

Minutes, Technology Group on Distribution 19 February 2004

Advanced Television Systems Committee
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The Advanced Television Systems Committee, Inc., is an international, non-profit organization developing voluntary standards for digital television. The ATSC member organizations represent the broadcast, broadcast equipment, motion picture, consumer electronics, computer, cable, satellite, and semiconductor industries.

Specifically, ATSC is working to coordinate television standards among different communications media focusing on digital television, interactive systems, and broadband multimedia communications. ATSC is also developing digital television implementation strategies and presenting educational seminars on the ATSC standards.

ATSC was formed in 1982 by the member organizations of the Joint Council on InterSociety Coordination (JCIC): the Electronic Industries Association (EIA), the Institute of Electrical and Electronic Engineers (IEEE), the National Association of Broadcasters (NAB), the National Cable Television Association (NCTA), and the Society of Motion Picture and Television Engineers (SMPTE). Currently, there are approximately 140 members representing the broadcast, broadcast equipment, motion picture, consumer electronics, computer, cable, satellite, and semiconductor industries.

ATSC Digital TV Standards include digital high definition television (HDTV), standard definition television (SDTV), data broadcasting, multichannel surround-sound audio, and satellite direct-to-home broadcasting.

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Minutes, ATSC Technology Group on Distribution (T3)

10:00 a.m. – 4:00 p.m.
NAB, 1771 N Street, N.W., Washington, D.C.
19 February 2004

1. WELCOME, INTRODUCTIONS, AND DETERMINATION OF QUORUM

Chairman Ralph Justus (CEA) called the meeting to order at 10:00 a.m. at the headquarters of the National Association of Broadcasters in Washington, D.C. He thanked NAB for hosting the meeting and welcomed those in attendance.

Chairman Justus asked each person to identify him or herself. The attendance list is given in **Attachment 1**. Secretary Jerry Whitaker (ATSC) reported that a quorum was present.

2. APPROVAL OF PROPOSED AGENDA

Chairman Justus asked for consideration of the draft agenda, distributed to the T3 reflector on February 5 (**Attachment 2**). He said two requests for additions had been received: “CDTV Remarks on E-VSB”, which he placed as agenda item 12.3; and “E-VSB Document Structure”, which he placed as agenda item 16.2. No other changes suggested and the agenda was accepted as amended.

3. APPROVAL OF THE DRAFT MINUTES OF DECEMBER 10 MEETING

Chairman Justus called member’s attention to the draft Minutes of the 9 December 2003 T3 meeting, which were distributed to the T3 reflector on June 30 (**Attachment 3**). Mike Dolan (TBT) identified a correction to the attendance list. No further changes were requested and the document was accepted as amended.

4. OPENING REMARKS

Chairman Justus observed that today’s agenda is a full one and he urged member to help move agenda item discussions along as expeditiously as possible.

5. COMMENTS BY THE PRESIDENT (MARK RICHER)

Mark Richer (ATSC) reported on current activities within the ATSC.

5.1 Status of ballots

The ballot on “ATSC Interaction Channel Protocols” was approved by the membership on 3 February 2004: 28 yes, 0 no, 10 abs; editorial privilege 28 yes, 2 no, 8 abs. Comments were received from Cox, NAB, and PBS. The comments were editorial in nature and are currently being integrated in to the standard, to be known as A/96.

5.2 Other

Other items covered in Mr. Richer’s report included the following:

- Planning for the ATSC annual meeting is well underway. The speakers will include Eddie Fritts, NAB; Robert Sachs, NCTA; and Gary Shapiro, CEA. The event will be held on March 30 at the Hotel Washington in Washington, D.C. Registration information can be found on the ATSC Web site.

- The NAB, CEA, and ATSC are combining forces again this year to sponsor the DTV Drafthouse at the NAB convention in Las Vegas. A number of technology demonstrations are planned for the event.
- ATSC, in conjunction with IEEE BTS, is organizing a day-long technical session at the NAB convention on Saturday April 17. Called the “ATSC University”, subjects will include PSIP and advanced coding technologies.

