# 3GPP TSG CN Plenary Meeting #24 2<sup>nd</sup> – 4<sup>th</sup> June 2004 Seoul, KOREA.

Source: TSG CN WG4

Title: Technical Enhancements and Improvements on Rel-6 MAP

Agenda item: 9.21

**Document for:** APPROVAL

Spec	CR	Rev	Doc-2nd-Level N4-040	Phase	Subject	Cat	Ver_C
29.002	735		585	Rel-6	Modify IMEI parameter usage definition in MAP- PSL and MAP-SLR	F	6.5.0
29.002	737		601	Rel-6	Clarification on the use of MSISDN parameter for Follow Me functionality	F	6.5.0

CHANGE REQUEST							
ж <b>2</b>	29.002 CR 735 #rev - #	Current version: 6.5.0 **					
For <u>HELP</u> on using this form, see bottom of this page or look at the pop-up text over the 策 symbols.							
Proposed change affects: UICC apps# ME Radio Access Network Core Network X							
Title:	Modify IMEI parameter usage definition in MAP-	-PSL and MAP-SLR					
Source: # (	CN4						
Work item code: ₩ ा	TEI6	Date: # 29/04/2004					
Category:  # F  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) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900.  Reason for change:  # In case of an emergency call using SIM-less UE, a non-dialable callback number shall be used to identify the target UE. The format and structure of the non-dialable callback number is according to national or regional regulations. However, this non-dialable callback number does not always uniquely identify the UE. In those cases the IMEI shall be always included in MAP-Provide-Subscriber-Location and MAP-Subscriber-							
Summary of change:	Location-Report messages.  Modify IMEI usage definition in MAP-Provide Subscriber-Location-Report accordingly.	de-Subscriber-Location and MAP-					
Consequences if not approved:	# There will be problems in locating the UE w SIM-less UE. Misalignment between TSs causing coonfuresulting in implementation differences due	usion to implementers possibly					
Clauses affected:	策 13A.2.3, 13A.3.3						
Other specs affected:	Y N   X Other core specifications   X Test specifications   X O&M Specifications	.271 CR 269					
Other comments:	<b>X</b>						

How to create CRs using this form: Comprehensive information and tips about how to create CRs can be found at <a href="http://www.3gpp.org/specs/CR.htm">http://www.3gpp.org/specs/CR.htm</a>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked \( \mathcal{H} \) 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 <a href="ftp://ftp.3gpp.org/specs/">ftp://ftp.3gpp.org/specs/</a> 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 modification

13A.2 MAP-PROVIDE-SUBSCRIBER-LOCATION Service				
LCS QoS				
This parameter indicates the required quality of service in terms of response time and accuracy.				
<u>IMEI</u>				
The requirements for its presence are specified in 3GPP TS 23.271 [26a]. Inclusion of the IMEI is optional.				
Supported GAD Shapes				
This parameter indicates which of the shapes defined in 3GPP TS 23.032 [122] are supported.				
Next modification				
13A.3 MAP-SUBSCRIBER-LOCATION-REPORT Service				
13A.3.3 Parameter Definition and Use				
13A.3.3 Parameter Definition and Use				
13A.3.3 Parameter Definition and Use				
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13A.3.3 Parameter Definition and Use				

This parameter provides the location estimate. The absence of this parameter implies that a location estimate was not available or could not be successfully obtained. If the obtained location estimate is not encoded in one of the supported geographical shapes then this parameter shall consist of one octet, which shall be discarded by the receiving node.

# Modification End

## 3GPP TSG CN WG4 Meeting #23 Zagreb, CROATIA, 10<sup>th</sup> – 14<sup>th</sup> MAY 2004

CHANGE REQUEST							
*	29.002 CR 737	#rev - <sup># (</sup>	Current version: 6.5.0 <sup>#</sup>				
For <u>HELP</u> on t	sing this form, see bottom of thi	is page or look at the	pop-up text over the 策 symbols.				
Proposed change affects: UICC apps# ME Radio Access Network Core Network X							
Title: ਖ਼	Clarification on the use of MS	ISDN parameter for F	Follow Me functionality				
Source:	CN4						
Work item code: ₩	TEI6		Date: 第 30/04/2004				
Category: #	F Use one of the following categorie F (correction) A (corresponds to a correction B (addition of feature), C (functional modification) D (editorial modification) Detailed explanations of the above be found in 3GPP TR 21.900.	es: on in an earlier release) feature)	Release: # Rel-6  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		s Unstructured SS Re	e MSISDN parameter being equest between HLRa and FFNb.				
Summary of chang	The parameter MSISDN described in the parameter		onal and also the condition is				
Consequences if not approved:		should be used for Fo	e is no clear indication in stage 3 ollow Me to carry the MSISDN of A est.				
Clauses affected:	策 2, 11.9						
Other specs affected:	Y N      X Other core specific     X Test specifications     O&M Specifications						
Other comments:	₩						

