TSG RAN#13 September 18-21, 2001 **Tdoc RP-01-0516**

Beijing, China

Source: TSG RAN WG1 Chairman

Report from TSG RAN WG1 chairman to TSG RAN#13

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WG1 CR list: RP-01-0517

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Executive Summary

- **One Release 5 Ad Hoc and one full WG1 meeting since last TSG RAN#12**
- **Release -99 CRs reducing even further, down to 18 CRs, of which 11 for FDD.**
- **Release 4 CRs total is 10CRs, 1 for FDD and 9 CRs on TDD**
- **Highest number of papers for High Speed Downlink Packet Access (HSDPA), several details agreed.**
- **HSDPA was the biggest topic (2.5 days) and Rel'99 issues (about 1 day)**
- **2 topics (Rel'99) were deferred to email discussion and CRs may appear for TSG RAN (Related to SSDT and TX diversity+compressed mode) sourced by proponents**

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Release -99

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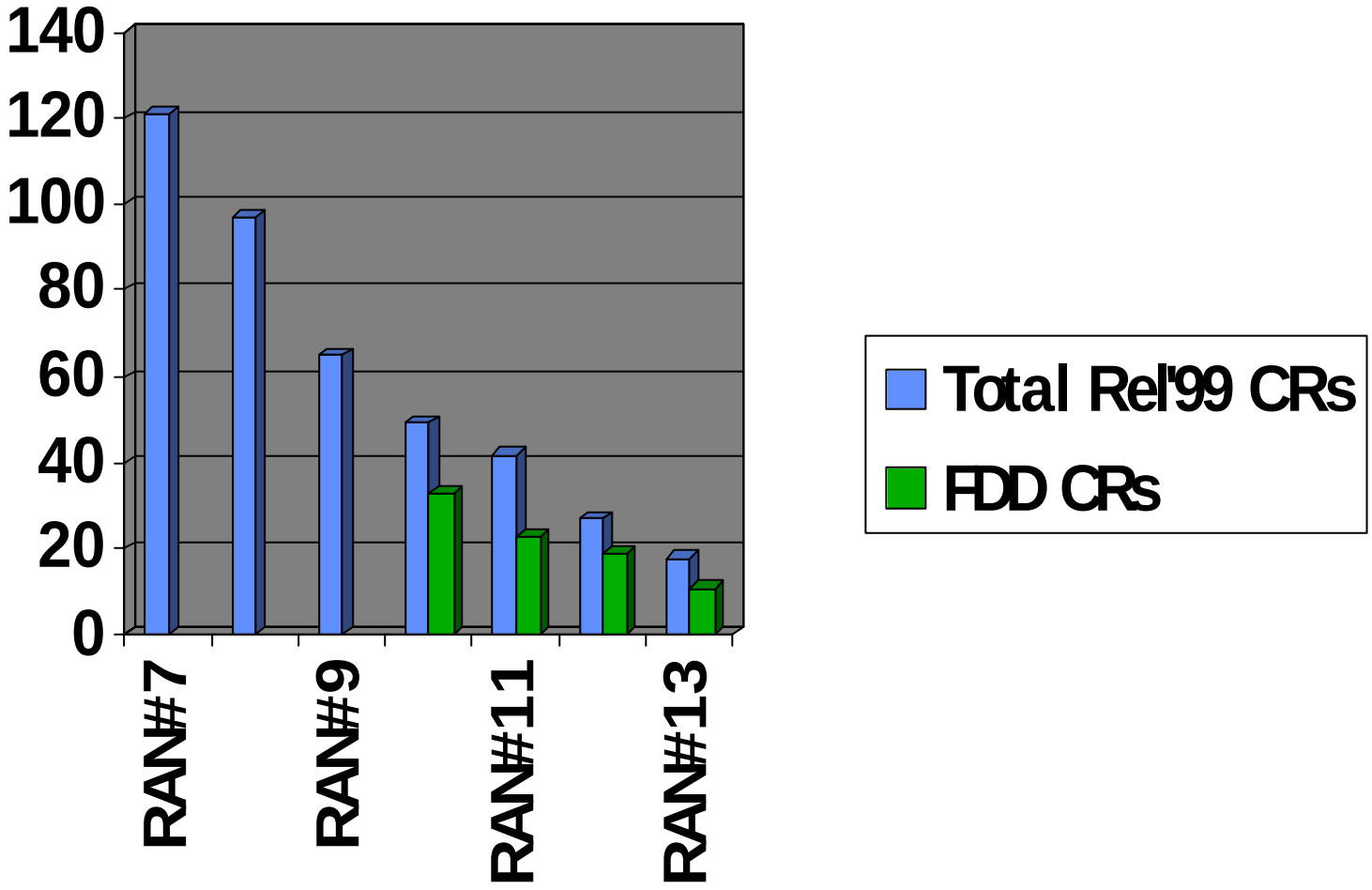
WG1 CRs (Rel'99) for RAN#13

- **TOTAL 18 CRs for RAN#13 approval**



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25.211 Physical Channels and Mapping of Transport Channels to Physical Channels
25.212 Multiplexing and Channel coding

- **25.211 4 CRs**
- Clarification DPCH/PDSCH timing
- Clarification of the usage of Tx diversity in SHO
- FACH beamforming reference removal
- Clarification of STTD

- **25.212 1 CR**
- PDSCH spreading factor signaling (removal of reference to a non-existing option)

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25.214 Physical Layer Procedures
25.215 Measurements

