Source:	**TSG-S4 Secretary**
Title:	**Draft Report S4#14 meeting**
Document for:	**Comment / Approval**

Draft S4#14 meeting report

1. Opening of the meeting.

The S4 Chairman, Kari Jarvinen[1], who welcomed the delegates to Bath, opened the S4#14 meeting. Mr. P. Barrett, on behalf of the host **BT**, illustrated the meeting facilities. The Secretary was Paolo Usai (MCC).

2. Approval of the agenda and registration of documents

The Agenda in TD S4-000558 was approved. The Temporary Documents were allocated to the Agenda Items (see Annex 1). The S4 Chairman illustrated the proposed schedule for the meeting contained in TD S4-000559. A change was agreed.

3. Approval of previous meeting report

TD S4-000560 **TSG-S4#13 Meeting Outcome**, for information from S4 Chairman, was noted. TD S4-000557R2 **TSG-S4#13 meeting report** was approved.

The list of Action Points from S4#13 meeting was considered:

A. P. 1 "**Minimum Performance Requirements for Noise Suppresser Application to the AMR Speech Encoder (GSM 06.77)**" The attachment to the specification TD S4-000524 **Test Plan Specification for Checking AMR-NS Speech Performance Requirements - Version 0.8** will be progressed by correspondence. Closed (see TD S4-000567 and TD S4-000583).

A. P. 2 Two CRs were produced in TD S4-000432 **CR A001 to GSM 06.71 v. 7.0.2 on clarification of the mandatory support of all AMR modes for the transcoders**, and in TD S4-000433 **CR 001 to GSM 26.071 v. 3.0.1 on clarification of the mandatory support of all AMR modes for the transcoders**, from BellSouth Mobility DCS. Both were objected by Nortel Networks and postponed. TD S4-000538 **CR 06.71 - A002 on Clarification on the support of Codec Source Rate in the TRAU (R98)** clarified Nortel's position on the issue, but was objected by Ericsson and Nokia, since both stated that compliance to the specification would imply to pass all test sequences. Motorola supported the CRs. No consensus could be reached at this meeting.

The same conclusion applies to the following two documents: TD S4-000539 **CR 26.071 - A002 on Clarification on the support of Codec Source Rate in the TRAU (R99)**, and TD S4-000540 **CR 26.071 - A003 on Clarification on the support of Codec Source Rate in the TRAU (Rel-4)**, from Nortel Networks. The issue was postponed until this meeting. Open (see Agenda Item 10).

A. P. 3 S4 Chairman to prepare a Draft report on the AMR-WB selection phase for SA#10, was closed (see TD S4-000568).

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4. Reports/Liaisons from other groups/meetings

4.1 TSG-SA

No documents were allocated under this Agenda Item.

4.2 3GPP working groups

TD S4-000617 **LS on Clarifications of AMR decision thresholds**, from TSG-GERAN, was presented by the S4 Chairman. Noted.

TD S4-000618 **Liaison Statement on Legacy Transceivers support**, from TSG-GERAN, was presented by the S4 Chairman. Noted.

TD S4-000622 **LS on Default configurations**, from TSG-RAN WG2, was presented by the S4 Chairman. Action: a reply will be provided (c/o K. Hellwig).

TD S4-000623 **RE: LS on size of ranap messages over map-e**, from TSG-SA WG2, was presented by the S4 Chairman. Noted.

TD S4-000624 **LS on RAB Assignment and QoS Negotiation**, from TSG-SA WG2, was presented by the S4 Chairman.

SA2 asked SA4 for advice on issues that need consideration when defining attributes used for bitrate negotiation appropriate for codecs (AMR codec as well as other codecs). For the case a list of discrete bitrates is preferable, how many discrete values must at least be supported.

The answer was left to be formulated later on under Agenda Item 9 (Action: for all delegates).

TD S4-000626 **LS to TSGs T2, SA1, SA2 and SA4 regarding conformance test requirements for application layer test**, from TSG-T WG1, was presented by the S4 Chairman.

The following areas were felt of interest for SA4 regarding conformance test requirements for application layer test:

SA4	Wideband Telephony Service - AMR
SA4	Tandem Free aspects for 3G and between 2G and 3G systems

TSG T1 will assume that these items will be addressed by the TSGs responsible for the core specifications unless TSG T1 is specifically requested to take on the task.

The current version of the work plan shows a tentative document, TS 34.125, which has been added as a placeholder in case a conformance test specification is required. It will be deleted in the future if not required.

A response to 3GPP TSG-T WG1 will be drafted (c/o Chairman S4).

4.3 Other groups

TD S4-000619 **Communication: Information on wideband speech coding activity**, from ITU-T SG16, was presented by the S4 Chairman. All 5 candidates were allowed to enter the selection phase in ITU-T Q.20/16. A Letter of Intent should be received by ITU-T TSB from Candidate Proponents within December 1st, 2000, and the Source (e.g. Nokia, endorsed by S4) was left to be discussed during the WB SWG meeting.

TD S4-000620 **Communication: Cooperation on basic operators**, from ITU-T SG16, was

presented by the S4 Chairman. Noted.

TD S4-000621 **Communication: Progress on variable bit rate voice question**, from ITU-T SG16, was presented by the S4 Chairman. P. Barrett encouraged delegates to join the reflector and contribute to the Question.

TD S4-000565 **Liaison Statement from SC 29/WG 11 to 3GPP TSG-SA WG4 on New Level for MPEG-4**, was presented by B. Wimmer. Noted.

TD S4-000625 **LS on application on external devices**, from Chair GSM Certification Forum and Chair EICTA CCIG, was presented by the S4 Chairman. Noted.

<u>Sub-Working-Group Sessions</u>:

5.   Speech Quality (SQ) SWG Session (including joint meeting with AMR Noise Suppression subgroup)

Participants: P. Usai (Chair), A. Eriksson, J. Vainio, W. Johannsen, K. Miseki, N.Naka, K. Adler, J. E. Pedersen, A Sharpley, J. Tardelli, A. Gervais, M. Myers.

Malcom Myers (Tellabs) was proposed by I. Goetz (Tellabs) to take over his responsibility as Rapporteur on Acoustic issues (related to TS 26.131 and TS 26.132), which was agreed during S4 Plenary session. The Chairman S4 thanked I. Goetz for his efforts as rapporteur on Acoustic issues until now.

AMR-NS during Speech Quality (SQ) SWG Session.

The **Speech Quality (SQ) SWG Chairman** summarized the situation: TD S4-000524 **Test Plan Specification for Checking AMR-NS Speech Performance Requirements - V. 0.8**, was progressed and was further improved in TD S4-000644R (see below).

TD S4-000583 **Discussion on Exp 4 (Input Level and VAD/DTX) in AMR NS test plan**, from Ericsson, was presented by A. Eriksson.

The discussion focused on Exp. 4 Influence of Input Level, Voice Activity Detection and Discontinuous Transmission (CCR).

A long debate took place on the advantages/disadvantages of ACR vs CCR method. Siemens expressed their position in favour of the CCR test, while a number of interventions where in favour of replacing the CCR test by the ACR test, felt more practicable and leading to enough satisfactory output (well suited to test clause 6.1.3 of the TS 06.77). Nokia proposed to make "optional" the choice of the "VAD option in Exp. 4, which was felt a good suggestion by the SQ delregates present at the meeting (of course, the endorsement from S4 would imply only the VAD tested formally from the AMR-NS proponent). The test plan in TD S4-000524 was revised in TD S4-000644 (c/o A. Eriksson).

TD S4-000644 **Test Plan Specification for Checking AMR-NS Speech Performance Requirements - V. 0.9**, was presented by the Editor A. Eriksson. Statistical analysis (missing so far for the ACR and CCR test) were added. The document was revised in TD S4-000644R, which will be attached to the CR 001 rev 1 to 06.77, with the exclusion of Exp. 4. How to build up Exp. 4 was left ffs, due to lack of consensus at this meeting.

TD S4-000567 **CR 001 to 3GPP TS 06.77 Addition of Test Plan and editorial changes**

(tidying), from Motorola, was discussed; it was agreed to modify Annex B, in order to consider as well the confidence intervals of the measured points, which would improve the statistical reliability of the requirement check required in clause 6.1.4 of 06.77, i.e the "subjective SNR improvement" (c/o J. Tardelli).

