

Minutes, Technology Group on Distribution 23 September 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)

23 September 2004, 10:00 a.m. until 4:00 p.m.
Public Broadcasting Service, 1320 Braddock Place, Alexandria, VA

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 Public Broadcasting Service in Alexandria, VA. He thanked PBS 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 August 27, with additional updates posted on September 10, and September 16 (**Attachment 2**). He said that, by request, item no. 9 (Report of the Specialist Group on ACAP) would be moved to follow item no. 11. He also noted that a report was expected from the T3 Architectural Team, and so suggested the addition of the "A-Team" to the agenda under Other Business. No other modifications were requested and the agenda was accepted as amended.

3. APPROVAL OF THE DRAFT MINUTES OF THE 10 JUNE 2004 MEETING

Chairman Justus called members attention to the draft Minutes of the June 10 T3 meeting, which was distributed to the T3 reflector on August 25 (**Attachment 3**). Mr. Whitaker reported that certain clarifications regarding the T3/S13 report in Section 16 were requested by Mike Dolan (TBT), chair of T3/S13. Chairman Justus and Secretary Whitaker believe these changes to be editorial in nature, and Mr. Whitaker said he will incorporate them into the final document. 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, with a large number of persons in attendance. He urged members to help move discussions along as expeditiously as possible.

5. COMMENTS BY THE PRESIDENT (MARK RICHER)

Mark Richer (ATSC) reported on current activities within the ATSC. He thanked PBS for hosting the meeting, and for providing excellent facilities and on-site technical support.

5.1 Status of Ballots

Mr. Richer reported on the status of ballots, specifically:

- **RP A/111: Design of Synchronized Multiple Transmitter Networks.** The membership ballot was issued 6 August 2004 and closed on 3 September 2004; it was approved 22 yes, 0 no, 8 abstain; editorial privilege was approved 24 yes, 1 no, 5 abstain.
- **A/110: Synchronization Standard for Distributed Transmission.** The membership ballot was issued 16 June 2004 and closed on 14 July 2004. It was approved 36 yes, 1 no, 12 abstain; editorial privilege was approved 39 yes, 2 no, 8 abstain.

- **A/53C Amendment No. 1** (Revision of A/53C Annex D Relating to an EVSB Transmission Mode). The membership ballot was issued on 15 June 2004 and closed on 13 July 2004. The document was approved 66 yes, 30 no, 13 abstain; editorial privilege was approved 71 yes, 18 no, 19 abstain.
- **RP A/74: Receiver Performance Guidelines**. The membership ballot was issued 21 May 2004 and closed on 18 June 2004. The document was approved: 19 yes, 0 no, 7 abstain; editorial privilege 21 yes, 0 no, 5 abstain.

5.2 Other

Other items covered in the President's report included the following:

- Mr. Richer called attention to the first issue of the *Descriptor* newsletter, distributed last week to the "admin" reflector. He said this monthly email briefing on ATSC activities will report on upcoming events and ongoing work. He encouraged specialist group chairs to use the *Descriptor* as a vehicle to alert ATSC contributors to current activities.
- Mr. Richer noted that Lisa Hester (ATSC) has changed the format of the meetings calendar on the ATSC Web site. He said this is part of a larger effort to improve communications facilities within the ATSC, the latest component being integration of updated calendar listings into member's Outlook applications.
- Mr. Richer announced that ATSC will be presenting a day-long seminar on ACAP in Washington, D.C. on December 7. Complete details can be found on the ATSC Web site. He said the event is timed to coincide with an in-place meeting of T3/S2.
- Mr. Richer reminded ATSC members and participants of the ATSC Patent Policy, which can be downloaded from the Web site. He added that an Intellectual Property AHG of the Board is working on an update to this document, which could be completed as early as next week.
- Finally, Mr. Richer reminded the committee of the confidentiality policy of the ATSC. He noted there appears to be some information—and in fact some disinformation—that has found its way to the press regarding work within T3/S6. He said this is very unfortunate and does not help the process. He reminded T3 members to communicate within their companies that internal ATSC documents are confidential. For the record, the text relating to confidentially, contained in the attendance sign-in sheet, is given below:

“IMPORTANT: This is a meeting of a subgroup of the Advanced Television Systems Committee. By opening this meeting to non members, the ATSC in no way intends to relinquish its rights to privacy for its business. The ATSC, therefore, insists that public disclosure pertaining to this meeting emanate only from, and be authorized only by, the Chairperson or President of the ATSC, or the chairperson of the technology group that is meeting (or to which this subgroup belongs). By remaining in attendance at this meeting, you, on behalf of yourself and your organization, agree to refrain from either directly or indirectly engaging in publicity pertaining to the business transacted at this or any other meeting of the ATSC unless authorized by one of the foregoing persons. Attendees unwilling to agree to these terms will be asked to leave the meeting.”

