat`

IS Parameters	OMG CORBA Structured Event attribute	Qualifier	Comment
There is no corresponding IS attribute.	domain_name	M	It carries the IRP document version number string. See clause 3.1. It indicates the syntax and semantics of the Structured Event as defined by the present document.
notificationType	t~~T~~ype_name	M	This is the ET_HEARTBEAT of module of CSIRPConstDefs.
There is no corresponding IS attribute	event_name	M	It carries no information.
There is no corresponding IS attribute.	Variable Header		
objectClass, objectInstance	One NV pair of filterable_body_fields	M	NV stands for name-value pair. Order arrangement of NV pairs is not significant. The name of NV-pair is always encoded in string. Name of this NV pair is the MANAGED_OBJECT_INSTANCE of interface AttributeNameValue of module NotificationIRPConstDefs. Value of NV pair is a string. See corresponding table in Notification IRP: CORBA SS [7].
notificationId	One NV pair of remaining_body ~~filterable_body_fields~~	M	Name of NV pair is the NOTIFICATION_ID of interface AttributeNameValue of module NotificationIRPConstDefs. Value of NV pair is a long. See corresponding table in Notification IRP: CORBA SS [7].
eventTime	One NV pair of filterable_body_fields	M	Name of NV pair is the EVENT_TIME of interface AttributeNameValue of module NotificationIRPConstDefs. Value of NV pair is IRPTime. See corresponding table in Notification IRP: CORBA SS [7].
systemDN	One NV pair of filterable_body_fields	M	Name of NV pair is the SYSTEM_DN of interface AttributeNameValue of module NotificationIRPConstDefs. Value of NV pair is a string. See corresponding table in Notification IRP: CORBA SS [7].
heartbeatPeriod	One NV pair of remaining_body ~~filterable_body_fields~~	M	Name of NV pair is the HEARTBEAT_PERIOD of interface AttributeNameValue of module CSIRPConstDefs. Value of NV pair is a CSIRPConstDefs::HeartbeatPeriodType.
triggerFlag	One NV pair of remaining_body ~~filterable_body_fields~~	M	Name of NV pair is the TRIGGER_FLAG of interface AttributeNameValue of module CSIRPConstDefs. Value of NV pair is a CSIRPConstDefs::TriggerFlagType.
locator	One NV pair of remaining_body ~~filterable_body_fields~~	M	Name of NV pair is the CHANNEL_ID of interface AttributeNameValue of module CSIRPConstDefs. Value of NV pair is a CSIRPConstDefs::channelIdType. This parameter shall be mapped to an identifier of channel. For definition of channel, see OMG Notification Service [8]. The CHANNEL_ID carry the same meaning but may or may not carry the same value used by OMG defined Channel ID.
managerIdentifier	One NV pair of remaining_body ~~filterable_body_fields~~	M	Name of NV pair is the MANAGER_IDENTIFIER of interface AttributeNameValue of module CSIRPConstDefs. Value of NV pair is a CSIRPConstDefs::ManagerIdentifierType.
~~There is no corresponding IS attribute.~~	remaining_body		

End of change in Table 8

A.1   IDL specification (file name "CSIRPConstDefs.idl")

```
// File: CSIRPConstDefs.idl

#ifndef _CSIRPCONSTDEFS_IDL_ CSIRPConstDefs_idl
#define _CSIRPCONSTDEFS_IDL_ CSIRPConstDefs_idl

// This statement must appear after all include statements
#pragma prefix "3gppsa5.org"

/* ## Module: CSIRPConstDefs
This module contains commonly used definitions for CSIRP.
=============================================================
*/
module CSIRPConstDefs
{

   typedef unsigned short HeartbeatPeriodType;

   /*
   If notifyHeartbeatET_HEARTBEAT notification is triggered by NM positively by invoking
   triggerH_heartbeat operation, the value of this parameter shall be IRPManager,
   otherwise, it shall be IRPAgent.
   */
   enum TriggerFlagType {IRPManager, IRPAgent};

   typedef string ManagerIdentifierType;

   typedef string ChannelIdType;

   /*
   It specifies whether the operation is success or failed.
   */
   enum ResultType { Success, Failure };

    /**
    * This block identifies attributes which are included as part of the
    * CommunicationSurveillanceIRP. These attribute values should not
    * clash with those defined for the attributes of notification
    * header (see IDL of Notification IRP).
    */
   interfacemodule AttributeNameValue
   {
     const string HEARTBEAT_PERIOD = "HEARTBEAT_PERIOD";
     const string CHANNEL_ID = "CHANNEL_ID";
     const string TRIGGER_FLAG = "TRIGGER_FLAG";
     const string MANAGER_IDENTIFIER = "MANAGER_IDENTIFIER";

   };

};
#endif  _CSIRPCONSTDEFS_IDL_
```

