3GPP TSG-CN1 Meeting #36 Tdoc N1-040491
Seoul, Korea, 15-19 November 2004

Source: CN1

Title: Liaison Statements sent from CN1 since CN#25

Agenda item: 6.1.1

Document for: INFORMATION

The document contains all LSs that have been agreed in CN1 since TSG CN#25.

TDoc #	Tdoc Title	Type	Comments
N1-041944	Reply to LS in N1-041658 on AS-NAS interaction for MBMS	LS OUT	To: RAN2, GERAN2, CC: RAN3
N1-041946	Reply LS on TISPAN NGN supplementary services (reply to N1-041672)	LS OUT	To: ETSI TISPAN, CC: SA1, SA2
N1-041948	Reply to LS on GPRS Network Selection (Reply to N1-041771)	LS OUT	To: SA1
N1-041949	LS on Support of eCall on UUS type 1 Supplementary Service (reply LS to N1-041770)	LS OUT	To: OCG EMTEL, CC: CN, SA
N1-041951	LS to GERAN containing N1-041950 as an attachment	LS OUT	To: GERAN
N1-041994	Reply LS to T3 on Equivalent HPLMN (reply to N1-041517)	LS OUT	To: T3; CC: CN, SA1, T1
N1-042016	Reply LS to OMA PoC with respect to signalling compression(reply to N1-041664)	LS OUT	To: OMA POC WG; CC: SA2
N1-042039	LS to SA2 on PDG redirection feature	LS OUT	To: SA2
N1-042062	LS on Addition of VGC reconfiguration procedure (CR in N1-042061)	LS OUT	To: GERAN WG2
N1-042069	Draft reply LS on selected PLMN and network sharing	LS OUT	To: RAN2, CC: GERAN
N1-042073	LS on initial HPLMN search timer (reply to N1-042073).	LS OUT	To: GERAN3, T1
N1-042078	Reply LS on Security aspects of early IMS systems (reply to N1-041673)	LS OUT	To: SA3, CN4, SA2, CC: T2, CN
N1-042097	Reply to LS on definition of RAT (reply to N1-041685)	LS OUT	To:SA1, CC: T3, GERAN, RAN, T, CN, SA
N1-042098	LS on conferencing in release 6	LS OUT	To: TSG CN
N1-042100	LS on a 3GPP IMS management object	LS OUT	To: OMA PAG, OMA POC, OMA DM, 3GPP2 TSG-X; CC: TSG CN
N1-042116	LS on 'No Identity' in Mobile Identity IE	LS OUT	To: GERAN2
N1-042125	LS on a new Enhanced NSAPI IE for MBMS	LS OUT	To:SA2, RAN2, RAN3, CN4

3GPP TSG-CN1 Meeting #36 Tdoc N1-041944
Seoul, Korea, 15-19 November 2004

Title: Reply LS on AS-NAS interaction for MBMS
Response to: LS (N1-041658/R2-041911) on AS-NAS interaction for MBMS
Release: Rel-6
Work Item: MBMS
Source: CN1
To: RAN2
Cc: GERAN 2, RAN 3

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Attachments: None

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1. Overall Description:

CN1 would like to thank RAN2 for their liaison statement (N1-041658/R2-041911).
In the LS sent by RAN2, CN1 was asked to confirm several assumptions made by RAN2, namely:

> Notification
> RAN 2 assumes UE-NAS informs UE-AS about the TMGIs of the multicast services the UE has joined as well as the TMGIs of the broadcast services the UE is interested in. UE-AS requires this information e.g. to monitor the MBMS notification indicator channel (MICH).

CN1 would like to bring to the attention of RAN2 that the TMGI is received at core network protocol only during the MBMS Multicast service activation procedure. Therefore, the entity in charge of the MBMS Session management protocol is not aware of the TMGIs of broadcast services. It is CN1's understanding that the TMGI is for group paging for MBMS multicast services, but not for broadcast services.

> Connection establishment
> UTRAN may apply counting to determine the optimum transfer mode to use. During counting, the UE may need to establish an RRC connection. RAN 2 assumes that in this case UE-AS will request UE-NAS to establish this connection. Furthermore, RAN 2 would like to request CN1 to define a special cause value to be used for this RRC connection establishment scenario.

CN1 would like to indicate that for counting the number of UEs in a cell, which are interested in a specific MBMS service, the UE is prompted by the contents of the MBMS Notification procedure to establish a PS signalling connection using a special service type, i.e. “MBMS notification response”. Additionally, CN1 would also like to note that TS 24.008, i.e. Annex L, contains tables on the Mapping of NAS procedures to RRC establishment causes, which seem to be the suitable place to add a mapping for the MBMS notification response to a special cause value for the RRC connection. However, CN1 understands that, at this moment in time, RAN2 has not defined a new RRC establishment cause value to be used for the special RRC connection establishment scenario. When this new RRC establishment cause value is specified or RAN2 indicates which RRC establishment cause value should be mapped to the appropriate NAS procedure (i.e. Service request with service type “MBMS notification response”), CN1 will add the corresponding mapping of the NAS procedure to the RRC establishment cause in the Annex L.

> Service prioritisation
> There may be cases in which a UE is not able to receive all of the services provided by UTRAN that it is interested in. RAN 2 assumes upon detecting the inability to receive services due to UE radio access capability limitations, UE-AS will request UE-NAS to perform a service prioritisation and to possibly stop lower priority services prohibiting UE-AS to receive a higher priority service.

CN1 understands from the liaison S2-043400 that the user or the application on charge of MBMS knows the priorities of MBMS services and performs the service prioritisation. Please note, that during the data transfer

phase of MBMS services the core network entity in charge of MBMS (i.e. MBMS Session management) is not aware of the fact of reception of MBMS data, so the service prioritisation feature cannot be performed at the MBMS Session management entity.

Bearer capability checking

RAN 2 understands that during MBMS Multicast Service Activation CN verifies the UE's bearer capabilities as described in 23.246 clause 8.2, bullet 6:

> *"If the SGSN has the MBMS Bearer Context information for this MBMS bearer service, the SGSN should verify the UE's MBMS bearer capabilities. If the SGSN determines that the UE's MBMS bearer capabilities are less than the Required MBMS Bearer Capabilities, it shall reject the request for activation of an MBMS context with an appropriate cause."*

RAN 2 would like to know what is intended to be covered by this bearer capability checking i.e. whether AS aspects are somehow taken into account.

CN1 answers that the MBMS bearer capabilities of the UE sent at the MBMS Multicast service activation procedure indicate the maximum bit rate for downlink supported by the UE for MBMS context. That is to say, the MBMS bearer capabilities indicate the static physical capabilities of the UE, independent of the radio access used (UMTS or GSM), the radio conditions, or other CS or PS services possibly activated by the UE.

RAB identity

RAN 2 has discussed the identification of the MBMS RABs, both for the point to point and the point to multipoint case. RAN 2 assumes to use the existing RAB identity when establishing a point to point radio bearer for MBMS. It is the understanding of RAN 2 that CN1 will apply the NSAPI to identify the PDP context of a specific MBMS service. RAN 2 assumes that, although the existing NSAPI definition may be modified to extend the value range, it would still be possible to map the NSAPI to the existing RAB identiy (8 bits).

In response to the set up of point-to-point radio bearer and the mapping between NSAPI and RAB identity CN1 has written a liaison statement in N1-042111 which is sent to RAN2 too.

2. Actions:

To RAN2 group.

ACTION: CN1 kindly asks RAN2 to take into account the points raised above.

3. Date of Next TSG-CN1 Meetings:

CN1_36	15th – 19th November 2004	Seoul, Korea
CN1_37	14th – 18th February 2005	Sydney, Australia
CN1_38	25th -30th April 2005	Cancun, Mexico

3GPP TSG-CN1 Meeting #36 Tdoc N1-041946
Seoul, Korea, 15-19 November 2004

Title: LS on **Cooperation on TISPAN NGN supplementary services**

Response to: LS (N1-041672) on **Cooperation on TISPAN NGN supplementary services** from ETSI TISPAN

Work Item: System enhancements for fixed broadband access to IMS

Source: 3GP WG CN1

To: ETSI TISPAN

Cc: SA1, SA2

Contact Person:

Name: **Keith Drage**

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1. Overall Description:

3GPP WG CN1 thanks ETSI TISPAN for their liaison statement on Cooperation on TISPAN NGN supplementary services.

3GPP WG CN1 experts are happy to review any service specific protocol documents that ETSI TISPAN may produce, especially in order to assist with the guidelines and comments given below. Due to meeting time constraints, such review may need to occur outside the CN1 meetings themselves.

In addition to the comments made by 3GPP WG SA1 and WG SA2, we have the following guidance and comments to make:

- We would normally expect specific services to be defined using procedures at an Application Server, and with corresponding procedures at a UE. CSCF procedures are defined to support such a service platform in a generic manner, and we have made very few additions in release 6 in order to support the 3GPP defined application usages. If you require any new procedures at CSCFs, we expect them to be generic to all usage and not service specific, and to appear in 3GPP TS 24.229 (unless they impact the filter criteria in which case 3GPP TS 23.218 and 3GPP WG CN4 documents may be affected). If such requirements exist we are happy to discuss them with TISPAN. It is expected by 3GPP WG CN1 that TISPAN restricts their specifications to application that uses IMS without redefining issues that have already been defined in the IMS specs.

- We are keen to keep the SIP protocol usage as close as possible to IETF usage, and to have a single protocol definition, as represented by 3GPP TS 24.229. Any protocol additions that do not form part of the IETF work programme may need expert review in IETF, and we would certainly like to discuss such requirements for extension in 3GPP WG CN1 with a view to such protocol appearing in 3GPP TS 24.229 rather than in TISPAN specific documents.

- Several existing supplementary services can already be emulated in SIP procedures, e.g., by following IETF example internet drafts, e.g. draft-ietf-sipping-service-examples.

- Some supplementary services are not applicably to IMS with a SIP terminal. As an example, waiting call has two sets of busy. Network determined user busy, which is the only part of the ISDN service that has network signalling, is not needed as a SIP subscriber is never network determined user-busy. User-determined user busy is dealt with entirely in the terminal even in ISDN.

- Note that any service specific functionality at the MGCF falls under the responsibility of 3GPP WG CN3 (3GPP WG CN1 deals only with the generic SIP procedures at the MGCF).

2. Actions:

None

3. Date of Next TSG-CN1 Meetings:

CN1_37	14th – 18th February 2005	Sidney, Australia
CN1_38	25th -30th April 2005	Cancun, Mexico

3GPP TSG-CN1 Meeting #36 Tdoc N1-041948
Seoul, Korea, 15-19 November 2004

Title: **LS on GPRS Network Selection**
Response to: **LS (S1-040999) on GPRS Network Selection from SA1**
Release:
Work Item:

Source: CN1
To: SA1
Cc:

Contact Person:
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Attachments:

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1. Overall Description:

CN1 thanks SA1 for their LS on GPRS Network Selection in S1-040999 and has considered the scenarios presented in it.

- ***Where there is no preferred network set in the PLMN list.***
  In this case, the UE may be allowed to try to find another PLMN to provide GPRS service.

CN1 believes that a solution to this problem is technically possible. It would for instance be possible to allow a PLMN selection in response the Reject Cause #14 (GPRS services not allowed in this PLMN). CN1 will investigate this further.

- ***Where there is a GPRS operational problem on the selected network.***
  There are 2 cases to consider:
  a) Where there is no Preferred PLMN and the UE has selected a PLMN with GPRS roaming and there is a fault preventing GPRS use. In this case, the UE may be allowed to try to find another PLMN to provide GPRS service.

  b) Where the UE has selected the Preferred PLMN with GPRS roaming and there is a fault preventing GPRS use. In this case, it may be desirable for the UE to try and find another PLMN to provide GPRS. However SA1 wishes to understand the implications that such an approach may have on the specifications and the operation of network selection.

CN1 wish to notify SA1 that service prioritisation against the prioritised PLMNs will be overridden by the background scan, and it is not desirable to affect the behaviour of the background scan in this case.

2. Actions:

No Action.

3. Date of Next TSG-CN1 Meetings:

CN1_36	15th – 19th November 2004	Seoul, Korea
CN1_37	14th – 18th February 2005	Sidney, Australia
CN1_38	25th -30th April 2005	Cancun, Mexico

3GPP TSG-CN1 Meeting #36 Tdoc N1-041949
Seoul, Korea, 15-19 November 2004

Title: **LS on Support of eCall on UUS type 1 Supplementary Service**
Response to: LS from OCG EMTEL on Support of eCall on UUS type 1 Supplementary Service
Release:
Work Item:

Source: **CN1**
To: **OCG EMTEL**
Cc: TSG CN, TSG SA

Contact Person:
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Attachments: None

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1. Introduction

CN1 thanks ETSI OCG EMTEL for their LS on the requirements for the support of pan-European in-vehicle eCall (Automatic & Manual).

CN1 has discussed the proposal that the Supplementary Service UUS type 1 may be sufficient to transport the required information and would be pleased to work with ETSI OCG EMTEL on introducing the necessary changes to the 3GPP specifications.

