

TSG RAN#8 June 21-23, 2000

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Report from TSG RAN WG1 chairman to TSG RAN#8

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Ref: CR list for RAN WG1 in Tdoc RP-00-0270

Executive Summary

- Release -99 issues still consuming meeting time, items small corrections/clarifications
- Joint sessions with RAN WG3 (Downlink power control) & RAN WG2 UE capability during WG1#12 in Seoul
- Technical report on narrowband TDD progressed a great deal, still work to do before proceeding to specification/CR phase
 - Separate physical 2 day ad hoc was held to proceed the topic
- Release 2000 discussed started with part of the topics
 - Terminal power saving features
 - High speed downlink packet access
 - Improved inter-frequency/inter-system measurements
 - TX diversity (radio link performance improvement study item)
 - TDD Node B synch, Improved Cell RACH/FACH state ...
- Discussions with these and other topics will proceed in the coming meetings

25.201 Physical Layer General Description

- Editorial CR done to update specification as well as CRs on information flow and mathematical notation included

25.211 Physical Channels and Mapping of Transport Channels to Physical Channels (FDD)

- Editorial changes and small adjustments/corrections
- No really new functionality introduced, rather adding clarifications and ensuring notation is consistent.

25.212 Multiplexing and Channel coding (FDD)

- Very detailed corrections and notational alignment for items such as:
 - Turbo interleaving
 - Rate matching
 - TFCI coding
- The BTFD (Blind Transport Format Detection) restrictions were clarified

25.213 Spreading and scrambling (FDD)

- PCPCH access preamble numbering clarified
- DPDCH/DPCCH gain factor equations adjusted

25.214 Physical Layer Procedures (FDD)

- Downlink power control specified in more detail after the joint session with WG3 during WG1#12 in Tokyo
- CSICH power parameter added (CSICH= CPCH Status Indication Channel)
- Others smaller corrections/clarifications
- Open Item: As suggested by RAN WG4, the UE TPC behaviour in SHO needs to be a bit more exactly specified. CR to be produced from the next WG1 meeting

25.215 Measurements (FDD)

- **Range/mapping values removed**
 - **Subject to approval on corresponding CR to W G4 specifications (which introduces range/mapping values)**
- **Propagation delay measurements added for PCPCH as well as RACH & CPCH measurements on number of access attempts etc.**
- **UTRAN TrCh BLER measurement removed based on feedback from other RAN WG2**
- **Other corrections**

25.221 Physical Channels and mapping of transport channels to physical channels (TDD)

- TPC transmission clarified
- PCH/PICH timing constraints specified
 - Minimum time between PICH & PCH
- Corrections

25.222 Multiplexing and Channel coding (TDD)

- Parity bit attachment for 0-size transport block introduced (as with FDD earlier)
- Corrections

25.223 Spreading and Scrambling (TDD)

- SCH code set modified
- corrections

25.224 Physical Layer Procedures (TDD)

- Downlink power control on slot by slot basis introduced (RNC information based)
- DSCH detection procedure introduced (to clarify the existing functionality)
- Corrections & Clarifications
- Open item: Power control in multislots cases might need some further work

25.225 Measurements (TDD)

- Range/mapping values removed
 - Subject to approval on corresponding CR to W G4 specifications (which introduces range/mapping values)
- UTRAN TrCh BLER measurement removed as with FDD
- TX diversity related clarifications

RAN WG1 Technical reports (1)

- **TR 25.944 Multiplexing and channel coding examples updated, single CR provided.**
 - **Discussions based on inputs, including ISG input**

RAN WG1 Technical reports (2)

- **TR 25.928 1.28 Mcps UTRA TDD Physical Layer** proceeded a great deal, items that remained to be worked on were as concluded by the physical Ad Hoc:
 - **The benefits (motivation) of the specific features of narrowband TDD, including:**
 - **uplink synchronisation**
 - **fast TPC for uplink**
 - **beamforming**
 - **GSM measurements (due different frame structure and slot length)**
- **- There are also less important details that can be covered in the specification work later**
- **- The description (differences/similarities) side made big progress in the TR**

How to proceed after the important items still to be covered for TR 25.928 are done

- **Should RAN WG1 create Separate specifications or CRs to the existing RAN WG1 specifications? RAN WG1 view:**
- **25.201 should cover also narrowband TDD (General Description)**
- **New specification for physical channels**
- **25.222 to be decided later whether this covers both TDD modes**
- **New specification for spreading and modulation**
- **25.224 to be decided later whether this covers both TDD modes**
- **25.225 to be decided later whether this covers both TDD modes**
- **25.944 TR on multiplexing and channel coding examples should also narrowband TDD**
- **Guidance from RAN considered valuable here**

Release 2000 Study Item Discussions

- Terminal power saving features:
 - Proposal on DPCCH gating was discussed. Contribution was made that gating when DCH only does not necessarily make sense but with DCH+DSCH could be clearer benefits. (DCH should be released as soon as possible when there is not data)
 - The view to proceed with studies towards DCH+DSCH case was supported by several companies
- Radio Link Performance Enhancements
 - The proposals on TX diversity enhancements have been discussed. There is not yet WG1 agreed particular solution that should be included in Release 00
 - WG1 would however have the possibility to bring CRs to RAN#9 if the work has converged (and there is consensus in WG1)
- Inter-frequency and inter-system handover improvements
 - Proposal for multi-frame compressed mode (uplink) under

Release 2000 Study Item Discussions (2)

- **High Speed Downlink Packet Access:**
 - In both meetings two overview documents were presented
- **Improved cell RACH/FACH state**
 - First simulation results were presented. Discussion has continued in the reflector after WG1#12
- **Radio Link performance enhancements**
 - Method for combining turbo decoding with soft handover (downlink) was presented. Discussions expected to continue
- **LAS-CDMA**
 - Presentation of the topic was made at the end of WG1#12, it was noted that proposal is not backwards compatible with current specification as proposals based on changed spreading and scrambling. WG1 is not expected to proceed with this.

Annex 1. WG1 Meetings held during 2000

- **W G 1#10 January Beijing, China, (Host: Nokia China)**
- **W G 1#11 Feb/March San Diego, USA, (Host: T1P1)**
- **W G 1#12 April 10-13 (Seoul, Korea, Host: TTA)**
- **W G 1#13 May 22-25 (Tokyo, Japan, Host: NTT DoCoMo)**
- **Ad Hoc on UTRA TDD 1.28 Mchips/s functionality June 14-15, (Espoo, Finland, Host: Nokia)**

Annex 2. RAN WG1 meetings left for year 2000

- **W G 1#14** **July 4-7 (Oulu, Finland, Host: Nokia)**
- **W G 1#15** **August 22-25 (Berlin, Germany, Host: Siemens)**
- **W G 1#16** **October 9-13* (Korea, Host: TTA)**
- **W G 1#17** **November 20-24* (Sweden, Host: Ericsson)**
- *** Note: Dates indicate the week, meeting duration typically 4 days**

Annex 3. WG1 CRs (REL-99) for RAN#8

- 25.201 3 CR
- 25.211 12 CRs
- 25.212 16 CRs
- 25.213 3 CRs
- 25.214 21 CRs
- 25.215 13 CRs
- 25.221 6 CRs
- 25.222 6 CRs
- 25.223 6 CRs
- 25.224 7 CRs
- 25.225 3 CRs
- 25.944 1 CRs

- TOTAL 97 CRs for RAN#8 approval (RAN#7 was 121 CRs)