Source: TSG CN WG4

Title: Corrections on WLAN

Agenda item: 9.8

Document for: APPROVAL

Spec	CR	Rev	Doc-2nd-Level	Phase	Subject	Cat	Ver_C
23.003	085		N4-040289	Rel-6	WLAN access parameters moved from TS 24.234 to TS 23.003	B	6.1.0

CR-Form-v7

CHANGE REQUEST

| ⌘ | **23.003** | CR | **085** | ⌘**rev** | **-** | ⌘ | Current version: | **6.1.0** | ⌘ |

*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: ⌘	WLAN access parameters moved from TS 24.234 to TS 23.003	
Source: ⌘	CN4	
Work item code:⌘	WLAN	**Date:** ⌘ 06/01/2004

Category: ⌘	**B**	**Release:** ⌘	Rel-6

Use <u>one</u> 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 <u>one</u> 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: ⌘	Agreement in CN1#32 of moving the specification of WLAN UE identities to TS 23.003.
Summary of change:⌘	• Scope updated to reflect WLAN identities • References added • New clause 14 added to cover new WLAN parameters
Consequences if not approved: ⌘	Specification of WLAN UE identities will remain in TS 24.234.

Clauses affected: ⌘	1, new clause added

Other specs affected:	⌘	Y	N		
		X		Other core specifications ⌘	24.234
			X	Test specifications	
			X	O&M Specifications	

Other comments: ⌘	The changes in this CR are in line with the new structure agreed in NP-030578 for the ".3gppnetwork.org" domain.

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

1 Scope

The present document defines the principal purpose and use of International Mobile station Equipment Identities (IMEI) within the digital cellular telecommunications system and the 3GPP system.

The present document defines:

a) an identification plan for mobile subscribers in the GSM system;

b) principles of assigning telephone and ISDN numbers to MSs in the country of registration of the MS;

c) principles of assigning Mobile Station (MS) roaming numbers to visiting MSs;

d) an identification plan for location areas, routing areas, and base stations in the GSM system;

e) an identification plan for MSCs, SGSNs, GGSNs, and location registers in the GSM system;

f) principles of assigning international mobile equipment identities;

g) principles of assigning zones for regional subscription;

h) an identification plan for groups of subscribers to the Voice Group Call Service (VGCS) and to the Voice Broadcast Service (VBS); and identification plan for voice group calls and voice broadcast calls; an identification plan for group call areas;

i) principles for assigning Packet Data Protocol (PDP) addresses to mobile stations;

j) an identification plan for point-to-multipoint data transmission groups;

k) an identification plan for CN domain, RNC and service area in the UTRAN system;.

l) an identification plan for mobile subscribers in the WLAN system.

1.1 References

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]   RFC 791: "Internet Protocol".

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

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

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

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

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

[26]   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]   RFC 2806: "URLs for Telephone Calls"

[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]   IETF Internet-Draft: "Network Discovery and Selection within the EAP Framework". draft-adrangi-eap-network-discovery-and-selection-00, work in progress.

[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.

Next change

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14   Numbering, addressing and identification for 3GPP System to WLAN Interworking

14.1   Introduction

This clause describes the format of the parameters needed to access the 3GPP system supporting the WLAN interworking. For further information on the use of the parameters see 3GPP TS 24.234 [48].

14.2 Home network realm

The home network realm shall be in the form of an Internet domain name, e.g. operator.com, as specified in RFC 1035 [19].

When attempting to authenticate within WLAN access, the WLAN 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; 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.   add the label "wlan." to the beginning of the domain name.

An example of a WLAN NAI realm is:

    IMSI in use: 234150999999999;

    Where:

        MCC = 234;

MNC = 15;

MSIN = 0999999999

Which gives the home network domain name: wlan.mnc015.mcc234.3gppnetwork.org.

14.3 Root NAI

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

The username part format of the Root NAI shall comply with draft-arkko-pppext-eap-aka [50] when EAP AKA authentication is used and with draft-haverinen-pppext-eap-sim [51], when EAP SIM authentication is used.

When the username part includes the IMSI, the Root NAI shall be built according to the following steps:

1. Generate an identity conforming to NAI format from IMSI as defined in EAP SIM [51] and EAP AKA [50] as appropiate;

2. Convert the leading digits of the IMSI, i.e. MNC and MCC, into a domain name, as described in subclause 14.2.

The result will be a root NAI of the form:

"0<IMSI>@wlan.mnc<MNC>.mcc<MCC>.3gppnetwork.org", for EAP AKA authentication and
"1<IMSI>@wlan.mnc<MNC>.mcc<MCC>.3gppnetwork.org", for EAP SIM authentication

For example, for EAP AKA authentication: If the IMSI is 234150999999999 (MCC = 234, MNC = 15), the root NAI then takes the form 0234150999999999@wlan.mnc015.mcc234.3gppnetwork.org.

14.4   Decorated NAI

Editor's note: it is FFS whether selected VPLMN(s) will be indicated in a prefix (i.e. vplmn1.com/vplmn2.com/username@home realm) or in a suffix format (i.e. username@vplmn1.vplmn2.home realm). See draft-adrangi-eap-network-discovery-and-selection [49].