3GPP TSG CN Plenary Meeting #16 **NP-020252**
5th – 7th June 2002 Marco Island, USA.

Source: TSG CN WG4

Title: CRs on Rel-5 Provisioning of IP-based multimedia services

Agenda item: 8.1

Document for: APPROVAL

Introduction:

This document contains 8 CRs on Rel-5 Work Item ”IMS”, that have been agreed by TSG CN WG4, and are forwarded to TSG CN Plenary meeting #16 for approval.

Spec	CR	Rev	Doc-2nd-Level	Phase	Subject	Cat	Ver_C
23.008	043		N4-020370	Rel-5	Inclusion of charging function addresses	C	5.0.0
23.003	039		N4-020488	R99	Allocation of unique prefixes to IPv6 terminals	F	3.9.0
23.003	040		N4-020489	Rel-4	Allocation of unique prefixes to IPv6 terminals	A	4.3.0
23.003	038		N4-020453	Rel-5	Allocation of unique prefixes to IPv6 terminals	A	5.2.0
23.008	041	2	N4-020525	Rel-5	Filter Criteria Modifications	C	5.0.0
23.008	048	1	N4-020693	Rel-5	CR on the charging function address format	C	5.0.0
23.008	047	1	N4-020738	Rel-5	Addition of Service Indication	B	5.0.0
23.003	041	2	N4-020774	Rel-5	Use of a temporary public user identity	F	5.2.0

CR-Form-v4

CHANGE REQUEST

⌘ **23.003** **CR** **38** ⌘ ev **-** ⌘ Current version: **5.2.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ☐ ME/UE **X** Radio Access Network ☐ Core Network **X**

Title:	⌘	Allocation of unique prefixes to IPv6 terminals
Source:	⌘	CN4
Work item code:	⌘	IMS-CCR
Date:	⌘	2002-04-04
Category:	⌘	**F**
Release:	⌘	Rel-5

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)*

Reason for change:	⌘	Alignment with 23.060 CR 286 introducing IPv6 prefix allocation to an MS and at the same time some clean-up of an obsolete reference.
Summary of change:	⌘	Added in the section about the IPv6 address the principle of allocation of a unique prefix to every PDP context when IPv6 stateless address autoconfiguration is used. Also the reference to the obsolete RFC 1883 is changed to RFC 2373 and other references are added (TS 23.060, RFC 2462, RFC3041). Note: RFC 1883 has been obsoleted by RFC 2460, however RFC 2373 is the proper reference when it comes to the actual addressing architecture of IPv6.
Consequences if not approved:	⌘	Misalignment of stage 2 and stage 3 specifications.

Clauses affected:	⌘	1.1; 3.8; 5.1		
Other specs affected:	⌘	**X** Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	23.060
Other comments:	⌘			

1.1 References

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[23~~1~~] 3GPP TS 23.236: "Intra Domain Connection of RAN Nodes to Multiple CN Nodes".

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3.8 Structure of an IP v6 address

One or more IP address domains could be allocated to each PLMN. The IP v6 address structure is defined in RFC 2373~~1883~~.

An IP v6 address may be allocated to an MS either permanently or on a temporary basis during a connection with the network.

If the dynamic IPv6 stateless address autoconfiguration procedure is used, then each PDP context, or group of PDP contexts sharing the same IP address, is assigned a unique prefix as defined in 3GPP TS 23.060.

As described in RFC 2462 and RFC 3041, the MS can change its interface identifier without the GPRS network being aware of the change.

Next modified section

5.1 Identification for routing purpose

MSCs, GSNs and location registers are identified by international PSTN/ISDN numbers and/or Signalling Point Codes ("entity number", i.e., "HLR number", "VLR number", "MSC number", "SGSN number" and "GGSN number") in each GSM PLMN.

Additionally SGSN, GGSN are identified by GSN Addresses. These are the SGSN Address and the GGSN Address.

A GSN Address shall be composed as shown in figure 9.

