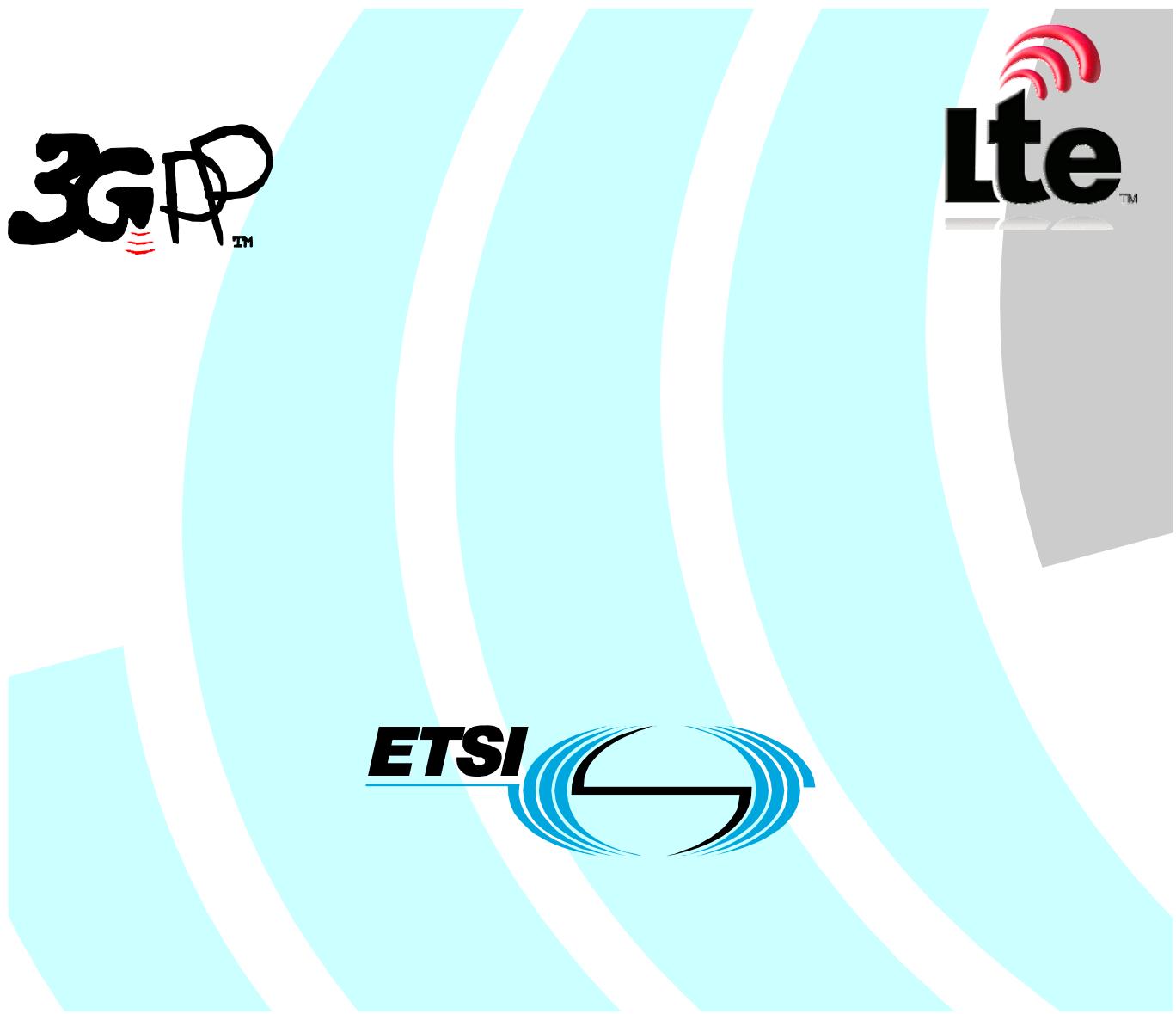# ETSI TS 132 383 V9.0.0 (2010-02)

Technical Specification

Digital cellular telecommunications system (Phase 2+);
Universal Mobile Telecommunications System (UMTS);
LTE;
Telecommunication management;
Partial Suspension of Itf-N Integration Reference Point (IRP);
Common Object Request Broker Architecture (CORBA)
Solution Set (SS)
(3GPP TS 32.383 version 9.0.0 Release 9)

Reference
RTS/TSGS-0532383v900

Keywords
GSM, LTE, UMTS

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Foreword

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The present document may refer to technical specifications or reports using their 3GPP identities, UMTS identities or GSM identities. These should be interpreted as being references to the corresponding ETSI deliverables.

