Agenda Item:

Source: Samsung Electronics Research Institute

Title: Proposed Liaison statement to T2 on Physical Layer Baseline Implementation Capabilities

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Introduction

TSG RAN WG1 was unable to reach an agreement on the physical layer baseline implementation capabilities at its 3rd meeting, in Stockholm. The meeting instead agreed to send liaison statement to TSG T WG2 explaining that it also saw the need to define "fundamental physical layer features" that may not be part of baseline implementation capabilities, but were nonetheless required to be mandated in the terminal. There was no time to discuss the issue of UE capabilities during the 4th R1 meeting due to the requirement to finalise first draft versions of the specifications.

T2 has since responded to the liaison statements it received on baseline implementation capabilities, and has asked once again that R1 sends details of physical layer baseline implementation capabilities. R1 should understand that T2 is not aiming to decide what should and what should not be mandated in the terminal, but is seeking at this time to identify aspects of the physical layer (and other technical domains) that are necessary in order for the UE to support the defined baseline functionality. Below is a proposed response to T2 listing physical layer baseline implementation capabilities. The meeting is invited to consider and approve the attached proposal, and forward it to T2 in time for its next meeting from June 14, 1999.

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Source: TSG RAN WG1

Title: Liaison statement on Physical Layer Baseline Implementation Capabilities

To: TSG T WG2

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TSG RAN WG1 would like to thank TSG T WG2 for the liaison on "Report of the current status on terminal capabilities". RAN WG1 has now begun to identify the baseline implementation capabilities that are within its technical domain. A first draft of the baseline implementation capabilities, together with relevant references to the 25.2 series, is given in the table below. This list is under review based upon further work that is being carried out within this group. TSG RAN WG1 would welcome any feedback from TSG T WG2 on the baseline implementation capabilities that have been identified.

Baseline Implementation Capability	Specification	Section(s)[1]	Status	Comments
Physical Layer UE procedures and measurements:				
Support for network and access node selection	25.214 / 25.224	4.1, 4.2, 4.3 / 6.5, 6.6	M / M	
Cell selection and reselection	25.231	5	M	
Support for network contact and registration	25.214 / 25.224	4.4, 4.5, 6 / 6.4	M / M	

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[1] The list of references to the 25.2 series should not be considered exhaustive and may need to be updated as the standard is further elaborated.

Power control	25.214	5	M	
	25.224	6.3	M	
	25.231	7.3	M	Not yet decided if there is a need to standardise measurements in relation to power control.
Channel Coding	25.212	4.1, 4.2	M	
	25.222	6.1, 6.2	M	
Spreading and Scrambling Code Generation	25.213	4.3	M	Limit of FDD spreading factor required to support baseline capability, is still to be decided.
	25.223	6, 7	M	
Code de-spreading and de-scrambling	25.213	5.2	M	
	25.223	6, 7	M	
Modulation	25.213	4.4,	M	
	25.223	5	M	
Support for downlink Transmit Diversity	25.211	5.3.1	M	
Transport channels necessary for the above:				
Synchronisation channel (SCH)	25.221	4.1.2	M	SCH exists for TDD mode only
Broadcast channel (BCH)	25.211	4.2.1, 6	M	
	25.221	4.1.2, 6	M	
Paging channel (PCH)	25.211	4.2.3, 6	M	PCH is required to transport notification of a change in system information carried on BCCH.
	25.221	4.1.2, 6	M	
Random access channel (RACH)	25.211	4.2.4, 6	M	
	25.221	4.1.2, 6	M	
Forward access channel (FACH)	25.211	4.2.2, 6	M	
	25.221	4.1.2, 6	M	
Dedicated channel (DCH)	25.211	4.1.1, 6	M	During connection for "registration" network will decide whether DCH is used for the DCCH or whether RACH/FACH is used
	25.221	4.1.1, 6	M	
Physical channels necessary for above:				
Primary Common Control Physical Channel (Primary CCPCH)	25.211	5.3.3.1, 6	M	Applies only to FDD mode
Secondary Common Control Physical Channel (Secondary CCPCH)	25.211	5.3.3.1, 6	M	Applies only to FDD mode
Common Control Physical Channel (CCPCH)	25.221	5.3.1, 6	M	Applies only to TDD mode
Physical Random Access Channel (PRACH)	25.211	5.2.2, 6	M	Applies to both FDD and TDD mode
	25.221	5.3.2, 6		
Dedicated Physical Data Channel (DPDCH)	25.211	5.2.1, 5.3.2, 6	M	Applies only to FDD mode
Dedicated Physical Control Channel (DPCCH)	25.211	5.1.2, 5.3.2, 6	M	Applies only to FDD mode
DPCH	25.221	5.2, 6		Applies only to TDD mode
Synchronisation Channel (SCH)	25.211	5.3.3.3, 6	M	Applies only to FDD mode
Physical Synchronisation Channel (PSCH)	25.221	5.4, 6		Applies only to TDD mode
Acquisition Indication Channel (AICH)	25.211	5.3.3.6, 6	M	Applies only to FDD mode
	25.221			