Title:	**Minutes of 3GPP/RAN/WG1#4 meeting (Shin Yokohama, Japan)**
Source:	**Temporary Secretary**
Agenda Item:	**2**

Meeting started: April 19th

Day 1, starts 09.00, ends 19:30

Day 2, starts 09:00, ends 20:00

1. Opening of the meeting

WG1 vice-chairman, Mr Takehiro Nakamura (DoCoMo), opened the meeting in the absence of chairman, Mr Antti Toskala (Nokia). Mr Toskala took the chair in the beginning of afternoon session of April 19th.

2. Approval of agenda

Approved without modifications.

3. Assignment of secretary

Mr Mauri Ukonmaanaho (Nokia) was assigned as the temporary secretary for morning session of April 19th. Mr Nicolas Voyer (Mitsubishi Electric) was assigned as temporary secretary for the rest of the meeting.

4. AdHoc Reports.

4.1 Report from AdHoc 6

Tdoc 353   Ad hoc 6 report   AH6 leader (Dr Pehkonen of Nokia)

Deadline for completion of studies on Tx diversity are agreed to be postponed to June 1999 (next WG1 meeting).

Question (Panasonic) : was Tdoc 433 approved in AdHoc 6 ? (AH6 leader) : the text proposal has not been seen by the AdHoc members, and thus the text was not approved by the AdHoc. The text will be presented later to the plenary. The concept was approved in the AdHoc. Regarding the number of FBI bits, it was concluded that the text is already included in the relevant S documents, with brackets, so the brackets should be removed.

Conclusion: The AdHoc recommendations were approved without modifications.

4.2 Report from AdHoc 1

Tdoc 430   AdHoc 1 report   AH 1 leader (Dr. Klein of Siemens).

Comment (Nokia) : Issues in Section 2 were not discussed in the AdHoc. (AH1 leader) : The issues were discussed, however the text proposals should be discussed in the Plenary.

Question (Panasonic) : Should items approved by WG2 be directly included into WG1 document ? Also why was USCH approved for TDD only ? (AH1 leader) : The inclusion of text is because of consistency

between WG1 and WG2 documents. The reason for approving USCH only for TDD was not known.
Question (Ericsson) : Is there any liaison statements from WG2 ?(AH1 leader) : Tdoc 432 was identified as a liaison from WG2.

Conclusion : 1st and 2nd last bullets of section 2 shall remain. The other bullets on USCH should be removed. So, following text should be removed : "Now these… specified should be remove". Rest should be included in the specifications. It was agreed that WG1 should report to the RAN the inconsistency between WG1 and WG2 (because USCH is part of WG2 specifications, but not part of WG1 specifications). The other AdHoc recommendations were approved without modifications.

| Tdoc | "Introduction of the Chinese Narrowband Key Parameters and Features for UTRA-TDD Mode" | CATT/China. |

Question (Nortel) : Should WG4 be informed about the relevant items (e.g. chip rate) ? (CATT) : a liaison letter shall be sent to WG4 at an appropriate timing.
Comment (FT) : Would the milestones be affected by the proposal ? A proposal was made by Mr. Sasaki of ARIB to inform TSG RAN about this issue. The conclusion for this issue was that Mr. Nakamura will discuss with the WG1 chairman about how to take the issue up in the TSG RAN meeting.

Conclusion : The related proposals were agreed to be presented in WG1 plenary for discussions in appropriate AdHoc.

4.3 Report from AdHoc 7

| Tdoc 412 | AdHoc 7 report | AH7 leader (Mr. Mochizuki of NEC). |

Comment (LG) : LG will submit a proposal of a new pilot pattern in the DL at the next WG1 meeting.

Conclusion : The AdHoc recommendations were approved without modifications

4.4 Report from AdHoc 3

| Tdoc 43 | AdHoc 3 report | AH 3 leader (Dr. Dahlman of Ericsson). |

For extended AICH signaling, the final text proposal is presented in doc. 438.

Comment (Panasonic) : on section 1.1, proponents of Tdoc 374 can agree on timing proposal of Tdoc 378. However a separate requirement is needed for large cells. The modification to the proposal in 378 is that in large cells the sending of AICH can be one access slot later. Conclusion was to set two values for the parameter t_{p-a} . Text proposal will be prepared according to the agreement.
Comment on section 1.5 was that the issue of BCCH complexity should not be included from here. The conclusion was to remove "Complexity of BCCH decoding" from the AdHoc report.

Conclusion : The other AdHoc conclusions were approved without modifications.

4.5 Report from AdHoc 4

| Tdoc 418 | Ad Hoc 4 report | AH 4 vice leader (Siemens) |

Question (Ericsson) : on item 13, the "simple and straightforward" was not the conclusion of the AdHoc. (AH4 vice leader) : the sentence will be removed from the AdHoc report.
Comment (Nokia) : on item 4, about possibility of having more that one CCTrCH, and about code multiplexing. The conclusion was to have offline discussions on this issue during this WG1 meeting.
Comments (Nortel) : The Nortel input on puncturing was moved to AdHoc 5. On Item 5, the number of different transport formats should be between 5-11. On Item 6, 0 bit CRC was also mentioned and

accepted. On Item 7, the AL interleaver is equivalent to MIL with regard to performance. NTT DoCoMo should also provide more simulation data.(WG1 chairman) : Nortel comments will be incorporated into the AdHoc report. The revised report will be presented later.

Question (Ericsson) : Is there any decision made in this ad hoc regarding text proposal on Hybrid ARQ ? (AH4 vice leader) : No decision was made.

