Minutes of 3GPP TSG RAN WG4 Meeting #2, revision 1, 23.3.99
Meeting: Turin, 15-19 February 1999

Contents

0 Introduction and Welcome to Delegates

The convenor Howard Benn opened the meeting and thanked our hosts, CSELT, for the providing the facilities and organisation.

1   Adoption of Agenda

The agenda was approved. See tdoc 26.

2   Approval of previous meeting report

The report for meeting TSG RAN WG4 #1 in tdoc 25 approved.

3 Appointment of Chair and Vice Chair (agenda 4)

The appointment of Chairman Howard Benn and Vice Chair Eisuke Fukuda was approved.

4 Appointment of Secretary (agenda 5)

David Cooper was appointed as secretary, noting that he proposed to serve for two meetings.

5 Letters from other groups (agenda item 6)

Tdoc 35 is a liaison statement from SMG2 to ERC TG1, copied to TSG-R4, presented by Simon Pike, asking for guidance concerning flexible utilisation of UMTS spectrum. It was noted. In the ensuing discussion the UK regulator, Stephen Green, reported that TG1 has asked for a definition of the spectral mask and this request was noted.

6 Work related to Combined documents (agenda item 7)

1.1. R4.00 Introduction (agenda item 7.1)

Tdoc 58 was presented by NTT DoCoMo. It introduces R4.00, which contains the groups document structure and workplan, and it was explained that the workplan requires more detail. A discussion followed. It was remarked that the title needs to be improved, with a proposal to change it to 'Document Structure and Workplan'. This was revised to '3GPP RAN WG4 Document Structure' and agreed. It was noted that meeting schedule is incorrect (3rd meeting is wk 29 March). The chairman proposed ad hoc to review this document.

It was noted that IPR statement needs to be changed since it is copy of ETSI text. The consensus is that the meeting needs to draft a LS to TSG RAN and PCG to obtain guidance: Tdoc 59 was allocated to Simon Pike to do this.

7 Baseline version of S4.01A, S4.01B (agenda item 7.2)

The chairman identified tdocs related to the contents of S4.01, which is the document defining radio transmission and reception requirements (FDD). It was agreed that these would be introduced and then a detailed review of S4.01 would be carried out section by section *(in fact, S4.01 is now split into two document, S4.01A for UE~~BS~~ and S4.01B for BS~~UE~~)*.

Tdoc 24 was presented by Edgar Fernandes, rapporteur. He explained this is based on tdoc TSG-R4#1 tdoc 20, entitled S4.01A V0.0.1 UTRA(UE) FDD; Radio Transmission and reception. The text is derived from ARIB Vol 4 and XX.06. He noted some text is duplicated and will be edited out in the next revision.

Tdoc 29 was presented by Johan Skold, rapporteur of Ericcson S4.01B V0.0.1 (Radio transmission and reception FDD). This is the 1st merged version of the base station part of S4.01. The text comes from vol 5 of ARIB text merged into ETSI structure. Section 5 onwards is merged text (ARIB text is lighter). Although the structure is from ETSI, much of the text is from ARIB. Page 36 onwards contains ARIB requirements that do not fit into ETSI structure.

The chairman asked whether tdocs 24/29 should be split into base station and UE parts or merged. Some discussion resulted, including the question of where does text on propagation go. Consensus reached: for the present these will stay separate as UE and base station and editorship continues unchanged. UE specification is to be ~~named~~ n'''d 4.01A, base station specification is named 4.01B.

Tdoc 32 was presented by Edgar Fernandes of Motoroa, which is a proposed input to annex C of 4.01A, "environmental conditions". This is new input, not present in XX.06 (in fact it is copied from GSM 05.05). Comments were made on temperature, and on whether AC voltage should be revised. It was questioned whether this should be added to equivalent FDD document. The chairman proposed to start with the FDD document, and the meeting agreed. Further consideration was deferred until discussion of annex C of 4.01A.

Tdoc 33 was presented by Denis Yann of Nortel, towards a base station ACPR definition (section 6.6 of S4.01B). This paper defines the concepts of out of band and out of block emissions and proposes a 50 dBc BS ACPR specification. In the discussion it was remarked this document mentions US requirements. Need to distinguish between out of block and out of band is agreed, but it was noted that

European requirement is tighter. This tdoc was identified for consideration with both UE and base station specification 4.01A and B.

Tdoc 34 was presented by Peter Van De Burg of Ericsson. It contains detailed comments on S4.01A v0.0.1 and was identified for consideration when this document is taken section by section.

