

Minutes, Technology Group on Distribution 8 October 2002

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 160 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

8 October 2002, 10:00 a.m. – 4:00 p.m.
National Association of Broadcasters, Washington, D.C.

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. He asked each person to identify himself or herself. The attendance list is given in **Attachment 1**.

2. APPROVAL OF PROPOSED AGENDA

Chairman Justus asked for consideration of the draft agenda (**Attachment 2**). William Miller (ABC) suggested the addition of an item to the agenda relating to required changes to A/53B. This item was assigned as item 8.5. No additional changes were suggested and the agenda was accepted as modified.

3. APPROVAL OF THE DRAFT MINUTES OF AUGUST 14, 2002 MEETING

Chairman Justus called member's attention to the draft Minutes of the 14 August 2002 T3 meeting, which were distributed to the T3 reflector on September 24 (**Attachment 3**). Secretary Jerry Whitaker (ATSC) stated that no corrections had been identified prior to today's meeting. No changes were requested by committee members and the draft Minutes were accepted as submitted.

Bernard Lechner (consultant) suggested that, in the future, the draft minutes document should be included in the T3 meeting folder on the ATSC Web site (Member's Only area) for the current meeting. This suggestion was accepted by Chairman Justus and Mr. Whitaker stated that, in the future, this would be done.

4. OPENING REMARKS

Chairman Justus observed that T3 has made considerable progress in moving important documents forward since the last meeting, and he thanked all participants for their hard work.

5. COMMENTS BY THE PRESIDENT (MARK RICHER)

Mark Richer (ATSC) reported on current activities within the organization. He noted the approval of DASE-1 by the membership, saying this was a major accomplishment for the organization. Still, he said, a number of issues remain to be resolved before the Standard can be published, including certain normative references. Mr. Richer added that the ATSC Board of Directors is working to address issues relating to compliance testing.

Mr. Richer reported that the ATSC Guidelines for Administrative Procedures document has been updated and expanded to address, among other items, the document revision process. He said this work was done with input from the T3 Architectural Team. The draft Guidelines will be considered by the Board at its next meeting.

Other items covered in Mr. Richer's briefing included the following:

- ATSC plans to begin offering sponsorships for the organization's newsletter, *The Standard*. He said the next issue is due to come out shortly. One additional issue is scheduled for 2002.

- A seminar on DTV is planned for October in Mexico in conjunction with the ATSC Forum
- A seminar on DTV is planned for October in Toronto in conjunction with CDTV
- A session on DTV is in the planning stages for the CES show in Las Vegas
- The Tech Retreat, scheduled for February of next year, will include a day-long seminar on data broadcasting and DASE, organized by ATSC.

Mr. Richer reported that ATSC has secured the domains of DASE.ORG and PSIP.ORG. He said the DASE resource is being produced with the help of an outside organization. The PSIP.ORG site is currently in the early stages of development and will be expanded as resources permit.

5.1 Status of Ballots

Mr. Richer reported on the status of current ballots; specifically, for ATSC ballots:

- DASE-1: approved September 16, 2002, 24 yes, 2 no; editorial privilege approved, 25 yes, 2 no.
- ARM: approved August 16, 2002, 24 yes, 1 no; editorial privilege approved, 24 yes, 2 no.

For T3 ballots:

- A/53B Amendment 2: approved August 14, 2002, 13 yes, 1 no; editorial privilege approved 13 yes, 2 no.
- Transport Stream File System: approved August 15, 2002, 14 yes, 1 no; editorial privilege approved, 14 yes, 2 no.

5.2 Other

There were no other items to report

6. BRIEF REPORTS ON ACTIONS FROM THE PREVIOUS MEETING

The following action items resulted from the T3 meeting of August 14, 2002.