6. BRIEF REPORTS ON ACTIONS FROM THE PREVIOUS MEETING

Chairman Justus called attention to the action items developed at the December 9 meeting of T3:

- 1) Graham Jones to forward to Jerry Whitaker the current version of the Working Draft PMCP specification (T3S1-218rev9b) for posting on the ATSC Web site as a Candidate Standard for a period of 6 months. *Completed*
- 2) Mark Eyer to work with ATSC Code Points Registrar Jerry Whitaker to provisionally assign the necessary values for T3/S8-527r3 prior to posting of said document as a Candidate Standard. *Completed*
- 3) Mark Eyer to forward to Jerry Whitaker T3/S8 Doc. 527 Rev. 3 (with provisional code point values added per above) for posting as a Candidate Standard for period of time ending 2 August 2004. Eyer and Whitaker to draft appropriate text explaining the purpose of the amendment and how it relates to other work underway within ATSC for inclusion on the Web site posting. *Completed*
- 4) Rich Chernock, Mark Eyer, and Jerry Whitaker to draft an informative note for the Web site listing of Approved Proposed Standard A/57A taking into account ISO-MPEG work in this area. *Completed*
- 5) Edwin Heredia to forward to Jerry Whitaker CS/96 for issuance of a letter ballot as a Proposed Standard. *Completed*

7. NEW WORK ITEMS FOR DISCUSSION

7.1 Assigned by Board of Directors

Mr. Richer reported there were no new work items for T3 from the Board of Directors.

7.2 Implementation Subcommittee

Art Allison (NAB), chair of the Implementation Subcommittee, reported there were no new work items for T3 from IS.

7.3 Other

No additional work items have been identified.

8. REPORT OF THE SPECIALISTS GROUP ON PSIP METADATA COMMUNICATION, T3/S1 (GRAHAM JONES)

Graham Jones (NAB) reported on current activities within T3/S1 (**Attachment 4**).

8.1 Status Report

Mr. Jones reviewed the status of activities, focused on the PMCP Candidate Standard, which was published in December. He said three teleconferences have been held since the last T3 meeting. Mr. Jones reported that T3/S1 is currently reviewing comments received on CS/75 and is considering possible revisions to the document. A record of all comments can be found on the T3/S1 page of the atscmembers.org Web site.

Mr. Jones said that a “Guide to the Use of the PMCP Standard” is being undertaken, with the goal of completion by September 2004. He added that future PMCP-related projects could

include extensions for PSIP for data broadcasting and extensions for PSIP for E-VSB applications.

Chairman Justus observed that, with the existing timeline on CS/75, action by T3 will be required by June 10 to either extend the CS period or to elevate the document to Proposed Standard status.

Mr. Jones acknowledged the timeline, and added that several companies represented in T3/S1 are working on trial implementations, with planned demonstrations set for the upcoming NAB convention.

9. REPORT OF THE SPECIALISTS GROUP ON ACAP DEVELOPMENT, T3/S2 (CRAIG SMITHPETERS)

Craig Smithpeters (Cox) reported on activities within T3/S2 (**Attachment 5**).

9.1 Status Report

Mr. Smithpeters reported that T3/S2 held one face-to-face meeting since the last T3 meeting and two corrigenda teleconferences. He reviewed the CS/101 corrigenda status, noting that a number of open items exist; however, he added, good progress is being made. He said a new version of CS/101 is planned by mid-March.

Mr. Smithpeters went on to review some of the major ACAP issues discussed at the last meeting of T3/S2, held earlier this month. He also provided an update on liaison work with DVB MUG, SCTE CAP, and ITU SG9.

9.2 ARIB Harmonization Proposal

Mr. Smithpeters reported that harmonization of ACAP with BML has been proposed by ARIB. He conveyed a request from T3/S2 for permission to enter into preliminary harmonization work with ARIB. He said it was unclear at this point the extent to which harmonization could be practical. However, he added, the answer to this question can only be determined by beginning the work.

