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Network Resources Model (NRM) - for Approval
Document for: Approval
Agenda Item: 7.5.3

3GPP TSG-SA5 (Telecom Management)
Meeting #39, Montreal, CANADA, 16 - 20 August 2004

S5-042539

Presentation of Specification to TSG SA

Presentation to: TSG SA Meeting #25
Document for presentation: TS 32.172, Version 2.0.0
Presented for: Approval

Abstract of document:

This TS defines the Network Resources Model (NRM) Information Service for the Subscription Management Resources Integration Reference Point (IRP).

Work is done against the WID contained in SP-020448 (Work Item ID: SuM).

This TS is a member of a family consisting of currently the following TSs:

3GPP TS 32.171: "Telecommunication management; Subscription Management (SuM) Network Resource Model (NRM) Integration Reference Point (IRP): Requirements".

3GPP TS 32.172: "Telecommunication management; Subscription Management (SuM) resources Integration Reference Point (IRP); Network Resources Model (NRM)".
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3GPP TS 32.173: "Telecommunication management; Subscription Management (SuM) Network Resource Model (NRM) Integration Reference Point (IRP); Common Object Request Broker Architecture (CORBA) Solution Set (SS)".
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Changes since last presentation to TSG Meeting #22:

- Agreement on a set of use cases to drive the selection of information elements has been reached.
- The set of managed attributes has been defined based on subscriber data defined in 23.008.
- Information Object Classes have been restructured based on use cases in 3GPP TS 32.140.

Outstanding Issues:

- Supplementary services may not be covered fully in the specification.
- Trace parameters are for further study.
- Diagrams need alignment with 3GPP TS 32.151.
- Linkage to Basic, Kernel and Bulk CM IRP is needed.
- The modelling of object classes for service specific parameters is incomplete.
- Temporary HSS Subscriber Data included in the specification are for further study.

Contentious Issues: None.

3GPP TS 32.172 V2.0.0 (2004-09)

Technical Specification

**3rd Generation Partnership Project;
Technical Specification Group Services and System Aspects;
Telecommunication management;
Subscription Management (SuM) Network Resource Model
(NRM) Integration Reference Point (IRP):
Information Service (IS)
(Release 6)**



The present document has been developed within the 3rd Generation Partnership Project (3GPP™) and may be further elaborated for the purposes of 3GPP.

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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

where:

x the first digit:

1 presented to TSG for information;

2 presented to TSG for approval;

3 or greater indicates TSG approved document under change control.

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

z the third digit is incremented when editorial only changes have been incorporated in the document.

Introduction

TS 32.172: "Telecommunication management; Subscription Management (SuM) Network Resource Model (NRM) Integration Reference Point (IRP): Information Service (IS)".

The interface Itf-N, defined in 3GPP TS 32.102 [2], 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].

The present document is a member of a TS-family consisting of:

TS 32.140: "Telecommunication management; Subscription Management (SuM) Requirements".

TS 32.141: "Telecommunication management; Subscription Management (SuM) Architecture".

TS 32.171: "Telecommunication management; Subscription Management (SuM) Network Resource Model (NRM) Integration Reference Point (IRP): Requirements".

TS 32.173: "Telecommunication management; Subscription Management (SuM) Network Resource Model (NRM) Integration Reference Point (IRP); Common Object Request Broker Architecture (CORBA) Solution Set (SS)".

1 Scope

The present document defines the Network Resources Model (NRM) for the present IRP: Subscription Management Resources Integration Reference Point (IRP).

2 References

The following documents contain provisions which, 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 32.140: "Telecommunication management; Subscription Management (SuM) Requirements".

[4] 3GPP TS 32.141: "Telecommunication management; Subscription Management (SuM) Architecture."

[5] 3GPP TS 32.171: "Telecommunication management; Subscription Management (SuM) Network Resource Model (NRM) Integration Reference Point (IRP): Requirements".

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

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply. For terms and definitions not found here, please refer to 3GPP TS 32.101 [1], 3GPP TS 32.102 [2], 3GPP TS 32.140 [3] and TS 32.141 [4].

Subscription Profile: see 3GPP TS 32.140 [3].

Subscription Profile Component: see 3GPP TS 32.140 [3].

Subscription Profile Component Definition: specifies a Subscription Profile Component.

Subscriber Profile: see 3GPP TS 32.140 [3].

3.2 Abbreviations

For the purposes of the present document the following and the abbreviations in 32.101 [1], 32.102 [2], 32.140 [3] and 32.141 [4] apply.

EM	Element Manager
IOC	Information Object Class
IRP	Integration Reference Point
MOC	Managed Object Class
NE	Network Element
SuM	Subscription Management
SOM	Service Operations Management

4 Compliance rules

The following defines the meaning of Mandatory and Optional IOC attributes and associations between IOCs, in Solution Sets to the IRP defined by the present document.

Solution Sets to the SuM IRP:

- The IRPManager shall support all mandatory attributes/associations. The IRPManager shall be prepared to receive information related to Mandatory as well as Optional attributes/associations without failure; however the IRPManager does not have to support handling of the Optional attributes/associations.
- The IRPAgent shall support all Mandatory attributes/associations. It may support Optional attributes/associations.