2. Comments

CN1 would like to note the following:

- At the moment the user-to-user IE is not included in the EMERGENCY SETUP message, so if that mechanism is to be used, then a new information element would need to be added.
- In previous releases the user information is limited to 32 octets which the old implementation are able to handle.
- User information can also be transferred in a dedicated USER INFORMATION message, but this would need to be negotiated in the preceding setup message, which is not currently possible using the EMERGENCY SETUP message.
- Some networks may not pass on the user-user information in those messages where it has been defined based on local policy.

CN1 also understands that there is a need to introduce the necessary requirements, for this functionality, into the Stage 1 specifications and notes that a copy of the ETSI OCG EMTEL liaison has already been sent to TSG SA WG1.

3. Action Required:

CN1 kindly asks ETSI OCG EMTEL to consider the above information.

4. Date of Next TSG-CN1 Meetings:

CN1_37	14th – 18th February 2005	Sidney, Australia
CN1_38	25th -30th April 2005	Cancun, Mexico

3GPP TSG-CN1 Meeting #36 Tdoc N1-041951
Seoul, Korea, 15-19 November 2004

Title: **LS on Negotiation of SNDCP Compression Entities**
Response to: none
Release: R97, R98 and Rel-6
Work Item: TEI

Source: **CN1**
To: **GERAN**
Cc: -

Contact Person:
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E-mail Address: anand@nortelnetworks.com

Attachments: N1-041950, N1-042052, N1-042053

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1. Overall Description:

CN1#36 has discussed and agreed on the three attached change requests to R97, R98 and Rel-6 versions of TR 09.95. These change requests introduce a workaround to the problem found during the negotiation of SNDCP compression entities with unknown algorithm type described in 3GPP TS 44.065 subclause 6.8 as it was interpreted differently by some manufacturers. TSG-CN #25 has already approved the CR 015r2 to 3GPP TS 44.065 for Rel-4 and CR 016r2 from Rel-5 onwards and these CRs mandate explicit rejection of non-supported compression algorithms by the mobile stations to remove the ambiguity. The attached CRs add the workaround solution to the TR to support the legacy mobile stations.

Furthermore, CN1 proposes that only the latest version (in this case, Rel-6 TR 49.995) of the TR 09.95 be maintained. Therefore, the attached R97 and R98 versions of the change requests deletes all the contents of the TR and refers the reader to the latest major version of TR 49.995, which will be newly created when the Rel-6 CR is approved by GERAN.
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2. Actions:

CN1 kindly requests GERAN to approve the attached change requests to the TR, as the TR is under GERAN control.

3. Date of Next TSG-CN1 Meetings:

CN1_37	14th – 18th February 2005	Sidney, Australia
CN1_38	25th -30th April 2005	Cancun, Mexico

3GPP TSG-CN1 Meeting #36
Seoul, Korea, 15-19 November 2004

Tdoc N1-041994

Revision of Tdoc N1-041943

Title: LS on EHPLMN (Equivalent HPLMN)
Response to: LS (T3-040586) on EHPLMN (Equivalent HPLMN) from T3
Release: Release 6
Work Item:

Source: 3GPP TSG CN1
To: 3GPP TSG T3
Cc: TSG CN, TSG SA1, TSG T1

Contact Person:
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Attachments: None

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1. Overall Description:

CN1 thanks T3 for their LS regarding support of the EHPLMN proposal.

CN1 has noted the two proposals from T3, to either introduce a new file or update the functionality of the existing HPLMN file.

After discussion within CN1 it has been agreed that the introduction of a new file, to cater for the EHPLMN requirement, would be the safer option.

CN1 also discussed the probable format of the new file and proposes that it contains a list of PLMN codes that will be used in addition to the HPLMN code derived from the IMSI. CN1 would also propose that there is no need to include Access Technology information as the mobile will use all the access technologies that it supports when searching for the HPLMN (or an Equivalent HPLMN).

2. Actions:

To 3GPP TSG T3

ACTION: CN1 requests T3 notes the conclusion of the discussion within CN1 and introduces a new file into the SIM and USIM specifications to support the EHPLMN requirement.

CN1 would be grateful if T3 could liaise the agreed CR back to CN1 so that the related CRs to the CN1 specifications can be completed in a timely manner.

3. Date of Next TSG-CN1 Meetings:

CN1_37	14th – 18th February 2005	Sidney, Australia
CN1_38	25th -30th April 2005	Cancun, Mexico

3GPP TSG-CN1 Meeting #36 Tdoc N1-042016
Seoul, Korea, 15-19 November 2004

Title:	**Reply LS on signalling compression**
Response to:	**LS (N1-041664 = OMA-PoC-2004-765R02) on signalling compression from OMA POC WG**
Release:	**Rel-6**
Work Item:	**3GPP Enablers for POC, IMS Phase 2**
Source:	**TSG_CN WG 1.**
To:	**OMA POC WG**
Cc:	**TSG_SA WG 2**

Contact Person:

Name: Peter Leis
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Attachments: **None**

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1. Overall Description:

CN WG1 kindly thanks OMA POC WG for their liaison response on signalling compression. 3GPP CN1 and SA2 discussed the liaison in a joint session and are happy to provide the following answers to the issues raised by OMA POC WG.

1.1 Signalling Compression and IMS

Signalling compression takes place between the P-CSCF and the UE. Signalling compression can be initiated when the UE registers in the IMS and is terminated once the UE deregisters (see subclause 8.1.1 of TS 24.229). The same compressor and decompressor instances are used for all IMS messages from the UE for all public use identities, independently of the application (e.g. PoC).

This means that PoC as defined in OMA cannot expect that compression is different for PoC than it is for other services when the SIP/IP core is IMS. On the other hand it means that signalling compression specified for and used in the IMS must be good enough to support the PoC requirements. 3GPP would also like to inform OMA POC that in addition to RFC 3320, a recent draft-ietf-rohc-sigcomp-sip gives additional information for the use of SigComp for SIP.

3GPP CN1 kindly asks OMA PoC WG to consider this context for the answers provided to the three issues addressed in the bullet items of the OMA liaison statement.

1.2 Ports for SIP and SigComp compression

OMA PoC notes that the existing IETF recommendations and 3GPP specifications do not specify the use of separate transport ports or a common transport port for SIP and SigComp messages.

Having different ports for compressed and uncompressed messages is not an issue within IMS, as the security architecture is based on fixed ports within a security association. Further, this is not a real issue for IMS and PoC, as it is mandated that terminals and networks will support SigComp (though its use is not mandatory). Consequently a terminal can decide on the first message whether or not it is going to use SigComp and not change. If there is a need to send an uncompressed message (e.g. due to loss of sync between compressor and decompressor, or to reduce processing load) when SigComp is in use, the 'uncompressed SigComp header' can be used. This is a set of 13 well known bytes that are prepended to the SIP message to make it a SigComp message and are removed as a block at the decompressor.

1.3 Memory sizes

OMA PoC notes that the existing IETF recommendations and 3GPP specifications do not specify minimum requirements for the endpoints like decompression memory size (DMS) and state memory size (SMS).

RFC 3320 identifies a minimum of 2K for DMS and of 0K for SMS. However, 2K is not a practical minimum for DMS. Consequently 3GPP CN1 decided to recommend higher values for use of SigComp in IMS. The following values were agreed:

- DMS min 8K recommended; following a recent agreement in IETF;
- SMS min 4K mandated; this allows the compressor to be sure that it will be able to store state information, improving the efficiency of compression.

With these values 3GPP is confident that IMS signaling compression can achieve a performance, which allows the 3GPP system to support the timing requirements for PoC.

3GPP CN1 agreed a CR to clarify the use of SigComp in IMS.

1.4 Byte Code

OMA PoC notes that the existing IETF recommendations and 3GPP specifications do not specify when the UDVM byte code should be exchanged.

In the SigComp model, the compressor controls the decompressor. Thus, the compressor can decide when it is necessary to send the byte code. Obviously the byte code must be sent in the very first message at compartment establishment. As this is during registration it does not affect the time for receiving the RtS indication. Everything else is up to the implementation of the compressor.

2. Actions:

None.

3. Date of Next CN1 Meetings:

CN1_37	14th – 18th February 2005	Sydney, Australia
CN1_38	25th – 30th April 2005	Cancun, Mexico

3GPP TSG-CN1 Meeting #36 Tdoc N1-042039
Seoul, Korea, 15-19 November 2004

Title: **LS on PDG Redirection Feature**
Release: **Rel-6**
Work Item: **WLAN**

Source: **CN1**
To: **SA2**
Cc:

Contact Person:
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Attachments:

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1. Overall Description:

CN1 would like to inform SA2 that they have considered the PDG redirection feature and have reached the conclusion that it is not practical or advisable to standardize it the Rel-6 WLAN-IW.

The reasoning for this decision is as follows:

- As SA3 have established, PDG redirection does not enhance security in the Scenario 3 procedure. Further, even though the PDG redirection feature might be used for load-balancing, this can be provided in many other ways. Hence the added value of the procedure is not substantial and the feature can be regarded as only an enhancement feature. Its removal would not remove any fundamental functionality from WLAN Interworking.
- At present, the IKEv2 [3] protocol does not include any functionality for the PDG to provide the WLAN UE with an alternative PDG IP address. Therefore, no solution exists in IKEv2.
- In order to provide the PDG redirection feature by stage 3, either the IKEv2 must be modify by IETF, which will likely delay the completion date of the stage 3 work on I-WLAN to be done by CN WGs or a private version of the IKEv2 protocol must be specified by 3GPP, which would result in considerable additional work and potentially the creation of not interoperable 3GPP version of the IKEv2 protocol.
- All the above solutions will delay the completion date of the I-WLAN work to be done by the CN WGs for Rel-6.

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2. Actions:

To SA2

ACTION: CN1 kindly asks SA2 to consider the reasoning given above with a view to deciding to remove the PDG redirection feature from its Stage 2 specification.

3. Date of Next CN1 Meetings

CN1 _37	14th – 18th February 2005	Sydney, Australia
CN1_38	25th -30th April 2005	Cancun, Mexico

3GPP TSG-CN1 Meeting #36
Seoul, Korea, 15-19 November 2004

Tdoc N1-042061
Revision of Tdoc N1-041702

CR-Form-v7

CHANGE REQUEST

⌘ **43.068** **CR** **21** ⌘ **rev** **1** ⌘ Current version: **6.2.0** ⌘

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

Proposed change affects: UICC apps⌘ [ ] ME [X] Radio Access Network [ ] Core Network [X]

Title:	⌘	Addition of VGCS reconfiguration procedure
Source:	⌘	Motorola
Work item code:	⌘	TEI6
Date:	⌘	18/11/2004
Category:	⌘	**C**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	In the event of a change to the channel allocation and/or frequency hopping parameters associated with an existing VGCS, mobiles in group receive mode or group transmit mode on this VGCS cannot be informed of the change in Group Channel Description. Any change to Group Channel Description results in mobiles returning to idle mode which results in a significant disruption of service. It is proposed to inform listeners and talker in group transmit mode of the change in VGCS channel description via a new VBS/VGCS reconfiguration procedure.
Summary of change:	⌘	Added new VGCS reconfiguration procedure to on-going group call to inform listeners and talker in group transmit mode of a change in Group Channel Description.
Consequences if not approved:	⌘	Not possible to support reconfiguration of an existing VGC Group Channel Description

Clauses affected:	⌘	Clause 4.2.2

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

⌘

Other comments: ⌘

****** First Modified Section ******

4.2.2 On-going group calls

4.2.2.1 Normal operation with successful outcome

Within each voice group call starting from the instant where the calling subscriber first becomes a listening service subscriber, one service subscriber has the access at any one time to the uplink of the voice group call channel and his speech is then broadcast on all voice group call channel downlinks accordingly. The mobile station of the talking service subscriber shall, while no dispatcher is talking, be commanded by the network to mute the downlink speech to avoid non intelligible echo's.

In case of one talking service subscriber plus a parallel talking dispatcher, the talking service subscriber's mobile station shall receive an indication by means of signalling from the network so that it can unmute the downlink. DTMF shall be used by dispatchers to trigger network signalling to mute and un-mute the downlink of a talking service subscriber as described in subclause 11.3.7.2.

If more than one service subscriber applies to the uplink, contention resolution shall be performed in the network. Contention resolution shall be performed in the group call anchor MSC.

Additionally, in order to speed up the uplink access procedure, the BSS may grant the uplink prior to contention resolution being performed by the group call anchor MSC. This would mean that more than one service subscriber may access to the uplink and the respective speech may be combined in the group call bridge and broadcast onto all voice group call downlink channels during a transitional period. The anchor MSC shall then select one of the talking subscribers and pre-empt the uplink use of the other talking subscribers.

Dispatchers voice involved shall be broadcast on the voice group call channel downlink at any time. Mobile dispatchers are provided with a standard link and thus with an dedicated permanent uplink different from the voice group call channel.