6. BRIEF REPORTS ON ACTIONS FROM THE PREVIOUS MEETING

Chairman Justus called attention to the action items developed at the June 10 meeting of T3:

- 1) ATSC staff to accept the changes detailed in PS/T3-596r1, with the wording change agreed to at today's meeting, and to issue a letter ballot to the membership.
Completed
- 2) Charles Einolf to report to T3/S9 that the specialist group is directed by T3 to provide a recommendation on how to facilitate extensibility in VSB enhancements.
Completed
- 3) Jerry Whitaker to modify the Candidate Standard posting of CS/75 on the ATSC Web site to reflect a new CS period ending 30 September 2004.
Completed
- 4) Jerry Whitaker to modify the Candidate Standard posting of CS/T3-613 on the ATSC Web site to reflect a new CS period ending 23 September 2004.
Completed
- 5) Richard Chernock to lead an AHG within T3/S6 to work on ways to designate one audio service as the "primary" audio service. Persons interested in contributing to this work are asked for contact Mr. Chernock.
Completed
- 6) John Henderson and T3/S10 to consider the recommendation from S8-4 that Annex E of A/53C be revised or deleted because it is out of date and inconsistent with other ATSC documents.
Completed
- 7) Mark Eyer to forward WD/70A to Jerry Whitaker for issuance of a letter ballot to the membership on the update of A/70, "Conditional Access System for Terrestrial Broadcast."
Completed
- 8) Jerry Whitaker to modify the Candidate Standard posting of CS/T3-606 to reflect a new CS period ending 30 September 2004.
Completed
- 9) Jerry Whitaker to modify the Candidate Standard posting of CS/T3-608 to reflect a new CS period ending 30 September 2004.
Completed
- 10) Jerry Whitaker to modify the Candidate Standard posting of CS/T3/609 to reflect a new CS period ending 30 September 2004.
Completed
- 11) Mark Eyer to issue a call for participation in suggested T3/S8 work relating to ENG communications, and to report back to T3 at the September 30 meeting.
Completed
- 12) Mark Eyer and T3/S8 to consider the Sony "small screen device service_type" and "MPEG-2 use in the robust mode" proposals as part of its normal comment resolution process for CS/T3-608 and CS/T3-609.
Completed

- 13) Charles Einolf to forward to Jerry Whitaker T3S9-222r11, "Working Draft Recommended Practice: Design of Synchronized Multiple Transmitter Networks," for the issuance of a letter ballot to T3 for consideration as a Proposed Recommended Practice.
Completed
- 14) ATSC staff to issue a letter ballot to the membership on PS/110C following integration of the normative reference issue identified and accepted at today's meeting.
Completed
- 15) Mike Dolan to forward S13-229r8, "Software Download Data Service," to Jerry Whitaker for posting as a Candidate Standard for a period of time ending 30 September 2004.
Completed
- 16) Jerry Whitaker to add to the T3 agenda for the September 23 meeting the following item:
"T3 goals for 2005."
Completed
- 17) Craig Todd to lead an AHG on Audio Program Elements to look at the issues identified in IS-308 and to begin the development of a Working Draft Recommended Practice. Mr. Todd to post a note to the T3 reflector announcing the formation of the AHG and asking interested persons to participate. [Carried forward from the 2 April 2004 meeting.]
Closed. It was observed that elements of this work have been taken up in SMPTE, and this action item can therefore be considered "closed."
- 18) Sam Narasimhan to post to the T3 reflector for comment details of an MPEG liaison issue relating to a Philips proposal to build a layered coding architecture. [Carried forward from the 2 April 2004 meeting.]
Closed. Sam Narasimhan (Motorola) requested that this item be closed, since Philips has expressed an interest in making a presentation on the topic at a future date. Chairman Justus agreed.

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

7.3.1 Major Channel Number Inquiry

Mr. Richer said he has received an inquiry from USDTV regarding whether ATSC was currently, or planned to act as a clearing house for major channel numbers. Mr. Richer suggested that the Architectural Team be asked to take a look at this issue and report back with recommendations. He pointed out that that nothing in the FCC rules prohibits ATSC from logging major channel numbers in the Code Points Registry. Chairman Justus asked the A Team to look into this issue and report back at the November 16 meeting.

7.3.2 MPAA Request to ATSC for Standardization of Content Protection SRM Carriage

Chairman Justus reported he received a request from MPAA relating to possible standardization of content protection system renewability message (SRM) carriage (see **Attachment 4**). He said the correspondence was forwarded to Mark Eyer, chair of T3/S8 for consideration about the best course of action for ATSC. Mr. Eyer noted that an AHG has been formed within T3/S8 (S8-8) to begin work on this project—if and when directed to do so. Chairman Justus asked S8-8 to consider how to address this request, without any specific direction from T3, and to report back to T3 at the next meeting. Chairman Justus said he would report the potential activity in this area to the Board of Directors at their next meeting.

In response to questions, Mr. Eyer outlined the technical issues relating to SRM carriage, specifically how it might impact transport stream issues. He said the output of the work could be as simple as a recommendation on how to convey the SRM information. Mr. Eyer emphasized that S8-8 would not address any policy issues, but rather be narrowly scoped to address transport elements, if any.