An IRPAgent that incorporates vendor-specific extensions shall support normal communication with a 3GPP SA5-compliant IRPManager with respect to all Mandatory and Optional Managed Object Classes (MOCs), attributes, associations, operations, parameters and notifications without requiring the IRPManager to have any knowledge of the extensions.

5 Modelling approach

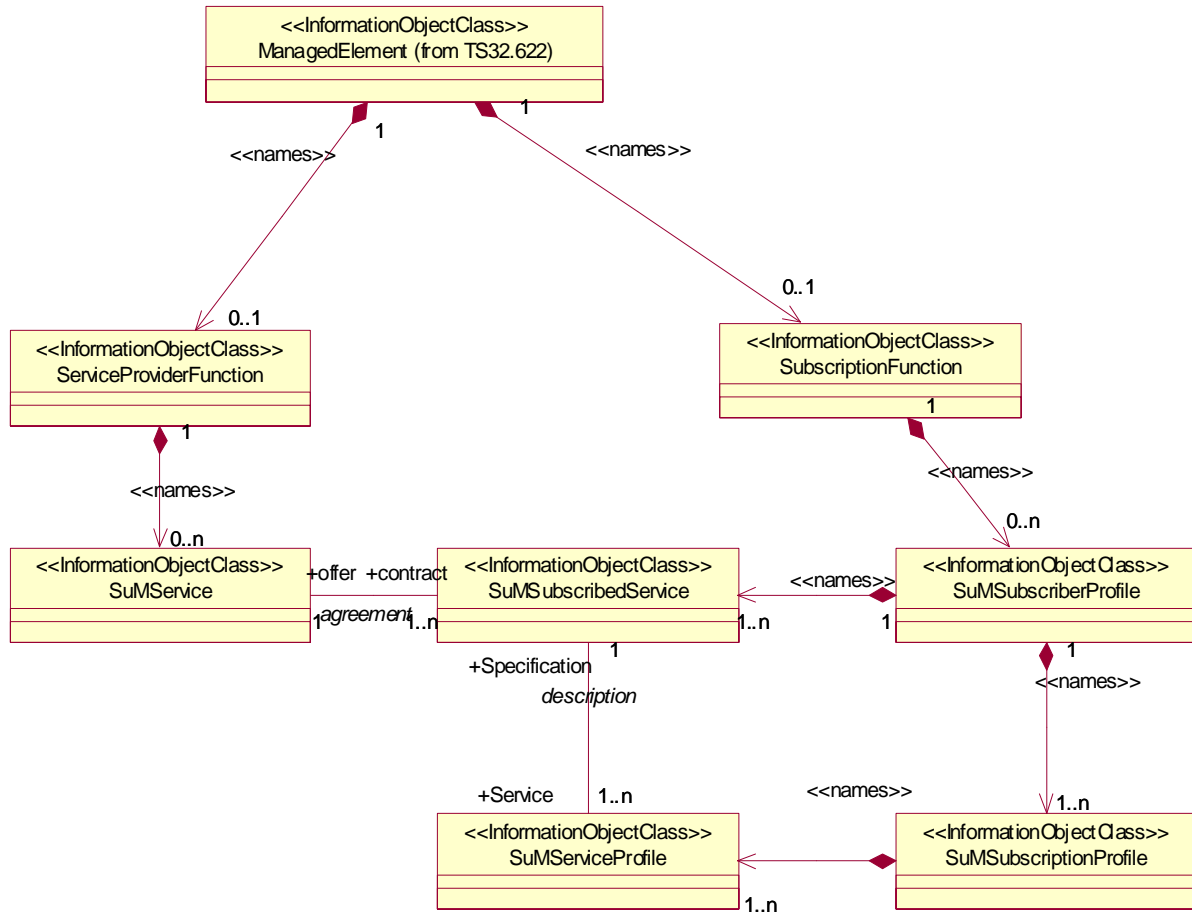
The modelling approach adopted and used in this IRP is described in 3GPP TS 32.622 [6].

6 Information Object Classes

6.1 Imported information entities and local labels

Label reference	Local label
32.622 [6], information object class, ManagedFunction	ManagedFunction
32.622 [6], information object class, ManagedElement	ManagedElement

6.2 Class diagram



Editor note: To be updated with alignment to TS 32.151

Figure 1: SuM NRM Containment/Naming and Association diagram

6.2.1 Attributes and relationships

This subclause depicts the set of IOCs that encapsulate information relevant for this service. This sub-clause provides the overview of all information object classes in UML. Subsequent subclauses provide more detailed specification of various aspects of these Information Object Classes (IOCs).

6.2.2 Inheritance

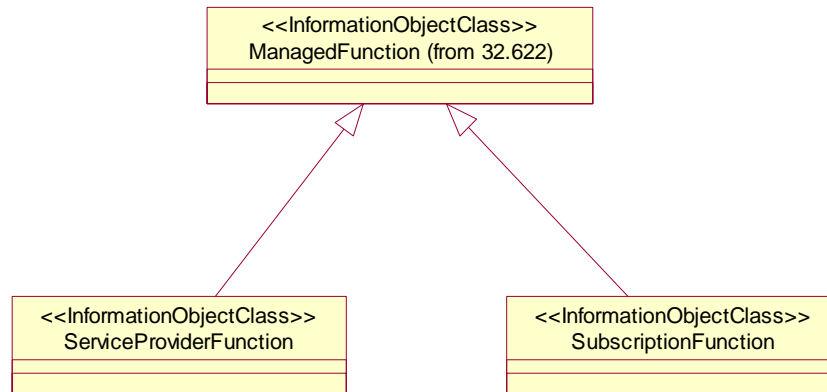


Figure 2: SuM NRM Inheritance Hierarchy

6.3 Information Object Class definitions

6.3.1 SuMService

6.3.1.1 Definition

In this management context:

- This class represents a service provided by a service provider
- This class contains the valid parameters that define the provided service from subscription point of view. These parameters may be composed of one to several Subscription Profile Component Definitions.

