3GPP TSG CN Plenary Meeting #24 **NP-040218**
2nd – 4th June 2004 Seoul, KOREA.

Source: TSG CN WG4

Title: Technical enhancements and improvements on GTP Rel-5

Agenda item: 8.8

Document for: APPROVAL

Spec	CR	Rev	Doc-2nd-Level N4-040	Phase	Subject	Cat	Ver_C
29.060	492		514	Rel-5	Change the attribution of Radio Priority LCS from TV to TLV	F	5.9.0
29.060	493		515	Rel-6	Change the attribution of Radio Priority LCS from TV to TLV	A	6.4.0

3GPP TSG CN WG4 Meeting #23 **N4-040514**
Zagreb, Croatia, 10th – 14th May 2004

CR-Form-v7

CHANGE REQUEST

⌘ **29.060** **CR** **492** ⌘ **rev** **-** ⌘ Current version: **5.9.0** ⌘

*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 ☒

Title:	⌘	Change the attribution of Radio Priority LCS from TV to TLV
Source:	⌘	CN4
Work item code:	⌘	TEI5
Date:	⌘	18/April/2004
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 TR 21.900.

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:	⌘	**This is the essential correction.** The Radio Priority LCS information element was introduced in the release 5 with the parameter attribution 'TV'. This introduction is problematic for R99 GSN nodes. If unknown information element with the attribution 'TV' is detected, then the rest of message would be discarded according to the section 11.1.9 Unknown Information Element.
Summary of change:	⌘	This CR proposes to change the attribution of Radio Priority LCS from 'TV' to 'TLV'. With this modification, the IE type value for Radio Priority LCS is reassigned to 150.
Consequences if not approved:	⌘	The R99 based GSN may not be able to interwork with R5 based GSN.

Clauses affected:	⌘	7.7, 7.7.25B

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

⌘

Other comments:	⌘	-Since the interworking with REL6 GSNs is taken into account, new IE type value 150 was chosen. -The IE type values 147 – 149 are left 'Spare' rather than 'Reserved' since handling of reervied IE type value is not clearly defined in current GTP.

****** First modified section ******

7.7 Information Elements

A GTP Signalling message may contain several information elements. The TLV (Type, Length, Value) or TV (Type, Value) encoding format shall be used for the GTP information elements. The information elements shall be sorted, with the Type fields in ascending order, in the signalling messages. The Length field contains the length of the information element excluding the Type and Length field.

For all the length fields, bit 8 of the lowest numbered octet is the most significant bit and bit 1 of the highest numbered octet is the least significant bit.

Within information elements, certain fields may be described as spare. These bits shall be transmitted with the value defined for them. To allow for future features, the receiver shall not evaluate these bits.

The most significant bit in the Type field is set to 0 when the TV format is used and set to 1 for the TLV format.