Mr. Smithpeters answered specific questions from committee members and outlined the potential benefits to ATSC of the proposed harmonization. He pointed out however that harmonization would likely delay a final document from T3/S2.

Mr. Richer said harmonization with ARIB would be beneficial. However, he added that completion of the ACAP specification in a reasonable timeframe is important. Chairman Justus agreed that harmonization would be worthwhile, but not at the expense of delaying ACAP. Craig Tanner (Sharp) suggested that T3/S2 should explore harmonization with ARIB and report back to T3 with an assessment of the prospects for harmonization.

Chairman Justus asked Mr. Smithpeters to explore with ARIB possible harmonization scenarios and report back on the prospects for successful work. He also urged T3/S2 to focus on completing ACAP.

9.3 Request to Extend the Candidate Standard Status of CS/101

Mr. Smithpeters **moved** on behalf of T3/S2 to extend CS/101 Candidate Standard status to 30 September 2004. Discussion followed, with questions focusing on the changes pending to the ACAP specification. Mr. Smithpeters said there are a small number of major issues that need to be addressed. The motion was **approved** on a show of hands (there were no objections or abstentions).

10. REPORT OF THE SPECIALISTS GROUP ON VIDEO AND AUDIO CODING, T3/S6 (BILL MILLER)

William Miller (ABC), chair of T3/S6, reported on activities within the specialists group (**Attachment 6**).

10.1 Recommendation of Enhanced AC-3 for E-VSB Audio

Mr. Miller reported that at its January 5 meeting, T3/S6 selected Enhanced AC3 as the advanced codec for the E-VSB mode. He said Dolby is completing work on final documentation, and that the necessary proposed amendments will be available by the next meeting of T3. Mr. Miller reported the consensus of T3/S6 that T3 accept selection of Enhanced AC3 as the advanced codec for robust mode applications. Chairman Justus recognized the **motion** of the chair of T3/S6 and called the question. It was **approved** on a show of hands (Nielsen objected; there were 3 abstentions).

Mr. Miller went on to review the new tools and features provided for in E-AC3.

10.2 Progress Report, Subjective Testing of Video Codecs

Mr. Miller reviewed the current status of video codec testing of the two remaining proponent systems—AVC/H.264 and Windows Media 9 (VC-9). He said a test plan has been completed and that all but two sequences have been distributed to the coding team leaders. Coding is currently underway and a formal report is planned for the next meeting of T3.

Mr. Miller outlined the subjective testing schedule. Viewing is expected to be done at Dolby and CRC (and possibly other locations) using expert viewers. He said that after the final schedule has been set, he will post a note to the T3 reflector outlining dates and venues. He said viewing of the test sequences is open to any T3 member interested in participating.

Mr. Miller went on to address specific questions about the test procedures, which he said are all outlined in the formal test plan (**Attachment 7**). He said T3/S6 intends to recommend to T3 selection of a single codec. He said it is also possible that the specialists group could recommend selection of neither codec. Wendy Aylsworth (Warner Bros.) questioned why selection of a single codec is necessary, rather than permitting multiple codecs, since the silicon expense seems to be minimal. She questioned whether a previous action item directing T3/S6 and T3/S8 to report back “on the ramifications of including more than one codec” has actually been completed. Mr. Miller and Mr. Eyer said they felt they had, indeed, answered that question but offered to expand upon their previous comments if so requested by T3. Edwin Heredia (Microsoft) said he felt a more thorough discussion should be held regarding the possible inclusion of more than one codec in the T3/S6 recommendation to T3.

Mr. Richer observed that idea of including more than one decoder would naturally receive a negative response from consumer electronics manufacturers. He said what is missing in this discussion is content providers explaining what the benefit of including more than one codec might be. Ms. Aylsworth suggested that T3/S6 schedule a teleconference on this subject so that it could be examined in detail. Mr. Miller suggested that the best path forward may be more apparent after the test results are completed in March. Chairman Justus asked Mr. Miller and T3/S6 to consider this issue in greater detail going forward.