A.2 IDL specification (file name "CSIRPSystem.idl")

```
// File: CSIRPSystem.idl

#ifndef _CSIRPSYSYEM_IDL_ CSIRPSystem_idl
#define _CSIRPSYSYEM_IDL_ CSIRPSystem_idl

#include "ManagedGenericIRPSystem.idl"
#include "ManagedGenericIRPConstDefs.idl"
#include "CSIRPConstDefs.idl"

// This statement must appear after all include statements
#pragma prefix "3gppsa5.org"

/* ## Module: CSIRPSystem
This module implements capabilities of CSIRP.
==============================================================================
*/
module CSIRPSystem
{

  /**
   * The InvalidHeartbeatPeriod exception is used when the period
   * value to be set by IRPManager is not a reasonable in IRPAgent's
   * implementation. A very short period may cause IRPAgent to
   * send many heartbeat notification in a short time, which may
   * decrease the performance of IRPAgent. To prevent this,
   * IRPAgent may set the lower limit period in its system
   * implemntation. When the period to be set is shorter the
   * lower limit period, IRPAgent may throw this exception
   * and reject to set the period to new value.
   * Note: set the period to zero must be allowed. The behaviour of
   * setting period to zero pls see definition for Period.
   */
  exception InvalidHeartbeatPeriod
  {
    unsigned short periodLowerLimit;
    string reason;
  };


  exception InvalidManagerIdentifier { string reason; };
  exception ConflictingHeartbeatPeriod { string reason; };

  /*
   System fails to complete the operation.  System can provide reason
   to qualify the exception.  The semantics carried in reason
   is outside the scope of this IRP.
  */
  exception GetHeartbeatPeriod { string reason; };
  exception SetHeartbeatPeriod { string reason; };
  exception TriggerHeartbeat { string reason; };
  exception GetCSIRPVersions { string reason; };
  exception GetCSIRPOperationsProfile { string reason; };
  exception GetCSIRPNotificationProfile { string reason; };

  interface CSIRP
  {
    /**
     * IRPManager invokes this operation to obtain the current
     * heartbeat period.
     */
    CSIRPConstDefs::ResultType get_heartbeat_period(
      out CSIRPConstDefs::HeartbeatPeriodType heartbeatPeriod
    )
    raises (GetHeartbeatPeriod);

    /**
     * IRPManager invokes this operation to set the heartbeatPeriod.
     * If the heartbeatPeriod is modified by one IRPManager, a
     * notifyHeartbeatCommunication Surveillance notification should be emitted
     * immediately to all the subscribed IRPManagers to indicate
     * the new heartbeatPeriod. If the heartbeatPeriod is set to
     * zero, one notifyHeartbeatCommunication Surveillance notification will be
```

```
    * emitted immediately and no more Communication Surveillance
    * notifications unless the heartbeatPeriod is modified again.
    */
    CSIRPConstDefs::ResultType ——set_heartbeat_period(
      in CSIRPConstDefs::HeartbeatPeriodType heartbeatPeriod
    )
    raises (SetHeartbeatPeriod,
            ConflictingHeartbeatPeriod,
                InvalidHeartbeatPeriod,
            ManagedGenericIRPSystem::ValueNotSupported,
            ManagedGenericIRPSystem::OperationNotSupported);

    /*
    * IRPManager invoke this operation to trigger ET_HEARTBEAT
    * notification positively.
    */
    CSIRPConstDefs::ResultType trigger_heartbeat(
      in CSIRPConstDefs::ManagerIdentifierType managerIdentifier
    )
    raises (TriggerHeartbeat, InvalidManagerIdentifier);

    /**
    * Return the list of all supported CSIRP versions.
    */
    ManagedGenericIRPConstDefs::VersionNumberSet get_CS_IRP_versions (
    )
    raises (GetCSIRPVersions);

    /**
    * Return the list of all supported operations and their supported
    * parameters for a specific CSIRP version.
    */
    ManagedGenericIRPConstDefs::MethodList get_CS_IRP_operations_profile (
        in ManagedGenericIRPConstDefs::VersionNumber iRPVersion
    )
    raises (GetCSIRPOperationsProfile,
            ManagedGenericIRPSystem::OperationNotSupported,
            ManagedGenericIRPSystem::InvalidParameter);

    /**
    * Return the list of all supported notifications and their supported
    * parameters for a specific CSIRP version.
    */
    ManagedGenericIRPConstDefs::MethodList get_CS_IRP_notification_profile (
        in ManagedGenericIRPConstDefs::VersionNumber iRPVersion
    )
    raises (GetCSIRPNotificationProfile,
            ManagedGenericIRPSystem::OperationNotSupported,
            ManagedGenericIRPSystem::InvalidParameter);


  };

};
#endif __CSIRPSYSTEM_IDL_
```