All non-dispatcher group call members are provided with an indication on the voice group call channel of whether the uplink is in use. When the uplink is not in use, any non-dispatcher group call member can request access to the uplink. Any speech from dispatchers is combined with any speech from a talking service subscriber.

The release of the uplink is triggered by the user and indicated by the mobile station to the network. The network shall then indicate to the listening mobile stations that the uplink is free.

Mobile stations in group receive mode use the group receive mode procedure (see 3GPP TS 43.022) to "camp-on" in a new cell to be able to listen to the group call channel. The mobile station may find the voice group call channel details of a new cell on the related NCH.

A network may decide not to establish voice group call channels in all cells. Instead, notifications containing no channel description may be provided. If a mobile station moves to such a cell, it must establish a dedicated connection and respond to the notification by use of the notification response procedure in order to receive the voice group call. The network may then establish a voice group call channel and inform the mobile station on the channel position.

A network may obtain knowledge on whether mobile stations are listening in a cell by sending an uplink access request in an uplink free message on the voice group call channel downlink when no talking service subscriber is present. Mobile stations receiving such a request shall use uplink reply procedure and send uplink access bursts on the voice group call channel uplink with the establishment cause "reply on uplink access request". If no uplink access bursts are received by the network, the network may decide to release the voice group call channel in that cell and then provide notifications containing no channel description.

NOTE: Concerning security aspects, whilst authentication and membership checking of mobile call originators and of mobile uplink users can be carried out, it is not possible to authenticate service subscribers in group receive mode if they have not before established a dedicated connection to responded to a notification. No equivalent of a group "TMSI" is provided to protect the "identity" of established voice group calls.

The network may decide to reconfigure an existing voice group call's physical channel configuration, frequencies and/or hopping sequences as well as the cell channel description. For the cell in which the group call is being reconfigured, the network informs any listeners in group receive mode and any talker in group transmit mode of the change in VGCS channel description by using the VGCS reconfiguration procedure (see 3GPP TS 44.018 [5]). Mobile stations on receipt of the VBS/VGCS reconfiguration messages shall remain on the existing group channel until indicated starting time and then apply the new configuration to the VGCS call that the mobile station is currently involved in.

****** End of Modified Section ******

3GPP TSG-CN1 Meeting #36 Tdoc N1-042062
Seoul, Korea, 15-19 November 2004

Title: **LS on Addition of VGC reconfiguration procedure**
Response to: **LS** (GP-042283) on Addition of VGC reconfiguration procedure from TSG GERAN2
Release: Release 6
Work Item: TEI6

Source: 3GPP TSG CN WG1
To: 3GPP TSG GERAN WG2
Cc:

Contact Person:
Name: Andrew Howell
Tel. Number: +44 1452 623967
E-mail Address: andrew.howell@motorola.com

Attachments: N1-042061 [CR to TS 43.068 on Addition of VGCS reconfiguration procedure]

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1. Overall Description:

3GPP TSG CN WG1 thanks 3GPP TSG GERAN WG2 for their liaison regarding the enhancement to the VGCS reconfiguration procedure that has been agreed to in Rel-6.

3GPP TSG CN WG1 has reviewed the CR to TS 43.068 (sent in attachment Tdoc GP-042276) and agreed the attached revised version (see Tdoc N1-042061). 3GPP TSG CN WG1 has removed the reference to VBS as it was unclear if the new procedure also applies to VBS, which is defined in TS 43.069.

2. Actions:

To 3GPP TSG GERAN WG2.

ACTION: 3GPP TSG CN WG1 kindly requests that 3GPP TSG GERAN WG2 consider whether the enhancement to the reconfiguration procedure also applies to VBS.

3. Date of Next TSG-CN1 Meetings:

CN1_37	14th – 18th February 2005	Sidney, Australia
CN1_38	25th -30th April 2005	Cancun, Mexico

3GPP TSG-CN1 Meeting #36
Seoul, Korea, 15-19 November 2004

Tdoc N1-042069

Revision of Tdoc N1-042028

Title: Reply LS on selected PLMN and network sharing
Response to: LS (R2-042272/N1-041671) on selected PLMN and network sharing from RAN2
Release: Rel-6

Source: CN1
To: RAN2
Cc: GERAN

Contact Person:
Name: Andrew Howell
E-mail Address: andrew.howell@motorola.com

Tao Cui
tao.cui@teliasonera.com

Attachments: None

---

1. Overall Description:

CN1 would like to thank RAN2 for their liaison statement on selected PLMN and network sharing and give the following answers to RAN2's questions.

Question from RAN2:

1 - Confirm the conclusion of RAN2 that it is the responsibility of NAS to select and maintain the Selected PLMN and inform this to AS, and therefore this is something to be covered by CN1 specifications rather than RAN2 specifications.

Answer from CN1:

In CN the Selected PLMN is not used after registration, and therefore it is not necessarily updated or maintained by NAS. Instead the Registered PLMN is used within the CN procedures.

NAS indicates to AS when the PLMN selection procedure selects a new PLMN, and when the equivalent PLMN list is changed, deleted or has become invalid, but AS will need to update the selected PLMN, for its own purposes, each time the PLMN is changed due to cell re-selection etc.

In the case of handover, when a PLMN is received in the dedicated RR signalling (e.g. in the RRC “CN information info” IE (Iu mode) or in the RR “DTM INFORMATION” message (A/Gb mode)) provided to NAS by AS, there appear to be two possible implementations. Either the NAS may update the selected PLMN before initiating registration towards this new selected PLMN, or alternatively NAS may choose not to update the selected PLMN and when returning to idle mode will attempt to return to the registered PLMN.

CN1 would note that due to the existence of the Equivalent PLMN list the above mentioned behaviour exists from Release 99 onwards and not only to network sharing.

Question from RAN2:

2 - Confirm whether the principles of AS-NAS interaction described in section 4 are in line with CN1s understanding.

Answer from CN1:

The general principles of AS-NAS interaction as described by RAN2 in the LS are in line with CN1 understanding except for the updating of the Selected PLMN. Please see the answer to the first question.

Question from RAN2:

3 - Inform RAN2 whether the scenario that more than one PLMN makes the cell suitable is a realistic network sharing case that needs to be supported by the specifications? If it is a realistic case, then RAN2 would like confirmation that it is a NAS responsibility to choose one PLMN from the PLMNs that make the cell suitable to which to perform registration, and therefore this will be covered by CN1 specifications.

Answer from CN1:

Combining network sharing with national roaming, it is possible to construct scenarios where more than one PLMN make a cell suitable. Such scenarios may be considered unlikely, but in order not to prevent any future needs or developments CN1 still think that this case should be supported by the specifications. CN1 can confirm that NAS will be responsible for choosing one PLMN from the PLMNs that make a cell suitable if the RPLMN is no longer available.

2. Actions:

To RAN2 group.

ACTION: CN1 asks RAN2 to take these answers into account when further discussing their CRs on Network Sharing.

3. Date of Next TSG-CN1 Meetings:

CN1_37	14th – 18th February 2005	Sidney, Australia
CN1_38	25th -30th April 2005	Cancun, Mexico

3GPP TSG-CN1 Meeting #36 Tdoc N1-042073
Seoul, Korea, 15-19 November 2004

Title: LS on initial HPLMN search timer
Release: R99
Work Item: TEI
Source: CN1
To: GERAN3, T1

Contact Person:
Name: Christian Herrero
Tel. Number: +46 46231812
E-mail Address: christian.herrero@ericsson.com

Attachments: None

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1. Overall Description:

CN1 would like to inform GERAN3 and T1 that the TS 23.122 contains conditions on when the attempts to access the HPLMN or higher priority PLMN shall be done, i.e. when the periodic PLMN search/Background scan procedure is started.

CN1 would like to bring to the attention of the working groups the following conditions stated in the sub-clause 4.4.3.3 'In VPLM':

> …
> The attempts to access the HPLMN or higher priority PLMN shall be as specified below:
> a) The periodic attempts shall only be performed in automatic mode when the MS is roaming;
> b) **After switch on**, a period of at least 2 minutes and at most T minutes shall elapse before the first attempt is made;
> c) The MS shall make an attempt if the MS is on the VPLMN at time T after the last attempt;
> …

CN1 has agreed that the there is no clear criterion to start the initial HPLMN search timer as the term "After switch on" is vague. Therefore, when in VPLMN, the start of the first attempt to access the HPLMN or higher priority PLMN is implementation specific. However, CN1 understanding is that the mobile first performs registration in order to get network communication, so the mobile do not start to look for the HPLMN or higher priority PLMN before registration. Then, the exact point in time when the first attempt is performed is implementation specific.

2. Actions:

To GERAN3 and T1 groups.

ACTION: CN1 kindly asks GERAN3 and T1 to check whether their test specifications (e.g. TS 51.010, TS 34.123) are in line with CN1 understanding.

3. Date of Next TSG-CN1 Meetings:

CN1_36	15th – 19th November 2004	Seoul, Korea
CN1_37	14th – 18th February 2005	Sydney, Australia
CN1_38	25th -30th April 2005	Cancun, Mexico

3GPP TSG-CN1 Meeting #36 Tdoc N1-042078
Seoul, Korea, 15-19 November 2004

Title: **Reply LS on Security aspects of early IMS systems**
Response to: S3-040880 (N1-041673)
Release: Rel-6
Work Item: TEI6

Source: 3GPP TSG CN1
To: SA3, CN4, SA2
Cc: T2, CN

Contact Person:

Name: Peter Dawes

Tel. Number: +44 7717 275009

E-mail Address: peter.dawes@vodafone.com

Attachments: None

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1. Overall Description:

CN1 thanks SA3 for their LS on Security aspects of early IMS systems. A related CR in N1-041846 was presented at CN1#36 proposing an Annex to TS 24.229 related to Security aspects of early IMS systems.

There was a concern that early IMS use, if specified in normative specifications would become a permanent one. In this respect TR would serve better.

It was agreed not to add the early IMS solution stage 3 as an annex to 24.229. CN1 does not make any recommendation on whether SA3 should take the proposed text and annex it to their early IMS TR 33.878.

The text presented in CN1#36, including the outcome of discussion, is included in this liaison.

2. Actions:

To 3GPP SA3

ACTION: CN1 asks TSG SA3 to take note of the text included in this liaison.

3. Date of Next TSG-CN1 Meetings:

CN1_37	14th – 18th February 2005	Sydney, Australia
CN1_38	25th – 30th April 2005	Cancun, Mexico

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3 Definitions and abbreviations

3.1 Definitions

Early IMS UE: UE which implement the early IMS security solution specified in 3GPP TR 33.878 [19B]

Fully compliant UE: UEs which implement the security solution mechanisms specified in 3GPPTS 33.203 [19].

Annex D (Normative): Handling of Early IMS Security

D.1 Scope

This clause describes the security aspects during registration for the early IM CN subsystem as defined in TR 33.878 [19B].

The present annex defines specific requirements for an IP Multimedia (IM) Core Network (CN) subsystem based on the Session Initiation Protocol (SIP) to allow for the security solution as described in 3GPP TR 33.878 [19B]. This security solution leads to different requirements with regards to Registration and Authentication.

D.2 Procedures at the UE

On sending a REGISTER request in order to indicate support for early IMS security procedures, the UE shall not include a Authorization header field and not include a Security-Client header field. The From header, To header, Contact header, Expires header, Request URI, Supported header and a P-Asserted-Id header shall be set according subclause 5.1.1.2.

On receiving the 200 (OK) response to the REGISTER request, the UE shall handle the expiration time, the P-Associated-URI header field, and the Service-Route header field according subclause 5.1.1.2.

NOTE 1: Early IMS security does not allow SIP requests to be protected using an IPsec security association because it does not perform a key agreement procedure.

NOTE 2: The UE shall not use the temporary public user identity used for registration in any subsequent SIP requests.

D.3 Procedures at the P-CSCF

NOTE: As specified in RFC 3261[26], when the P-CSCF receives a SIP request from the early IMS UE, the P-CSCF checks the IP address in the “sent-by” parameter in the top of the Via header field. If the "sent-by" parameter contains a domain name, or if it contains an IP address that differs from the packet source IP address, the P-CSCF adds a "received" parameter to that Via header field value. This parameter contains the source IP address from which the packet was received.

D.3.1 Registration

When the P-CSCF receives a REGISTER request from the UE that does not contain a Authorization header and not contain a Security-Client header, the P-CSCF shall handle the Path header, the Require header, the P-Charging-Vector header and the P-Visited-Network-ID header as described in subclause 5.2.12. Afterwards the P-CSCF shall determine the I-CSCF of the home network and forward the request to that I-CSCF.

When the P-CSCF receives a 200 (OK) response to a REGISTER request, the P-CSCF shall check the value of the Expires header field and/or Expires parameter in the Contact header. When the value of the Expires header field and/or expires parameter in the Contact header is different than zero, then the P-CSCF shall:

1) handle the Service-Route header, the public user identities, the P-Asserted-Identity header, the P-Charging-Function-Address header as described in subclause 5.2.2 for the reception of a 200 (OK) response; and

2) forward the 200 (OK) response to the UE.

