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3GPP TSG RAN Meeting #25
7th-9th September, 2004
Palm Springs, USA

Report from TSG RAN WG1 Chairman to TSG RAN#25

Dirk Gerstenberger
TSG RAN WG1 Chairman

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Rel'6 Ad Hoc
June 20-24, 2004
Cannes, France

RAN1#38
August 16-20, 2004
Prague, Czech Republic

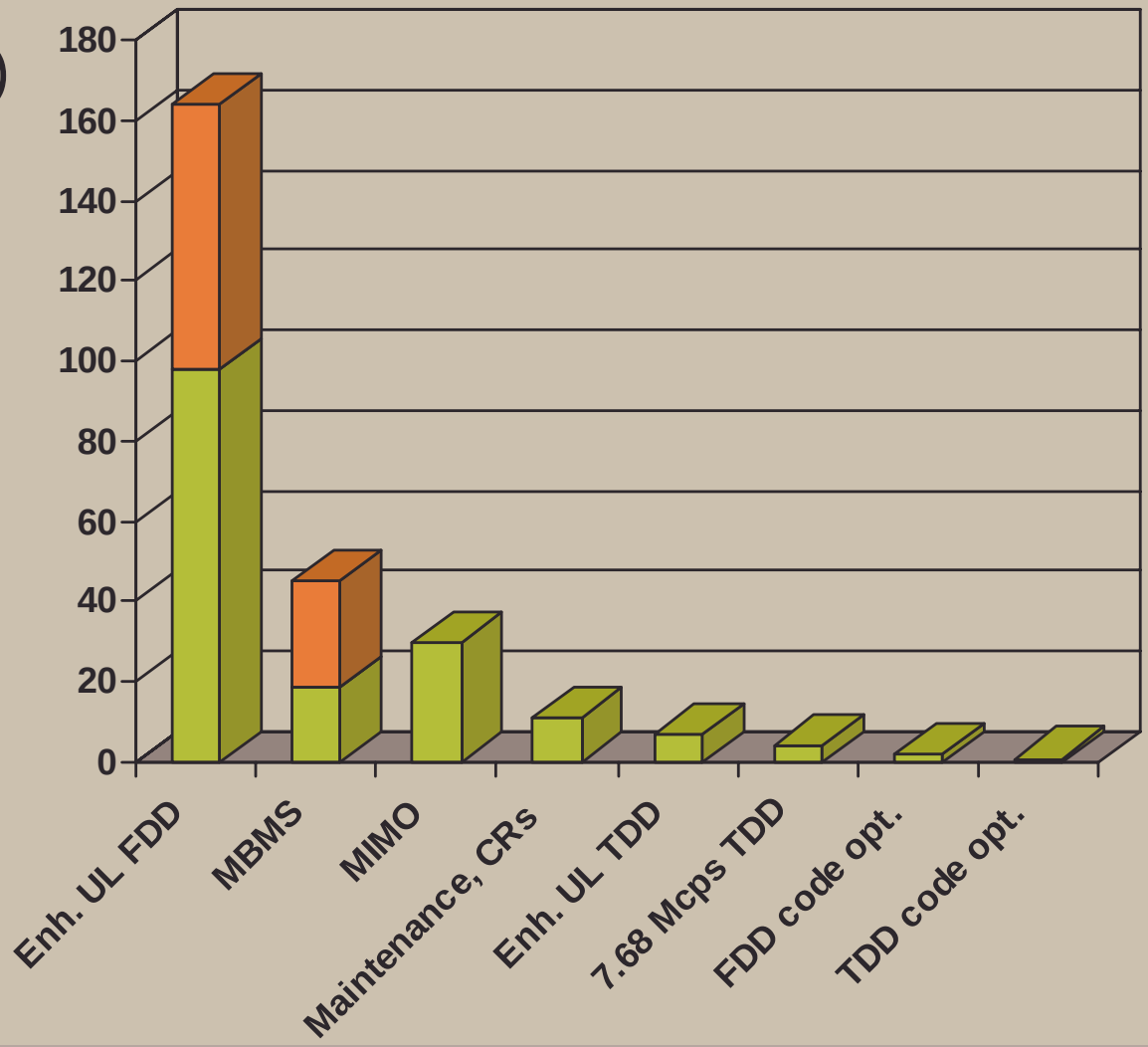
Executive Summary

- Agreed change requests
  - 3 CRs for Rel4 TDD, 2 CRs for Rel5 FDD
  - HSDPA ACK/NACK enhancements – CRs for TR25.899 agreed
- Progress on FDD Enhanced Uplink WI
  - Joint discussions with RAN2 progressing TTI, HARQ, Scheduling
  - Principles of HARQ and Scheduling agreed
  - Major L1 aspects agreed, further work on signaling solutions
- ✓ MIMO evaluation methodology agreed
- ✓ Higher Chiprate TDD study item completed
- ✓ MICH agreed, MBMS UE capability partially agreed
- RAN1#38bis: FDD Enhanced UL, MBMS UE cap., IMS

200 contributions submitted, around 100 delegates attended.