At this point, an E-mail message from the Rapporteur AMR-NS, S. Aftelak (Motorola), who could not attend the meeting, was received. The message stated that neither the NS test plan as it stands, nor the new ACR approach, will do the job. Motorola proposed either

1. Delete the text from Expt 4 and release the TP with a TBD for Expt 4, or

2. Delay releasing the test plan and allow more time to sort the methodology question out.

The SQ Chairman pointed out that, in order to have a comprehensive check of requirements given in 06.77, the VAD/DTX aspects would require:

a) No Degradation in Clean Speech: the requirement for VAD/DTX is checked with the use of a paired comparison test where the requirement is met if AMR/NS is preferred or equal to AMR within the 95 % confidence interval.

b) No degradation of Speech and no Undesirable Effects in Residual Noise in Conditions with Background Noise (*residual noise = background noise after AMR/NS.*

A discussion took place to decide what action SQ would like to propose to the S4 Plenary. Conclusion: a CR will be produced in TD S4-000649 with a specific sentence mentioning the exclusion of Exp. 4, left ffs (or tbd).

TD S4-000649 **CR 001 rev1 to 3GPP TS 06.77 Addition of Test Plan and editorial changes (tidying)**, including TD S4-000650 **Test Plan Specification for Checking AMR-NS Speech Performance Requirements - V. 0.9 (Exp. 4 on VAD-DTX + Input Level = tbd)** was agreed to be proposed to the Plenary session S4 for approval.

3G AMR-NB during Speech Quality (SQ) SWG Session.

TD S4-000628 **AMR-NB 3G Characterisation Host Laboratory Report**, from ARCON, was presented by J. Tardelli. It was agreed.

TD S4-000587 **3G AMR-NB Characterization Experiment 1A – Dynastat Results**, from Dynastat, was presented by A. Sharpley. Differences between Male and Female talkers results were pointed out, in favour of Male talkers. The report was agreed.

TD S4-000561 **AMR-NB 3G Characterization Experiment 1B Results**, from LMGT, was presented by P. Usai. Very little resolution was shown in this experiment; differences between Male and Female talkers results were confirmed, in favour of Male talkers. The report was agreed.

TD S4-000645 **AMR-NB Characterization Tests – NTT-AT's Experiment 1C Results**, from NTT-AT, was presented by P. Usai. Differences between Male and Female talkers results, in favour of Male talkers, were less evident in this experiment, although the trend seemed not to be contradicted; the results were rather depressed,which was felt due to a well known cultural effect. It was commented that quantization noise may have affected the GSM FR performance evaluations made by the Japanese subjects, since the processed speech material was judged rather "noisy", which explained low MOS than expected, in addition to the traditional "cultural" effect, i.e. that lower scores are expressed in Japanese tests comparing with other (western) languages. The report was agreed.

Conclusion from Exp. 1: plots in terms of Equivalent dBQ values for the three experiments were felt useful.

TD S4-000627 **AMR-NB 3G Characterisation Experiment 2A Results**, from ARCON, was presented by J. Tardelli. The trend of differences between Male and Female talkers results were confirmed, in favour of Male talkers, also for this experiment. Effect of error profiles (i.e. pedestrian at 3 km/h or TU50) was noticed. The general behaviour of the different codecs was felt in line with Exp. 1 results. The report was agreed.

TD S4-000629 **AMR-NB 3G Characterisation Global Analysis**, from ARCON, was presented by J. Tardelli. It was revised in TD S4-000629R **AMR-NB 3G Characterisation Global Analysis** (revised). The document was discussed and commented; the results were found quite reasonable and logical, taking into account the backgroung and the expertise in SQ about. The report was agreed.

All reports will be presented to the Plenary session S4 for approval.

J. Tardelli agreed to co-operate with the editor of TR 26.975 to complete the 3GPP specification, by including the output from the **AMR-NB 3G Characterisation phase** of testing. The Editor was left to be identified during the S4 Plenary session.

Miscellaneus: subjective testing methodologies, test procedures, correct pricing aspects, etc. during Speech Quality (SQ) SWG Session.

A spreadsheet with useful information to be taken into account for future subjective testing exercises, related to the quantification of the effort required to provide test plans, speech material, processing, listening, analysis tasks performed by individual laboratories was produced by J. Tardelli and will be circulated to the interested Organizations to collect further data (c/o SQ Chairman). This would hopefully help the drafting of contracts and the bids for future exercises.

6. AMR Wideband Codec (AMR-WB) SWG Session

The **AMR-WB SWG** Chairman I. Varga opened the **AMR Wideband Codec (AMR-WB) SWG Session**.

TD S4-000599 **Draft Agenda for the AMR-WB#8 Meeting**, was presented by I. Varga. It was agreed.

TD S4-000568 **Results of AMR Wideband (AMR-WB) Codec Selection Phase** v.0.1 (initial draft), was presented by the S4 Chairman. The latest version of the Global Analysis Laboratory report was requested to be attached to the document.

Communications from/to other groups.

TD S4-000619 **Communication: Information on wideband speech coding activity**, from ITU-T SG16, was presented by the Rapporteur Q. 20/16, R. Drogo De Iacovo. In the Communication, it was assumed that either VoiceAge or Nokia would confirm their participation to the competition in ITU-T. P. Haavisto asked the Rapporteur Q. 20/16 to clarify whether only one candidate, VoiceAge or Nokia, or both, could eventually be admitted to the ITU-T selection phase, and stated the two algorithms are somewhat different, e.g. one has two modes and the other 9 modes. P. Barrett commented that, during the ITU-T discussion, it was understood that the VoiceAge algorithm was just the floating point version of the 3GPP selected AMR-WB algorithm. Some delegates felt the issue not relevant for the discussion in S4 Committee, which was confirmed by the S4 Secretary, who reminded a Communicanication endorsing the AMR-WB codec selected in S4 was already sent to ITU-T, Source: Nokia. This ended the discussion on the Communication. A reply was asked to be provided, and was left to be drafted off-line. The text in TD S4-000676 **Draft Communication with ITU-T Q.20/16 "Audio and Wideband Coding" on Wideband Codec Standardizationwas read by AMR-WB** was endorsed by the **AMR-WB SWG.**

Verification phase AMR-WB

TD S4-000601 **Verification of Nokia AMRWB codec**, from Ericsson, was presented by S. Bruhn. The Nokia AMR-WB codec passed the verification phase.

On "Performance with DTMF tones" (Item 1): BT confirmed their interest to contribute to this item.

Also Item 8 involving different languages was felt of interest, but no volunteers were found.

Review of the AMR-WB draft specifications

TD S4-000612 **CR A0xx to 05.09: Changes to link adaptation for AMR wideband codec**, TD S4-000613 **CR A0xx to 05.03: Channel coding AMR Wide band codec on GSM full rate channel**, and TD S4-000614 **CR A0xx to 05.03: Channel coding AMR Wide band codec on EDGE full rate and half rate channels**, from Nokia, were presented by J. Vainio. These documents were provided for information to TSG-SA WG4 Codec.

The following specifications were foreseen to be provided for information to TSG-SA#10 Plenary:

TD S4-000604 **26.171 AMR Wideband Speech Codec; General description v.0.0.1**, from Nokia, was presented by J. Vainio. A few open issues were listed. Removal of one mode was requested, which was felt a general issue, impacting on several specifications, not only this one.

TD S4-000605 **26.173 AMR Wideband Speech Codec; C-source code v.0.0.1**, from Nokia, was presented by J. Vainio.

TD S4-000661 **26.190 AMR Wideband Speech Codec; Transcoding Functions v.0.0.3**, from Nokia, was presented by J. Vainio.

TD S4-000607 **26.191 AMR Wideband Speech Codec; Error concealment of erroneous or lost frames v.0.0.1**, from Nokia, was presented by J. Vainio.

TD S4-000608 **26.192 AMR Wideband Speech Codec; CN for AMR Speech Traffic Channels v.0.0.2**, from Nokia, was presented by J. Vainio.

TD S4-000609 **26.193 AMR Wideband Speech Codec; Source Controlled Rate operation v.0.0.1**, from Nokia, was presented by J. Vainio. LOST_FRAME was suggested to be replaced by SPEECH_LOST.

TD S4-000610 **26.194 AMR Wideband Speech Codec; VAD for AMR Speech Traffic Channels v.0.0.2**, from Nokia, was presented by J. Vainio.

TD S4-000611 **26.201 AMR Wideband Speech Codec; Speech Codec Frame Structure v.0.0.1**, from Nokia, was presented by J. Vainio.

TD S4-000631 **TS 26.202 v. 0.0.1 AMR-WB speech codec; interface to Iu and Uu**, from Nokia, was presented by J. Vainio.

Provision and check of AMR-WB test vectors was felt to be needed asap.

Characterization phase AMR-WB (Joint meeting AMR-WB / SQ SWGs)

No documents were made available for the **Characterization phase AMR-WB**.

