3GPP TSG-CT Meeting #28 **CP-050198**
Quebec, CANADA. 1st to 3rd June 2005.

CR-Form-v7.1

CHANGE REQUEST

⌘ **23.003** **CR** **100** ⌘ **rev** **5** ⌘ Current version: **6.5.0** ⌘

*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 ☐ Radio Access Network ☐ Core Network **X**

Title:	⌘	Correction to wildcards in PSI
Source:	⌘	Vodafone, Nokia, HP
Work item code:	⌘	IMS
Date:	⌘	11/5/2005
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:	⌘	The current definition of wildcarded PSIs is wrong and incomplete. Also there exists a reference to an IETF RFC that is now obsolete.
Summary of change:	⌘	Addtional text to describe wildcarded PSIs, and general tidy up of existing text. The reference to the obsoleted IETF RFC 2806 ("Tel URLs for Telephone Calls") has been replaced with a reference to the obsoleting IETF RFC 3966 ("The tel URI for Telephone Numbers").
Consequences if not approved:	⌘	PSIs will not be able to be wildcarded.

Clauses affected:	⌘	1.1.1, 13.4, 13.5			
Other specs affected:	⌘	**Y** / **N**	Other core specifications	⌘	CR 23.228-491
		X /	Other core specifications		
		/ **X**	Test specifications		
		/ **X**	O&M Specifications		
Other comments:	⌘	The only change since revision 4 (the final one approved at CT4 #27) is the addition of the change to the reference for tel URIs.			

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.

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

1.1.1 Normative references

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

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TS 21.905: "3G Vocabulary".

[2] 3GPP TS 23.008: "Organization of subscriber data".

[3] 3GPP TS 23.060: "General Packet Radio Service (GPRS); Service description; Stage 2"

[4] 3GPP TS 23.070: "Routeing of calls to/from Public Data Networks (PDN)".

[5] 3GPP TS 24.008: "Mobile Radio Interface Layer 3 specification; Core Network Protocols; Stage 3".

[6] 3GPP TS 29.060: "GPRS Tunnelling protocol (GPT) across the Gn and Gp interface".

[7] 3GPP TS 43.020: "Digital cellular telecommunications system (Phase 2+); Security related network functions".

[8] void

[9] 3GPP TS 51.011: " Specification of the Subscriber Identity Module - Mobile Equipment (SIM - ME) interface".

[10] ITU-T Recommendation E.164: "The international public telecommunication numbering plan".

[11] ITU-T Recommendation E.212: "The international identification plan for mobile terminals and mobile users".

[12] ITU-T Recommendation E.213: "Telephone and ISDN numbering plan for land Mobile Stations in public land mobile networks (PLMN)".

[13] ITU-T Recommendation X.121: "International numbering plan for public data networks".

[14] IETF RFC 791: "Internet Protocol".

[15] IETF RFC 2373: "IP Version 6 Addressing Architecture".

[16] 3GPP TS 25.401: "UTRAN Overall Description".

[17] 3GPP TS 25.413: "UTRAN Iu Interface RANAP Signalling".

[18] IETF RFC 2181: "Clarifications to the DNS Specification".

[19] IETF RFC 1035: "Domain Names - Implementation and Specification".

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

[21] IETF RFC 2462: "IPv6 Stateless Address Autoconfiguration".

[22] IETF RFC 3041: "Privacy Extensions for Stateless Address Autoconfiguration in IPv6".

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

[24] 3GPP TS 23.228: "IP Multimedia (IM) Subsystem – Stage 2"

[25] IETF RFC 2486: "The Network Access Identifier"

[26] IETF RFC 3261: "SIP: Session Initiation Protocol"

[27] 3GPP TS 31.102: "Characteristics of the USIM Application."

[28] void

[29] 3GPP TS 44.118: "Radio Resource Control (RRC) Protocol, Iu Mode".

[30] 3GPP TS 23.073: "Support of Localised Service Area (SoLSA); Stage 2"

[31] 3GPP TS 29.002: "Mobile Application Part (MAP) specification"

[32] 3GPP TS 22.016: "International Mobile Equipment Identities (IMEI)"

[33] void

[34] void

[35] 3GPP TS 45.056: "CTS-FP Radio Sub-system"

[36] 3GPP TS 42.009: "Security aspects" [currently not being raised to rel-5 – Pete H. looking into it]

[37] 3GPP TS 25.423: "UTRAN Iur interface RNSAP signalling"

[38] 3GPP TS 25.419: "UTRAN Iu-BC interface: Service Area Broadcast Protocol (SABP)"

[39] 3GPP TS 25.410: "UTRAN Iu Interface: General Aspects and Principles"

[40] ISO/IEC 7812: "Identification cards - Numbering system and registration procedure for issuer identifiers"

[41] 3GPP TS 31.102 "Characteristics of the USIM Application"

[42] 3GPP TS 33.102 "3G security; Security architecture"

[43] 3GPP TS 43.130: "Iur-g interface; Stage 2"

[45] IETF RFC ~~2806~~3966: "The tel URI~~L~~s for Telephone ~~Calls~~Numbers"

[46] 3GPP TS 44.068: "Group Call Control (GCC) protocol".