6.3.1.2 Attributes

Attributes of SuMService

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
suMServiceId	+	M	M	-
suMServiceDescriptor	+	M	M	O
suMServiceInfo	+	M	M	O
agreement-contract	+	M	M	O

6.3.2 SuMSubscribedService

6.3.2.1 Definition

In this management context:

- This class represents subscription to a service for a subscriber. The entire set of subscribed services owned by a subscriber constitutes the subscriber's Subscribed Services Profile.
- This class contains the agreed (between the Subscriber and the Service Provider) parameter settings for a service that a Subscriber subscribes to.

6.3.2.2 Attributes

Attributes of SuMSubscribedService

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
suMSubscribedServiceId	+	M	M	-
suMSubscribedServiceInfo	+	M	M	O
description-Service	+	M	M	O
agreement-Offer	+	M	M	O

6.3.3 SuMSubscriberProfile

6.3.3.1 Definition

In this management context:

- a) This class represents the Subscriber Profile.
- b) This class contains the Subscribed Services for a subscriber
- c) This class contains the users for a subscriber.

6.3.3.2 Attributes

Attributes of SuMSubscriberProfile

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
suMSubscriberProfileId	+	M	M	-
suMSubscriberProfileInfo	+	M	M	O

6.3.4 SuMSubscriptionProfile

6.3.4.1 Definition

In this management context:

- a) This class represents user's subscription profile of the services contracted by a subscriber.
- b) This class contains Service Profiles for the services contracted by a subscriber and assigned to a user.

6.3.4.2 Attributes

Attributes of SuMSubscriptionProfile

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
suMSubscriptionProfileId	+	M	M	-
suMSubscriptionProfileInfo	+	M	M	O

6.3.5 SuMServiceProfile

6.3.5.1 Definition

In this management context:

- a) This class represents for a particular subscribed service the service preferences and settings chosen for a user.

6.3.5.2 Attributes

Attributes of SuMServiceProfile

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
suMServiceProfileId	+	M	M	O
suMServiceProfileInfo	+	M	M	-
description-Specification	+	M	M	O

6.3.6 ServiceProviderFunction

6.3.6.1 Definition

In this management context:

- This class represents service provider functionality.
- All managed elements related with providing services have this functionality.
- It carries references to all services to be provided.
- It inherits from ManagedFunction (defined in 32.622 [6]).

6.3.6.2 Attributes

Attributes of ServiceProviderFunction

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
serviceProviderFunctionId	+	M	M	-
userLabel	+	M	M	M

6.3.7 SubscriptionFunction

6.3.7.1 Definition

In this management context:

- This class represents subscription functionality.
- All managed elements related with the subscription of services have this functionality.
- It carries references to all subscription profile data.
- It carries references to all Subscriber data
- It inherits from ManagedFunction (defined in 32.622 [6]).

6.3.7.2 Attributes

Attributes of SubscriptionFunction

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
subscriptionFunctionId	+	M	M	-
userLabel	+	M	M	M

6.4 Information relationship definitions

6.4.1 Agreement

6.4.1.1 Definition

This represents the agreement relationship between SuMService and SuMSubscribedService.

6.4.1.2 Roles

Name	Definition
contract	The SuMSubscribedService represents an agreed contract for a SuMService.
offer	The SuMService represents an offer of an agreement to a SuMSubscribedService

6.4.1.3 Constraints

There is no constraint for this relationship?

6.4.2 Description

6.4.2.1 Definition

This represents the content relationship between SuMSubscriptionProfile and SuMServiceProfile.

6.4.2.2 Roles

Name	Definition
specification	SuMSubscribedService act as the specification for the description of SuMServiceProfile
service	SuMServiceProfile act as the service specified in the description

6.4.2.3 Constraints

There is no constraint for this relationship.

6.5 Information attribute definitions

6.5.1 Definitions and legal values

The following table defines the attributes that are present in several IOCs of the present document.