A.3 IDL specification (file name "CSIRPNotifications~~Defs~~.idl")

```
// File: CSIRPNotifications.idl

#ifndef _CSIRPNOTIFICATIONS_IDL_ CSIRPNotifDefs_idl
#define _CSIRPNOTIFICATIONS_IDL_ CSIRPNotifDefs_idl

#include "CSIRPConstDefs.idl"
#include "NotificationIRPConstDefs.idl"
#include "NotificationIRPNotifications.idl"


// This statement must appear after all include statements
#pragma prefix "3gppsa5.org"

/* ## Module: CSIRPNotifDefs
This module contains the specification of all notifications of CS IRP Agent.
====================================================================================
*/
module CSIRPNotifications fDefs
{

  const string ET_HEARTBEAT = "notifyHeartbeat";

    /**
    *  Constant definitions for the FileReady notification
    */
    interface notifyHeartbeat: NotificationIRPNotifications::NotifyConstDefs::AttributeNameValue
    {
      const string EVENT_TYPE = "notifyHeartbeat";ET_HEARTBEAT;

      /**
      * This constant defines the name of the  period property,
      * which is transported in the filterable_body fields.
      * The data type for the value of this property
      * is CSIRPConstDefs::HeartbeatPeriodType.
      */
      const string HEARTBEAT_PERIOD = CSIRPConstDefs::AttributeNameValue::HEARTBEAT_PERIOD;

      /*
      * This constant defines the name of the
      * channelId property,
      * which is transported in the filterable_body
      * fields.
      * The data type for the value of this property
      * is CSIRPConstDefs::ChannelIdType.
      */
      const string CHANNEL_ID = CSIRPConstDefs::AttributeNameValue::CHANNEL_ID;

      /*
      * This constant defines the name of the
      * triggerFlag property,
      * which is transported in the filterable_body
      * fields.
      * The data type for the value of this property
      * is CSIRPConstDefs::TriggerFlagType.
      */
       const string TRIGGER_FLAG = CSIRPConstDefs::AttributeNameValue::TRIGGER_FLAG;

      /*
      * This constant defines the name of the
      * managerIdentifier property,
      * which is transported in the filterable_body
      * fields.
      * The data type for the value of this property
      * is CSIRPConstDefs::ManagerIdentifierType.
      */
      const string MANAGER_IDENTIFIER = CSIRPConstDefs::AttributeNameValue::MANAGER_IDENTIFIER;
    };

};
```

```
#endif __CSIRPNOTIFICATIONS_IDL_
```

Change in Clauses A.1,A.2,A.3