Summary from previous meeting was given by the SQ Chairman.

Within the available budget of 250 KEURO a max of 20 experiments with the actual pricing would be possible (most likely less than 20, due to cost increases).

Interaction with other standards, e.g. with G.722/G722.1 and simulation of experimental conditions reflecting present and future scenarios involving the AMR-WB codec (e.g. Packet Switched networks, were felt items to be considered for the drafting of the AMR-WB characterisation test plan. Target: test plan & listening/processing/analysis tasks to be defined by the end of the year.

Further experimental conditions to be possibly tested:

Tests on performance for individual modes, spanning a wider range of error conditions, more background noises (5-6 types). Also effect of multiple talkers, talker dependency, music, languages (Korean language was requested to be included in the tests at SA#9 Plenary), channel coding (GSM, EDGE, 3G).

Time scale for GERAN completion of the work was left to be checked with TSG-GERAN. No contributions were presented at last GERAN meeting.

Potential host labs/cross-check laboratories were provisionally identified (subject to confirmation): ARCON (offering the recording of new types of noise as well), and LMGT.

Potential listening labs were provisionally identified as well (subject to confirmation): T-Nova (German), Nortel Networks (Canadian English), NTT-AT (Japanese and Korean), Dynastat (American English and Spanish), France Telecom R&D (French), BT (British English), ARCON (American English), LMGT (American English and other languages, if available from the NTT Database CD-ROM).

Schedule of events was revised: a two phased AMR-WB Characterisation was agreed, and work by correspondence was proposed to the purpose. This would allow a faster start of the characterisation phase (less experiments to be finalised) and will allow the aspects linked to other 3GPP groups to be finalised. Editors for the test plan, processing functions and Analysis of Results documents were requested to be identified. P. Barrett (BT) agreed to be the Editor for the processing functions document, and J. Vainio (Nokia) volunteered to contribute as (partial) Editor for the test plan. An Editor for the Analysis of Results document was not identified at this meeting.

Characterisation Phase 1 draft test plan was targeted by the January meeting, and the finalisation of the test plan, processing functions and Analysis of Results was targeted for the February meeting (S4#16). The results of Characterisation Phase 1 were programmed to be inserted in a draft Technical Report, ready for approval at the June meeting (S4#17).

The Joint meeting AMR-WB & SQ SWGs was closed.

7. Tandem Free Operation (TFO) SWG Session

TDs 566, 594, 595, 596, 597, 598, 634 to 639 were delt with during the TFO ad-hoc session.

See report in A. I. 11.3.

8. Packet Switched Multimedia (PSM) SWG Session

The following documents were dealt with during the ad-hoc session:

569, 570, 571, 572, 573, 580, 581, 582, 583, 584, 588, 589, 590, 591, 592, 593 (missing), 600, 602, 603, 615, 616, 632, 642, 643, 648, 651, 654, 655.

See report in A.I. 11.4.

Plenary Session

9. Postponed Liaisons

TD S4-000660 **Draft LS to TSG-T1 regarding conformance test requirements for application layer test (Response)**, from TSG-S4, was revised in TD S4-000687 **LS to TSG-T1 regarding conformance test requirements for application layer test (Response)**, and agreed.

TD S4-000640 **Communication to 3GPP TSG-S4 and S2 and 3GPP2 TSG-C on Video Codec Support for Wireless Multimedia Terminals**, from ITU-T SG 16, was presented by S4 Chairman. Noted.

TD S4-000646 **Reply to LS on Supported Codec Lists in TS 26.103**, from TSG-CN WG1, was presented by S4 Chairman. CN1 has noticed that parts of the CR 26.103-004 approved by S4 are not in line with TS 24.008. Specifically, in section 4 of the specification, a new statement was added that TS 26.103 **"... further specifies the coding of these Codec Lists for both radio access technologies, GSM and UMTS, to be used by the Core Network Protocols on the radio interface."** CN1 kindly asked SA4 to align their specification with TS 24.008. Clarification was requested to N1 (c/o Ericsson) before any action could be taken in S4. Ericsson prepared TD S4-000692, to satisfy the request from N1.

TD S4-000692 **CR 26.103 - 006 Clarification for the use of the Codec List Information Element (Rel-4)**, from Ericsson, was presented by A. Ohana, on behalf of K. Hellwig. It is a CR on top of an already approved CR. It was clarified it is for Rel-4 only. It was agreed, and S4 Secretary will inform N1 Secretary.

TD S4-000624 **LS on RAB Assignment and QoS Negotiation**, from TSG-SA WG2, was already presented by the S4 Chairman under A. I. 4.2. The LS was postponed until next meeting.

TD S4-000684 **Liaison Statement to MPEG-4 on the MPEG-4 visual simple profile @L0** was presented by I. Varga. It was agreed in TD S4-000684R, and will be provided by a Siemens representative.

TD S4-000683 **Reply on Default Configurations for Handover (LS to TSG-R2, Cc TSG-T, TSG-GERAN, TSG-R1, TSG-N4)**, from Ericsson, was presented by K. Hellwig. H. Yamaguchi asked to modify the LS, and A. Ohana asked to remove any reference to codec types. Nortel Networks questioned the bit rate values for AMR + DTX. More off-line discussion was felt needed, and the LS was left to be progressed by correspondence; the approval was postponed until next TSG-S4#15 meeting in January 2001.

TD S4-000688 **MMS Media Codecs/Formats**, from 3GPP TSG T2, was presented by P. Barrett. The LS in TD S4-000690, sent to T2 as well as orther WGs, contained useful information partly answering T2 questions; the formal reply to TD S4-000688, from S4 to T2, was postponed until next TSG-S4#15 meeting in January 2001.

TD S4-000689 **File Format for MMS**, from 3GPP TSG T2, was presented by the Chairman S4. The formal reply to TD S4-000689, from S4 to T2, was postponed until next TSG-S4#15 meeting in January 2001.

TD S4-000698 **LS providing Comments to LS from SA4 regarding support of DTX and No_Data frames**, from TSG-CN WG4, was presented by the Chairman S4. Reply was postponed until next TSG-S4#15 meeting in January 2001, waiting for answers requested to R2 and N1 (from S4).

10. Maintenance of GSM Phase 2, Release '96 - '99, and Release 4

10.1 AMR (WI1 excluding 3G AMR Characterization)

Two CRs were produced at last meeting in TD S4-000432 CR A001 to GSM 06.71 v. 7.0.2 on clarification of the mandatory support of all AMR modes for the transcoders, and in TD S4-000433 CR 001 to GSM 26.071 v. 3.0.1 on clarification of the mandatory support of all AMR modes for the transcoders, from BellSouth Mobility DCS. Both were objected by Nortel Networks and postponed. TD S4-000538 CR 06.71 - A002 on Clarification on the support of Codec Source Rate in the TRAU (R98), TD S4-000539, and TD S4-000540 clarified Nortel's position on the issue at last meeting, but were objected by Ericsson and Nokia, since both stated that compliance to the specification would imply to pass all test sequences. Motorola supported the CRs. At this meeting, BT was in favour of a clarification of the issue. No consensus on the support of all modes in all BTSs could be reached at last meeting as well as at this meeting. Off-line discussion was left to try to reach an agreement on the support of AMR modes in the TRAU.

TD S4-000686 **Transcoder capabilities**, from Nortel networks, was presented by P. Thierion. K. Hellwig felt GERAN and GSM transcoders could behave differently. Conclusion: still no agreement was possible on the issue.

10.2 Multimedia Codec (WI2)

TD S4-000585 **CR 26.911 006 rev1 Annex K submodes of H.263 video codec for 3G-H324 specification (R99)**, from Motorola, was presented by K. Gofron. It was agreed.

TD S4-000586 **CR 26.911 007 Annex K submodes of H.263 video codec for 3G-H324 specification (Rel-4)**, from Motorola, was presented by K. Gofron. It was agreed.

TD S4-000630 **CR TS 26.111 - 005 rev 1 on Clarification to 3G-324M (R99)**, from Siemens, was

presented by B. Wimmer. It was agreed.

TD S4-000641 **CR TR 26.911 - 008 Editorial changes due to Correction**, from Siemens, was presented by I. Varga. It was revised in TD S4-000641R **CR TR 26.911 - 008 Editorial changes due to Correction**.

TD S4-000641R **CR TR 26.911 - 008 Editorial changes due to Correction** was agreed.