#### **How to create CRs using this form:**

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- 1) Fill out the above form. The symbols above marked # contain pop-up help information about the field that they are closest to.
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- downloaded from the 3GPP server under <a href="ftp://ftp.3gpp.org/specs/">ftp://ftp.3gpp.org/specs/</a> 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.

### 2 References

[22]

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 22.001: "Digital cellular telecommunications system (Phase 2+); Principles of telecommunication services supported by a Public Land Mobile Network (PLMN)". [3] 3GPP TS 22.002: "Bearer Services Supported by a Public Land Mobile Network (PLMN)". [4] 3GPP TS 22.003: "Circuit Teleservices Supported by a Public Land Mobile Network (PLMN)". [5] 3GPP TS 22.004: "General on Supplementary Services". 3GPP TS 42.009: "Digital cellular telecommunications system (Phase 2+); Security aspects". [6] [7] 3GPP TS 22.016: "International Mobile station Equipment Identities (IMEI)". [8] 3GPP TS 22.041: "Operator Determined Barring". [9] 3GPP TS 22.081: "Line identification supplementary services - Stage 1". [10] 3GPP TS 22.082: "Call Forwarding (CF) supplementary services - Stage 1". 3GPP TS 22.083: "Call Waiting (CW) and Call Hold (HOLD) Supplementary Services - Stage 1". [11] 3GPP TS 22.084: "Multi Party (MPTY) Supplementary Services - Stage 1". [12] [13] 3GPP TS 22.085: "Closed User Group (CUG) supplementary services - Stage 1". [14] 3GPP TS 22.086: "Advice of charge (AoC) Supplementary Services - Stage 1". 3GPP TS 22.088: "Call Barring (CB) supplementary services - Stage 1". [15] 3GPP TS 22.090: "Unstructured Supplementary Service Data (USSD); - Stage 1". [16] 3GPP TS 23.003: "Numbering, addressing and identification". [17] [18] Void 3GPP TS 23.007: "Restoration procedures". [19] [20] 3GPP TS 23.008: "Organisation of subscriber data". [21] 3GPP TS 23.009: "Handover procedures".

3GPP TS 23.011: "Technical realization of Supplementary Services - General Aspects".

3GPP TS 23.012: "Location management procedures".
3GPP TS 43.020: "Security related network functions".
3GPP TS 23.038: "Alphabets and language".
3GPP TS 23.039: "Interface protocols for the connection of Short Message Service Centres (SMSCs) to Short Message Entities (SMEs)".
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3GPP TS 23.271: "Functional stage2 description of LCS".
3GPP TS 23.081: "Line Identification Supplementary Services - Stage 2".
3GPP TS 23.082: "Call Forwarding (CF) Supplementary Services - Stage 2".
3GPP TS 23.083: "Call Waiting (CW) and Call Hold (HOLD) Supplementary Services - Stage 2"
3GPP TS 23.084: "Multi Party (MPTY) Supplementary Services - Stage 2".
3GPP TS 23.085: "Closed User Group (CUG) Supplementary Services - Stage 2".
3GPP TS 23.086: "Advice of Charge (AoC) Supplementary Services - Stage 2".
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3GPP TS 23.090: "Unstructured Supplementary Services Data (USSD) - Stage 2".
3GPP TS 33.200: "3G Security; Network domain security; MAP application layer security".
3GPP TS 24.008: "Mobile Radio Interface Layer 3 specification; Core Network Protocols - Stage 3".
3GPP TS 24.010: "Mobile radio interface layer 3 Supplementary Services specification - General aspects".
3GPP TS 24.011: "Point-to-Point (PP) Short Message Service (SMS) support on mobile radio interface".
3GPP TS 44.071: "Location Services (LCS) – stage 3".
3GPP TS 24.080: "Mobile radio interface layer 3 supplementary services specification - Formats and coding".
3GPP TS 24.081: "Line identification supplementary services - Stage 3".
3GPP TS 24.082: "Call Forwarding (CF) Supplementary Services - Stage 3".
3GPP TS 24.083: "Call Waiting (CW) and Call Hold (HOLD) supplementary services - Stage 3"
3GPP TS 24.084: "Multi Party (MPTY) Supplementary Services - Stage 3".
3GPP TS 24.085: "Closed User Group (CUG) Supplementary Services - Stage 3".
3GPP TS 24.086: "Advice of Charge (AoC) Supplementary Services - Stage 3".
3GPP TS 24.088: "Call Barring (CB) Supplementary Services - Stage 3".
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3GPP TS 48.002: " Base Station System - Mobile-services Switching Centre (BSS - MSC) interface principles".
3GPP TS 48.006: "Signalling transport mechanism specification for the Base Station System - Mobile-services Switching Centre (BSS - MSC) interface".