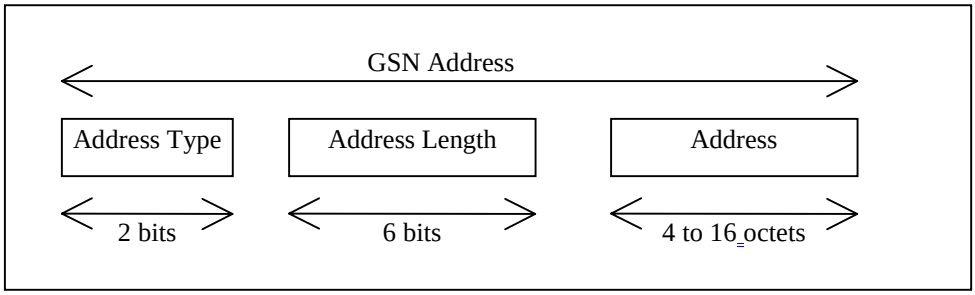

Figure 9: Structure of GSN Address

The GSN Address is composed of the following elements:

1) The Address Type which is a fixed length code (of 2 bits) identifying the type of address that is used in the Address field.

2) Address Length which is a fixed length code (of 6 bits) identifying the length of the Address field.

1. 3) Address is a variable length field with either an IPv4 address or an IPv6 address.

Address Type 0 and Address Length 4 are used when Address is an IPv4 address.

Address Type 1 and Address Length 16 are used when Address is an IPv6 address.

The IP v4 address structure is defined in RFC 791.

The IP v6 address structure is defined in RFC 2373~~1883~~.

3GPP TSG CN WG4 Meeting #13 ***N4-020488***
Fort Lauderdale, US, 8th April – 12th April 2002

CR-Form-v4

CHANGE REQUEST

⌘ **23.003** **CR** **39** ⌘ ev **-** ⌘ Current version: **3.9.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ☐ ME/UE **X** Radio Access Network ☐ Core Network **X**

Title:	⌘	Allocation of unique prefixes to IPv6 terminals
Source:	⌘	CN4
Work item code:	⌘	IMS-CCR
Date:	⌘	2002-04-10
Category:	⌘	**F**
Release:	⌘	R'99

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)*
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R96	*(Release 1996)*
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R98	*(Release 1998)*
R99	*(Release 1999)*
REL-4	*(Release 4)*
REL-5	*(Release 5)*

Reason for change:	⌘	Alignment with 23.060 CR 305 introducing IPv6 prefix allocation to an MS and at the same time some clean-up of an obsolete reference.
Summary of change:	⌘	Added in the section about the IPv6 address the principle of allocation of a unique prefix to every PDP context when IPv6 stateless address autoconfiguration is used. Also the reference to the obsolete RFC 1883 is changed to RFC 2373 and other references are added (TS 23.060, RFC 2462, RFC3041). Note: RFC 1883 has been obsoleted by RFC 2460, however RFC 2373 is the proper reference when it comes to the actual addressing architecture of IPv6.
Consequences if not approved:	⌘	Misalignment of stage 2 and stage 3 specifications.

Clauses affected:	⌘	1.1; 3.8; 5.1		
Other specs affected:	⌘	**X** Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	23.060
Other comments:	⌘			

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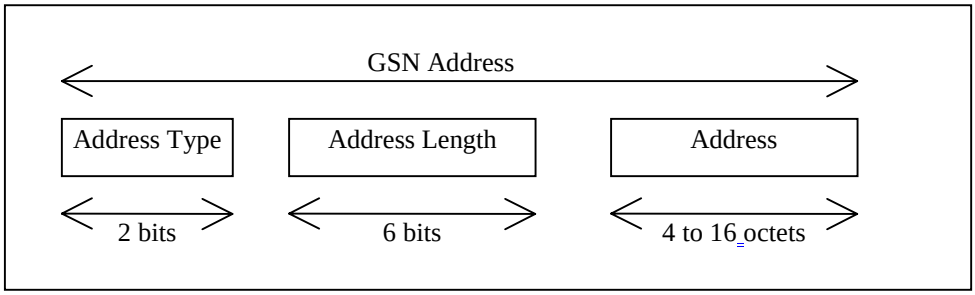

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3GPP TSG CN WG4 Meeting #13 ***N4-020489***
Fort Lauderdale, US, 8th April – 12th April 2002

CR-Form-v4

CHANGE REQUEST

⌘ **23.003** **CR** **40** ⌘ ev **-** ⌘ Current version: **4.3.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ☐ ME/UE **X** Radio Access Network ☐ Core Network **X**

Title:	⌘	Allocation of unique prefixes to IPv6 terminals
Source:	⌘	CN4
Work item code:	⌘	IMS-CCR
Date:	⌘	2002-04-10
Category:	⌘	**A**
Release:	⌘	Rel-4

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F *(correction)*
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Consequences if not approved:	⌘	Misalignment of stage 2 and stage 3 specifications.