Mr. Miller reported that T3/S6 has received an inquiry from EBU to share test results, since EBU is also conducting subjective evaluations of the same two codecs. He said this liaison could benefit both groups, and added that such liaison should not result in any delay in the work of T3/S6. Chairman Justus observed the consensus of T3 for T3/S6 to proceed with the liaison effort.

10.3 Closed Captioning, Corrigendum to A53C

Mr. Miller called attention to proposed changes to WD/53C intended to correct an old reference to CEA documents and to clarify certain elements in Annex A. He noted a document posted to the T3 reflector on February 18, formed as a corrigendum, which addresses these issues (**Attachment 8**). Mr. Richer observed that the integration of this change into WD/53C is appropriate and that since it is a change to a Working Draft, the change can be made without formal T3 action today. Mr. Allison suggested, however, that T3 should formally accept the language and direct that the change be made in WD/53C. Mr. Allison so **moved**, with certain editorial changes identified by Pat Waddell (Harmonic)¹. **Second** by Mr. Dolan. It was **approve** on a show of hands.

10.4 Still Picture/Low Delay Issues

Mr. Miller brought members up to date on the background of this issue (**Attachment 6a**). He noted that MPEG-2 is unclear with regard to a still picture mode, specifically:

- A/53 does not include the parts of MPEG-2 Systems that pertain to the still picture model
- The lowest frame rate in A/53 Table A3 is 23.97 fps
- MPEG-2 Systems is somewhat unclear on the definition of “still pictures”
- The `low_delay` flag appears to be related to still pictures
- Receiver manufacturers did not test with video streams having `low_delay=1`

Mr. Miller went on to outline the ramifications of setting the `low_delay` mode to 1 and the possible impact on legacy receivers:

- Setting `low_delay=1` allows the video ES buffer to underflow
- No B-pictures are allowed; all pictures are sent in display order
- Decoding happens whenever a full access unit arrives
- Underflow could extend indefinitely (> 60 sec)

Mr. Miller reported the recommendations of T3/S6 and T3/S8 to specify a constraint on MPEG-2 video in the main mode (in A/53) to set `low_delay=0`. He said this change could be integrated into WD/53C. Sam Narasimhan (Motorola) provided technical background on this issue and answered specific questions from committee members. Mr. Miller emphasized that the proposed constraint would apply only to the main channel; the E-VSB mode would not be so constrained.

Mr. Allison commented that work remains to be done, including coordination between T3/S6 and T3/S8, before the `low_delay` issue could be rolled into WD/53C. Mr. Miller and Mr. Eyer agreed, saying they would welcome direction from T3 to draft suggested language for resolution. Chairman Justus observed the consensus of T3 to proceed in this manner.

The meeting broke for lunch at 11:45 a.m.

The meeting resumed at 12:30 p.m.

11. REPORT OF SPECIALISTS GROUP ON DATA MULTIPLEX/TRANSPORT, T3/S8 (MARK EYER)

Mark Eyer (Sony) chair of T3/S8, outlined current work of the specialists group (**Attachment 9**).

11.1 EVSB Amendment to A/53C Annex C: Proposal to Publish as Candidate Standard

Mr. Eyer reported the consensus recommendation of T3/S8 to advance the E-VSB amendments to Working Draft 53C to Candidate Standard status for a period of time ending 2 August 2004.

¹ The correction identified by Mr. Waddell to Attachment 8 is as follows: Move the change “Delete footnote #6” from its current position in item #3 to item #4.

He went on to review the E-VSB transport philosophy and architecture, including a description of the linkages provided to signal a “fall-back” or “fall-forward” mode.

Mr. Eyer noted that T3-608 (**Attachment 10**) and T3-609 (**Attachment 11**) include several “TBD” values for code points, which he requested be assigned on a provisional basis so that implementation experience could be gained. Mr. Whitaker, the ATSC Code Points Registrar, said he would make the appropriate assignments.

