CR-Form-v7

CHANGE REQUEST

| ⌘ | **23.003** CR **082** | ⌘ **rev** | **2** ~~**1**~~ | ⌘ | Current version: | **5.7.0** | ⌘ |

*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: ⌘	Changes to enable the GSMA root DNS architecture using ".3gppnetwork.org" TLD	
Source: ⌘	Vodafone	
Work item code: ⌘	TEI_5	***Date:*** ⌘ 5/12/2003

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 <u>TR 21.900</u>.

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: ⌘	**Essential Correction** In an LS from the GSMA IREG working group (N4-030932) it was stated that a root DNS architecture for the ".gprs" top level domain is being set up by the GSMA for the private, inter-PLMN IP backbone known as the GRX. The LS identified some inconsistencies with definitions of the ".gprs" domain and asked that these be corrected. Upon further analysis within 3GPP TSG CN WG4, it was agreed that it would be advantagous and ease burden on administraors if the new top level domain name of ".3gppnetwork.org" have the exact same structure of the current ".gprs" top level domain.
Summary of change: ⌘	1. All occurences of the "<MNC>.<MCC>.IMSI.3gppnetwork.org" domain are replaced with the new structure of "mnc<MNC>.mcc<MCC>.3gppnetwork.org"; where MNC is 3 digits (with a zero added at the beginning for 2 digit MNCs) and MCC is 3 digits. 2. A few miscellaneous errors in grammar and punctuation are corrected. 3. Care has been taken to ensure the changes in this CR do *not* conflict with those proposed in CR 23.003-081.
Consequences if not approved: ⌘	1. Administration of two different DNS systems will be more complex; administrators will have to configure 2 domains with totally different structures. 2. If only Rel-6 and onwards is changed, there will be backward compatibility issues for SIP clients in UEs which do not have access to an ISIM (which is defined from Rel-5 onwards).

Clauses affected:	⌘	13.2, 13.3, 13.4		

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

Other comments:	⌘	This CR is the same in substance as CR 23.003-079r1, except that the ".3gppnetwork.org" TLD has its structure aligned with that of ".gprs", rather than a complete swap of using the (old structured) ".3gppnetwork.org" domain name.
		Only change from previous revision is that the proposed changes to section 9 have been removed (as APN definitions should not be affected by the new TLD) and the mandate that the access network has to be the GRX has been removed (as this is something which the UE and/or SIP application may not be able to perform).

**** Start of document ****

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 [24].

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 [19].

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. take the first 5 or 6 digits, depending on whether a 2 or 3 digit MNC is used (see 3GPP TS 31.102 [27]) and separate them into MCC and MNC ~~with ".";~~ if the MNC is 2 digits then a zero shall be added at the beginning;

2. use the MCC and MNC derived in step 1 to create the "mnc<MNC>.mcc<MCC>.3gppnetwork.org" domain name;

3~~2~~. ~~reverse the order of the MCC and MNC. Append to the result: ".IMSI.3gppnetwork.org"~~add the label "ims." to the beginning of the domain.

An example of a home network domain name is:

- ~~-~~IMSI in use: 234150999999999;

Where:

　　MCC = 234;

　　MNC = 15;

　　MSIN = 0999999999~~, which gives~~.

Which gives the home network domain name: ims.mnc015.mcc234.~~IMSI.~~3gppnetwork.org~~.~~

13.3　Private user identity

The private user identity shall take the form of an NAI, and shall have the form username@realm as specified in clause 3 of RFC 2486 [25].

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~~If the private user identity is not known, the private user identity shall be~~is~~ derived from the IMSI.

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

1. use the whole string of digits as the username part of the private user identity;

2. convert the leading digits of the IMSI, i.e. MNC and MCC, into a domain name, as described in subclause 13.2.

The result will be a private user identity of the form
"<IMSI>~~imsi~~@ims.mnc<MNC>.mcc<MCC>.~~"IMSI.~~3gppnetwork.org". For example: If the IMSI is 234150999999999
(MCC = 234, MNC = 15), the private user identity then takes the form
234150999999999@ims.mnc015.mcc234.~~IMSI.~~3gppnetwork.org

13.4   Public user identity

The public user identity shall take the form of either a SIP URI (see RFC 3261 [26]) or a tel URL (see RFC 2806 [45]).
A SIP URI shall take the form "sip:user@domain".

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.~~IMSI.~~3gppnetwork.org".

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