3GPP TSG CN Plenary Meeting #11, Palm Springs, U.S.A 14th - 16th March 2001

Source:TSG CN WG4Title:CRs to R97 on Work Item GTP EnhancementAgenda item:7.14Document for:APPROVAL

Introduction:

This document contains **3** CRs on **R97** Work Item "**GTP Enhancement**", that have been agreed by **TSG CN WG4**, and are forwarded to TSG CN Plenary meeting #11 for approval.

Spec	CR	Rev	Doc-2nd-Level	Phase	Subject	Cat	Ver_C
09.60	A101	1	N4-010447	R97	IMSI Encoding Clarification	F	6.9.0
09.60	A100	1	N4-010448	R98	IMSI Encoding Clarification	А	7.6.0
29.060	A180	1	N4-010449	R99	IMSI Encoding Clarification	А	3.7.0

3GPP TSG-CN4 Meeting #7 Sophia Antipolis, France. 26 February – 2 March 2001

Tdoc N4-010448 (Revision of Tdoc N4-010353)

	CHANGE REQUEST	CR-Form-v3
¥	09.60 CR A100 # rev 1 #	Current version: 7.6.0 [#]
For <u>HELP</u> on usin	g this form, see bottom of this page or look at the	pop-up text over the # symbols.
Proposed change aff	ects: ¥ (U)SIM ME/UE Radio Acc	cess Network Core Network X
Title: ೫	MSI Encoding Clarification.	
Source: ೫ (CN4	
Work item code: # 🤇	GTP enhancements	Date: # 27 February 2001
Category: ೫ /	N	Release: # R98
Us De be	 a <u>one</u> of the following categories: F (essential correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification) etailed explanations of the above categories can found in 3GPP TR 21.900. 	Use <u>one</u> of the following releases: 2 (GSM Phase 2) 9) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)
Reason for change:	The IMSI encoding definition in GTP spec. 09.60 MNC digits with Hex F or just discard the 3 rd MN IMSI digits leftward, in case of 2 digit MNC, esp format of RAI IE which shares the common source very confusing how to counter the order and num situations: 2 digits MNC and 3 digits MNC. Hen clearly specify the encoding format of IMSI IE in	D is ambiguous whether to pad the 3 rd NC digits with shifting the remaining ecially when comparing the encoding ce of MCC and MNC digits. It is also aber of the IMSI digits in various ace, there is a strong requirement to a GTP spec.
Summary of change:	# Explicitly specify that no padding nibble would if MNC is 2 digits long.	d be used between MCC and MNC
Consequences if not approved:	# GTP won't work correctly.	
Clauses affected:	¥ 7.9.2	
Other specs affected:	# Other core specifications # Test specifications 0&M Specifications	
Other comments:	ж	

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: <u>http://www.3gpp.org/3G_Specs/CRs.htm</u>. 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 <u>ftp://www.3gpp.org/specs/</u> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 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.

7.9.2 International Mobile Subscriber Identity (IMSI)

The IMSI shall be the subscriber identity of the MS. The IMSI is defined in GSM 03.03.



Figure 9: IMSI information element

The IMSI is TBCD-coded with a fixed length of 8 octets. Bits 8765 of octet n+1 encodes digit 2n, bits 4321 of octet n+1 encodes digit 2n-1.Unused half octets shall be coded as '1 1 1 1' or F(HEX). Digits are packed contiguously with no internal padding.

*** End ***

3GPP TSG-CN4 Meeting #7 Sophia Antipolis, France. 26 February – 2 March 2001

Tdoc N4-010447 (Revision of Tdoc N4-010354)