Tdoc 38 was presented by Nokia, for discussion. It is an analysis of 3GP FDD UE RF Parameters. The chairman suggested that it applies both to document S4.01, and RF scenarios S4.13. It was asked when MCL will be handled. The answer was in agenda item 7.8, RF system scenarios.

Tdoc 47 was presented by Nokia on DL dynamic range and DL power control range. The chairman noted that it should be discussed it detail when section 6.4 of 4.01B is taken.

Tdoc 48 was presented by Ericsson: This is an evaluation of up and downlink adjacent channel performance. The conclusion is that it applies to section 6.6 of 4.01 (output RF spectrum emissions), and section 7.7, on both base stations and mobile and will be taken during the detailed review of that document. It also applies to the RF scenarios document.

Tdoc 49 was presented by DoCoMo. It is the latest BS specification of ARIB volume 5, adding new material (channel spacing vs chip rates) to section 5.4 of 4.01 (channel arrangement). It was discussed and it was agreed to produce Tdoc 62 to reflect the outcome of this discussion.

Tdoc 50 was presented by DoCoMo. It proposes deletion of three paragraphs (Max frequency deviation, Rx dynamic range, RSQI measurement). The conclusion was that it will be included in the detailed discussion of 4.01B.

Tdoc 54 was presented by Simon Pike, Lucent, on principles for definition of adjacent channel performance of UTRA. Some comments were made and in conclusion it will be handled in the agenda item on RF system scenarios.

Tdoc 57 was presented by DoCoMo. It was agreed that it will be included in the discussion of 4.01.

Tdocs 01 and 12 from meeting #1 of this group are also to be taken into consideration in the dissuasion of 4.01.

Tdoc 27, the submission of composite Rho proposal from HP, was presented by Chair in absence of an HP representative. The agreement was to take it as part of the discussion of 4.01, section 6.8. Also from HP was tdoc 28 which is contains two proposals for amendments to the definitions of RF front end key characteristics (3dB bandwidth and ACP). It was presented by the chairman and is be taken as part of the BS conformance testing agenda item. There was some discussion of the wording of definition of ACP which needs to be revisited, since rectangular filters cannot be implemented.

Tdoc 39 was not available at this time, and is to be presented later in the meeting.

Discussion of S4.01A (In Main Meeting)

There now commenced a discussion of S4.01A (UE section of S4.01) section by section, with the rapporteur noting agreed textual changes.

In section 4 (status) tdocs 34, 38, 57 were considered and text was agreed.
In section 5.1 (general) tdocs 34, 57, were considered and text was agreed.
In section 5.2 tdocs 34,38, 57 were taken into account and text was agreed.

Action on rapporteur of R4.01A (Nadia Benabdallah). there is a need to include a section on variable duplex channel spacing in scenarios document.

In section 5.3 (Tx-Rx frequency separation): tdocs 34, 38, 57, 35 were taken into account and text was agreed.

In section 5.4: tdocs (Channel Arrangement) tdocs 34, 38, 57, 54, 35 were taken into account and text was agreed.

In section 6.2 tdocs 34,38, 57 were taken into account. A column indicating tolerance added, but in square brackets. The chairman asks for delegates to come back with specific tolerance values for next meeting.

Some discussions took place on the need for power classes 5,6. No clear consensus emerged on their need.

In Section 6.3, UE frequency stability, tdocs 34, 38, 57 were taken into account. A tolerance of 0.1ppm was agreed. The consensus is that more clarity is needed to define frequency stability, with a decision as to whether it relates to chip rate, carrier frequency or both.

In section 6.4 (Output power dynamics) tdocs 34,38,57 were considered. It was agreed that anew definition of open loop power control is required, for future meetings. Delegates questioned the need for step size, and questioned +/- 9 dB tolerance. The chairman requested inputs to restructure section on open loop power control. A relaxation over temperature range was requested by Nokia; the chairman requested inputs at the next meeting.

In order to progress more quickly, the meeting split into two drafting sub-groups, one for 4.01A and one for 4.01B, and the main meeting was temporarily suspended.

Discussion of S4.01A, S4.01B(side meetings)

During Tuesday 16 Feb the main meeting was suspended in order that ad-hoc two side meetings could take place to discuss S4.01A, S4.01B whose conclusions are to be reported in tocs 61 and 63 respectively from the appropriate rapporteurs.

1.2.   Continuation of Agenda 7.2

Howard Benn, chair of subgroup meeting on 4.01A, briefly reported the results of the subgroup.