8. REPORT OF THE SPECIALIST GROUP ON PSIP METADATA COMMUNICATION, T3/S1 (TOUFIC MOUBARAK)

Toufic Moubarak (Decisionmark), vice-chair of T3/S1, provided an update on the work of the specialist group (**Attachment 5**). He noted that Graham Jones (NAB), chair of T3/S1, was out of the country this week.

8.1 Status Report

Mr. Moubarak recognized the many contributions of T3/S1 members to the work of developing and refining the PMCP Candidate Standard. He reviewed the major points of PMCP development, specifically:

- PMCP Candidate Standard CS/75 was approved by T3 in December 2003, with 6-month CS period, which was subsequently extended an additional 3 months in June 2004.
- A total of 45 meetings and teleconferences were held during the development of this specification.
- T3/S1 members have resolved all issues identified in CS/75, and reviewed and addressed all comments received during the CS period.
- At least ten companies have undertaken trial implementations of PMCP, with implementation feedback considered in the revision of CS/75.
- The latest revision of the specification, CS/75r1, was posted to T3 reflector on September 9 for review (**Attachment 6**). CS/75r2, now submitted for approval by T3, contains editorial updates only.
- At its last meeting, T3/S1 unanimously recommended that T3 raise CS/75r2 to Proposed Standard, after which the document would go to a vote of the full ATSC membership.

Mr. Moubarak emphasized that this standard is urgently needed in the marketplace; he said manufacturers are waiting for PMCP to be finalized. He went on to outline ongoing work of T3/S1, which includes:

- Possible schema extensions for E-VSB, DCC, and ACAP metadata.
- Implementation Guidelines for PMCP.
- Coordination with SMPTE on additional work in the realm of program metadata communication.

Mr. Moubarak reported that work is now underway in SMPTE S.22 on a protocol for traffic-to-automation system communication, led by Chris Lennon (Encoda Systems). Mr. Moubarak said T3/S1 recommends that ATSC formally send the final PMCP document to the SMPTE S.22 Chair and Traffic Communication AHG chair with the strong suggestion that the new SMPTE protocol be harmonized with PMCP. Bill Miller (SMPTE) endorsed this proposal. Mr. Jones was given an action item to work with ATSC staff to communicate with SMPTE on this issue.

8.2 Proposal to Raise CS/75r2 to Proposed Standard

Mr. Moubarak reported the unanimous agreement of T3/S1 to recommend that T3 elevate CS/75r2 to Proposed Standard. He noted that a port number assignment remains to be finalized, and that the document will be updated as appropriate. Chairman Justus recognized the **motion** from the vice-chair of T3/S1 to elevate CS/75r2 to Proposed Standard. Adam Goldberg (Sharp) asked for clarification of the motion. Mr. Moubarak clarified that he was requesting—with the consensus of T3/S1—that CS/75r2 be elevated to Proposed Standard at this meeting. In response to a question, Mr. Richer outlined the options available; specifically, either to raise the document to Proposed Standard at this meeting, or a T3 letter ballot to raise the document to Proposed Standard.

Andy Scott (NCTA) said he felt that a letter ballot was more appropriate, since it would provide for a considered comment period. Sterling Davis (Cox) and Art Allison (NAB) disagreed, saying there is an urgent need for this specification in the marketplace, and that action today was appropriate. Mr. Miller agreed to the time-urgency of document. Mr. Goldberg argued that a T3 ballot stage is appropriate since it provides for feedback on technical issues, which could then be integrated into the document as needed. He pointed out that a membership vote does not provide for direct integration of substantive comments. Merrill Weiss (Tribune) argued that timeliness is important; however he recognized that there has been no T3 letter ballot to date on PMCP. Jeff Krauss (NCTA) said that he understood and—in general—agreed with the arguments for a letter ballot, but noted that the specialists involved in this work are satisfied with the document, which he said should be taken into consideration.

Mr. Allison pointed out that considerable implementation experience has already been received and integrated into the specification, and that CS/75 has been available publicly for nine months. Ren McMann (CBS) noted that adequate advance notice was given to T3 members, and he suggested that the committee go ahead and vote on the motion. Wayne Luplow (Zenith) noted that the chair of T3 some months ago sent a note to all ATSC members calling attention to this document, and all other CS documents, and specifically asking for feedback to the appropriate specialists groups.

Chairman Justus recognized the points raised by Mr. Scott, Mr. Goldberg, and others; however, he said T3/S1 has clearly done its homework on this specification. He said that—given the stated urgency of the industry for completion of this specification and the recent adoption by the FCC of PSIP requirements—he was inclined to accept the T3/S1 recommendation. Chairman Justus called the question. It was **approved** on a show of hands.

8.3 Presentation on Proposed DMCP extension to PMCP (Minsik Park)

Minsik Park (ETRI) provided a presentation on proposed PMCP extensions for data broadcasting (**Attachment 7**). He pointed out that the current version of PMCP does not support data broadcasting. Therefore, he argued, a new interface specification should be developed to support this service based on PMCP. He said such an extension would guarantee interoperability among equipments of digital data broadcasting emissions systems. He went on to review the general

requirements—including announcement, signaling, and encapsulation—and the system reference model.