Mr. Eyer **moved** of behalf of T3/S8 that T3-608 and T3-609 (with provisional code point values added) be advanced to Candidate Standard status for an implementation period ending 2 August 2004. Chairman Justus opened the floor for discussion. Mr. Goldberg said that although good progress has been made in developing the E-VSB draft specifications, the documents are not sufficiently defined to move to CS status. Ren McMann (CBS) offered that, because of the complexity of the E-VSB system, he was uncomfortable with moving these specifications forward. He said some type of sample implementation should first be developed. Charles Einolf (UPN) agreed, saying that testing of the system would be appropriate prior to publication. Mr. Eyer, speaking as the Sony representative, expressed Sony’s opposition to the E-VSB system; he said the company believes that evolutionary improvements in receiver designs will do more to advance the receivability of DTV than the proposed robust mode.

Mr. Richer reminded the committee that Annex D of A/53B will move to a membership vote on June 1 regardless of what T3 does with regard to these documents. He added that the Candidate Standard phase is expressly designed to gather implementation experience, which can include system testing.

Merrill Weiss (Tribune) emphasized that the Candidate Standard phase is intended for gathering real-world experience. Mr. Allison agreed, saying the system is technically sound and deserves the opportunity to be proven through trial implementations, for which the Candidate Standard phase is ideal. Mr. Miller, speaking for ABC, said the company strongly favors moving these documents forward as Candidate Standards. He said that any remaining issues can be addressed during the CS period.

Other comments were voiced by Robert Rast (LINX), Mr. Waddell, and Craig Tanner (Sharp). Mr. Narasimhan suggested that because of the complexity of the E-VSB system, August 2 is not sufficient time to gain implementation experience.

Chairman Justus called the question. It was **approved** 15 yes, 11 no, 17 abstentions. (The vote tally is given in **Attachment 12**.)

Mr. Eyer noted that when posted on the ATSC Web site, some explanatory text describing the scope of the CS documents will be required. Chairman Justus asked Mr. Eyer, Mr. Miller, Mr. Whitaker, and Mr. Richer to craft the appropriate text.

11.2 Standards Update Activity

Mr. Eyer reported that various A/65B update issues are under consideration in T3/S8, including:

- Updated references
- Extensibility of descriptors, tables
- User private table PID ranges
- Mechanism for announcement of multiple language/audio type pairs in the EIT

Mr. Eyer said this effort is being led by Rich Chernock (Triveni).

12. REPORT OF THE SPECIALISTS GROUP ON RF TRANSMISSION, T3/S9 (CHARLES EINOLF)

Charles Einolf (UPN), chair of T3/S9, reported on current activities within the specialists group (**Attachment 13**).

12.1 Distributed Transmission

Mr. Einolf said that work continues to develop a draft Recommended Practice on Distributed Transmission Networks. He also reported the consensus recommendation of T3/S9 to extend the CS status of CS/110 for a period of six months in order to complete the draft RP. Mr. Einolf so **moved**. Mr. Allison, while speaking in favor of the motion, argued that CS/110 should move forward sooner rather than later and that coupling the standard to the RP is not appropriate. This viewpoint was echoed by Wayne Luplow (Zenith). Mr. Weiss said no substantive changes have been made recently to the document and none are expected. Chairman Justus called the question; it was **approved** on a show of hands (there were no objections and 6 abstentions).

12.2 EDOCR

Mr. Einolf reported that T3/S9 continues to examine the ETRI Equalization Digital On-Channel Repeater (EDOCR) system. He said KBS plans to begin field tests next month.

12.3 Other VSB Enhancements

Mr. Einolf reported that the specialists group continues to look at additional VSB enhancements, specifically:

- Samsung Transversal R-S Coding
- Philips-ETRI Enhanced-xVSB

Mr. Einolf said the proponents are keeping T3/S9 updated on the progress of system testing, including backward compatibility. In response to a question, he said the proposals appear to be compatible with the E-VSB transmission system as previously approved by T3.

12.4 RP on E-VSB

Mr. Einolf said that work continues to develop a draft Recommended Practice on E-VSB. This work is being led by Wayne Bretl (Zenith).

