Source: TSG-SA WG4

Title: CRs TS 26.173 and TS 26.204 on AMR-WB codec : Incorrect

definition of vector nb_of_bits (Release 5 and Release 6)

Document for: Approval

Agenda Item: 7.4.3

The following CRs, agreed at the TSG-SA WG4 meeting #33, are presented to TSG SA #26 for approval.

Spec	CR	Rev	Phase	Subject	Cat	Vers	WG	Meeting	S4 doc
26.173	021		Rel-5	Incorrect definition of vector nb_of_bits	F	5.8.0	S4	TSG-SA WG4#33	S4-040745
26.173	020	1	Rel-6	Incorrect definition of vector nb_of_bits	Α	5.8.0	S4	TSG-SA WG4#33	S4-040746
26.204	010		Rel-5	Incorrect definition of vector nb_of_bits	F	5.2.0	S4	TSG-SA WG4#33	S4-040747
26.204	009	1	Rel-6	Incorrect definition of vector nb_of_bits	Α	5.2.0	S4	TSG-SA WG4#33	S4-040748

	CHANGE REQUEST	CR-Form-v7
₩ TS	26.173 CR 021	(#)
For <u>HELP</u> on us	sing this form, see bottom of this page or look at the pop-up text over the 🕱 syr	nbols.
Proposed change a	ME X Radio Access Network X Core Ne	etwork X
Title:	Incorrect definition of vector nb_of_bits	
Source:	TSG-SA WG4	
Work item code: ₩	AMRWB Date: 2004-12-14	
	F Use one of the following categories: Use one of the following categories: Use one of the following categories: Use one of the following release: Use one of the following release: Use one of the following release of the	eases:
Reason for change.	One line has been erroneously repeated in the AMR-WB C-code (contain TS 26.173) in the definition of vector nb_of_bits. This results in a wrong index to be generated for the SID mode and a superfluous index for the kbit/s mode.	mode
Summary of change	e: The mode indices generated by the C-code are corrected.	
Consequences if not approved:	The mode indices for the SID frame and 23.85 kbit/s frame generated by code of TS 26.173 are not in line with the indices used in the generic AM interface formats explained in TS 26.201. (E.g., according to TS 26.201 frame type index is 9, while the C-code of TS 26.173 produces index 10 frames.) This may raise confusion and even interoperability problems whimplementing the generic AMR-WB interface formats of TS 26.201. The incorrect indices are not used in the encoding-decoding process itse C-code of TS 26.173. Therefore, the correction has no impact to the bit-exactness of the AMR-WB C-code.	IR-WB the SID for SID en
Other comments:	bits.h and cnst.h files X	

1) Change in bits.h

```
Before the change:
```

```
static const Word16 nb_of_bits[NUM_OF_MODES] = {
   NBBITS_7k,
   NBBITS_9k,
   NBBITS_12k,
   NBBITS_14k,
   NBBITS_14k,
   NBBITS_16k,
   NBBITS_20k,
   NBBITS_20k,
   NBBITS_23k,
   NBBITS_24k,
   NBBITS_24k,
   NBBITS_SID};
```

After the change:

```
static const Word16 nb_of_bits[NUM_OF_MODES] = {
   NBBITS_7k,
   NBBITS_9k,
   NBBITS_12k,
   NBBITS_12k,
   NBBITS_16k,
   NBBITS_16k,
   NBBITS_20k,
   NBBITS_20k,
   NBBITS_23k,
   NBBITS_24k,
   NBBITS_24k,
   NBBITS_24k,
   NBBITS_SID};
```

2) Change in cnst.h

Before the change:

After the change:

CHANGE REQUEST CHANGE REQUEST									
₩ TS 2	26.173 CR 020								
For <u>HELP</u> on usin	ng this form, see bottom of this page or look at the pop-up text over the # symbols.								
Proposed change aff	ects: UICC apps器 ME X Radio Access Network X Core Network X								
Title: 黑 I	ncorrect definition of vector nb_of_bits								
Source:	rsg-sa wg4								
Work item code: 器	AMRWB Date: 2004-12-14								
De	Release: # REL-6 se 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) etailed explanations of the above categories can found in 3GPP TR 21.900. Release: Release: C (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1997) R99 (Release 1998) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)								
Reason for change:	One line has been erroneously repeated in the AMR-WB C-code (contained in TS 26.173) in the definition of vector nb_of_bits. This results in a wrong mode index to be generated for the SID mode and a superfluous index for the 23.85 kbit/s mode.								
Summary of change:	The mode indices generated by the C-code are corrected.								
Consequences if not approved:	The mode indices for the SID frame and 23.85 kbit/s frame generated by the C-code of TS 26.173 are not in line with the indices used in the generic AMR-WB interface formats explained in TS 26.201. (E.g., according to TS 26.201 the SID frame type index is 9, while the C-code of TS 26.173 produces index 10 for SID frames.) This may raise confusion and even interoperability problems when implementing the generic AMR-WB interface formats of TS 26.201. The incorrect indices are not used in the encoding-decoding process itself in the C-code of TS 26.173. Therefore, the correction has no impact to the bit-exactness of the AMR-WB C-code.								
Other specs affected:	bits.h and cnst.h files X								
Other comments:	≋								

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```
Before the change:
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   NBBITS_16k,
   NBBITS_20k,
   NBBITS_20k,
   NBBITS_23k,
   NBBITS_24k,
   NBBITS_24k,
   NBBITS_SID};
```

After the change:

```
static const Word16 nb_of_bits[NUM_OF_MODES] = {
   NBBITS_7k,
   NBBITS_9k,
   NBBITS_12k,
   NBBITS_12k,
   NBBITS_16k,
   NBBITS_16k,
   NBBITS_20k,
   NBBITS_20k,
   NBBITS_23k,
   NBBITS_24k,
   NBBITS_24k,
   NBBITS_24k,
   NBBITS_SID};
```

2) Change in cnst.h

Before the change:

After the change:

CHANGE REQUEST										CR-Form-v7		
[₩] TS	26.	204	CR	010	9	∉ rev	-	¥	Current vers	sion:	5.2.0	¥
For <u>HELP</u> on u	sing t	his for	m, see	bottom c	of this p	page or	look a	at the	e pop-up text	over	the ₩ syr	nbols.
Proposed change	affect	ts: L	JICC a	pps#]	ME X	Rac	dio A	ccess Netwo	rk X	Core Ne	etwork X
Title: 第	Inco	orrect	definitio	on of vec	tor nb_	of_bits						
Source: 第	TS	G-SA V	NG4									
Work item code: ₩	AM	RWB							Date: ♯	200	04-12-14	
Category: 米	Detai	F (corr A (corr B (add C (fund D (edit lled exp	rection) respond lition of ctional r torial mo	wing cates Is to a confeature), modification as of the a	rection in the same of the sam	ature)		elease	Release: % Use <u>one</u> of 2 e) R96 R97 R98 R99 Rel-4 Rel-5 Rel-6	the for (GSN (Rele (Rele (Rele (Rele (Rele (Rele		eases:
Reason for change	e: #	MRD		J_MUM_C					ined in TS 26 d to be consi			
Summary of chang	ye: ₩			ons of mo 6.204) are			the n	umbe	er of modes i	n the	floating po	oint C-
Consequences if not approved:	Ж	gene indice (E.g. TS 2 numb numb	erated best used, according 6.204 per of notes that the second se	by the float d in the g ding to Ta produces nodes is nodes) T	eneric S 26.20 index 10, wh	oint C-c AMR-W 01 the S 10 for S ile the C y raise	ode of Bint BID fra BID fra BID fra BID fra BID fra BID confu	of TS erfact ame ames e of sion	nber of mode 26.204 are rece formats ex type index is 3. Also accord TS 26.204 pr and even interface forma	not in splaine 9, wh ding to oduction	line with t ed in TS 2 nile the C- o TS 26.1 es 11 as t erability pro	he 6.201. code of 73 the he oblems
Clauses affected:	æ	dec_	if.c, en	c_dtx.c, e	enc_if.c	c, enc_r	nain.	c file:	S			
Other specs affected:	¥ [Y N X X	Other Test s	core spe specificati Specifica	ecificati	· –	ж					
Other comments:	Ж											

1) Change in dec_if.c, enc_dtx.c, enc_if.c, enc_main.c files

Before the change: #define MRDTX

10

After the change: #define MRDTX

2) Change in dec_if.c

Before the change: #define NUM_OF_MODES 11

After the change:

#define NUM_OF_MODES 10

CHANGE REQUEST CHANGE REQUEST												
₩ T	S 26	.204	CR	009	⊭ re	ev	1	¥	Current vers	sion:	5.2.0	ж
For <u>HELP</u> 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 X Core Network X												
Title:	Inc	orrect	definitio	n of vector	r nb_of_l	bits						
Source:	TS	G-SA V	VG4									
Work item code: ₩	3 AM	RWB							Date: ₩	200	04-12-14	
Category:	Deta	F (corr A (corr B (add C (fund D (edit iled exp	rection) respond lition of to ctional mo orial mo olanatior	wing categories to a corrective sture), nodification diffication) is of the about 21.900.	ction in ar	e)		lease	Release: # Use <u>one</u> of 2 e) R96 R97 R98 R99 Rel-4 Rel-5 Rel-6	the for (GSN) (Relea (Relea (Relea (Relea (Relea		eases:
Reason for chang	e: #	In the	AMR-	WB floating	a point C	C-cod	e (co	ntai	ined in TS 26	204)	the defin	itions of
reacon to chang		MRD		NUM_OF					d to be consi			
Summary of chang	ge:₩			ns of mode .204) are o			ne nu	umbe	er of modes i	in the	floating po	oint C-
Consequences if not approved:	*	gene indice (E.g., TS 20 numb numb	rated bes used, accord 6.204 per of more	y the floating to TS and the general the general to TS and the gen	ng point neric AM 26.201 t idex 10 f), while t s may ra	C-co R-WE he SI for SII he C- ise co	de o B inte D fra D fra -code onfus	f TS erfact ame ames e of sion	nber of mode 26.204 are rece formats ex type index is a. Also accord TS 26.204 po and even interface forma	not in cplain s 9, which ding to roduction	line with t ed in TS 2 hile the C- o TS 26.1 es 11 as t erability pre	he 6.201. code of 73 the he oblems
Clauses affected:	ж	dec	if.c, end	c_dtx.c, en	c if.c, er	nc m	ain.c	file	S			
Other specs affected:	¥	Y N X X	Other Test s	core specification	fications ns		¥					
Other comments:	Ж											

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