Table 6.5.1: Attributes

Attribute Name	Definition	Legal Values
suMServiceId	An attribute whose <i>#name+value#</i> can be used as an RDN when naming an instance of the SuMService object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
suMServiceProfileId	An attribute whose <i>#name+value#</i> can be used as an RDN when naming an instance of the SuMServiceProfile object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
suMServiceInfo	Definition of the service provided in the form of attribute name and attribute value pairs. What attributes could be defined is a service specific issue. This could include Subscription Profile Component definitions for HSS, MMS, etc., etc.,...	
suMServiceDescriptor	Describes the set of service parameters that the SuMServiceInfo can contain	see annex A
suMServiceProfileInfo	Definition of the service preferences chosen for a user in the form of attribute name and attribute value pairs. What attributes could be defined is a service specific issue but it should at least contain the subscription identity that owns this service preferences.	
suMSubscriberProfileId	An attribute whose <i>#name+value#</i> can be used as an RDN when naming an instance of the SumSubscriberProfile object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
suMSubscriberProfileInfo	Definition of the properties of a subscriber in the form of attribute name and attribute value pairs. What attributes could be defined is a Subscriber identification specific issue. This could include for example subscriber Name, MSISDN or IMSI.	
suMSubscribedServiceId	An attribute whose <i>#name+value#</i> can be used as an RDN when naming an instance of the SuMSubscribedService object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
suMSubscribedServiceInfo	Definition of the provided service that has been agreed between the subscriber and the service provider in the form of attribute name and attribute value pairs. What attributes could be defined is a service specific issue, which includes Subscription Profile Data and associated Subscription Profile Component data	
suMSubscriptionProfileId	An attribute whose <i>#name+value#</i> can be used as an RDN when naming an instance of the SuMSubscriptionProfile object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
suMSubscriptionProfileInfo	Definition of the properties of a user in the form of attribute name and attribute value pairs. What attributes could be defined is a Subscription Profile identification specific issue. This could include for example MSISDN and IMSI.	
userLabel	A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.	
agreement-contract	Models the agreement relationship to a subscribed service. This attribute contains a list of the DN(s) of the related SuMSubscribedService instance(s).	
agreement-offer	Models the agreement relationship to a service. An attribute whose <i>#name+value#</i> can be used as DN when referencing an instance of the SuMService object class.	
description-Service	Models the description relationship to a service profile. This attribute contains a list of the DN(s) of the related SuMServiceProfile instance(s).	
description-Specification	Models the description relationship to a subscribed service. An attribute whose <i>#name+value#</i> can be used as DN when referencing an instance of the SuMSubscribedService object class.	

Annex A (normative): Service Specific Parameters

This annex specifies the service specific parameters that shall be used for attribute SuMServiceInfo, SuMSubscribedServiceInfo, SuMServiceProfileInfo and SuMSubscriptionProfile. The attribute SuMServiceDescriptor is set to a specific value for each set of service specific parameters.

A.1 Circuit Switched Service Parameters

The 3GPP defined Circuit Switched Service parameters are listed in TS 23.008.

A.1.1 Attributes

For the SuMServiceDescriptor set to 'CS parameters', attribute SuMServiceInfo contain some or all of the attributes in the following tables.

SuMSubscribedServiceInfo may contain a selected part of the contents in the following tables.

SuMSubscriptionProfileInfo contains the entire contents of table A.1.1.1.

SuMServiceProfileInfo contains the entire contents of table A.1.1.2.

Table A.1.1.1: Circuit Switched Service parameters (Part 1)

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
IMSI	+	M	M	-
mobileStationCategory	+	M	M	M
iMUIIdentifier	+	M	M	M
mSCNumber	+	M	M	-
subscriptionRestriction	+	M	M	M
mSCAreaRestrictedFlag	+	M	M	-
oDBinducedBarringData	+	M	M	-
roamingRestrictionDueToUnsupportedFeature	+	M	M	-
mNRR	+	M	M	-
subscriberStatus	+	M	M	-
notificationToCSEFlagForODB	+	M	M	M
gsmSCFaddresslistForODB	+	M	M	-
messagesWaitingData	+	M	M	-
mobileStationNotReachableFlag	+	M	M	-
memoryCapacityExceededFlag	+	M	M	-
traceReference	+	M	M	M
traceType	+	M	M	M
operationsSystemsIdentity	+	M	M	M
hLRTraceType	+	M	M	M
mAPErrrorOnTrace	+	M	M	-
traceActivatedInVLR	+	M	M	-

Table A.1.1.2: Circuit Switched Service parameters (Part 2)

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
provisionOfBearerService	+	M	M	M
provisionOfTeleservice	+	M	M	M
bCAllocation	+	M	M	M
checkSSIndicator	+	M	M	-
mSPurgedForNonGPRSFlag	+	M	M	-
barringOfOutgoingCalls	+	M	M	-
barringOfIncomingCalls	+	M	M	-
barringOfRoaming	+	M	M	-
barringOfPremiumRateCalls	+	M	M	-
barringOfSupplementaryServiceManagement	+	M	M	-
barringOfRegistrationOfCallForwarding	+	M	M	-
barringOfInvocationOfCallTransfer	+	M	M	-
operatorDeterminedBarringPLMNspecificData	+	M	M	-
vGCSTGroupMembershipList	+	M	M	M
vBSGroupMembershipList	+	M	M	M
broadcastCallInitiationAllowedList	+	M	M	M
originatingCAMELSubscriptionInformationOCSI	+	M	M	M
terminatingCAMELSubscriptionInformationTCSI	+	M	M	M
vMCTerminatingCAMELSubscriptionInformationVTCSI	+	M	M	M
locationInformation/SubscriberStateInformation	+	M	M	M
uSSDCAMELSubscriptionInformationUCSI	+	M	M	M
sSInvocationNotificationSSCSI	+	M	M	M
translationInformationFlagTIFCSI	+	M	M	M
dialledServiceCAMELSubscriptionInformationDCSI	+	M	M	M
uSSDGeneralCAMELServiceInformationUGCSI	+	M	M	M
oCSINegotiatedCAMELCapabilityHandling	+	M	M	-
sCSINegotiatedCAMELCapabilityHandling	+	M	M	-
vCSINegotiatedCAMELCapabilityHandling	+	M	M	-
shortMessageServiceCAMELSubscriptionInformationMOSMSCSI	+	M	M	M
shortMessageServiceCAMELSubscriptionInformationMTSMSCSI	+	M	M	M
mOSMSCSIVLRNegotiatedCAMELCapabilityHandling	+	M	M	-
mTSMSCSIVLRNegotiatedCAMELCapabilityHandling	+	M	M	-
mCSINegotiatedCAMELCapabilityHandling	+	M	M	-
vLRSupportedCAMELPhases	+	M	M	-
gsmSCFAddressforCSI	+	M	M	M
vLROfferedCAMEL4CSIs	+	M	M	-
iSTAlertTimer	+	M	M	M
cSAllocation/Retentionpriority	+	M	M	M