Clauses affected:	⌘	1.1; 3.8; 5.1		
Other specs affected:	⌘	**X** Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	23.060
Other comments:	⌘			

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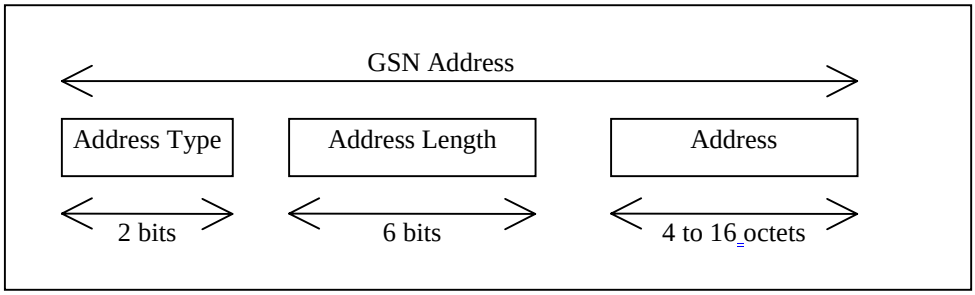

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3GPP TSG CN WG4 Meeting #14 ***N4-020774***
Budapest, Hungary, 13th – 17th May 2002 **revision of N1-021445 (N4-020757)**

3GPP TSG-CN1 Meeting #24 ***Tdoc N1-021461***
Budapest, Hungary, 13. – 17. May 2002 **revision of N1-021445 (N1-021329)**

CR-Form-v5

CHANGE REQUEST

⌘ **23.003** **CR** **041** ⌘ **rev** **2** ⌘ Current version: **5.2.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ☐ ME/UE **X** Radio Access Network ☐ Core Network **X**

Title:	⌘	Use of a temporary public user identity
Source:	⌘	CN4
Work item code:	⌘	IMS-CCR
Date:	⌘	1st May 2002
Category:	⌘	**F**
Release:	⌘	REL-5

Use one of the following categories:
F *(correction)*
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R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
REL-4 (Release 4)
REL-5 (Release 5)

Reason for change:	⌘	SA2 have agreed the stage two for IMS access with a R99/Rel-4 USIM. In order to align with the stage two, it is now necessary to add the procedures to derive domain name, private user identity and public user identity from the IMSI.
Summary of change:	⌘	Addition of conversion procedures in a new section on IMS.
Consequences if not approved:	⌘	Pre-Release-5 USIMs not supported by IMS

Clauses affected:	⌘			
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ 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/3G_Specs/CRs.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.

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[21] 3GPP TS 23.236: "Intra Domain Connection of RAN Nodes to Multiple CN Nodes".

[22] 3GPP TS 23.228: "IP Multimedia (IM) Subsystem – Stage 2"

[23] RFC 2486: "The Network Access Identifier"

[24] RFC 3261: "SIP: Session Initiation Protocol"

[25] 3GPP TS 31.102: "Characteristics of the USIM Application."

[26] RFC 1035: "Domain names – implementation and specification"

*** Proposed New Section ***

13 Numbering, addressing and identification within the IP multimedia core network subsystem

13.1 Introduction

This clause describes the format of the parameters needed to access the IP multimedia core network subsystem. For further information on the use of the parameters see 3GPP TS 23.228 [22].

13.2 Home network domain name

The home network domain name shall be in the form of an Internet domain name, e.g. operator.com, as specified in RFC 1035 [26].

If there is no ISIM application, the UE shall derive the home network domain name from the IMSI as described in the following steps:

1. ~~remove any non-decimal digits from the IMSI, leaving a string of 15 or less digits;~~

2. take the first 5 or 6 digits, depending on whether a 2 or 3 digit MNC is used (see 3GPP TS 31.102 [25]) and separate them into MCC and MNC with "."; and

3. reverse the order of the MCC and MNC. Append to the result: ".IMSI.3gppnetwork.org"

An example of a home network domain name is:

EXAMPLE: IMSI in use: 234150999999999;

where;

MCC: 234;

MNC: 15;

MSIN: 0999999999; and

home domain name: 15.234.IMSI.3gppnetwork.org.

13.3 Private user identity

The private user identity shall take the form of an NAI, and shall have the form user@realm as specified in clause 3 of RFC2486 [23].

