ETSI TS 132 172 V8.1.0 (2009-10)

Technical Specification

**Digital cellular telecommunications system (Phase 2+);
Universal Mobile Telecommunications System (UMTS);
LTE;
Telecommunication management;
Subscription Management (SuM) Network Resource Model (NRM)
Integration Reference Point (IRP): Information Service (IS)
(3GPP TS 32.172 version 8.1.0 Release 8)**

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Foreword

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

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:

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Introduction

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 part of a TS-family covering the 3rd Generation Partnership Project: Technical Specification Group Services and System Aspects; Telecommunication management, as identified below:

TS 32.140:   "Subscription Management (SuM) requirements".

TS 32.141:   "Subscription Management (SuM) architecture".

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

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

TS 32.175:   "Subscription Management (SuM) Network Resource Model (NRM) Integration Reference Point (IRP): eXtensible Markup Language (XML) definition".

1   Scope

The present document defines the Network Resources Model (NRM) for the SuM 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)".

[7]   3GPP TS 23.008: "Organization of subscriber data".

[8]   3GPP TS 29.228: "IP Multimedia (IM) Subsystem Cx and Dx interfaces; Signalling flows and message contents".

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].

User: 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

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`

6.2.1 Attributes and relationships

This clause 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 clauses provide more detailed specification of various aspects of these Information Object Classes (IOCs).
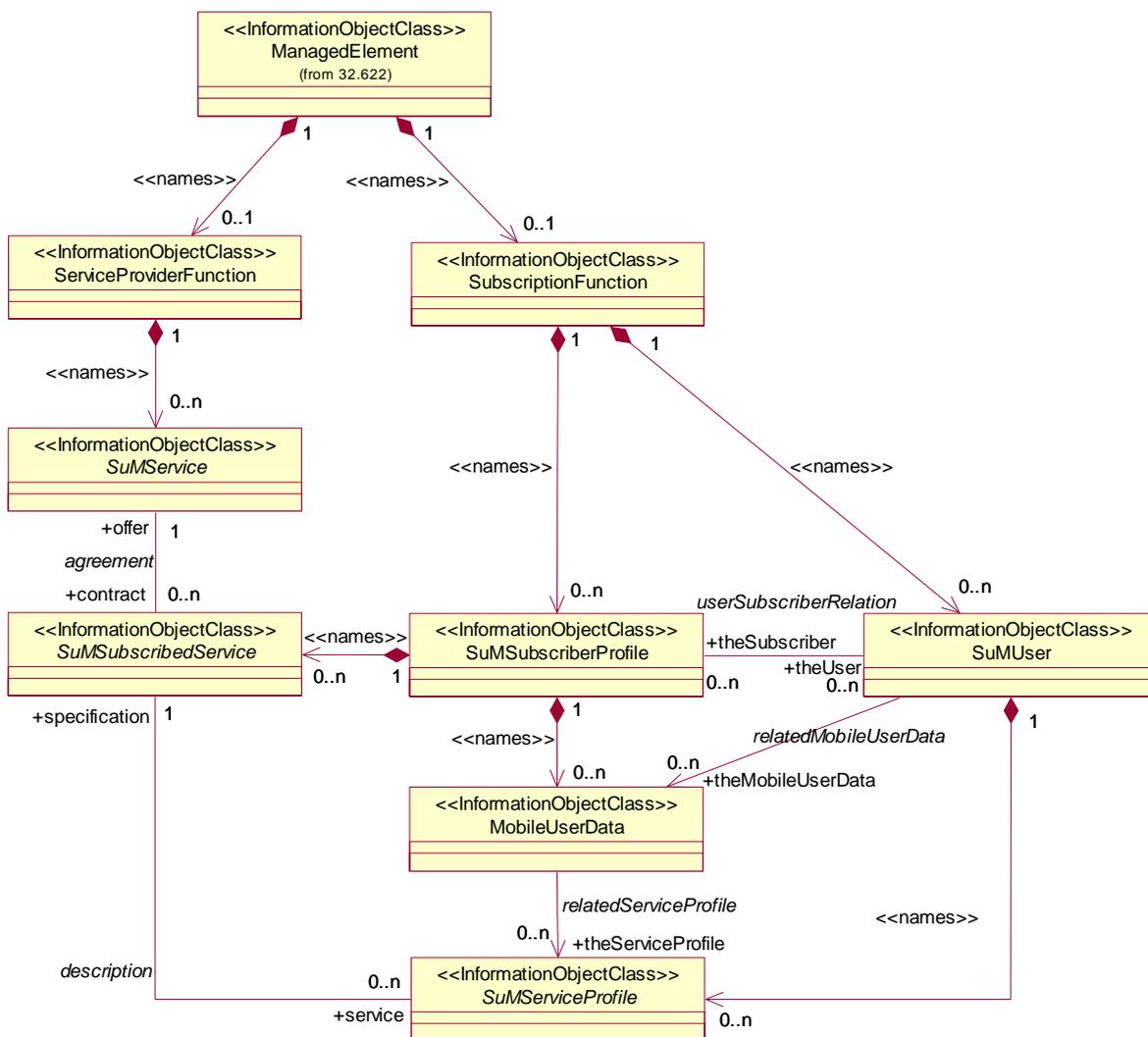
Figure 1.a: SuM NRM Containment/Naming and Association diagram 1
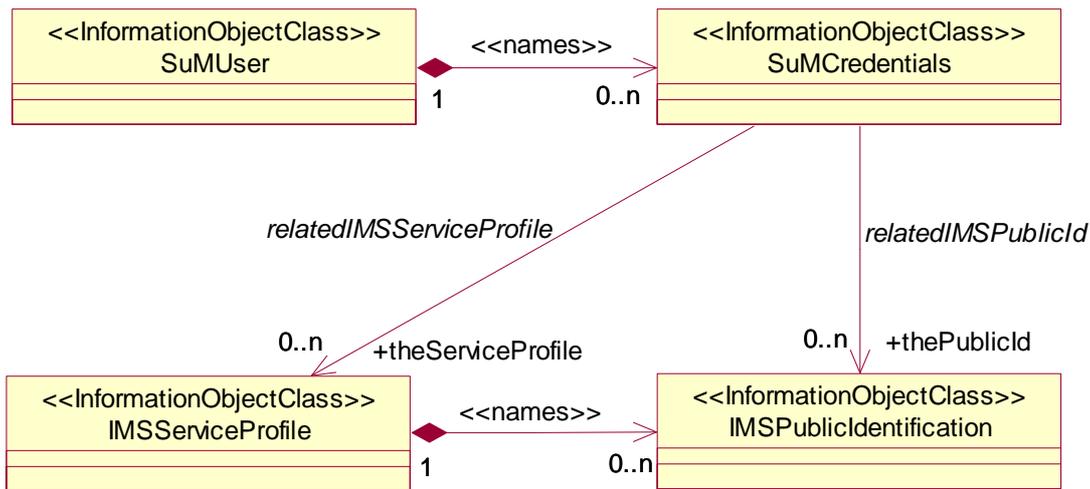
Figure 1.a-1: SuM NRM Containment/Naming and Association diagram 2
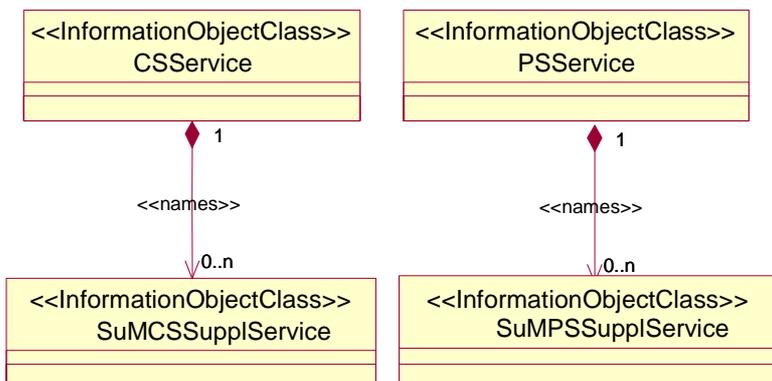
Figure 1.b: SuM Supplementary Service NRM Containment/Naming and Association diagram 1
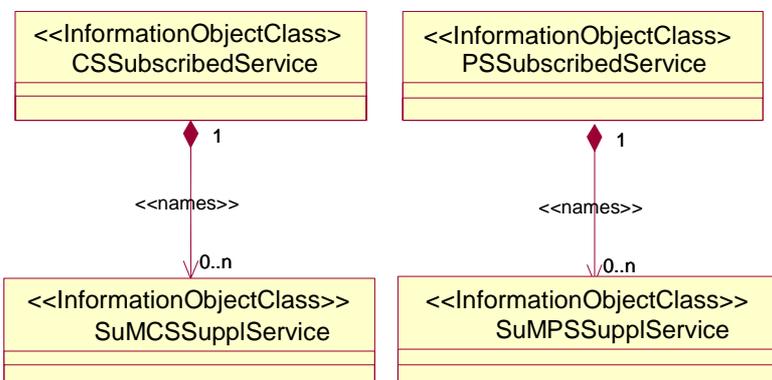
Figure 1.c: SuM Supplementary Service NRM Containment/Naming and Association diagram 2
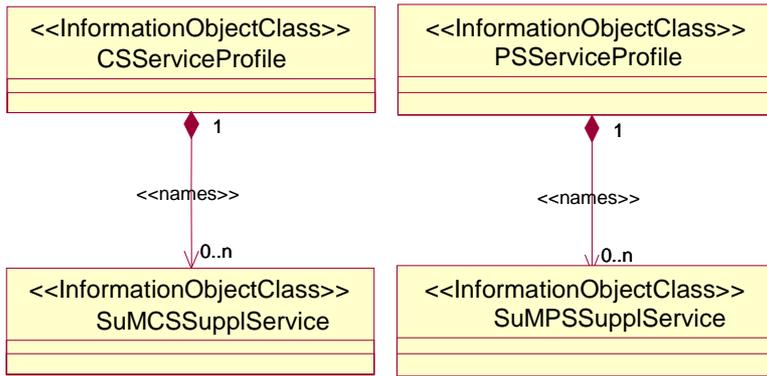
Figure 1.d: SuM Supplementary Service NRM Containment/Naming and Association diagram 3

