3GPP TSG RAN WG5 #27 R5-050777
Bath, UK, 25 – 29 April 05

Title: Editorial issues with 34.108 and others
Source: RAN5 Secretary
For: Discussion

Part 1: Once Upon A Time the peoples of WG T1 agreed on the following:

- CN common GSM-MAP NAS system information - GSM-MAP NAS system information - CN domain system information - CN domain identity - CN domain specific NAS system information - GSM-MAP NAS system information - CN domain specific DRX cycle length coefficient	A1	 00 01H PS 1E 01H 7
- CN common GSM-MAP NAS system information - GSM-MAP NAS system information - CN domain system information - CN domain identity - CN domain specific NAS system information - GSM-MAP NAS system information - CN domain specific DRX cycle length coefficient	A2	 00 80H (see note) PS 1E 01H 7
- UE Timers and constants in idle mode -T300 -N300 -T312 - N312 - T317	A1, A2	 4 000 milliseconds 3 10 seconds 1 Not Present (180 seconds: default value)
NOTE: For Inter-RAT test cases GERAN and UTRAN cells use different LAC and RAC.		

Then, as it always happens, Life went on …

One day a new bookkeeper came in and discovered … this

- CN domain specific DRX cycle length coefficient	
- References to other system information blocks and scheduling blocks	
- References to other system information blocks	
- Scheduling information	
- CHOICE Value tag	Cell Value Tag
- Cell Value tag	1
- Scheduling	
- SEG_COUNT	1
- SIB_REP	16
- Cell Value tag	1
- SEG_COUNT	1
- SIB_REP	64
- SIB_POS	20
- SIB_POS offset info	Not Present - use default
- SIB and SB type	System Information Type 3
- Scheduling information	
- CHOICE Value tag	Cell Value tag

And this …

- SIB6 indicator	TRUE
- PRACH partitioning	
- Access Service Class	
- ASC Settings	(ASC#0)
- CHOICE mode	TDD
- CHOICE TDD option	1.28 Mcps TDD
- Available SYNC_UL codes indices	"11111111"
- CHOICE subchannel size	Size1
- Available Subchannels	Null
- Individual timeslot info	
- Channelisation Code	Reference clause 6.10 "Parameter Set"
- TFCS	Reference clause 6.10 "Parameter Set"
- CHOICE TFCI *signalling*	
- Midamble configuration	8
- Midamble Shift	Not Present
- Channelisation code list	
- Channelisation code	(16/1)
- Channelisation code	(16/2)
- Repetition period/length	64/2
- Offset	0
- Paging indicator length	4
- N_{GAP}	4
- N_{PCH}	2
- CBS DRX Level 1 information	Not Present

And this …

- Cell info		Same content as specified for Intra-frequency cell id=2 with the exception that value for Primary scrambling code shall be according to clause titled "Default settings for cell No.11 (FDD)" in clause 6.1.4
- Cells for measurement - Intra-frequency measurement quantity - Filter coefficient - Reporting quantities for monitored set cells - Cell synchronization information reporting indicator - CHOICE mode - Reporting interval - Reporting cell status	A1, A2, A3 A1, A2, A3	Not Present Not present Absence of this IE is equivalent to the default value 0 TRUE FDD Not Present
- CHOICE reported cell - Maximum number of reported cells **- Inter-frequency measurement system information** - Inter-frequency cell info list - CHOICE Inter-frequency cell removal - Cell info - Cell for measurement - Inter-RAT measurement system information	A1, A2 A1, A3	Report cell within active set and/or monitored set cells on used frequency 3 Not present (This IE shall be ignored by the UE for SIB11) Not present Not Present
- Inter-RAT measurement system information **- Inter-RAT cell info list** - CHOICE *Inter-RAT cell removal*	A2	Not Present (This IE shall be ignored by the UE for SIB11)
- New inter-RAT cells - Traffic volume measurement system information	A1, A2, A3	Not Present

And even this …

- Cell info …..		Same content as specified for Inter-frequency cell id=6 in SIB11 for Cell 1 in clause 6.1.0b
- Inter-RAT cell info list …. - New inter-RAT cells	A2	

and this …

Contents of UE positioning GPS reference time IE

Information Element	Value/remark	Version
GPS Week	FFS	
GPS TOW msec	FFS	
UTRAN GPS reference time	FFS	
>UTRAN GPS timing of cell frames	FFS	
>CHOICE mode	FFS	
>>FDD	FFS	
>>>Primary CPICH Info	FFS	
>>TDD	Not present	
>>>cell parameters id	Not present	
>SFN	FFS	
SFN-TOW Uncertainty	FFS	

And many like the above (see at the end of this story) …

----------End of Part 1----------

Part 2: Logic is logic but can you read it?