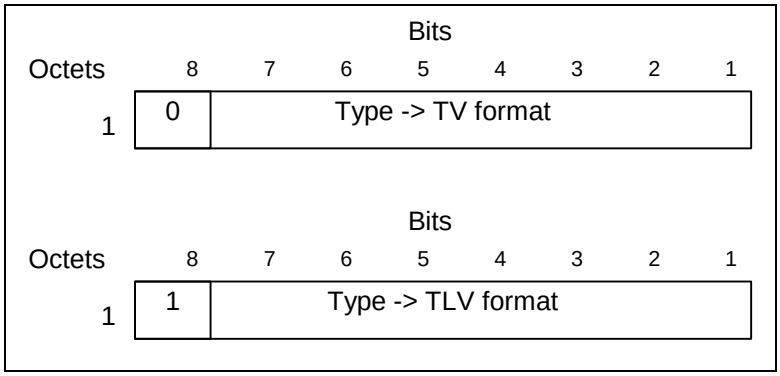

Figure 8: Type field for TV and TLV format

Table 37: Information Elements

IE Type Value	Format	Information Element	Reference
1	TV	Cause	7.7.1
2	TV	International Mobile Subscriber Identity (IMSI)	7.7.2
3	TV	Routeing Area Identity (RAI)	7.7.3
4	TV	Temporary Logical Link Identity (TLLI)	7.7.4
5	TV	Packet TMSI (P-TMSI)	7.7.5
6-7	Spare		
8	TV	Reordering Required	7.7.6
9	TV	Authentication Triplet	7.7.7
10	Spare		
11	TV	MAP Cause	7.7.8
12	TV	P-TMSI Signature	7.7.9
13	TV	MS Validated	7.7.10
14	TV	Recovery	7.7.11
15	TV	Selection Mode	7.7.12
16	TV	Tunnel Endpoint Identifier Data I	7.7.13
17	TV	Tunnel Endpoint Identifier Control Plane	7.7.14
18	TV	Tunnel Endpoint Identifier Data II	7.7.15
19	TV	Teardown Ind	7.7.16
20	TV	NSAPI	7.7.17
21	TV	RANAP Cause	7.7.18
22	TV	RAB Context	7.7.19
23	TV	Radio Priority SMS	7.7.20
24	TV	Radio Priority	7.7.21
25	TV	Packet Flow Id	7.7.22
26	TV	Charging Characteristics	7.7.23

IE Type Value	Format	Information Element	Reference
27	TV	Trace Reference	7.7.24
28	TV	Trace Type	7.7.25
29	TV	MS Not Reachable Reason	7.7.25A
~~30~~	~~TV~~	~~Radio Priority LCS~~	~~7.7.25B~~
117-126	Reserved for the GPRS charging protocol (see GTP' in 3GPP TS 32.215 [18])		
127	TV	Charging ID	7.7.26
128	TLV	End User Address	7.7.27
129	TLV	MM Context	7.7.28
130	TLV	PDP Context	7.7.29
131	TLV	Access Point Name	7.7.30
132	TLV	Protocol Configuration Options	7.7.31
133	TLV	GSN Address	7.7.32
134	TLV	MS International PSTN/ISDN Number (MSISDN)	7.7.33
135	TLV	Quality of Service Profile	7.7.34
136	TLV	Authentication Quintuplet	7.7.35
137	TLV	Traffic Flow Template	7.7.36
138	TLV	Target Identification	7.7.37
139	TLV	UTRAN Transparent Container	7.7.38
140	TLV	RAB Setup Information	7.7.39
141	TLV	Extension Header Type List	7.7.40
142	TLV	Trigger Id	7.7.41
143	TLV	OMC Identity	7.7.42
144	TLV	RAN Transparent Container	7.7.43
145	TLV	PDP Context Prioritization	7.7.45
146	TLV	Additional RAB Setup Information	7.7.45A
147-149	Spare		
150	TLV	Radio Priority LCS	7.7.25B
239-250	Reserved for the GPRS charging protocol (see GTP' in 3GPP TS 32.215 [18])		
251	TLV	Charging Gateway Address	7.7.44
252-254	Reserved for the GPRS charging protocol (see GTP' in 3GPP TS 32.215 [18])		
255	TLV	Private Extension	7.7.46

****** Next modified section ******

7.7.25B Radio Priority LCS

The Radio Priority LCS information element contains the radio priority level for MO LCS transmission.

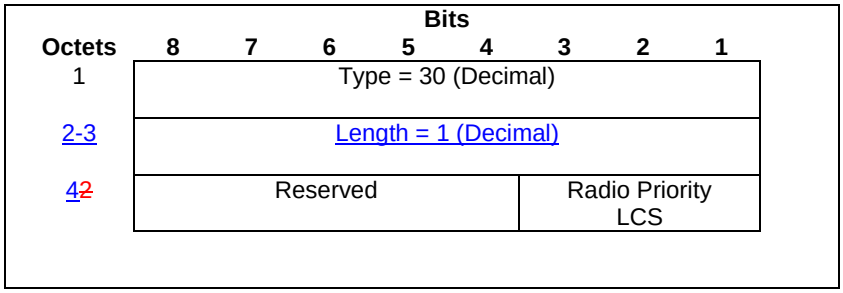

Figure 33b: Radio Priority LCS Information Element

3GPP TSG CN WG4 Meeting #23
Zagreb, Croatia, 10th – 14th May 2004

N4-040515

CR-Form-v7

CHANGE REQUEST

⌘ **29.060** **CR** **493** ⌘ **rev** **-** ⌘ Current version: **6.4.0** ⌘

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Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☐ Core Network ☒