6.2.2   Inheritance
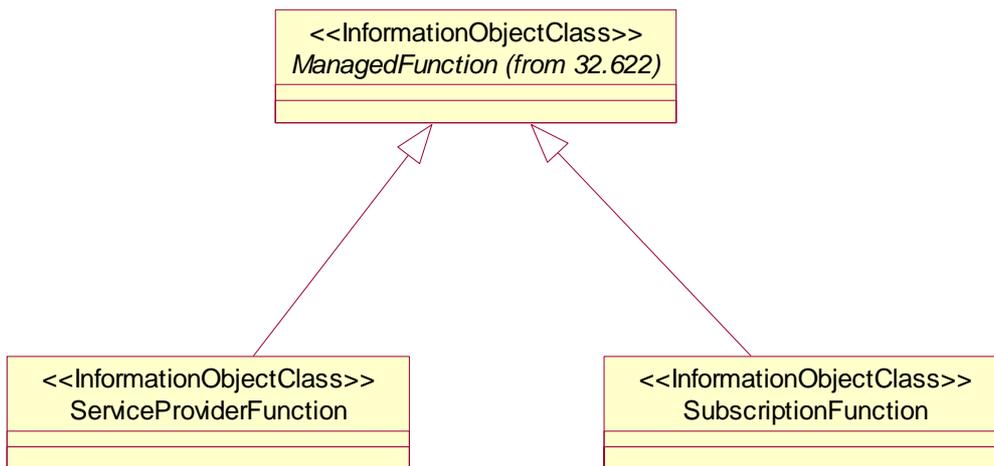
Figure 2a: SuM NRM Inheritance Hierarchy 1
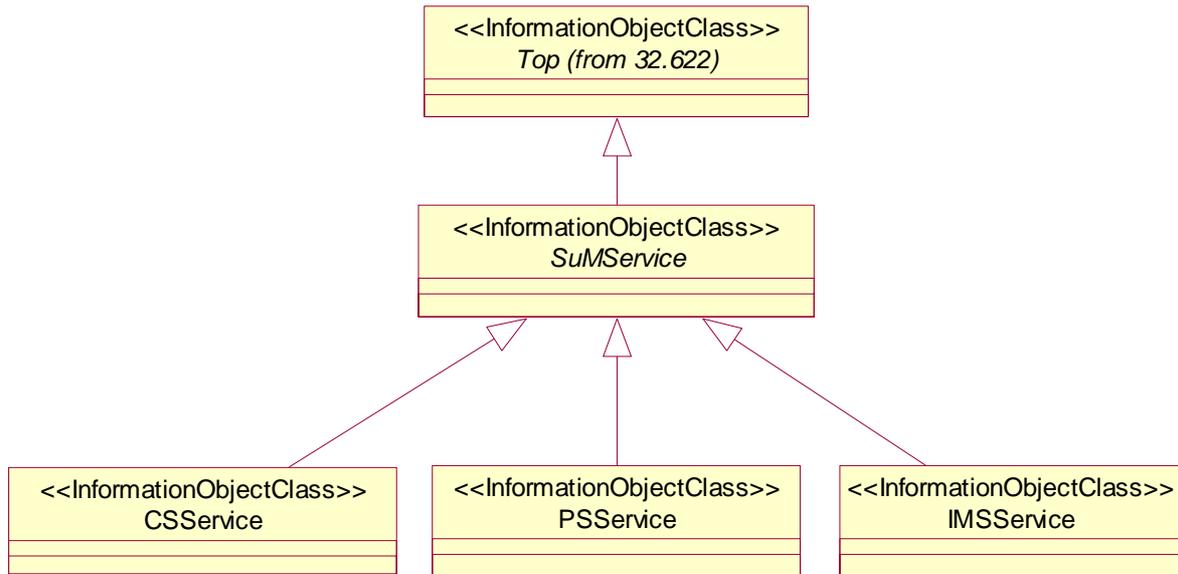
Figure 2b: SuM NRM Inheritance Hierarchy 2
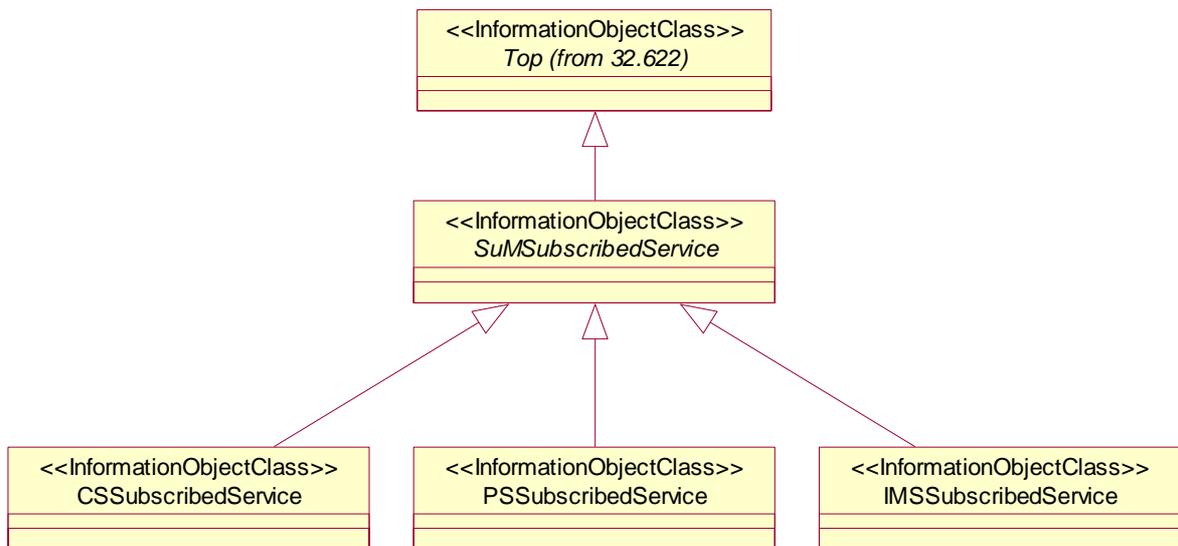
Figure 2c: SuM NRM Inheritance Hierarchy 3
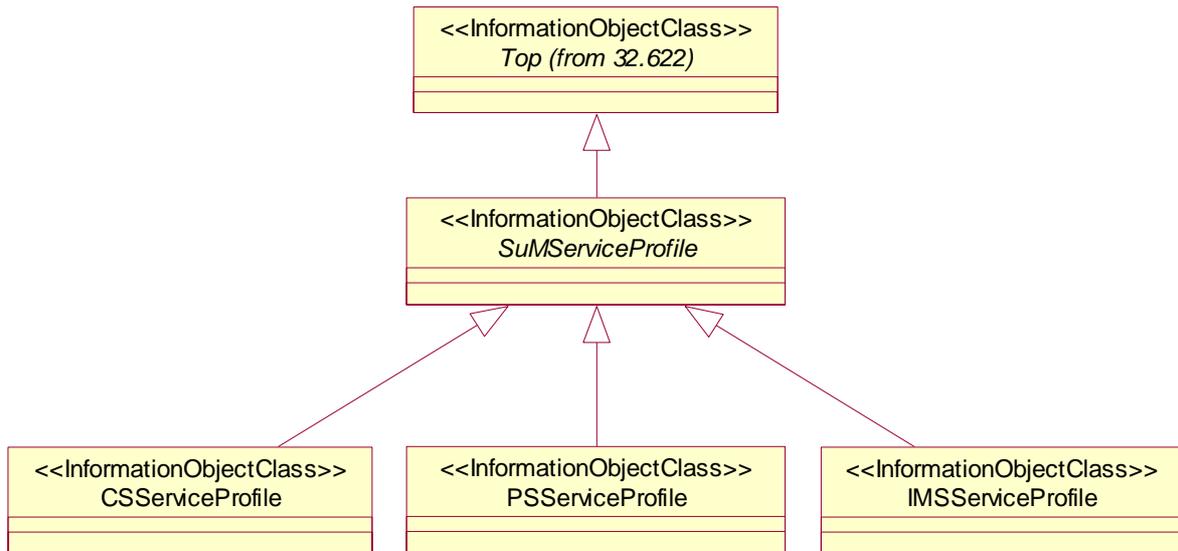
Figure 2d: SuM NRM Inheritance Hierarchy 4
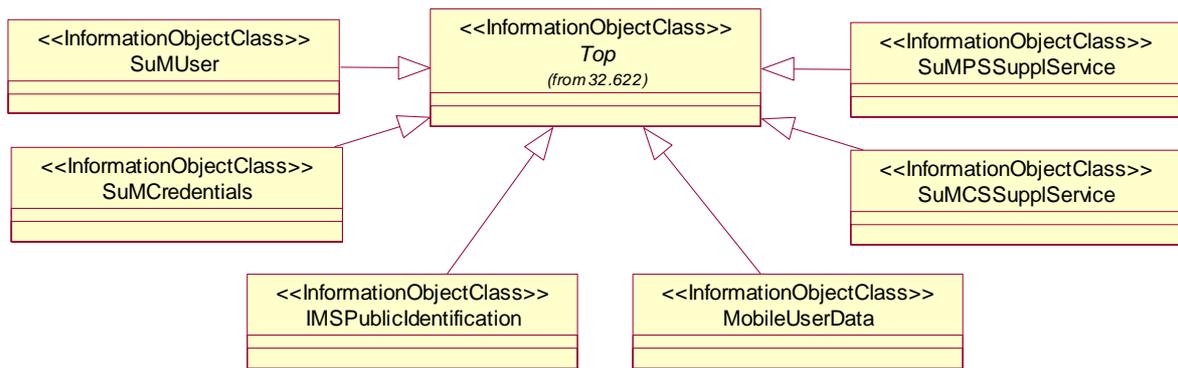
Figure 2e: SuM NRM Inheritance Hierarchy 5