Conclusion : A request was presented by the WG1 vice Chairman for the AdHoc to define a simulation schedule (plan), so that a decision can be reached in the next WG1 meeting on channel interleaving.

Tdoc 487	Ad Hoc 4 report (updated)	AH 4 leader (Siemens)

Text is added that there is no common understanding of CCTrCH definition, and no common understanding of multicode transmission definition. Channel interleaver shall be frozen in next WG1 meeting.

Comment (Ericsson) ; Deadline for channel interleaver selection is the next WG1 meeting. However, proposal description shall be sent on the reflector much BEFORE the deadlines. (Nokia) : For DTX gathering, we need full description as fast as possible on the issue.
Question (Philips) : Low BER bearers are proposed to support turbo-codes. Does that mean that turbo-codes shall not be used for the other channels (e.g. common channels). (Nortel) : This is our position indeed to have only one channel coder, only one single scheme could be used. (Philips) : So, the sentence should be read also low bit rate bearers. If this is accepted, this may have quite a big impact on the support of BRD, that would be longer applicable. This would mean a major change in the specifications.(Lucent) : This is allowed to be discussed in the Ad Hoc 5. (Mitsubishi) : In our understanding, coding scheme was selected based on the interleaver block size, this is what counts in the FEC implementation design. So we feel puzzled with this bit rate selection criteria. (WG1 chairman) : Current specs are a bit unclear on the issue. Current specifications specifies 32 kbps without mentioning coding interleaving size… A proposal to base the limitation on block size is on the table, but is not fully accepted yet. (Nokia) : a comment should be included that for voice only terminals, it is not sensible to go for turbo-codes. (Lucent) : we can not agree with that.

Conclusion : Discussion to go on within Ad Hoc 5.

4.6 Report from AdHoc 5

Tdoc 449	Ad hoc 5 report	AH5 leader (Mr Hammons of HNS)

Two text proposals were accepted (one from NTT DoCoMo on turbo interleaver, one from HNS).

Conclusion : The AdHoc conclusions were approved without modifications.

4.7 Report from AdHoc 8

Tdoc 442	Ad hoc 8 report	AH8 vice leader (Mr Voyer of Mitsubishi)

One text proposal was accepted (on FDD reporting), another text proposal needs to be discussed in plenary (Mitsubishi).

Comments (Nortel) : reference to GPRS should be replaced by GSM in this report.
Comments (Siemens) : it was agreed that requirement is to have several GSM search speed, not only as good as in GSM, but also some faster and slower schemes should be specified.
Comment (Vodafone) : Impact of uplink compressed mode on link budget should be further studied. (FT) : we agree that UE with single synthesisers should not be prevented. However, we agree that impact on link budget should be clarified. Also, simultaneous use of both UL and DL compressed mode should at least be checked in terms of overall performance and behavior. (AH 8 vice chair) some data on uplink coverage limitation was provided in previous meetings. (Nokia) : yes, we saw only a small effect on link budget if uplink is interference limited. (Philips) : there currently seems to be no other solution that uplink compressed mode, so we shall take it. Contribution for solving the issue by some other means is welcome.

(Vodafone) : uplink compressed mode is not essential for certain handover scenarios.
Comment (Nokia) : there were discussions on the reflector on mapping of mode A and B. Is the issue clarified ? Answer : Mode A is used for SF = 256, 512. Mode B is used otherwise.
Comment (WG1 chairman) : I understand there is an action point to draft LS to WG2 on compressed mode.
Comment (Philips) : Ad Hoc 4 should support Ad Hoc 8 to form the DTX gaps with proper rate matching and multiplexing.

Conclusion : The AdHoc conclusions were approved with above modifications. LS should be drafted to WG2 when text is stable.

4.8 Report from AdHoc 10

Tdoc 414	Ad hoc 10 report	AdHoc 10 leader (Mr Kato of Panasonic)

Short code scrambling should be supported mandatory by UE (optional at Node B). A new scheme for code polynomials generation is being proposed, but could not be agreed.

Comment (Nortel) : code generation is implementation dependent and should not be standardised. We should not specify things that are not testable. (Ericsson) : We agree on last comment principles. However, code labeling is easier if some assumption is made on code generation method : there are indeed too many codes. Code labeling has some impact on code generation. So we should have a common understanding on how code can be generated. This does not prevent some other implementation, but ensures that the same code is generated.

Conclusion : The AdHoc conclusions were approved with above modifications.

4.9 Report from AdHoc 14

Tdoc 451	Ad hoc 14 report	AdHoc 14 chair (Motorola)

CPCH, USCH, DSCH were further evaluated. LS should be sent to WG2 stating that both CPCH and USCH are viable solution on a L1 perspective. 2 LS are drafted and shall be treated afterwards.

Conclusion : The AdHoc conclusions were approved with above modifications.

4.10 Report from AdHoc 12

Tdoc 504	Ad hoc 12 report	AdHoc 12 chair (Mr Nakamura, from DoCoMo)

CPM was deeply discussed. However, because CPM was agreed to have a significant impact on development plans of mobile manufacturers, and because simulation results in favor of CPM were not conclusive, the CPM issue was closed. SSC codes will be decided at next meeting, because the impact on development plans is lower. Simulation shall be done to evaluate cross correlation properties under frequency error. Detailed selection procedure shall be determined on the reflector.

Comment (Siemens) : AH12 decision regarding PSC Decision is not reflected here. New PSC proposed by Siemens was agreed as working assumption.

Conclusion : The AdHoc conclusions were approved with above modification.