Quiz: What is the default value of T312?

- UE Timers and constants in connected mode		
- T301		Not Present (2 000 milliseconds: default value)
- N301		Not Present (2: default value)
- T302		Not Present (4 000 milliseconds: default value)
- N302		Not Present (3: default value)
- T304		Not Present (2 000 milliseconds: default value)
- N304		Not Present (2: default value)
- T305		Not Present (30 minutes: default value)
- T307		Not Present (30 seconds: default value)
- T308		Not Present (160 milliseconds: default value)
- T309		Not Present (5 seconds: default value)
- T310		Not Present (160 milliseconds: default value)
- N310		Not Present (4: default value)
- T311		Not Present (2 000 milliseconds: default value)
- T312		Not Present (1 seconds: default value)
- N312		Not Present (1: default value)
- T313		Not Present (3 seconds: default value)
- N313		Not Present (20: default value)
- T314		Not Present (12 seconds: default value)
- T315		Not Present (180 seconds: default value)
- N315		Not Present (1: default value)
- T316		Not Present (30 seconds: default value)
- T317		Not Present (180 seconds: default value)
NOTE: For Inter-RAT test cases GERAN and UTRAN cells use different LAC and RAC.		

Which way is better for reading?

This way:

- Max PDCP SN window size		Not present	
- PDCP PDU header		Absent	
- Header compression information		Not present	
- CHOICE RLC info type		RLC info	
- CHOICE Uplink RLC mode		AM RLC	
- Transmission RLC discard			
- CHOICE SDU discard mode		No Discard	
- MAX_DAT		15	
- Transmission window size		128	
- Timer_RST		500	
- Max_RST		4	
- Polling info			
- Timer_poll_prohibit		100	
- Timer_poll		100	

Or This way:

- Max PDCP SN window size		Not present	
- PDCP PDU header		Absent	
- Header compression information		Not present	
- CHOICE RLC info type		RLC info	
- CHOICE Uplink RLC mode		AM RLC	
- Transmission RLC discard			
- CHOICE SDU discard mode		No Discard	
- MAX_DAT		15	
- Transmission window size		128	
- Timer_RST		500	
- Max_RST		4	
- Polling info			
- Timer_poll_prohibit		100	
- Timer_poll		100	

And another quiz …

Could you tell in the following two tables what the REL-5 applies to?

New C-RNTI	A5, A6, A7, A8 , A10	'1010 1010 1010 1010'	REL-5
New DSCH-RNTI	A1, A2, A3, A4, A5, A6, A7, A8 , A9, A10,	Not Present	REL-5
New H-RNTI	A1, A2, A3, A4, A5, A6, A7, A8 , A9, A10,	Not Present	REL-5
RRC State indicator	A1,A2, A3, A4 , A9	CELL_DCH	REL-5
RRC State indicator	A5, A6, A7, A8 , A10	CELL_FACH	REL-5

New DSCH-RNTI	A1, A2, A3, A4, A5, A6	Not Present	
New H-RNTI	A1, A2, A3, A4, A5, A6	Not Present	REL-5
RRC State indicator	A1, A2, A3, A4	CELL_DCH	
RRC State indicator	A5, A6	CELL_FACH	
UTRAN DRX cycle length coefficient	A1, A2, A3, A4,A5,A6	Not Present	
CN information info		Not Present	
URA identity		Not Present	

Now for something completely different…

Who is this that does not like tables?