Mr Fukuda chair of subgroup meeting on 4.01B briefly reported that a LS to TSG-R1 was required on downlink power control. Specific values for accuracy of step size are required, but no rationale is presently available.

Action (agreed to be taken during this meeting): Mr Fukuda will produce LS, tdoc 65.

Almost all of rest of document had been covered by the subgroup.

Tdoc 61 (draft merged 4.01A) was summarised by Edgar Fernandes as the work done by the ad hoc drafting group. A number of changes were agreed, some areas need further study. Where further work is needed there are detailed comments in text, in brackets. There was some question as to whether section 8.3 (Rx synchronisation characteristics) should stay in this document.

The chairman proposed to note the document suggesting that comments should be input directly to editor. We cannot approve this document but chairman requests that a modified, tided up, unapproved version, to be presented for information at TSG RAN meeting by the editor with discussion on email reflector. In discussion it was noted that status needs updated; a question of step size of power control (rated as 1dB +/- 0.5 dB) arose. It was pointed out that this is a baseline text but not approved.

Tdoc 63 (merged 4.01B resulting from the work of the ad hoc) was summarised by Johan Skold. Status not completely updated. Output power may need consideration of code domain. The subgroup felt that spurious emissions need to be discussed in full meeting. More text will be provided for blocking characteristics and spurious response. Subgroup concurred that Rx synchronisation should move to S4.03 and environmental requirements to another document. In discussion:, it was asked whether should sections be aligned; editors are encouraged to synchronise text.

Consensus is that editors should collect editorial changes together before next 3GPP TSG meeting, using email reflector, so that unapproved version can be presented to 3GPP TSG. Both editors agree that 1st draft will be ready on reflector by next Wednesday provided comments are given this meeting, so comments on it can be made by the Friday.

Tdoc 39 from Nokia presented by Jussi Numminen proposes test parameters for receiver baseband tests, outlines conditions, and channel models. It proposes a separate ad-hoc group. During the discussion there were comments on the methodology. The chairman proposed an ad hoc on email reflector, and Nokia agreed to provide the chair.

Tdoc 67 will be a revision of tdoc 62, on the need to clarify centre frequency separation. There was some discussion. The text is for inclusion in 4.01A and referenced by 4.01B.

1.4. Frequency bands (Agenda 7.2)

A drafting group met to discuss frequency bands. Tdoc 62 is result of drafting group, presented by Simon Pike. It provides draft text on frequency bands, including frequency separation. In discussion Nicola Magnani questioned phraseology where standard includes 'usage' of spectrum. Stephen Green UK DTI agreed, pointing out that standards and regulation are separate issues.

Action on ~~Amir El Saigh~~ Simon Pike (agreed to be taken during this meeting): LS to WG2 on variable duplex spacing to TSG-R1, TSG-R2. Outcome to be Tdoc 66.

1.5. Further work on Agenda 7.2

The meeting returned to this agenda item on the Friday.

Tdoc 77, a proposal for UE frequency stability, was presented by Mr Normimasu of NEC. The approach was accepted, subject to editorial correction.

Tdoc 78, on UE power levels, was also presented by Mr Norimatsu. It was commented by Dirk Kistowski, T-mobil, that the range of 4 dB is too wide. But delegates pointed out that this is tighter than GSM. The proposal was not accepted, and a 4 dB range remains provisional. Simon Pike offered to chair an email discussion in time for the next meeting.

Tdoc79, was presented by Mr Iwane. It is a proposal for definition of modulation accuracy. In discussion Peter Van de Berg suggested that EVM after despreading is a better measure. The consensus is that the matter requires further study.

On the last day the meeting re-considered that phrasing of frequency separation. Tdoc 67 was presented by Simon Pike, and is a re-draft of text on frequency bands, which has change bars relative to tdoc 62, resulting from a drafting group. An objection to clause 5.3 (b) arose. Mr Iwane asks if wording mandates mobile to support variable duplex spacing; in the opinion of some of delegates this is not the case ~~the meeting thinks not~~. It was agreed that clause (b) will be rephrased to "UTRA/FDD can support…".

Tdoc 69, presented by Simon Pike, contains the CEPT/ERC/Recommendation 74-01E on Spurious emission for information. It was noted.

8 Basestation EMC: Agenda 7.7

Norman Lightfoot of UK DTI introduced tdoc 64. The EC has placed mandate on standards organisation to produce minimum standards for EMC directive. This tdoc illustrates the ports considered. There were remarks that European specifications are based on international specifications, IEC1000 series or CISPR 15/22. It was questioned how the enclosure port is dealt with? The answer is as part of UMTS standard.