6.3 Information Object Class definitions

6.3.1 `SuMService`

6.3.1.1 Definition

This is an abstract IOC provided for sub-classing only. It provides attribute(s) that are common to Services IOCs.

6.3.1.2 Attributes

Attributes of `SuMService`

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

6.3.2 `CSService`

6.3.2.1 Definition

In this management context:

a) This class represents a CS service (see 3GPP TS 23.008 [7]) provided by a service provider

b) This class contains the valid parameters that define the CS service from subscription point of view.

6.3.2.2 Attributes

Attributes of CSService

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
cSServiceId	+	M	M	-
networkAccessMode	+	M	M	M
basicMSISDNIndicator	+	O	M	M
mSISDNAlertIndicator	+	O	M	M
subscriptionRestriction	+	O	M	M
rSZIlists	+	O	M	M
lSAIdentity	+	O	M	M
lSAPriority	+	O	M	M
lSAPreferentialAccessIndicator	+	O	M	M
lSAActiveModeSupportIndicator	+	O	M	M
lSAOnlyAccessIndicator	+	O	M	M
lSAActiveModeIndicator	+	O	M	M
vPLMNIdentifier	+	O	M	M
accessRestrictionData	+	O	M	M
privacyExceptionList	+	O	M	M
gMLCNumbers	+	O	M	M
mOLRList	+	O	M	M
serviceTypes	+	O	M	M
mobileStationCategory	+	M	M	M
lMUIdentifier	+	M	M	M
subscriberStatus	+	M	M	M
gsmSCFaddresslistForODB	+	M	M	M
provisionOfBearerService	+	M	M	M
provisionOfTeleservice	+	M	M	M
bCAllocation	+	O	M	-
barringOfOutgoingCalls	+	O	M	M
barringOfIncomingCalls	+	O	M	M
barringOfRoaming	+	O	M	M
barringOfPremiumRateCalls	+	O	M	M
barringOfSupplementaryServiceManagement	+	O	M	M
barringOfRegistrationOfCallForwarding	+	O	M	M
barringOfInvocationOfCallTransfer	+	O	M	M
operatorDeterminedBarringPLMNspecificData	+	O	M	M
vGCSGroupMembershipList	+	O	M	M
vBSGroupMembershipList	+	O	M	M
broadcastCallInitiationAllowedList	+	O	M	M
originatingCAMELSubscriptionInformationOCSI	+	O	M	M
terminatingCAMELSubscriptionInformationTCSI	+	O	M	M
vMSCTerminatingCAMELSubscriptionInformationVTCSI	+	O	M	M
locationInformationSubscriberStateInformation	+	O	M	M
uSSDCAMELSubscriptionInformationUCSI	+	O	M	M
sSInvocationNotificationSSCSI	+	O	M	M
translationInformationFlagTIFCSI	+	O	M	M
dialledServiceCAMELSubscriptionInformationDCSI	+	O	M	M
uSSDGeneralCAMELServiceInformationUGCSI	+	O	M	M
shortMessageServiceCAMELSubscriptionInformationMOSMSCSI	+	O	M	M
shortMessageServiceCAMELSubscriptionInformationMTSMSCSI	+	O	M	M
mTSMSCSIVLRNegotiatedCAMELCapabilityHandling	+	O	M	M
gsmSCFaddressforCSI	+	O	M	M
iSTAlertTimer	+	O	M	M
cSAllocationRetentionpriority	+	O	M	M

6.3.2.3 Attribute constraints

The optional attributes shall be supported for the following criteria: The NE supports the parameter (see TS 23.008 [7]).

6.3.3 PSService

6.3.3.1 Definition

In this management context:

a) This class represents a PS service (see 3GPP TS 23.008 [7]) provided by a service provider

b) This class contains the valid parameters that define the PS service from subscription point of view.

6.3.3.2 Attributes

Attributes of PSService

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
pSServiceId	+	M	M	-
networkAccessMode	+	M	M	M
basicMSISDNIndicator	+	O	M	M
mSISDNAlertIndicator	+	O	M	M
subscriptionRestriction	+	O	M	M
rSZIlists	+	O	M	M
lSAIdentity	+	O	M	M
lSAPriority	+	O	M	M
lSAPreferentialAccessIndicator	+	O	M	M
lSAActiveModeSupportIndicator	+	O	M	M
lSAOnlyAccessIndicator	+	O	M	M
lSAActiveModeIndicator	+	O	M	M
vPLMNIdentifier	+	O	M	M
accessRestrictionData	+	O	M	M
privacyExceptionList	+	O	M	M
gMLCNumbers	+	O	M	M
mOLRList	+	O	M	M
serviceTypes	+	O	M	M
gGSNNumber	+	O	M	M
provisionofTeleservice	+	O	M	M
transferofSMoption	+	M	M	M
subscriberStatus	+	M	M	M
barringofPacketOrientedServices	+	O	M	M
pDPType	+	O	M	M
pDPAddress	+	O	M	M
accessPointName	+	O	M	M
vPLMNAddressAllowed	+	O	M	M
qualityofServiceSubscribed	+	O	M	M
pDPContextChargingCharacteristics	+	O	M	M
gPRSCAMELSubscriptionInformationGPRSCSI	+	O	M	M
mOShortMessageServiceCAMELSubscriptionInformationMOSMSCSI	+	O	M	M
mTShortMessageServiceCAMELSubscriptionInformationMTSMSCSI	+	O	M	M
mOSMSCSISGSNNegotiatedCAMELCapabilityHandling	+	O	M	M
mTSMSCSISGSNNegotiatedCAMELCapabilityHandling	+	O	M	M
mobilityManagementforGPRSeventnotificationMGCSI	+	O	M	M
mGCSINegotiatedCAMELCapabilityHandling	+	O	M	M
gsmSCFaddressforCSI	+	O	M	M
subscribedChargingCharacteristics	+	O	M	M
w-APN	+	O	M	M
listofauthorizedvisitednetworkidentifiers	+	O	M	M
wLANUERemoteIPaddress	+	O	M	M
wLANAccess	+	O	M	M
wLANTunnelling	+	O	M	M
wLANDirectIPAccess	+	O	M	M
wAPNAuthorised	+	O	M	M
w-APNBarringType	+	O	M	M
w-APNChargingData	+	O	M	M
wLANUERemoteIPAddress	+	O	M	M

accessIndependenceFlag	**+**	O	M	M
i-WLANAccessType	**+**	O	M	M
chargingData	**+**	O	M	M
chargingCharacteristics	**+**	O	M	M
primaryOCSChargingFunctionName	**+**	O	M	M
secondaryOCSChargingFunctionName	**+**	O	M	M
primaryChargingCollectionFunctionName	**+**	O	M	M
secondaryChargingCollectionFunctionName	**+**	O	M	M

6.3.3.3 Attribute constraints

The optional attributes shall be supported for the following criteria: The NE supports the parameter (See TS 23.008 [7]).

6.3.4 IMSService

6.3.4.1 Definition

In this management context:

a) This class represents a IMS service (see 3GPP TS 23.008 [7]) provided by a service provider

b) This class contains the valid parameters that define the IMS service from subscription point of view.

6.3.4.2 Attributes

Attributes of `IMSService`

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
iMSServiceId	+	M	M	-
listofauthorizedvisitednetworkidentifiers	+	M	M	M
registrationStatus	+	M	M	M
sCSCFName	+	M	M	M
serverCapabilities	+	O	M	M
subscribedMediaProfileIdentifier	+	O	M	M
initialFilterCriteria	+	O	M	M
applicationServerInformation	+	O	M	M
serviceIndication	+	M	M	M
primaryEventChargingFunctionName	+	O	M	M
secondaryEventChargingFunctionName	+	O	M	M
primaryChargingCollectionFunctionName	+	M	M	M
secondaryChargingCollectionFunctionName	+	O	M	M
gsmSCFaddressforIMCSI	+	O	M	M
oIMCSI	+	O	M	M
vTIMCSI	+	O	M	M
dIMCS	+	O	M	M
gAAServiceType	+	O	M	M
gAAServiceIdentifier	+	O	M	M
gBAUserSecuritySettings	+	O	M	M
userSecuritySetting	+	O	M	M
userPublicIdentity	+	O	M	M
gAAAuthorizationflag	+	O	M	M
keyLifetime	+	O	M	M
uICCSecuritySetting	+	O	M	M
nAFGroupIdentity	+	O	M	M

6.3.4.3 Attribute constraints

The optional attributes shall be supported for the following criteria: The NE supports the parameter (See TS 23.008 [7]).

