TSG-RAN Working Group 1 (Radio Layer 1) meeting #1   *TSGR1#1(99)003*
ESpoo 21st - 22nd January 1999

Agenda Item:

Source: **ARIB IMT-2000 Study Committee / Air-interface Working Group**

Title: **Documentation Structure for Layer-1 Specification**

Document for:

_____

As pointed out in [1], we also recognise that it is important to start deciding the document structure for Radio Access Network. Attached is a comparison result between ETSI [1] and ARIB [2] Layer-1 documentation structures. ETSI and ARIB have almost the same structure. We agree to use the documentation structure proposed in [1] as regards the Layer-1 specification part.

References

[1] Proposed Specification Structure for the Radio Access Network TSG, Source: Ericsson, 3GPP1 TSG Tdoc TSG#1(98)003, December 1998.

[2] Volume 3: Specifications of Air-Interface for 3G Mobile System (Ver.1.0), Source: ARIB, January 14, 1999 (**Error! Bookmark not defined.**).

RAN TSG Technical Specifications

No	Name	Scope	ETSI	ARIB	Difference (A:ARIB, E:ETSI)
S0.01	Vocabulary for the 3GPP RAN TSG	Compilation of terms, definitions and abbreviations related to the documents in the RAN TSG.	25.xx Vocabulary for the UTRAN		
S0.02	UE capabilities	Identifies the capabilities of different user equipment.	XX.21 "UTRA MS capability"		
S1.01	Physical Layer – General Description	Describes the contents of the L1 documents (S1 & I1 series), where to find information, as well as a general description of L1.	XX.01 "UMTS physical layer documentation plan" and XX.02 "UTRA physical layer – general description"	Vol.3-Sec.1 "Introduction" Vol.3-Sec.2 "General Protocol Architecture" Vol.3-Sec.3.1 "Duplex operation"	
S1.11	Transport and physical channels (FDD)	Specifies transport channels, physical channel structure and contents, timing relationship between physical channels, and mapping of data to the physical channels.	XX.03 "UTRA FDD, Transport and physical channels description"	Vol.3-Sec.3.2.1 "FDD mode, Channel Structure" Vol.3-Sec.3.2.2 "FDD mode, Frame Format" Vol.3-Sec.3.2.5 "FDD mode, Timing Relationship"	*A. 3.2.1.1 Logical channels* *A. 3.2.1.3 Mapping of logical channels onto transport channels* *A. 3.2.2.1 Timing relationship* *A. 3.2.2.4.3 Power control timing*
S1.12	Multiplexing and channel coding (FDD)	Specifies channel coding, interleaving, rate matching and multiplexing of transport channels.	XX.04 " UTRA FDD, multiplexing, channel coding and interleaving description"	Vol.3-Sec.3.2.3 "FDD mode, Channel Coding"	*A. 3.2.3.4 Error detection* *A. 3.2.3.5 Coding procedure* *A. 3.2.3.6 Bit transmission sequence* *E. XX.04.8.5 Coding for slotted mode*
S1.13	Spreading and modulation (FDD)	Specifies the spreading, modulation and pulse shaping, including generation of various spreading and scrambling codes and RF channel arrangements.	XX.05 "UTRA FDD, spreading and modulation description" and parts of XX.06 "UTRA FDD, Radio transmission and reception description"	Vol.3-Sec.3.2.4 "FDD mode, Modulation and Spreading	
S1.14	Physical layer procedures (FDD)	Specifies the physical layer procedures, such as power control, cell search and idle mode tasks.	XX.07 "UTRA FDD, physical layer procedures description"	Vol.3-Sec.3.2.6 "FDD mode, Layer 1 Procedures"	*A. 3.2.6.2 Synchronization procedures* *A. 3.2.6.4 Rate detection* *A. 3.2.6.5 Quality supervision* *A. 3.2.6.8 Multirate transmission* *A. 3.2.6.9 Discontinuous transmission* *A. 3.2.6.10 Packet data transmission procedures*
S1.15	Measurements (FDD)	Specifies the measurements that L1 is to perform and reporting to higher layers and network.	XX.15 "UTRA handover".	Vol.3-Sec.3.2.6.6 "FDD mode, Layer 1 Procedures, Handover"	
	(Others)		XX.08 "Additional features description	Vol.3-Sec.3.2.6.12 "FDD mode, Layer 1 Procedures, Others"	*A. Reverse link synchronous transmission*

					A. Asynchronous transmission control A. Antenna/BS selection information E. Adaptive antennas E. Multi-user detection E. Locationing function support
S1.21	Transport and physical channels (TDD)	Specifies transport channels, physical channel structure and contents, timing relationship between physical channels, and mapping of data to the physical channels.	XX.09 "UTRA TDD, Transport and physical channels description"	Vol.3-Sec.3.3.1 "TDD mode, Channel Structure" Vol.3-Sec.3.3.2 "TDD mode, Frame Format" Vol.3-Sec.3.3.5 "TDD mode, Timing Relationship" Vol.3-Sec3.3.6.13.1 "TDD mode, Layer 1 Procedures, Others, Asymmetric transmission control"	A. 3.3.1.1 Logical channels A. 3.3.1.3 Mapping of logical channels onto transport channels
S1.22	Multiplexing and channel coding (TDD)	Specifies transport channels, physical channel structure and contents, timing relationship between physical channels, and mapping of data to the physical channels.	XX.10 " UTRA TDD, multiplexing, channel coding and interleaving description"	Vol.3-Sec.3.3.3 "TDD mode, Channel Coding"	A. 3.3.3.4 Error detection A. 3.3.3.5 Coding procedure A. 3.3.3.6 Bit transmission sequence
S1.23	Spreading and modulation (TDD)	Specifies the spreading, modulation and pulse shaping, including generation of various spreading and scrambling codes and RF channel arrangements.	XX.11 "UTRA TDD, spreading and modulation description" and parts of XX.12 "UTRA TDD, Radio transmission and reception description"	Vol.3-Sec.3.3.4 "TDD mode, Modulation and Spreading"	
S1.24	Physical layer procedures (TDD)	Specifies the physical layer procedures, such as power control, cell search and idle mode tasks.	XX.13 "UTRA TDD, physical layer procedures description"	Vol.3-Sec.3.3.6 "TDD mode, Layer 1 Procedures"	A. 3.3.6.2 Synchronization procedures A. 3.3.6.4 Rate detection A. 3.3.6.5 Quality supervision A. 3.3.6.8 Multirate transmission A. 3.3.6.9 Discontinuous transmission A. 3.3.6.10 Packet data transmission procedures
S1.25	Measurements (TDD)	Specifies the measurements that L1 is to perform and reporting to higher layers and network.	XX.15 "UTRA handover"	Vol.3-Sec.3.3.6.6 "TDD mode, Layer 1 Procedures, Handover"	
	(Others)		XX.14 "UTRA TDD, additional features description"	Vol.3-Sec.3.3.6.12 "FDD mode, Layer 1 procedures, Forward link transmit diversity" Vol.3-Sec.3.3.6.13 "FDD mode, Layer 1 procedures, Others"	E. Adaptive antennas E. Multi-user detection E. Locationing function support