The cross reference between GSM, UMTS, 3GPP and ETSI identities can be found under http://webapp.etsi.org/key/queryform.asp.

Contents

Foreword

This Technical Specification has been produced by the 3rd Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

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x   the first digit:

1   presented to TSG for information;

2   presented to TSG for approval;

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y   the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.

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Introduction

The present document is part 3 of a multi-part TS covering the 3rd Generation Partnership Project: Technical Specification Group Services and System Aspects; Telecommunication Management; Partial Suspension of Itf-N Integration Reference Point (IRP), as identified below:

32.381:   "Partial Suspension of Itf-N Integration Reference Point (IRP); Requirements".

32.382:   "Partial Suspension of Itf-N Integration Reference Point (IRP); Information Service (IS)".

32.383:   "Partial Suspension of Itf-N Integration Reference Point (IRP); Common Object Request Broker Architecture (CORBA) Solution Set (SS)".

32.385:   Partial Suspension of Itf-N Integration Reference Point (IRP); eXtensible Markup Language (XML) definitions.

The Itf-N interface is built up by a number of Integration Reference Points (IRPs) and a related Name Convention, which realise the functional capabilities over this interface. The basic structure of the IRPs is defined in 3GPP TS 32.101 [1] and 3GPP TS 32.102 [2].

Information of an event is carried in notification. An IRPAgent (typically an EM or a NE) emits notifications (see 3GPP TS 32.302 [3]. IRPManager (typically a network management system) receives notifications. In certain scenarios floods of unwanted notifications including alarms will be sent to the IRP manager by network object instances. Thereby the interface and the management systems bear unnecessary load. Even worse: The operator's awareness is drawn away from really urgent events.

1 Scope

The purpose of Partial Suspension of Itf-N IRP is to define an interface through which an IRPManager can suspend the forwarding of notifications via Itf-N which were generated in parts of the managed systems.

The present document is the "CORBA Solution Set" of Partial Suspension of Itf-N IRP for the IRP whose semantics is specified in Partial Suspension of Itf-N IRP Information Service (3GPP TS 32.382 [5]).

2 References

The following documents contain provisions that, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document in the same Release as the present document.

[1]   3GPP TS 32.101: "Telecommunication management; Principles and high level requirements".

[2]   3GPP TS 32.102: "Telecommunication management; Architecture".

[3]   3GPP TS 32.302: "Telecommunication management; Configuration Management (CM); Notification Integration Reference Point (IRP): Information Service (IS)".

[4]   3GPP TS 32.381: "Configuration Management (CM); Notification Partial Suspension of Itf-N Integration Reference Point (IRP); Requirements".

[5]   3GPP TS 32.382: "Configuration Management (CM); Notification Partial Suspension of Itf-N Integration Reference Point (IRP); Information Service (IS)".

[6]   3GPP TS 32.622: "Telecommunication management; Configuration Management (CM); Generic network resources Integration Reference Point (IRP); Network Resource Model (NRM)".

[7]   3GPP TS 32.312: "Telecommunication management; Generic Integration Reference Point (IRP) management; Information Service (IS)".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply:

IRP: See 3GPP TS 32.101 [1].

IRPAgent: See 3GPP TS 32.102 [2].

IRPManager: See 3GPP TS 32.102 [2].

Suspended notification: See 3GPP TS 32.381 [4].

Itf-N suspended managed instance: See 3GPP TS 32.381 [4].

Partial suspension of Itf-N: See 3GPP TS 32.381 [4].

3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

EM	Element Manager
IRP	Integration Reference Point
IS	Information Service (see 3GPP TS 32.101 [1])
Itf-N	Interface N
NE	Network Element
TS	Technical Specification

4 Architectural features

The overall architectural feature of Partial Suspension of Itf-N IRP is specified in 3GPP TS 32.382 [5].

5 Mapping

5.1 General mappings

Not applicable.

5.2 Operation and notification mapping

The Partial Suspension of Itf-N IRP: IS (see 3GPP TS 32.382 [6]) defines semantics of operations visible across the Partial Suspension of Itf-N IRP. Table 5.2-1 indicates mapping of these operations and notifications to their equivalents defined in this SS.

Table 5.2-1: Mapping from IS Operation and Notification to SS equivalents

IS Operation / Notification (3GPP TS 32.382 [5])	SS Method	Qualifier
setPartialSuspensionOfItfN	setPartialSuspensionOfItfN	M
removePartialSuspensionOfItfN	removePartialSuspensionOfItfN	M
readActivePartialSuspensionsOfItfN	readActivePartialSuspensionsOfItfN	O
notifyChangeOfPartialSuspensionOfItfN	notifyChangeOfPartialSuspensionOfItfN	M

5.3 Operation parameter mapping

The Partial Suspension of Itf-N IRP: IS (see 3GPP TS 32.382 [6]) defines semantics of parameters carried in operations across the Partial Suspension of Itf-N IRP. The following tables indicate the mapping of these parameters, as per operation, to their equivalents defined in this SS.