- 1) Miller to post a "call for participants" note to the T3 reflector, and other ATSC reflectors as appropriate, to facilitate the work of T3/S6. *Completed*
- 2) Eyer to report to T3/S8 that the specialist group is directed to address comments received during the T3 ballot on Amendment 2 to A/53B (Annex C), if any. *Completed*
- 3) Eyer to report to T3/S8 that the specialist group is directed to analyze and address comments received during the T3 ballot of the Proposed Standard "Content Identification and Labeling for ATSC Transport" and to report back at the next T3 meeting on progress made. *Completed*
- 4) Richer to report to the Board of Directors the recommendation of T3 that TV Anytime be added to the list of approved organizations to which ATSC documents may normatively reference. *Completed*
- 5) Pizzi to provide certain background information to Richer regarding TV Anytime for the purpose of facilitating Action Item 4. *Completed*
- 6) Dolan to report to T3/S13 that the specialist group has been directed to analyze and address comments received during the T3 ballot of the Transport Stream File System document, if any, and to report back to T3 at its next meeting. *Completed*

- 7) Adams to forward to ATSC staff the DASE-1 suite of documents, as approved at this meeting, for the purpose of a vote of the full membership of ATSC as a Proposed Standard. *Completed*
- 8) Mr. Richer to inform CableLabs that T3 strongly endorses the concept of DASE/OCAP harmonization, that he lead the discussions with Dr. Green and, and that he to work with the DASE/OCAP team to put together a work plan on how harmonization goals can be achieved. *Completed*
- 9) Richer to respond to correspondence from Prof. Reimers of DVB regarding DASE/OCAP harmonization, as appropriate. *Completed*
- 10) Adams to report to T3/S17 that it is the consensus of T3 that the Interaction Channel Option (ICO) and GEM Compatibility Option (GCO) to DASE-1 should be given top priority within the specialist group. *Completed*
- 11) .Dolan to lead the initial organizational meeting of the Architectural Team, and to report that T3 has accepted the scope of work as submitted. *Completed*

7. NEW WORK ITEMS FOR DISCUSSION

7.1 Assigned by Board of Directors

Mr. Richer reported there were no new work items assigned by the Board of Directors.

7.2 Implementation Subcommittee

Art Allison (NAB), Chair of IS, reported there were no work items to discuss. He did, however, call attention to a new IS Finding relating to a method for PSIP communication among various systems. He said the finding includes a recommendation for standardization work, which he said IS will be pursuing through the appropriate channels.

7.3 Other

There were no other work items.

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

William Miller (ABC), the chair of T3/S6, reported on current activities within the specialist group, which held its most recent meeting yesterday.

8.1 Approve New Scope

Mr. Miller reported that the specialists group has developed a new scope statement, which he requested that T3 accept. The draft T3/S6 scope statement is given in **Attachment 4**. Mr. Miller **moved** acceptance by T3 of the scope statement. **Second** by Mr. Allison. The motion was **approved** on a voice vote.

8.2 Approve New Work Statement

Mr. Miller reported that the specialists group has agreed to a new work statement, which he asked that T3 accept. The draft T3/S6 work statement is given in **Attachment 5**. Mr. Miller **moved** that T3 accept the work statement. **Second** by Adam Goldberg (Sharp). Discussion followed on timelines given in the statement, and whether additional flexibility would be appropriate. Mr. Richer pointed out that a work statement should include dates, and that it should be revised periodically. Chairman Justus suggested certain changes to the document intended to clarify the specialists group timelines, which were accepted by Mr. Miller and Mr. Goldberg. The final version of the document is given in **Attachment 6**.

Mike Dolan (consultant) and Glenn Adams (XFSI) identified areas of potential overlap with the work by other specialists groups, specifically with regard to streaming media and still

images. Mr. Richer suggested that coordination among the specialists groups through the Architecture Team would be a good way of moving forward.

Chairman Justus called the question. The motion was **approved** on a voice vote.