D.3.2 General treatment for all dialogs and standalone transactions excluding REGISTER requests

As the security solution according 3GPP TR 33.878 [19B] does not offer IPSec, the P-CSCF shall implement the procedures as described in subclause 5.2.6 with the following deviations.

For requests initiated by the UE, when the P-CSCF receives a 1xx or 2xx response, the P-CSCF shall not rewrite its own Record Route entry.

For requests terminated by the UE, when the P-CSCF receives a request, prior to forwarding the request, the P-CSCF shall not include a protected server port in the Record-Route header and in the Via header.

D.4 Procedures at the I-CSCF

NOTE: Topology hiding is not available with early IMS security because topology hiding alters the "via" header.

D.5 Procedures at the S-CSCF

D.5.1 Registration

Upon receipt of an initial REGISTER request without an Authorization header, the S-CSCF shall:

1) identify the user by the public user identity as received in the To header of the REGISTER request;

2) check if the P-Visited-Network header is included in the REGISTER request, and if it is included identify the visited network by the value of this header;

3) if no IP address is stored for the UE, query the HSS, as described in 3GPP TS 29.229 [15] with the public user ID as input and store the received IP address of the UE. Prior to contacting the HSS, the S-CSCF decides which HSS to query, possibly as a result of a query to the Subscription Locator Functional (SLF) entity as specified in 3GPP TS 29.228 [14];

NOTE: At this point the S-CSCF informs the HSS, that the user currently registering will be served by the S-CSCF by passing its SIP URI to the HSS. This will be indicated by the HSS for all further incoming requests to this user, in order to direct all these requests directly to this S-CSCF.

4) check whether a "received" parameter exists in the top "via" header field. If a "received" parameter exists, S-CSCF shall compare the IP address received in the "received" parameter against the stored UE's IP address. If no "received" parameter exists in the top "via"" header field, then S-CSCF shall compare IP address received in the "sent-by" parameter against the stored UE IP address. In both cases, if the stored IP address and the IP address received in the top "via" header field do not match, the S-CSCF shall reject the registration with a 403 (Forbidden) response and skip the following steps.

5) handle the Cx Server Assignment procedure, the ICID, each non-barred registered public user identity, the Path header, the registration duration as described in subclause 5.4.1.2.2; and

6) send a 200 (OK) response to the UE as described in subclause 5.4.1.2.2.

D.5.2 General treatment for all dialogs and standalone transactions excluding REGISTER requests

On the reception of any request other than an initial REGISTER request, the S-CSCF shall check whether a "received" parameter exists in the top "via"" header field. If a "received" parameter exists, S-CSCF shall compare the IP address received in the "received" parameter against the UE's IP address stored during registration. If no "received" parameter exists in the top "via"" header field, then S-CSCF shall compare IP address received in the "sent-by" parameter against the IP address stored during registration. If the stored IP address and the IP address received in the top "via" header field do not match, the S-CSCF shall reject the request with a 403 (Forbidden) response.

In case the stored IP address and the IP address receive in the top "via" header field do match, the S-CSCF shall proceed as described in 5.4.3.

D.6 Interworking between early IMS and fully compliant implementations during IMS registration

For interworking between early IMS and fully compliant implementations during IMS registration, the cases summarized following shall be supported.

Both UE and IMS network support early IMS only

IMS registration uses Early IMS security as described in this annex.

UE supports early IMS only, IMS network supports both early IMS and fully compliant access security

Early IMS security according to this annex shall be used for authenticating the UE for all registrations from UEs that do not provide the fully compliant security headers.

UE supports both, IMS network supports early IMS only

If the UE already has knowledge about the IMS network capabilities (which could for example be preconfigured in the UE), the appropriate authentication method shall be chosen. The UE shall use fully compliant security if the network supports this, otherwise the UE shall use early IMS security.

If the UE does not have such knowledge it shall start with the fully compliant registration procedure. The early IMS P-CSCF shall answer with a 420 "Bad Extension" failure, since it does not recognize the method mandated by the Proxy-Require header that is sent by the UE in the initial Register message

NOTE: The Proxy-Require header cannot be ignored by the P-CSCF.

The UE shall, after receiving the error message, send an early IMS registration, i.e., shall send a new REGISTER request without the fully compliant security headers.

UE and IMS Network Support Both

The UE shall start with the fully compliant IMS registration procedure. The network, with receiving the initial REGISTER message, receives indication that the UE is fully compliant and shall continue as specified by TS 33.203[19].

UE and IMS network support both, UE contains a SIM

The UE might start with the fully compliant IMS registration procedure. However, when the S-CSCF requests authentication vectors from the HSS, the HSS will discover that the UE contains a SIM and return an error.

The S-CSCF shall answer with a 401 (Unauthorized) with an Error-info: header containing the text "Early security required". The UE then retries using early IMS security.

UE supports early IMS only, IMS network supports fully compliant access security only

The UE sends a REGISTER request to the IMS network that does not contain the security headers required by fully compliant IMS. The fully compliant P-CSCF will detect that the Security-Client header is missing and return a 4xx messages, as described in clause 5.2.2.

UE supports fully compliant access security only, IMS network supports early IMS only

The UE shall start with the fully compliant IMS registration procedure. The early IMS P-CSCF shall answer with a 420 “Bad Extension” failure, since it does not recognize the method mandated by the Proxy-Require header that is sent by the UE in the initial Register message. After receiving the error message, the UE shall stop the attempt to register with this network, since the fully 3GPP compliant security according to TS 33.203[19] is not supported.

Early IMS Authentication Fails

If early authentication fails, for example because the source address of IP packets does not match the IP address in the Via header when checked at the P-CSCF, the network returns 403 (Forbidden) to the UE.

3GPP TSG-CN1 Meeting #36 Tdoc N1-042097
Seoul, Korea, 15-19 November 2004

Title: Reply LS on Definition of RAT
Response to: LS (N1-041685/S1-040940) on Definition of RAT
Release: Rel-6
Work Item: TEI6
Source: CN1
To: SA1
Cc: T3, GERAN, RAN, T, CN, SA

Contact Person:
Name: Christian Herrero
Tel. Number: +46 46231812
E-mail Address: christian.herrero@ericsson.com

Attachments: None

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1. Overall Description:

CN1 would like to thank SA1 for their liaison statement (N1-041685/S1-040940) on Definition of RAT. CN1 have taken note of this liaison and also the CR in S1-040941 against TR 21.905. However, CN1 would like to bring to the attention of SA1 and other working groups that CN1 uses its own definition of 'Access technology' specified by TS 23.122.

Additionally, the definitions of '3GPP RAT' and 'Non-3GPP RAT' are not relevant for CN1, since they are not used by CN1 specifications. CN1 considers the new definition of 'Radio Access Technology' vague because of "3GPP defined interface". The use of this text makes unclear which radio technologies are included, overall in case of WLAN technologies such as 802.11. CN1 understanding is that WLAN technologies are not considered radio access technologies by 3GPP for Rel-6. However, 3GPP specifies signalling on interfaces which use WLAN technologies as radio access technologies. This would be in contradiction with the new definition of the 'Radio Access Technology' term.

Finally, CN1 would like to indicate that it was not seen feasible to amend the already existing CN1 specifications to start using the new definitions.

2. Actions:

To SA1 group.

ACTION: To taken into account of the CN1 points raised above for concluding their work on Definition of RAT. Finally, CN1 would like to request SA1 to consider whether it is seen feasible to add into TR 21.905 the term 'Access Technology' under custody of CN1 and currently specified by TS 23.122.

3. Date of Next TSG-CN1 Meetings:

CN1_36	15th – 19th November 2004	Seoul, Korea
CN1_37	14th – 18th February 2005	Sydney, Australia
CN1_38	25th -30th April 2005	Cancun, Mexico

3GPP TSG-CN1 Meeting #36 Tdoc N1-042098
Seoul, Korea, 15-19 November 2004

Title: LS on conferencing in release 6
Response to:
Release: Rel-6
Work Item: IMS2

Source: 3GPP TSG CN1
To: 3GPP TSG CN
Cc:

Contact Person:
Name: Atle Monrad
Tel. Number: +47 454 10 665
E-mail Address: atle.monrad@ericsson.com

Name: Georg Mayer
Tel. Number: +358 50 4821437
E-mail Address: georg.mayer@nokia.com

Attachments: None

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1. Overall Description:

CN1 is working on 3GPP TS 24.147 “Conferencing using the IP Multimedia (IM) Core Network (CN) subsystem;”. The work is largely dependent on the work performed in IETF, and parts of conferencing are delayed within IETF. A firm completion date for the related internet-drafts cannot be given.

The concerned functionality is:

- Conference event package is not expected to be completed by the end of 2004.
- Floor control (BFCP) has a security requirement in authentication and authorisation of the floor control request. 3GPP has not yet been able to define a mechanism to fulfill this requirement.
- CPCP is not expected to be completed by the end of 2004.

CN1 has introduced parts of this into TS 24.147, but cannot get any further until IETF progress their work.

CN1 has concerns whether the above functionality is regarded as important for the completion of release 6, or if it can be removed, and support of conferencing in release 6 can be solved by regular SIP-procedures as already described in TS 24.147.

2. Actions:

To 3GPP TSG CN

ACTION: CN1 kindly asks TSG CN to consider whether further work on TS 24.147 should be continued in release 6 with CN1s current scope, or if the scope of IMS conferencing in release 6 should be reduced. Continue with the current scope of conferencing in release 6 will delay this part of the work item IMS2.

If it is decided to reduce the content of IMS conferencing in release 6, CN1 would like to get guidance on the subject.

Further, if the scope of conferencing in release 6 is reduced, CN1 will perform the relevant changes to 24.147 in CN1 #37. A reduced scope of IMS conferencing may have an impact on TS 24.247 (IMS messaging) as well, since TS 24.247 reference TS 24.147 for session based messaging conferences.

If the scope of conferencing in release 6 is reduced, CN1 kindly asks CN plenary to give further guidance how to handle the dropped functionality in release 7.

3. Date of Next TSG-CN1 Meetings:

CN1_37	14th – 18th February 2005	Sydney, Australia
CN1_38	25th -30th April 2005	Cancun, Mexico

3GPP TSG-CN1 Meeting #36 Tdoc N1-042100
Seoul, Korea, 15-19 November 2004

Title: LS on a 3GPP IMS management object
Response to:
Release: Rel-6
Work Item: IMS2

Source: 3GPP TSG CN1
To: OMA PAG, OMA POC, OMA DM, 3GPP2 TSG-X
Cc: 3GPP TSG CN

Contact Person:
Name: Atle Monrad
Tel. Number: +47 454 10 665
E-mail Address: atle.monrad@ericsson.com

Attachments: N1-042099 (TS 24.167) 3GPP IMS Management Object (MO)

---

1. Overall Description:

CN1 is working on a technical specification for a 3GPP IMS management object. This TS proposes to have a functional split between the basic functionality that concerns the SIP protocol suite and 3GPP TS 24.229 in a 3GPP IMS MO and on top of this management object it can be added "service specific" management objects where each MO typically contains a service. Examples of such foreseen services are PoC and presence.

CN1 regards the new technical specification as stable and close to completion, but the attached TS is still a draft version.

2. Actions:

To OMA PAG / OMA POC / OMA DM

ACTION: CN1 would kindly inform OMA PAG, OMA POC and OMA DM that the attached draft specification has been reviewed and agreed by 3GPP TSG CN1. OMA PAG and OMA POC may consider the content of the draft for their ongoing work with the management objects for services as PoC and presence.

To 3GPP2 TSG-X

ACTION: CN1 would kindly inform 3GPP2 about the ongoing work on a 3GPP IMS MO.

3. Date of Next TSG-CN1 Meetings:

CN1_37	14th – 18th February 2005	Sydney, Australia
CN1_38	25th – 30th April 2005	Cancun, Mexico

3GPP TSG-CN1 Meeting #36
Seoul, Korea, 15-19 November 2004

Tdoc N1-042107
Revision of N1-042101

CR-Form-v7.1

CHANGE REQUEST

⌘ **24.008** **CR** **915** ⌘ **rev** **3** ⌘ Current version: **6.6.0** ⌘

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

Proposed change affects: UICC apps⌘ [ ] ME [X] Radio Access Network [X] Core Network [ ]

Title:	⌘	Mobile identity – "No Identity"
Source:	⌘	Ericsson
Work item code:	⌘	TEI6
Date:	⌘	19/11/2004
Category:	⌘	**F**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
Ph2 *(GSM Phase 2)*
R96 *(Release 1996)*
R97 *(Release 1997)*
R98 *(Release 1998)*
R99 *(Release 1999)*
Rel-4 *(Release 4)*
Rel-5 *(Release 5)*
Rel-6 *(Release 6)*
Rel-7 *(Release 7)*

Reason for change:	⌘	At CN1#34, the CR on 'Identity request for identity that is not available' in N1-041098 was agreed and now, implemented in TS 24.008. This CR introduces the possibility for the MS to indicate the identity type "No identity" to the network when the network request for an identity which is not available in the MS. The Mobile Identity Information Element (IE) is a type 4 IE with a maximum length of 11 octets. The octet 3 carries the Type of identity, the odd/even indicator and the Identity digit bits. Even though, the CR in N1-041098 introduces the way to code the Type of identity parameter of the Mobile Identity IE, it was not specified which is the length that the Mobile Identity IE has to have and the way to code the Identity digit bits. The MS needs to know this information in order to code the Mobile identity IE when the identity types indicates "No identity".
Summary of change:	⌘	It is clarified that if the Type of identity indicates "No Identity", the Mobile Identity IE shall have a length of 2 octets and the Identity digit bits shall be coded with all zeores.
Consequences if not approved:	⌘	Lack of requirement on how the MS has to code the Mobile Identity Information Element (IE) when the identity type indicates "No identity".