8.2 Default Parameters for the test USIM

K:

Size:	16 Bytes
Default values:	Bytes 1 (HEX): 00
	Bytes 2 (HEX): 01
	Bytes 3 (HEX): 02
	Bytes 4 (HEX): 03
	Bytes 5 (HEX): 04
	Bytes 6 (HEX): 05
	Bytes 7 (HEX): 06

8.3.2.5 $EF_{PLMNwAcT}$ (User controlled PLMN selector with Access Technology)

File size:	5n bytes		
Default values (HEX):	Bytes 1 to 3:	32 F4 10	(MCC, MNC) - Translates to 234, 01
	Bytes 4 to 5: UTRAN	80 00	(Access Technology) - Translates to
	Bytes 6 to 8:	32 F4 20	(MCC, MNC)
	Bytes 9 to 10:	80 00	(Access Technology)
	Bytes 11 to 13:	32 F4 30	(MCC, MNC)
	….		
	….		
	….		
	Bytes(5n-4) to (5n-2):	32 F4 43	(MCC, MNC)
	Bytes (5n-1) to 5n:	80 00	(Access Technology)

How about if we would have liked tables?

8.2 Default Parameters for the test USIM

K:	
Size:	16 Bytes
Default values:	Bytes 1 (HEX): 00
	Bytes 2 (HEX): 01
	Bytes 3 (HEX): 02
	Bytes 4 (HEX): 03
	Bytes 5 (HEX): 04
	Bytes 6 (HEX): 05
	Bytes 7 (HEX): 06

8.3.2.5 $EF_{PLMNwAcT}$ (User controlled PLMN selector with Access Technology)

File size: 5n bytes

Default values (HEX) indicated in the table bellow:

Bytes	**Vallue**	**Comment**
Bytes 1 to 3:	32 F4 10	(MCC, MNC) - Translates to 234, 01
Bytes 4 to 5:	80 00	(Access Technology) - Translates to UTRAN
Bytes 6 to 8:	32 F4 20	(MCC, MNC)
Bytes 9 to 10:	80 00	(Access Technology)
Bytes 11 to 13:	32 F4 30	(MCC, MNC)
....	…	…
Bytes(5n-4) to (5n-2):	32 F4 43	(MCC, MNC)
Bytes (5n-1) to 5n:	80 00	(Access Technology)

End of Part 2
To be continued …

More comparison info for curious people (and cold nights)

Condition	Explanation	Version
A1	This IE is needed for "Non speech to CELL_DCH from CELL_DCH in CS"	
A2	This IE is needed for "Speech to CELL_DCH from CELL_DCH in CS"	
A3	This IE is needed for "Packet to CELL_DCH from CELL_DCH in PS"	
A4	This IE is needed for "Packet to CELL_DCH from CELL_FACH in PS"	
A5	This IE is needed for "Packet to CELL_FACH from CELL_DCH in PS"	
A6	This IE is needed for "Packet to CELL_FACH from CELL_FACH in PS"	
A7	This IE is needed for "Non speech to CELL_DCH from CELL_FACH in CS"	
A8	This IE is needed for "Speech to CELL_DCH from CELL_FACH in CS"	
A9	This IE is needed for "Packet to CELL_DCH / HS-DSCH using three multiplexing options", or when not stated otherwise, for "Packet to CELL_DCH / HS-DSCH from CELL_DCH in PS"	REL-5
A10	This IE is needed for "Packet to CELL_DCH / HS-DSCH using one multiplexing option", or when not stated otherwise, for "Packet to CELL_DCH / HS-DSCH from CELL_FACH in PS"	REL-5
A11	This IE is needed for " Packet RAB Setup after Speech RAB Setup in CELL_DCH"	

- RRC Message Sequence Number		Set to an arbitrarily selected integer between 0 and 15
Security capability - Ciphering algorithm capability - UEA0		If the UE has indicated support for ciphering algorithm UEA0 in the IE "security capability" in the RRC CONNECTION SETUP COMPLETE message, this IE is set to TRUE.
- UEA1 - Spare - Integrity protection algorithm capability - UIA1 - Spare Ciphering mode info		If the UE has indicated support for ciphering algorithm UEA1 in the IE "security capability" in the RRC CONNECTION SETUP COMPLETE message, this IE is set to TRUE. Spare 2-15 = FALSE 0000000000000010B (UIA1) TRUE Spare 0 and Spare 2-15 = FALSE This presence of this IE is dependent on IXIT statements in TS 34.123-2. If ciphering is indicated to be active, this IE present with the values of the sub IEs as stated below. Else, this IE is omitted.