8.3 Approve RFI on Video and Audio Compression for Robust Mode

Mr. Miller reported that T3/S6 is developing a Request for Information in response to a directive from T3 to investigate alternate modes of audio and video compression for possible use in the robust transmission mode being considered by T3/S9. He said a draft document has been developed, and that it should be ready for consideration by T3 at the December 2 meeting. Mr. Miller invited participation in this work.

8.4 Still Image Issues

Mr. Miller asked for direction from T3 regarding whether T3/S6 should consider still image transmission in its future work. Mr. Adams pointed out that DASE-1 supports the delivery of a series of images, including the PNG and JPEG still image formats. He added that DASE-2 provides additional still image capabilities. Mr. Adams said that, should T3/S6 take on such work, coordination with T3/S17 would be important. Graham Jones (NAB) reminded the group that the focus of the RFI, per direction by the Board, is on the proposed robust transmission mode. As such, he suggested, it is separate from the range of applications envisions by DASE. Craig Todd (Dolby) proposed that the issue might be given to the Application Subcommittee for consideration and recommendation. Mr. Richer offered that, although AS could address this question, the issue on the table is simply whether T3/S6 should consider still coding systems. The decision of how to ultimately proceed would, he pointed out, be a separate discussion.

Mr. Miller, responding to the comments received, suggested that any detailed discussion should be held for later in the process. He explained that all he is asking about now is whether still images should be considered for the robust mode. Mr. Richer suggested that T3/S6 consider still images within the domain of its work, coordinating with T3/S17 and the Architecture Team as appropriate. Chairman Justus observed the consensus of T3 to proceed along those lines.

8.5 A/53B vbv_delay Issue

Mr. Miller reported that an error has been identified in Section 5.1.5 of A/53B Annex A regarding the vbv_delay statement. With the issuance of A/53 with Amendment 1, dated 16 March 2000, the statement $\text{vbv_delay} \leq 45000$ was changed to $\text{vbv_delay} = 45000$. This change was apparently the result of an editorial and/or formatting error; it was not specified in Amendment 1.

Mr. Miller reported the consensus of T3/S6 to recommend to T3 the following actions to correct this situation: First, to instruct ATSC staff to put back the missing “less-than-or-equal” sign immediately, since the current document is clearly wrong and there is no indication that this change was intentional. Second, Sam Narasimhan (Motorola) and Adam Goldberg (Sharp) have been asked to research this issue and report back to T3/S6 on the original reasons for the constraint in Section 5.1.5, including the Table 2 constraint. Based on the history uncovered, the specialists group may consider recommending that the constraint be removed or modified.

Mr. Richer outlined the process planned for fixing this error, which includes an administrative editorial correction. He said a note calling attention to the correction could also be posted to the administrative reflector. Craig Tanner (Sharp) suggested that the change to A/53B include an informational footnote stating that this correction was made without a change in the document version number. Chairman Justus observed the consensus of T3 to proceed in the proposed manner.

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

Mark Eyer (Sony) reported on current activities in the specialist group (**Attachment 7**). He said T3/S6 has developed a revised scope statement, which will be discussed—and presumably finalized—at the next T3/S8 meeting. Following agreement by the specialists group, the scope statement will be brought to T3 for final approval.

9.1 Request to Elevate Working Draft A/65B to Proposed Standard

Mr. Eyer reported that A/65B incorporating Amendments 1A, 2, and 3 is now posted on the ATSC Web site. With regard to the membership ballot on Amendments 1A and 2, he said that 72 ballot comments were received from 5 organizations. Many were editorial, but he explained that some would require formal disposition.

Mr. Eyer reminded the committee that he and Mr. Whitaker were given an action item at the June 25, 2002, T3 meeting to produce a Working Draft A/65B which incorporated the changes specified in Amendments 1A, 2, and 3. A copy of such a document was developed and distributed to the T3 reflector on September 16 (**Attachment 8**). However, in view of the number and types of comments received during the membership ballots, Mr. Eyer proposed that T3 direct T3/S8 to form an ad-hoc group to consider the comments received and to produce a final Working Draft A/65B prior to the December T3 meeting.