Clauses affected:	⌘	10.5.1.4

[Y] [N]

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

How to create CRs using this form:

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

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

1st Change

10.5.1.4 Mobile Identity

The purpose of the *Mobile Identity* information element is to provide either the international mobile subscriber identity, IMSI, the temporary mobile subscriber identity, TMSI/P-TMSI, the international mobile equipment identity, IMEI or the international mobile equipment identity together with the software version number, IMEISV.

The IMSI shall not exceed 15 digits, the TMSI/P-TMSI is 4 octets long, and the IMEI is composed of 15 digits, the IMEISV is 16 digits (see 3GPP TS 23.003 [10]).

For packet paging the network shall select the mobile identity type with the following priority:

1- P-TMSI: The P-TMSI shall be used if it is available.

2- IMSI: The IMSI shall be used in cases where no P-TMSI is available.

For all other transactions except emergency call establishment, emergency call re-establishment, mobile terminated call establishment, the identification procedure, the GMM identification procedure, the GMM authentication and ciphering procedure and the ciphering mode setting procedure, the mobile station and the network shall select the mobile identity type with the following priority:

1- TMSI: The TMSI shall be used if it is available.

2- IMSI: The IMSI shall be used in cases where no TMSI is available.

For mobile terminated call establishment the mobile station shall select the same mobile identity type as received from the network in the PAGING REQUEST message.

For emergency call establishment and re-establishment the mobile station shall select the mobile identity type with the following priority:

1- TMSI: The TMSI shall be used if it is available and if the location update status is UPDATED, and the stored LAI is equal to the one received on the BCCH from the current serving cell.

2- IMSI: The IMSI shall be used in cases where no TMSI is available or TMSI is available but either the update status is different from UPDATED, or the stored LAI is different from the one received on the BCCH from the current serving cell.

3- IMEI: The IMEI shall be used in cases where no SIM/USIM is available or the SIM/USIM is considered as not valid by the mobile station or no IMSI or TMSI is available.

In the identification procedure and in the GMM identification procedure the mobile station shall select the mobile identity type which was requested by the network, if available. If the requested identity is not available, then the mobile station shall indicate the identity type "No Identity".

In the ciphering mode setting procedure and in the GMM authentication and ciphering procedure the mobile shall select the IMEISV.

The *Mobile Identity* information element is coded as shown in figure 10.5.4/3GPP TS 24.008 and table 10.5.4/3GPP TS 24.008.

The *Mobile Identity* is a type 4 information element with a minimum length of 3 octet and 11 octets length maximal. Further restriction on the length may be applied, e.g. number plans.

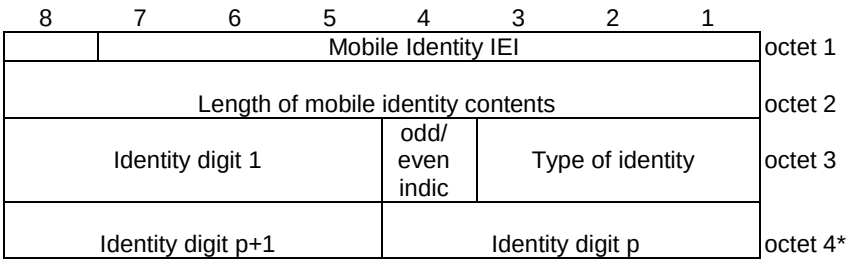

Figure 10.5.4/3GPP TS 24.008 *Mobile Identity* information element

Table 10.5.4/3GPP TS 24.008: *Mobile Identity* information element

Type of identity (octet 3)
Bits

3	**2**	**1**	
0	0	1	IMSI
0	1	0	IMEI
0	1	1	IMEISV
1	0	0	TMSI/P-TMSI
0	0	0	No Identity note 1)

All other values are reserved.

Odd/even indication (octet 3)
Bit

4	
0	even number of identity digits and also when the TMSI/P-TMSI is used
1	odd number of identity digits

Identity digits (octet 3 etc)

For the IMSI, IMEI and IMEISV this field is coded using BCD coding. If the number of identity digits is even then bits 5 to 8 of the last octet shall be filled with an end mark coded as "1111".

For Type of identity "No Identity", the Identity digit bits shall be encoded with all 0s and the Length of mobile identity contents parameter shall be set to 1.

If the mobile identity is the TMSI/P-TMSI then bits 5 to 8 of octet 3 are coded as "1111" and bit 8 of octet4 is the most significant bit and bit 1 of the last octet the least significant bit. The coding of the TMSI/P-TMSI is left open for each administration.

NOTE 1: This can be used in the case when a fill paging message without any valid identity has to be sent on the paging subchannel and when the requested identity is not available at the mobile station during the identity request procedure.

3GPP TSG-CN1 Meeting #36
Seoul, Korea, 15-19 November 2004

Tdoc N1-042110
Revision of N1-042066

CR-Form-v7.1

CHANGE REQUEST

⌘ **24.008** **CR** **908** ⌘ **rev** **1** ⌘ Current version: **6.6.0** ⌘

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

Proposed change affects: UICC apps⌘ [ ] ME [X] Radio Access Network [ ] Core Network [X]

Title:	⌘	NSAPI at MBMS context activation
Source:	⌘	Ericsson, Samsung
Work item code:	⌘	MBMS
Date:	⌘	18/11/2004
Category:	⌘	**C**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

Ph2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*
Rel-7	*(Release 7)*

Reason for change:	⌘	The LS in N1-041655 on 'MBMS NSAPI' indicates that today, TS 23.146 specifies that the MBMS UE Contexts (i.e. MBMS context in TS 24.008) contains among other parameters the MBMS NSAPI which was chosen by the UE during the MBMS Multicast Service Activation procedure. With the current solution only a maximum of 11 MBMS contexts can be simultaneously activated, which also have to be shared by ordinary PDP context. This CR proposes that a new IE is defined as an 'Enhanced NSAPI' intended to be used exclusively for MBMS. The UE allocates an unused NSAPI value from the new enhanced IE value space when activating a new MBMS context.
Summary of change:	⌘	A new enhanced NSAPI IE is defined to be used by the UE in the ACTIVATE MBMS CONTEXT REQUEST message.
Consequences if not approved:	⌘	Only a maximum of 11 MBMS contexts could be activated.

Clauses affected:	⌘	9.5.22, 10.5.6.15

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

Other comments: ⌘

How to create CRs using this form:

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

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

1st Change

9.5.22 Activate MBMS Context Request

This message is sent by the MS to the network as an explicit response to a *Request MBMS Context Activation* message See table 9.5.22/3GPP TS 24.008.

Message type: ACTIVATE MBMS CONTEXT REQUEST

Significance: global

Direction: MS to network

TABLE 9.5.22 : ACTIVATE MBMS CONTEXT REQUEST message content

IEI	Information Element	Type/	Presence	Format	Length
	Protocol discriminator	Protocol discriminator 10.2	M	V	1/2
	Transaction identifier	Transaction identifier 10.3.2	M	V	1/2– 3/2
	Activate MBMS context request message identity	Message type 10.4	M	V	1
	Requested MBMS NSAPI	Enhanced Network service access point identifier 10.5.6.~~2~~15	M	V	1
	Requested LLC SAPI	LLC service access point identifier 10.5.6.9	M	V	1
	Supported MBMS bearer capabilities	MBMS bearer capabilities 10.5.6.14	M	LV	2 – 3
	Requested multicast address	Packet data protocol address 10.5.6.4	M	LV	3 - 19
28	Access point name	Access point name 10.5.6.1	M	LV	2 – 101
35	MBMS protocol configuration options	MBMS protocol configuration options 10.5.6.15	O	TLV	3 - 253

NOTE: The MBMS NSAPI will be used in Iu mode when ~~UTRAN~~ the network chooses a point-to-point MBMS bearer for the transfer of MBMS data in the user plane.

Next Change

10.5.6.15 Enhanced network service access point identifier

The purpose of the *enhanced network service access point identifier* information element is to identify the service access point that is used at layer 3.

The *enhanced network service access point identifier* is a type 3 information element with a length of 2 octets.

The value part of an *enhanced network service access point identifier* information element is coded as shown in figure 10.5.xxx/3GPP TS 24.008 and table 10.5.xxx/3GPP TS 24.008.

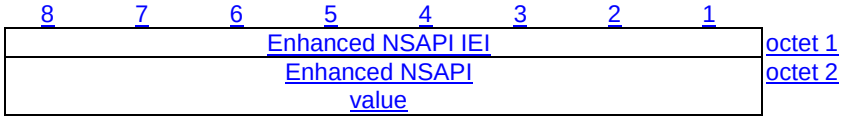

Figure 10.5.xxx/3GPP TS 24.008: *Enhanced network service access point identifier* information element

Table 10.5.xxx/3GPP TS 24.008: *Enhanced network service access point identifier* information element

Enhanced NSAPI value (octet 2, bits 1 to 7)

Bits 8 7 6 5 4 3 2 1	
0 0 0 0 0 0 0 0	Reserved
through	
0 1 1 1 1 1 1 1	Reserved
1 0 0 0 0 0 0 0	NSAPI 128 for Multimedia Broadcast/Multicast Service (MBMS)
through	
1 1 1 1 1 1 1 1	NSAPI 255 for Multimedia Broadcast/Multicast Service (MBMS)

End of Change

3GPP TSG-CN1 Meeting #36
Seoul, Korea, 15-19 November 2004

Tdoc N1-042116

Revision of Tdoc N1-042072

Title: **LS on 'No Identity' in Mobile Identity IE**
Release: Release 6
Work Item: TEI6

Source: 3GPP TSG CN WG1
To: 3GPP TSG GERAN WG2
Cc:

Contact Person:
Name: Andrew Howell
Tel. Number: +44 1452 623967
E-mail Address: andrew.howell@motorola.com

Attachments: N1-042107[CR to TS 24.008 on Mobile Identity 'No Identity']

---

1. Overall Description:

3GPP TSG CN WG1 has agreed the attached CR to TS 24.008 (see Tdoc N1-042101), which clarifies the coding on the Mobile Identity IE when the Type of identity indicates "No Identity". The CR specifies that the Mobile Identity IE shall have a length of 2 octets (the Length Octet plus 1 octet of information) and that the Identity digit bits shall be coded with all zeroes.

3GPP TSG CN WG1 believes that this change has no impact on the specifications under TSG GERAN responsibility and would be grateful for feedback if this is not the case.

2. Actions:

To 3GPP TSG GERAN WG2.

ACTION: 3GPP TSG CN WG1 kindly requests that 3GPP TSG GERAN WG2 note the attached CR to TS 24.008.

3. Date of Next TSG-CN1 Meetings:

CN1_37	14th – 18th February 2005	Sidney, Australia
CN1_38	25th -30th April 2005	Cancun, Mexico

3GPP TSG-CN1 Meeting #36 Tdoc N1-042125
Seoul, Korea, 15-19 November 2004

Title: LS on a new Enhanced NSAPI IE for MBMS
Response to: LS (S2-042922) on MBMS NSAPI from SA2
Release: Release 6
Work Item: MBMS

Source: CN1
To: SA2, RAN2, RAN3, CN4
Cc:

Contact Person:
Name: Stefan Toth
Tel. Number: +46 31 747 4246
E-mail Address: stefan.toth@ericsson.com

Attachments: The CR agreed by CN1 on an extension of the NSAPI value range for MBMS

---

1. Overall Description:

CN1 would like to thank SA2 for their LS regarding the MBMS NSAPI and the need to have many simultaneously active MBMS services.

CN1 has analysed the problem and decided on a solution that covers the Iu mode point-to-point (ptp) transfer case. The UTRAN and GERAN point-to-multipoint transfer mode cases doesn't present this problem that was initially brought up by SA2.

In short, the solution means that 128 values are defined in a new Enhanced NSAPI IE to be used exclusively for MBMS. It should be noted that this solution gives the restriction that a maximum of 128 MBMS contexts can be active at the same time. The intention is that the UE allocates an NSAPI whenever an MBMS service is activated through the existing MBMS Context Activation procedure. For further information please refer to the attached agreed CR.

2. Actions:

To SA2, RAN2, RAN3 and CN4 groups.

ACTION: Above WGs are asked to take note of the decision in CN1 and update their specifications accordingly if needed.