4.11 Report from AdHoc 9

Tdoc 468	Ad hoc 9 report	AdHoc 9 chair (Ms Le Start, from Nortel)

Because of lack of time, 5 contributions could not be dealt. They were planned to be discussed on the plenary, but shall go on in the reflector. Basically, there is no conclusion yet on the power control issues. In order to come to a conclusion, some agreement is needed on simulation assumptions. This shall be discussed in the reflector. There was no text proposal output from the ad hoc.
Question (Nokia) : Do the proposals on power control in compressed mode assume adaptive step sizes ? Answer : in Alcatel proposal, a fixed step is used in compressed mode, which is different than in normal mode. So, it is inaccurate to say that it is adaptive.

Question (Nokia) : In Panasonic ASPC proposal, is power constant within DPCCH ? What is the impact on UE implementation ? (Panasonic) : No, this scheme is proposed in the downlink only, there is a mistake in the report. The report contains another imprecision : the referenced field tests only showed that the normal power control scheme performs correctly in normal mode, it does not mean that ASPC would not bring any significant advantage in normal mode …

Conclusion : The AdHoc conclusions were approved with above clarifications.

5. Text proposals from Ad hocs or from earlier open issues for S1 documents

5.1 Text Proposals for S1.01

5.2 Text Proposals for S1.02

5.3 Text Proposals for S1.11

Tdoc 337   Text proposal for the modifications of secondary CCPCH   LGIC
The text introduces the possibility to have multicast data sent on secondary CCPCH, that should support the TFCI field.

Comment (Philips) : Brackets in the first paragraph could be removed.

Conclusion : Text and comment accepted.

Tdoc 343   Text proposal for 3 valued acquisition indicator   Ericsson
Accepted on principles.

Comment (Nortel) : Wording of "slot" should be changed.
Comment (Philips) : Because AICH is using coherent detection, a phase reference should be defined, to make proper definition of the AICH. For instance, a reference to CCPCH phase could be added to thet text. Yes approved.
Comment (Mitsubishi) : AICH signatures should be defined as 4096 chips sequences. (Editor) : We can add an editors note that details of AICH signatures are still FFS.

Conclusion : Text and comments accepted.

Tdoc 344   Text proposal for random access message structure   Ericsson
2 new bits are defined in the RACH DPCCH, that shall be used as rate information bits. This decision is linked to Tdoc 386 (tables page 12).

Conclusion : Text accepted.

Tdoc 353   Ad Hoc #6 report   Ad Hoc 6
The table of applicability of Tx diversity on physical channels is updated.

Conclusion : Text accepted.

Tdoc 400   Text proposal for STTD encoding of PCCPCH   Texas Instruments
Clarification of application of STTD Tx diversity to primary CCPCH is added.

Conclusion : Text accepted.

Clarification of application of Tx diversity to SCH is added. Figures shall be moved to the proper sections.

Conclusion : Text accepted.

Two changes to the pilot patterns in the uplink. This tem was accepted in Ad Hoc 7.

Conclusion : Text accepted.

Comment (Nortel) : Same editorial convention should be used for RACH and DTCH channels. Also, UL/DL timing should be clarified to be those as seen at the UE.
Comment (Motorola) : Some inconsistency in figure 23 should be solved. Also definition of small/large cells should be clarified. (Nortel) : we suggest that there can be a parameter (either one or zero) that can be set separately for each cell. In a given cell, the preamble retransmission time is set to 3 plus this value. Then we do not need to define large/small cells.
Comment (Ericsson) : in figure 21, there is TX and RX, the same naming should be used accordingly, instead of UL/DL. No objection, so accepted.
Comment (Philips) : Tpp is being thought as being a MINIMUM value of 3 or 4. This should be reflected in the text. (Nortel) No, common assumption is that the retransmission time between successive preambles is fixed. Whether it should be random or fixed, is a WG2 problem, so this could maybe part of our liaison to WG2. (Ericsson) : Should it be random, there should then also be some definition of an upper limit in preamble retransmission time, because preamble power setting may not be proper otherwise. (Nortel) : Agreed. So guidance from WG2 is asked on this issue.

Conclusion : Both comments and text are accepted. Editor shall make the agreed changes. LS to WG2 should reflect our concerns on fixed/random preamble retransmission time.

Because USCH could be used in conjunction with FAUSCH (FAUSCH could be used for restarting transmission on a DCH already allocated), FAUSCH should remain in the specifications until decision is made on contents of Release 99. So it is proposed to remove some editor notes. This is line with WG2 and RAN assumptions.

Comment (Motorola) : There seem to be some misunderstanding on USCH here. So concept described in the paper may not be agreed. However, we agree that editors note could be removed.
Comment (GBT) : FAUSCH was not accepted in 3GPP, in ETSI only. T1P1 members could not have proper discussions on the issue. So what is its precise status ? (Nortel) : 3GPP should make decision at company level, not at group level, so reference to ETSI, T1P1 is non sense now. However, If WG1 members are not happy with WG2 and RAN decisions, we should raise this to those groups. (GBT) : mechanisms should be at least further discussed in ad hoc 14, and then go the feasibility level before FAUSCH becoming a working assumption. (WG1 chairman) : having the text in S1.11 does not have any impact on what shall be effectively included in the Release 99. So editor's notes on FAUSCH could be removed, the square brackets shall be kept on the FAUSCH description, with on going discussions on the issue in AH14. (Editor) : there are some other similar notes on the FAUSCH issue in some other places of the document. Agreed decision : they all should be removed.

Conclusion : Text accepted, with additional changes..

Some editorial changes, with inclusion of pilot patterns, figure reflecting DPCCH structure on multicode

Transmission, and some more.