Mr. Moubarak said he has reviewed this proposal, and added that it is currently on its list of work items for future development by T3/S1. He noted that this item—and others currently on the projects list—can be taken up now that PMCP has been released to a membership ballot.

Chairman Justus observed the consensus of T3 that T3/S1 should proceed to consider this proposal as it works on extensions to PMCP.

The meeting broke for lunch at 11:25 a.m.

The meeting resumed at 12:10 p.m.

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

William Miller (ABC), chair of T3/S6, reported on activities within the specialist group (**Attachment 8**).

9.1 Request for Extension of Candidate Standard Period for CS/T3-614A

Mr. Miller reported the consensus of T3/S6 to extend the Candidate Standard period for CS/T3-614A (**Attachment 9**) until November 17. He said the committee believes that additional time for implementation experience is appropriate. Chairman Justus recognized the **motion** of the chair of T3/S6 to extend the CS period for CS/T3-614A to 17 November 2004. Mr. Einolf questioned the time frame for the extension, specifically whether sufficient time was being allocated for gathering implementation experience. Craig Todd (Dolby) said Dolby is continuing to work on implementations. Mr. Miller pointed out that CS/T3-614 has been a Candidate Standard since April 2004. Chairman Justus called the question. It was **approved** on a show of hands.

9.2 Incorporation of CS/T3-613r1 into WD/52B; Request for Elevation of WD/52B to CS Status

Mr. Miller briefed the committee on WD/52B, which is a revision of A/52A with CS/T3-613r1 incorporated as Annex E. (**Attachment 10**). Mr. Miller reported the consensus recommendation of T3/S6 that WD/52Br3, including CS/T3-613r1, be elevated to Candidate Standard for a period of time ending 17 November 2004. Chairman Justus recognized the **motion** of the chair of T3/S6. Mr. Todd called attention to proposed changes intended to signal primary audio, and modifications to the language descriptor; he asked T3 to review the document during the CS period and provide input to T3/S6 as appropriate. Chairman Justus called the motion. It was **approved** on a show of hands.

9.3 Analysis of Video Codec Test Data

Mr. Miller updated the committee on the status of the comparative evaluations of the two candidate video codecs: AVC (H.264) and VC-1 (Windows Media 9). He said that NIST and CRC have both done extensive analysis of the raw data. He noted that the performance of the two codecs is close—but that one codec tends to perform better than the other under certain circumstances. He said T3/S6 is continuing to study and discuss the results.

Ann Marie Rohaly (Microsoft) cautioned Mr. Miller and the group in general that strictly speaking, it is inappropriate to state that one codec performs better than another unless the data analysis shows there is a statistically significant difference in performance. She added that the

full statistical analysis was not yet complete; therefore any such statement on codec performance was premature.

Mr. Miller reported that bit stream verification has been requested and the details of this process are being discussed by the specialist group. Because there is some concern regarding the proprietary nature of certain bit streams, an independent third party is planning to review the streams for conformance to the test plan. He said Sarnoff Labs is expected to do this work within the next few weeks.

Mr. Miller called attention to the “Eye Chart”, which is a running tally of sentiment within T3/S6 on codec selection (**Attachment 11**). He emphasized this is not a vote, but rather an expression of preference by committee members. He went on to explain recent changes made to the chart and the reasons behind those changes. Based on this straw pole, he said, there appears to be a consensus emerging to adopt AVC. Mr. Miller said the “Eye Chart” will be updated as he receives input from T3/S6 members.

Regarding the possibility of recommending to T3 acceptance of both AVC and VC-1, Mr. Miller reported that opinions within the specialist group are divided. He encouraged additional input from members.

Craig Tanner (Sharp) suggested a formal liaison request to the DVD Forum and Blu-Ray Group asking that they explain their codec decisions and the reasons for those decisions. Mr. Eyer pointed out the technical issues that would be imposed on the system should more than one codec be selected. C. B. Patel (Samsung) urged T3/S6 to make a decision based strictly on technology. Chairman Justus observed that these are good points and he encouraged members to pursue them within T3/S6.

Mr. Miller pointed out that the use of certain tools on the part of the coding teams could account for some of the performance differences observed. Mr. Tanner suggested that comparative viewing of the sequences could be useful to understand the impact of such tools. While acknowledging the value of this proposal, Mr. Miller said the resources to accomplish such viewings are not available.

Mr. Narasimhan noted that the cable industry has an interest in the results of the T3/S6 video codec tests and he inquired when the results might be released. Mr. Miller and Mr. Richer agreed that release to SCTE was possible, and provisions exist for that. Mr. Richer said a formal request from SCTE would help move this forward. Mr. Miller added that EBU has also requested access to the test results.

Chairman Justus and Mr. Richer thanked CRC, NIST, and Sarnoff Labs for their support of the T3/S6 work.

