TSG RAN#16 June 4-7, 2002 **Tdoc RP-02-0304**

Marco Island, USA

Source: TSG RAN WG1 Chairman

Report from TSG RAN WG1 chairman to TSG RAN#16

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WG1 CR list: RP-02-0305

Executive Summary

- **Two full WG1 meeting since last TSG RAN#15, joint Ad Hoc on MIMO channel modeling with 3GPP2 during WG1 in Paris (04/02)**
- **Release -99 CRs further, 10 CRs, of which 5 for FDD.**
  - **Biggest single item was measurement applicability for TDD**
  - **For the meeting in May there were no new Rel'99 CRs, CRs presented for approval now were introduced in April meeting**
- **Release 4 CRs total is 2 TDD CRs**
- **Highest number of papers for High Speed Downlink Packet Access (HSDPA) corrections, total of 25 CRs for 25.211 to 25.214 and 25,221 to 25.224 agreed.**
- **HSDPA was the biggest topic, Rel'99/4 issues took less than ½ day meeting time.**
- **Release 6 related issues also briefly covered**

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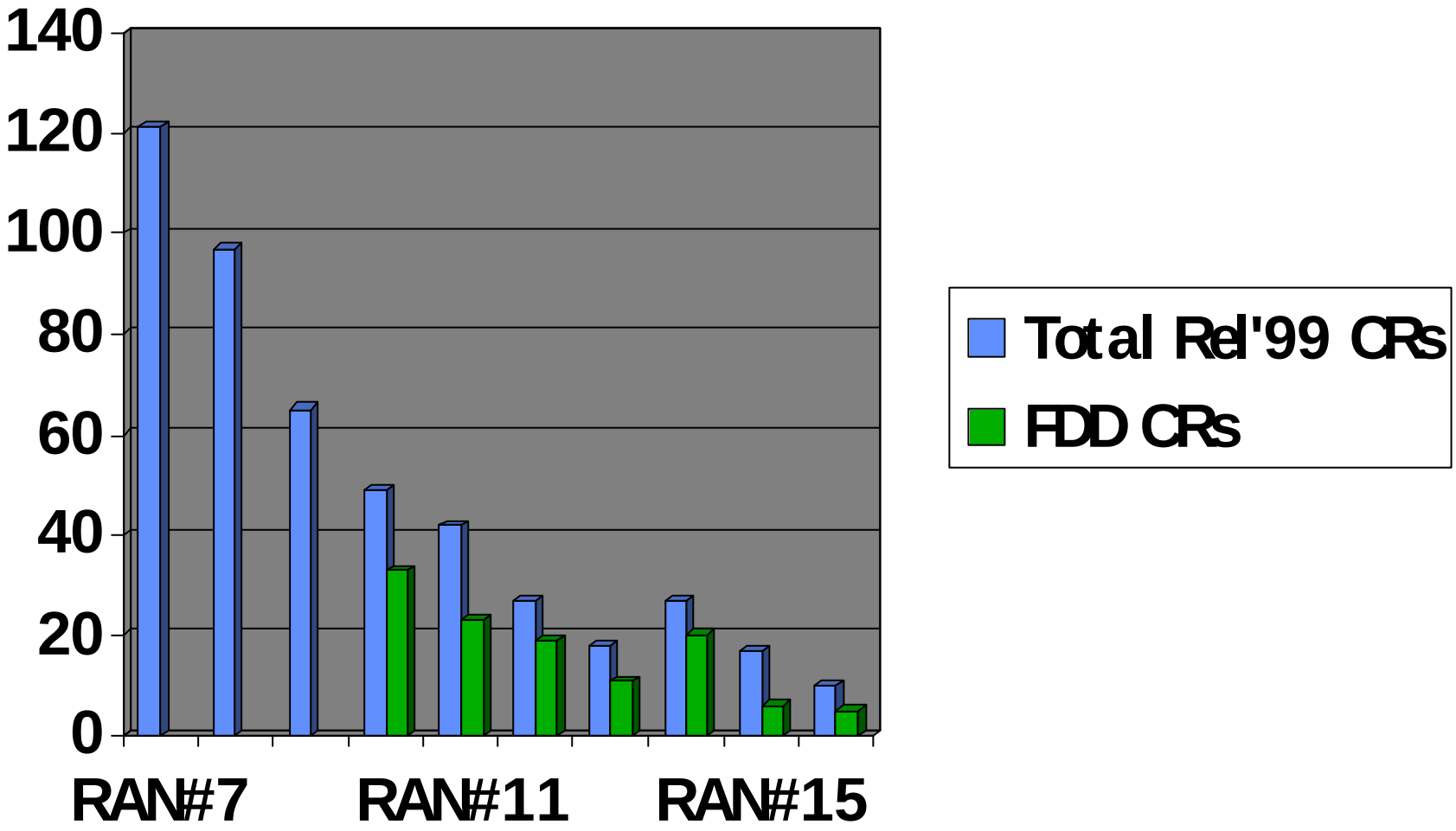
Release -99