Table 5.3-1: Mapping from IS `setPartialSuspensionOfItfN` parameters to SS equivalents

IS Operation parameter	SS Method parameter	Qualifier
managerReference	PartialSuspensionConstDefs::ManagerReference	M
baseMOInstance	PartialSuspensionConstDefs::DNOpt	O
scope	PartialSuspensionConstDefs::ScopeTypeConditional	CM
partialSuspensionId	PartialSuspensionConstDefs::PartialSuspensionIdConditional	CM
conflictingPartialSuspensionList	PartialSuspensionConstDefs::PartialSuspensionListConditional	CM
activationTime	PartialSuspensionConstDefs::ActivationTimeOpt	O
status	Exceptions: PartialSuspensionConstDefs::SetPartialSuspensionOfItfN PartialSuspensionConstDefs::AtLeastOneInstanceAlreadySuspended GenericIRPManagementSystem::ParameterNotSupported, GenericIRPManagementSystem::InvalidParameter, GenericIRPManagementSystem::ValueNotSupported, GenericIRPManagementSystem::OperationNotSupported	M

Table 5.3-2: Mapping from IS `removePartialSuspensionOfItfN` parameters to SS equivalents

IS Operation parameter	SS Method parameter	Qualifier
managerReference	PartialSuspensionConstDefs::ManagerReference	M
partialSuspensionId	PartialSuspensionConstDefs::PartialSuspensionId	M
status	Exceptions: PartialSuspensionConstDefs::RemovePartialSuspensionOfItfN GenericIRPManagementSystem::ParameterNotSupported, GenericIRPManagementSystem::InvalidParameter, GenericIRPManagementSystem::ValueNotSupported, GenericIRPManagementSystem::OperationNotSupported	M

**Table 5.3-3: Mapping from IS `readActivePartialSuspensionsOfItfN`
parameters to SS equivalents**

IS Operation parameter	SS Method parameter	Qualifier
activePartialSuspensionList	PartialSuspensionConstDefs::PartialSuspensionListConditional	CM
status	Exceptions: PartialSuspensionConstDefs::ReadActivePartialSuspensionsOfItfN GenericIRPManagementSystem::ParameterNotSupported, GenericIRPManagementSystem::InvalidParameter, GenericIRPManagementSystem::ValueNotSupported, GenericIRPManagementSystem::OperationNotSupported	M

5.4 Notification parameter mapping

**Table 5.4-1: Mapping from IS `notifyChangeOfPartialSuspensionOfItfN`
parameters to SS equivalents**

IS Operation parameter	SS Method parameter	Qualifier
managerReference	PartialSuspensionConstDefs::ManagerReference	M
typeOfChange	PartialSuspensionConstDefs::TypeOfChange	M
partialSuspensionId	PartialSuspensionConstDefs::PartialSuspensionId	M
baseMOInstance	PartialSuspensionConstDefs::DNOpt	CO
scope	PartialSuspensionConstDefs::ScopeTypeConditional	CM
activationTime	PartialSuspensionConstDefs::ActivationTimeOpt	CO

