

Agenda Item:

Source: AH01 secretary

Title: Report AH01 meeting (27 July 1999)

Document for: Approval

1 Introduction

AH01-DL chairman¹ informed the meeting that Tdoc R4-99433 will be used as agenda for this AH01, first downlink will be discussed then uplink. Secretary for this meeting is David Sandberg, Ericsson.

There was some misunderstanding about the chairman for AH01-UL, so a chairman is still needed. Motorola volunteered to find a chairman for AH01-UL before the end of RAN4 meeting.

The chairman clarified that AH01 is now split in downlink and uplink and "AH01-DL" and "AH01-UL" should be used for discussion on the reflector to avoid confusion.

2 AdHoc01-Downlink (AH01-DL)

Based on TS 25.101

No. 1: Benchmarking simulation results

Ericsson presented Tdoc R4-99388 with benchmark results. No comments

Nokia presented Tdoc R4-99414 with benchmark results. Same assumptions are used as R4-99388. The results have been compared with Ericsson results and they map well. No further comments.

No other benchmark simulation results are available in this meeting. Siemens indicated that they intend to perform similar benchmark simulations. Motorola also showed interest. As the simulation results matched well, they were approved as benchmarks. Discussion of other simulation results can continue on the reflector.

No. 2: Update measurement channels

Ericsson presented Tdoc R4-99426 proposing measurement channels for the downlink. Ericsson proposed that these measurement channels are reviewed in detail by RAN4 and interested WG1 members. Comments should be sent to the reflector in one week after this RAN4 meeting. Nokia requested extended reviewing time because of the holidays. A reviewing time of two weeks was approved. After measurement channels are reviewed, they can be approved on the reflector and then used for simulations until the next meeting.

Motorola asked if the definition of the measurement channels is still depending on WG1. Ericsson commented that these measurement channels are defined based on assumptions mentioned in Tdoc R4-99426. These assumptions are considered stable and are not depending on remaining work in WG1.

No. 3: Review of the propagation conditions due to chip rate change

The chairman explained the current status of Annex B (propagation conditions) and questioned the need for additional changes due to the chip rate change. Nokia commented that paths are starting to correlate when path spacing is reduced to less than one chip. Nokia proposed to change delays in case 3: Path 1: 0 ns, Path 2: 260 ns, Path3: 521 ns, Path 4: 781 ns. Telenor commented that the proposal is ok as long as channel characteristics are not really changed. The proposed change was approved.

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No. 4: Definition of performance

The chairman explained that the BLER was approved for performance definition in the plenary. Vodafone asked about the block length for speech. Nokia answered that the block length is equal to 20ms. It was further clarified that the blocks are the information data blocks as defined in in Tdoc R4-99426.

No. 5: Performance limits

The chairman stated that we don't have a good definition of the performance limits today. Therefore he proposed to produce BLER curves and decide the limits later. The chairman asked what range for the BLER should be produced in the simulations. There were no suggestions and it was commented that this could be dependent of the block length. It was agreed to discuss a suitable range for BLER curves on the reflector.

No. 6: Review status section 8

No comments

No. 7: Review of simulation assumptions.

The chairman proposed to review Tdoc R4-99341 (Assumptions for benchmark simulations) to define the assumptions for the upcoming link level simulations. He also stated that the number of test cases today is in the order of 30 to 40. Based on the review of Tdoc R4-99341 the additional assumptions were defined as given in Annex A.

Motorola suggested to send a liaison statement to WG1 to inform them about the status of the link-level simulations and ask them to finalise related open issues. Motorola agreed to write this LS. R4(99)436

Telenor asked about simulation of other users. Nokia answered that the ONCS is used to simulates other users.

Nortel asked about the usage of TFCI and what TFCI=on means in the simulations. Nokia answered that we don't have to use blind rate detection with TFCI on.

Nokia made a principle comment that we should not have so detailed assumptions and should allow companies to perform simulations including implementation issues. A large discussion followed. One point was that it will be hard to compare the results without the detailed assumptions. It was agreed to keep the detailed assumptions. Companies should come up with simulation results based on these assumptions and also propose implementation margins for the different test cases.