6.3.5   SuMSubscribedService

6.3.5.1   Definition

This is an abstract IOC provided for sub-classing only. It provides attribute(s) that are common to Subscribed Services IOCs.

6.3.5.2   Attributes

Attributes of SuMSubscribedService

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
description-service	+	M	M	O
agreement-offer	+	M	M	O

6.3.6   CSSubscribedService

6.3.6.1   Definition

In this management context:

a) This class represents subscription to a CS service (see 3GPP TS 23.008 [7]) for a subscriber.   The entire set of CS subscribed services owned by a subscriber constitutes the subscriber's Subscribed Services Profile for CS services.

b) This class contains the agreed (between the Subscriber and the Service Provider) parameter settings for a CS service that a Subscriber subscribes to.

6.3.6.2 Attributes

Attributes of `CSSubscribedService`

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
cSSubscribedServiceId	+	M	M	-
networkAccessMode	+	M	M	M
basicMSISDNIndicator	+	O	M	M
mSISDNAlertIndicator	+	O	M	M
subscriptionRestriction	+	O	M	M
rSZIlists	+	O	M	M
lSAIdentity	+	O	M	M
lSAPriority	+	O	M	M
lSAPreferentialAccessIndicator	+	O	M	M
lSAActiveModeSupportIndicator	+	O	M	M
lSAOnlyAccessIndicator	+	O	M	M
lSAActiveModeIndicator	+	O	M	M
vPLMNIdentifier	+	O	M	M
accessRestrictionData	+	O	M	M
privacyExceptionList	+	O	M	M
gMLCNumbers	+	O	M	M
mOLRList	+	O	M	M
serviceTypes	+	O	M	M
mobileStationCategory	+	M	M	M
lMUIdentifier	+	M	M	M
subscriberStatus	+	M	M	M
gsmSCFaddresslistForODB	+	M	M	M
provisionOfBearerService	+	M	M	M
provisionOfTeleservice	+	M	M	M
bCAllocation	+	O	M	-
barringOfOutgoingCalls	+	O	M	M
barringOfIncomingCalls	+	O	M	M
barringOfRoaming	+	O	M	M
barringOfPremiumRateCalls	+	O	M	M
barringOfSupplementaryServiceManagement	+	O	M	M
barringOfRegistrationOfCallForwarding	+	O	M	M
barringOfInvocationOfCallTransfer	+	O	M	M
operatorDeterminedBarringPLMNspecificData	+	O	M	M
vGCSGroupMembershipList	+	O	M	M
vBSGroupMembershipList	+	O	M	M
broadcastCallInitiationAllowedList	+	O	M	M
originatingCAMELSubscriptionInformationOCSI	+	O	M	M
terminatingCAMELSubscriptionInformationTCSI	+	O	M	M
vMSCTerminatingCAMELSubscriptionInformationVTCSI	+	O	M	M
locationInformation/SubscriberStateInformation	+	O	M	M
uSSDCAMELSubscriptionInformationUCSI	+	O	M	M
sSInvocationNotificationSSCSI	+	O	M	M
translationInformationFlagTIFCSI	+	O	M	M
dialledServiceCAMELSubscriptionInformationDCSI	+	O	M	M
uSSDGeneralCAMELServiceInformationUGCSI	+	O	M	M
shortMessageServiceCAMELSubscriptionInformationMOSMSCSI	+	O	M	M
shortMessageServiceCAMELSubscriptionInformationMTSMSCSI	+	O	M	M
mTSMSCSIVLRNegotiatedCAMELCapabilityHandling	+	O	M	M
gsmSCFaddressforCSI	+	O	M	M
iSTAlertTimer	+	O	M	M
cSAllocationRetentionpriority	+	O	M	M

6.3.6.3 Attribute constraints

The optional attributes shall be supported for the following criteria: The NE supports the parameter (See TS 23.008 [7]).

6.3.7   `PSSubscribedService`

6.3.7.1   Definition

In this management context:

a) This class represents subscription to a PS service (see 3GPP TS 23.008 [7]) for a subscriber.   The entire set of PS subscribed services owned by a subscriber constitutes the subscriber's Subscribed Services Profile for PS services.

6.3.7.2 Attributes

Attributes of `PSSubscribedService`

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
pSSubscribedServiceId	+	M	M	-
networkAccessMode	+	M	M	M
basicMSISDNIndicator	+	O	M	M
mSISDNAlertIndicator	+	O	M	M
subscriptionRestriction	+	O	M	M
rSZIlists	+	O	M	M
lSAIdentity	+	O	M	M
lSAPriority	+	O	M	M
lSAPreferentialAccessIndicator	+	O	M	M
lSAActiveModeSupportIndicator	+	O	M	M
lSAOnlyAccessIndicator	+	O	M	M
lSAActiveModeIndicator	+	O	M	M
vPLMNIdentifier	+	O	M	M
accessRestrictionData	+	O	M	M
privacyExceptionList	+	O	M	M
gMLCNumbers	+	O	M	M
mOLRList	+	O	M	M
serviceTypes	+	O	M	M
gGSNNumber	+	O	M	M
provisionofTeleservice	+	O	M	M
transferofSMoption	+	M	M	M
subscriberStatus	+	M	M	M
barringofPacketOrientedServices	+	O	M	M
pDPType	+	O	M	M
pDPAddress	+	O	M	M
accessPointName	+	O	M	M
vPLMNAddressAllowed	+	O	M	M
qualityofServiceSubscribed	+	O	M	M
pDPContextChargingCharacteristics	+	O	M	M
gPRSCAMELSubscriptionInformationGPRSCSI	+	O	M	M
mOShortMessageServiceCAMELSubscriptionInformationMOSMSCSI	+	O	M	M
mTShortMessageServiceCAMELSubscriptionInformationMTSMSCSI	+	O	M	M
mOSMSCSISGSNNegotiatedCAMELCapabilityHandling	+	O	M	M
mTSMSCSISGSNNegotiatedCAMELCapabilityHandling	+	O	M	M
mobilityManagementforGPRSeventnotificationMGCSI	+	O	M	M
mGCSINegotiatedCAMELCapabilityHandling	+	O	M	M
gsmSCFaddressforCSI	+	O	M	M
subscribedChargingCharacteristics	+	O	M	M
w-APN	+	O	M	M
listofauthorizedvisitednetworkidentifiers	+	O	M	M
wLANUERemoteIPaddress	+	O	M	M
wLANAccess	+	O	M	M
wLANTunnelling	+	O	M	M
wLANDirectIPAccess	+	O	M	M
wAPNAuthorised	+	O	M	M
w-APNBarringType	+	O	M	M
w-APNChargingData	+	O	M	M
wLANUERemoteIPAddress	+	O	M	M
accessIndependenceFlag	+	O	M	M
i-WLANAccessType	+	O	M	M
chargingData	+	O	M	M
chargingCharacteristics	+	O	M	M
primaryOCSChargingFunctionName	+	O	M	M
secondaryOCSChargingFunctionName	+	O	M	M
primaryChargingCollectionFunctionName	+	O	M	M
secondaryChargingCollectionFunctionName	+	O	M	M

6.3.7.3 Attribute constraints

The optional attributes shall be supported for the following criteria: The NE supports the parameter (see TS 23.008 [7]).

6.3.8 `IMSSubscribedService`

6.3.8.1 Definition

In this management context:

a) This class represents subscription to an IMS (see 3GPP TS 23.008 [7]) service for a subscriber. The entire set of IMS subscribed services owned by a subscriber constitutes the subscriber's Subscribed Services profile for IMS services.

b) This class contains the agreed (between the Subscriber and the Service Provider) parameter settings for an IMS service that a Subscriber subscribes to.

6.3.8.2 Attributes

Attributes of `IMSSubscribedService`

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
iMSSubscribedServiceId	+	M	M	-
listofauthorizedvisitednetworkidentifiers	+	M	M	M
registrationStatus	+	M	M	M
sCSCFName	+	M	M	M
serverCapabilities	+	O	M	M
subscribedMediaProfileIdentifier	+	O	M	M
initialFilterCriteria	+	O	M	M
applicationServerInformation	+	O	M	M
serviceIndication	+	M	M	M
primaryEventChargingFunctionName	+	O	M	M
secondaryEventChargingFunctionName	+	O	M	M
primaryChargingCollectionFunctionName	+	M	M	M
secondaryChargingCollectionFunctionName	+	O	M	M
gsmSCFaddressforIMCSI	+	O	M	M
oIMCSI	+	O	M	M
vTIMCSI	+	O	M	M
dIMCS	+	O	M	M
gAAServiceType	+	O	M	M
gAAServiceIdentifier	+	O	M	M
gBAUserSecuritySettings	+	O	M	M
userSecuritySetting	+	O	M	M
userPublicIdentity	+	O	M	M
gAAAuthorizationflag	+	O	M	M
keyLifetime	+	O	M	M
uICCSecuritySetting	+	O	M	M
nAFGroupIdentity	+	O	M	M

6.3.8.3 Attribute constraints

The optional attributes shall be supported for the following criteria: The NE supports the parameter (see TS 23.008 [7]).