Simon Pike presented tdoc 37, draft text for UMTS baseline EMC (S4.13). This is proposed as a suitable starting point for producing spec for 3rd generation products. This draft is structured in accordance with R&TTE directive. Mr Pike noted that it is based on international IEC standards but organisational partners should check applicability and completeness. He also notes that masthead

amplifier is presently in spec and suggests this should be removed. Also repeaters are included. He suggests that ancillary equipment should continue to be included. He notes terminology is written in accordance with 'PNE' rules in accordance with 3GPP agreement. The document was noted. In discussion, Mr Lightfoot noted that terminals group must be aware that terminals and vehicle mounted ancillary equipment are subject to European Automotive directives 95/54. It was questioned whether we need the exclusion band? The answer is that it is to be considered. Mr Prem Sood of Sharp queried the possibility of having single standard for all regions. There was a question of definition of terms and it was noted that some terms are defined in ITU documents.

Tdocs 40,41 are from Nokia. Tdoc 40 is a proposal for the scope of BS EMC requirements and Tdoc 41 is a proposal for contents of this document. These were noted. Simon Pike volunteered to be editor of this document S4.13.

Edgar Fernandes asked if this group should take responsibility for terminals EMC as well as basestations. Mr Jussi Numminen of Nokia asked if the group has the necessary scope or expertise for this.

On Friday Tdoc 74 was presented as the set of normative references for S4.13 basestation specifications. An open issue is whether references should be dated. It replaces the equivalent section in tdoc 36.

9 Input on RF Key Parameters for ITU ad-hoc (Agenda 8.1)

Tdoc 36 was presented by Nicola Magnani of CSELT. This is a LS from the TSG RAN ITU ad hoc contact person, containing liaisons from ITU-R TG 8/1 WG5 on progress of 3GPP harmonisation activities. It is considered very important to submit inputs based on 3GPP activity into next ITU-R TG 8/1 meeting to ensure that ITU recommendation is suitable for 3GPP. Need to examine parameters, proposed to set up drafting group. Discussion: Johan Skold points out values with ambiguous meanings. It is agreed that a note requiring that references should be associated with values in resulting document. Consensus is to have ad hoc session (Thursday), Nicola Magnani will act as rapporteur.

On Friday the result of the drafting group was presented in Tdoc 76 by Nicolae Magnani. Amer El Saigh re-opened the issue of ACLR at 30dB stating concern over capacity loss. Steve Green noted work taking place in ERC which is assuming more stringent ACLR. But the meeting notes that work continues to produce the single optimum figure. The In response to a question the chairman expressed his understanding is that ITU can influence parameters but not mandate.

The phrasing of section 1.6 will be changed to: "work is continuing to define a single value." In section 2.5 it is suggested to change MS column to inched the note "optimum value is currently under investigation" and add ">=". This was agreed. Also a note on SM-329 is to be added in section 1.7.

This document will be sent to ITU ad hoc to be submitted to ITUR-TG81 by an individual member of 3GPP.

10 R4.01 RF system scenarios (agenda 7.8)

Tdoc 33 was re-presented by Yann Denis of Nortel for this agenda item. It studies the case of 20W output power and recommends output spectral purity of 50 dBc, examining the particular case of PCS compliance.It was asked: how is IS-95 value of IIP3 derived; the answer was not completely sure. Amer El Saigh asked why an absoluterelative value is used for ACPR rather than absolute relative value, and what scenarios considered; agreements of a definition is needed. It was questioned whether SP-3383 is relevant, since it applies to narrowband CDMA. Nokia commented that calculations are very sensitive to assumptions, eg path loss. Mr of Skold Ericsson favours a Monte-Carlo simulation, and pointed out that call loss is probabilistic, not deterministic. It was asked if 100 meter 'outage' is acceptable, and can a representative model be achieved? Should all parameters have equal effect? How does outage compare with GSM?

Tdoc 48, presented by Johan Skold, presents result of Monte Carlo simulations done by Ericsson, Nokia, Motorola, Vodafone (aimed at deriving channel spacing) and proposes terminological

definitions. The conclusion is that ACIR can be as low as in the region of 30-40 dB on both uplink and downlink without significant degradation. The downlink degrades before uplink. In discussions it was remarked: the term adjacent channel selectivity may lead to confusion with similarly named tests. HP clarified that in principle one can correct for non rectangularity of filter response and mentioned that there exists equipment which does this. Error due to tail of raised cosine signal is 0.17 dB. Mr De Pasquale asks for agreed systems scenario. Amer El Saigh points out need for better blocking probability than GSM. Chairman asks to concentrate on definitions, leave aside simulations for now.