Mr. Eyer **moved** that T3/S8 be directed to develop a Working Draft A/65B and to, in the process, address comments received during the membership ballots of Amendments 1A and 2 to A/65A, and to deliver said document to T3 in advance of its December 2 meeting for consideration of elevating the document to the status of Proposed Standard. **Second** by Merrill Weiss (Tribune). Richard Chernock (Triveni) suggested that, given the Thanksgiving holiday and various industry events, more than the usual 2 week review timeframe would be appropriate; he suggested at least three weeks. Chairman Justus called the question. It was **approved** on a voice vote.

9.2 Ballot Comment Resolution Status: Amendment 2 to A/53B

Mr. Eyer reported on work to resolve comments received during the T3 ballot of Amendment 2 to A/53B (Annex C). He said 48 comments were received from 3 organizations.

Mr. Eyer observed that other annexes in A/53B also need updating, and that certain issues have been identified relating to the use of “will,” dates of cited references, style consistency, and other items. Mr. Allison suggested that T3 should direct the other specialists groups to consider these items. Mr. Eyer **moved** that T3 direct the appropriate specialists groups to consider revisions and/or updates to A/53B annexes to conform with the changes and updates made to Annex C. **Second** by Mr. Allison. The motion was **approved** on a voice vote.

Mr. Eyer called attention to another issue identified during the Amendment 2 ballot comment resolution work relating to Emergency Audio. Mr. Richer suggested that ATSC should address, in a more general form, how to provide emergency alert information. Mr. Eyer **moved** that T3 direct T3/S6 to address the problem of the Emergency Audio track in A/53B Annex B and to consider removing the receiver requirement therein to state that Emergency Audio should be in the main audio track when present. **Second** by Joe Rodolico (Panasonic). The motion was **approved** on a voice vote.

Following up on the emergency alert issue, Mr. Richer suggested that the Application Subcommittee be asked to analyze the requirements and offer suggestions on how ATSC might be involved. Chairman Justus observed the consensus of T3 to proceed in this manner.

9.3 Ballot Comment Resolution Status: Content Identification and Labeling (Replacement for A/57)

Mr. Eyer reported on work to resolve comments received during the T3 ballot of the Proposed Standard "Content Identification and Labeling for ATSC Transport." He said 30 comments were received from 8 organizations, some of which were substantive. He added that the resolution group had successfully addressed all but one comment.

Because some of the changes made to the document were substantive, Mr. Eyer said a re-ballot is planned. He reported that an updated Proposed Standard will be circulated to T3/S8 for comment, with the goal of bringing the finalized document back to T3 at the December meeting.

9.3.1 Liaison with ISO

Mr. Eyer reported that a liaison letter to the convener of the ISO working group responsible for ISAN (and V-ISAN) has been sent which calls attention to the apparent restriction in the assignment of an ISAN value to Works (and thus services) not containing a video element, such as audio-only, data-only, or audio-data services contemplated by ATSC. He explained the letter was framed as a question, since the easiest way to resolve this issue is to have a ruling that the prohibition was not intended.

Mr. Miller reported that some progress has been made to address this issue, although additional work is necessary. Mr. Weiss expanded upon the specific coordination issues involved.

9.4 Status of Ad-Hoc Group Activities

9.4.1 A/54 Update

Mr. Eyer reported that progress continues to be made on updating the transport-related sections of A/54. He said the AHG, chaired by Mr. Chernock, has completed its work on Section 4 (Introduction and Overview) and is continuing to work on Section 8 (MPEG Transport Issues). He estimated that about 50 percent of the work on Section 8 has been completed.

It is the goal of the AHG to complete this project before the end of the year. A preliminary version of the Working Draft A/54A was posted to the T3 reflector by Mr. Whitaker on September 30 for informational purposes (**Attachment 9**).