NOTE: It is possible for a representation of the IMSI to be contained within the NAI for the private identity.

If there is no ISIM application, the private user identity is not known. In this case, the private user identity is derived from the IMSI.

The following steps show how to build the private user identity out of the IMSI:

~~1. remove any non-decimal digits from the IMSI, leaving a string of 15 or less digits;~~

1~~2~~. use ~~the result from step 1, i.e.~~ the whole string of digits~~,~~ as the user part of the private user identity; and

2~~3~~. the first digits of the IMSI, i.e. MNC and MCC, will be converted into a domain name, as described in subclause 13.2~~1~~.

The result will be a private user identity of the form imsi@mnc.mcc."IMSI.3gppnetwork.org". For example: If the IMSI is 234150999999999 (MCC = 234, MNC = 15), the private user identity then takes the form 234150999999999@15.234.IMSI.3gppnetwork.org

13.4 Public user identity

The public user identity shall take the form of either a SIP URI, see RFC3261[24] or an E.164 number. A SIP URI shall take the form "sip:user@domain".

~~In case~~If there is no ISIM application to host the public user identity, a temporary public user identity shall be derived, based on the IMSI. The temporary public user identity shall be of the form "user@domain" and shall therefore be equal to the private user identity. The private user identity is derived as per subclause 13.2. That is, the private user identity will be appended to the string "sip:"

EXAMPLE: "sip:234150999999999@15.234.IMSI.3gppnetwork.org".

3GPP TSG CN WG4 Meeting #13 **N4-020525**
Fort Lauderdale, US, 8th April – 12th April 2002

CR-Form-v5.1

CHANGE REQUEST

⌘ **23.008** **CR** **041** ⌘ **rev** **2** ⌘ Current version: **5.0.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☐ Radio Access Network ☐ Core Network **X**

Title:	⌘	Filter Criteria Modifications
Source:	⌘	CN4
Work item code:	⌘	IMS
Date:	⌘	29-03-2002
Category:	⌘	**C**
Release:	⌘	REL-5

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)*

Reason for change: ⌘

At the last CN1 meeting in Oulu changes were agreed to the Application Server Filter Criteria description in 23.218 such that

1. The filter criteria for each AS are evaluated once.
2. The AS filter criteria are evaluated and AS contacted (if necessary) in a prioritised order
3. The filter criteria for an AS are applied to the output from any previous AS action

This is detailed in TS 23.218.

These changes were in line with the agreement reached at the joint CN1/4 meeting in Sophia Antipolis in January.

Consequently the subscriber data stored must include filter criteria per AS, and priority for contact of AS. This should be reflected in 23.008.

Summary of change: ⌘

Section 3.5.2 – text is added to reflect the filter criteria as defined in 23.218 and include AS Address as part of the Filter Criteria. Consequently section 3.5.1 is deleted as this information is incorporated in the new text and references in section 3.5.2

Section 3.5.3 title is modfied and text added to refer to the need for he HSS to store service scripts etc.,also with a reference to 23.218.

Section 5.3 – the table is modified to align with the fact that the Address is part of the filter Criteria.

Consequences if not approved: ⌘

3.5.1, 3.5.2, 3.5.3, 5.3

Clauses affected:	⌘			
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ 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:

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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.

3.5 Data related to Application and service triggers

For definition and handling of these data see 3GPP TS 23.218 [53].

3.5.1 VoidSubscribed Media

The Subscribed Media shall provide a list of media types that the subscriber is authorized to request. This shall include SDP Media Types, Transport Protocols, Media Format and Bandwidth. The format of the list and the parameters contained within is FFS.
The Subscribed Media is permanent data stored in the HSS and in the S-CSCF.

3.5.2 Initial Filter Criteria

FFSA set of Initial Filter Criteria are stored for each user, for each application or service that the user request may invoke. The relevant service points of interest are defined in 3GPP TS 23.218 [53] section 5.2

Each set of filter criteria includes the Application Server Address, AS priority, Default Handling, Subscribed Media, Trigger Points and Optional Service Information.

3.5.3 Application Server AddressesInformation

FFSThe HSS may store Application Server specific information for each user. This information may include Service Key, Trigger Points, and Service Scripts etc. (see 3GPP TS 23.218 [53] section 9.3.1)

3.6 Data related to Core Network Services Authorization

This is FFS.