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

Mark Eyer (Sony), chair of T3/S8, outlined current work of the specialist group (**Attachment 12**).

10.1 Status Report

Mr. Eyer reviewed the current work in T3/S8 ad hoc groups, specifically:

- **S8-1 – E-VSB Transport.** This AHG recently completed revisions to CS_T3-606, CS/T3-608, and CS/T3-609, which were accepted by T3/S8, resulting in the publication of “A” revisions of the three documents on the ATSC Web site. Mr. Eyer said the AHG is considering a review of buffer model issues.

- **S8-3 – Advanced EPG.** This AHG is reforming and will restart work shortly with Jim Theberge (EAT-TV) as the chair. Mr. Eyer noted that revision of the AHG scope is under consideration. He encouraged interested members to participate in the work.
- **S8-4 – Standards Maintenance.** This AHG continues to develop updates for A/53C and A/65B. A total of 38 issues have been identified, with 28 closed as of this date.
- **S8-6 – Content Identification.** This AHG is tracking MPEG developments. One suggested action is the addition of a note to ISO 13818-1:2000 FPDAM4:

“Note 3: For interoperability amongst metadata applications that use these metadata_application_format values, it is recommended that the content_reference_id_flag be set to ‘1’ and the content_time_base_indicator be set to ‘00’.”

Mr. Eyer called attention to T3/S8-554, a draft liaison statement—suggested to be from the chair of T3 or the ATSC President—to Motorola or ANSI L3.1 or ISO JTC1/SC29 (see **Attachment 13**). Chairman Justus recommended that the liaison come from the ATSC President. Regarding who the liaison should be sent to, Mike Dolan (TBT) recommended deferring this discussion until the A-Team report. The committee agreed to this approach. The MPEG/ATSC liaison situation was discussed briefly by the committee, with Mr. Narasimhan pointing out that updates are needed in MPEG documentation regarding the ATSC representative. Mr. Narasimhan took an action item to forward details relating to official MPEG liaison to ATSC staff, which will submit any necessary corrections.

- **S8-7 – ENG Communications.** Mr. Eyer reported that he issued a “call for participation” in this AHG and is currently looking for a chair. He said this work cannot proceed unless someone steps forward to lead the work. Mr. Richer noted that there seems to be an interest in ATSC taking on other areas of ENG standardization currently being discussed in SBE. If that is the case, he said, we might want to rethink how this work is undertaken.
- **S8-8 – System Renewability Messages.** Mr. Eyer noted the request from MPAA to examine possible transport of revocations lists for copy protection technologies, which could encompass some form of container for private data. He said a “call for participation” was issued to specialist groups T3/S8, T3/S2, and T3/S13. Mr. Eyer encouraged interested persons to contact him and join the AHG group. Mr. Allison questioned whether the current scope of T3/S8 would support this work. Mr. Eyer explained that S8-8 simply planned to investigate what, if anything, is required to respond to the MPAA request—i.e., is a Standard needed, a Recommended Practice, or just a White Paper—after which T3/S8 would report back to T3 with their recommendations. Mr. Richer commented that we need some technical input to make an informed decision on how to proceed. Mr. Narasimhan agreed, pointing out that the input from MPAA was quite specific and that a technical analysis was appropriate. Mr. Dolan agreed that clarity was needed on the new work item process in general. Mr. Tanner commented that we need to understand the reasoning and planned use behind this request before devising a solution. Mr. Eyer summarized that he would ask MPAA to give a presentation to S8-8 explaining the request and the issues involved as the first order of business. He said T3/S8 would provide a report on the technical issues involved at the next T3 meeting.

10.2 Recommendation regarding Candidate Standard Status of CS/T3-606, 608, 609

Mr. Eyer reported that updates have been made to the E-VSB-related Candidate Standards CS/T3-606, CS/T3-608, and CS/T3-609. These changes include:

- Describing a `low_delay` mode and allowing MPEG Still Pictures data in the robust stream
- Increasing the audio buffer size for E-AC-3 streams
- Defining a `service_type 0x06` “Unassociated/Small Screen Service”
- Requiring virtual channels in the robust stream that carry the same program schedule as a channel in the Main stream to have the same major/minor channel number, even when not “linked” (tightly time-synchronized)

Mr. Eyer reported that T3/S8 recommends extension of the Candidate Standard status of CS/T3-606A, CS/T3-608A, and CS/T3-609A from September 30 to 17 November 2004. Mr. Eyer said there are various reasons for the proposed extensions, including recent changes made in the “A” revisions and the issues that could result if these documents get ahead of related E-VSB documents.

Mr. Eyer **moved** that the Candidate Standard periods for CS/T3-606A, CS/T3-608A, and CS/T3-609A be extended to 17 November 2004. The motion was **approved** on a show of hands.

