TSG-RAN Working Group 1 meeting #11
San Diego, USA, February 29 – March 3, 2000

TSGR1#11(00)0377

Agenda item: **13**

Source: **Ad Hoc #1**

Title: **Report from Ad Hoc #1, part 1**

Document for: **Approval**

1 Introduction

Ad hoc #1 meeting on TDD, part 1, March 1, 2000.

Starting Time: 9:00
End Time: 12:00

2 Documents relevant for TDD

In the following, the discussion and the results on the presented documents are given. The recommended output documents (CRs, LS, work item descriptions) are summarised in the next section.

2.1 Liaison statements

Tdoc 0146/00, "Draft LS on SFN synchronisation for TDD", Siemens AG

Conclusion:
- AdHoc 1 recommends acceptance of the liaison statement contained in Tdoc 0146/00.

2.2 TFCI coding

Tdoc 0193/00, "TFCI coding specification in TDD", Siemens AG

Conclusion:
- AdHoc 1 recommends to accept CR019r1-222 contained in Tdoc 0193/00.

Tdoc 0237/00, "Change of TFCI basis for TDD", LGIC

Conclusion:
- AdHoc 1 recommends to accept CR025-222 contained in Tdoc 0237/00.

2.3 Signal point constellation

Tdoc 0228/00, "Signal point constellation", Siemens AG

Conclusion:
- AdHoc 1 recommends to accept CR015r1-221, CR006r1-223 and CR013-224 contained in Tdoc 0228/00.

2.4 Update on blind transport format detection

Tdoc 0226/00, "Update of TS 25.222 - clarification of BTFD for TDD", Siemens AG

Conclusion:
- Ad Hoc 1 recommends to accept CR023-222 contained in Tdoc 0226/00.

2.5 Midamble mapping

Tdoc 0071/00, "Association between Midambles and Channelisation Codes", Interdigital, Siemens AG

Conclusion:
- Ad Hoc 1 recommends to accept CR016-221 contained in Tdoc 0071/00.

2.6 Timing advance

Tdoc 0291/00, "Changes to the section on Timing Advance in TS25.224", Nokia, Siemens AG

Conclusion:
- Ad Hoc 1 recommends to accept CR007r2-224 contained in Tdoc 0291/00.

2.7 RACH procedure

Tdoc 0219/00, "Description of the random access procedure for inclusion into 25.224", Siemens AG

Discussion:
- There was a question whether the description is aligned with FDD. The answer was that this is taken into account.

Conclusion:
- Ad Hoc 1 recommends to accept CR009-224 contained in Tdoc 0219/00.

2.8 Corrections to 225

Tdoc 0227/00, "Editorial modifications to 25.225 Measurements for TDD (CR005 rev2)", Siemens AG

Conclusion:
- Ad Hoc 1 recommends to accept CR005r2-225 contained in Tdoc 0227/00.

Tdoc 0318/00, "Corrections to 25.225 Measurements for TDD (CR006)", Siemens AG

Discussion:
- There should be an offline discussion whether a better wording instead of "non-orthogonal part of the interference" can be found to define the measurements since different receiver techniques may cancel different amount of interference. This discussion is related to TDD and FDD.

Conclusion:
- Ad Hoc 1 recommends to accept CR006-225 contained in Tdoc 0318/00.

2.9 Out-of-sync

Tdoc 0302/00, "Out-of-sync handling for UTRA TDD", Nokia

Discussion:
- The concept is aligned with FDD as far as possible. There are three items which are different compared to FDD due to TDD specific characteristics:
  - There is no soft handover in TDD.
  - There is an extra criterion based on DL beacon.
  - A dummy burst is needed in case of DTX.

Conclusion:

- The TDD specific characteristics as given in CR014-224 contained in Tdoc 0302/00 are recommended to be accepted. The general out-of-sync procedural aspects will be discussed in Ad Hoc 18 together with FDD.

2.10 Usage of dummy burst

Tdoc 0229/00, "Usage of Dummy Burst in DTX (TDD mode)", Siemens AG

Discussion:

- There was a question why the proposal is limited to layer 1 usage. The answer was that the availability of this signalling capacity depends on layer 1 and no certain requirements on the time instants or time periodicity can be guaranteed for higher layer usage. If the dummy burst would be used as a transport channel, then its availability would depend on the other transport channels.
- There was a comment that the power level and data rate when using the dummy burst should be optimised.
- It was clarified that the structure of header plus data was used to be able to define other headers for other purposes except for power control.
- It should be clarified if the RNC can request this dummy burst or if it at least knows when this burst will be transmitted.
- There was a question whether the concept of zero length transport blocks is the same notion, a competing notion to the usage of the dummy burst or whether these concepts should be co-ordinated. One difference is that the zero length transport block is a higher layer concept while the usage of the dummy burst is a layer 1 issue.