Chairman Justus asked John Henderson (Hitachi), chair of T3/S10, to provide an update on the work of his specialists group on the A/54 revision. Mr. Henderson reported that work continues on Section 10 dealing with receiving systems. He said the group is meeting on a regular basis via teleconference, and that T3/S10 expects to complete its work prior to year-end.

9.4.2 Carriage of Metadata

Mr. Eyer reported that the AHG on Generalized Transport of Metadata, chaired by Richard Chernock (IBM) is in the process of preparing a working document. Specific attention has been given to terminology and timelines. He said much of this work depends on a draft MPEG-2 amendment, which is now working its way through the MPEG document cycle. He said the AHG plans to complete a Working Draft by late winter.

9.4.3 Advanced EPG

Mr. Eyer reported that work continues on the Advanced EPG functionality effort, led by Gomer Thomas (Triveni). He said that all basic issues have been studied in some depth, with consensus reached on the general architecture of the proposed system. He said consensus also has been achieved on many other issues, although significant details still remain to be resolved and considerable drafting work remains to be done. The group has also identified certain issues that involve coordination with the work of T3/S13.

. Mr. Richer reported that T3's formal request to add TV-Anytime to the list of approved ATSC Normative Reference organizations has been delivered to the Board of Directors and will be considered for approval at the next Board meeting.

9.4.4 Transport for Robust Transmission

Mr. Eyer reported that the AHG on Transport Issues for Robust Transport, chaired by Mr. Allison, continues to hold regular meetings. He said the group has circulated a proposal for discussion, which has raised some new issues with regard to service structure and signaling. He said the AHG has initiated a delay for reconsideration and reevaluation of assumptions and approach. He added that the group is developing an outline to capture transport design and specification issues.

Mr. Allison, expanding upon Mr. Eyer's assessment, stated that the AHG is facing considerable challenges, and that it may be necessary to come back to T3/S8 and T3 with a proposed change of Requirements for the work. Mr. Dolan suggested that it might be worthwhile to divide the work of the AHG into more than one effort. Mr. Eyer said this issue will be discussed at the next T3/S8 meeting and, if necessary, he will ask T3 for clarification.

10. REPORT OF THE SPECIALIST GROUP ON RF TRANSMISSION, T3/S9 (JOHN TOLLEFSON)

John Tollefson (PBS) provided an overview of the work underway in the specialist group (**Attachment 10**).

10.1 Status Report

Mr. Tollefson reported there are no substantive changes since the last T3 meeting with regard to the NxtWave/Zenith or Philips proposals. He added that Broadcom has supplied equipment for testing the enhanced training sequence system.

Mr. Tollefson said laboratory testing of the NxtWave/Zenith, Philips, and Broadcom systems has been completed. In addition, field testing in Washington D.C. of the NxtWave/Zenith and Philips systems is now complete. This work includes outdoor, indoor (bowtie), portable (dipole), and pedestrian configurations. Mr. Tollefson said the Broadcom field tests in Washington are now underway. He added that testing in New Haven, CT, should begin shortly on all three systems. The target completion date for all testing is early November.

10.2 Move Advance Distributed Transmission Standard for Ballot

Mr. Tollefson reported the consensus of T3/S9 (from the August 28, 2002, meeting) to forward to T3 the Working Draft Transmitter Synchronization Standard with a recommendation that it be sent to ballot (**Attachment 11**). He said the document has been fully vetted by T3/S9 and an ad hoc group established for that purpose. Mr. Tollefson reported that T3/S9 had no preference between the draft being considered for elevation to Candidate Standard or Proposed Standard.

Mr. Tollefson **moved** that the Working Draft Transmitter Synchronization Standard (T3/S9-131) be sent to a four week ballot of T3. At the suggestion of Chairman Justus, the committee discussed the appropriate route to follow—either to ballot the document for elevation to Proposed Standard or Candidate Standard. Views were offered from several committee members, including Mr. Weiss, the principal architect of the document. Mr. Goldberg suggested that the CS status could make it easier to integrate substantive changes in the document, and lead to faster final acceptance by the ATSC membership. Mr. Adams agreed, saying the CS process proved to be quite useful in the development of DASE-1.