Tdoc 38 from Nokia was presented. Annex 1 gives principles of ACP simulation, defining eg MCL, propagation, handover, system scenario. Annex 2 gives principles of ACS simulation. There is a suggestion to include in the model the fact that ACP improves with lower powers, a request for comments from other manufacturers. In discussion Amer El Saigh suggests 53 dB MCL. Sami Jokinen clarified that MCL includes antenna gain. The chairman summarised that we need a common definition of simulation parameters, which will be in R4.01. Simon Pike remarked that it is important to look at different parameters. Amer El Saigh notes that admission also needs to be considered.

Tdoc 54 was presented again by Simon Pike in relation to this agenda item. It was remarked that data services should be considered.

Tdoc 55from Motorola was presented by Howard Benn. This proposes use of a Monte Carlo simulation methodology in R4.01 section 10 (Methodology for coexistence studies).

Tdoc 56 from Motorola presented by Howard Benn suggests text for input to R4.01, in the annex describing system assumptions. Amer El Saigh commented that an 80dB power control dynamic range is excessive, and this was agreed. The suggestion is that parameters should be used, not values.

An ad-hoc subgroup was suggested to further discuss this matter. Peter Van de Berg, of Ericsson, asked what is scope of ad-hoc group. There followed a discussion on the scope of the proposed ad-hoc group with the conclusion:

Scope of ad hoc group.
- Define common simulation parameters, and agreement of their definition.
- To define what is simulated, for example capacity.
- To produce output for RF scenarios document, R4.01.

The chair is Seppo Hamalainen of Nokia, and it was scheduled to meet on Wednesday evening between 5:00 pm to 10:00pm.

This issue was revisited on Thursday after the ad hoc group met.

Tdoc 60 is a copy of XX.17. Edgar Fernandes remarked that the scope of the document was agreed last meeting. Chairman agrees since this was in tdoc 17 and should be incorporated in document. The rapporteur, Nadia Benabdallah, agreed to include it. Document was noted.

Nokia noted that some of Tdoc 38 is relevant to this issue. The Chairman asked to discuss this Tdoc after simulation ad-hoc results are presented.

Tdoc 73 was presented by Andrea de Pasquale. It outlines the consensus on detailed simulation assumptions, obtained by the simulation ad-hoc side meeting. Some open issues still need be agreed. It is proposed to allow comments on reflector until 2 March. Comments clarified some points: we need to define statistical significance level of results, particularly for data; we need agreement on number of cells; traffic is homogeneous.; the wrap around problem still open. Amer El Saigh suggested that Seppo Hamacainen could run the email discussion, with the aim of providing input to R4.01.

The proposal is to produce edited versions of tdoc 38 which contains parameters for inclusion in RF system scenarios for presentation at next WG4 meeting. The chairman also encourages companies to produce results for next meeting, including ARIB side and the meeting concurred.

Action:Seppo Hamacainen to run ad hoc email meeting, to include in RF system scenarios

0 S4.03 System level protocol aspect (agenda 7.4)

Tdoc 30 was presented by Daniele Franceschini. It proposes a scope list and structure for S4.03, system level protocol aspects. It ~~would~~ includes <u>minimum performance requirements and informative criteria for the radio sub-system link control</u> ~~strategies for handovers~~ and is analogous to GSM 05.08. Edgar Fernandes and Johan Skold questioned whether this is within the scope of this group or WG1. <u>CSELT replied that the S4.03 doesn't address physical procedure (these certainly in the field of competence of 3GPP TSG RAN WG1) but performance requirements for the interlayer management of the Radio Link.</u> It was suggested that scope includes TDD and FDD. Amer El Saigh thinks we should look at all handoffs. The chairman suggested a drafting group to review the scope. The chairman asked for a LS to TSG-RAN ~~and PCG~~, and possibly TSG-T to be co-ordinated by Daniele Franceschini<u>. CSELT highlighted the importance to send LS statements regarding the S4.03 Scope and Structure in order to clarify the field of competence inside TSG RAN in an issue as important as "Radio Sub-System Link Control".</u>. <u>The resulting liaisons were 84 (to 3GPP TSG RAN WG2 & TSG-T) and 85 to TSG-R1.</u>

Tdoc 68 was presented by Amer El Saig. It is proposed text for requirements on handover. It includes handover requirements for a number of situations. It was commented that handover to GSM cannot be better than within GSM unless GSM is changed. It was questioned as to whether document is in scope of group. The chairman remarked that before this contribution can be agreed the scope needs to be clarified.

