

**Source:** SA5 (Telecom Management)

**Title:** Rel-4 CR 32.303 (Configuration Management; Notification IRP:  
CORBA solution set): Incorporation of version handling, adopting  
release 5 agreements

**Document for:** Approval

**Agenda Item:** 7.5.3

Doc-1st-Level	Spec	CR	Rev	Phase	Subject	Cat	Version-Current	Doc-2nd-Level	Workitem
SP-030415	32.303	011	-	Rel-4	Incorporation of version handling, adopting release 5 agreements	F	4.4.0	S5-036801	OAM-CM

## CHANGE REQUEST

⌘ **32.303 CR 011** ⌘ rev **-** ⌘ Current version: **4.4.0** ⌘

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

<b>Title:</b>	⌘ Incorporation of version handling, adopting release 5 agreements		
<b>Source:</b>	⌘ SA5 (islip@lucent.com)		
<b>Work item code:</b>	⌘ OAM-CM	<b>Date:</b>	⌘ 05/09/2003
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ Rel-4
	<i>Use <u>one</u> of the following categories:</i> <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .		<i>Use <u>one</u> of the following releases:</i> 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)

<b>Reason for change:</b>	⌘ Version handling alignment with 32.303 v5.2.0 Notification IRP CORBA Solution Set.		
<b>Summary of change:</b>	⌘ Clause A1 minor correction to the typographical spelling error for sequence Clause A3 delete the constant NOTIFICATION_IRP_VERSION and related comments Clause A4 for the operation get_notification_IRP_versions, add a reference to the version rule clause in 32.311		
<b>Consequences if not approved:</b>	⌘ potential confusion and resulting interworking problems regarding interpretation of version.		

<b>Clauses affected:</b>	⌘ A1, A3, A4						
<b>Other specs affected:</b>	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> Other core specifications	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	⌘	
Y	N						
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	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> Test specifications	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	⌘	
Y	N						
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	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> O&M Specifications	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	⌘	
Y	N						
<input type="checkbox"/>	<input checked="" type="checkbox"/>						
<b>Other comments:</b>	⌘ This mirrors the version handling changes already done for 32.303 v5.2.0.						

**How to create CRs using this form:**

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

<b>Change in Annex A</b>
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## Annex A (normative): IDL specifications

### A.1 IDL specification (file name "ManagedGenericIRPConstDefs.idl")

```

#ifndef ManagedGenericIRPConstDefs_idl
#define ManagedGenericIRPConstDefs_idl

#include "TimeBase.idl"

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

/* ## Module: ManagedGenericIRPConstDefs
This module contains definitions commonly used among all IRPs such as Alarm IRP.
=====
*/
module ManagedGenericIRPConstDefs
{
    /*
    Definition imported from CosTime.
    The time refers to time in Greenwich Time Zone.
    It also consists of a time displacement factor in the form of minutes of
    displacement from the Greenwich Meridian.
    */
    typedef TimeBase::UtcT IRPTime;

    enum Signal {OK, Failure, PartialFailure};

    /*
    The VersionNumber is a string that identifies the IRP specification name
    and its version number. See definition "IRP document version number
    string" or "IRPVersion".

    The VersionNumberSet is a sequence of such VersionNumber. It is returned
    by get_XXX_IRP_versions(). The sequence order has no significance.
    */
    typedef string VersionNumber;
    typedef sequence <VersionNumber> VersionNumberSet;

    typedef string MethodName;
    typedef string ParameterName;
    typedef sequence <ParameterName> ParameterList;

    /*
    The Method defines the structure to be returned as part of
    get_supported_operations_profile(). The name shall be the actual method
    name (ex. "attach_push", "change_subscription_filter", etc.)
    The parameter_list contains a list of strings. Each string shall be
    the actual parameter name (ex. "manager_reference", "filter", etc.)
    */
    struct Method
    {
        MethodName name;
    }

```

```

    ParameterList parameter_list;
};

/*
List of all methods and their associated parameters.
*/
typedef sequence <Method> MethodList;
};

#endif

```

---

## A.2 IDL specification (file name "ManagedGenericIRPSystem.idl")

```

#ifndef ManagedGenericIRPSystem_idl
#define ManagedGenericIRPSystem_idl

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

/* ## Module: ManagedGenericIRPSystem
This module contains definitions commonly used among all IRPs such as Alarm IRP.
=====
*/
module ManagedGenericIRPSystem
{
    /*
    Exception thrown when an unsupported optional parameter
    is passed with information.
    The parameter shall be the actual unsupported parameter name.
    */
    exception ParameterNotSupported { string parameter; };

    /*
    Exception thrown when an invalid parameter value is passed.
    The parameter shall be the actual parameter name.
    */
    exception InvalidParameter { string parameter; };

    /*
    Exception thrown when a valid but unsupported parameter value is passed.
    The parameter shall be the actual parameter name.
    */
    exception ValueNotSupported { string parameter; };

    /*
    Exception thrown when an unsupported optional method is called.
    */
    exception OperationNotSupported {};
};

#endif