Question (Philips) : What about the agreement of use of SF=64 on Secondary CCPCH for FACH and PCH ? (Ericsson) We can not make such assumption, because we miss information on the expected FACH data rate. (Philips) : Secondary CCPCH data rate has an impact on UE maximum supportable data rate. So an editor note should be added, whether this FACH bit rate should be changed, is FFS. The maximum bit rate for different UE terminal classes is FFS.

Conclusion : "the maximum bit rates supported by different terminal classes on secondary CCPCH is FFS" shall be added as editor's note. Text approved. S1.11 V1.1.2 shall include changes from Day 1. A new version shall be produced. Only chapters concerned by discussion on Day 2 shall be printed on the new version.

5.4 Text Proposals for S1.12

Tdoc 202   Proposal for enhanced extending TFCI encoding   Siemens
This document could not be treated in AdHoc 5. Scheme is agreed, and shall also be applied to TDD.

Conclusion : Text is approved, and shall be inserted in both S1.12 and S1.22..

Tdoc 356   Text proposal for support of hybrid ARQ type II/II in the physical layer   Siemens

Comment (Ericsson) : There were no conclusion in the ad hoc meetings and the use of this scheme. (WG1 chairman) : Because there is no consensus, we should postpone the issue. (Siemens) : AdHoc 5 suggested to have discussion made at the plenary meeting, so we should discuss it now. (WG1 chairman) : OK, this discussion shall be treated tomorrow.

Day 2 discussion :
Description of the scheme : to support Hybrid type II/III ARQ, a redundancy selection block is added, that can remove some of the redundancy bits, depending on higher layer commands.

Comment (Nokia) : Our internal studies showed that gain from type II/III ARQ compared to other ARQ schemes only appears at FER of 60 %. Turbo-codes have not been studied at these high error rates in AdHoc 5. Further, it really is not acceptable to have so deep puncturing on turbo-codes. Also, the position of redundancy blocks has to be carefully notified with the position of tail bit insertion. We have many concerns, and we can not accept this at this time.
Answer (Siemens) : our simulation showed direct comparison between type I and type II/III ARQ mechanisms. We see clear advantages there. As tail bits are concerned, the same channel coding is used for both schemes, so we see no problem here. In our simulations, puncturing is used, and also TPC was simulated.
Comment (Lucent) : This proposal was not discussed. We should discuss this. And to conclude on the issue, we should define QoS requirements more clearly. For example, in this kind of comparison, FER is more important than BER, and this was not the approach used in AdHoc 5.
Comment (Siemens) : we would like to have in S1.22 document, if not in S1.12 document. (Lucent) Difference on those issues between FDD and TDD modes is not going to be appreciated at the WG2 level, because it will have some impact of compatibility between the 2 modes on the network side. So, the same approach should be used for the 2 schemes. Either we accept this scheme for both TDD or FDD, either we reject it for both modes.

Conclusion : it is premature to accept this. The issue shall be reported to RAN, so that WG2 will be aware of the current situation inWG1. The document is rejected.

Tdoc 436   Text proposal for S1.12   Lucent Technologies

Question (Siemens) : can the same scheme be used for the TDD scheme ? Answer : Yes.

Conclusion : Text is accepted and shall be inserted in both S1.12 and S1.22.

Tdoc 447   Encoding blocks for turbo-codes   Nokia
Some text is added on the formation of coding data blocks.

Conclusion : Text is accepted and shall be inserted in both S1.12 and S1.22.

Tdoc 471   Text proposal for Turbo code interleaver   NTT DoCoMo and Nortel Networks
A turbo-code interleaver, including a pruning scheme was proposed and agreed in AdHoc 5.

Conclusion : Text is accepted and shall be inserted in both S1.12 and S1.22.

Tdoc 476   Text proposal for S1.12 (treillis termination and rate ½ turbo codes)   AdHoc 5
Text includes more text on turbo codes.

Comment (Lucent) : This text contradicts UMTS 20.05 (officially agreed in SA), where QoS to be supported by UTRAN are already specified. (WG1 chairman) The requirements in this document are not precise enough (noticeably in terms of packet data QoS). Indeed, UMTS 20.05 did not precise whether the listed BER assumed ARQ or not. So, it is difficult to base our work on UMTS 20.05. (Philips) : Indeed, in this document there is a requirement to have BER of down to 10^{-8}. (Ericsson) : Nobody in TSG SA actually read the RAN specifications. So we should maybe liaise to this group our understanding of QoS definitions. At least we should report the impact of supporting TSG SA requirements. (Nortel) We feel confused with the discussions. The UMTS 20.05 only gives a range of BER requirement.

Conclusion : WG1 should make LS to TSG/SA, to clarify the position in TSG/SA. If such very low BER service (without ARQ) is to be specified, then we shall define then the FEC scheme to support that. Text accepted, with some additional editor note in 4.2.2.2 : "It needs to be clarified from TSG SA what are the service specifications with respect to different quality of services". Samsung proposed to liaise in addition the QoS that are shown to be achievable, and the ones shown not to be achievable. WG1 Chair shall indicate this to the RAN meeting.

Tdoc 392   Text proposal to S1.12   Nokia
It is proposed to clarify the position of CRC position to facilitate the blind rate detection. Also, tail bits should be clarified for convolutional coding. The SFN should be defined in accordance with long code generation agreement. The bit transmission sequence is also clarified.

Comment (Ericsson) : It is not clear how first proposal acytually helps the blind rate detection, it is the first time to hear from this, we can not accept this. (NEC) DoCoMo showed simulation results in ARIB on the use of CRC pattern for blind rate detection.