3. Date of Next TSG-CN1 Meetings:

CN1_36	15th – 19th November 2004	Seoul, Korea
CN1_37	14th – 18th February 2005	Sydney, Australia
CN1_38	25th -30th April 2005	Cancun, Mexico

3GPP TSG-CN1 Meeting #36 Tdoc N1-042099
Seoul, Korea, 15-19 November 2004

Source: Ericsson, Vodafone, Nokia

Title: TS, 3GPP IMS managed object (MO); Stage 3

Agenda item: 7.4.1

Document for: APPROVAL

Proposal

A new TS is proposed.

The scope of the new TS is:

> This document defines a mobile device 3GPP IMS Management Object. The management object is compatible with OMA Device Management protocol specifications, version 1.1.2 and upwards, and is defined using the OMA DM Device Description Framework as described in OMA-SyncML-DMTND-V1-1 [6] and OMA-SyncML-DMStdObj-V1-1-2 [7].
>
> The 3GPP IMS Management Object consists of relevant parameters that can be managed for the IM CN Subsystem. This includes the basic framework defined in 3GPP TS 23.228 [4] and 3GPP TS 24.229 [5], and early IMS as defined in 3GPP TS 23.221 [3].

The proposed version 0.0.2 is attached as file 24.167-002.zip

3GPP TS 24.167 V0.0.2 (2004-11)

Technical Specification

3rd Generation Partnership Project; Technical Specification Group Core Network; 3GPP IMS Management Object (MO); Stage 3 (Release 6)

Remove GSM logo from the cover page for pure 3rd Generation documents.

Select keywords from list provided in specs database.

Keywords
UMTS, IMS, multimedia

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Contents

Foreword

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

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

Version x.y.z

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.

1 Scope

This document defines a mobile device 3GPP IMS Management Object. The management object is compatible with OMA Device Management protocol specifications, version 1.1.2 and upwards, and is defined using the OMA DM Device Description Framework as described in OMA-SyncML-DMTND-V1-1 [6] and OMA-SyncML-DMStdObj-V1-1-2 [7].

The 3GPP IMS Management Object consists of relevant parameters that can be managed for the IM CN Subsystem. This includes the basic framework defined in 3GPP TS 23.228 [4] and 3GPP TS 24.229 [5], and early IMS as defined in 3GPP TS 23.221 [3].

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the 3GPP IMS Management Object 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 TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TS 23.003: "Numbering, addressing and identification".

[3] 3GPP TS 23.221: "Architectural requirements".

[4] 3GPP TS 23.228: "IP Multimedia Subsystem (IMS); Stage 2".

[5] 3GPP TS 24.229: "Internet Protocol (IP) multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Stage 3".

[6] OMA-SyncML-DMTND-V1-1: "SyncML Device Management Tree and Description".

[7] OMA-SyncML-DMStdObj-V1-1-2: "SyncML Device Management Standardized Objects".

[8] RFC 1123: " Requirements for Internet Hosts -- Application and Support".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in 3GPP TR 21.905 [1] apply.

3.2 Abbreviations

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

AS	Application Server
CN	Core Network
CSCF	Call Session Control Function
DDF	Device Description Framework
DM	Device Management

IMS	IP Multimedia core network Subsystem
IP	Internet Protocol
MO	Management Object
OMA	Open Mobile Alliance
P-CSCF	Proxy – CSCF
PDP	Packet Data Protocol
SIP	Session Initiation Protocol
UE	User Equipment
URI	Universal Resource Identifier

4 3GPP IMS Management Object

The 3GPP IMS Management Object is used to manage settings of the UE for IM CN Subsystem protocols. The Management Object covers generic parameters for the IM CN subsystem. The Management Object enables the management of the settings on behalf of the end user.

The Management Object Identifier is: org.3gpp/1.0/SIPCore

Protocol compatibility: This MO is compatible with OMA DM 1.2.

Management object name: 3GPP_IMS

Editor's Note: The name of the management object to be determined by OMA.

The following nodes and leaf objects are possible under the 3GPP_IMS node:

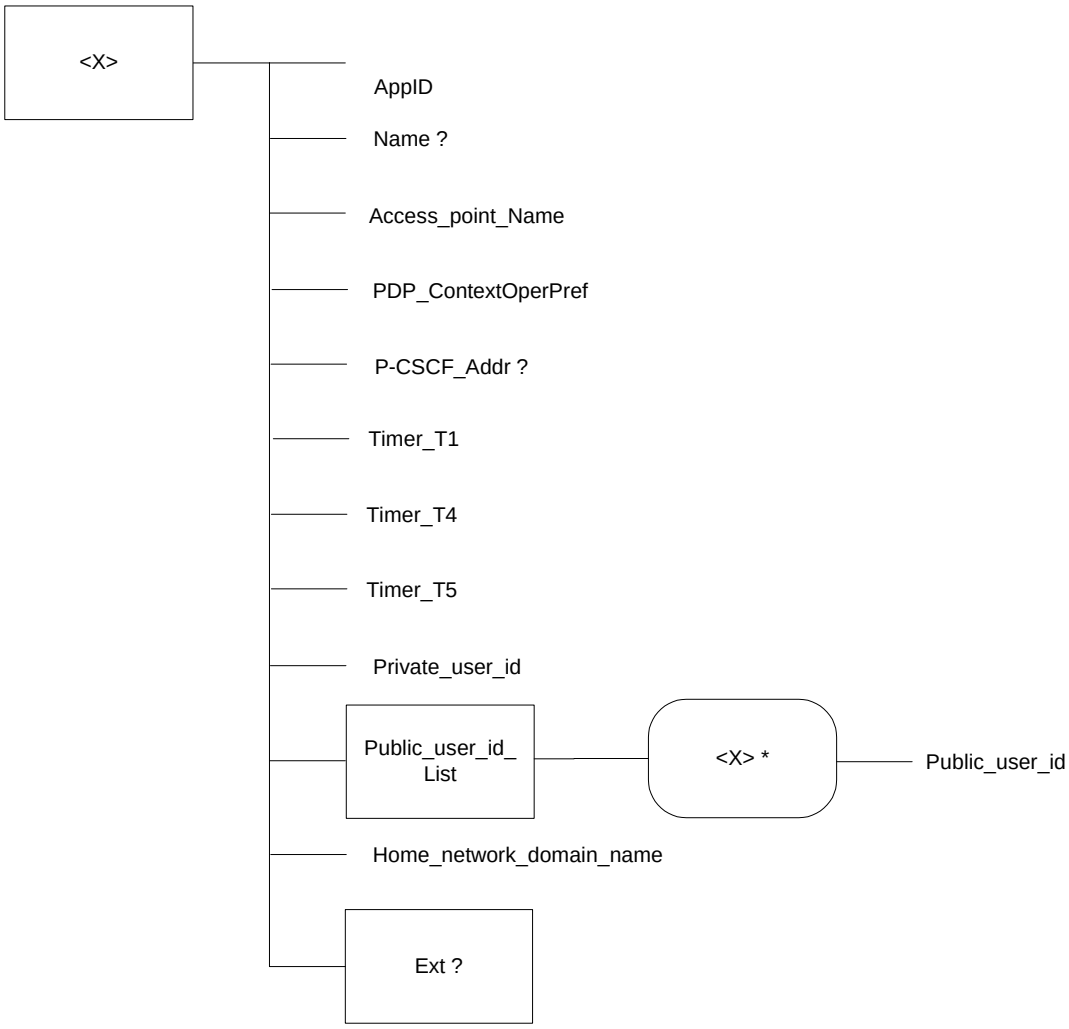

Figure 1: The 3GPP IMS Management Object

5 Management Object parameters

5.1 General

This clause describes the parameters for the 3GPP IMS Management Object.

5.2 Node: /<X>

This interior node acts as a placeholder for one or more accounts for a fixed node.

- Occurrence: OneOrMore
- Format: Node
- Access Types: Get
- Values: N/A

The interior node is mandatory if the UE supports the IM CN Subsystem. Support for a UE is defined by the user agent role as defined in 3GPP TS 24.229 [5].

5.3 /<X>/AppID

The AppID identifies the type of the application service available at the described application service access point. The value is expected to be globally unique.

- Occurrence: One
- Format: chr
- Access Types: Get
- Values: <Globally unique value>

Editor's Note: The value of the 3GPP_IMS/AppID to be determined by OMA

5.4 /<X>/Name

The Name leaf is a name for the 3GPP_IMS settings.

- Occurrence: ZeroOrOne
- Format: chr
- Access Types: Get
- Values: <User displayable name>

5.5 /<X>/Access_Point_Name

The Access_Point_Name leaf defines the APN to use for where the PDP context for the SIP towards the FQDN to a P-CSCF.

- Occurrence: One
- Format: chr
- Access Types: Get, Replace
- Values: <The IMS access point name>

The format of the APN is defined by 3GPP TS 23.003 [2].

Example: operator.com

5.6 /<X>/PDP_ContextOperPref

The PDP_ContextOperPref leaf indicates an operators preference to have a dedicated PDP context for SIP signalling.

- Occurrence: One
- Format: bin
- Access Types: Get, Replace
- Values: 0, 1

  0 – Indicates that the operator has no preference for a dedicated PDP context for SIP signalling.

  1 – Indicates that the operator has preference for a dedicated PDP context for SIP signalling.

The PDP_ContextOperPref leaf indicates a preference only. 3GPP TS 24.229 [5] describes the normative options and the procedures for establishment of a dedicated PDP context for SIP signalling.

5.7 /<X>/P-CSCF_Addr

The P-CSCF_Addr leaf defines an FQDN to an IPv4 P-CSCF.

- Occurrence: ZeroOrOne
- Format: chr
- Access Types: Get, Replace
- Values: <A fully qualified domain name>

The P-CSCF_Addr leaf shall only be used in early IMS implementations as described in 3GPP TS 23.221 [3].

The FQDN, or domain name as defined by RFC 1123 [8], is represented as character-labels with dots as delimiters.

Example: operator.com

5.8 /<X>/Timer_T1

The Timer_T1 leaf defines the SIP timer T1 – the RTT estimate.

- Occurrence: One
- Format: chr
- Access Types: Get, Replace
- Values: <The round trip time>

The Timer_T1 leaf is an estimate for the round trip time in the system (UE – P-CSCF). The timer value shall be given in milliseconds. The recommended value is defined in 3GPP TS 24.229 [5]

Example: 2000 (milliseconds)

5.9 /<X>/Timer_T4

The Timer_T4 leaf defines the SIP timer T4 – the maximum retransmit interval for non-INVITE requests and INVITE responses.

- Occurrence: One
- Format: chr
- Access Types: Get, Replace
- Values: < The maximum retransmit interval for non-INVITE requests and INVITE responses>

The Timer_T4 leaf is an estimate for the maximum retransmit interval for non-INVITE requests and INVITE responses. The timer value shall be given in milliseconds. The recommended value is defined in 3GPP TS 24.229 [5]

Example: 16000 (milliseconds)

5.10 /<X>/Timer_T5

The Timer_T5 leaf defines the SIP timer T1 – the maximum duration a message will remain in the network.

- Occurrence: One
- Format: chr
- Access Types: Get, Replace
- Values: <The maximum duration a message will remain in the network>

The Timer_T5 leaf is an estimate for the maximum duration a message will remain in the network. The timer value shall be given in milliseconds. The recommended value is defined in 3GPP TS 24.229 [5]

Example: 17000 (milliseconds)

5.11 /<X>/Private_user_id

The Private_user_id leaf defines the private identity of the user.

- Occurrence: One
- Format: chr
- Access Types: Get
- Values: <A private user identity>

The format of the private user identity is defined by 3GPP TS 23.003 [2].

Example: 234150999999999@ims.mnc015.mcc234.3gppnetwork.org

5.12 /<X>/Public_user_id_List/

The Public_user_id_List interior node is used to allow a reference to a list of public user identities.

- Occurrence: One
- Format: node
- Access Types: Get
- Values: N/A

5.13 /<X>/Public_user_identity_List/<X>

This run-time node acts as a placeholder for one or more public user identities.

- Occurrence: OneOrMore
- Format: node
- Access Types: Get
- Values: N/A

5.14 /<X>/Public_user_identity_List/<X>/ Public_user_identity

The Public_user_identity leaf defines one or more public user identity.

- Occurrence: One
- Format: chr
- Access Types: Get
- Values: <A public user identity>

The format of the public user identity is defined by 3GPP TS 23.003 [2].

Example: sip: sip:user@domain

5.15 /<X>/Home_network_domain_name

The Home_network_domain_name leaf indicates the operators home network domain.

- Occurrence: One
- Format: chr

- Access Types: Get
- Values: <The home network domain name>

The format of the home network domain name is defined by 3GPP TS 23.003 [2].