Links to the current versions of these Candidate Standards are given below:

- CS/T3-606A: http://www.atsc.org/standards/cs_documents/cs_t3-606revA.pdf
- CS/T3/608A: http://www.atsc.org/standards/cs_documents/cs_t3-608revA.pdf
- CS/T3-609A: http://www.atsc.org/standards/cs_documents/cs_t3-609revA.pdf

11. REPORT OF THE SPECIALIST GROUP ON ACAP, T3/S2 (CRAIG SMITHPETERS)

Craig Smithpeters (Cox Communications) reported on activities within T3/S2 (**Attachment 14**).

11.1 Status Report

Mr. Smithpeters reviewed the status of the ACAP specification, CS/101A. He explained the corrigenda status and pointed out that essentially all outstanding items have been closed. (The most recent version of the ACAP document is given in **Attachment 15**.) He reported the unanimous agreement of T3/S2 to recommend to T3 the issuance of a letter ballot on this document.

Mr. Smithpeters **moved** to authorize a T3 letter ballot of T3S2-006rev8 as a Proposed Standard. Mr. Allison suggested a six week ballot rather than the usual four week ballot because of the length and complexity of the document. Mr. Smithpeters agreed to this suggestion as a friendly amendment. **Second** by Mr. Scott. Chairman Justus called the question; it was **approved** on a show of hands.

11.2 Future Work

Mr. Smithpeters reviewed the near-term activities for T3/S2, specifically:

- Await ballot results and address comments from the T3 ballot via teleconferences and in-place meeting scheduled for early December.
- T3/S2 members to participate in the ACAP seminar scheduled for December 7 in Washington, D.C.

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

Charles Einolf (UPN), chair of T3/S9, reported on current activities within the specialist group (**Attachment 16**).

12.1 Status Report

Mr. Einolf reviewed recent activities within the T3/S9 ad-hoc groups, specifically:

- **S9-1 Multiple Transmitter Networks.** Standard A/110, “Synchronization Standard for Distributed Transmission,” has been approved by the ATSC membership and is now available on the ATSC web site. The companion Recommended Practice—A/111, “Design of Synchronized Multiple Transmitter Networks”—has also been approved by the membership and will be published shortly.
- **S9-2 E-VSB Implementation Guidelines.** Work continues to develop this document, led by Wayne Bretl (Zenith). The current draft can be downloaded from the atscmembers.org web site: <http://www.atscmembers.org/sg/S9/s9-2/documents/T3S9-2-014r5.doc>. Interested members of T3 and T3/S6 are encouraged to participate in the development of this implementation guide. Mr. Tanner noted that Section 10.4.1 of the ATSC Bylaws requires notification of the membership of the development of new standards and recommended practices. He suggested that such notification should be made in a timely manner so that any input can be integrated early-on in the process. Chairman Justus asked Mr. Bretl to keep this provision in mind as the draft document is developed and, when the IG has reached a certain level of maturity, to deliver the Working Draft to ATSC staff for distribution to the full membership for comment.
- **S9-3 Signaling Extensions and Enhancements.** The work item for this AHG, led by Michael Epstein¹ (Philips), is to devise a method for signaling extensions and enhancements to Annex D of A/53. Requirements are currently under development. Mr. Einolf noted that S9-3 is addressing the issue of reserving a bit(s) for signaling extensibility, which could affect current implementations of E-VSB.

12.2 VSB Enhancement Proposals

Mr. Einolf briefed T3 on the status of two VSB enhancement proposals that the specialist group has received:

- Philips-ETRI enhanced-X-VSB
- Samsung supplementary reference sequence

Mr. Einolf said that additional information has been requested from the proponents of these systems, and that no subgroups or work schedules have yet been established. He also conveyed a request from T3/S9 to T3 that interested parties become involved in considering the two proposals. Furthermore, he said, the Chair of T3 is requested by T3/S9 to ask the ATSC Board for any guidance it might have regarding work by T3/S9 on these items.

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

John Henderson (Hitachi), chair of T3/S10, briefed the committee on the work of the specialist group.

¹ Mr. Einolf reported that James Wendorf (Philips) has stepped down as chair of S9-3 because of work commitments.

13.1 Status Report

Mr. Henderson reported the consensus recommendation of T3/S10 that Annex E of A/53C, an informative annex, be deleted from the next revision of the standard. He went on to suggest how that might be accomplished. Mr. Henderson noted that since S8-4 is already working on revisions of A/53, his recommendation is that S8-4 take up the issue. Mr. Miller urged that with the deletion of Annex E, the annexes not be renumbered. He suggested replacing Annex E with a note indicating that this annex has been withdrawn and that readers are referred to document A/74 for information on receiver performance. This approach was accepted by the committee. Mr. Whitaker took an action item to inform S8-4 of this decision.

Regarding the ongoing work of documenting “interesting sites” resulting from the work on A/74, Mr. Henderson reported that T3/S10 has determined some basic guidelines for moving forward. He noted the existing archive of captured data and said that more captures will be useful, but they need to be vetted. Mr. Henderson invited expressions of interest in working on this project. He said T3/S10 will try to augment the existing A/74 library, following appropriate consideration.

Victor Tawil (MSTV) reported that the A/74 capture data has been distributed to nine companies so far, at no charge except for shipping. Requests should be directed to captures@atsc.org. Robert Blanchard (Sony) said his company found the captures very useful and he thanked MSTV for taking on this task.