Conclusion : Points 2,3,4 approved. Point 1 decision postponed. Changes should be reflected to S1.22 as well.

Tdoc 358   Definition of encoding block for channel coding   Nokia
This clarifies the difference between convolutional coding and turbo coding in terms of mapping which channel coding is applied to the different logical channels. Changing point of coding scheme shall depend on the coding unit size in bits, rather than in data rate.

Comment (Lucent) : We wish to keep the changing point in terms of bit rate (32 kbps) because for lower rates, some companies wish to keep convolutional codes in order to keep the possibility of all expected QoS. (Ericsson) The hardware size shall be designed with given maximum coding block size. We should put a changing point in terms of block size length (Lucent) : it is too early to have such statement in the S1 documents. The QoS should be clarified first.

Conclusion : There is no agreement for changes. We shall keep the current text.

5.5 Text Proposals for S1.13

Tdoc 347	Amplitude differences between uplink DPCCH and DPDCHs	Ericsson

Quantization of coding amplitude ratio between DPDCH and DPCCH is investigated. Leading concept is that a change in the power ratios should not change instantaneous power in the PA.

Conclusion : Text is approved.

Tdoc 365	text proposal for uplink long scrambling codes	Nokia

Conclusion : document was not approved in Ad Hoc 10. So, discussion is skipped.

Tdoc 379	text proposal for downlink long scrambling codes	Nokia

Conclusion : document was not approved in Ad Hoc 10. So, discussion is skipped.

Tdoc 385	Text proposal regarding S1.13 figures 1 and 2 channelisation code	Editor

Conclusion : Text is approved.

Tdoc 397	A new Hierarchical correlation sequence	Siemens

The constituent sequences of PSC are changed for optimisation of correlation.

Conclusion : Text is approved.

5.6 Text Proposals for S1.14

Tdoc 438		Nortel
Tdoc 508		Nortel

This proposal suggests further needed text on power control issues, where many details should be fixed. Infinite loops should be prevented, power setting of preambles has to be specified, dynamic persistence execution, etc. should be clearly defined, especially in the UE side. In addition the retransmission rules of preambles should be defined. Should it be a cyclic pattern ? Should it be a schedule decided by upper layers ? Should it be 2,3 or 4 access slot delay ?

Last minute correction (Nortel) : in Tdoc 438, there was some major error. They are corrected in Tdoc 508, including one FFS issue : the problem lies in the fact that some access slots may not be allowed for PRACH.

Conclusion : The paper shall be adapted to support the changes relative to the agreement this morning on AICH/preamble timing. Text accepted with these changes.

Tdoc 441	Frame synchronisation	LGIC

Comment (Nortel) : A new technique is being defined here. We should check it should be done like that. Text could be added for information, but this technique should not be mandatory.
Comment (NTT) : We remember previous discussions in ARIB on synchronisation confirmation to higher layers. However, signaling to the higher layers is not suitable (from ARIB discussion). So, the procedure part of this paper is not needed. However, we could have a new section, dedicated to synchronisation,

including confirmation of synchronisation of frame, but also some other issues related to synchronisation in general. (WG1 chairman) : So text could be added as an annex for information. In addition, there might be some work there for WG2 or WG3. We shall come back on this tomorrow, while drafting Liaisons.

Conclusion : Text is accepted to be removed to an informative annex in S1.14, with all other synchronisation chapters.

5.6 Text Proposals for S1.21

Tdoc 357   Calculation of t_{offset} for PSCH in TDD   Siemens

Conclusion : Text approved

5.7 Text Proposals for S1.22

Tdoc 202 (follows) Text Proposal for Optimisation of extended TFCI encoding   Siemens

Conclusion : Text agreed to be also included in S1.22

Tdoc 356

Conclusion : Decision/Discussion Postponed

Tdoc 375   Text proposal for S1.22 'Multiplxing and channel coding (TDD)   Siemens
Many new items, and refreshing of the text.

Comments (Nortel) : the paragraph on compressed mode is now being very vague. (Siemens) : compressed mode is decided at the higher layers with fast DCA, so there is no need for description in here. The compressed mode is transparent to the physical layers.
Comment (Nokia) : Output Rate zero is missing. This shall be added.
Comment (Nokia) : Page 18, figure 6.10 : Does spreading refer to scrambling and channelisation ? (Siemens) : This refers to channelisation spreading. This shall be clarified.
Comment (Philips) : Blind rate detection (BRD) is removed. How viable is the multiplexing approach in terms of complexty/performance? This scheme shall be indicated as being for further study.

Conclusion : Editor shall take this changes into account. Text agreed.

5.8 Text Proposals for S1.23

5.9 Text Proposals for S1.24

Tdoc 431   TDD synchronisation   Ericsson, Panasonic, Siemens
Some text is added on Node B synchronisation.

Conclusion : Text is approved.

Tdoc 473   revision of Tdoc 368   Siemens
Some more precise text is added on TDD physical layer procedures.

Conclusion : text is approved

5.10 Text Proposals for S1.31

Tdoc 335   Monitoring of UTRA FDD Cells   Nokia

BCCH is not needed to be decoded to make measurement report.

Conclusion : Text is approved. A LS to WG2 shall be drafted on how measruements report shall be signaled over the air.

Tdoc 445   Text Proposal for use of compressed mode   Mitsubishi

This text is presented for discussion. It presents some rewording of monitoring procedures at the UE, an introduces some new text on FDD and GSM BCCH monitoring.