Contributions Statistics

- Rel'6 Ad hoc (red)
- RAN1#38 (green)



Change Requests

Agreed Change Requests

- Release 99
  - No CRs for FDD/TDD
- Release 4
  - 25.222: Sub-frame segmentation correction (1.28Mcps TDD)
  - 25.224: TX diversity for beacon channels (1.28Mcps TDD); RACH correction (1.28Mcps TDD)
- Release 5
  - 25.211: CPCH power control preamble
  - 25.214: SSDT uplink only signaling
- Release 6
  - TR 25.899: ACK/NACK complexity; HSDPA cell coverage improvement

Other Maintenance Issues

- TX diversity branch load measurement (Rel6)
  - To be discussed further in RAN4
- PAR/Cubic Metric (Rel6)
  - Both can be used, RAN4 will refine the cubic metric equation
- Radio link synchronization issues (Rel6)
  - To be discussed further in RAN1
- UE behavior at minimum power (Rel5)
  - Discuss further in RAN1 if UE behavior needs to be defined
- RAB configurations
  - Review of new L1 aspects for RAB combinations discussed in RAN2 in Prague until RAN1#38bis

Work Items & Study Items

WI/SI where RAN WG1 is the Leading Group (1/5)

- FDD Enhanced Uplink (See RP-040271)
  - Impressive progress of the WI phase
    - ✓ Decisions from joint sessions with RAN2
      - TTI question resolved – 2ms/10ms supported by the standard
      - Synchronous HARQ with synchronous retransmissions
      - Scheduling principles agreed
    - ✓ E-DPCH PhCH structure
      - Code multiplexed E-DCH
      - Code multiplexed E-DPCCH (for 2ms) is working assumption
      - E-DCH frame aligned with UL DPCH is working assumption
    - ✓ Further details on TrCH processing (channel coding) agreed
    - ✓ Major open issues to be addressed in RAN1
      - E-DCH + E-DPCCH code mapping, UL/DL signaling solutions, channel coding details, transmit power issues, UE scheduling behaviour

WI/SI where RAN WG1 is the Leading Group (2/5)

- MIMO (See RP-040269)
  - Latest TR 25.876 (v1.7.0)
  - Contributions on system simulation and evaluation methodology discussed
    - ½ day Ad Hoc resulted in an agreement on the methodology!
  - More than 20 contributions on details of old and new MIMO proposals
    - This topic will be discussed at RAN1#39

WI/SI where RAN WG1 is the Leading Group (3/5)

- Radio link performance enhancements (See RP-040272)
  - HSDPA enhancements (PRE/POST scheme)
    - CRs for TR 25.899 on NodeB complexity and cell coverage improvement agreed
    - Study item can be closed

WI/SI where RAN WG1 is the Leading Group (4/5)

- Improvements of interfrequency and intersystem measurements (See RP-040261)
  - Compressed mode code sharing
    - All work finished, work item could be closed
    - RAN1 could not conclude on a significant code saving gain
  - New proposal for multiframe puncturing and unequal frame segmentation submitted
    - Based on a proposal earlier rejected in RAN1 during 2000
- Higher chiprates for TDD (See RP-040273)
  - All work finished, study item can be closed
  - TR 25.895 (v2.0.0) presented to RAN for approval
  - RAN1 did not agree to recommend the creation of a work item

WI/SI where RAN WG1 is the Leading Group (5/5)

- Uplink enhancements for UTRA TDD (See RP-040274)
  - Latest TR 25.804 (v0.3.0)
  - Three text proposals agreed
- Optimisation of channelisation code utilisation for FDD (See RP-040264)
  - Two documents submitted, but not treated due to lack of time
- Optimisation of channelisation code utilisation for TDD (See RP-040363)
  - One document submitted, but not treated due to lack of time

WI/SI where RAN WG1 is not the Leading Group

- MBMS (See also RP-040268)
  - ✓ Solution for MICH agreed
    - Draft CRs for Layer 1 the specifications available
  - – Progress on UE capability discussion
    - Up to 256kbps supported (depending on combining technique, RLs, TTI, SF)
      - – Basic capability: 128kbps, 2RL Selective combining, 80ms, SF=16
      - – Agreement on combinations of bitrate, number of RL, SF and TTI for Selective Combining and Rake Combining
    - Discussion on Soft Combining and supported RL timing difference to be continued at RAN1#38bis
    - Three levels of time difference for RL combining discussed
      - – +/-148chip (RAKE combining), a few 10's of ms (Soft Combining), a few TTIs (Selective Combining)

WI/SI where RAN WG1 is not the Leading Group

- RAB support enhancement (See also RP-040263)
  - Joint discussion with RAN2 on use of secondary scrambling codes for IMS
  - Further analysis needed in RAN1, discuss at RAN1#38bis

Review of SI/WI Descriptions

- U-TDOA
  - Performance predictions were presented and discussed
  - SI sheet reviewed in RAN1/RAN2 joint session
  - No alternative methods are proposed
  - No modification of the physical layer in UE or NodeB (e.g. no change in power control behaviour)
    - Therefore, no further study phase needed in RAN1
    - SI sheet revised by RAN1/2 to a WI sheet (RP-040347)
  - Objections by one company regarding the focus on FDD only

RAN WG1 Meeting Schedule 2004/2005

Meeting	Date	Location	Host
RAN1#38bis	20-24 September 2004	Seoul, Korea	Samsung
RAN1#39	15-19 November 2004	Shin-Yokohama, Japan	Japanese Friends
RAN1#40	14-18 February 2005	Phoenix, USA	North American Friends
RAN1#40bis	04-08 April 2005	China (TBC)	TBC
RAN1#41	09-13 May 2005	TBD, EU	European Friends
RAN1#42	29 Aug – 02 Sept 2005	TBD, EU	European Friends
RAN1#43	07-11 November 2005	TBD, Korea	Samsung