A.1.2 Information attribute definitions

A.1.2.1 Definitions and legal values

Definitions and legal values that are present in circuit switched service parameters.

Table A.1.2.1: Circuit Switched Service attributes

Attribute Name	Definition	Legal Values
iMSI	Subclause in TS 23.008 2.1.1.1	
networkAccessMode	Subclause in TS 23.008 2.1.1.2	
internationalMSISDNNumber	Subclause in TS 23.008 2.1.2	
multinumberingMSISDNs	Subclause in TS 23.008 2.1.3	
basicMMSISDNIndicator	Subclause in TS 23.008 2.1.3.1	
mSISDNAlertIndicator	Subclause in TS 23.008 2.1.3.2	
IMSI	Subclause in TS 23.008 2.1.8	
mobileStationCategory	Subclause in TS 23.008 2.2.1	
iMUIdentifier	Subclause in TS 23.008 2.2.2	
iMEISV	Subclause in TS 23.008 2.2.3	
vLRNumber	Subclause in TS 23.008 2.4.5	
mSCNumber	Subclause in S 23.008 2.4.6	
subscriptionRestriction	Subclause in TS 23.008 2.4.10	
mSCAreaRestrictedFlag	Subclause in TS 23.008 2.4.12	
oDBinducedBarringData	Subclause in TS 23.008 2.4.15.1	
roamingRestrictionDueToUnsupportedFeature	Subclause in TS 23.008 2.4.15.2	
ISAIentity	Subclause in TS 23.008 2.4.17.1	
ISAPriority	Subclause in TS 23.008 2.4.17.2	
ISAPreferentialAccessIndicator	Subclause in TS 23.008 2.4.17.2A	
ISAActiveModeSupportIndicator	Subclause in TS 23.008 2.4.17.2B	
ISAOnlyAccessIndicator	Subclause in TS 23.008 2.4.17.3	
ISAActiveModeIndicator	Subclause in TS 23.008 2.4.17.4	
provisionOfBearerService	Subclause in TS 23.008 2.5.1	
provisionOfTeleservice	Subclause in TS 23.008 2.5.2	
bCAllocation	Subclause in TS 23.008 2.5.3	
checkSSIndicator	Subclause in TS 23.008 2.7.4.4	
mSPurgedForNonGPRSFlag	Subclause in TS 23.008 2.7.5	
mNRR	Subclause in TS 23.008 2.7.7	
subscriberStatus	Subclause in TS 23.008 2.8.1	
barringOfOutgoingCalls	Subclause in TS 23.008 2.8.2.1	
barringOfIncomingCalls	Subclause in TS 23.008 2.8.2.2	
barringOfRoaming	Subclause in TS 23.008 2.8.2.3	
barringOfPremiumRateCalls	Subclause in TS 23.008 2.8.2.4	
barringOfSupplementaryServiceManagement	Subclause in TS 23.008 2.8.2.5	
barringOfRegistrationOfCallForwarding	Subclause in TS 23.008 2.8.2.6	
barringOfInvocationOfCallTransfer	Subclause in TS 23.008 2.8.2.7	
operatorDeterminedBarringPLMNspecificData	Subclause in TS 23.008 2.8.3	
notificationToCSEFlagForODB	Subclause in TS 23.008 2.8.4	
gsmSCFaddresslistForODB	Subclause in TS 23.008 2.8.5	
messagesWaitingData	Subclause in TS 23.008 2.10.1	
mobileStationNotReachableFlag	Subclause in TS 23.008 2.10.2	
memoryCapacityExceededFlag	Subclause in TS 23.008 2.10.3	
traceReference	Subclause in TS 23.008 2.11.1	
traceType	Subclause in TS 23.008 2.11.2	
operationsSystemsIdentity	Subclause in TS 23.008 2.11.3	
hLRTraceType	Subclause in TS 23.008 2.11.4	
mAPErrrorOnTrace	Subclause in TS 23.008 2.11.5	
traceActivatedInVLR	Subclause in TS 23.008 2.11.6	
vGCSGroupMembershipList	Subclause in TS 23.008 2.12.1	
vBSGroupMembershipList	Subclause in TS 23.008 2.12.2	
broadcastCallInitiationAllowedList	Subclause in TS 23.008 2.12.2.1	
originatingCAMELSubscriptionInformationOCSI	Subclause in TS 23.008 2.14.1.1/3.1	