Example: ims.mnc015.mcc234.3gppnetwork.org

5.16 /<X>/Ext/

The Ext is an interior node for where the vendor specific information about the 3GPP-IMS MO is being placed (vendor meaning application vendor, device vendor etc.). Usually the vendor extension is identified by vendor specific name under the ext node. The tree structure under the vendor identified is not defined and can therefore include un-standardized sub-tree.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get
- Values: N/A

Annex A (informative): Management Object DDF

This DDF is the standardized minimal set. A vendor can define it's own DDF for the complete device. This DDF can include more features than this minimal standardized version.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE MgmtTree PUBLIC "-//OMA//DTD SYNCML-DMDDF 1.2//EN"
http://www.openmobilealliance.org/tech/DTD/OMA-SyncML-DMDDF-1_2.dtd>

<MgmtTree>
    <VerDTD>1.2</VerDTD>
    <Man>--The device manufacturer--</Man>
    <Mod>--The device model--</Mod>

    <Node>
        <NodeName>--3GPP_IMS--</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
            </AccessType>
            <Description>--3GPP IMS settings--</Description>
            <DFFormat>
                <Node/>
            </DFFormat>
            <Occurrence>
                <OneOrMore/>
            </Occurrence>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>--3GPP IMS Management Object--</DFTitle>
            <DFType>
                <DDFName/>
            </DFType>
        </DFProperties>

        <Node>
            <NodeName>--AppID--</NodeName>
            <DFProperties>
                <AccessType>
                    <Get/>
                </AccessType>
                <DFFormat>
                    <chr/>
                </DFFormat>
                <Occurrence>
                    <One/>
                </Occurrence>
                <Scope>
                    <Permanent/>
                </Scope>
                <DFTitle>--Application ID--</DFTitle>
                <DFType>
                    <MIME>text/plain</MIME>
                </DFType>
            </DFProperties>
        </Node>

        <Node>
            <NodeName>--Name--</NodeName>
```

```
            <DFProperties>
                <AccessType>
                    <Get/>
                </AccessType>
                <DFFormat>
                    <chr/>
                </DFFormat>
                <Occurrence>
                    <ZeroOrOne/>
                </Occurrence>
                <Scope>
                    <Dynamic/>
                </Scope>
                <DFTitle>--User displayable name for the node--</DFTitle>
                <DFType>
                    <MIME>text/plain</MIME>
                </DFType>
            </DFProperties>
        </Node>

        <Node>
            <NodeName>--Access_Point_Name--</NodeName>
            <DFProperties>
                <AccessType>
                    <Get/>
                    <Replace/>
                </AccessType>
                <DFFormat>
                    <chr/>
                </DFFormat>
                <Occurrence>
                    <One/>
                </Occurrence>
                <Scope>
                    <Permanent/>
                </Scope>
                <DFTitle>--The IMS access point name--</DFTitle>
                <DFType>
                    <MIME>text/plain</MIME>
                </DFType>
            </DFProperties>
        </Node>

        <Node>
            <NodeName>--PDP_ContextOperPref--</NodeName>
            <DFProperties>
                <AccessType>
                    <Get/>
                    <Replace/>
                </AccessType>
                <DFFormat>
                    <bin/>
                </DFFormat>
                <Occurrence>
                    <One/>
                </Occurrence>
                <Scope>
                    <Permanent/>
                </Scope>
                <DFTitle>--Indication of operator preference for a dedicated PDP context for IMS signalling--
</DFTitle>
                <DFType>
                    <MIME>text/plain</MIME>
```

```
            </DFType>
        </DFProperties>
    </Node>

    <Node>
        <NodeName>--P-CSCF_Addr--</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <ZeroOrOne/>
            </Occurrence>
            <Scope>
                <Dynamic/>
            </Scope>
            <DFTitle>--The address of the P-CSCF--</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>

    <Node>
        <NodeName>--Timer_T1--</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <One/>
            </Occurrence>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>--RFC 3261, timer T1--</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>

    <Node>
        <NodeName>--Timer_T4--</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <One/>
            </Occurrence>
```

```
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>--RFC 3261, timer T4--</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>

    <Node>
        <NodeName>--Timer_T5--</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <One/>
            </Occurrence>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>--RFC 3261, timer T5--</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>

    <Node>
        <NodeName>--Private_user_identity--</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <One/>
            </Occurrence>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>--private user identity--</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>

    <Node>
        <NodeName>--Public_user_identity_List--</NodeName>
        <!—The Public_user_identity_List node starts here.-->
        <DFProperties>
            <AccessType>
                <Get/>
            </AccessType>
            <DFFormat>
```

```
                <node/>
            </DFFormat>
            <Occurrence>
                <One/>
            </Occurrence>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>--A collection of public user identity objects--</DFTitle>
            <DFType>
                <DDFName/>
            </DFType>
        </DFProperties>
        <Node>
            <NodeName/>
            <DFProperties>
                <AccessType>
                    <Get/>
                </AccessType>
                <DFFormat>
                    <node/>
                </DFFormat>
                <Occurrence>
                    <OneOrMore/>
                </Occurrence>
                <Scope>
                    <Dynamic/>
                </Scope>
                <DFTitle>--The "name" node for an public user identity object--</DFTitle>
                <DFType>
                    <DDFName/>
                </DFType>
            </DFProperties>
            <Node>
                <NodeName>--public user identity--</NodeName>
                <DFProperties>
                    <AccessType>
                        <Get/>
                    </AccessType>
                    <DFFormat>
                        <chr/>
                    </DFFormat>
                    <Occurrence>
                        <One/>
                    </Occurrence>
                    <Scope>
                        <Permanent/>
                    </Scope>
                    <DFTitle>--The public user identity--</DFTitle>
                    <DFType>
                        <MIME>text/plain</MIME>
                    </DFType>
                </DFProperties>
            </Node>
        </Node>
    </Node>

    <Node>
        <NodeName>--Home_network_domain_name--</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
```

```
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <One/>
            </Occurrence>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>--home domain--</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>

    <Node>
        <NodeName>--Ext--</NodeName>
        <!—The Ext  node starts here.-->
        <DFProperties>
            <AccessType>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <node/>
            </DFFormat>
            <Occurrence>
                <ZeroOrOne/>
            </Occurrence>
            <Scope>
                <Dynamic/>
            </Scope>
            <DFTitle>--A collection of all vendor extension objects--</DFTitle>
            <DFType>
                <DDFName/>
            </DFType>
        </DFProperties>
    </Node>