The chairman asked if there were any additional comments for AH01-DL. Nokia commented that values are needed for the geometric parameter I_{or}/I_{oc} . Then Nokia commented that the synchronisation channel has to be defined because that may impact the results. Motorola agreed with Nokia and commented that also additional assumptions on the pilot channel may be needed. It was agreed that the definition of these items are to be discussed on the reflector.

3 AdHoc 01-uplink

Based on TS 25.104

No. 1: Validation of benchmarking simulations

The chairman asked if there where any benchmarking simulations to present for the uplink. Motorola commented that no real benchmark simulations are available, but two inputs are available which could be used as benchmarks: R4-99358, R4-99373. These documents were presented and show quite similar results.

Interdigital asked if pulse shaping filters were updated with the new chip rate. Motorola confirmed that they were.

Motorola suggested that the above documents are useable for benchmarks, and that the table in R4-99373 could be used as assumptions. Further benchmark simulations should be discussed on the reflector.

No. 2: Measurement channels (Annex A)

No specification of the measurement channels exists for the basestation. The Chairman suggested that a volunteer would draft a document with proposed measurement channels. Fujitsu volunteered to put together a document with a draft of measurement channels and send it to the reflector for comments and then approval. Thereafter the simulations can be started.

No. 3: Propagation conditions (Annex B):

No specification of propagation conditions exist. The chairman asked if it would be ok to use the same propagation conditions as for the downlink.

Lucent asked if propagation conditions for RX diversity should be added. Motorola replied that the easiest way is to have it RX diversity turned off. Telenor commented that fading is uncorrelated on the two antennas and it should therefore be included. Motorola suggested to start without RX-diversity and consider usage later. It was approved to use the text from Annex B from TS25.101 as a starting point.

No4. Definition of performance

The chairman asked if it would be ok to use the same conclusion as for the downlink: BLock Error Rate. This was approved.

No.5. Performance limits

The chairman commented that no proper performance limits are available and suggested to produce BLER curves and later define limits.

No 6. Status of section 8

The chairman summarised that there is still very little definition of requirements in section 8. Fujitsu commented that R4-99374 provides input for section 8.2.1. This document was presented. However this document still is based on BER performance requirements. It was approved to accept the changes without the BER definition and limits, but include BLER.

Motorola commented that performance limits for several channels are missing such as the RACH. Also requirements for dynamic channels are not yet defined. The chairman requested a volunteer to draft text for section 8.

It was questioned if a requirement for false detection is needed. No volunteers jumped up so people were recommended to consider this before the end of the meeting.

No7. Additional simulation assumptions

Based on the review of the simulation assumptions for the downlink, the simulation assumptions for the uplink were defined as given in annex B.

Simulation of other users needs to be defined and should be discussed on the reflector.

Annex A: Assumptions for link level simulations for UTRA-FDD Downlink

1. Test cases as defined in section 8 of 25.101.
2. 3GPP RAN WG1 specifications with modifications from WG1 meeting in July 1999, as reflected in the measurement channels proposed in Tdoc R4-99426 for Annex A of TS25.101.
3. Orthogonal channel noise simulator (OCNS) is used (one additional orthogonal user). Set up the power of it so that the total power of BS equals to 1 always. (if power of DPCH increases, the power of OCNS decreases).
4. Power control is switched off.
5. Automatic Gain Control (AGC) is not used.
6. Propagation conditions as defined in Annex B of TS25.101.
7. Ideal channel estimation from PCCPCH is used.
8. Floating point chip level simulations, 4 samples per chip.
9. Produce curves for the testcases. The range of BLER has to be defined. Implementation margin should not be added to curves.

Annex B: Assumptions for link level simulations for UTRA-FDD Uplink

1. Test cases are to be defined in section 8 of 25.104.
2. 3GPP RAN WG1 specifications with modifications from WG1 meeting in July 1999. Measurement channels are to be defined for Annex A of TS25.101.
3. Simulation of other users needs to be defined.
4. Power control is switched off.
5. Automatic Gain Control (AGC) is not used.
6. Propagation conditions as defined in Annex B of TS25.104.
7. Ideal channel estimation from DPCCH is used.
8. Floating point chip level simulations, 4 samples per chip.
9. Produce curves for the testcases. The range of BLER has to be defined. Implementation margin should not be added to curves.