12.5 CDTV Remarks

Chairman Justus introduced Guy Bouchard (CDTV/CBC) who read correspondence from Michael McEwin (CDTV) relating to E-VSB (**Attachment 14**). In the letter, Mr. McEwin stated that CDTV “has great reservations regarding the E-VSB proposal. The enhancements which E-VSB is expected to deliver appear not to serve the Canadian broadcasters’ requirement.” Chairman Justus acknowledged Mr. McEwin’s input.

13. REPORT OF THE SPECIALISTS GROUP ON RECEIVERS, T3/S10 (JOHN HENDERSON)

John Henderson (Hitachi), chair of T3/S10, briefed the committee on the work of the specialists group (**Attachment 15**).

13.1 Status Report

Mr. Henderson reported that T3/S10 has completed a draft Recommended Practice on DTV receiver performance guidelines, which was distributed to the T3 reflector on February 4 (**Attachment 16**). He explained that the document, T3S10-025r2, is written from the standpoint of “what are the signal conditions under which receivers should operate?” He said the component elements of the receiver “front end” addressed in the document include:

- Antenna and control interface
- Tuner
- IF gain, selectivity, and band shaping
- Demodulation
- Equalization

- Forward error correction

Mr. Henderson said that specific performance areas covered in the draft RP include:

- Sensitivity
- Multi-signal overload
- Phase noise
- Selectivity
- Multipath

Mr. Henderson said that data captures used during development of the RP will be available from ATSC by request. Mr. Richer added that the procedure for obtaining this material would be worked out in the coming months.

Mr. Henderson said the work in developing this document was joint effort by CE manufacturers and broadcasters, and he thanked all contributors for their efforts.

13.2 Recommendation to Ballot Working Draft on Receiver Performance as Proposed RP

Mr. Henderson **moved** on behalf of T3/S10 that T3S10-025r2 be balloted as a draft Recommended Practice. Certain editorial corrections were identified by several T3 members. Chairman Justus suggested that T3 approve issuance of a letter ballot contingent upon integration of any outstanding editorial items collected within a two-week comment period, if so approved by Mr. Henderson and Mr. Richer. Various comments were offered on the best route forward. Mr. Henderson said that while most of the comments are editorial in nature, some comments may be deemed substantive. As such, he said, visibility of the changes should be given to T3/S10 members.

Following additional discussion, Chairman Justus asked Mr. Henderson make the editorial changes, post to the revised document to the T3/S10 and T3 reflectors, and after a two week comment period if no issues are raised, the document could go forward to a letter ballot. This approach was accepted by the committee. Chairman Justus called the question; it was **approved** on a show of hands (no objections, 6 abstentions).

Mr. Richer congratulated Mr. Henderson and T3/S10 on the draft RP. He said this document is long overdue.

14. REPORT OF THE SPECIALISTS GROUP ON DATA BROADCAST, T3/S13 (MIKE DOLAN)

Mike Dolan (TBT), chair of T3/S13, reported on activities in the specialists group (**Attachment 17**).

14.1 Software Download

Mr. Dolan said the software download specification is the highest priority work item within T3/S13. He reported that a detailed requirements document was completed in January and added that the goal of the specialists group is to have a CS-quality document ready for T3 consideration by June 10. He also said the specialists group plans to recommend that SCTE consider the work (i.e., amend SCTE-28). He said harmonization with SCTE could hold considerable benefits for end-users.

14.2 ACAP Harmonization

Mr. Dolan said work has been suspended on reconciling the A/9x standards with ACAP pending completion of the software download task.

14.3 Closed Caption in Fallback EVSB

Mr. Dolan reported on possible considerations surrounding the carriage of closed captions in E-VSB. He explained the issues involved and noted that any solution could stretch across three

specialists groups—T3/S6, T3/S8, and T3/S13. He offered that that because no one specialists group has a clear scope to address DTVCC, the chairs of the three specialists groups recommend the formation of an ad-hoc in T3/S13 to consider DTVCC issues..