Contents of URA UPDATE message: TM

Information Element	Value/remark
Message Type	
U-RNTI	Checked to see if it is set to the following values
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
RRC transaction identifier	Checked to see if it is absent
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
URA update cause	See the test content
Protocol error indicator	Checked to see if it is absent or set to 'FALSE'
Protocol error information	Checked to see if it is absent

Default settings for cell No.1 (FDD)

Downlink input level	Reference clause 6.10 "Parameter Set"
Uplink output power	Minimum supported by the UE's power class.
PCCPCH/PCPICH carrier number	Reference clause 6.10 "Parameter Set"
Cell Channel Description	
- Primary CPICH info	
- Primary scrambling code	100

The contents of SYSTEM INFORMATION BLOCK TYPE 1 to 16 messages for cell No.2 are identical to those of cell No.1 with the following exceptions.

Cell identity	0000 0000 0000 0000 0000 0000 0010B
URA identity	0000 0000 0000 0001B

Table 6.1.5: Default power levels of physical channels relative to CPICH_Ec

Parameter	Unit	Level Idle mode	Level Connected mode
DPCH_Ec	dB	(see note)	See table 6.1.6
PCCPCH_Ec	dB	-2	
SCCPCH_Ec	dB	-2	
AICH_Ec	dB	-5	
SCH_Ec	dB	-5	
PICH_Ec	dB	-5	
NOTE: This shall be less than -122 dBm to ensure the channel is considered as "off".			

6.10.2.4.1.11.2.1.1 Transport channel parameters for Conversational / speech / DL:4.75 kbps / CS RAB

Higher layer	RAB/Signalling RB		RAB subflow #1	RAB subflow #2
RLC	Logical channel type		DTCH	
	RLC mode		TM	TM
	Payload sizes, bit		0 39 42	53
	Max data rate, bps		4 750	
	TrD PDU header, bit		0	
MAC	MAC header, bit		0	
	MAC multiplexing		N/A	
Layer 1	TrCH type		DCH	DCH
	TB sizes, bit		0 39 42	53
	TFS (note 1)	TF0, bits	1x0 (note 2)	0x53
		TF1, bits	1x39	1x53
		TF2, bits	1x42	N/A
	TTI, ms		20	20
	Coding type		CC 1/3	CC 1/3
	CRC, bit		12	N/A
	Max number of bits/TTI after channel coding		186	183
	RM attribute		180 to 220	170 to 210
NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in 3GPP TS 25.212 [14]). NOTE 2: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see clause 4.2.1.1 in 3GPP TS 25.212 [14]).				

7.4.2.8.1.1.3 Procedure

The Session Set-up procedure shall be performed under Ideal radio conditions as defined in clauses 5.2 and 6.1.

Step	Direction		Message	Comments
	UE	SS		
1	←		PAGING TYPE2 (DCCH)	Paging
2	→		SERVICE REQUEST	GMM
3	←		AUTHENTICATION AND CIPHERING REQUEST	GMM
4	→		AUTHENTICATION AND CIPHERING RESPONSE	GMM
5	←		SECURITY MODE COMMAND	RRC
6	→		SECURITY MODE COMPLETE	RRC
7	←		REQUEST PDP CONTEXT ACTIVATION	SM
8	→		ACTIVATE PDP CONTEXT REQUEST	SM
9	←		RADIO BEARER SETUP	RRC RAB SETUP
10	→		RADIO BEARER SETUP COMPLETE	RRC
11	←		ACTIVATE PDP CONTEXT ACCEPT	SM

Contents of MEASUREMENT CONTROL message: RRC

Information Element	Value/remark
Measurement Reporting Mode	Periodical reporting
Amount of reporting	Infinite (see note)
Reporting interval	2 000 ms
Horizontal accuracy	50 m
Vertical accuracy	100 m
NOTE: Infinite means during the complete test time.	