6.3.9   SuMSubscriberProfile

6.3.9.1   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.

6.3.9.2   Attributes

Attributes of SuMSubscriberProfile

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

6.3.10   Void

6.3.11   SuMServiceProfile

6.3.11.1   Definition

This is an abstract IOC provided for sub-classing only. It provides attribute(s) that are common to Service Profiles IOCs.

6.3.11.2   Attributes

Attributes of SuMServiceProfile

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
description-specification	+	M	M	O

6.3.12 `CSServiceProfile`

6.3.12.1 Definition

In this management context:

a) This class represents for a subscribed CS service (see 3GPP TS 23.008 [7]) the service preferences and settings chosen for a user.

6.3.12.2 Attributes

Attributes of `CSServiceProfile`

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
cSServiceProfileId	+	M	M	O
networkAccessMode	+	M	M	M
basicMSISDNIndicator	+	O	M	M
mSISDNAlertIndicator	+	O	M	M
vLRNumber	+	M	M	-
mSCNumber	+	M	M	-
subscriptionRestriction	+	O	M	M
rSZIlists	+	O	M	M
mSCAreaRestrictedFlag	+	M	M	-
oDBinducedBarringData	+	O	M	-
roamingRestrictionDueToUnsupportedFeature	+	M	M	-
lSAIdentity	+	O	M	M
lSAPriority	+	O	M	M
lSAPreferentialAccess Indicator	+	O	M	M
lSAActiveModeSupportIndicator	+	O	M	M
lSAOnlyAccessIndicator	+	O	M	M
lSAActiveModeIndicator	+	O	M	M
vPLMNIdentifier	+	O	M	M
accessRestrictionData	+	O	M	M
privacyExceptionList	+	O	M	M
gMLCNumbers	+	O	M	M
mOLRList	+	O	M	M
serviceTypes	+	O	M	M
ageIndicator	+	O	M	-
lMSI	+	M	M	-
mobileStationCategory	+	M	M	M
lMUIdentifier	+	M	M	M
mNRR	+	M	M	-
subscriberStatus	+	M	M	M
notificationToCSEFlagForODB	+	M	M	-
gsmSCFaddresslistForODB	+	M	M	M
messagesWaitingData	+	M	M	-
mobileStationNotReachableFlag	+	M	M	-
memoryCapacityExceededFlag	+	M	M	-
traceReference	+	O	M	-
traceType	+	O	M	-
operationsSystemsIdentity	+	O	M	-
hLRTraceType	+	O	M	-
mAPErrorOnTrace	+	O	M	-
traceActivatedInVLR	+	O	M	-
provisionOfBearerService	+	M	M	M
provisionOfTeleservice	+	M	M	M
bCAllocation	+	O	M	M
checkSSIndicator	+	M	M	-
mSPurgedForNonGPRSFlag	+	M	M	-
barringOfOutgoingCalls	+	O	M	M
barringOfIncomingCalls	+	O	M	M
barringOfRoaming	+	O	M	M
barringOfPremiumRateCalls	+	O	M	M

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
barringOfSupplementaryServiceManagement	+	O	M	M
barringOfRegistrationOfCallForwarding	+	O	M	M
barringOfInvocationOfCallTransfer	+	O	M	M
operatorDeterminedBarringPLMNspecificData	+	O	M	M
vGCSGroupMembershipList	+	O	M	M
vBSGroupMembershipList	+	O	M	M
broadcastCallInitiationAllowedList	+	O	M	M
originatingCAMELSubscriptionInformationOCSI	+	O	M	M
terminatingCAMELSubscriptionInformationTCSI	+	O	M	M
vMSCTerminatingCAMELSubscriptionInformationVTCSI	+	O	M	M
locationInformationSubscriberStateInformation	+	O	M	M
uSSDCAMELSubscriptionInformationUCSI	+	O	M	M
sSInvocationNotificationSSCSI	+	O	M	M
translationInformationFlagTIFCSI	+	O	M	M
dialledServiceCAMELSubscriptionInformationDCSI	+	O	M	M
uSSDGeneralCAMELServiceInformationUGCSI	+	O	M	M
oCSINegotiatedCAMELCapabilityHandling	+	O	M	-
sSCSINegotiatedCAMELCapabilityHandling	+	O	M	-
vTCSINegotiatedCAMELCapabilityHandling	+	O	M	-
shortMessageServiceCAMELSubscriptionInformationMOSMSCSI	+	O	M	M
shortMessageServiceCAMELSubscriptionInformationMTSMSCSI	+	O	M	M
mOSMSCSIVLRNegotiatedCAMELCapabilityHandling	+	O	M	-
mTSMSCSIVLRNegotiatedCAMELCapabilityHandling	+	O	M	M
mCSINegotiatedCAMELCapabilityHandling	+	O	M	-
vLRSupportedCAMELPhases	+	O	M	-
gsmSCFaddressforCSI	+	O	M	M
vLROfferedCAMEL4CSIs	+	O	M	-
iSTAlertTimer	+	O	M	M
cSAllocationRetentionpriority	+	O	M	M
TraceReference2	+	O	M	-
TraceDepth	+	O	M	-
ListofNeTypestoTrace	+	O	M	-
TriggeringEvents	+	O	M	-
ListofInterfacestoTrace	+	O	M	-

6.3.12.3 Attribute constraints

The optional attributes:

```
accessRestrictionData
ageIndicator
barringOfIncomingCalls
barringOfInvocationOfCallTransfer
barringOfOutgoingCalls
barringOfPremiumRateCalls
barringOfRegistrationOfCallForwarding
barringOfRoaming
barringOfSupplementaryServiceManagement
basicMSISDNIndicator
bCAllocation
bCAllocation
broadcastCallInitiationAllowedList
cSAllocationRetentionpriority
dialledServiceCAMELSubscriptionInformationDCSI
gMLCNumbers
gsmSCFaddressforCSI
iSTAlertTimer
locationInformationSubscriberStateInformation
lSAActiveModeIndicator
lSAActiveModeSupportIndicator
lSAIdentity
lSAOnlyAccessIndicator
lSAPreferentialAccess Indicator
lSAPriority
mCSINegotiatedCAMELCapabilityHandling
mOLRList
mOSMSCSIVLRNegotiatedCAMELCapabilityHandling
mSISDNAlertIndicator
mTSMSCSIVLRNegotiatedCAMELCapabilityHandling
oCSINegotiatedCAMELCapabilityHandling
oDBinducedBarringData
operatorDeterminedBarringPLMNspecificData
originatingCAMELSubscriptionInformationOCSI
privacyExceptionList
rSZIlists
serviceTypes
shortMessageServiceCAMELSubscriptionInformationMOSMSCSI
shortMessageServiceCAMELSubscriptionInformationMTSMSCSI
sSCSINegotiatedCAMELCapabilityHandling
sSInvocationNotificationSSCSI
subscriptionRestriction
terminatingCAMELSubscriptionInformationTCSI
translationInformationFlagTIFCSI
uSSDCAMELSubscriptionInformationUCSI
uSSDGeneralCAMELServiceInformationUGCSI
vBSGroupMembershipList
vGCSGroupMembershipList
vLROfferedCAMEL4CSIs
vLRSupportedCAMELPhases
vMSCTerminatingCAMELSubscriptionInformationVTCSI
vPLMNIdentifier
vTCSINegotiatedCAMELCapabilityHandling
```

shall be supported for the following criteria: The NE supports the parameter (see TS 23.008 [7]).

6.3.13   `PSServiceProfile`

6.3.13.1   Definition

In this management context:

a) This class represents for a subscribed PS service (see 3GPP TS 23.008 [7]) the service preferences and settings chosen for a user.

6.3.13.2 Attributes

Attributes of `PSServiceProfile`

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
pSServiceProfileId	+	M	M	O
networkAccessMode	+	M	M	M
basicMSISDNIndicator	+	O	M	M
mSISDNAlertIndicator	+	O	M	M
vLRNumber	+	M	M	-
mSCNumber	+	M	M	-
subscriptionRestriction	+	O	M	M
rSZIlists	+	O	M	M
mSCAreaRestrictedFlag	+	M	M	-
oDBinducedBarringData	+	O	M	-
roamingRestrictionDueToUnsupportedFeature	+	M	M	-
lSAIdentity	+	O	M	M
lSAPriority	+	O	M	M
lSAPreferentialAccessIndicator	+	O	M	M
lSAActiveModeSupportIndicator	+	O	M	M
lSAOnlyAccessIndicator	+	O	M	M
lSAActiveModeIndicator	+	O	M	M
vPLMNIdentifier	+	O	M	M
accessRestrictionData	+	O	M	M
privacyExceptionList	+	O	M	M
gMLCNumbers	+	O	M	M
mOLRList	+	O	M	M
serviceTypes	+	O	M	M
ageIndicator	+	O	M	-
sGSNNumber	+	M	M	-
gGSNNumber	+	O	M	M
sGSNarearestrictedflag	+	M	M	-
roamingRestrictedintheSGSNduetounsupportedfeature	+	M	M	-
mNRG	+	M	M	-
traceActivatedinSGSN	+	O	M	-
provisionofTeleservice	+	O	M	M
transferofSMoption	+	M	M	M
mSpurgedforGPRSflag	+	M	M	-
subscriberStatus	+	M	M	M
barringofPacketOrientedServices	+	O	M	M
pDPType	+	O	M	M
pDPAddress	+	O	M	M
accessPointName	+	O	M	M
vPLMNAddressAllowed	+	O	M	M
gGSNlist	+	M	M	-
qualityofServiceSubscribed	+	O	M	M
pDPContextIdentifier	+	O	M	-
pDPContextChargingCharacteristics	+	O	M	M
gPRSCAMELSubscriptionInformationGPRSCSI	+	O	M	M
mOShortMessageServiceCAMELSubscriptionInformationMOSMSCSI	+	O	M	M
mTShortMessageServiceCAMELSubscriptionInformationMTSMSCSI	+	O	M	M
mOSMSCSISGSNNegotiatedCAMELCapabilityHandling	+	O	M	M
mTSMSCSISGSNNegotiatedCAMELCapabilityHandling	+	O	M	M
mobilityManagementforGPRSeventnotificationMGCSI	+	O	M	M
mGCSINegotiatedCAMELCapabilityHandling	+	O	M	M
gPRSCSINegotiatedCAMELCapabilityHandling	+	O	M	-
sGSNSupportedCAMELPhases	+	O	M	-
sGSNOfferedCAMEL4CSIs	+	O	M	-
gsmSCFaddressforCSI	+	O	M	M
subscribedChargingCharacteristics	+	O	M	M
w-APN	+	O	M	M
listofauthorizedvisitednetworkidentifiers	+	O	M	M
3GPPAAAServerName	+	O	M	-
wLANUERemoteIPaddress	+	O	M	M