Mr. Dolan asked for feedback from T3 on whether this issue needs to be addressed, and if so, permission to proceed in T3/S13. Discussion followed, with comments from Mr. Goldberg, Robert Blanchard (Sony), Mr. Tanner, and Mr. Eyer. Mr. Allison questioned the need for this capability. Mr. Waddell suggested that the issue might first be sent to IS for study and returned to T3 when the requirements are identified there. Mr. Graham pointed out there will likely be a need to address fallback captions as E-VSB moves forward. Mr. Miller said the proposal outlined by Mr. Dolan could solve a looming issue.

Mr. Richer suggested that before any work is done in this area, the Applications Subcommittee should be asked to provide input. Mr. Dolan said he was comfortable with that approach. Chairman Justus observed the consensus of T3 to proceed in this manner and he asked Mr. Dolan to convey the issue to the Applications Subcommittee. He also asked Mr. Dolan to craft a draft revised scope for T3/S13 for consideration by T3 at the next meeting that includes CC-related work.

15. REPORT OF SPECIALISTS GROUP ON TRANSACTIONAL SERVICES, T3/S16 (EDWIN HEREDIA)

Edwin Heredia (Microsoft), chair of T3/S16, reported on current activities within the specialists group.

15.1 Status Report

Mr. Heredia recognized the final approval of A/96, the “ATSC Interaction Channel Protocols” Standard and thanked contributors for their efforts. He said that maintenance of A/96 will be an ongoing activity for T3/S16. He added there is a tentative proposal from ETRI regarding development of extensions to A/96, which he will report on as warranted.

16. OTHER BUSINESS

16.1 E-VSB Documentation Structure

Mr. Dolan called attention to an E-VSB document map that he, with help from other specialists group chairs, developed to explain the expected roadmap to E-VSB (**Attachment 18**). He walked through the individual elements of the map and explained how those elements might ultimately emerge as completed standards.

Mr. Richer said the map is a good pictorial of how the various amendments should proceed. Mr. Dolan and Mr. Richer answered specific questions from members on process issues that might impact E-VSB.

17. SCHEDULE OF NEXT T3 MEETINGS

The next meeting of the Technology Group on Distribution will be held on 2 April 2004. Other meetings this year include:

- June 10, 2004
- September 23, 2004
- November 16, 2004

18. ADJOURNMENT

There being no further business, the meeting was adjourned at 3:00 p.m. EST.

Action Items Developed at this Meeting

The following action items were developed at today's meeting:

- 1) Craig Smithpeters and T3/S2 to explore with ARIB possible harmonization scenarios regarding BML and to report back to T3 on the prospects for successful work.
- 2) William Miller and T3/S6 to work with Mark Eyer and T3/S8 to draft proposed language that would add the constraint `low_delay=0` in WD/53C.
- 3) Mark Eyer to forward to Jerry Whitaker T3-608 and T3-609, with provisional code points assigned, for posting on the ATSC Web site as Candidate Standards.
- 4) Mark Eyer, William Miller, Jerry Whitaker, and Mark Richer to draft explanatory text describing the scope of the T3-608 and T3-609 Candidate Standard documents to accompany the CS postings on the ATSC Web site.
- 5) John Henderson to integrate editorial changes identified to T3S10-025r2, to post the revised document to the T3/S10 and T3 reflectors, and after a two week comment period if no issues are raised to forward the revised document to ATSC staff for the issuance of a letter ballot as a draft Recommended Practice.
- 6) Mike Dolan to provide background information on possible DTVCC issues relating to E-VSB to Sterling Davis, chair of the Applications Subcommittee, and to request feedback from AS on the issue.
- 7) Mike Dolan to draft a revised scope for T3/S13 for consideration by T3 at the next meeting that includes CC-related work