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

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

14.1 Recommendation to Elevate CS/97 to Proposed Standard

Mr. Dolan updated the committee on the status of CS/97, “Software Data Download Service.” He reported that:

- No comments were received by T3/S13 during the Candidate Standard phase.
- No input on the specification has been received from SCTE DVS so far; however it is expected based on recent liaison.
- Test bit stream have been made available.
- Manufacturers participating in trial tests have not reported any problems.
- T3/S13 has no further edits to the document.

Mr. Dolan, on behalf of T3/S13, **moved** that CS/97 be elevated to Proposed Standard. Mr. Richer suggested that T3 might want to give editorial privilege to Mr. Dolan depending on the nature of the SCTE comments. The committee accepted this provision. Chairman Justus called the question; it was **approved** on a show of hands.

Mr. Dolan reported that T3/S13 recommends CEA be made aware of this document and its current status. Chairman Justus took an action item to make CE manufacturers generally aware of PS/97.

14.2 Harmonization of A/9x with ACAP

Mr. Dolan reminded the committee that work was previously suspended on revisions/updates to A/9x standards pending completion of the software download task and stabilization of the ACAP

transport specification. Mr. Dolan reported the recommendation from T3/S13 that the specialist group:

- Complete the A/90 errata (A/90“A”) and resolve usage rules for AIT and DST
- Harmonize A/95 with the ACAP Object Carousel
- Review consistency with current A/53 and A/65 concepts

Chairman Justus observed the consensus of T3/S13 to proceed in this manner. Mr. Dolan said T3/S13 will begin to develop a work plan for these items at its next meeting.

15. OTHER BUSINESS

15.1 A-Team

Mr. Dolan pointed out there is no formal process for liaison to MPEG, but proposed that one is needed for matters relating to ATSC work. He noted that input to the MPEG process has been provided through the help of Mr. Narasimhan, but that no formal process exists for developing an ATSC position on specific questions. Mr. Dolan reported the consensus of the Architecture Team that ATSC develop a formal process for liaison to MPEG.

Mr. Miller noted that ATSC is entitled to a Class A liaison with MPEG.. Mr. Allison said there should be some consideration of how an ATSC position would be developed. Mr. Richer agreed, suggesting that an informal group be formed to explore this issue, consisting of Mr. Richer, Mr. Miller, Mr. Allison, Mr. Dolan, and Mr. Narasimhan. The committee accepted this approach.

15.2 Liaison Reports

15.2.1 MPEG

Mr. Narasimhan noted three MPEG items of interest to ATSC:

- Development and approval of H.264 High Profile, with three categories (4:2:0, 4:2:2, and 4:4:4).
- A U.S. National Body meeting will be held next week at which time input in the form of ballot comments is expected to be developed on Amendment 4, which signals ISAN/VISAN information.
- A corrigenda is being developed to a portion of the Systems standard regarding time stamp coding for MPEG-2 field pictures to correct an error in the document.

In response to a request from Mr. Bretl and Mr. Miller, Chairman Justus asked Mr. Narasimhan to prepare a more detailed report on the MPEG activities for distribution to T3.

15.2.2 ITU

Mr. Richer noted that in ITU-R there are a number of recommendations that incorporate ATSC standards. He reported that a group of ATSC experts has been formed to review those documents and to provide input to the U.S. Delegation regarding updates as necessary for the 2005 spring round of meetings of Study Group 6. Mr. Richer said he is also exploring with ITU-R the possibility of working out an arrangement similar to what SMPTE has with ITU-R whereby ATSC documents could be referenced directly. Mr. Richer invited interested persons to contact him.

15.3 T3 Goals for 2005

Chairman Justus said that over the next couple of months, T3 will be developing 2005 goals for consideration by the ATSC Board. He encouraged members with comments to forward them to him and Mr. Richer.

16. SCHEDULE OF NEXT T3 MEETING

The next meeting of the ATSC Technology Group on Distribution will be held on 16 November 2004.

17. ADJOURNMENT

There being no further business before the committee, the meeting was adjourned at 2:11 p.m. EDT.