[49]	3GPP TS 48.008: "Mobile Switching Centre - Base Station System (MSC - BSS) interface; Layer 3 specification".
[49a1]	3GPP TS 48.031: "Location Services (LCS); Serving Mobile Location Centre (SMLC) – Serving Mobile Location Centre (SMLC); SMLC Peer Protocol (SMLCPP)".
[49b]	3GPP TS 48.071: "Location Services (LCS); Serving Mobile Location Centre - Base Station System (SMLC - BSS) interface Layer 3 specification".
[50]	3GPP TS 49.001: "General network interworking scenarios".
[51]	3GPP TS 29.002: "Mobile Application Part (MAP) specification".
[52]	Void
[53]	Void
[54]	Void
[55]	3GPP TS 29.006: "Interworking between a Public Land Mobile Network (PLMN) and a Packet Switched Public Data Network/Integrated Services Digital Network (PSPDN/ISDN) for the support of Packet Switched data transmission services".
[56]	3GPP TS 29.007: "General requirements on interworking between the Public Land Mobile Network (PLMN) and the Integrated Services Digital Network (ISDN) or Public Switched Telephone Network (PSTN)".
[57]	3GPP TS 29.008: "Application of the Base Station System Application Part (BSSAP) on the Einterface".
[58]	3GPP TS 29.010: "Information element mapping between Mobile Station - Base Station System and BSS - Mobile-services Switching Centre (MS - BSS - MSC) Signalling procedures and the Mobile Application Part (MAP)".
[59]	3GPP TS 29.011: "Signalling interworking for Supplementary Services".
[59a]	3GPP TS 49.031: "Digital cellular telecommunications system (Phase 2+); Location Services (LCS); Base Station System Application Part LCS Extension (BSSAP-LE)".
[60]	Void
[61]	GSM 12.08: "Digital cellular telecommunications system (Phase 2); Subscriber and Equipment Trace".
[62]	ETS 300 102-1 (1990): "Integrated Services Digital Network (ISDN); User-network interface layer 3 specifications for basic call control".
[63]	ETS 300 136 (1992): "Integrated Services Digital Network (ISDN); Closed User Group (CUG) supplementary service description".
[64]	ETS 300 138 (1992): "Integrated Services Digital Network (ISDN); Closed User Group (CUG) supplementary service Digital Subscriber Signalling System No.one (DSS1) protocol".
[65]	ETS 300 287: "Integrated Services Digital Network (ISDN); Signalling System No.7; Transaction Capabilities (TC) version 2".
[66]	ETR 060: "Signalling Protocols and Switching (SPS); Guide-lines for using Abstract Syntax Notation One (ASN.1) in telecommunication application protocols".
[66b]	ETR 091: "ETSI object identifier tree; Common domain Mobile domain"
[67]	ITU-T Recommendation E.164: "The international public telecommunication numbering plan".
[68]	ITU-T Recommendation E.212: " The international identification plan for mobile terminals and mobile users".