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
wLANAccess	+	O	M	M
wLANTunnelling	+	O	M	M
wLANDirectIPAccess	+	O	M	M
wAPNAuthorised	+	O	M	M
w-APNBarringType	+	O	M	M
w-APNChargingData	+	O	M	M
wLANUERemoteIPAddress	+	O	M	M
accessIndependenceFlag	+	O	M	M
i-WLANAccessType	+	O	M	M
chargingData	+	O	M	M
chargingCharacteristics	+	O	M	M
primaryOCSChargingFunctionName	+	O	M	M
secondaryOCSChargingFunctionName	+	O	M	M
primaryChargingCollectionFunctionName	+	O	M	M
secondaryChargingCollectionFunctionName	+	O	M	M
TraceReference2	+	O	M	-
TraceDepth	+	O	M	-
ListofNeTypestoTrace	+	O	M	-
TriggeringEvents	+	O	M	-
ListofInterfacestoTrace	+	O	M	-

6.3.13.3   Attribute constraints

The optional attributes:

```
3GPPAAAServerName
accessIndependenceFlag
accessPointName
accessRestrictionData
ageIndicator
barringofPacketOrientedServices
basicMSISDNIndicator
chargingCharacteristics
chargingData
gGSNNumber
gMLCNumbers
gPRSCAMELSubscriptionInformationGPRSCSI
gPRSCSINegotiatedCAMELCapabilityHandling
gsmSCFaddressforCSI
i-WLANAccessType
listofauthorizedvisitednetworkidentifiers
lSAActiveModeIndicator
lSAActiveModeSupportIndicator
lSAIdentity
lSAOnlyAccessIndicator
lSAPreferentialAccessIndicator
lSAPriority
mGCSINegotiatedCAMELCapabilityHandling
mobilityManagementforGPRSeventnotificationMGCSI
mOLRList
mOShortMessageServiceCAMELSubscriptionInformationMOSMSCSI
mOSMSCSISGSNNegotiatedCAMELCapabilityHandling
mSISDNAlertIndicator
mTShortMessageServiceCAMELSubscriptionInformationMTSMSCSI
mTSMSCSISGSNNegotiatedCAMELCapabilityHandling
oDBinducedBarringData
pDPAddress
pDPContextChargingCharacteristics
pDPContextIdentifier
pDPType
```

```
primaryChargingCollectionFunctionName
primaryOCSChargingFunctionName
privacyExceptionList
provisionofTeleservice
qualityofServiceSubscribed
rSZIlists
secondaryChargingCollectionFunctionName
secondaryOCSChargingFunctionName
serviceTypes
sGSNOfferedCAMEL4CSIs
sGSNSupportedCAMELPhases
subscribedChargingCharacteristics
subscriptionRestriction
vPLMNAddressAllowed
vPLMNIdentifier
w-APN
wAPNAuthorised
w-APNBarringType
w-APNChargingData
wLANAccess
wLANDirectIPAccess
wLANTunnelling
wLANUERemoteIPaddress
wLANUERemoteIPAddress
```

shall be supported for the following criteria: The NE supports the parameter (see TS 23.008 [7]).

6.3.14 `IMSServiceProfile`

6.3.14.1 Definition

In this management context:

a) This class represents for a subscribed IMS (see 3GPP TS 23.008 [7]) service the service preferences and settings chosen for a user.

6.3.14.2 Attributes

Attributes of `IMSServiceProfile`

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
iMSServiceProfileId	+	M	M	O
listofauthorizedvisitednetworkidentifiers	+	M	M	M
registrationStatus	+	M	M	M
sCSCFName	+	M	M	M
diameterClientAddressofSCSCF	+	M	M	-
serverCapabilities	+	O	M	M
subscribedMediaProfileIdentifier	+	O	M	M
initialFilterCriteria	+	O	M	M
applicationServerInformation	+	O	M	M
serviceIndication	+	M	M	M
primaryEventChargingFunctionName	+	O	M	M
secondaryEventChargingFunctionName	+	O	M	M
primaryChargingCollectionFunctionName	+	M	M	M
secondaryChargingCollectionFunctionName	+	O	M	M
gsmSCFaddressforIMCSI	+	O	M	M
iMSSFaddressforIMCSI	+	O	M	-
oIMCSI	+	O	M	M
vTIMCSI	+	O	M	M
dIMCS	+	O	M	M
gAAServiceType	+	O	M	M
gAAServiceIdentifier	+	O	M	M
gBAUserSecuritySettings	+	O	M	M
userSecuritySetting	+	O	M	M
userPublicIdentity	+	O	M	M
gAAAuthorizationflag	+	O	M	M
keyLifetime	+	O	M	M
uICCSecuritySetting	+	O	M	M
nAFGroupIdentity	+	O	M	M

6.3.14.3 Attribute constraints

The optional attributes shall be supported for the following criteria: The NE supports the parameter (see TS 23.008 [7]).

6.3.15 ServiceProviderFunction

6.3.15.1 Definition

In this management context:

    a) This class represents service provider functionality.

    b) All managed elements related with providing services have this functionality.

    c) It carries references to all services to be provided.

    d) It inherits from ManagedFunction (defined in 32.622 [6]).

6.3.15.2 Attributes

Attributes of ServiceProviderFunction

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

6.3.16 SubscriptionFunction

6.3.16.1 Definition

In this management context:

    a) This class represents subscription functionality.

    b) All managed elements related with the subscription of services have this functionality.

    c) It carries references to all subscription profile data.

    d) It carries references to all Subscriber data

    e) It inherits from ManagedFunction (defined in 32.622 [6]).

6.3.16.2 Attributes

Attributes of SubscriptionFunction

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

6.3.17 `SuMCSSupplService`

6.3.17.1 Definition

In this management context:

a) This class represents a Supplementary Service for a CS service (see 3GPP TS 23.008 [7]) provided by a service provider

b) This class contains the valid parameters that define the CS supplementary service from subscription point of view.

6.3.17.2 Attributes

Attributes of `SuMCSSupplService`

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
sS-Code	+	M	M	M
provisioningState	+	M	M	M
activationState	+	M	M	M
registrationState	+	O	M	M
overrideCategory	+	O	M	M
cLIRestrictionOption	+	O	M	M
forwarded-toNumber	+	O	M	M
forwarded-toSubaddress	+	O	M	M
noReplyConditionTimer	+	O	M	M
maximumEntitledPriority	+	O	M	M
defaultPriority	+	O	M	M
nbrUser	+	O	M	M
nbrSB	+	O	M	M

6.3.17.3 Attribute constraints

The optional attributes shall be supported for the following criteria: The NE supports the parameter (see TS 23.008 [7]).

6.3.18 `SuMPSSupplService`

6.3.18.1 Definition

In this management context:

a) This class represents a Supplementary Service for a PS service (see 3GPP TS 23.008 [7]) provided by a service provider

b) This class contains the valid parameters that define the PS supplementary service from subscription point of view.

6.3.18.2 Attributes

Attributes of `SuMPSSupplService`

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
sS-Code	+	M	M	M
provisioningState	+	M	M	M
activationState	+	M	M	M

6.3.18.3 Attribute constraints

The optional attributes shall be supported for the following criteria: The NE supports the parameter (See TS 23.008 [7]).

6.3.19 `SuMUser`

6.3.19.1 Definition

In this management context:

a) This class represents a User.

b) This class contains the valid parameters that define the User from subscription point of view.

6.3.19.2 Attributes

Attributes of `SuMUser`

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
suMUserId	+	M	M	-
relatedMobileUserData-theMobileUserData	+	M	M	O
userSubscriberRelation-theSubscriber	+	O	M	O

6.3.20 SuMCredentials

6.3.20.1   Definition

In this management context:

a) This class represents a User's credentials.

b) This class contains the valid parameters that define the credentials from subscription point of view.