To help clarify the issues involved, Mr. Weiss outlined the scope of the Working Draft document, which is strictly to facilitate the synchronization of DTV transmitter emissions. He said there are no FCC or interference issues involved that would impact what ATSC might do.

Chairman Justus observed the consensus of T3 to send T3/S9-131 forward as a Candidate Standard, and Mr. Tollefson agreed to modify his motion accordingly. Restating the motion, then, Mr. Tollefson **moved** that the Working Draft Transmitter Synchronization Standard—T3/S9-131, with appropriate editorial changes—be sent to a four week ballot of T3 as a Candidate Standard for a period ending July 31, 2003. **Second** by Mr. Miller. The motion was **approved** on a voice vote.

10.3 Schedule

Mr. Tollefson provided an update on the T3/S9 work schedule, which he said has been impacted by testing delays. Specific milestones include the following:

- Lab test analysis expected by end of October 2002
- Field testing report analysis expected by end of December 2002
- Recommendations to T3 on standard likely in early 2003

The next meeting of T3/S9 is set for October 16, 2002.

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

Mike Dolan (TerraByte Technology), chair of T3/S13, briefed the committee on the work of the specialist group (**Attachment 12**).

11.1 Robust Mode Progress

Mr. Dolan reported that joint S8/S13 teleconferences are being held to address data broadcast issues relating to the proposed robust transmission mode being considered by T3/S9. He said that no data-specific issues have yet been identified.

11.2 TSFS Ballot Comment Report

Mr. Dolan said that the T3 ballot on the Transport Stream File System Proposed Standard closed on August 15, and that 130 comments from 4 companies were received. He said comments appear to be editorial and/or clarification issues. Mr. Dolan said he expected to have comments addressed and a redlined document by available by the December 2 T3 meeting

11.3 ARM Status

Mr. Dolan said that the ATSC ballot on the Application Reference Model Standard closed on August 16 and that comments were received. He said the comments appear to be editorial and/or clarifications and are in the hands of ATSC staff. He said, though, that one comment—plus feedback from one implementer—indicates the URI and content type labeling:

- Has some inconsistent language
- Is under-specified for the desired level of interoperability
- Does not alone meet the need for labeling large numbers of modules

Mr. Dolan outlined the solution to these issues proposed by T3/S13, specifically:

- Proponent to propose text that addresses these issues
- T3/S13 to review and reach consensus on specific language

Mr. Dolan said he plans to discuss with T3 members and ATSC staff how best to capture the text changes in a document. Options include:

- Change A/94 and rebalot at the T3 and ATSC levels
- Create an A/94 Amendment/Corrigendum
- Issue an external report

Chairman Justus asked Mr. Dolan to work with ATSC staff on how to move forward, and to come back to T3 at the next meeting with a specific recommendation.

11.4 A/90 Errata

Mr. Dolan reported on plans for a revision of A/90, saying there are 43 noted errata, clarifications, and enhancements identified so far, as detailed in document S13-105. He said that most of these items are editorial but that they will require significant redline of A/90 to implement. He said items needing further study have been assigned to T3/S13 members to propose specific text.

12. REPORT OF THE SPECIALIST GROUP ON SATELLITE BROADCAST, T3/S14-A (DIPAK SHAH)

Dipak Shah (DirecTV) was unable to attend today's meeting. Chairman Justus asked Sam Narasimhan (Motorola) to provide an update on the work of T3/S14A.

12.1 1. Review Working Draft Standard

Mr. Narasimhan reported that T3/S14A has developed a Working Draft Direct-to-Home Satellite Standard (**Attachment 13**). This document was provided for informational purposes to T3 on September 29, with the request that comments be submitted to Mr. Shah and T3/S14A. Mr. Narasimhan said it is the goal of the specialists group to have a final version of the Working Draft completed in time for consideration at the December T3 meeting.