Title:	⌘	Change the attribution of Radio Priority LCS from TV to TLV
Source:	⌘	CN4
Work item code:	⌘	TEI_5
Date:	⌘	18/April/2004
Category:	⌘	**A**
Release:	⌘	Rel-6

Use one of the following categories:
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Use one of the following releases:

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R97	*(Release 1997)*
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R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	**This is the essential correction.** The Radio Priority LCS information element was introduced in the release 5 with the parameter attribution 'TV'. This introduction is problematic for R99 GSN nodes. If unknown information element with the attribution 'TV' is detected, then the rest of message would be discarded according to the section 11.1.9 Unknown Information Element. In addition, the APN Restriction information element has undefined attribution 'TVL'.
Summary of change:	⌘	This CR proposes to change the attribution of Radio Priority LCS from 'TV' to 'TLV'. With this modification, The IE type value for Radio Priority LCS is reassigned to 150. In addition, the attribution of APN Restriction is corrected from 'TVL' to 'TLV'.
Consequences if not approved:	⌘	The R99 based GSN may not be able to interwork with R5 or R6 based GSN.

Clauses affected:	⌘	7.7, 7.7.25B

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

Other comments: ⌘

****** First modified section ******

7.7 Information Elements

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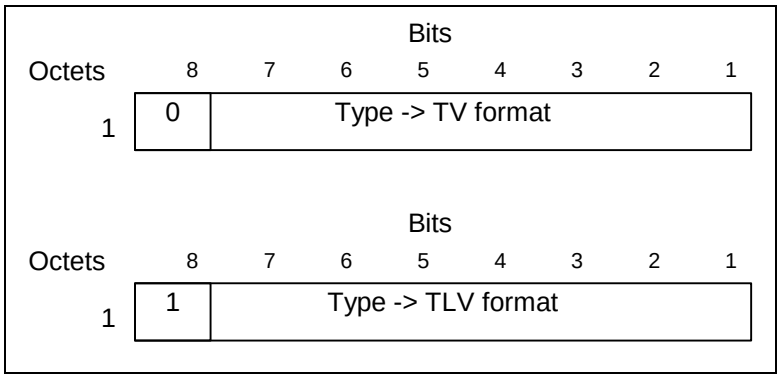

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IE Type Value	Format	Information Element	Reference
24	TV	Radio Priority	7.7.21
25	TV	Packet Flow Id	7.7.22
26	TV	Charging Characteristics	7.7.23
27	TV	Trace Reference	7.7.24
28	TV	Trace Type	7.7.25
29	TV	MS Not Reachable Reason	7.7.25A
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144	TLV	RAN Transparent Container	7.7.43
145	TLV	PDP Context Prioritization	7.7.45
146	TLV	Additional RAB Setup Information	7.7.45A
147	TLV	SGSN Number	7.7.47
148	TLV	Common Flags	7.7.48
149	TLV~~L~~	APN Restriction	7.7.49
150	TLV	Radio Priority LCS	7.7.25B
239-250	Reserved for the GPRS charging protocol (see GTP' in 3GPP TS 32.215 [18])		
251	TLV	Charging Gateway Address	7.7.44
252-254	Reserved for the GPRS charging protocol (see GTP' in 3GPP TS 32.215 [18])		
255	TLV	Private Extension	7.7.46

****** Next modified section ******

7.7.25B Radio Priority LCS

The Radio Priority LCS information element contains the radio priority level for MO LCS transmission.

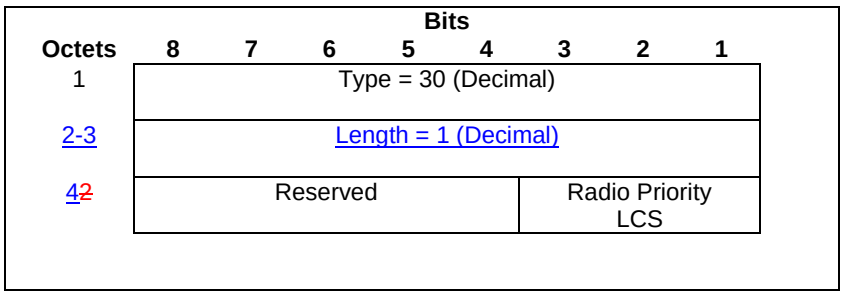

Figure 33b: Radio Priority LCS Information Element