Annex A (normative): IDL specifications

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

```
// File: PartialSuspensionConstDefs.idl
#ifndef _PARTIAL_SUSPENSION_CONST_DEFS_IDL_
#define _PARTIAL_SUSPENSION_CONST_DEFS_IDL_

#include <TimeBase.idl>


#include <KernelCmConstDefs.idl>
#include <NotificationIRPConstDefs.idl>

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


/* ## Module: PartialSuspensionConstDefs */

module PartialSuspensionConstDefs
{

/*****************************************************************/
/* definition of types used in operations for Partial Suspension: */
/*****************************************************************/

/* types used in several operations: */

   typedef string ManagerReference;

   typedef string PartialSuspensionId;

   /*
   PartialSuspensionIdConditional is a type carrying a conditional parameter.
   The boolean shall be TRUE, if the condition described in TS 32.382 is fulfilled.
   In this case the value is present. Otherwise the value is be absent.
   */
   union PartialSuspensionIdConditional switch (boolean)
   {
      case TRUE: PartialSuspensionId value;
   };


   /*
   DNOpt is a type carrying an optional parameter.
   If the boolean is TRUE, then the value is present.
   Otherwise the value is absent.
   */
   union DNOpt switch (boolean)
   {
      case TRUE: KernelCmConstDefs::DN value;
   };


   /*
   ScopeTypeConditional is a type carrying a conditional parameter.
   The boolean shall be TRUE, if the condition described in TS 32.382 is fulfilled.
   In this case the value is present. Otherwise the value is be absent.
   */
   union ScopeTypeConditional switch (boolean)
   {
      case TRUE: KernelCmConstDefs::ScopeType value;
   };


typedef TimeBase::UtcT ActivationTime;
```

```
    /*
    ActivationTimeOpt is a type carrying an optional parameter.
    If the boolean is TRUE, then the value is present.
    Otherwise the value is absent.
    */
    union ActivationTimeOpt switch (boolean)
    {
        case TRUE: ActivationTime value;
    };


    struct PartialSuspensionParameter
        {
        KernelCmConstDefs::DN baseObjectInstance;
        KernelCmConstDefs::ScopeType scope;
        ActivationTimeOpt activationTime;
        };

    typedef sequence<PartialSuspensionParameter> PartialSuspensionParameterList;

    /*
    PartialSuspensionParameterListConditional is a type carrying a conditional parameter.
    The boolean shall be TRUE, if the condition described in TS 32.382 is fulfilled.
    In this case the value is present. Otherwise the value is be absent.
    */
    union PartialSuspensionParameterListConditional switch (boolean)
    {
        case TRUE: PartialSuspensionParameterList value;
    };


    struct PartialSuspension
        {
        PartialSuspensionId partialSuspensionId;
        PartialSuspensionParameterListConditional partialSuspensionParameterList;
        };

    typedef sequence<PartialSuspension> PartialSuspensionList;

    /*
    PartialSuspensionListConditional is a type carrying a conditional parameter.
    The boolean shall be TRUE, if the condition described in TS 32.382 is fulfilled.
    In this case the value is present. Otherwise the value is be absent.
    */
    union PartialSuspensionListConditional switch (boolean)
    {
        case TRUE: PartialSuspensionList value;
    };


    enum Status {SUCCESS, FAILURE};

    enum TypeOfChange { SET_PARTIAL_SUSPENSION, REMOVE_PARTIAL_SUSPENSION };


/* types used in operation setPartialSuspensionOfItfN: */

    /* no typedef specifically for this operation */


/* types used in operation removePartialSuspensionOfItfN: */

    /* no typedef specifically for this operation */


/* types used in operation readActivePartialSuspensionsOfItfN: */

    /* no typedef specifically for this operation */



/*****************************************************************/
/* definition of types in nofications for partial suspension ::    */
/*****************************************************************/

interface AttributeNameValue
```

ETSI

```
    {
    const string MANAGER_REFERENCE = "MANAGER_REFERENCE";
    const string TYPE_OF_CHANGE = "TYPE_OF_CHANGE";
    const string PARTIAL_SUSPENSION_ID = "PARTIAL_SUSPENSION_ID";
    const string BASE_MO_INSTANCE = "BASE_MO_INSTANCE";
    const string SCOPE = "SCOPE";
    const string ACTIVATION_TIME = "ACTIVATION_TIME";
    };

/* types used in notification notifyChangeOfPartialSuspensionOfItfN: */

    /* no typedef specifically for this notfication */


};

#endif // _PARTIAL_SUSPENSION_CONST_DEFS_IDL_
```