Mr. Narasimhan went on to outline the basic architecture of the proposed system and some of the specific elements. He encouraged T3 members to review the document and provide specific feedback to T3/S14A.

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

Edwin Heredia (Microsoft), chair of T3/S16 provided an update on activities within the specialist group (**Attachment 14**).

13.1 Report of Recent Activities

Mr. Heredia reported that T3/S16 has been meeting periodically to define a series of core protocols that will enable ATSC receivers to communicate with remote servers, establish secure channels, and exchange data for transactions. For the specifications, he said the group has adopted the conventional OSI layered protocol model to construct and define required functionality. These layers consist of:

- The physical communications layer
- The data link layer
- The network layer
- The transport layer
- The application layer (including presentation, session, and application layers of the OSI model)

Mr. Heredia explained that, for each of the layers, the group is selecting necessary protocols to enable transactions. In particular:

- No specific protocols are mandated at the physical or data link layer. Instead, the draft specification only suggests the use of popular access protocol suites for DSL, cable modems, wireless LANs, etc.
- At the network and transport layers, the draft specification requires support for TCP/IP and some of the related protocols such as ICMP, and possibly DNS, DHCP, and IGMP. Mr. Heredia said the last three have been tabled for discussion to evaluate their importance and to decide on the required support level.

- At the application layer, the draft specification requires support for HTTP 1.1 and optionally for FTP. He said additional protocols tabled for discussion include different flavors of session-based protocols.

For establishing secure communication channels, the draft specification requires support for TLS, strongly recommends support for SSL v3, and suggests support for IPSec. Deployment of these protocols requires strict use of certificates and certificate revocation lists, for which the draft specification also defines a functional profile.

Mr. Heredia reported that T3/S16 has been having joint meetings with T3/S17 to channel the expertise of both groups and to ensure that when DASE supports interaction channels, the T3/S16 specification will match their requirements. He added that the specialists group hopes to bring a Working Draft document to T3 for consideration early next year.

14. REPORT OF THE SPECIALIST GROUP ON DASE, T3/S17 (GLENN ADAMS)

Glenn Adams (XFSI), chair of T3/S17, provided an update on the work of the specialists group.

14.1 Status Report

Mr. Adams outlined the issues that need to be resolved prior to publication of DASE-1, which focus on certain normative references. He went on to provide an estimate of the probable timelines for finalization.

Mr. Adams said that 18 comments were received during the membership ballot of DASE-1, and he requested that T3 assign T3/S17 the task of reviewing and resolving editorial comments received during the ballot for the purpose of preparing a final document for publishing on the ATSC Web site. Chairman Justus so directed.

Mr. Adams reported that progress is being made on DASE-2, with regular meetings addressing a range of issues.

14.2 DASE Harmonization

Regarding DASE/MHP harmonization, Mr. Adams provided an update on work underway to address certain technical issues. He said good progress has been made. He then asked Mr. Richer to provide an update on the DASE/OCAP harmonization work.

Mr. Richer reported that the initial response from CableLabs after elevation of DASE-1 by T3 at the August 14 meeting to Proposed Standard was not positive. He said, however, that subsequent discussions with Dr. Green of CableLabs have been more encouraging. Mr. Richer said it would be helpful in this effort to have T3 reaffirm that harmonization of DASE/OCAP is important and that T3 is eager to see this process move forward. Mr. Richer suggested that, should T3 provide such reassurance, the ATSC Board of Directors could then be asked to affirm said position.

Subsequent discussion focused on the appropriate route for moving forward. Mr. Allison suggested it should be T3's position that—for North America at least—there be a single common-receiver standard. He said there should be no constraints on this position. Mr. Tanner suggested that no further clarification is necessary, and that the support of T3 for DASE/OCAP harmonization did not need to be repeated. This position was echoed by Mr. Henderson and Mr. Adams. John Courtney (Sun) disagreed, saying that a statement of support for DASE/OCAP harmonization could only help the situation. Mr. Weiss proposed that a reaffirmation of ATSC interest in DASE/OCAP harmonization by T3 could be fashioned to express the desire and necessity to move forward quickly on this work.