terminatingCAMELSubscriptionInformationTCSI	Subclause in TS 23.008 2.14.1.2	
vMSTerminatingCAMELSubscriptionInformationVTCSI	Subclause in TS 23.008 2.14.1.2/3.2	
locationInformation/SubscriberStateInformation	Subclause in TS 23.008 2.14.1.3	
uSSDCAMELSubscriptionInformationUCSI	Subclause in TS 23.008 2.14.1.4	
sSInvocationNotificationSSCSI	Subclause in TS 23.008 2.14.1.5/3.2	
translationInformationFlagTIFCSI	Subclause in TS 23.008 2.14.1.6/3.6	
dialledServiceCAMELSubscriptionInformationDCSI	Subclause in TS 23.008 2.14.1.11/3.7	
uSSDGeneralCAMELServiceInformationUGCSI	Subclause in TS 23.008 2.14.2.4	
oCSINegotiatedCAMELCapabilityHandling	Subclause in TS 23.008 2.14.2.1	
sSCSINegotiatedCAMELCapabilityHandling	Subclause in TS 23.008 2.14.2.1	
vTCSINegotiatedCAMELCapabilityHandling	Subclause in TS 23.008 2.14.2.1	
shortMessageServiceCAMELSubscriptionInformationMOSMSCSI	Subclause in TS 23.008 2.14.1.8/2.14.3.5	
shortMessageServiceCAMELSubscriptionInformationMTSMSCSI	Subclause in TS 23.008 2.14.1.9/2.14.3.6	
mOSMSCSIVLRNegotiatedCAMELCapabilityHandling	Subclause in TS 23.008 2.14.2.1	
mTSMSCSIVLRNegotiatedCAMELCapabilityHandling	Subclause in TS 23.008 2.14.2.1	
mCSINegotiatedCAMELCapabilityHandling	Subclause in TS 23.008 2.14.2.1	
vLRSupportedCAMELPhases	Subclause in TS 23.008 2.14.2.3	
gsmSCFaddressforCSI	Subclause in TS 23.008 2.14.2.4	
vLROfferedCAMEL4CSIs	Subclause in TS 23.008 2.14.2.2A	
iSTAlertTimer	Subclause in TS 23.008 2.15.1	
cSAllocation/Retentionpriority	Subclause in TS 23.008 2.18.1	

A.2 Packet Switched Service Parameters

The 3GPP defined Packet Switched Service parameters are listed in TS 23.008.

A.2.1 Attributes

For the SuMServiceDescriptor set to 'PS parameters', attribute SuMServiceInfo contain some or all of the attributes in the following tables.

SuMSubscribedServiceInfo may contain a selected part of the following tables.

SuMSubscriptionProfileInfo contains the entire contents in table A.2.1.1.

SuMServiceProfileInfo contains the entire contents in table A.2.1.2.

Table A.2.1.1: Packet Switched Service parameters (Part 1)

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
sGSNNumber	+	M	M	-
gGSNNumber	+	M	M	-
sGSNarearestrictedflag	+	M	M	-
roamingRestrictedintheSGSNdueto unsupportedfeature	+	M	M	-
mNRG	+	M	M	-
traceActivatedinSGSN	+	M	M	M

Table A.2.1.2: Packet Switched Service parameters (Part 2)

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
provisionofteleservice	+	M	M	M
transferofSMoption	+	M	M	M
mSpurgedforGPRSflag	+	M	M	-
barringofPacketOrientedServices	+	M	M	M
pDPType	+	M	M	M
pDPAddress	+	M	M	M
accessPointName	+	M	M	M
vPLMNAddressAllowed	+	M	M	M
gGSNlist	+	M	M	-
qualityofServiceSubscribed	+	M	M	M
pDPContextIdentifier	+	M	M	-
pDPContextChargingCharacteristics	+	M	M	M
gPRSCAMELSubscriptionInformationGPRSCSI	+	M	M	M
mOShortMessageServiceCAMELSubscriptionInformationMOSMSCSI	+	M	M	M
mTShortMessageServiceCAMELSubscriptionInformationMTSMSCSI	+	M	M	M
mOSMSCSISGSNNegotiatedCAMELCapabilityHandling	+	M	M	M
mTSMSCSISGSNNegotiatedCAMELCapabilityHandling	+	M	M	M
mobilityManagementforGPRSeventnotificationMGCSI	+	M	M	M
mGCSINegotiatedCAMELCapabilityHandling	+	M	M	M
gPRSCSINegotiatedCAMELCapabilityHandling	+	M	M	-
sGSNSupportedCAMELPhases	+	M	M	-
SGSNOfferedCAMEL4CSIs	+	M	M	-
gsmSCFaddressforCSI	+	M	M	M
subscribedChargingCharacteristics	+	M	M	

A.2.2 Information attribute definitions

A.2.2.1 Definitions and legal values

Definitions and legal values present in packet switched service parameters.