5.3 IP Multimedia Service Data Storage

Table 3: Overview of data used for IP Multimedia services

PARAMETER	Subclause	HSS	S-CSCF	TYPE
Private User Identity	3.1.1	M	M	P
Public Identity	3.1.2	M	M	P
Registration Status	3.2.1	M	-	T
S-CSCF Name	3.2.2	M	-	T
Diameter Client Address of S-CSCF	3.2.3	M	-	T
Diameter Server Address of HSS	3.2.3	-	M	T
RAND, XRES, CK, IK and AUTN	3.3.1	M	C	T
Server Capabilities	3.4.1	C	C	P
~~Subscribed Media~~	~~3.5.1~~	~~FFS~~	~~FFS~~	~~P~~
Initial Filter Criteria	3.5.2	C	C	P
~~Application Server Address~~	~~3.5.3~~	~~C~~	~~C~~	~~P~~

3GPP TSG CN WG4 Meeting #13 **N4-020370**
Fort Lauderdale, US, 8th April – 12th April 2002

CR-Form-v5.1

CHANGE REQUEST

⌘ **23.008** **CR** **043** ⌘ **rev** **-** ⌘ Current version: **5.0.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☐ Radio Access Network ☐ Core Network **X**

Title:	⌘	Correction to TS 23.008
Source:	⌘	CN4
Work item code:	⌘	IMS
Date:	⌘	29-03-2002
Category:	⌘	**C**
Release:	⌘	REL-5

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)

Reason for change:	⌘	In the charging architecture there are two charging functions, Event Charging Function (ECF) and Charging Collection Function (CCF). There may be a separate primary and secondary Charging Function address used. These addresses are stored in HSS and S-CSCF when transferred over the Cx.
Summary of change:	⌘	New section 3.7 including charging related addresses added. Section 5.3 – the table is modified to include the charging related addresses
Consequences if not approved:	⌘	3.7, 3.7.1, 3.7.2, 3.7.3, 3.7.4, 5.3

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

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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.

Start of Modification

3.7 Data related to Charging

3.7.1 Primary Event Charging Function Name

The Primary Event Charging Function Name identifies the primary Event Charging Function, which performs event-based charging (content charging).

The Primary Event Charging Function Address is permanent data stored in the HSS and in the S-CSCF.

3.7.2 Secondary Event Charging Function Name

The Secondary Event Charging Function Name identifies the secondary Event Charging Function, which performs event-based charging (content charging).

The Secondary Event Charging Function Address is permanent data stored in the HSS and in the S-CSCF.

3.7.3 Primary Charging Collection Function Name

The Primary Charging Collection Function Name identifies the primary Charging Collection Function, which provides off-line charging support for the IMS subscribers.

The Primary Charging Collection Function Name is permanent data stored in the HSS and in the S-CSCF.

3.7.4 Secondary Charging Collection Function Name

The Secondary Charging Collection Function Name identifies the secondary Charging Collection Function, which provides off-line charging support for the IMS subscribers.

The Secondary Charging Collection Function Name is permanent data stored in the HSS and in the S-CSCF.

End of Modification

Start of Modification

5.3 IP Multimedia Service Data Storage

Table 3: Overview of data used for IP Multimedia services

PARAMETER	Subclause	HSS	S-CSCF	TYPE
Private User Identity	3.1.1	M	M	P
Public Identity	3.1.2	M	M	P
Registration Status	3.2.1	M	-	T
S-CSCF Name	3.2.2	M	-	T
Diameter Client Address of S-CSCF	3.2.3	M	-	T
Diameter Server Address of HSS	3.2.3	-	M	T
RAND, XRES, CK, IK and AUTN	3.3.1	M	C	T
Server Capabilities	3.4.1	C	C	P
Subscribed Media	3.5.1	FFS	FFS	P
Initial Filter Criteria	3.5.2	C	C	P
Application Server Address	3.5.3	C	C	P
Primary Event Charging Function Name	3.7.1	C	C	P
Secondary Event Charging Function Name	3.7.2	C	C	P
Primary Charging Collection Function Name	3.7.3	C	C	P
Secondary Charging Collection Function Name	3.7.4	C	C	P

End of Modification

3GPP TSG CN WG4 Meeting #14 **N4-020738**
Budapes, Hungary, 13th – 17th May 2002

CR-Form-v5.1

CHANGE REQUEST

⌘ **23.008** **CR** **047** ⌘ **rev** **1** ⌘ Current version: **5.0.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☐ Radio Access Network ☐ Core Network **X**