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

```
//File: PartialSuspensionSystem.idl
#ifndef _PARTIAL_SUPENSION_IRP_SYSTEM_IDL_
#define _PARTIAL_SUPENSION_IRP_SYSTEM_IDL_

#include <PartialSuspensionConstDefs.idl>
#include <GenericIRPManagementSystem.idl>

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

/* ## Module: PartialSuspensionSystem */

module PartialSuspensionSystem
{

    /*
    If the system fails to complete an operation, then it can provide a reason
    to qualify the exception. The semantics carried in this reason are outside
    the scope of the present document.
    */
    exception SetPartialSuspensionOfItfN { string reason; };
    exception RemovePartialSuspensionOfItfN { string reason; };
    exception ReadActivePartialSuspensionsOfItfN { string reason; };


    interface partialSuspension
    {
       /* for the purpose of this operation see 3GPP TS 32.382 */
       PartialSuspensionConstDefs::Status setPartialSuspensionOfItfN
          (
          in PartialSuspensionConstDefs::ManagerReference managerReference,
          in PartialSuspensionConstDefs::DNOpt baseMOInstance,
          in PartialSuspensionConstDefs::ScopeTypeConditional scope,
          out PartialSuspensionConstDefs::PartialSuspensionIdConditional partialSuspensionId,
          out PartialSuspensionConstDefs::PartialSuspensionListConditional
              conflictingPartialSuspensionList,
          out PartialSuspensionConstDefs::ActivationTimeOpt activationTime
          )
       raises
          (
          SetPartialSuspensionOfItfN,
          GenericIRPManagementSystem::ParameterNotSupported,
          GenericIRPManagementSystem::InvalidParameter,
          GenericIRPManagementSystem::ValueNotSupported,
          GenericIRPManagementSystem::OperationNotSupported
          );


       /* for the purpose of this operation see 3GPP TS 32.382 */
       PartialSuspensionConstDefs::Status removePartialSuspensionOfItfN
          (
          in PartialSuspensionConstDefs::ManagerReference managerReference,
          in PartialSuspensionConstDefs::PartialSuspensionId partialSuspensionId
          )
       raises
          (
          RemovePartialSuspensionOfItfN,
          GenericIRPManagementSystem::ParameterNotSupported,
          GenericIRPManagementSystem::InvalidParameter,
          GenericIRPManagementSystem::ValueNotSupported,
          GenericIRPManagementSystem::OperationNotSupported
          );


       /* for the purpose of this operation see 3GPP TS 32.382 */
       PartialSuspensionConstDefs::Status readActivePartialSuspensionsOfItfN
          (
          out PartialSuspensionConstDefs::PartialSuspensionListConditional
              activePartialPuspensionList
          )
       raises
```

```
            (
            ReadActivePartialSuspensionsOfItfN,
            GenericIRPManagementSystem::ParameterNotSupported,
            GenericIRPManagementSystem::InvalidParameter,
            GenericIRPManagementSystem::ValueNotSupported,
            GenericIRPManagementSystem::OperationNotSupported
            );

    };

};


#endif // _PARTIAL_SUPENSION_IRP_SYSTEM_IDL_
```

A.3   IDL specification (file name "PartialSuspensionOfItfNNotifications.idl")

```
//File: PartialSuspensionOfItfNNotifications.idl
#ifndef _PARTIAL_SUSPENSION_OF_ITFN_NOTIFICATIONS_IDL_
#define _PARTIAL_SUSPENSION_OF_ITFN_NOTIFICATIONS_IDL_

#include <PartialSuspensionConstDefs.idl>
#include <NotificationIRPNotifications.idl>

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

/* ## Module: PartialSuspensionOfItfNNotifications
This contains the specification of notifications of Partial Suspension of Itf-N.
=============================================================================
*/
module PartialSuspensionOfItfNNotifications
{

    /* Constant definitions for the notifyChangeOfPartialSuspensionOfItfN notification */

    interface notifyChangeOfPartialSuspensionOfItfN: NotificationIRPNotifications::Notify
    {
        const string EVENT_TYPE = "notifyChangeOfPartialSuspensionOfItfN";

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

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

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

        /**
        * This constant defines the name of the BaseMOInstance property,
        * which is transported in the filterable_body fields.
        * The data type for the value of this property is
        * PartialSuspensionConstDefs::DNOpt.
        */
        const string BASE_MO_INSTANCE =
           PartialSuspensionConstDefs::AttributeNameValue::BASE_MO_INSTANCE;

        /**
        * This constant defines the name of the Scope property,
        * which is transported in the filterable_body fields.
        * The data type for the value of this property is
        * PartialSuspensionConstDefs::ScopeTypeConditional.
        */
        const string SCOPE =
           PartialSuspensionConstDefs::AttributeNameValue::SCOPE;
```

```
        /**
        * This constant defines the name of the ActivationTime property,
        * which is transported in the filterable_body fields.
        * The data type for the value of this property is
        * PartialSuspensionConstDefs::ActivationTimeOpt.
        */
        const string ACTIVATION_TIME =
            PartialSuspensionConstDefs::AttributeNameValue::ACTIVATION_TIME;

    };


};

#endif // _PARTIAL_SUSPENSION_OF_ITFN_NOTIFICATIONS_IDL_
```

Annex B (informative): Change history

Change history								
Date	**TSG #**	**TSG Doc.**	**CR**	**R**	**Subject/Comment**	**Cat**	**Old**	**New**
Mar 2007	SA_35	SP-070060	--	--	Submitted to SA#35 for Approval	--	1.0.0	7.0.0
Dec 2008	SA_42	--	--	--	Upgrade to Release 8	--	7.0.0	8.0.0
Dec 2009	-	-	-	-	Update to Rel-9 version (MCC)	--	8.0.0	9.0.0

History

Document history		
V9.0.0	February 2010	Publication