Concerning the proposed scope for document S4.03, Daniele Francesschini <u>proposed the following scope in the light of the drafting group's</u> discussion<u>: "This Technical Specification specifies the performance requirements for the radio subsystem link control implemented in the UE, BS and RNC; this TS addresses criteria for the Radio Resource Management (or as alternative to this last sentence: this TS addresses criteria for the Interlayer Management of the Radio Link)". The Scope agreed after some discussion was: "This Technical Specification specifies the minimum performance requirements for the Radio Subsystem Link Control implemented in the UE, and UTRAN".</u> ~~remarked that technical specification specifies the minimum performance requirements for the radio sub system link control implemented in the UE and UTRAN.~~ The Vice Chairman noted that ARIB does not have an equiva<u>e</u>lent test document. The concept was accepted, after some discussion.

<u>The chairman suggested a drafting group to combine tdoc 30, tdoc 68.</u>

Action: subgroup to agree contents of S4.03, during this meeting. Daniele Franceschini to chair

Tdoc 31 is a request for clarification about the specification of protocol parameters and timers values, presented by Daniele Franceschini. In particular the document asks which group, TSG-R4 or TSG-R2, defines parameters <u>and timer values</u> and proposes three solutions. Consensus is that WG2 must specify since it is where expertise lies, and WG4 may comment.

On the last day of the meeting the results of the drafting subgroup on S4.03 were presented. Tdoc 80 was presented by Daniele Frances<u>c</u>hini, which is a merge between Tdoc 30 and 68 and proposes structure for S4.03 produced by a drafting group. In discussion some points were raised: efficient handover mentioned in 6.6 should apply to entire spectrum, not just that allocated to one operator; in 6.8.1, handover to GSM, requirement of demodulation of BCCH every 10 seconds is to be bracketed. The document is noted, and the version to be upgraded to V0.0.2 and is to be presented for information at TSG meeting.

1 S4.11 Basestation conformance testing (FDD) (Agenda item 7.5)

Mr Fukuda, vice chair, stated the proposal that that the editor shall be Mr Takaharu Nakamura, Fujitsu. This was agreed. The document is not yet ready to be presented, but will be presented on the email reflector. The chairman noted that tdoc 27 from HP on composite rho is relevant in this area.

2 S4.12 Base station conformance testing (TDD) Agenda 7.6

The vice chair stated that Panasonic and Siemens will provide text for next meeting. Meik Kottkamp, Siemens, welcomed contributions from other companies and the chairman concurred.

3 S4.02 Radio transmission and reception, TDD (Agenda 7.3)

Tdoc 81 (S4.02A), Radio transmission and reception (TDD) for UE, was presented on screen by Meik Kottkamp, and will be made available later on the email reflector. It was clarified that all values in it are provisional. Tdoc 82 is the equivalent document for BS.

4 Any other business, agenda 10

Tdoc 52 was presented by Olivier Visbecq on Co-existence between FDD and TDD modes in the uplink paired band. It presents a number of scenarios. Alcatel want to be sure that introduction of TDD is still under consideration and to add the proposed scenarios to the RF scenarios document. This is accepted in principle. Contributions will be provided for next meeting.

Tdoc 53 presented by Meik Kottkamp of Siemens, a TDD/FDD co-existence investigation which includes the results of a number of simulations. In discussion it was confirmed that simulated MS receiver filter is ideal. It was confirmed that results will be fed into RF systems scenarios document.

5 Liaison statements

Tdoc 59 presented by Simon Pike, on IPR statement. Accepted.

Tdoc 65was a liaison statement presented by Johan Skold, arising from work on S4.01B, asking for guidance on accuracy of downlink closed loop power control step size. Accepted.

Tdoc 70 is a LS statement regarding scope and structure of S4.03. Accepted, with editorial modifications as tdoc 84.

Tdoc 71 is a draft LS statement to TSG-R1 regarding the scope and structure of S4.03 and the division of responsibility in the definition of Radio Link proposal. Accepted, with minor editorial changes (see tdoc 85).
Note: since TSG-R1 meeting follows on next week CSELT agree to present it directly.

Tdoc 72 is a draft LS on signalling of frequencies for RF channels. Accepted, final version to be tdoc 83 which will be made available on the reflector.