[69] ITU-T Recommendation E.213: "Telephone and ISDN numbering plan for land mobile stations in public land mobile networks (PLMN) ". [70] ITU-T Recommendation E.214: "Structure of the land mobile global title for the signalling connection control part (SCCP) ". ITU-T Recommendation Q.699: "Interworking between ISDN access and non-ISDN access over [71] ISDN User Part of Signalling System No. 7". [72] ITU-T Recommendation Q.711: "Specifications of Signalling System No.7; Functional description of the Signalling Connection Control Part". [73] ITU-T Recommendation O.712: "Definition and function of SCCP messages". [74] ITU-T Recommendation Q.713: "Specifications of Signalling System No.7; SCCP formats and codes". ITU-T Recommendation Q.714: "Specifications of Signalling System No.7; Signalling Connection [75] Control Part procedures". ITU-T Recommendation Q.716: "Specifications of Signalling System No.7; Signalling connection [76] control part (SCCP) performances". [77] ITU-T Recommendation Q.721 (1988): "Specifications of Signalling System No.7; Functional description of the Signalling System No.7 Telephone user part". [78] ITU-T Recommendation Q.722 (1988): "Specifications of Signalling System No.7; General function of Telephone messages and signals". [79] ITU-T Recommendation Q.723 (1988): "Specifications of Signalling System No.7; Formats and codes". ITU-T Recommendation Q.724 (1988): "Specifications of Signalling System No.7; Signalling [80] procedures". [81] ITU-T Recommendation Q.725 (1988): "Specifications of Signalling System No.7; Signalling performance in the telephone application". ITU-T Recommendation Q.761 (1988): "Specifications of Signalling System No.7; Functional [82] description of the ISDN user part of Signalling System No.7". [83] ITU-T Recommendation Q.762 (1988): "Specifications of Signalling System No.7; General function of messages and signals". [84] ITU-T Recommendation Q.763 (1988): "Specifications of Signalling System No.7; Formats and codes". [85] ITU-T Recommendation Q.764 (1988): "Specifications of Signalling System No.7; Signalling procedures". ITU-T Recommendation Q.767: "Specifications of Signalling System No.7; Application of the [86] ISDN user part of CCITT signalling System No.7 for international ISDN interconnections". ITU-T Recommendation Q.771: "Specifications of Signalling System No.7; Functional description [87] of transaction capabilities". [88] ITU-T Recommendation Q.772: "Specifications of Signalling System No.7; Transaction capabilities information element definitions". [89] ITU-T Recommendation Q.773: "Specifications of Signalling System No.7; Transaction capabilities formats and encoding". [90] ITU-T Recommendation Q.774: "Specifications of Signalling System No.7; Transaction capabilities procedures".

[91]	ITU-T Recommendation Q.775: "Specifications of Signalling System No.7; Guide-lines for using transaction capabilities".
[92]	ITU-T Recommendation X.200: "Reference Model of Open systems interconnection for CCITT Applications".
[93]	ITU-T Recommendation X.680: "Information technology – Abstract Syntax Notation One (ASN.1): Specification of basic notation".
[93b]	ITU-T Recommendation X.681: "Information technology – Abstract Syntax Notation One (ASN.1): Information object specification"
[94]	ITU-T Recommendation X.690: "Information technology – ASN.1 encoding rules: Specification of Basic Encoding Rules (BER), Canonical Encoding Rules (CER) and Distinguished Encoding Rules (DER)".
[95]	ITU-T Recommendation X.210: "Open systems interconnection layer service definition conventions".
[97]	3GPP TS 23.018: "Basic Call Handling".
[98]	3GPP TS 23.078: "Customised Applications for Mobile network Enhanced Logic (CAMEL) Phase 4 - Stage 2".
[99]	3GPP TS 23.079: "Support of Optimal Routeing (SOR) - Stage 2".
[100]	3GPP TS 43.068: "Voice Group Call Service (VGCS) - Stage 2".
[101]	3GPP TS 43.069: "Voice Broadcast service (VBS) - Stage 2".
[102]	ANSI T1.113: "Signaling System No. 7 (SS7) - ISDN User Part".
[103]	Void
[104]	3GPP TS 23.060: "General Packet Radio Service (GPRS) Description; Stage 2".
[105]	3GPP TS 29.060: "General Packet Radio Service (GPRS); GPRS Tunnelling Protocol (GTP) across the Gn and Gp Interface".
[106]	3GPP TS 29.018: "General Packet Radio Service (GPRS); Serving GPRS Support Node (SGSN) - Visitors Location Register (VLR); Gs interface layer 3 specification".
[107]	3GPP TS 23.093: "Technical Realization of Completion of Calls to Busy Subscriber (CCBS); Stage 2".
[108]	3GPP TS 23.066: "Support of Mobile Number Portability (MNP); Technical Realisation Stage 2".
[109]	ANSI T1.112 (1996): "Telecommunication – Signalling No. 7 - Signaling Connection Control Part (SCCP)".
[110]	3GPP TS 23.116: "Super-Charger Technical Realisation; Stage 2."
[111]	Void.
[112]	Void
[113]	Void
[114]	Void
[115]	Void
[116]	ITU-T Recommendation Q.850 (May 1998): "Usage of cause and location in the Digital Subscriber Signalling System No. 1 and the Signalling System No. 7 ISDN User Part".
[117]	3GPP TS 22.135: "Multicall; Service description; Stage 1".