Comments (Nortel) : use of "implicit" and "explicit" scheduling is making some assumptions on how signaling is done. Also, reference to RRM should be avoided in such paper. In addition, the text introduces some new specific parameters (Ncarriers), that make new assumption on how measurement will be done. This was not discussed, and we see many cases where measurements could be done with some other schemes. So, we can not accept the text as such.

Comment (Vodafone) : It seems that text assumes that uplink and downlink compressed mode are mandatory for single receiver UE. However, there are cases where this could be avoided (monitoring FDD and GSM 900). The text needs to be rephrased. (Mitsubishi) : We made an assumption based on email discussions, that the single receiver UE would use only one synthesiser. We thought this was agreed, based on discussion on ad hoc 8.

Comment (FT) : the text is missing the compressed mode parameters values. This should be further studied.

Conclusion : Decision is postponed, until some new text is drafted in coordination with involved companies.

Tdoc 505   Text Proposal for use of compressed mode   Mitsubishi, Nortel, FT,
                                                                       Vodafone, Siemens, Nokia

This is the new text, based on night discussion about Tdoc 445, where an agreement was found to include the agreeable part in S1.31.

Comment (Nokia) : about the editors note comparing the R1-99505 paper to RAN WG4 specification document R4.03 RF parameters in support of radio resource management, the paper R4.03 is not very mature and contains mainly text copied from GSM specifications. All practical values are in the square brackets and they are not yet discussed thoroughly. It is up to WG1 to define the physical layer measurements (S1.31) needed to support the handover.

Comment (Vodafone) : Because the agreed text paragraph is still not stable, we would like that it shall not be treated under change control in further meetings. (WG1 Chairman) : Yes, agreed, we do not need to change this with a change control. We do not want that discussion proceeds at the RAN meeting. (Nortel) : anyway, the whole S1.31 is still unstable, so the argument is valid for the whole document.

Conclusion : Text is accepted. The missing values of parameters shall be fixed at the following meeting, with more discussions on the reflector on the issue.

Tdoc 145   Split of adjacent channel protection rule   NEC

This document introduces some text on adjacent channel protection rule. The proposal is to split what is in the WG1 part and what is in the WG2 part.

Comment (Nortel) : This text will likely raise further discussion. Especially, UE should not initiate L2 algorithm. There should be a report to UTRAN of the measurements. Otherwise, it will be difficult to

predict the behavior of UE if they can make such handover decision alone. This kind of situation should be avoided. (NEC) : it is not mandatory for UTRAN to support handover on UE request, so there is no much problem here. (Vodafone) Operators wish to have the full control of the decision making of handover trigger. If this scheme is to be used, the measurements should be visible to UTRAN. (Mannesmann) We should avoid to have network control mixed between the network part and the UE part.

Conclusion : The split is acceptable (for the text already existed). the scheme is left for further study. A LS would only be sent to WG2, if considered necessary in the future

Tdoc 519   Text changes to S1.31, on "measurements for adjacent protection rule"   NEC, Vodafone
It is proposed to remove some of the text shall was not agreeable in Tdoc 145. It is noted that the scheme should be left FFS.

Comment (Nokia) : Some more clarification will be needed to tell what is really meant by the "downlink

Conclusion : Text is accepted.

6. Approval of the minutes from meeting No. 3

Tdoc 454   Minutes of the Stockholm meeting   Temporary WG1 secretary
Minutes approved.

7. Report on the S1.xx documents produced by the editors, version approval from 1.1.x to 1.2.0 and for RAN approval.

Tdoc 411   S1.01   Editor

Comment (Nortel) : This text is NOT a technical report. So, it shall remain as a specification text.

Conclusion : new version of S1.01 is approved.

Tdoc 491   S1.02   Editor

Tdoc 484   S1.11 v1.1.3   Editor
Tdoc 507

Comment (Nortel) : RACH timing part : comments were included from last identified issue. Regarding DTCH timing part : some appendix should be added for the timing issues, in order to reference somewhere the one slot power control delay (which is not specified). Some contribution is welcome to solve how we can rule out this issue of annex.

Conclusion : both Tdocs 484 and 507 are approved, with a new WG1 number and submitted as version 2.0.0 RAN specification.

Tdoc 493   S1.12 v1.1.1   Editor

Comment (Editor) : some wording issue (definition of idle slots) remains on the compressed mode. (Ericsson) : Nidle is the same as the length of the transmission gap (i.e. transmission gap length).
Comment (Philips) : Table 4.4. : Transmission gap length of 2 slots was agreed be removed (same comment applies to some other places in this document).
Comment (Lucent) : On § 4.2.2.2.3, page 21 : with this block length definition, it is implicitly stated low QoS services do not use turbo codes. We should add an editor note stating that we are not in a position to agree with that. (Nortel) : Since this is still an FFS issue, such statement should be located in document listing the FFS points. So it is OK to keep this text until contrary decision is made. (Lucent) : We accept

this, but would still like to have it stated in editor's note. (Nokia and Ericsson) : we disagree, since this is not the normal procedure. S1 documents shall not contain such kind of notes. (Philips) : the view point of Lucent is already included in another editor note. It is useless to add specific note on the issue.

Comment (Nortel) : on § 4.2.5 and support of DTX indication bits. DTX symbols are positioned at the end of each slot. This assumption shall be changed. So, in the wording, it should be clarified at the physical mapping instead. It indeed has some impact on channel interleaver. So "at the end of each slot" should be rather changed by "at the physical mapping". (Nokia) : This should be decided along with the channel interleaver. (Nortel) : OK, but then there should be clarification of this point soon. This should be discussed very soon in the reflector.