TD S4-000699 **CR 26.102 005 on Incorrect Introductory text of RAB Section (R99)**, from Nortel Networks, was presented by P. Thierion, who requested to provide the document for information to TSG-SA. The document was instead proposed to be agreed, but NTT DoCoMo asked to approve the final stable version of the document by Wednesday 6th December 2000. The document was at once revised in TD S4-000699R **CR 26.102 005 rev 1 on Incorrect Introductory text of RAB Section (R99)**.

10.3   QoS for Speech and Multimedia (WI3)

No documents were provided under this Agenda Item.

10.4   3G Audio-Visual Terminal Characteristics (WI4)

TD S4-000681 **Amendments to TS 26.132 for compatibility with wideband telephony transmission performance**, from Nokia, was presented by J. Vainio. Noted. The discussion will continue on the reflector.

TD S4-000682 **Changes to TS 26.131 to include specification of wideband telephony transmission performance**, from Nokia, was presented by J. Vainio. Noted. The discussion will continue on the reflector.

10.5   GSM AMR Noise Suppression

No documents were provided under this Agenda Item.

10.6   Other issues

TD S4-000574 **CR A023 to TS 03.50 V4.6.1 (Phase 2) on Harmonisation of Rx frequency response mask to TS 26.131**, from Ericsson, was presented by J. Grosshog. BT asked some time to be left to consider the proposal. E. Ekudden asked some comments to be given on the harmonisation issue in general. Discussion to continue on the reflector.

TD S4-000575 until TD S4-000579 were related to the previous document (Category A). Discussion to continue on the reflector.

TD S4-000649 **CR 001 rev1 to 3GPP TS 06.77 Addition of Test Plan and editorial changes (tidying)**, including TD S4-000650 **Test Plan Specification for Checking AMR-NS Speech Performance Requirements - V. 0.9 (Exp. 4 on VAD-DTX + Input Level = tbd)** was presented to the Plenary session S4 for approval by the SQ Chairman. Two corrections were suggested by A. Ohana (in clause 6.1.4, removal of text in brackets) and Annex C will contain the test plan, i.e. the corresponding text referring to TD S4-000650 will be removed. Revised in TD S4-000649R **CR 001 rev2 to 3GPP TS 06.77 Addition of Test Plan and editorial changes (tidying)**, including TD S4-000650 **Test Plan Specification for Checking AMR-NS Speech Performance Requirements - V. 0.9 (Exp. 4 on VAD-DTX + Input Level = tbd)**. The CR was agreed by S4 as is, but the presentation to TSG-SA was postponed to TSG-SA#11 with the intention to reach consensus also for the missing Exp. 4, and complete the job.

TD S4-000666 until TD S4-000670 **CR 06.51 - A009 to A013 Definition of the homing frame for the alternative EFR implementation (Phase 2, R96, R97, R98, R99)**, from Philips Semiconductors, were presented by D. Lorenz. They were agreed.

TD S4-000671 until TD S4-000675 **CR 06.54 - A007 to A011 Correction to the test vectors of the alternative EFR version (Phase 2, R96, R97, R98, R99)**, from Philips Semiconductors, were presented by D. Lorenz. They were agreed. Attachment containing the new test sequences was provided.

11. Release 4 and later releases Work Items

11.1 SQ Activities (including 3G AMR Characterization of WI1)

P. Usai reported verbally on the SQ session work (see all items in Section 5).

The report was approved.

AMR-NS

TD S4-000649 **CR 001 rev1 to 3GPP TS 06.77 Addition of Test Plan and editorial changes (tidying)**, including TD S4-000650 **Test Plan Specification for Checking AMR-NS Speech Performance Requirements - V. 0.9 (Exp. 4 on VAD-DTX + Input Level = tbd)** was agreed to be proposed to the Plenary session S4 for approval. see A. I. 10.6.

3G Characterisation

TD S4-000628 **AMR-NB 3G Characterisation Host Laboratory Report**, from ARCON, was agreed.

TD S4-000587 3G AMR-NB Characterization Experiment 1A – Dynastat Results, from Dynastat Inc., was agreed.

TD S4-000561 AMR-NB 3G Characterization Experiment 1B Results, from LMGT, was agreed.

TD S4-000645 **AMR-NB Characterization Tests – NTT-AT's Experiment 1C Results**, from NTT-AT, was agreed.

TD S4-000627 **AMR-NB 3G Characterisation Experiment 2A Results**, from ARCON, was agreed.

TD S4-000629R **AMR-NB 3G Characterisation Global Analysis** (revised), from ARCON, was agreed.

11.2 Wideband Codec (WI5)

TD S4-000679 **Draft Report of the AMR-WB#8 Meeting**, was presented by I. Varga. The report was approved.

TD S4-000678 **AMR-WB development overview (WB-1) version 0.5**, was presented by I. Varga.

Noted.

TD S4-000677 **AMR-WB project plan (WB-2) version 0.5**, was presented by I. Varga. Comments. Nortel Networks asked that before the presentation to TSG-SA of the Draft specifications, one AMR-WB mode be removed. P. Haavisto asked evidence of benefits be provided before such action is taken. TFO mechanism aspects (MCI/ACS/SCS) were felt justifying the removal, to save signaling bits (one bit less would be needed to describe 8 modes instead than 9). TRAU frame issues and solutions were felt by Nokia worth investigating (further), but not justifying a choice at this stage. The draft test plan for characterisation AMR-WB would be impacted as well. The Chairman asked to postpone the issue until the January meeting, and invited to produce technical contributions.

The following documents were presented by J. Vainio, and will be provided for information to TSG-SA Plenary:

TD S4-000604, TD S4-000605, TD S4-000661, TD S4-000607, TD S4-000608, TD S4-000609, TD S4-000610, TD S4-000611, TD S4-000631. All were raised to v. 1.0.0 (all filenames will get a further "R").

TD S4-000676 **Draft Communication with ITU-T Q.20/16 "Audio and Wideband Coding" on Wideband Codec Standardization**, was presented by I. Varga. It was agreed by TSG-S4. The ITU-T Rapporteur Q 20/116 R. Drogo De Iacovo agreed to circulate the document on the ITU-T reflector.

TD S4-000685 **LOI for AMR wide band**, from Nokia, was presented by P. Haavisto. Alternatives for the wording were discussed, to clarify (further) that no "3GPP" direct funding involvement is by all means implied for the ITU-T competition, i.e. the endorsement by S4 regards the harmonisation effort and the submission of the Nokia algorithm AMR-WB codec (selected by S4). The document was revised in TD S4-000697 LOI for AMR wide band (revised).

TD S4-000659 **Results of AMR Wideband (AMR-WB) Codec Selection Phase, v. 1.0**, was presented by the S4 Chairman. The document was agreed to be provided to TSG-SA#10 Plenary. A TR will be proposed to be produced containing all results.

The SQ Chairman requested that the S4 Chairman would explicitly request the formal approval of the AMR-WB selection phase of testing by TSG-SA#10 Plenary, and a specific sentence included in the official report of TSG-SA#10 Plenary; this is necessary to authorise ETSI to pay the involved laboratories.

11.3   AMR Tandem Free Operation/Transcoder Free Operation (WI6)

TD S4-000639 **Draft Report of the TFO Drafting Session during S4#14**, from TSG-S4 TFO Acting Chairman, was presented by A. Ohana. Some specifications were requested to be removed and others created (see A.P. 4). The report was approved.

TD S4-000664 **TS28.062 v006**, from the Rapporteur (Siemens), was presented by A. Ohana. The document will eventually be improved in one week time, and provided for information to TSG-SA#10 Plenary as version 1.0.0. Deadline for the provision of the specification is December 7th 2000.

11.4   Transparent End-to-End Packet Switched Mobile Streaming Applications

The following TDs were dealt with under this Agenda Item: 603R1, 680, 652, 653, 656, 657, 658.

TD S4-000680 **Draft Report of the PSM Sub-Group Meeting during TSG-S4#14**, from TSG-S4 PSM Interim Chairman, was presented by R. Hakenberg. Two modifications to the report were requested and agreed. The revised TD S4-000680R **Report of the PSM Sub-Group Meeting during TSG-S4#14** was approved.

TD S4-000652 **Draft LS on TSG-SA4 request for information with regard to RAN handling of bit erroneous SDUs within packet switched domain radio bearers (To: TSG-RAN2)**, was presented by H. Honko. It was agreed.

TD S4-000653 **Proposal for LS on packet switched streaming**, from BT, was presented by P.Barrett. It was proposed to be sent to S2, T2, Cc N1, and N3. The attachment was felt a matter of concern for Alcatel, but P. Barrett and R. Hakenberg felt Alcatel's concern was already reflected in the PSM report. The explanation text in the first page was removed in the revised version TD S4-000690 **LS on packet switched streaming (to S2, T2, Cc N1, and N3)**, which was agreed.