- **25.214 5 CRs**
- Idle period (for positioning) calculation
- CPCH access procedure (removal of a parameter)
- Downlink power control in compressed mode
- Closed loop Tx diversity description improvement
- Random access procedure (MAC primitive name removal)

- **25.215 1 CR**
- Removal of BLER for the BCH (not reported anywhere)

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25.221 - 25.225 Rel'99 TDD specifications

- Total of 7 CRs
- TFCI Terminology, notations reference corrections
- Out of synch criteria correction
- Beacon measurement

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Release 4

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Release 4 (only) CRs provided on following items

- 25.214 improvement of the PDSCH power control text
- 9 TDD specific CRs,
  - PRACH
  - FPACH
  - Notations
  - Idle period calculation
  - RX Timing deviation
    - Introducing the measurement existing already for 3.84 Mcps, now also for 1.28 Mcps TDD
  - SFN-SFN Type 1 timing different measurement

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Release 5/6 work/study items

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Rel'5 WI: High Speed Downlink Packet Access (HSDPA) - Physical Layer

- The WI made significant progress, e.g. TTI of 2 ms agreed
- Issues that require further work in the coming meetings include
  - Modulation aspects (8PSK & 64 QAM issues)
  - ARQ details (limitations for retransmissions etc.)
  - Downlink signaling details (how many bits for what item etc)
  - Timing issues
  - See separate HSDPA report for further details

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Rel'5 Study Item: USTS

- Uplink Synchronous Transmission.
- The only remaining concern is the Eb/No adjustment needed in the system simulations due, other WG1 issues seem to be clarified
- See separate status report in Tdoc RP-01-0646

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Rel'5 WI: DSCH Hard Split mode enhancement

- The coding solution for the varying TFCI was discussed and after modifications to align with Rel'99 solution (output 32 bits) agreed to be included in the TR
- TR presented for TSG RAN for information

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Rel'5/Rel'99 "Beamforming"

- The issue as raised in the last meeting and agreed to be fixed but made as UE capability has been covered in WG1/WG2 & WG4.
- The necessary CRs on UE capability are introduced for Rel'99/Rel'4
- The following issues have been identified
  - Synchronisation procedures with phase reference change
  - Restrictions for handover cases with beamforming
- With this feature interaction with other features needs to be verified, the SSDT operation together with beamforming was discussed and a Rel'99 CR on the proposed restrictions is brought directly to TSG RAN by the proponent following the email discussions
- Also as optimisation, new UTRAN measurement are proposed and are under consideration.
- For further details, please refer to the more detailed report in and refined WI sheet.

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Rel'5 WI: Improvement of Inter-frequency and Inter-system Measurements

- Proposal for additional code allocation was made for compressed mode with SF/2,
- From WG1 point of view the proposal was considered to be very simple but concerns were raised achievable gain and on the RNC algorithm side whether coordination issues are complicated or not. WG3 should investigate RNC aspects the issue and give feedback on the topic for WG1 consideration.

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Rel'5 study item: Improved cell FACH state

- Study item was discussed for the achievable downlink gains, however the uplink impact due to the access procedure was not yet clarified
- Study item should be extended further

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Rel' 5/6 WI: MIMO

- Together with TX diversity studies channel model was discussed to be used with MIMO/Tx diversity simulations
- The details seem to be difficult to agree, issue put to the email discussions and to be resumed in the next meeting
- The TR outline created

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Rel'5 Study Item: Radiolink Performance Enhancements

- As part of this a proposal was made on the improvements of the inter-frequency handover procedure (by means of sending a preamble using compressed mode on a another frequency prior actual handover)
- WG1 did not reach conclusions of the level of the problem and on the achievable gains with the proposed solution (it was proposed to modify the WI on Inter-frequency and inter-system measurements to cover also the proposed modified handover procedure itself.)
- Other proposal made was Enhanced SSDT, on which WG1 did not agreed to suggest WI for the TSG RAN. WG1 preferred to continue within the study item framework and also comments were made on the realistic timing still for Rel'5. WI sheet is proposed directly to TSG RAN by the proponent.

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Release 5 Progress

- 1.28 Mcps TDD node B synch
  - TR worked further

- DSCH hard split enhancement
  - TR agreed, presented for info for TSG RAN, see Tdocs RP-01-0533 and RP-01-0534

- UE Positioning enhancement for 1.28 Mcps TDD
  - Issues covered, TR for info for TSG RAN

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Annex 1. Coming TSG RAN WG1 meetings

- **WG1#22 October 23-26 (New York, Host North American Friends of 3GPP)**
- **WG1#23 November 19-23 (Korea, Host Samsung)**
- **WG1#24 8-11.1.2002 TBD**
- **WG1#25 5-8.2.2002 USA (tentative reserved)**
- **WG1#26 9-12.4.2002 TBD**
- **WG1#27 14-17.5.2002 TBD**
- **WG1#28 25-28.6.2002 TBD**
- **WG1#29 20-23.8.2002 TBD**
- **WG1#30 24-27.9.2002 TBD**
- **WG1#31 12-15.11.2002 TBD**

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Annex 2: WG1 Email Ad Hocs Codes

- **AH31 = 1.28 Mcps TDD UE positioning & Node B synch**
- **AH32 = HSDPA General**
- **AH33 = HSDPA UE capability**
- **AH34 = DSCH hard split mode**
- **AH35 = Interfrequency and intersystem measurements (e.g. compressed mode)**
- **AH36 = MIMO and TX diversity issues, including channel models**
- **AH37 = Improved cell FACH state**
- **AH38 = Beamforming**
- **AH39 = USTS**
- **AH40 = Release 4 issues**
- **AH99 = Release -99 issues**

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