```

---

## A.3 IDL specification (file name "NotificationIRPConstDefs.idl")

```

#ifndef NotificationIRPConstDefs_idl

```

```

#define NotificationIRPConstDefs_id1

#include "ManagedGenericIRPConstDefs.idl"

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

/* ## Module: NotificationIRPConstDefs
This module contains definitions specific for Notification IRP.
=====
*/
module NotificationIRPConstDefs
{

  /*

Define the current Notification IRP version.
This string is used for the return value of
get_Notification_IRP_versions().


It should be updated based on the rule of sub-clause
titled "IRP document version number string".

*/
const string NOTIFICATION_IRP_VERSION = "<to be updated using the rule>";


  /*
  Define the parameters (in the notification header) specified in
  the Notification IRP: IS.
  */
  interface AttributeNameValue
  {
    const string NOTIFICATION_ID = "a";
    const string EVENT_TIME = "b";
    const string SYSTEM_DN = "c";
    const string MANAGED_OBJECT_CLASS = "d";
    const string MANAGED_OBJECT_INSTANCE = "e";
  };

  /*
  It defines the notification categories.
  A notification category is identified by the IRP name and its version number.
  */
  typedef ManagedGenericIRPConstDefs::VersionNumberSet NotificationCategorySet;

  /*
  It defines the notification types of a particular notification category.
  */
  typedef sequence <string> NotificationTypePerNotificationCategory;

  /*
  This sequence identifies all notification types of all notification
  categories identified by NotificationCategorySet. The number of elements
  in this sequence shall be identical to that of NotificationCategorySet.
  */
  typedef sequence <NotificationTypePerNotificationCategory>
    NotificationTypesSet;

  /*
  It defines a sequence of SubscriptionIds.
  */
  typedef string SubscriptionId;
  typedef sequence <SubscriptionId> SubscriptionIdSet;

  /*

```

```

    This indicates if the subscription is Active (not suspended), Suspended,
    or Invalid.
    */
    enum SubscriptionState {Active, Suspended, Invalid};
};

#endif

```

---

## A.4 IDL specification (file name "NotificationIRPSystem.idl")

```

#ifndef NotificationIRPSystem_idl
#define NotificationIRPSystem_idl

#include "CosNotifyChannelAdmin.idl"
#include "ManagedGenericIRPConstDefs.idl"
#include "ManagedGenericIRPSystem.idl"
#include "NotificationIRPConstDefs.idl"

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

/* ## Module: NotificationIRPSystem
This module implements capabilities of Notification IRP.
=====
*/
module NotificationIRPSystem
{
    /*
    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 GetNotificationIRPVersions { string reason; };
    exception GetNotificationIRPOperationsProfile { string reason; };
    exception GetNotificationIRPNotificationProfile { string reason; };
    exception Attach { string reason; };
    exception DetachException { string reason; };
    exception GetSubscriptionStatus { string reason; };
    exception ChangeSubscriptionFilter { string reason; };
    exception GetNotificationCategories { string reason; };
    exception GetSubscriptionIds { string reason; };

    exception AlreadySubscribed {};
    exception AtLeastOneNotificationCategoryNotSupported {};

    interface NotificationIRP
    {
        /*
        Return the list of all supported Notification IRP versions.
        Each IRPVersion shall be constructed according to the rule described by
        the definition of "IRP document version number string" found in
        3GPP TS 32.311.
        */
        ManagedGenericIRPConstDefs::VersionNumberSet get_notification_IRP_versions
        (
        )
        raises (GetNotificationIRPVersions);

        /*

