

Source: TSG RAN WG1

Title: Liaison statement on Physical Layer Baseline Implementation Capabilities

To: TSG T WG2

Cc: TSG RAN WG2

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 necessary for the support of a service-less terminal as defined in R1-99256, together with relevant references to the 25.2 series, is given in the tables below. This list is under review based upon further work 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.

R1 notes the request to identify whether each of the baseline implementation capabilities are mandatory or optional. R1 considers that all the baseline implementation capabilities are mandatory, but dependent on the operational mode. Where a particular baseline implementation capability is only applicable to one mode (TDD or FDD) then that capability could be considered optional because the mode as a whole is optional. In this situation, we consider that the particular baseline implementation capability is mandatory for a given mode.

R1 is aware of the inconsistency regarding support of dedicated channels, between this LS and that sent by TSG RAN WG2 in document T2-99397. R1 does not consider support of dedicated channels to be part of the baseline implementation capabilities, but the matter is subject to discussion with TSG RAN WG2.

Table 1. FDD mode Physical Layer Baseline implementation capabilities

Baseline Implementation Capability	Specification	Section(s)¹	Comments
---	----------------------	-------------------------------	-----------------

¹ The list of references to the 25.2 series should not be considered exhaustive. References will need to be refined and updated as the standard is further elaborated.

Physical Layer UE procedures and measurements:			
Support for network and access node selection	25.214	4.1, 4.2, 4.3	
Cell selection and reselection	25.231	5	
Support for network contact and registration	25.214	4.4, 4.5, 6	
Power control	25.214 25.231	5.1.1 7.3	Not yet decided if there is a need to standardise measurements in relation to power control.
Channel Coding	25.212	4.1, 4.2	The exact requirements for channel coding to support baseline capability, are still to be decided
Spreading and Scrambling Code Generation	25.213	4.3	Limit of FDD spreading factor required to support baseline capability, is still to be decided.
Code de-spreading and de-scrambling	25.213	5.2	
Modulation	25.213	4.4,	
Support for downlink Transmit Diversity	25.211	5.3.1	Only Open Loop mode Tx diversity required to support baseline capability
Transport channels necessary for the above:			
Broadcast channel (BCH)	25.211	4.2.1, 6	
Paging channel (PCH)	25.211	4.2.3, 6	PCH is required to transport notification of a change in system information carried on BCCH.
Random access channel (RACH)	25.211	4.2.4, 6	
Forward access channel (FACH)	25.211	4.2.2, 6	
Physical channels necessary for above:			
Primary Common Control Physical Channel (Primary CCPCH)	25.211	5.3.3.1, 6	
Secondary Common Control Physical Channel (Secondary CCPCH)	25.211	5.3.3.1, 6	
Physical Random Access Channel (PRACH)	25.211	5.2.2, 6	
Synchronisation Channel (SCH)	25.211	5.3.3.3, 6	
Acquisition Indication Channel (AICH)	25.211 25.221	5.3.3.6, 6	

Table 2. TDD mode Physical Layer Baseline Implementation Capabilities

Baseline Implementation Capability	Specification	Section(s)²	Comments
Physical Layer UE procedures and measurements:			

² The list of references to the 25.2 series should not be considered exhaustive. References will need to be refined and updated as the standard is further elaborated.

Support for network and access node selection	25.224	6.5, 6.6	
Cell selection and reselection	25.231	5	
Support for network contact and registration	25.224	6.4	
Power control	25.224 25.231	6.3.3.1 7.3	Not yet decided if there is a need to standardise measurements in relation to power control.
Channel Coding	25.222	6.1, 6.2	The exact requirements for channel coding to support baseline capability, are still to be decided
Spreading and Scrambling Code Generation	25.223	6, 7	
Code de-spreading and de-scrambling	25.223	6, 7	
Modulation	25.223	5	
Support for downlink Transmit Diversity	25.221	6.8	
Transport channels necessary for the above:			
Synchronisation channel (SCH)	25.221	4.1.2	SCH exists for TDD mode only
Broadcast channel (BCH)	25.221	4.1.2, 6	
Paging channel (PCH)	25.221	4.1.2, 6	PCH is required to transport notification of a change in system information carried on BCCH.
Random access channel (RACH)	25.221	4.1.2, 6	
Forward access channel (FACH)	25.221	4.1.2, 6	
Physical channels necessary for above:			
Common Control Physical Channel (CCPCH)	25.221	5.3.1, 6	
Physical Random Access Channel (PRACH)	25.221	5.3.2, 6	
Physical Synchronisation Channel (PSCH)	25.221	5.4, 6	