Rel'99 General

- Release'99 activity was low
- For FDD two issues discussed resulted to the total of 5 CRs
  - TX diversity (STTD) definition with certain slot formats was unclear (if TFCI bits are included in the encoding or not) (25.211)
  - The bit/symbol mapping between different blocks in the transmission chain had potential possibilities for miss-understanding (though inter-operability had shown that everybody had the same understanding) Thus this was corrected, including 25.201 (Physical Layer – General Description) and 25.211, 25.212, 25.213
- For TDD the main issue that took some off-line discussions before agreement was the measurement applicability in 25.225 (the same issue was discussed during the last TSG RAN for FDD)

WG1 CRs (Rel'99) for RAN#14

- **TOTAL 10 Rel’99 CRs for RAN#16 approval**



25.211 – 25.215 FDD specifications

- 25.211, 25.212, 25.213 (also 25.201)
  - Symbol/bit mapping correction
- 25.211
  - STTD encoding with certain slot structures (with TFCI)

25.221 - 25.225 Rel'99 TDD specifications

- Measurement clarifications as FDD as reported during TSG RAN #15. (CR for 25.225)
- TDD shared channel related corrections (25.221)

Release 4

Rel-4 (only) CRs provided on following items

- TDD (1.28 Mcps TDD)
  - Padding of zeros on PICH correction
  - Power control and transmit diversity correction

Release 5 CRs

Rel-5: HSDPA Related Issues

- Lot of work done on correcting details, 25 CRs approved
- The issues which still are expected to be discussed in WG1#27 to close the open issues identified and not yet fully concluded:
  - Use of 16QAM, whether 16QAM is required from all HSDPA capable UEs
  - Applicability of TX diversity (closed loop) modes
  - Applicability of beamforming with HSDPA (dedicated pilots only case)
  - CQI feedback rate change as a function of downlink activity
  - TDD interleaving with HSDPA
  - Uplink parameters for offsets etc, WG1 will need to provide feedback to RRC parameters to WG2 as some have big impact on Layer 1 TX side for the UE. Simulations also done and discussed in WG1 to determine sensible ranges
  - HS-DPCCH operation in SHO, are some further enhancements needed
- For 4 CRs updates version were approved via email and the revised version is replacing the one approved in WG1#26.
- Joint Session with RAN WG3 Iub/Iur SWG on HSDPA during the WGs in Korea in May to provide feedback on the Iub/Iur related HSDPA questions. LS to WG2 provided to check the uplink signaling requirements from protocol viewpoint

Rel-5: Other activity

- The CR related to the support of SSDT in UTRAN CRs provided for TSG RAN#15 for approval for Rel-5 in Tdoc RP-02-0056 (on hold from last TSG RAN due pending WG4 issues), was updated for the CR in Tdoc RP-02-0318
- Status report in Tdoc RP-02-0356,

Rel-6: Beamforming Enhancements

- This issue was covered with updates to the TR approved on measurement definitions (text proposal)
- The TR v 1.1.0 provided for TSG RAN for information
- WG3 should investigate the necessary specification changes for their specifications. (no WG2 impact as UTRAN only measurements)
- Status report in Tdoc RP-02-0357

Rel-6 WI: MIMO

- Joint started with 3GPP/3GPP2 during TSG RAN WG1#25 in Paris for channel modeling
- Separate email reflector has been organized for the activity
- See separate report in Tdoc RP-02-0xxx

Rel-6 Study Item: Radiolink Performance Enhancements

- TX diversity was discussed, the issue addressed was the use of the same channels models as in MIMO work for these studies as well, situation to be discussed until next meeting. Updates for the TR were not done during this meeting cycle. (Compared to the version that has been presented for TSG RAN for information during TSG RAN#15)
- See separate report in Tdoc RP-02-0358

Rel-6 WIs: Other Items

- The TR outline was agreed for the Rel'6 SI: "Improvement of Inter-frequency and inter-system measurement for 1.28 Mcps TDD" Status report in Tdoc RP-02-0374.
  - There are 2 papers pending for the treatment at WG1#27
- FCS
  - 2 papers pending for the treatment at WG1#27
- Now other Rel'6 WI activity
  - One paper issued for comments on new UE measurements
- There are "no-activity" status reports for other existing Rel'6 items.

Annex 1. TSG RAN WG1 meetings

- **WG1#25 9-12.4.2002 Paris, France (Host: Nortel Networks)**
- **WG1#26 13-16.5.2002 Kyongju ,Korea (Host: Samsung) (MON-THU)**
- **WG1#27 2-5.7.2002 Oulu, Finland (Host Nokia, Sonera, TAC Finland, Elisa Communications, Finnet) (Tue-Fri)**
- **WG1#28 19-22.8.2002 Seattle, USA (Host: North American Friends of 3GPP) (Mon-Thu)**
- **WG1#29 08-11.10.2002 China (Host Samsung) (Tue-Fri)**
- **WG1#30 January 2003 (Tentative San Diego, US)**
- **WG1#31 February 2003 (Tentative Japan)**

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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**
- **AH38 = Beamforming**
- **AH40 = Release 4 issues**
- **AH99 = Release -99 issues**
- **TO be updated at TSG RAN WG1#27**