TD S4-000656 **Liaison to RAN1 & RAN2 on the Efficiency of Packet-Switched Conversational Audio Service**, from Siemens, was presented by B. Wimmer. Doubts were cast on the purpose of the LS, the work for Rel-4 and Rel-5 not being finalised yet for the transport. B. wimmer remarked the importance of producing an optimized system. Other codecs than AMR were requested to be considered as well. Lucent asked to postpone the LS. Others requested to redraft it during this meeting. It was revised in TD S4-000700 Liaison to RAN1 & RAN2 on the Efficiency of Packet-Switched Conversational Audio Service.

TD S4-000700 **Liaison to RAN1 & RAN2 on the Efficiency of Packet-Switched Conversational Audio Service**, was presented by I. Varga. A. Ohana wondered what response S4 would expect from R1 and R2, supported by P. Ojala. The issues raised in the LS were felt of interest, at least by BT and Siemens. The document was revised in TD S4-000700R, which was agreed.

TD S4-000700R **Liaison to TSG-RAN WG1 & TSG-RAN WG2 on the Efficiency of Packet-Switched Conversational Multimedia Service** was agreed.

TD S4-000603R1 **TS 26.235 PS conversational multimedia; default codecs" specification: updated version 1.0.0** was agreed to be sent for information to TSG-SA#10 Plenary.

TD S4-000657 **3G TS 26.233 V 0.1.1 - Packet-switched Streaming Services (PSS); General Description Release 4** was presented by H. Honko. It was agreed it could be sent for information to TSG-SA#10 Plenary, after a clean-up, in a revised version (provided in TD S4-000691).

TD S4-000691 **3G TS 26.233 V 1.0.0 - Packet-switched Streaming Services (PSS); General Description Release 4**, was presented by H.Honko. S4 agreed to provide the document for information to TSG-SA#10 Plenary.

TD S4-000658 **TS 26.234 v0.1.1, "Packet Switched Streaming Services (PSS), Protocols and Codecs"** was presented by A. Nohlgren. Motorola felt some text required to be modified, to reflect Motorola's proposals. It was agreed it could be sent for information to TSG-SA#10 Plenary, after a clean-up, in a revised and agreed version (provided in TD S4-000696).

TD S4-000696 **TS 26.234 v1.0.0 - "Packet Switched Streaming Services (PSS), Protocols and Codecs"** was presented by A. Nohlgren. S4 agreed to provide the document for information to TSG-SA#10 Plenary.

11.5   Multimedia Codecs and Protocols for Conversational Packet-Switched Services

The documents treated in A.I. 11.4 covered also these aspects. The appointment of the Chairman for the PSM SWG was left open.

11.6   Global Text Telephony

TD S4-000562 3GPP TS 26.226 Cellular Text Telephone Modem (CTM) General Description, from Ericsson, was replaced by TD S4-000693 **Draft 26.226 Cellular Text telephone Modem (CTM), General Description v. 0.0.12**. The document was presented by M. Doerbecker. Nortel Networks expressed concern on the localisation of CTM, e.g. in the BSS / NSS, and on the possibility of CTMs in cascade. Cascade case was felt covered by the specification. Localisation was felt responsibility of the operator, and/or an architectural issue, to be dealt with in S2. The document will be presented for approval (with the concern on architectural issue raised to the SA Plenary). The specification was agreed and will be raised to v. 2.0.0 for the TSG-SA#10 Plenary.

TD S4-000563 3GPP TS 26.230 Cellular Text Telephone Modem; Transmitter C-code description (C-code appended), from Ericsson, was replaced by TD S4-000694 **26.230 Cellular Text telephone Modem (CTM), Transmitter C-Code Description v. 0.0.7** (C-code appended), that was presented by M. Doerbecker. The specification was agreed and will be raised to v. 2.0.0 for the TSG-SA#10 Plenary.

TD S4-000564 3GPP TS 26.231 Cellular Text Telephone Modem: Minimum performance requirements (Test sequences appended), from Ericsson, was replaced by TD S4-000695 **Draft 26.231 Cellular Text telephone Modem (CTM), Minimum Performance specification v. 0.0.3** (Test sequences appended), that was presented by M. Doerbecker.

TD S4-000633 **Additional test sequences for TTY minimum performance**, from Nortel Networks, was presented by P. Thierion. The document suggested that means be provided by Ericsson to check all AMR modes as well as the EFR and FR in order to cover all the possible implementation cases of the TTY. Ericsson stated that the test sequences provided were sufficient for verification purposes, as not intended for "type approval". A. Ohana proposed to add further character error requirements to cover all modes, in the Table just before Section 6.3. Nortel Networks disagreed, insisting in the request to provide further clarification in the specification and test sequences for all modes. The issue was felt pertaining to a separate discussion by A. Ohana and Chairman S4. The test sequences were also proposed to be reduced. In addition, Siemens raised concern on the use of a proprietary program to check the requirements given in the Table, and asked Ericsson to provide the software program. Nortel Networks offered to provide figures for EFR and FR in future CRs.

Conclusion: the Table will be extended to cover all modes (values for all modes to be confirmed by correspondence by CoB Monday 4th December 2000); software C-code program or detailed description of the calculation method to be provided by Wednesday 6th December 2000 and approved by Thursday 7th December 2000. Text in the spec **26.231** will be modified accordingly.

11.7 Other issues

None.

12. New Work Items

No documents were provided under this Agenda item.

13. Postponed issues

No documents were provided under this Agenda item.

14. Review of the future work plan (next meeting dates, hosts)

The work plan was thoroughly considered by S4: no changes were proposed to the work plan dated November 6th 2000.

Ad hoc meetings PSM: 8-9 February (Host: Ericsson, Stockholm), and 3-4 May 2001 (Host: tbd).

22 – 26 Jan 2001 Host: Siemens, Munich, Germany

26 Feb 2001 – 02 Mar 2001   Host: tbd

04 – 08 Jun 2001   Host: tbd

10 – 14 Sep 2001   Host: tbd

03 – 07 Dec 2001   Host: tbd

15. Any Other Business

No documents were provided under this Agenda item. Anyway, two E-mail messages were circulated over the reflector 3GPP_TSG_SA_WG4 mentioning possible problems in the "encoder installation verification" of the C-code of AMR codec 26.073 version 3.1.0. All interested Companies of S4 were invited to download the package from the 3GPP FTP site and check whet.

Close of meeting

The TSG-SA WG4 Chairman thanked the host **BT** for providing the excellent facilities which ensured a smooth-running of the meeting, and for the social event at the ancient Roman bath. The S4 Chairman thanked the delegates for their hard work. The meeting was then closed.

ANNEX 1 - Agenda

Proposed Meeting Agenda for S4#14

1. **Opening of the meeting:** Monday November 27, 9:00 AM
2. **Approval of the agenda and registration of documents**   558, 559
3. **Approval of previous meeting report**   557R2, 560
4. **Reports/Liaisons from other groups/meetings**
   4.1   TSG-SA
   4.2   3GPP working groups   617, 618, 622, 623, 624, 626
   4.3   Other groups   619, 620, 621, 565, 625

Sub-Working-Group Sessions:

5. **Speech Quality (SQ) SWG Session** (including joint meeting with AMR Noise Suppression
   subgroup)   561, 567, 583, 587 , 627, 628, 629
6. **AMR Wideband Codec (AMR-WB) SWG Session**   568, 599, 601, 604-614, 631,
7. **Tandem Free Operation (TFO) SWG Session**   566, 594, 595, 596, 597, 598, 634-639
8. **Packet Switched Multimedia (PSM) SWG Session**   582, 584, 588, 600, 602, 603, 569, 570,
   571, 572, 573, 580, 581, 589, 590, 591,
   592, 593 (missing),, 615, 616, 632, 642,
   643

Plenary Session:

9. **Postponed Liaisons**   622 -> (Karl) -> 683, 624, 626 -> (Kari) -> 660 -> 687, 565 ->
   (Bernhard) -> 684, 640, LS from N4,
   646 -> (Karl to contact N1 contact person)
10. **Maintenance of GSM Phase 2, Release '96 - '99, and Release 4**
    10.1   AMR (WI1 excluding 3G AMR Characterization)   432/433, 538/539/540 -> off-line -> 686
    (Nortel, Motorola)
    10.2   Multimedia Codec (WI2)   545 -> 585, 586, 420-> 630, 641,
    10.3   QoS for Speech and Multimedia (WI3)
    10.4   3G Audio-Visual Terminal Characteristics (WI4)   681, 682
    10.5   GSM AMR Noise Suppression
    10.6   Other issues   574, 575, 576, 577, 578, 579, 649 (650)
    666-670, 671-675
11. **Release 4 and later releases Work Items**
    11.1   SQ Activities (including 3G AMR Characterization of WI1)
    11.2   Wideband Codec (WI5)   659, 676, 677, 678, 679
    11.3   AMR Tandem Free Operation/Transcoder Free Operation (WI6)   664, 639
    11.4   Transparent End-to-End Packet Switched Mobile Streaming Applications   652, 653, 656, 657,
    658, 680
    11.5   Multimedia Codecs and Protocols for Conversational Packet-Switched Services
    11.6   Global Text Telephony   562, 563, 564, 633,
    11.7   Other issues
12. **New Work Items**
13. **Postponed issues**
14. **Review of the future work plan (next meeting dates, hosts)**
15. **Any Other Business**

Close of meeting: Friday December 1, before 5:00 PM

Annex 2 - List of documents

557R2	Draft Report TSG-S4#13 meeting	TSG-SA WG4 Secretary
	S4#14 meeting - Bath	
558	Proposed Meeting Agenda for S4#14	TSG-SA WG4 Chairman
559	Proposed Meeting Schedule for S4#14	TSG-SA WG4 Chairman
560	TSG-S4#13 Meeting Outcome	TSG-SA WG4 Chairman
561	AMR-NB 3G Characterization Experiment 1B Results	LMGT
562	3GPP TS 26.226 Cellular Text Telephone Modem (CTM) General Description	Ericsson
563	3GPP TS 26.230 Cellular Text Telephone Modem; Transmitter C-code description (C-code appended)	Ericsson
564	3GPP TS 26.231 Cellular Text Telephone Modem: Minimum performance requirements (Test sequences appended)	Ericsson
565	Liaison Statement from SC 29/WG 11 to 3GPP TSG-SA WG4 on New Level for MPEG-4	SC 29/WG 11 Meeting
566	Draft 28.062 v005	Editor
567	CR 001 to 3GPP TS 06.77 Addition of Test Plan and editorial changes (tidying)	Motorola
568	Results of AMR Wideband (AMR-WB) Codec Selection Phase, v.0.1 (initial draft)	S4 Chairman
569	Updated Draft of TS 26.234, "Packet Switched Streaming Services (PSS), Protocols and Codecs	Editor (Ericsson)
570	Presentation control for packet-switched streaming applications	Ericsson
571	Proposal for video codec for PSS	Ericsson
572	Protocols for the transport of media for PSS	Ericsson
573	Codecs for static media in PSS	Ericsson
574	CR A023 to TS 03.50 V4.6.1 (Phase 2) on Harmonisation of Rx frequency response mask to TS 26.131	Ericsson

575	CR A024 to TS 03.50 V5.4.0 (R96) on Harmonisation of Rx frequency response mask to TS 26.131	Ericsson
576	CR A025 to TS 03.50 V6.2.0 (R97) on Harmonisation of Rx frequency response mask to TS 26.131	Ericsson
577	CR A026 to TS 03.50 V7.1.0 (R98) on Harmonisation of Rx frequency response mask to TS 26.131	Ericsson
578	CR A027 to TS 03.50 V8.1.0 (R99) on Harmonisation of Rx frequency response mask to TS 26.131	Ericsson
579	CR A028 to TS 03.50 V8.1.0 (TS 43.050 v. 4.0.0 in Rel-4) on Harmonisation of Rx frequency response mask to TS 26.131	Ericsson
580	Multimedia Streaming Walkthrough with SMIL	Matsushita, Toshiba
581	RTSP setup and play for PSS applications	Matsushita
582	Video Codec Selection for Packet Switched Streaming Applications	NEC
583	Discussion on Exp 4 (Input Level and VAD/DTX) in AMR NS test plan	Ericsson
584	TS 26.233 v0.1.0, Packet-switched Streaming Services (PSS) - General Description	Editor
585	CR 26.911 006 rev1 Annex K submodes of H.263 video codec for 3G-H324 specification (R99)	Motorola
586	CR 26.911 007 Annex K submodes of H.263 video codec for 3G-H324 specification (Rel-4)	Motorola
587	3G AMR-NB Characterization Experiment 1A – Dynastat Results	Dynastat Inc.
588	Proposal for update of Draft: TS 26.233, "Packet Switched Streaming Services (PSS), General Description"	Motorola
589	Codecs for PS Conversation MM WITHDRAWN	Toshiba
590	WI7: PSS: requirements on presentation layer	Philips
591	WI7: PSS: proposal for presentation layer	Philips
592	WI7: PSS: Audio codec	Philips

593	Conversational services: Video codec (missing)	Philips
594	TS 28.062, Annex D: "TFO in UMTS"	Ericsson
595	OACS Selection Rules for TFO	Ericsson
596	TFO State Machine and TFO Protocol	Ericsson
597	TFO Frames for AMR	Ericsson
598	TFO package in TS-29.232	Ericsson
599	Draft Agenda for the AMR-WB#8 Meeting	Rapporteur
600	Support of JPEG for PSM	Siemens
601	Verification of Nokia AMRWB codec	Ericsson
602	WI7: PSS: Video codec	Philips
603R1	TS 26.235 PS conversational multimedia; default codecs" specification: updated version 1.0.0	Nokia
604	26.171 AMR Wideband Speech Codec; General description v.0.0.1	Editor (Nokia)
604R	26.171 AMR Wideband Speech Codec; General description v.1.0.0	TSG-S4
605	26.173 AMR Wideband Speech Codec; C-source code v.0.0.1	Editor (Nokia)
605R	26.173 AMR Wideband Speech Codec; C-source code v.1.0.0	TSG-S4
606	26.190 AMR Wideband Speech Codec; Transcoding Functions v.0.0.2 (replaced by 661)	Editor (Nokia)
607	26.191 AMR Wideband Speech Codec; Error concealment of erroneous or lost frames v.0.0.1	Editor (Nokia)
607R	26.191 AMR Wideband Speech Codec; Error concealment of erroneous or lost frames v 1.0.0	TSG-S4
608	26.192 AMR Wideband Speech Codec; CN for AMR Speech Traffic Channels v.0.0.2	Editor (Nokia)
608R	26.192 AMR Wideband Speech Codec; CN for AMR Speech Traffic Channels v. 1.0.0	TSG-S4
609	26.193 AMR Wideband Speech Codec; Source Controlled Rate operation v.0.0.1	Editor (Nokia)
609R	26.193 AMR Wideband Speech Codec; Source Controlled Rate operation v. 1.0.0	TSG-S4

610	26.194 AMR Wideband Speech Codec; VAD for AMR Speech Traffic Channels v.0.0.2	Editor (Nokia)
610R	26.194 AMR Wideband Speech Codec; VAD for AMR Speech Traffic Channels v. 1.0.0	TSG-S4
611	26.201 AMR Wideband Speech Codec; Speech Codec Frame Structure v. 0.0.1	Editor (Nokia)
611R	26.201 AMR Wideband Speech Codec; Speech Codec Frame Structure v. 1.0.0	TSG-S4
612	CR A0xx to 05.09: Changes to link adaptation for AMR wideband codec	Nokia
613	CR A0xx to 05.03: Channel coding AMR Wide band codec on GSM full rate channel	Nokia
614	CR A0xx to 05.03: Channel coding AMR Wide band codec on EDGE full rate and half rate channels	Nokia
615	MSEQ / SMIL comparative	Alcatel
616	MSEQ presentation	Alcatel
617	LS on Clarifications of AMR decision thresholds	TSG-GERAN
618	Liaison Statement on Legacy Transceivers support	TSG-GERAN
619	Communication: Information on wideband speech coding activity	ITU-T SG16
620	Communication: Cooperation on basic operators	ITU-T SG16
621	Communication: Progress on variable bit rate voice question	ITU-T SG16
622	LS on Default configurations	TSG-RAN WG2
623	RE: LS on size of ranap messages over map-e	TSG-SA WG2
624	LS on RAB Assignment and QoS Negotiation	TSG-SA WG2
625	LS on application on external devices	Chair GSM Certification Forum and Chair EICTA CCIG
626	LS to TSGs T2, SA1, SA2 and SA4 regarding conformance test requirements for application layer test	TSG-T WG1
627	AMR-NB 3G Characterisation Experiment 3A Results	ARCON