6 Future Email Meetings

Summary of email ad-hocs.
AH 01: Channel models, Nokia. Chairman to be advised.
AH 02: Simulation, host Nokia.
AH 03: Ad-hocs user equipement output power tolerance, co-ordinated by Lucent.
AH 04: TDD radio tx and rx group. Scope: to provide editorial comments on 4.02A and B. Siemens.
AH 05: FDD radio transmission. Scope to provide editorial commens on 4.01A. Rapporteur.
AH 06: FDD radio transmission. Provied editorial comments on 4.01B. Rapporteur.

7 Work plan

The chairman encourages thought for next meeting.

8 Future Meetings

RAN WG4, 29-31 March, Tokyo, hosted by Motorola.
TSG RAN, 22-23 April
RAN WG4, 10-12 May, Host Ericsson Stockholm to be confirmed.
RAN WG4, 15-17 June, host needed.
RAN WG4, 27-29 July, host needed.
RAN WG4, 7-9 Sept, host needed.

9 Closure of Meeting

The chairman thanked the hosts for their kind support and declared the meeting closed.

Annex A: Summary of outputs and liaisons

No	Title	To	Copy to	Note
59	LS to TSG RAN, PCG on IPR section in documents	PCG	TSG RAN	Sent
65	LS to TSG-R1 on downlink power control step size accuracy	TSG-R1		Sent
83	LS statement on signalling of frequencies for RF channels	TSG-R2	STS-R1, ERC TG1, ETSI/ERM /RM, ARIB	Sent
84	LS to 3GPP TSG RAN WG2 & TSG-T regarding the scope and structure of S4.03 on system level protocol aspects	TSG-RAN, TSG-R2, TSG-T		Sent
85	LS to 3GPP TSG RAN WG1 regarding the division of responsibility in the definition of radio link procedures (specifically S1.15, S1.25)	TSG-R1		sent

Annex B: list of documents

No	Title	Source	Agenda item	Result	To	
24	S4.01 Draft MS radio specification	Editor		Presented		
25	Draft meeting report	Convenor		Approved		
26	Revised agenda for meeting #2	Convenor		Approved		
27	Composite Rho measurement	HP		Presented, passed to S4.01 ad hoc		
28	Definition of adjacent channel power	HP	7.5	Presented		
29	S4.01 draft BTS radio specification	Editor		Presented, passed to S4.01 ad hoc		
30	Draft proposal for S4.03 on "system level protocol aspect"	CSELT		Presented, Discussed		
31	request for clarification about the specification of protocl parameters and timer values	CSELT	7.4	Presented, Discussed		
32	Annex C (normative) Environmental conditions	Motorola		Presented, passed to S4.01 ad hoc		
33	BS ACPR	Nortel	7.1, 7.2	Presented (7.1), passed to S4.01 ad		

				hoc. Disussed 7.2		
34	Comments to S4.01A v0.0.1 UTRA (UE) FDD Radio	Ericsson		Presented, passed to S4.01 ad hoc		
35	Liaison statement on utilisation of the UMTS spectrum	SMG 2		Presented, noted		
36	Liaisons from ITU-R TG 8/1 WG5	ITU Ad Hoc contact person	6	Presented, subgroup will discuss		
37	Proposed text for EMC specification	Lucent	7.7	Presented, discussed		
38	The analysis of 3GPP FDD MS RF parameters	Nokia	7.2 and 7.8	Presented, passed to S4.01 ad hoc		
39	Test parameters for receiver baseband tests	Nokia	7.2	Presented		
40	Proposal for scope of BS EMC requirements	Nokia		Noted		
41	Proposal for table of content for BS EMC requirements	Nokia		Noted		
42	Letter of support for Dr Benn	Motorola		Information		
43	CV for Dr Benn	Motorola		Information		
44	Letter of support for Mr Fukuda	Fujitsu		Information		
45	CV for Mr Fukuda	Fujitsu		Information		
46	Election procedure	ETSI		Information		
47	DL dynamic range and DL power control range	Nokia		Presented, passed to S4.01 ad hoc		
48	Evaluation of up- and downlink adjacent channel performance	Ericsson	7.2, 7.8	Presented, passed to S4.01 ad hoc		
49	Minimum Carrier Spacing and a comment for Raster Frequency	11 companies		Presented, tdoc 62 is outcome		
50	Maximum frequency deviation for receiver performance, Receiver dynamic range, RSQI measurement	11 companies		Presented, passed to S4.01 ad hoc		
51	Additional specification of transmitter requirements	11 companies		Taken bya ad hoc		
52	Co-existence between FDD and TDD modes in the Uplink paired band	Alcatel	10	Presented		
53	TDD/FDD co-existence investigations	Siemens	10	Presented		
54	Principles for the definition of adjacent channel performance of UTRA	Lucent	7.8	Presented, deferred to 7.8		
55	Text for input to R4.01, section 10 - Methodology for coexistence studies	Motorola		Presented		
56	Text for input to R4.01, Annex describing system assumptions	Motorola		Presented		
57	ARIB merged document for S4.01	ARIB		Presented, passed to S4.01 ad hoc		
58	R4.00 Introduction	Editor		Presented		
59	LS to TSG RAN, PCG on IPR section in documents	RAN WG4		Accepted	TSG RAN, PCG	
60	UTRA RF system scenarios R4.01 V0.0.1	Omnitel		Noted		
61	Revisons to tdoc 24 R4.01A Draft MS radio specification	rapporteur		Presented, discussed		