Conclusion:

- The discussion on the usage of the dummy burst will be continued.

2.11 Power control

Tdoc 0225/00, "Clarifications on power control for TDD", Siemens AG

Discussion:

- There was a comment that the concept is agreeable, but it should be checked whether there is still some text in the CR which belongs to WG2 or WG4 specifications. This split between WG1, WG2 and WG4 should be the same as for FDD.
- There was a comment that the maximum and minimum values relative to the CPICH should be given in dB instead of dBm.
- There was a discussion whether the open loop power control section should be contained in specification 25.224 or in 25.331. It was agreed that for the RACH, this section should be removed from 25.224 and replaced by a reference to 25.331. For the dedicated channel, the procedure is more physical layer related and some refining inputs have already been received and are still expected for the next WG1 meeting. Therefore, it is proposed to keep the section on open loop power control for dedicated channels in the WG1 specifications for one more meeting and decide afterwards on the appropriate specification where to put this section.
- It was discussed that the third paragraph of section 4.2.3.3 contains some text which is implementation-specific. This part of the text should be rewritten.
- It was discussed that the use of the expressions "TPC bits" and "TPC commands" should be revisited to avoid mixing them up.
- There was a proposal to introduce a new subsection with separate heading for the text given under section 4.2.2. This should be aligned with FDD.

Conclusion:

- Ad Hoc 1 recommends to accept a revised version updated according to the comments mentioned above of CR012-224 contained in Tdoc 0225/00. The new version will be included in Tdoc 0380/00 as CR012r1-224.

Tdoc 0230/00, "Proposal for Work Item Description 'NodeB Synchronisation via Air for TDD'", Siemens AG

Discussion:

- There was a comment that the scope of the work item description should be extended to cover also other methods except for air interface synchronisation methods. The title and the objective of the work item description should be changed to reflect this.

Conclusion:

- Ad Hoc 1 recommends to accept an updated version of the work item description contained in Tdoc 0230/00 taking into account the comments mentioned above. The new version will be contained in Tdoc 0379/00.

3 Conclusion

It is recommended by Ad Hoc #1 on TDD to modify the existing set of WG1 specifications based on the following CRs:

Nr.	CR	Tdoc	Topic	Source
1	CR019r1-222	0193/00	TFCI coding specification in TDD	Siemens AG
2	CR025-222	0237/00	Change of TFCI basis for TDD	LGIC
3	CR015r1-221, CR006r1-223, CR013-224	0228/00	Signal point constellation	Siemens AG
4	CR023-222	0226/00	Update of TS 25.222 - clarification of BTFD for TDD	Siemens AG
5	CR016-221	0071/00	Association between midambles and channelisation codes	Interdigital, Siemens AG
6	CR007r2-224	0291/00	Changes to the section on timing advance in TS25.224	Nokia, Siemens AG
7	CR009-224	0219/00	Description of the random access procedure for inclusion into 25.224	Siemens AG
8	CR005r2-225	0227/00	Editorial modifications to 25.225 Measurements for TDD (CR005 rev2)	Siemens AG
9	CR006-225	0318/00	Corrections to 25.225 Measurements for TDD (CR006)	Siemens AG
10	Update of CR014-224	(old version: 0302/00)	Out-of-sync handling for UTRA TDD	Nokia
11	CR012r1-224 (Update of CR012-224)	0380/00 (update of 0225/00)	Clarifications on power control for TDD	Siemens AG

Furthermore, it is recommended to send LS to other working groups based on the following drafts:

Nr.	Tdoc	Title	Source	TO:	CC:
1	0146/00	Draft LS on SFN synchronisation for TDD	Siemens AG	WG3	WG2

Alao, it is recommended to agree on the following work item descriptions:

Nr.	Tdoc	Title	Source
1	0379/00 (update of 0230/00)	Proposal for Work Item Description ‘NodeB Synchronisation for TDD’	Siemens AG