[47] 3GPP TS 44.069: "Broadcast Call Control (BCC) Protocol ".

[48] 3GPP TS 24.234: "3GPP System to WLAN Interworking; UE to Network protocols; Stage 3".

[49] void.

[50] IETF Internet-Draft: "EAP AKA Authentication". draft-arkko-pppext-eap-aka-11, work in progress.

[51] IETF Internet-Draft: "EAP SIM Authentication". draft-haverinen-pppext-eap-sim-12, work in progress.

[52] 3GPP TS 23.246: "Multimedia Broadcast/Multicast Service (MBMS); Architechture and functional description"

[53] IETF Internet-Draft: 'The Network Access Identifier'. 00draft-ietf-radext-rfc2486bis-01, work in progress.

[54] IETF RFC 2279: "UTF-8, a transformation format of ISO 10646".

[55] 3GPP TS 33.234: "Wireless Local Area Network (WLAN) interworking security".

[56] void.

[58] 3GPP TS 33.221 "Generic Authentication Architecture (GAA); Support for Subscriber Certificates (rel-6) ".

[xx] IEEE 1003.1-2004, Part 1: Base Definitions

****** Next Modified Section ******

13.4 Public User Identity

The Public User Identity shall take the form of either a SIP URI (see IETF RFC 3261 [26]) or a tel URI~~L~~ (see IETF RFC ~~2806~~3966 [45]). A SIP URI for a Public User Identity shall take the form "sip:user@domain". SIP URI comparis~~i~~ons shall be performed as defined in RFC 3261 [26], section 19.1.4.

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 described in subclause 13.2. That is, the private user identity will be appended to the string "sip:"

EXAMPLE: "sip:234150999999999@ims.mnc015.mcc234.3gppnetwork.org".

****** Last Modified Section ******

13.5 Public service identity (PSI)

The public service identity shall take the form of either a SIP URI (see RFC 3261 [26]) or a tel URI~~L~~ (see IETF RFC ~~2806~~3966 [45]).

A public service identity ~~defines~~ identifies a service, or a specific resource created for a service on an application server.

The domain part is pre-defined by the IMS operators and the IMS system provides the flexibility to dynamically create the user part of the PSIs.

~~The SIP URI shall take the form of a distinct PSI "sip:service@domain", where ""service"" identifies a service (EXAMPLE: sip:conference@examplenetwork.com).~~

In order to ~~facilitate~~ optimise the operation and maintenance of the nodes, it is possible to represent a collection of ~~SIP URI~~PSIs as a wilcarded PSI. A wildcarded PSI consists of a delimited regular expression located either in the userinfo portion of the SIP URI or in the telephone-subscriber portion of the Tel URI~~as, an escaped SIP URI (see RFC 3261) that contains a wildcard "*"~~. The regular expression in the wildcarded PSI shall take the form of Extended Regular Expressions (ERE) as defined in chapter 9 in IEEE 1003.1-2004 Part 1 [xx]. The delimiter shall be the exclamation mark character ("!").

When stored in the HSS, the wildcarded PSI shall include the delimiter character to indicate the extent of the part of the PSI that is wildcarded. It is used to separate the regular expression from the fixed part of the wildcarded PSI.

Example: The following PSI could be stored in the HSS - "sip:chatlist!.*!@example.com".

When used on an interface, the PSI may include the delimiter character. The inclusion of the delimiter character within the PSI may allow the HSS to perform the matching of the PSI with the wildcarded PSIs stored in the HSS more rapidly and hence process messages faster (this potential optimisation is dependent upon HSS implementation). However, if the delimiter character is not included in the PSI in the interface message, the matching of the PSI to the PSIs stored in the HSS shall still be completed.

Example: The following PSIs communicated in interface messages to the HSS will match to the wildcarded PSI of "sip:chatlist!.*!@example.com" stored in the HSS :

~~The asterisk matches any string of 0 or more characters. Example: The following PSIs sip:chatlist%2A@examplenetwork.com matches sip:chatlist1@examplenetwork.com,~~

~~sip:chatlist2@examplenetwork.com, etc.will match to the wildcarded PSI of "sip:chatlist!.*!@example.com" stored in the HSS. :~~

sip:chatlist1@example.com

sip:chatlist2@example.com

sip:chatlist42@example.com

sip:chatlistAbC@example.com

sip:chatlist!1@example.com

~~NOTE: SIP URIs cannot contain wildcards, as such; the asterisk is represented as character %2A.~~