6.3.20.2   Attributes

Attributes of SuMCredentials

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
suMCredentialsId	+	M	M	-
relatedIMSPublicId-thePublicId	+	M	M	O
relatedIMSServiceProfile-theServiceProfile	+	M	M	O
iMSPrivateUserIdentity	+	M	M	M

6.3.21   IMSPublicIdentification

6.3.21.1   Definition

In this management context:

a) This class represents the IMS Public Identification (see 3GPP TS 23.008 [7] and 3GPP TS 29.228 [8]).

b) This class contains the valid parameters that define the IMS Public Identification from subscription point of view.

6.3.21.2   Attributes

Attributes of IMSPublicIdentification

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
iMSPublicIdentificationId	+	M	M	-
publicUserIdentity	+	M	M	M
barringIndication	+	M	M	M

6.3.22 MobileUserData

6.3.22.1 Definition

In this management context:

   a) This class represents user data of a mobile User Equipment

   b) This class contains the valid parameters that define the user data of the mobile User Equipment from subscription point of view.

6.3.22.2 Attributes

Attributes of MobileUserData

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
mobileUserDataId	+	M	M	-
relatedServiceProfile-theServiceProfile	+	M	M	O
iMSI	+	M	M	M
mSISDN	+	M	M	M
multinumberingMSISDNs	+	M	M	M
iMEISV	+	O	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

The relationship is between a service and a subscription to the same type of service (for example between `CSService` and `CSSubscribedService`).

6.4.2 `description`

6.4.2.1 Definition

This represents the content description relationship between `SuMSubscribedService` and `SuMServiceProfile`.

6.4.2.2 Roles

Name	Definition
specification	`SuMSubscribedService` acts as the specification for the description of `SuMServiceProfile`.
service	`SuMServiceProfile` acts as the service specified in the description.

6.4.2.3 Constraints

The relationship is between a subscribed service and a service profile of the same type of service (for example between `CSSubscribedService` and `CSServiceProfile`).

6.4.3 `userSubscriberRelation`

6.4.3.1 Definition

This represents the relationship between `SuMUser` and `SuMSubscriberProfile`. This relationship is optional.

6.4.3.2 Roles

Name	Definition
theUser	Represents the User to which the Subscriber links.
theSubscriber	Represents the Subscriber to which the User links.

6.4.4 `relatedMobileUserData`

6.4.4.1 Definition

This represents the relationship between `SuMUser` and `MobileUserData`.

6.4.4.2 Roles

Name	Definition
theMobileUserData	Represents the user data of the mobile User Equipment being used.

6.4.5 `relatedServiceProfile`

6.4.5.1 Definition

This represents the relationship between `MobileUserData` and `SuMServiceProfile`.

6.4.5.2 Roles

Name	Definition
theServiceProfile	Represents the Service Profile to which the user data of the mobile User Equipment links.

6.4.6 `relatedIMSServiceProfile`

6.4.6.1 Definition

This represents the relationship between `SuMCredentials` and `IMSServiceProfile`.

6.4.6.2 Roles

Name	Definition
theServiceProfile	Represents the IMS Service Profile to which IMS Private User Identity links.

6.4.6.3 Constraints

1) This relationship is Conditional Mandatory. The condition is that no instances of `relatedIMSPublicId` are present for the same object instance of `SuMCredentials`.

2) All instances of this relationship from the same object instance of `SuMCredentials` shall be to object instances of `IMSServiceProfile` that are

   i) name-contained by the same object instance of `SuMUser` as name-contains the `SuMCredentials` object instance, and

   ii) associated (through the `description` relationship to `SuMSubscribedService` name-contained by `SuMSubscriberProfile`) to a single object instance of `SuMSubscriberProfile`.

6.4.7 `relatedIMSPublicId`

6.4.7.1 Definition

This represents the relationship between `SuMCredentials` and `IMSPublicIdentification`.

6.4.7.2 Roles

Name	Definition
thePublicId	Represents the IMS Public Identification to which IMS Private User Identity links.

6.4.7.3 Constraints

1) This relationship is Conditional Mandatory. The condition is that no instances of relatedIMSServiceProfile are present for the same object instance of SuMCredentials.

2) All instances of this relationship from the same object instance of SuMCredentials shall be to object instances of IMSPublicIdentification that are name-contained by object instances of IMSServiceProfile that are

    i) name-contained by the same object instance of SuMUser as name-contains the SuMCredentials object instance, and

    ii) associated (through the description relationship to SuMSubscribedService name-contained by SuMSubscriberProfile) to a single object instance of SuMSubscriberProfile.

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.

Attributes

Attribute Name	Definition	Legal Values
`iMSServiceId`	An attribute whose 'name+value' can be used as an RDN when naming an instance of the IMSService object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
`cSServiceId`	An attribute whose 'name+value' can be used as an RDN when naming an instance of the CSService object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
`pSServiceId`	An attribute whose 'name+value' can be used as an RDN when naming an instance of the PSService object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
`cSServiceProfileId`	An attribute whose 'name+value' can be used as an RDN when naming an instance of the CSServiceProfile object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
`pSServiceProfileId`	An attribute whose 'name+value' can be used as an RDN when naming an instance of the PSServiceProfile object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
`iMSServiceProfileId`	An attribute whose 'name+value' can be used as an RDN when naming an instance of the `IMSServiceProfile` object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
`cSSubscribedServiceId`	An attribute whose 'name+value' can be used as an RDN when naming an instance of the CSSubscribedService object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
`pSSubscribedServiceId`	An attribute whose 'name+value' can be used as an RDN when naming an instance of the PSSubscribedService object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
`iMSSubscribedServiceId`	An attribute whose 'name+value' can be used as an RDN when naming an instance of the IMSSubscribedService object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
`iMSPublicIdentificationId`	An attribute whose 'name+value' can be used as an RDN when naming an instance of the `IMSPublicIdentification` object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
`mobileUserDataId`	An attribute whose 'name+value' can be used as an RDN when naming an instance of the `MobileUserData` object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
`suMCredentialsId`	An attribute whose 'name+value' can be used as an RDN when naming an instance of the `SuMCredentials` object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
`suMSubscriberProfileId`	An attribute whose 'name+value' 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`	A description of (information for) the Subscriber Profile. It is an "Any" type with free structure and format.	
`suMUserId`	An attribute whose 'name+value' can be used as an RDN when naming an instance of the `SuMUser` object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
`userLabel`	A user-friendly (and user assigned) name of the associated object. IOCs inheriting from `ManagedFunction` will have this attribute. Other IOCs may have it as well, if explicitly defined for them.	
`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 'name+value' 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 'name+value' can be used as DN when referencing an instance of the `SuMSubscribedService` object class.	
relatedIMSPublicId-thePublicId	Models the relatedIMSPublicId relationship from a user's credentials to the IMS Public Identification. This attribute contains a list of the DN(s) of the related IMSPublicIdentification instance(s).	
relatedIMSServiceProfile-theServiceProfile	Models the relatedIMSServiceProfile relationship from a user's credentials to an IMS service profile. This attribute contains a list of the DN(s) of the related IMSServiceProfile instance(s).	
relatedMobileUserData-theMobileUserData	Models the relatedMobileUserData relationship from a user to the user data of a mobile User Equipment. This attribute contains a list of the DN(s) of the related MobileUserData instance(s).	
relatedServiceProfile-theServiceProfile	Models the relatedServiceProfile relationship from the user data of a mobile User Equipment to a service profile. This attribute contains a list of the DN(s) of the related SuMServiceProfile derived instance(s).	
userSubscriberRelation-theSubscriber	Models the userSubscriberRelation relationship from a user to a subscriber. This attribute contains a list of the DN(s) of the related SuMSubscriberProfile instance(s).	
userSubscriberRelation-theUser	Models the userSubscriberRelation relationship from a subscriber to a user. This attribute contains a list of the DN(s) of the related SuMUser instance(s).	