```

```

Return the list of all supported operations and their supported
parameters for a specific Notification IRP version.
*/
ManagedGenericIRPConstDefs::MethodList
    get_notification_IRP_operations_profile (
        in ManagedGenericIRPConstDefs::VersionNumber
            notification_irp_version
    )
raises (GetNotificationIRPOperationsProfile,
        ManagedGenericIRPSystem::OperationNotSupported,
        ManagedGenericIRPSystem::InvalidParameter);

/*
Return the list of all supported notifications.
Agent should always throw a ManagedGenericIRPSystem::OperationNotSupported
exception.
Similar method, such as get_alarm_IRP_notification_profile,
is supported in other IRP versions such as Alarm IRP.
*/
ManagedGenericIRPConstDefs::MethodList
    get_notification_IRP_notification_profile (
        in ManagedGenericIRPConstDefs::VersionNumber
            notification_irp_version
    )
raises (GetNotificationIRPNotificationProfile,
        ManagedGenericIRPSystem::OperationNotSupported,
        ManagedGenericIRPSystem::InvalidParameter);

/*
Obtain the list of all supported notification categories.
*/
NotificationIRPConstDefs::NotificationCategorySet
    get_notification_categories (
        out NotificationIRPConstDefs::NotificationTypesSet
            notification_type_list
    )
raises (GetNotificationCategories,
        ManagedGenericIRPSystem::OperationNotSupported);

NotificationIRPConstDefs::SubscriptionId attach_push (
    in string manager_reference,
    in unsigned long time_tick,
    in NotificationIRPConstDefs::NotificationCategorySet
        notification_categories,
    in string filter
)
raises (Attach, ManagedGenericIRPSystem::ParameterNotSupported,
        ManagedGenericIRPSystem::InvalidParameter, AlreadySubscribed,
        AtLeastOneNotificationCategoryNotSupported);

NotificationIRPConstDefs::SubscriptionId attach_push_b (
    in string manager_reference,
    in unsigned long time_tick,
    in NotificationIRPConstDefs::NotificationCategorySet
        notification_categories,
    in string filter,
    out CosNotifyChannelAdmin::SequenceProxyPushSupplier system_reference
)
raises (Attach, ManagedGenericIRPSystem::OperationNotSupported,
        ManagedGenericIRPSystem::ParameterNotSupported,
        ManagedGenericIRPSystem::InvalidParameter,
        AlreadySubscribed, AtLeastOneNotificationCategoryNotSupported);

```

```

NotificationIRPConstDefs::SubscriptionId attach_pull (
    in string manager_reference,
    in unsigned long time_tick,
    in NotificationIRPConstDefs::NotificationCategorySet
        notification_categories,
    in string filter,
    out CosNotifyChannelAdmin::SequenceProxyPullSupplier system_reference
)
)
raises (Attach, ManagedGenericIRPSystem::OperationNotSupported,
        ManagedGenericIRPSystem::ParameterNotSupported,
        ManagedGenericIRPSystem::InvalidParameter,
        AlreadySubscribed, AtLeastOneNotificationCategoryNotSupported);

/*
Replace the present filter constraint with the one provided.
*/
void change_subscription_filter (
    in NotificationIRPConstDefs::SubscriptionId subscription_id,
    in string filter
)
)
raises (ChangeSubscriptionFilter,
        ManagedGenericIRPSystem::OperationNotSupported,
        ManagedGenericIRPSystem::InvalidParameter);

/*
Check the current state of the subscription.
*/
NotificationIRPConstDefs::NotificationCategorySet get_subscription_status
(
    in NotificationIRPConstDefs::SubscriptionId subscription_id,
    out string filter_in_effect,
    out NotificationIRPConstDefs::SubscriptionState subscription_state,
    out unsigned long time_tick
)
)
raises (GetSubscriptionStatus,
        ManagedGenericIRPSystem::OperationNotSupported,
        ManagedGenericIRPSystem::InvalidParameter);

NotificationIRPConstDefs::SubscriptionIdSet get_subscription_ids (
    in string manager_reference
)
)
raises (GetSubscriptionIds,
        ManagedGenericIRPSystem::OperationNotSupported,
        ManagedGenericIRPSystem::InvalidParameter);

/*
Terminates the subscription with the agent.
*/
void detach (
    in string manager_reference,
    in NotificationIRPConstDefs::SubscriptionId subscription_id
)
)
raises (DetachException,
        ManagedGenericIRPSystem::ParameterNotSupported,
        ManagedGenericIRPSystem::InvalidParameter);
};
};
#endif

```

<b>End of change in Annex A</b>
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## Annex B (informative): Change history

Change history							
Date	TSG #	TSG Doc.	CR	Rev	Subject/Comment	Old	New
Jun 2001	S_12	SP-010283	--	--	Approved at TSG SA #12 and placed under Change Control	2.0.0	4.0.0
Sep 2001	S_13	SP-010522	001	--	Eliminate guesses on IDL file names in Notification IRP: CORBA SS	4.0.0	4.1.0
Mar 2002	S_15	SP-020038	002	--	Addition of missing generic CORBA exception "ValueNotSupported" into CORBA module "ManagedGenericIRPSystem"	4.1.0	4.2.0
Sep 2002	S_17	SP-020482	003	--	Corrections to CORBA IDL specification "NotificationIRPSystem"	4.2.0	4.3.0
Sep 2002	--	--	--	--	Corrected history box TS version#	4.3.0	4.3.1
Dec 2002	--	--	--	--	Cosmetics	4.3.1	4.3.2
Mar 2003	S_19	SP-030137	007	--	Remove unused suspend_subscription and resume_subscription methods	4.3.2	4.4.0