						CR-Form-v3				
		CHANG	E REQ	UESI						
ж	<mark>09.60</mark> C	R <mark>A101</mark>	₩ rev	<mark>1</mark>	Current vers	^{ion:} 6.9.0 [#]				
For <u>HELP</u> on usin	g this form,	see bottom of th	his page or	look at the	e pop-up text	over the # symbols.				
Proposed change affe	ects: ¥	(U)SIM N	IE/UE	Radio Ac	cess Network	Core Network X				
Title: भ ॥	MSI Encodi	ng Clarification.								
Source: ೫ C	N4									
Work item code: 🕷 🤆	TP enhand	cements			Date: ೫	27 February 2001				
Category: ೫ F	Essenti	al correction)			Release: ೫	R97				
Us De be	se <u>one</u> of the F (essent A (corres B (Addition C (Function D (Editor) found in 3G	following categori tial correction) ponds to a correct on of feature), ional modification of ial modification) nations of the abov PP TR 21.900.	ies: tion in an ear of feature) ve categories	<i>lier release</i> s can	Use <u>one</u> of 2 R96 R97 R98 R99 REL-4 REL-5	the following releases: (GSM Phase 2) (Release 1996) (Release 1997) (Release 1998) (Release 1999) (Release 4) (Release 5)				
Reason for change:	 The IM MNC d IMSI di format of very consistuation situation clearly situation 	SI encoding defini igits with Hex F or gits leftward, in ca of RAI IE which st nfusing how to con ns: 2 digits MNC a specify the encodi	tion in GTP r just discard ase of 2 digit hares the cor unter the ord and 3 digits 1 ng format of	spec. 09.60 the 3 rd MI MNC, esp nmon sour er and num MNC. Her IMSI IE in	0 is ambiguous NC digits with pecially when c ce of MCC and ber of the IMS ace, there is a s a GTP spec.	s whether to pad the 3 rd shifting the remaining comparing the encoding d MNC digits. It is also SI digits in various trong requirement to				
Summary of change:	# Explicit if MNC	Explicitly specify that no padding nibble would be used between MCC and MN if MNC is 2 digits long.								
Consequences if not approved:	# GTP w	on't work correct	ly.							
Clauses affected:	ж <mark>7.9.2</mark>									
Other specs affected:	# Othe Test	er core specificat specifications 1 Specifications	ions ¥							
Other comments:	ж									

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*** End ***

3GPP TSG-CN4 Meeting #7 Sophia Antipolis, France, 26 February – 2 March 2001

Tdoc N4-010449 (Revision of Tdoc N4-010352)

	-									•					CR-Form-v3
CHANGE REQUEST															
ж	29.	060	CR	180		ж re	v	1	ж	Current	versi	on:	3.7.	0	¥
For <u>HELP</u> on u	sing tl	his for	m, see	e bottom	of this	page	or lo	ook a	at the	e pop-up	text o	over	the X	syn	nbols.
Proposed change affects: # (U)SIM ME/UE Radio Access Network Core Network															
Title: #	IMS	I Enco	oding (<u>Clarificati</u>	on.										
Source: ೫	CN4	1													
Work item code: ℜ	GTF	<mark>P enha</mark>	ancem	ents						Date	e: ೫	27	Februa	ary 2	2001
Category: ೫	Α									Release	e: X	R99	Ð		
Use one of the following categories:Use one of the following religionF (essential correction)2A (corresponds to a correction in an earlier release)R96B (Addition of feature),R97C (Functional modification of feature)R98D (Editorial modification)R99D tetailed explanations of the above categories canREL-4be found in 3GPP TR 21.900.REL-5									rele 2) 96) 97) 98) 99)	eases:					
Reason for change	e: ¥	The MNC IMS form very situa clear	MSI e digits digits at of R confus tions: 2 ly spec	ncoding d with Hex leftward, AI IE whi ing how to digits Mi ify the en	efinitio F or ju in case ch shar count NC and coding	n in G of 2 d res the er the 3 digi format	TP s ard igit l com orde its M t of I	pec. the 3 MNC mon r and INC. MSI	09.60 rd Mî C, esp sour l num Hen	0 is ambig NC digits becially w ce of MC ber of the ice, there in GTP spe	guous with s hen co C and e IMS is a st is a st	whet shiftin ompa MN(I digi rong	her to p ng the p ring the C digits ts in va require	pad rema e en s. It ariot emer	the 3 rd aining coding t is also us nt to
Summary of chang	је: Ж	Explicitly specify that no padding nibble would be used between MCC and MNC if MNC is 2 digits long.													
Consequences if not approved:	Ħ	GTP	won't	work cor	rectly.										
Clauses affected:	ж	7.7.2													
Other specs affected:	ж	0 Te 0	ther co est spe &M Sp	ore specif ecification pecificatio	ication is ons	IS	ж								
Other comments:	ж														

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7.7.2 International Mobile Subscriber Identity (IMSI)

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Figure 10: IMSI information element

The IMSI is TBCD-coded with a fixed length of 8 octets. Bits 8765 of octet n+1 encodes digit 2n, bits 4321 of octet n+1 encodes digit 2n-1.Unused half octets shall be coded as '1 1 1 1' or F(HEX). Digits are packed contiguously with no internal padding.

*** End ***