62	Proposed text for frequency bands (outcome of discussion on Tdoc 49)	TSG-R4 subgroup	7.2	presented discussed		
63	Merged 4.01B V0.0.2	TSG-R4 subgroup		Presented, discussed		
64	Information on EMC requirements	UK DTI	7.7	Presented, discussed		
65	LS to TSG-R1 on downlink power control step size accuracy	TSG-R4	8	Accepted	TSG-R1	
66	LS on variable duplex spacing to TSG-R1, TSG-R2. Tdoc 66	RAN WG4		Withdrawn	TSG-R1, TSG-R2	
67	Proposed text for frequency bands (revision of Tdoc 62)	Drafting group, Wed	7.2	presented, discussed		
68	Requirements on handover for 3-G	Vodafone, Telia	7.4	Presented, discsussed		
69	CEPT recommendation on spurious emissions 74-01E	This meeting	7.2	Noted		
70	LS to 3GPP TSG RAN WG2 & TSG-T regarding the scope and structure of S4.03 on system level protocol aspects, (final version is 84)	This meeting, Daniele		accepted		
71	LS to 3GPP TSG RAN WG1 regarding the division of responsibility in the definition of radio link procedures (specifically S1.15, S1.25) (final version is 85)	This meeting, Daniele		Accepted		
72	Draft LS on signalling of frequencies for RF channels (superceded by 83)	TSG-R4		Discussed	TSG-R2 Cc TSG-R1,ERC TG1,	
73	Draft Minutes of side meeting: ad-hoc on systems simulation	Ad hoc		Discussed		
74	Proposed normative references for S4.13 basestation EMC specification	Lucent Tech		Presented, noted		
75	Minutes of side meeting: ad-hoc on systems simultion [note: distribute on reflector]	This meeting Andrea				
76	Draft table of RF front end key characteristics	ITU drafting group (Nicolae)		Presented		
77	Proposal for UE frequency stability	NTT docomo,NEC,Matsushita, Toshiba, Sharp	7.2	Presented, Accepted		
78	Proposal for UE maximum output power	NTT docomo,NEC,Matsushita, Toshiba, Sharp	7.2	Presented, Discussed		
79	Proposal for modulation accuracy	NTT docomo,NEC,Matsushita, Toshiba, Sharp	7.2	Presented, Discussed		
80	Result of drafting group on system level protocol aspects: Radio subsystem link control	Drafting group (daniele)				
81	S4.02A, UE radio transmission and reception (TDD)	Siemens (Meik)		Presented		
82	S4.02B, BS radio transmission and reception (TDD)	Siemens (Meik)		Presented		
83	LS statement on signalling of frequencies for RF channels (final version of 72)	TSG-R4				
84	LS to 3GPP TSG RAN WG2 & TSG-T	TSG-R4				

	regarding the scope and structure of S4.03 on system level protocol aspects, (final version, superceds 70)						
85	LS to 3GPP TSG RAN WG1 regarding the division of responsibility in the definition of radio link procedures (specifically S1.15, S1.25) (final version supercedes 71)	<u>TSG-R4</u>					
86	S4.03 version 2 (to be circulated on reflector)						
87	S4.01A version 0.0.3 (to be circulated on reflector by next Wed)	(Edgar)					
88	S4.01A version 0.0.4 (to be submitted to TSG-RAN, and will supercede 87),	(Edgar)					
89	Draft meeting report for meeting #2	<u>Secretary</u>					

Annex C Participants list

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