Attachments

- Attachment 1.** Attendance List
http://www.atscmembers.org/sg/T3/2004_02_19/documents/Attachment_1_2004_02_19_attendance.doc
- Attachment 2.** Draft Agenda
http://www.atscmembers.org/sg/T3/2004_02_19/documents/Attachment_2_draft_t3_agenda_2004_02_19.doc
- Attachment 3.** Draft Minutes from T3 Meeting of 10 December 2003
http://www.atscmembers.org/sg/T3/2004_02_19/documents/Attachment_3_T3-607r3_Minutes_T3_2003_12_10.doc
- Attachment 4.** T3/S1 Status Report
[http://www.atscmembers.org/sg/T3/2004_02_19/documents/542.3.Activities since last T3 meeting](http://www.atscmembers.org/sg/T3/2004_02_19/documents/542.3.Activities%20since%20last%20T3%20meeting)
- Attachment 5.** T3/S2 Status Report
http://www.atscmembers.org/sg/T3/2004_02_19/documents/Attachment_5_T3S2-024.ppt
- Attachment 6.** T3/S6 Status Report
http://www.atscmembers.org/sg/T3/2004_02_19/documents/Attachment_6_T3S6_status_2004-02-19.ppt
- See also:
http://www.atscmembers.org/sg/T3/2004_02_19/documents/Attachment_6a_Still_Pictures_2-04a.ppt
- Attachment 7.** T3/S6 Video Codec Test Plan
http://www.atscmembers.org/sg/T3/2004_02_19/documents/Attachment_7_T3S6-290r2_test_plan.doc
- Attachment 8.** Proposed Corrigendum to A/53C regarding CC
http://www.atscmembers.org/sg/T3/2004_02_19/documents/Attachment_8_T3S6-289-A53Cr2-Amend-WD5.doc
- Attachment 9.** T3/S8 Status Report
http://www.atscmembers.org/sg/T3/2004_02_19/documents/Attachment_9_S8_Status_Report_2-04.ppt
- Attachment 10.** T3-608, AVC/H.264 Version of A/53C Amendment
[http://www.atscmembers.org/sg/T3/2004_02_19/documents/Attachment_10_T3-608_A-53C_Amendment_\(AVC_version\).doc](http://www.atscmembers.org/sg/T3/2004_02_19/documents/Attachment_10_T3-608_A-53C_Amendment_(AVC_version).doc)
- Attachment 11.** T3-609, Windows Media 9 (VC-9) Version of A/53C Amendment
[http://www.atscmembers.org/sg/T3/2004_02_19/documents/Attachment_11_T3-609_A-53C_Amendment_\(VC9_version\).doc](http://www.atscmembers.org/sg/T3/2004_02_19/documents/Attachment_11_T3-609_A-53C_Amendment_(VC9_version).doc)
- Attachment 12.** T3 Vote Tally on T3/S8 E-VSB Motion
http://www.atscmembers.org/sg/T3/2004_02_19/documents/Attachment_12_EVSB_vote_tally.doc
- Attachment 13.** T3/S9 Status Report
http://www.atscmembers.org/sg/T3/2004_02_19/documents/Attachment_13_S9_Status_Report_February_2004.ppt
- Attachment 14.** Correspondence from Michael McEwin (CDTV) relating to E-VSB
http://www.atscmembers.org/sg/T3/2004_02_19/documents/Attachment_14_CDTV_statement.pdf
- Attachment 15.** T3/S10 Status Report
http://www.atscmembers.org/sg/T3/2004_02_19/documents/Attachment_15_T3S10_status_report_2-19-04.ppt

Attachment 16. Draft Recommended Practice on Receiver Performance Guidelines

http://www.atscmembers.org/sg/T3/2004_02_19/documents/Attachment_16_T3S10-025r2.doc

See also:

http://www.atscmembers.org/sg/T3/2004_02_19/documents/Attachment_16a_ATSC_RFCapture_selection-aaa.xls

Attachment 17. T3/S13 Status Report

http://www.atscmembers.org/sg/T3/2004_02_19/documents/Attachment_17_S13-236R0-Status.ppt

Attachment 18. E-VSB Document Map

http://www.atscmembers.org/sg/T3/2004_02_19/documents/Attachment_18_ATSC-EVSB-MapR3.ppt