Question (Nortel) : on § 4.2.11.1, pp 25 and multicode transmission : Does this mean that the same SF is used for all codes ? Also, is the TPC field common to all codes ?

Question : (TI) : in pp 34, the value of t in uplink rate matching is 0.2. But before it was set to zero. What is the status of this value in ad hoc 4 ? (WG1 Chairman) : this new value was agreed in last meeting.

Comment (Nortel) : in § 4.2.12 about Blind Rate Detection. It is stated that services that support BRD shall be specified. But it was agreed in AD hoc 4 that this is rather more dependent on the number of transfert formats. So text is that this is not precisely consistent with ad hoc conclusions. (WG1 Chairman) : If there is a rapid proposal for proposal, it shall be agreed. (Nortel) : a copy & paste from Ad Hoc 4 report would be proper and rapid.

Conclusion : Text shall be added : "for forward link, the blind rate detection shall be done with convolutional coding. Maximum number of different transport formats and maximum data rates allowed are to be specified." Text accepted with the above changes and submitted as version 2.0.0 RAN specification.

Tdoc 494	S1.13 v1.1.4	Editor

Tdoc 495	S1.14 v1.1.1	Editor

Comment (Editor) : Section 4.2 should not be moved to annex, since it has impacts on physical layer. Some text on open loop power control description is also added here. We ask for some feedback from ad hoc 9 leader. Also, Section 7.3.1 should be checked.

Question (Nortel) : On pp 8, is some specific implementation assumed ? In that case, Nortel can not agree with that text. Editor note should clarify that the content is informative and should be moved as an annex. (WG1 chairman) : We shall add the following editors note : "the criteria for synchronisation confirmation should be considered informative and will be moved to an informative annex". (Editor) We still have some concerns on how this sentence can be moved to annex.

Comment (Nortel) : On pp10 : We already gave our opinion on the specification of power control, regarding issues such as open loop power control, packet data, change of rate, etc. WG1 may do partly the specifications in some independent way, but we have to pass indication up to the WG4. So, text can be left as it is now, but we should clarify how we can share the work with other groups. This statement should be reported to the RAN plenary. But there is still a problem with text as it is. This is coming from ARIB sections, but there has been no discussion there, and this was not agreed formally. For the whole section on power control, we should indicate that the section is NOT stable. (WG1 chairman) This chapter shall be reported as being not stable.

Comment (Nortel) : On pp 14: the editors note were removed. This is not agreed. It should be added that the signaling of power offset, and the maximum power offset needs should be clarified. (WG1 chairman) : Are we the ones that defines this ? (Nortel) : this question was indeed liaised to other groups but there was no answer yet on this issue. (Nokia) : I thought the power offset was agreed, so it is acceptable to remove the square brackets. (Nortel) I do not question that, I question the signaling needs there. (WG1 chairman) OK, we shall remove square brackets and add : "the range and need for signaling with power offsets is

Comment (Nortel) : The text from Tdoc 508 should be added, since it was accepted previously in this meeting.

Comment (Philips) : On pp 23, figure 9 should refer to uplink rather than downlink.

Conclusion : Document accepted with the above editorial changes, with a new WG1 number and forwarded as version 2.0.0.

Tdoc 496	S1.21 v1.2.0	Editor

Comments : one title should be changed to "Physical channels and mapping of transport channels onto physical channels (TDD)". One sentence is missing that should be added from initial text proposal Tdoc 357, and should be added.

Conclusion : text approved with new version number 2.0.0.

Tdoc 485 Tdoc 511	S1.22 v1.1.2	Editor

Question (Siemens) : About ARQ and TDD, did we agree to remove this ? We want to keep the text, even if there is no agreement, because the text was there before. (WG1 chairman) : we should minimise the number of empty chapters. (Siemens) : Ok, but it should then be mentioned in the chair report that Hybrid ARQ is being studied in WG1.
Comment : About compressed mode, it is proposed to have a short editor's note stating that this is dealt by the higher layers.
Comment (Lucent) : There are some problems with conflicting editors notes between S1.12 and S2.12. We could remove the notes. The notes reflect opinion of several editors, that should be approved at WG1 level. Alternatively, Lucent proposes to align the note with Tdoc 493. (WG1 chairman) : OK, this is agreed.
Comment (Nortel) : On pp11. 2.2.1, there is a reference to 20 kbps as minimum bit rate for turbo-codes, this must be an error and be replaced by 32 kbps. (Editor) Yes, this is corrected in Tdoc 511.

Conclusion : Text approved, with new version 2.0.0, including above editorial changes.

Tdoc 283	S1.23 v1.1.0	Editor

Conclusion : text already approved in the previous meeting. Accepted with new WG1 number and new version 2.0.0.

Tdoc 499	S1.24 v1.1.1	Editor

Conclusion : Text agreed. New WG1 number and version 2.0.0.

Tdoc 500	S1.31 v0.1.1	Editor

Version 0.1.0 was including some changes and was accepted. version 0.1.1 is including changes due to tdoc 335 (Nokia), Tdoc 505 (Ad Hoc 8), and Tdoc 515 (NEC) that were included. Some on-line modifications were made on the screen.

Conclusion : Text agreed. New WG1 number and version 2.0.0. (even thought this does not look as normal procedure to go directly to version 2.0.0).

Tdoc 518	R1.01 v0.0.2	Editor

Comment (Ericsson) : The point regarding simulations results for long/short long code performance should be deleted, since it is no longer FFS.
Comment (Interdigital) : Higher payload should also considered in the design of RACH scheme.
Comment (Nokia) : The point regarding the need for formats without TFCI should be deleted. This could be removed for the time being.