Attribute Name	Definition	Legal Values
iMSI	23.008 clause 2.1.1.1	
networkAccessMode	23.008 clause 2.1.1.2	
mSISDN	23.008 clause 2.1.2	
multinumberingMSISDNs	23.008 clause 2.1.3	
basicMSISDNIndicator	23.008 clause 2.1.3.1	
mSISDNAlertIndicator	23.008 clause 2.1.3.2	
lMSI	23.008 clause 2.1.8	
mobileStationCategory	23.008 clause 2.2.1	
lMUIdentifier	23.008 clause 2.2.2	
iMEISV	23.008 clause 2.2.3	
subscriptionRestriction	23.008 clause 2.4.10	
rSZIlists	23.008 clause 2.4.11.1	
mSCAreaRestrictedFlag	23.008 clause 2.4.12	
sGSNarearestrictedflag	23.008 clause 2.4.14	
oDBinducedBarringData	23.008 clause 2.4.15.1	
roamingRestrictionDueToUnsupportedFeature	23.008 clause 2.4.15.2	
roamingRestrictedintheSGSNduetounsupportedfeature	23.008 clause 2.4.15.3	
lSAIdentity	23.008 clause 2.4.17.1	
lSAPriority	23.008 clause 2.4.17.2	
lSAPreferentialAccessIndicator	23.008 clause 2.4.17.2A	
lSAActiveModeSupportIndicator	23.008 clause 2.4.17.2B	
lSAOnlyAccessIndicator	23.008 clause 2.4.17.3	
lSAActiveModeIndicator	23.008 clause 2.4.17.4	
vPLMNIdentifier	23.008 clause 2.4.17.5	
accessRestrictionData	23.008 clause 2.4.18	
vLRNumber	23.008 clause 2.4.5	
mSCNumber	23.008 clause 2.4.6	
sGSNNumber	23.008 clause 2.4.8.1	
gGSNNumber	23.008 clause 2.4.8.2	
provisionOfBearerService	23.008 clause 2.5.1	
provisionOfTeleservice	23.008 clause 2.5.2	
bCAllocation	23.008 clause 2.5.3	
transferofSMoption	23.008 clause 2.5.4	
mNRG	23.008 clause 2.7.2	
checkSSIndicator	23.008 clause 2.7.4.4	
mSPurgedForNonGPRSFlag	23.008 clause 2.7.5	
mSpurgedforGPRSflag	23.008 clause 2.7.6	
subscriberStatus	23.008 clause 2.8.1	
barringOfOutgoingCalls	23.008 clause 2.8.2.1	
barringOfIncomingCalls	23.008 clause 2.8.2.2	
barringOfRoaming	23.008 clause 2.8.2.3	
barringOfPremiumRateCalls	23.008 clause 2.8.2.4	
barringOfSupplementaryServiceManagement	23.008 clause 2.8.2.5	
barringOfRegistrationOfCallForwarding	23.008 clause 2.8.2.6	
barringOfInvocationOfCallTransfer	23.008 clause 2.8.2.7	
barringofPacketOrientedServices	23.008 clause 2.8.2.8	
operatorDeterminedBarringPLMNspecificData	23.008 clause 2.8.3	
notificationToCSEFlagForODB	23.008 clause 2.8.4	
gsmSCFaddresslistForODB	23.008 clause 2.8.5	
messagesWaitingData	23.008 clause 2.10.1	
mobileStationNotReachableFlag	23.008 clause 2.10.2	
memoryCapacityExceededFlag	23.008 clause 2.10.3	
traceReference	23.008 clause 2.11.1	
traceType	23.008 clause 2.11.2	
operationsSystemsIdentity	23.008 clause 2.11.3	
hLRTraceType	23.008 clause 2.11.4	
mAPErrorOnTrace	23.008 clause 2.11.5	
traceActivatedInVLR	23.008 clause 2.11.6	
traceActivatedinSGSN	23.008 clause 2.11.7	
vGCSGroupMembershipList	23.008 clause 2.12.1	
vBSGroupMembershipList	23.008 clause 2.12.2	
broadcastCallInitiationAllowedList	23.008 clause 2.12.2.1	
pDPType	23.008 clause 2.13.1	

gGSNlist	23.008 clause 2.13.11	
qualityofServiceSubscribed	23.008 clause 2.13.12	
pDPAddress	23.008 clause 2.13.2	
pDPContextIdentifier	23.008 clause 2.13.24	
pDPContextChargingCharacteristics	23.008 clause 2.13.25	
accessPointName	23.008 clause 2.13.6	
vPLMNAddressAllowed	23.008 clause 2.13.8	
originatingCAMELSubscriptionInformationOCSI	23.008 clause 2.14.1.1/3.1	
gPRSCAMELSubscriptionInformationGPRSCSI	23.008 clause 2.14.1.10/2.14.4.4	
dialledServiceCAMELSubscriptionInformationDCSI	23.008 clause 2.14.1.11/3.7	
mobilityManagementforGPRSeventnotificationMGCSI	23.008 clause 2.14.1.12/2.14.4.4	
terminatingCAMELSubscriptionInformationTCSI	23.008 clause 2.14.1.2	
vMSCTerminatingCAMELSubscriptionInformationVTCSI	23.008 clause 2.14.1.2/3.2	
locationInformationSubscriberStateInformation	23.008 clause 2.14.1.3	
uSSDCAMELSubscriptionInformationUCSI	23.008 clause 2.14.1.4	
sSInvocationNotificationSSCSI	23.008 clause 2.14.1.5/3.2	
translationInformationFlagTIFCSI	23.008 clause 2.14.1.6/3.6	
shortMessageServiceCAMELSubscriptionInformationMOSMSCSI	23.008 clause 2.14.1.8/2.14.3.5	
mOShortMessageServiceCAMELSubscriptionInformationMOSMSCSI	23.008 clause 2.14.1.8/2.14.4.1	
shortMessageServiceCAMELSubscriptionInformationMTSMSCSI	23.008 clause 2.14.1.9/2.14.3.6	
mTShortMessageServiceCAMELSubscriptionInformationMTSMSCSI	23.008 clause 2.14.1.9/2.14.4.2.	
gPRSCSINegotiatedCAMELCapabilityHandling	23.008 clause 2.14.2.1	
mCSINegotiatedCAMELCapabilityHandling	23.008 clause 2.14.2.1	
mGCSINegotiatedCAMELCapabilityHandling	23.008 clause 2.14.2.1	
mOSMSCSISGSNNegotiatedCAMELCapabilityHandling	23.008 clause 2.14.2.1	
mOSMSCSIVLRNegotiatedCAMELCapabilityHandling	23.008 clause 2.14.2.1	
mTSMSCSISGSNNegotiatedCAMELCapabilityHandling	23.008 clause 2.14.2.1	
mTSMSCSIVLRNegotiatedCAMELCapabilityHandling	23.008 clause 2.14.2.1	
oCSINegotiatedCAMELCapabilityHandling	23.008 clause 2.14.2.1	
sSCSINegotiatedCAMELCapabilityHandling	23.008 clause 2.14.2.1	
vTCSINegotiatedCAMELCapabilityHandling	23.008 clause 2.14.2.1	
SGSNOfferedCAMEL4CSIs	23.008 clause 2.14.2.2A	
vLROfferedCAMEL4CSIs	23.008 clause 2.14.2.2A	
sGSNSupportedCAMELPhases	23.008 clause 2.14.2.2	
vLRSupportedCAMELPhases	23.008 clause 2.14.2.2	
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userPublicIdentity	23.008 clause 3A.5	
gAAAuthorizationflag	23.008 clause 3A.6	
keyLifetime	23.008 clause 3A.8	
uICCSecuritySetting	23.008 clause 3A.9	
nAFGroupIdentity	23.008 clause 3A.11	
w-APN	23.008 clause 3B.1.3	
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wLANTunnelling	23.008 clause 3B.5.2	
wLANDirectIPAccess	23.008 clause 3B.5.3	
wAPNAuthorised	23.008 clause 3B.5.4	
w-APNBarringType	23.008 clause 3B.5.4.2	
w-APNChargingData	23.008 clause 3B.5.4.3	
wLANUERemoteIPAddress	23.008 clause 3B.5.4.4	
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i-WLANAccessType	23.008 clause 3B.5.6	
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secondaryOCSChargingFunctionName	23.008 clause 3B.7.3	
primaryChargingCollectionFunctionName	23.008 clause 3B.7.4	
secondaryChargingCollectionFunctionName	23.008 clause 3B.7.5	
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TriggeringEvents	23.008 Clause 2.11.12	
ListofInterfacestoTrace	23.008 Clause 2.11.13	

Annex A (informative):
Change history

Change history								
Date	TSG #	TSG Doc.	CR	Rev	Subject/Comment	Cat	Old	New
Dec 2003	SA_22	SP-030617	--	--	Submitted to TSG SA#22 for Information	--	1.0.0	
Sep 2004	SA_25	SP-040546	--	--	Submitted to TSG SA#25 for Approval	--	2.0.0	
Dec 2004	SA_26	SP-040830	--	--	Submitted to TSG SA#26 for Approval	--	2.7.0	6.0.0
Mar 2005	SA_27	SP-050024	0001	--	Add Generic Authentication Architecture (GAA) attributes – Align with CN4's 23.008 (Organisation of subscriber data)	F	6.0.0	6.1.0
Mar 2005	SA_27	SP-050024	0002	--	Add Interworking WLAN (I-WLAN) parameters – Align with CN4's 23.008 (Organisation of subscriber data)	F	6.0.0	6.1.0
Mar 2005	SA_27	SP-050024	0003	--	Add Supplementary Service attributes – Align with CN4's 23.008 (Organisation of subscriber data)	F	6.0.0	6.1.0
Jun 2005	SA_28	SP-050269	0004	--	Add Rel-6 trace parameters to SuM - align with CT4's TS 23.008 (Organisation of subscriber data)	F	6.1.0	6.2.0
Mar 2006	SA_31	SP-060092	0005	--	Remove duplicate attributes in the Information Service (IS)	F	6.2.0	6.3.0
Jun 2007	SA_36	SP-070269	0006	--	Add definition of missing attributes	F	6.3.0	6.4.0
Jun 2007	SA_36	SP-070269	0007	--	Add missing inheritance definitions	F	6.3.0	6.4.0
Jun 2007	SA_36	--	--	--	Automatic upgrade to Rel-7 (no CR) at freeze of Rel-7.	--	6.4.0	7.0.0
Sep 2007	SA_37	SP-070607	0009	--	Add missing subscriberStatus attribute to PS object class - Align with CT4's 23.008 (Organisation of subscriber data)	A	7.0.0	7.1.0
Sep 2007	SA_37	SP-070614	0011	--	Update information attribute definitions - Align with CT4 23.008 and 29.002	F	7.1.0	8.0.0
Sep 2007	SA_37	SP-070614	0012	--	Changes to modelling of User	C	7.1.0	8.0.0
Sep 2009	SA_45	SP-090534	0013	--	Correction of SuMSubscriptionProfile and suMSubscriptionProfileId	F	8.0.0	8.1.0

History

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V8.0.0	February 2009	Publication
V8.1.0	October 2009	Publication