TSG-RAN Working Group 1 meeting #10
Beijing, China
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Agenda item:

Source: Nokia

Title: Need for compressed mode in UL and DL

Document for: Decision

Summary

Currently, Table 1 in section 5.1, Value Ranges, in TR 25.926 v1.0.0 defines value range Yes/No for compressed mode (CM) capability parameter. In order to define this in more detail we propose that the capability parameter for CM is divided into UL and DL parts. Consequently, UL and DL do not need to switch simultaneously to compressed mode enabling the further development of the terminals.

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Table 1: UE radio access capability parameter value ranges

		UE radio access capability parameter	Value range
PDCP parameters		Header compression algorithm supported	Yes/No
RLC parameters		Total RLC AM buffer size	2,10,50,100,150,500,1000 kBytes
		Maximum number of AM entities	2,3,4,8,16,32
PHY parameters	Transport channel parameters in downlink	Maximum sum of number of bits of all transport blocks received in TTIs that end at the same time	640, 1280, 2560, 3840, 5120, 6400, 7680, 8960, 10240, 20480, 40960, 81920, 163840
		Maximum sum of number of sustainedly processable bits of all transport blocks received in TTIs that end at the same time, normalized with the respective TTI lengths in number of radio frames.	640, 1280, 2560, 3840, 5120, 6400, 7680, 8960, 10240, 20480, 40960, 81920, 163840
		Maximum number of simultaneous transport channels	4, 8, 16, 32
		Maximum number of simultaneous CCTrCH (of DCH type	1, 2, 3, 4, 5, 6, 7, 8
		Maximum total number of transport blocks received within TTIs that end at the same time	4, 8, 16, 32, 48, 64, 96, 128, 256, 512
		Maximum number of TFC in the TFCS	16, 32, 48, 64, 96, 128, 256, 512, 1024
		Support for turbo decoding	Yes/No
		Support of 24 bits CRC	Yes/No
		Support of blind transport format detection (FFS) This should be first specified fully. Then a LS should be sent by WG1 to WG2 about what needs to be the UE capability.	Yes/No
	Transport channel parameters in uplink	Maximum sum of number of bits of all transport blocks transmitted in TTIs that start at the same time	, 640, 1280, 2560, 3840, 5120, 6400, 7680, 8960, 10240, 20480, 40960, 81920, 163840
		Maximum sum of number of sustainedly processable bits of all transport blocks received in TTIs that end at the same time, normalized with the respective TTI lengths in number of radio frames.	640, 1280, 2560, 3840, 5120, 6400, 7680, 8960, 10240, 20480, 40960, 81920, 163840
		Maximum number of simultaneous transport channels	2, 4, 8, 16, 32
		Maximum number of simultaneous CCTrCH of DCH type (TDD only)	1, 2, 3, 4, 5, 6, 7, 8
		Maximum total number of transport blocks transmitted within TTIs that start at the same time	2, 4, 8, 16, 32, 48, 64, 96, 128, 256, 512
		Maximum number of TFC in the TFCS	4, 8, 16, 32, 48, 64, 96, 128, 256, 512, 1024
		Support for turbo encoding	Yes/No
		Support of 24 bits CRC	Yes/No
	FDD Physical channel parameters in downlink	Maximum number of DPCH per RL	1, 2, 3, 4, 5, 6, 7, 8
		Maximum number of DPCH bits received per 10 ms	300, 600, 1200, 2400, 4800, 9600, 19200, 28800, 38400, 48000, 57600, 67200
		Support for SF 512	Yes/No

		Support of PDSCH	Yes/No
		Maximum number of simultaneous S-CCPCH	FFS
		Simultaneous reception of SCCPCH and DPCH	Yes/No
	FDD Physical channel parameters in uplink		
		Maximum number of DPDCH bits transmitted per 10 ms	150, 300, 600, 1200, 2400, 4800. 9600. 19200. 28800, 38400, 48000, 57600
		Support of PCPCH	FFS
	TDD physical channel parameters in downlink	Maximum number of timeslots per frame	1..14
		Maximum number of physical channels per frame	1,2,3..,224
		Minimum SF	16, 1
		Support of PDSCH	Yes/No
	TDD physical channel parameters in uplink	Maximum Number of timeslots per frame	1..14
		Maximum number of physical channels per timeslot	1, 2
		Minimum SF	16,8,4,2,1
		Support of PUSCH	Yes/No
RF parameters	FDD RF parameters	UE power class (25.101 section 6.2.1)	1, 2, 3, 4
		Radio frequency bands (25.101 section 5.2)	a), b), a+b)
		Tx/Rx frequency separation FFS for frequency band b (25.101 section 5.3)	190 MHz 174.8-205.2 MHz 134.8-245.2 MHZ
		Chip rate capability	N/A for FDD
RF parameters	TDD RF parameters	UE power class (25.102)	1,2,3,4,
		Radio frequency bands (25.102)	a), b), c), a+b), a+c), a+b+c)
		Tx/Rx frequency separation	N/A for TDD
		Chip rate capability (25.102)	3.84,1.28
Multi-mode related parameters		Support of UTRA FDD/TDD	FDD, TDD, FDD+TDD
Multi-RAT related parameters		Support of GSM	Yes/No
		Support of multi-carrier	Yes/No
LCS related parameters		LCS support	FFS
Measurement related capabilities (FFS)		Need for UL compressed mode Need for DL compressed mode	Yes/No Yes/No

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