Action Items Developed at this Meeting

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

- 1) Mike Dolan and the Architecture Team to consider logging major channel numbers in the Code Points Registry, and to report back with recommendations at the November 16 meeting.
- 2) Mark Eyer and S8-8 to consider how to address the MPAA request relating to possible standardization of content protection SRM carriage, without any specific direction from T3, and to report back to T3 at the next meeting.
- 3) Chairman Justus to report the potential activity in the area of content protection SRM carriage to the Board of Directors at their next meeting.
- 4) Graham Jones and ATSC staff to send the final PMCP document to the SMPTE S.22 Chair and Traffic Communication AHG chair with the strong suggestion that the new SMPTE protocol for traffic-to-automation system communication be harmonized with PMCP.
- 5) ATSC staff to issue a letter ballot to the ATSC membership on Proposed Standard CS/75r2.
- 6) Graham Jones and T3/S1 to consider the ETRI proposal for extensions to PMCP to support data broadcasting.
- 7) Sam Narasimhan to forward details relating to official MPEG liaison policies to ATSC staff, which will submit any necessary corrections.
- 8) Craig Smithpeters to forward to ATSC staff T3S2-006rev8 for issuance of a 6-week T3 ballot as a Proposed Standard.
- 9) Wayne Bretl to keep the notification provisions of Section 10.4.1 of the ATSC Bylaws in mind as the draft E-VSB IG is developed and, when the document has reached a certain level of maturity, to deliver the Working Draft to ATSC staff for distribution to the full membership for comment.
- 10) Chairman Justus to ask the ATSC Board for any guidance it might have regarding work by T3/S9 on new VSB enhancement proposals.
- 11) Jerry Whitaker to inform S8-4 of the T3 decision to delete Annex E of A/53 in the next revision of the standard and to replace it with a note indicating that this annex has been withdrawn and that readers were referred to document A/74 for information on receiver performance.
- 12) Chairman Justus, through CEA, to make consumer electronics manufacturers generally aware of PS/97.
- 13) Mark Richer, Bill Miller, Art Allison, Mike Dolan, and Sam Narasimhan to explore a formal liaison process for MPEG activities.
- 14) Sam Narasimhan to prepare a detailed report on the current MPEG activities for distribution to T3.

Attachments

Attachment 1. Attendance List (* denotes attending by telephone)

http://www.atscmembers.org/sg/T3/2004_09_23/documents/Attachment_1_9-23-04_attendance.doc

Attachment 2. Draft Agenda

http://www.atscmembers.org/sg/T3/2004_09_23/documents/Attachment_2_draft_t3_agenda_09_23_04_r5.doc

Attachment 3. Draft Minutes from T3 Meeting of 10 June 2004

http://www.atscmembers.org/sg/T3/2004_09_23/documents/Attachment_3_T3-618r4.doc

Attachment 4. MPAA Correspondence Regarding SRMs

http://www.atscmembers.org/sg/T3/2004_09_23/documents/Attachment_4_040722%20MPAA%20ex%20parte%20SRMs%20CoverLtr.pdf

See also

http://www.atscmembers.org/sg/T3/2004_09_23/documents/Attachment_4_040722%20MPAA%20RevocationPaper.pdf

See also

http://www.atscmembers.org/sg/T3/2004_09_23/documents/Attachment_4_040722%20MPAA%20RevocationSlide.pdf

Attachment 5. T3/S1 Status Report

http://www.atscmembers.org/sg/T3/2004_09_23/documents/Attachment_5_S1_T3%20report%209-23-04r1.ppt

Attachment 6. CS/75, Programming Metadata Communication Protocol, Revisions

http://www.atscmembers.org/sg/T3/2004_09_23/documents/Attachment_6_CS_75r1.doc

See also

http://www.atscmembers.org/sg/T3/2004_09_23/documents/Attachment_6_CS_75r2.doc

Attachment 7. ETRI PMCP Extension Proposal

http://www.atscmembers.org/sg/T3/2004_09_23/documents/Attachment_7_S1_PMCP_extension.ppt

Attachment 8. T3/S6 Status Report

http://www.atscmembers.org/sg/T3/2004_09_23/documents/Attachment_8_T3S6_status_2004-09-23.ppt

Attachment 9. CS/T3-614 Revision A

http://www.atscmembers.org/sg/T3/2004_09_23/documents/Attachment_9_CS_T3-614revA_redline.doc

Attachment 10. WD/52Br3, Incorporating CS/T3-613r1

http://www.atscmembers.org/sg/T3/2004_09_23/documents/Attachment_10_WD_52Br3.doc

Attachment 11. T3/S6 Codec Preference Straw Poll

http://www.atscmembers.org/sg/T3/2004_09_23/documents/Attachment_11_T3S6-232r29.xls

Attachment 12. T3/S8 Status Report

http://www.atscmembers.org/sg/T3/2004_09_23/documents/Attachment_12_T3S8-558_S8_Status_Report_9-04.ppt

Attachment 13. T3S8-554, MPEG Liaison

http://www.atscmembers.org/sg/T3/2004_09_23/documents/Attachment_13_T3S8-554_MPEG_Liaison.doc

Attachment 14. T3/S2 Status Report

http://www.atscmembers.org/sg/T3/2004_09_23/documents/Attachment_14_T3S2-042.ppt

Attachment 15. T3S2-006 Revision 8, ACAP

http://www.atscmembers.org/sg/T3/2004_09_23/documents/Attachment_15_t3s2-006r8-acap.pdf

Attachment 16. T3/S9 Status Report

http://www.atscmembers.org/sg/T3/2004_09_23/documents/Attachment_16_T3S9%20Status%20September%202004%20Rev%201.ppt

Attachment 17. T3/S13 Status Report

http://www.atscmembers.org/sg/T3/2004_09_23/documents/Attachment_17_S13-259R1-Status.ppt