Title:	⌘	Addition of Service Indication
Source:	⌘	CN4
Work item code:	⌘	IMS (Sh if.)
Date:	⌘	2002-04-30
Category:	⌘	**B**
Release:	⌘	REL-5

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)

Reason for change:	⌘	An AS needs to provide to the HSS a unique indication of the service for which the AS is accessing filter criteria or data repository.
Summary of change:	⌘	Addition of description of Service Indication
Consequences if not approved:	⌘	

Clauses affected:	⌘	New 3.5.4		
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	
Other comments:	⌘			

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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.

New Reference

[54] 3GPP TS 29.328 “IP Multimedia (IM) Subsystem Sh Interface; Signalling flows and message contents (Release 5)”

New Section

3.5.4 Service Indication

Service Indication identifies exactly one set of service related transparent data (see 3GPP TS 29.328 [54]), which is stored in an HSS in an operator network. It is defined in 3GPP TS 29.328 [54].

The Service Indication is permanent subscriber data and is stored in the HSS and one or more ASs.

New Section

5.3 IP Multimedia Service Data Storage

Table 3: Overview of data used for IP Multimedia services

PARAMETER	Subclause	HSS	S-CSCF	AS	TYPE
Private User Identity	3.1.1	M	M	-	P
Public Identity	3.1.2	M	M	-	P
Registration Status	3.2.1	M	-	-	T
S-CSCF Name	3.2.2	M	-	-	T
Diameter Client Address of S-CSCF	3.2.3	M	-	-	T
Diameter Server Address of HSS	3.2.3	-	M	-	T
RAND, XRES, CK, IK and AUTN	3.3.1	M	C	-	T
Server Capabilities	3.4.1	C	C	-	P
Initial Filter Criteria	3.5.2	C	C	-	P
Service Indication	3.5.4	M	-	M	P

3GPP TSG CN WG4 Meeting #14 **N4-020693**
Budapest, Hungary, 13th – 17th May 2002

CR-Form-v5.1

CHANGE REQUEST

⌘ **23.008** **CR** **048** ⌘ **rev** **1** ⌘ Current version: **5.0.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☐ Radio Access Network ☐ Core Network **X**

Title:	⌘	CR on the charging function address format
Source:	⌘	CN4
Work item code:	⌘	IMS
Date:	⌘	29-03-2002
Category:	⌘	**C**
Release:	⌘	REL-5

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)

Reason for change:	⌘	In the last CN4 it agreed to have new AVPs for the addresses of the charging functions. The assumption in the SA5 is to use Diameter for both online and offline charging therefore it is proposed that DiameterURI is the format in which the addresses are carried over the Cx interface.
Summary of change:	⌘	DiameterURI included into the section 3.7 including charging related addresses added.
Consequences if not approved:	⌘	

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

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Start of Modification

3.7 Data related to Charging

3.7.1 Primary Event Charging Function Name

The Primary Event Charging Function Name identifies the primary Event Charging Function, which performs event-based charging (content charging). ~~The format is DiameterURI.~~The format is specified in 3GPP TS 29.229 [44].

The Primary Event Charging Function Address is permanent data stored in the HSS and in the S-CSCF.

3.7.2 Secondary Event Charging Function Name

The Secondary Event Charging Function Name identifies the secondary Event Charging Function, which performs event-based charging (content charging).~~The format is DiameterURI~~ The format is specified in 3GPP TS 29.229 [44].

The Secondary Event Charging Function Address is permanent data stored in the HSS and in the S-CSCF.

3.7.3 Primary Charging Collection Function Name

The Primary Charging Collection Function Name identifies the primary Charging Collection Function, which provides off-line charging support for the IMS subscribers. ~~The format is DiameterURI~~The format is specified in 3GPP TS 29.229 [44].

The Primary Charging Collection Function Name is permanent data stored in the HSS and in the S-CSCF.

3.7.4 Secondary Charging Collection Function Name

The Secondary Charging Collection Function Name identifies the secondary Charging Collection Function, which provides off-line charging support for the IMS subscribers. ~~The format is DiameterURI~~The format is specified in 3GPP TS 29.229 [44].

The Secondary Charging Collection Function Name is permanent data stored in the HSS and in the S-CSCF.

End of Modificatio