Table A.2.2.1: Attributes

Attribute Name	Definition	Legal Values
sGSNNumber	Subclause in TS 23.008 2.4.8.1	
gGSNNumber	Subclause in TS 23.008 2.4.8.2	
sGSNarearestrictedflag	Subclause in TS 23.008 2.4.14	
roamingRestrictedintheSGSNduetounsupportedfeature	Subclause in TS 23.008 2.4.15.3	
provisionofteleservice	Subclause in TS 23.008 2.5.2	
transferofSMoption	Subclause in TS 23.008 2.5.4	
mNRG	Subclause in TS 23.008 2.7.2	
mSpurgedforGPRSflag	Subclause in TS 23.008 2.7.6	
barringofPacketOrientedServices	Subclause in TS 23.008 2.8.2.8	
traceActivatedinSGSN	Subclause in TS 23.008 2.11.7	
pDPType	Subclause in TS 23.008 2.13.1	
pDPAddress	Subclause in TS 23.008 2.13.2	
accessPointName	Subclause in TS 23.008 2.13.6	
vPLMNAddressAllowed	Subclause in TS 23.008 2.13.8	
gGSNlist	Subclause in TS 23.008 2.13.11	
qualityofServiceSubscribed	Subclause in TS 23.008 2.13.12	
pDPContextIdentifier	Subclause in TS 23.008 2.13.24	
pDPContextChargingCharacteristics	Subclause in TS 23.008 2.13.25	
gPRSCAMELSubscriptionInformationGPRSCSI	Subclause in TS 23.008 2.14.1.10/2.14.4.4	
mOShortMessageServiceCAMELSubscriptionInformationMOSMSCSI	Subclause in TS 23.008 2.14.1.8/2.14.4.1	
mTShortMessageServiceCAMELSubscriptionInformationMTSMS CSI	Subclause in TS 23.008 2.14.1.9/2.14.4.2.	
mOSMSCSISGSNNegotiatedCAMELCapabilityHandling	Subclause in TS 23.008 2.14.2.1	
mTSMSCSISGSNNegotiatedCAMELCapabilityHandling	Subclause in TS 23.008 2.14.2.1	
mobilityManagementforGPRSeventnotificationMGCSI	Subclause in TS 23.008 2.14.1.12/2.14.4.4	
mGCSINegotiatedCAMELCapabilityHandling	Subclause in TS 23.008 2.14.2.1	
gPRSCSINegotiatedCAMELCapabilityHandling	Subclause in TS 23.008 2.14.2.1	
sGSNSupportedCAMELPhases	Subclause in TS 23.008 2.14.2.3	
SGSNOfferedCAMEL4CSIs	Subclause in TS 23.008 2.14.2.2A	
gsmSCFAddressforCSI	Subclause in TS 23.008 2.14.2.4	
subscribedChargingCharacteristics	Subclause in TS 23.008 2.19.1	

A.3 IMS Service Parameters

The 3GPP defined Packet Switched Service parameters are listed in TS 23.008.

A.3.1 Attributes

For the SuMServiceDescriptor set to 'IMS parameters', attribute SuMServiceInfo contain some or all of the attributes in the following tables.

SuMSubscribedServiceInfo may contain a selected part of the contents in the following tables.

SuMSubscriptionProfileInfo contains the entire contents in table A.3.1.1.

SuMServiceProfileInfo contains the entire contents in table A.3.1.2.

Table A3.1.1: IMS parameters (Part 1)

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
privateUserIdentity	+	M	M	-
publicIdentity	+	M	M	M

Table A.3.1.2: IMS parameters (Part 2)

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
barringIndication	+	M	M	M
listofauthorizedvisitednetworkidentifiers	+	M	M	M
registrationStatus	+	M	M	M
sCSCFName	+	M	M	M
diameterClientAddressofSCSCF	+	M	M	-
serverCapabilities	+	M	M	M
subscribedMediaProfileIdentifier	+	M	M	M
initialFilterCriteria	+	M	M	-
applicationServerInformation	+	M	M	-
serviceIndication	+	M	M	M
primaryEventChargingFunctionName	+	M	M	M
secondaryEventChargingFunctionName	+	M	M	-
primaryChargingCollectionFunctionName	+	M	M	-
secondaryChargingCollectionFunctionName	+	M	M	-
gsmSCFaddressforIMCSI	+	M	M	M
iMSSFaddressforIMCSI	+	M	M	-
oIMCSI	+	M	M	M
vTIMCSI	+	M	M	M
dIMCS	+	M	M	M

A.3.2 Information attribute definitions

A.3.2.1 Definitions and legal values

Definitions and legal values present in IMS parameters.