	Experiment 2A Results	
628	AMR-NB 3G Characterisation Host Laboratory Report	ARCON
629	AMR-NB 3G Characterisation Global Analysis	ARCON
630	CR TS 26.111 - 005 rev 1 on Clarification to 3G-324M (R99)	Siemens
631	TS 26.202 v. 0.0.1 AMR-WB speech codec; interface to Iu and Uu	Nokia
631R	TS 26.202 v. 1.0.0 AMR-WB speech codec; interface to Iu and Uu	TSG-S4
632	Video Codec Simulations for PS Conversational Multimedia Services	Nokia
633	Additional test sequences for TTY minimum performance	Nortel Networks
634	List of new events related to AMR TFO establishment	Nortel Networks
635	Draft TFO Sub-Group Session Agenda	Acting TFO Chairman
636	Proposal for an updated TS 28.062 Annex C	BellSouth Mobility DCS
637	TFO Time Alignment	Motorola
638	TFO Decision Algorithm and OACS Determination	Ericsson
639	Draft Report of the TFO Drafting Session during S4#14	TSG-S4 TFO Acting Chairman
640	Communication to 3GPP TSG-S4 and S2 and 3GPP2 TSG-C on Video Codec Support for Wireless Multimedia Terminals	ITU-T SG 16
641R	CR TR 26.911 - 008 Editorial changes due to Correction	Siemens
642	Proposed Meeting Agenda for PSM SWG S4#14	TSG-S4 PSM SWG interim Chairman
643	Requirements for Scene Description	Matsushita
644R	Test Plan Specification for Checking AMR-NS Speech Performance Requirements - V. 0.9	AMR/NS and SQ
645	AMR-NB Characterization Tests – NTT-AT's Results	NTT-AT
646	Reply to LS on Supported Codec Lists in TS 26.103	TSG-CN WG1
647	LS on Codec Requirements to UMTS UEs / Mandatory Subflow Combinations for SID and NO_DATA frames for speech calls	3GPP TrFO/TFO Harmonisation Workshop

	frames for speech calls	
648	MSEQ - requirements	Alcatel
649	CR 001 rev 1 to TS 06.77 Addition of Test Plan (except Exp. 4 tbd) and editorial changes (tidying)	AMR/NS and SQ
649R	CR 001 rev 2 to TS 06.77 Addition of Test Plan (except Exp. 4 tbd) and editorial changes (tidying)	TSG-S4
650	Test Plan Specification for Checking AMR-NS Speech Performance Requirements - V. 0.9 (Exp. 4 on VAD-DTX + Input Level = tbd)	AMR/NS and SQ
651	Audio codec for PSS	Philips, Bouygues Telecom
652	Draft LS on TSG-SA4 request for information with regard to RAN handling of bit erroneous SDUs within packet switched domain radio bearers (To: TSG-RAN2)	PSM Drafting Group
653	Proposal for LS on packet switched streaming	BT
654	Updated Draft of TS 26.234, "Packet Switched Streaming Services (PSS), Protocols and Codecs"	Editor
655	Support of JPEG for PSS rev1	Siemens
656	Liaison to RAN1 & RAN2 on the Efficiency of Packet-Switched Conversational Audio Service	Siemens
657	3G TS 26.233 V0.1.1 - Packet-switched Streaming Services (PSS); General Description Release 4	Editor
658	TS 26.234 v0.1.1, "Packet Switched Streaming Services (PSS), Protocols and Codecs"	Editor
659	Results of AMR Wideband (AMR-WB) Codec Selection Phase, v. 1.0	S4 Chairman
660	Draft LS to TSG-T1 regarding conformance test requirements for application layer test (Response)	TSG-S4
661	26.190 AMR Wideband Speech v 0.0.3	Editor (Nokia)
661R	26.190 AMR Wideband Speech v. 1.0.0	TSG-S4
662	Introduction to TS 28.062, Annex F, " Call flows for AMR TFO setup & HO and Implementor's Guide "	Alcatel

663	3G TS 28.062 V0.0.5 In-band Tandem Free Operation (TFO) of Speech Codecs; Stage 3 - Service Description Section 9: TFO State Machine; (Release 2000)	TFO SWG
664	TS28.062 v006	Rapporteur (Siemens)
665	not used	
666	CR 06.51 - A009 Definition of the homing frame for the alternative EFR implementation (Phase 2)	Philips Semiconductors
667	CR 06.51 - A010 Definition of the homing frame for the alternative EFR implementation (R96)	Philips Semiconductors
668	CR 06.51 - A011 Definition of the homing frame for the alternative EFR implementation (R97)	Philips Semiconductors
669	CR 06.51 - A012 Definition of the homing frame for the alternative EFR implementation (R98)	Philips Semiconductors
670	CR 06.51 - A013 Definition of the homing frame for the alternative EFR implementation (R99)	Philips Semiconductors
671	CR 06.54 - A007 Correction to the test vectors of the alternative EFR version (Phase 2)	Philips Semiconductors
672	CR 06.54 - A008 Correction to the test vectors of the alternative EFR version (R96)	Philips Semiconductors
673	CR 06.54 - A009 Correction to the test vectors of the alternative EFR version (R97)	Philips Semiconductors
674	CR 06.54 - A010 Correction to the test vectors of the alternative EFR version (R98)	Philips Semiconductors
675	CR 06.54 - A011 Correction to the test vectors of the alternative EFR version (R99)	Philips Semiconductors
676	Draft Communication with ITU-T Q.20/16 "Audio and Wideband Coding" on Wideband Codec Standardization	Drafting Group
677	AMR-WB project plan (WB-2) version 0.5	Editor
678	AMR-WB development overview (WB-1) version 0.5	Editor
679	Draft Report of the AMR-WB#8 Meeting	AMR-WB Rapporteur

680	Draft Report of the PSM Sub-Group Meeting during TSG-S4#14	TSG-S4 PSM Interim Chairman
680R	Report of the PSM Sub-Group Meeting during TSG-S4#14	TSG-S4 PSM Interim Chairman
681	Amendments to TS 26.132 for compatibility with wideband telephony transmission performance	Nokia
682	Changes to TS 26.131 to include specification of wideband telephony transmission performance	Nokia
683	Reply on Default Configurations for Handover (LS to TSG-R2, Cc TSG-T, TSG-GERAN, TSG-R1, TSG-N4)	Ericsson
684R	Liaison Statement to MPEG-4 on the MPEG-4 visual simple profile @L0	TSG-S4
685	LOI for AMR wide band	Nokia
686	Transcoder capabilities	Nortel Networks
687	LS to TSG-T1 regarding conformance test requirements for application layer test (Response)	TSG-S4
688	MMS Media Codecs/Formats	3GPP TSG T2
689	File Format for MMS	3GPP TSG T2
690	LS on packet switched streaming (to S2, T2, Cc N1, and N3)	TSG-S4
691	3G TS 26.233 V 1.0.0 - Packet-switched Streaming Services (PSS); General Description Release 4	TSG-S4
692	CR 26.103 - 006 Clarification for the use of the Codec List Information Element (Rel-4)	Ericsson
693	Draft 26.226 Cellular Text telephone Modem (CTM), General Description v. 0.0.12	Ericsson
694	26.230 Cellular Text telephone Modem (CTM), Transmitter C-Code Description v. 0.0.7	Ericsson
695	Draft 26.231 Cellular Text telephone Modem (CTM), Minimum Performance specification v. 0.0.3	Ericsson
696	TS 26.234 v1.0.0 - "Packet Switched Streaming Services (PSS), Protocols and Codecs"	TSG-S4
697	LOI for AMR wide band (revised)	Nokia
698	LS providing Comments to LS from SA4 regarding support of DTX and	TSG-CN WG4

	No_Data frames	
699R	CR 26.102 005 rev 1 on Incorrect Introductory text of RAB Section (R99)	Nortel Networks
700R	Liaison to RAN1 & RAN2 on the Efficiency of Packet-Switched Conversational Multimedia Service	TSG-S4

Annex 3 - S4#14 List of participants (final version, kindly provided by BT)

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Annex 4 - List of Action Points

A. P. 1 Chairman SQ SWG to circulate over the reflector a Table of issues related to bids for subjective testing exercises. The Table will be circulated to the interested Organizations to collect further data. This would hopefully help the drafting of contracts and the bids for future exercises.

A. P. 2 J. Tardelli agreed to co-operate with the editor of TR 26.975 to complete the 3GPP specification, by including the output from the **AMR-NB 3G Characterisation phase** of testing. All delegates to co-operate for the finalisation of such action.

A. P. 3 TD S4-000676 **Draft Communication with ITU-T Q.20/16 "Audio and Wideband Coding" on Wideband Codec Standardization**. The ITU-T Rapporteur Q 20/116 R. Drogo De Iacovo agreed to circulate the document on the ITU-T reflector.