Comment (Panasonic) : USCH and physical channel mapping is not the point here, if WG2 thinks it should be used for TDD, they should study it; As far as we are concerned, this problem does not exist. So this item should be removed from FFS items. (Siemens) The FFS issue is the use of USCH. (Panasonic) : No, since USCH does not exist, so we can not discuss its needs. (Siemens) we can not omit that WG2 is assuming a USCH. So, the point shall be removed by "possible inclusion of USCH".

Comment (Siemens) : The 2nd bullet of section 4.6 can be removed, because it was agreed to have always dynamic Rate matching in TDD. 3rd bullet point should be closed, as well as 5th bullet (Agreed).

Comment (Philips) : Commonality between FAUSCH and RACH should be removed from FFS points. (WG1 Chairman) : OK, FAUSCH shall no longer be studied. (Philips) : there is no more left to study.

Conclusion : the document shall beforwarded for RAN (including changes), but no need to increase version number. Only a new WG1 number shall be allocated.

Conclusion on the S1.xx documents : they should be sent to both RAN and WG1 reflectors, with Tdoc numbers of both groups.

8. Milestone evaluation

Agenda item not treated

9. New contributions

Agenda item not treated

10. Other business

10.1 Output LS from WG1 :

Tdoc 458	Liaison statement on Access Cell Selection	Motorola

It is asked whether uplink interference floor could be broadcast on BCH, to be used by some UE to perform cell selection/reselection.

Comment (Nortel) : we disagree with this LS, it should not be sent as such, there is no agreement that there is no implementation complexity implications… This paper should be postponed, until there is enough time to investigate this. (Motorola) The proposal was presented at the previous meeting, so there was enough time to investigate this, there is no reason to delay this.

Conclusion : Decision to make this LS is postponed to Day 2.

Tdoc 515	(revised Tdoc 458)	Motorola, Nortel

Guidance by WG2 is asked on the impacts, in terms of BCH size, location update, of broadcasting the uplink interference floor in the downlink for cell selection/reselection purposes.

Conclusion : LS is approved by WG1.

Tdoc 469	Feasibility of the USCH scheme.	WG1

WG1 liaises to WG2 that USCH concept is feasible and acceptable in terms of L1 perspective. It is also stated that there is still a need to finalise its parameters.

Comment (Philips) : noted that this paper only concerns the FDD mode. So it should be reflected in the text.

Conclusion : in the LS, a reference to FDD should be added, since the technical explanations given in the text of the LS refer mainly to FDD.Comment and LS agreed by WG1.

Tdoc 475   Feasibility of the CPCH scheme proposed by GBT   WG1

WG1 liaises to WG2 that CPCH concept is feasible and acceptable in terms of L1 perspective. Further work is needed to finalise its parameters.

Conclusion : LS agreed by WG1.

Tdoc 503   LS to WG2   Ad Hoc 7

The document reflects the discussions whether the lowest spreading factor should be 16 or 32 for low end UEs. This is connected to what is the expected highest bit rates that should carry FACH.

Comment (Ericsson) : We do not ask the right question here. There could be a FACH with high SF in all cells that any UE would support, and some other FACH with higher bit rates for higher end UE. (WG1 Chairman) : We shall rephrase the question to take this comment into account.

Conclusion : Comment and LS approved by WG1.

Tdoc 503   LS to WG2 and WG4 on the monitoring of UTRA FDD cells   Ad Hoc 8

Conclusion : LS agreed by WG1.

Tdoc 506   LS to WG2 on the additional length of CRC   Ad Hoc 4

Comment (WG1 chairman) : a reference to the AMR codec needs would be benefitial in this LS. (Nortel) : Yes, this document was sent only to us. So the WG1 document reference should be given (approved). Question (Nokia) : Should we tell about service specific CRC there ? (Nortel) : We do not understand the question. This might not be a service specific issue. There might some different classes of bits within the service…

Conclusion : LS agreed by WG1.

Tdoc 405 :   LS to T-WG1 and R-WG4 on tx diversity testing issues   Ad Hoc 6

Question (Philips) : Does this document mean that all UE should support closed loop ? (WG1 chairman) this shall be studied along with complexity. There was an agreement in ad hoc 6 that it shall be mandatory.

Conclusion : LS agreed by WG1

10.2 : Input LS

Nortel stresses that we have still not answered the invitation from TS4 to have a joint meeting. We should answer ASAP. We shall inform them at the end of RAN meeting if there should be a joint meeting. However, it is not expected so. WG1 chairman asked where shall be their next meeting (Nortel answered Munich).

Many LS from WG2 were received. They could not answered because of lack of time. The LS were noted. Ad hoc shall provide the missing answers to the LS in future WG1 meetings.

Tdoc 448   LS from T1   T1

For test requirements schedule, parameters should be fully frozen in october 99. Because of tough TDD schedule, more contributions on TDD are also invited.

Conclusion : LS agreed by WG1.

Tdoc 509   Responsibility for conformance test methods   Ericsson, Mitsubishi, Panasonic, NEC

Minimum test requirement should be specified. The contributors of WG1 should participate to WG4, or

other when needed.

Conclusion : LS agreed by WG1.

11. Closing

TTA will host the next WG1#5 meeting, to be held in southern part of Korea, at one hour flight from Seoul, in a famous Honeymoon island place

WG1#5   June 1-4   Korea
WG1#6   July 12-16   Finland
WG1#7   August 31-3   Host required
WG1#8   October 12-15   Host required
WG1#9   November 30-3   Host required