Table A.3.2.1: Attributes

Attribute Name	Definition	Legal Values
privateUserIdentity	Subclause in TS 23.008 3.1.1	
publicIdentity	Subclause in TS 23.008 3.1.2	
barringIndication	Subclause in TS 23.008 3.1.3	
listofauthorizedvisitednetworkidentifiers	Subclause in TS 23.008 3.1.4	
registrationStatus	Subclause in TS 23.008 3.2.1	
sCSCFName	Subclause in TS 23.008 3.2.2	
diameterClientAddressofSCSCF	Subclause in TS 23.008 3.2.3	
serverCapabilities	Subclause in TS 23.008 3.4.1	
subscribedMediaProfileIdentifier	Subclause in TS 23.008 3.5.1	
initialFilterCriteria	Subclause in TS 23.008 3.5.2	
applicationServerInformation	Subclause in TS 23.008 3.5.3	
serviceIndication	Subclause in TS 23.008 3.5.4	
primaryEventChargingFunctionName	Subclause in TS 23.008 3.7.1	
secondaryEventChargingFunctionName	Subclause in TS 23.008 3.7.2	
primaryChargingCollectionFunctionName	Subclause in TS 23.008 3.7.3	
secondaryChargingCollectionFunctionName	Subclause in TS 23.008 3.7.4	
gsmSCFAddressforIMCSI	Subclause in TS 23.008 3.8.4	
iMSSFAddressforIMCSI	Subclause in TS 23.008 3.8.5	
oIMCSI	Subclause in TS 23.008 3.8.1	
vTIMCSI	Subclause in TS 23.008 3.8.2	
dIMCS	Subclause in TS 23.008 3.8.3	

A.4 Common CS and PS Parameters

The 3GPP defined Service independent parameters are listed in TS 23.008.

A.4.1 Attributes

For the SuMServiceDescriptor set to 'Common CS and PS parameters', attribute SuMServiceInfo contain some or all of the attributes in the following table.

SuMSubscribedServiceInfo may contain a selected part of the in the following table.

SuMSubscriptionProfileInfo contains the entire in the following table.

Table A.4.1: Common CS and PS parameters

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
iMSI	+	M	M	-
networkAccessMode	+	M	M	M
internationalMSISDNNumber	+	M	M	M
multinumberingMSISDNs	+	M	M	M
basicMMSISDNIndicator	+	M	M	M
mSISDNAlertIndicator	+	M	M	M
iMEISV	+	M	M	-
vLRNumber	+	M	M	-
mSCNumber	+	M	M	-
subscriptionRestriction	+	M	M	M
rSZI lists	+	M	M	M
mSCAreaRestrictedFlag	+	M	M	-
oDBinducedBarringData	+	M	M	-
roamingRestrictionDueToUnsupportedFeature	+	M	M	-
ISAIidentity	+	M	M	M
ISAPriority	+	M	M	M
ISAPreferential Access Indicator	+	M	M	M
ISAActive Mode Support Indicator	+	M	M	M
ISAOnly Access Indicator	+	M	M	M
ISAActive Mode Indicator	+	M	M	M
vPLMNIdentifier	+	M	M	M
accessRestriction Data	+	M	M	M
privacyExceptionList	+	M	M	M
gMLCNumbers	+	M	M	M
mOLRList	+	M	M	M
serviceTypes	+	M	M	M
ageIndicator	+	M	M	-

A.4.2 Information attribute definitions

A.4.2.1 Definitions and legal values

Definitions and legal values present in circuit switched service parameters.

Table A.4.2.1: Service independent attributes

Attribute Name	Definition	Legal Values
iMSI	Subclause in TS 23.008 2.1.1.1	
networkAccessMode	Subclause in TS 23.008 2.1.1.2	
internationalMSISDNNumber	Subclause in TS 23.008 2.1.2	
multinumberingMSISDNs	Subclause in TS 23.008 2.1.3	
basicMMSISDNIndicator	Subclause in TS 23.008 2.1.3.1	
mSISDNAlertIndicator	Subclause in TS 23.008 2.1.3.2	
IMEISV	Subclause in TS 23.008 2.2.3	
vLRNNumber	Subclause in TS 23.008 2.4.5	
mSCNumber	Subclause in S 23.008 2.4.6	
subscriptionRestriction	Subclause in TS 23.008 2.4.10	
rSZIlists	Subclause in TS 23.008 2.4.11.1	
mSCAreaRestrictedFlag	Subclause in TS 23.008 2.4.12	
oDBinducedBarringData	Subclause in TS 23.008 2.4.15.1	
roamingRestrictionDueToUnsupportedFeature	Subclause in TS 23.008 2.4.15.2	
ISAIidentity	Subclause in TS 23.008 2.4.17.1	
ISAPriority	Subclause in TS 23.008 2.4.17.2	
ISAPreferentialAccessIndicator	Subclause in TS 23.008 2.4.17.2A	
ISAActiveModeSupportIndicator	Subclause in TS 23.008 2.4.17.2B	
ISAOnlyAccessIndicator	Subclause in TS 23.008 2.4.17.3	
ISAActiveModeIndicator	Subclause in TS 23.008 2.4.17.4	
vPLMNIidentifier	Subclause in TS 23.008 2.4.17.5	
accessRestrictionData	Subclause in TS 23.008 2.4.18	
privacyExceptionList	Subclause in TS 23.008 2.16.1.1	
gMLCNumbers	Subclause in TS 23.008 2.16.1.2	
mOLRList	Subclause in TS 23.008 2.16.1.3	
serviceTypes	Subclause in TS 23.008 2.16.1.4	
ageIndicator	Subclause in TS 23.008 2.17.1	

Annex B (informative): Change history

Change history							
Date	TSG #	TSG Doc.	CR	Rev	Subject/Comment	Old	New
Dec 2003	S_22	SP-030617	--	--	Submitted to TSG SA#22 for Information	1.0.0	
Sep 2004	S_25	SP-040546	--	--	Submitted to TSG SA#25 for Approval	2.0.0	