A. P. 4 MCC to take the necessary actions to create/remove TFO specifications for Release 99, as specified in TD S4-000639. 02.53 v.8.0.0 to be created, remove 22.053 v. 0.1.1, remove 26.920 v. 0.1.1

Annex 5 - Output documents

To TSG-SA#10 Bangkok (11-14 December 2000)

GSM / 3G (agreed at S4#13)

TD S4-000529 **CR to GSM 06.93 - A010 on rescheduling of stolen SID_UPDATE frames by SID_FIRST frames for AMR and clarification of Hangover period after Handover (R98)**

TD S4-000530 **CR to 3G TS 26.093- 005 on rescheduling of stolen SID_UPDATE frames by SID_FIRST frames for AMR and clarification of Hangover period after Handover (R99)**

A corresponding CR to create v. 4.0.0 was agreed in TD S4-000531 **CR to 3G TS 26.093 - 006 on rescheduling of stolen SID_UPDATE frames by SID_FIRST frames for AMR and clarification of Hangover period after Handover (Rel-4)**

TD S4-000533 **CR to 3GPP TS 06.93 - A009 rev 1 Re-scheduling of stolen SID_UPDATE frames for AMR (Part 2) (R98)**

TD S4-000534 **CR to 3GPP TS 26.093 - 003 rev 1 Re-scheduling of stolen SID_UPDATE frames for AMR (Part 2) (R99)**

A corresponding CR to create v. 4.0.0 was agreed in TD S4-000535 **CR to 3GPP TS 26.093- 004 Re-scheduling of stolen SID_UPDATE frames for AMR (Part 2) (Rel-4)**

TD S4-000493 **CR 001 to 26.104 "AMR speech Codec; Floating point C-Code" (R99)**

A corresponding CR to create v. 4.0.0 was agreed in TD S4-000536 **CR 002 to 26.104 "AMR speech Codec; Floating point C-Code" (Rel-4)**

TD S4-000522R **CR 004 to TS 26.103 on introduction of the bit map of codec types for call control protocol (Rel-4)**

TD S4-000551 **CR 005 to TS 26.103 on Introduction of Selected Codec Type for Codec Negotiation (Rel-4)**

GSM / 3G (agreed at S4#14)

TD S4-000585 **CR 26.911 006 rev1 Annex K submodes of H.263 video codec for 3G-H324 specification (R99)**

TD S4-000586 **CR 26.911 007 Annex K submodes of H.263 video codec for 3G-H324 specification (Rel-4)**

TD S4-000630 **CR TS 26.111 - 005 rev 1 on Clarification to 3G-324M (R99)**

TD S4-000666 until TD S4-000670 **CR 06.51 - A009 Definition of the homing frame for the alternative EFR implementation (Phase 2, R96, R97, R98, R99)**

TD S4-000671 until TD S4-000675 **CR 06.54 - A007 to A011 Correction to the test vectors of the alternative EFR version (Phase 2, R96, R97, R98, R99)**. Attachment containing the new test sequences was provided as a separate file.

TD S4-000603R1 **TS 26.235 PS conversational multimedia; default codecs" specification: updated version 1.0.0** was agreed to be sent for information to TSG-SA#10 Plenary.

TD S4-000628 **AMR-NB 3G Characterisation - Host Laboratory Report (ARCON)**

TD S4-000587 **AMR-NB 3G Characterization - Experiment 1A Results, (Dynastat Inc.)**

TD S4-000561 **AMR-NB 3G Characterization - Experiment 1B Results (LMGT)**

TD S4-000645 **AMR-NB 3G Characterization - Experiment 1C Results (NTT-AT)**

TD S4-000627 **AMR-NB 3G Characterisation - Experiment 2A Results (ARCON)**

TD S4-000629R **AMR-NB 3G Characterisation - Global Analysis (revised, ARCON)**

AMR-WB specifications provided for information to TSG-SA:

TD S4-000604R, TD S4-000605R, TD S4-000661R, TD S4-000607R, TD S4-000608R, TD S4-000609R, TD S4-000610R, TD S4-000611R, TD S4-000631R. All were raised to v. 1.0.0 (and all filenames were added a further "R").

TD S4-000659 **Results of AMR Wideband (AMR-WB) Codec Selection Phase, v. 1.0** will be provided to TSG-SA#10 Plenary (as a separate document).

TD S4-000693 **TS 26.226 Cellular Text telephone Modem (CTM), General Description raised to v. 2.0.0** (with the concern on architectural issue raised to the SA Plenary).

TD S4-000694 TS **26.230 Cellular Text telephone Modem (CTM), Transmitter C-Code Description** (C-code appended) **raised to v. 2.0.0**.

TS 26.231 Cellular Text telephone Modem (CTM), Minimum Performance specification v. 2.0.0 (+ attachment) to be provided by Thursday 7th December 2000, c/o/ Ericsson.

TD S4-000696 **TS 26.234 v1.0.0 - "Packet Switched Streaming Services (PSS), Protocols and Codecs"** was agreed to be provided for information to TSG-SA#10 Plenary.

TD S4-000691 **3G TS 26.233 V 1.0.0 - Packet-switched Streaming Services (PSS); General Description Release 4**, was agreed to be provided for information to TSG-SA#10 Plenary.

TD S4-000641R **CR TR 26.911 - 008 Editorial changes due to Correction**

TD S4-000699R **CR 26.102 005 rev 1 on Incorrect Introductory text of RAB Section (R99)**: the final stable version of the document will be agreed by Wednesday 6th December 2000.

TD S4-000692 **CR 26.103 - 006 Clarification for the use of the Codec List Information Element (Rel-4)**

TD S4-000664 **TS28.062 v006** was agreed to be provided for information to TSG-SA#10 Plenary as version 1.0.0. Deadline for the provision of the improved specification is Thursday December 7th 2000.

New WI

None

Liaison Statements / Communications

TD S4-000687 **LS to TSG-T1 regarding conformance test requirements for application layer test (Response)**

TD S4-000652 **LS on TSG-SA4 request for information with regard to RAN handling of bit erroneous SDUs within packet switched domain radio bearers (To: TSG-RAN2)**

TD S4-000690 **LS on packet switched streaming (to S2, T2, Cc N1, and N3)**

TD S4-000676 **Draft Communication with ITU-T Q.20/16 "Audio and Wideband Coding" on Wideband Codec Standardization**. The ITU-T Rapporteur Q 20/116 R. Drogo De Iacovo agreed to circulate the document on the ITU-T reflector.

TD S4-000700R **Liaison to TSG-RAN WG1 & TSG-RAN WG2 on the Efficiency of Packet-Switched Conversational Multimedia Service**

TD S4-000684R **Liaison Statement to MPEG-4 on the MPEG-4 visual simple profile @L0**. A reseprentative from Siemens will provide the document (Source S4) to MPEG-4.

Future TSG meetings

TSG	No.	Date	Venue	Host
CN	#10	06-08 December 2000	Bangkok, Thailand	Unisys Deutschland GmbH
RAN	#10	06-08 December 2000	Bangkok, Thailand	Unisys Deutschland GmbH
T	#10	06-08 December 2000	Bangkok, Thailand	Unisys Deutschland GmbH
SA	#10	11-14 December 2000	Bangkok, Thailand	Unisys Deutschland GmbH
GERAN#3	#3	15 - 19 January 2001	Boston, USA	The North American Friends of 3GPP
CN	#11	14 - 16 March 2001	US	
RAN	#11	13 - 16 March 2001	US	
T	#11	14 - 16 March 2001	US	
SA	#11	19 - 22 March 2001	US	
GERAN#4	#4	02 - 06 April 2001	TBD	TBD
GERAN#5	#5	28 - 01 May/June 2001	USA ?	TBD
CN	#12	13 - 15 June 2001	EUROPE (Sweden)	
RAN	#12	13 - 15 June 2001	EUROPE (Sweden)	
T	#12	13 - 15 June 2001	EUROPE (Sweden)	
SA	#12	18 - 21 June 2001	EUROPE (Sweden)	
GERAN#6	#6	27 – 31 August 2001	TBD	TBD
CN	#13	19 - 21 September 2001	China	
RAN	#13	19 - 21 September 2001	China	
T	#13	19 - 21 September 2001	China	
SA	#13	24 - 27 September 2001	China	
GERAN#7	#7	26 – 30 November 2001	TBD	TBD
CN	#14	12 - 14 December 2001	Japan	
RAN	#14	12 - 14 December 2001	Japan	
T	#14	12 - 14 December 2001	Japan	
SA	#14	17 - 20 December 2001	Japan	