</Node>

</MgmtTree>
```

Annex B (informative): Change history

It is usual to include an annex (usually the final annex of the document) for specifications under TSG change control which details the change history of the specification using a table as follows:

Change history							
Date	**TSG #**	**TSG Doc.**	**CR**	**Rev**	**Subject/Comment**	**Old**	**New**
2004-10					Version 0.0.1: Preliminary proposal		
2004-11					Version 0.0.2: Version after CN1 #36		

3GPP TS 24.167abc V0.0.21 (2004-110)

Technical Specification

3rd Generation Partnership Project;
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3GPP IMS Management Object (MO);
Stage 3
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Remove GSM logo from the cover page for pure 3rd Generation documents.

Select keywords from list provided in specs database.

Keywords
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Contents

Foreword

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

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

Version x.y.z

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.

1 Scope

This document defines a mobile device 3GPP IMS Management Object. The management object is compatible with OMA Device Management protocol specifications, version 1.1.2 and upwards, and is defined using the OMA DM Device Description Framework as described in OMA-SyncML-DMTND-V1-1 [65] and OMA-SyncML-DMStdObj-V1-1-2 [76].

The 3GPP –IMS Management Object consists of relevant parameters that can be managed for the IM CN Subsystem. This includes the basic framework defined in 3GPP TS 23.228 [43] and 3GPP TS 24.229 [54], and early IMS as defined in 3GPP TS 23.221 [3].

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the 3GPP IMS Management Object 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 TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TS 23.003: "Numbering, addressing and identification-".

[3] 3GPP TS 23.221: "Architectural requirements".

[43] 3GPP TS 23.228: "IP Multimedia Subsystem (IMS); Stage 2".

[54] 3GPP TS 24.229: "Internet Protocol (IP) multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Stage 3".

[65] OMA-SyncML-DMTND-V1-1: "SyncML Device Management Tree and Description".

[76] OMA-SyncML-DMStdObj-V1-1-2: "SyncML Device Management Standardized Objects".

[87] RFC 1123: " Requirements for Internet Hosts -- Application and Support".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in 3GPP TR 21.905 [1] apply.

3.2 Abbreviations

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

AS	Application Server
CN	Core Network
CSCF	Call Session Control Function
DDF	Device Description Framework
DM	Device Management

IMS	IP Multimedia core network Subsystem
IP	Internet Protocol
MO	Management Object
OMA	Open Mobile Alliance
P-CSCF	Proxy – CSCF
PDP	Packet Data Protocol
SIP	Session Initiation Protocol
UE	User Equipment
URI	Universal Resource Identifier

4 3GPP IMS Management Object

The 3GPP IMS Management Object is used to manage settings of the UE for IM CN Subsystem protocols. The Management Object covers generic parameters for the IM CN subsystem. The Management Object enables the management of the settings on behalf of the end user.

The Management Object Identifier is: org.3gpp/1.0/SIPCore

Protocol compatibility: This MO is compatible with OMA DM 1.2.

Management object name: 3GPP_IMS

Editor's Note: The name of the management object to be determined by OMA.

The following nodes and leaf objects are possible under the 3GPP_IMS node:

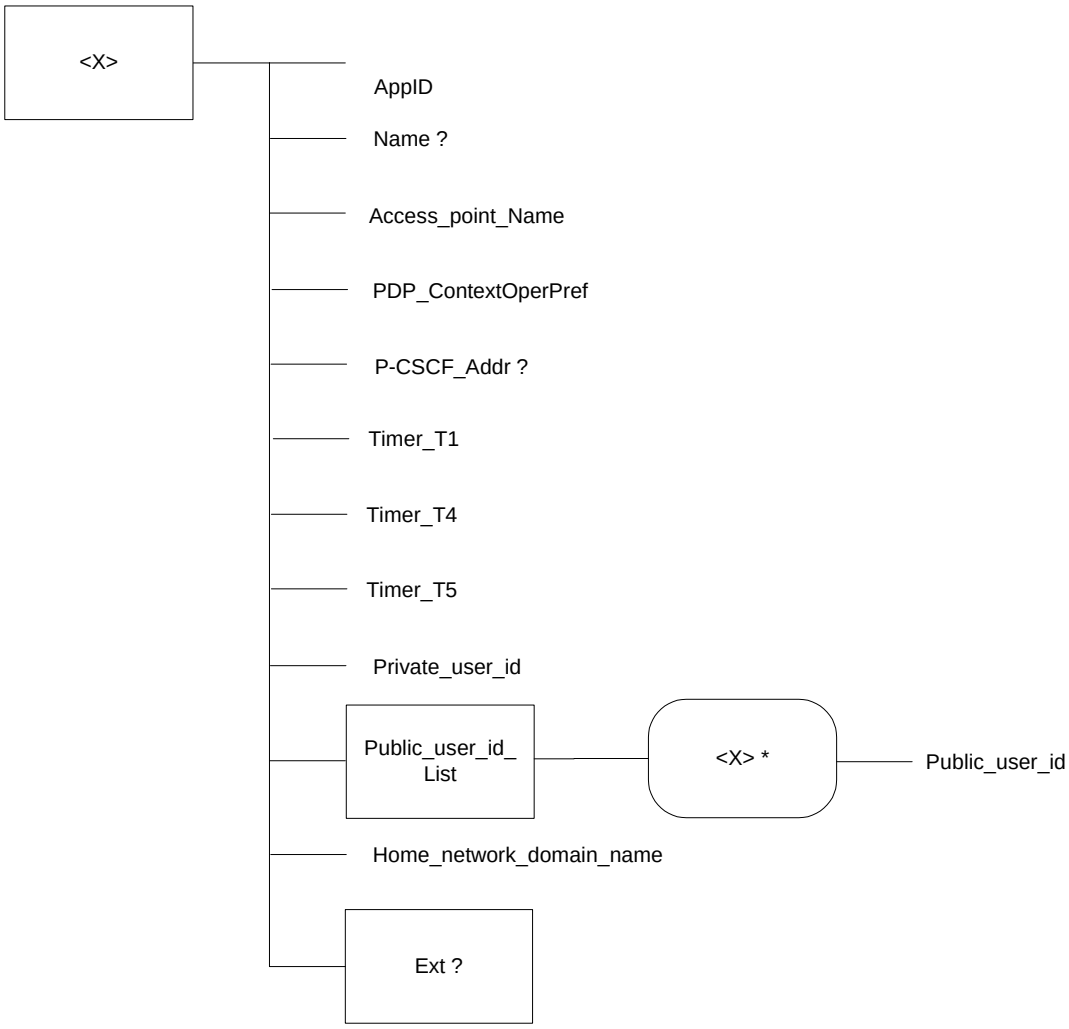

Figure 1: The 3GPP IMS Management Object

5 Management Object parameters

5.1 General

This clause describes the parameters for the 3GPP IMS Management Object.

5.2 Node: /<X>

This interior node acts as a placeholder for one or more accounts for a fixed node.

- Occurrence: OneOrMore
- Format: Node
- Access Types: Get
- Values: N/A

The interior node is mandatory if the UE supports the IM CN SubsystemIMS. IMS sSupport for a UE is defined by the user agent role as defined in 3GPP TS 24.229 [54].

5.3 /<X>/AppID

The AppID identifies the type of the application service available at the described application service access point. The value is expected to be globally unique.

- Occurrence: One
- Format: chr
- Access Types: Get
- Values: <Globally unique value>

Editor's Note: The value of the 3GPP_IMS/AppID to be determined by OMA

5.4 /<X>/Name

The Name leaf is a name for the 3GPP_-IMS settings.

- Occurrence: ZeroOrOne
- Format: chr
- Access Types: Get
- Values: <User displayable name>

5.5 /<X>/Access_Point_Name

The Access_Point_Name leaf defines the APN to use for where the PDP context for the SIP towards the FQDN to a P-CSCF.

- Occurrence: One
- Format: chr
- Access Types: Get, Replace
- Values: <The IMS access point name>

The format of the APN is defined by 3GPP TS 23.003 [2].

Example: operator.com

5.6 /<X>/PDP_ContextOperPref

The PDP_ContextOperPref leaf indicates ~~the~~ an operators preference to have a dedicated PDP context for SIP signalling. ~~If preference for a dedicated PDP context for signalling is indicated, one or more additional PDP contexts will be used for media according to the description in 3GPP TS 24.229 [4].~~

- Occurrence: One
- Format: bin
- Access Types: Get, Replace
- Values: 0, 1

  0 – Indicates that the operator has no~~NO~~ preference for a dedicated PDP context for SIP signalling.

  1 – Indicates that the operator has preference for a dedicated PDP context for SIP signalling.

The PDP_ContextOperPref leaf indicates a preference only. 3GPP TS 24.229 [5] describes the normative options and the procedures for establishment of a dedicated PDP context for SIP signalling.

5.7 /<X>/P-CSCF_Addr

The P-CSCF_Addr leaf defines an FQDN to an IPv4 P-CSCF.

- Occurrence: ZeroOrOne
- Format: chr
- Access Types: Get, Replace
- Values: <A fully qualified domain name>

The P-CSCF_Addr leaf shall only be used in early IMS implementations as described in 3GPP TS 23.221 [3]. ~~The P-CSCF_Addr leaf will only be used if no P-CSCF address is received from the network as part of the PDP context activation procedure as described by 3GPP TS 24.229 [4].~~

The FQDN, or domain name as defined by RFC 1123 [8~~7~~], is represented as character-labels with dots as delimiters.

Example: operator.com

5.8 /<X>/Timer_T1

The Timer_T1 leaf defines the SIP timer T1 – the RTT estimate.

- Occurrence: One
- Format: chr
- Access Types: Get, Replace
- Values: <The round trip time>

The Timer_T1 leaf is an estimate for the round trip time in the system (UE – P-CSCF). The timer value shall be given in milliseconds. The recommended value is defined in 3GPP TS 24.229 [5~~4~~]

Example: 2000 (milliseconds)

5.9 /<X>/Timer_T4

The Timer_T4 leaf defines the SIP timer T4 – the maximum retransmit interval for non-INVITE requests and INVITE responses.

- Occurrence: One
- Format: chr
- Access Types: Get, Replace
- Values: < The maximum retransmit interval for non-INVITE requests and INVITE responses>

The Timer_T4 leaf is an estimate for the maximum retransmit interval for non-INVITE requests and INVITE responses. The timer value shall be given in milliseconds. The recommended value is defined in 3GPP TS 24.229 [5~~4~~]

Example: 16000 (milliseconds)

5.10 /<X>/Timer_T5

The Timer_T5 leaf defines the SIP timer T1 – the maximum duration a message will remain in the network.

- Occurrence: One
- Format: chr
- Access Types: Get, Replace
- Values: <The maximum duration a message will remain in the network>

The Timer_T5 leaf is an estimate for the maximum duration a message will remain in the network. The timer value shall be given in milliseconds. The recommended value is defined in 3GPP TS 24.229 [54]

Example: 17000 (milliseconds)

5.11 /<X>/Private_user_id

The Private_user_id leaf defines the private identity of the user.

- Occurrence: One
- Format: chr
- Access Types: Get
- Values: <A private user identity>

The format of the private user identity ~~IMPI~~ is defined by 3GPP TS 23.003 [2].

Example: 234150999999999@ims.mnc015.mcc234.3gppnetwork.org

5.12 /<X>/Public_user_id_List/

The Public_user_id_List interior node is used to allow a reference to a list of public user identities.

- Occurrence: One
- Format: node
- Access Types: Get
- Values: N/A

5.13 /<X>/Public_user_identity_List/<X>

This run-time node acts as a placeholder for one or more public user identities.

- Occurrence: OneOrMore
- Format: node
- Access Types: Get
- Values: N/A

5.14 /<X>/Public_user_identity_List/<X>/ Public_user_identity

The Public_user_identity leaf defines one or more public user identity.

- Occurrence: One
- Format: chr
- Access Types: Get
- Values: <A public user identity>

The format of the public user identity ~~IMPI~~ is defined by 3GPP TS 23.003 [2].

Example: sip: sip:user@domain~~234150999999999@ims.mnc015.mcc234.3gppnetwork.org~~

5.15 /<X>/Home_network_domain_name

The Home_network_domain_name leaf indicates the operators home network domain.

- Occurrence: One
- Format: chr
- Access Types: Get
- Values: <The home network domain name>

The format of the home network domain name is defined by 3GPP TS 23.003 [2].

Example: ims.mnc015.mcc234.3gppnetwork.org

5.16 /<X>/Ext/

The Ext is an interior node for where the vendor specific information about the 3GPP-IMS MO is being placed (vendor meaning application vendor, device vendor etc.). Usually the vendor extension is identified by vendor specific name under the ext node. The tree structure under the vendor identified is not defined and can therefore include un-standardized sub-tree.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get
- Values: N/A

Annex A (informative): Management Object DDF

This DDF is the standardized minimal set. A vendor can define it's own DDF for the complete device. This DDF can include more features than this minimal standardized version.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE MgmtTree PUBLIC "-//OMA//DTD SYNCML-DMDDF 1.2//EN"
http://www.openmobilealliance.org/tech/DTD/OMA-SyncML-DMDDF-1_2.dtd>

<MgmtTree>
    <VerDTD>1.2</VerDTD>
    <Man>--The device manufacturer--</Man>
    <Mod>--The device model--</Mod>

    <Node>
        <NodeName>--3GPP_IMS--</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
            </AccessType>
            <Description>--3GPP IMS settings--</Description>
            <DFFormat>
                <Node/>
            </DFFormat>
            <Occurrence>
                <OneOrMore/>
            </Occurrence>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>--3GPP IMS Management Object--</DFTitle>
            <DFType>
                <DDFName/>
            </DFType>
        </DFProperties>

        <Node>
            <NodeName>--AppID--</NodeName>
            <DFProperties>
                <AccessType>
                    <Get/>
                </AccessType>
                <DFFormat>
                    <chr/>
                </DFFormat>
                <Occurrence>
                    <One/>
                </Occurrence>
                <Scope>
                    <Permanent/>
                </Scope>
                <DFTitle>--Application ID--</DFTitle>
                <DFType>
                    <MIME>text/plain</MIME>
                </DFType>
            </DFProperties>
        </Node>

        <Node>
            <NodeName>--Name--</NodeName>
```

```
            <DFProperties>
                <AccessType>
                    <Get/>
                </AccessType>
                <DFFormat>
                    <chr/>
                </DFFormat>
                <Occurrence>
                    <ZeroOrOne/>
                </Occurrence>
                <Scope>
                    <Dynamic/>
                </Scope>
                <DFTitle>--User displayable name for the node--</DFTitle>
                <DFType>
                    <MIME>text/plain</MIME>
                </DFType>
            </DFProperties>
        </Node>

        <Node>
            <NodeName>--Access_Point_Name--</NodeName>
            <DFProperties>
                <AccessType>
                    <Get/>
                    <Replace/>
                </AccessType>
                <DFFormat>
                    <chr/>
                </DFFormat>
                <Occurrence>
                    <One/>
                </Occurrence>
                <Scope>
                    <Permanent/>
                </Scope>
                <DFTitle>--The IMS access point name--</DFTitle>
                <DFType>
                    <MIME>text/plain</MIME>
                </DFType>
            </DFProperties>
        </Node>

        <Node>
            <NodeName>--PDP_ContextOperPref--</NodeName>
            <DFProperties>
                <AccessType>
                    <Get/>
                    <Replace/>
                </AccessType>
                <DFFormat>
                    <bin/>
                </DFFormat>
                <Occurrence>
                    <One/>
                </Occurrence>
                <Scope>
                    <Permanent/>
                </Scope>
                <DFTitle>--Indication of operator preference for a dedicated PDP context for IMS signalling--
</DFTitle>
                <DFType>
                    <MIME>text/plain</MIME>
```

```
            </DFType>
        </DFProperties>
    </Node>

    <Node>
        <NodeName>--P-CSCF_Addr--</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <ZeroOrOne/>
            </Occurrence>
            <Scope>
                <Dynamic/>
            </Scope>
            <DFTitle>--The address of the P-CSCF--</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>

    <Node>
        <NodeName>--Timer_T1--</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <One/>
            </Occurrence>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>--RFC 3261, timer T1--</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>

    <Node>
        <NodeName>--Timer_T4--</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <One/>
            </Occurrence>
```

```
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>--RFC 3261, timer T4--</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>

    <Node>
        <NodeName>--Timer_T5--</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
                <Replace/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <One/>
            </Occurrence>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>--RFC 3261, timer T5--</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>

    <Node>
        <NodeName>--Private_user_identity--</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
            </AccessType>
            <DFFormat>
                <chr/>
            </DFFormat>
            <Occurrence>
                <One/>
            </Occurrence>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>--IMPIprivate user identity--</DFTitle>
            <DFType>
                <MIME>text/plain</MIME>
            </DFType>
        </DFProperties>
    </Node>

    <Node>
        <NodeName>--Public_user_identity_List--</NodeName>
        <!—The Public_user_identity_List IMPU_LIST node starts here.-->
        <DFProperties>
            <AccessType>
                <Get/>
            </AccessType>
            <DFFormat>
```

```
                <node/>
            </DFFormat>
            <Occurrence>
                <One/>
            </Occurrence>
            <Scope>
                <Permanent/>
            </Scope>
            <DFTitle>--A collection of IMPU public user identity objects--</DFTitle>
            <DFType>
                <DDFName/>
            </DFType>
        </DFProperties>
        <Node>
            <NodeName/>
            <DFProperties>
                <AccessType>
                    <Get/>
                </AccessType>
                <DFFormat>
                    <node/>
                </DFFormat>
                <Occurrence>
                    <OneOrMore/>
                </Occurrence>
                <Scope>
                    <Dynamic/>
                </Scope>
                <DFTitle>--The "name" node for an public user identity IMPU Oobject--</DFTitle>
                <DFType>
                    <DDFName/>
                </DFType>
            </DFProperties>
            <Node>
                <NodeName>---public user identityIMPU --</NodeName>
                <DFProperties>
                    <AccessType>
                        <Get/>
                    </AccessType>
                    <DFFormat>
                        <chr/>
                    </DFFormat>
                    <Occurrence>
                        <One/>
                    </Occurrence>
                    <Scope>
                        <Permanent/>
                    </Scope>
                    <DFTitle>---The public user identityIMPU.--</DFTitle>
                    <DFType>
                        <MIME>text/plain</MIME>
                    </DFType>
                </DFProperties>
            </Node>
        </Node>
    </Node>

    <Node>
        <NodeName>--Home_network_domain_name--</NodeName>
        <DFProperties>
            <AccessType>
                <Get/>
```

```
                </AccessType>
                <DFFormat>
                    <chr/>
                </DFFormat>
                <Occurrence>
                    <One/>
                </Occurrence>
                <Scope>
                    <Permanent/>
                </Scope>
                <DFTitle>--home domain--</DFTitle>
                <DFType>
                    <MIME>text/plain</MIME>
                </DFType>
            </DFProperties>
        </Node>

        <Node>
            <NodeName>--Ext--</NodeName>
            <!—The Ext  node starts here.-->
            <DFProperties>
                <AccessType>
                    <Get/>
                    <Replace/>
                </AccessType>
                <DFFormat>
                    <node/>
                </DFFormat>
                <Occurrence>
                    <ZeroOrOne/>
                </Occurrence>
                <Scope>
                    <Dynamic/>
                </Scope>
                <DFTitle>--A collection of all vendor extension objects--</DFTitle>
                <DFType>
                    <DDFName/>
                </DFType>
            </DFProperties>
        </Node>

    </Node>

</MgmtTree>
```

Annex B (informative): Change history

It is usual to include an annex (usually the final annex of the document) for specifications under TSG change control which details the change history of the specification using a table as follows:

Change history							
Date	**TSG #**	**TSG Doc.**	**CR**	**Rev**	**Subject/Comment**	**Old**	**New**
2004-10					Version 0.0.1: Preliminary proposal		
2004-11					Version 0.0.2: Version after CN1 #36		