[118]	3GPP TS 23.135: "Multicall supplementary service; Stage 2".
[119]	3GPP TS 24.135: "Multicall supplementary service; Stage 3".
[120]	3GPP TS 25.413: "UTRAN Iu Interface RANAP Signalling".
[121]	3GPP TS 29.202: "SS7 signalling transport in core network"
[122]	3GPP TS 23.032: "Universal Geographical Area Description (GAD)"
[123]	3GPP TS 22.071: "Location Services (LCS); Service description, Stage 1"
[124]	$ITU-T\ Recommendation\ X.880:\ "Data\ networks\ and\ open\ system\ communication\ -\ Open\ System\ Interconnection\ -\ Service\ definitions\ -\ Remote\ operations:\ Concepts,\ model\ and\ notation".$
[125]	3GPP TS 23.278: "Customised Applications for Mobile Network Enhanced Logic (CAMEL) Phase 4 – Stage 2 IM CN Interworking (Rel-5)"
[126]	3GPP TS 23.172: "Technical realization of Circuit Switched (CS) multimedia service; UDI/RDI fallback and service modification"
[127]	3GPP TS 26.103: "Speech codec list for GSM and UMTS".
[128]	3GPP TS 23.141: "Presence Service; Architecture and Functional Description"
[xx]	3GPP TS 23.094: "Follow Me (FM) – Stage 2"

#### \*\*\*\* NEXT MODIFIED SECTION \*\*\*\*

# 11.9 MAP\_PROCESS\_UNSTRUCTURED\_SS\_REQUEST service

### 11.9.1 Definitions

This service is used between the MSC and the VLR, between the VLR and the HLR, between the HLR and gsmSCF and between the HLR and HLR to relay information in order to allow unstructured supplementary service operation.

The MAP\_PROCESS\_UNSTRUCTURED\_SS\_REQUEST service is a confirmed service using the primitives from table 11.9/1.

# 11.9.2 Service primitives

Table 11.9/1: MAP\_PROCESS\_UNSTRUCTURED\_SS\_REQUEST parameters

Parameter name	Request	Indication	Response	Confirm
Invoke id	M	M(=)	M(=)	M(=)
USSD Data Coding Scheme	M	M(=)	С	C(=)
USSD String	M	M(=)	С	C(=)
MSISDN	₩ <u>C</u>	C(=)		
User error			С	C(=)
Provider error				0

#### 11.9.3 Parameter use

Invoke id

See clause 7.6.1 for the use of this parameter.

#### **USSD Data Coding Scheme**

See clause 7.6.4 for the use of this parameter. The presence of the parameter in the response is dependent on the unstructured supplementary service application. If this parameter is present, then the USSD String parameter has to be present.

#### **USSD String**

See clause 7.6.1 for the use of this parameter. The presence of the parameter in the response is dependent on the unstructured supplementary service application. If this parameter is present, then the USSD Data Coding Scheme parameter has to be present.

#### **MSISDN**

The subscriber's basic MSISDN.

See definition in clause 7.6.2. For Follow Me when the service request is sent from the HLR of the A subscriber, the parameter shall contain the MSISDN of the A subscriber, see 3GPP TS 23.094 [xx]. For other purposes The MSISDN ismay be included as an operator option, e.g. to allow addressing the subscriber's data in the gsmSCF with the MSISDN.

#### User error

This parameter is sent by the responder upon unsuccessful outcome of the service, and then takes one of the following values defined in clause 7.6.1:

- System failure;
- Data missing;
- Unexpected data value;

This error is returned by the responder if it is not able to deal with the contents of the USSD string.

- Call Barred:
- Unknown Alphabet.

#### Provider error

See clause 7.6.1 for the use of this parameter.