Source:	**TSG-S4 Chairman[1]**
Title:	**Draft Report of the TFO Ad Hoc session during S4#10/SMG11#15**
Document for:	**Information**
Agenda Item:	**13.2**

The TFO Ad Hoc session took place on February 29 and March 1, 2000. The meeting was chaired by the TSG-S4 Chairman temporarily acting as the TFO Chairman. The meeting agenda was established and approved in session. It is reported in Annex 1. The list of documents reviewed or relevant to the TFO session is provided in Annex 2. Annex 3 contains the list of participants.

1. Report from other Forum/Liaisons:

No document or report was available as part of this Agenda Item.

2. TFO Release 98:

The Release 98 was not further discussed. The CR prepared at the last plenary (Tdoc S4-000050 including the CR002Rev1 on the GSM 08.62 v7.0.0) is supposed to be presented at the next TSG-SA plenary in March 2000.

3. TFO Release 2000:

The primary objective of the meeting was to review and update the CR introducing AMR TFO in the GSM08.62, which approval was postponed by TSG-SA#6 to Release 2000. The second objective was to establish how the proposal for a simplified option presented by Ericsson in Tdoc S4-000045 at the last TSG-S4 meeting could be introduced in the standard. For information, the simplified option requires that the network equipment supports all AMR codec modes and the full range of allowed number of Codec Modes in the Active Codec Set. A significant simplification of the TFO decision process and of the Codec Configuration Resolution algorithm can then be expected. Ericsson view is that the TFO Procedures in TRAU, BTS and BSC could also be substantially simplified and potential TFO interruptions would be reduced.

Siemens presented Tdoc S4-000121 proposing to introduce two additional 'shortcuts' in cases when the network would be limited to the 4 lowest Full Rate modes or the 3 lowest Half Rate modes. This proposal was based on the fact that TFO is expected to be all the more beneficial for the lower modes and it could then be interesting to define a simplified version of the TFO protocol allowing to establish TFO over these modes only. It was however commented that AMR benefits were primary achieved by the capability to use a set a codec modes scanning the full range of operational C/I conditions, including the highest codec rates operating in low error conditions. Consequently, it was decided to keep this proposal as a potential future evolution, but to concentrate on the completion of the standard without any additional option.

Nortel Networks commented in Tdoc S4-000133 that the introduction of the new option was only simplifying the decision process (TFO is always possible since both sides support all codec modes) and to concentrate the discussion on the Codec Configuration Mismatch resolution. It was indicated that in this new option, a default codec set would have to be agreed and that should be the full extent of the codec mismatch resolution. The issue was then to agree on a default codec set, but no proposal was made at this meeting.

Ericsson presented document S4-000134 proposing a new text for section 6 of the 08.62 (TFO Message Structure) introducing AMR support. The proposal includes the possibility for the TRAU to indicate the support of the full set of AMR codec modes with the transmission of the first TFO_REQ message. This proposal was endorsed by the TFO sub-group and it was decided to include this version of section 6 in the future R2000 CR to the 08.62.

The remaining of the meeting was spent reviewing the existing CR introducing AMR in the 08.62 (Tdoc 499/99). The first 9 sections were reviewed in detail and updated when required and possible. A number of other points were identified for further review and discussion over the reflector until the next drafting session

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(see action list). Tdoc S4-000135 contains the last version of the working draft agreed during the sub-working group.

The following action points must be completed or progressed before or at the next drafting session:

AP1: Port the content of the working draft CR on the updated version of the 08.62 after the update of the specification by MCC following TSG-SA#7. Update the figures as required. **Resp: Rapporteur**

AP2: Provide input for section 5.2.2 providing AMR 8/kbit/s Frame Structure. **Resp: A.Ohana**

AP3: Comment the possibility to remove any mention or recommendation to freeze the codec adaptation before Handover. **Resp: All**

AP4: Comment the possibility to not use the Time Alignment field to transport Status Information (*Handover_Soon*). **Resp: All**

AP5: Provide inputs for a CR to the GSM05.09 allowing the Codec Mode Indication to span more than one step in some specific cases in relation to TFO, before the next SMG2 meeting in early April 2000. **Resp: All**

AP6: Provide inputs for a normative Annex describing the simplified implementation of the TFO protocol when the network equipment supports all codec modes. Provide inputs on the default codec set. **Resp: All**

AP7: Provide recommendations on the re-organization of the 08.62 to make it applicable to GSM and 3G (Transposition to TS 28.062). **Resp: All**

4 Transcoder Free Operation:

The group reviewed the exchange of Liaison Statements between TSG-R3 and TSG-N2 on the resolution of the problem identified at TrFO break (Tdocs S4-000103, S4-000105 & S4-000107). The sub-group also agreed to propose to the plenary to send a Liaison to TSG-R3 and TSG-N2 supporting any tentative to harmonize TFO and TrFO so that both protocols would be transparent to the UTRAN and respectfully asking to be informed of the final date of the joint meeting where these issues would be discussed. The draft Liaison is included in Tdoc S4-000159.

The group shortly discussed the CR003 to the TS26.102 proposed by NTT DoCoMo in Tdoc S4-000068. It was indicated that a revision 1of this CR would be available for the plenary.

5. Miscellaneous:

It was decided to schedule another drafting session for May 17-19, 2000 (Starting May 17 at 13:00) with the objective to progress the CR on the introduction of AMR TFO as part of Release 2000. The Chairman agreed to set up this drafting session and to find possible hosting locations.

Finally, the chairman renewed his call for candidates to the position of TFO sub-group chairman.

Source: **TSG-S4 Chairman[2]**

Title: **TFO Sub Working-Group Meeting Agenda**

Document for: **Approval**

Agenda Item: **9.2**

TFO Ad-Hoc Session Agenda

9.1 **Opening of the meeting:** Tuesday February 29, 2000

9.2 **Approval of the agenda and registration of documents** 132

9.3 **Report from other Forum/Liaisons**

9.4 **TFO Release 98**

9.5 **TFO Release 2000**
    9.5.1 **Stage 1 / Stage 2**
    9.5.2 **AMR TFO support in GSM** 45,121,133,134,499/99>135
    9.5.3 **AMR TFO support in 3G**

9.6 **Transcoder Free Operation** 103/105/107>159,68>xxx

9.7 **Any Other Business**

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Annex 2: TFO Ad Hoc Session - Document List

Tdoc.	Title	Source	Agenda Item
499/99	CR to GSM 08.6: Introduction of AMR TFO	Ericsson & Nortel Networks	9.5.2
S4-000068	CR 003 on TS26.102; Time Alignment	NT DoCoMo	9.6
S4-000103	Liaison Statement on procedure for TrFO break	TSG-R3	9.6
S4-000105	Liaison Statement on Harmonization of TFO and TrFO	TSG-N2	9.6
S4-000107	Stage 2 description for TrFO break	TSG-N2	9.6
S4-000121	TFO for AMR: Painting the shortcut grey	Siemens	9.5.2
S4-000132	Agenda TFO Session	Acting Chairman	9.2
S4-000133	Proposal for AMR TFO	Nortel Networks	9.5.2
S4-000134	TFO Messages for AMR	Ericsson	9.5.2
S4-000135	CR to 08.62 for Introduction of AMR TFO; Working Draft	TFO Sub-Group	9.5.2

Annex 3: TFO Ad Hoc Session - List of Participants

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