Chairman Justus observed the consensus of T3 that the harmonization work of DASE and OCAP should continue. He said, clearly, T3 has expressed an interest in seeing this work move

forward. He observed that there is a window of possibility, but that such a window will not remain open forever. He proposed the following resolution:

“T3 urges Mr. Richer to continue to seek means of harmonizing OCAP and DASE and related standards, and to urge the ATSC Board of Directors to consider allocating the necessary resources to pursue this goal as expeditiously as possible.”

This resolution was **approved** unanimously by T3.

Mr. Heredia suggested that, going forward, it would be important for ATSC to establish liaison with CableLabs so that documents can be freely exchanged. He said this ability will be more important as the work moves ahead.

Chairman Justus summarized the discussion, saying that everything is on the table for the sake of harmonization.

15. OTHER BUSINESS

15.1 Liaison Reports

Mr. Allison, the ATSC liaison to SCTE, reported that SCTE has approved DVS-161, which he identified as an important step forward for ATSC and SCTE. He said some comments were received during the SCTE ballot, but they did not appear to pose any major obstacle to publication of the standard.

15.2 Architectural Team

Mr. Dolan briefed the committee on preliminary work of the Architectural Team. He said the group has provided support for ATSC staff activities in a variety of instances.

Mr. Dolan reported that work has progressed on the Code Points Registry, identifying one new collision and clarifying the Registry table. Chairman Justus asked Mr. Dolan and the Architecture Team to analyze the collision issue, which involves the MGT table_type ATSC LTST and SCTE AEIT, and report back with a recommendation to T3.

Following some discussion on the status of the Code Points Registry, Chairman Justus directed Mr. Whitaker to follow up with SCTE and other SDOs, as appropriate, on the Code Points Registry project and to report back to T3 at the next meeting on progress made.

Mr. Dolan called attention to the robust mode work being conducted in several specialists groups and suggested that some coordination might be in order. Mr. Richer agreed and asked the Architecture Team address the following question: “How should the enhancements relating to robust mode transmission be structured; e.g., as a single standard or revisions to existing standards?” Mr. Dolan said he would take the question back to the group.

15.2.1 Normative Reference Document Types

Mr. Richer called member’s attention to requirements contained in the ATSC Copyright and Reference policy that obligates the Board to establish a list of organizations that may be normatively referenced in ATSC Standards. He said the policy also states that the Technology Group will for each organization determine which document types can be referenced. Mr. Richer said this work needs to be done. Chairman Justus asked the Architecture Team to consider this issue and report back to at the next T3 meeting with a plan for moving forward.

16. SCHEDULE OF NEXT T3 MEETINGS

The next meeting of the Technology Group on Distribution will be held on December 2, 2002, 1:00 p.m. to 6:00 p.m., in the Los Angeles area. A tentative schedule of ATSC meetings for 2003 is given in **Attachment 16**.

17. ADJOURNMENT

There being no further business, the meeting was adjourned at 3:30 p.m.

Action Items Developed at this Meeting

- 1) Miller to report to T3/S6 the consensus of T3 that the specialists group may consider still images for the robust mode to be within the scope of its work on robust mode issues, and that T3/S6 is directed to coordinate with T3/S17 and the Architecture Team as appropriate.
- 2) ATSC staff to correct the error identified in Section 5.1.5 of A/53B regarding the `vbv_delay` statement, to include a footnote calling attention to the correction, and to post the corrected document on the Standards page of the ATSC Web site.
- 3) Eyer to report that T3/S8 is directed to develop a Working Draft A/65B and to, in the process, address comments received during the membership ballots of Amendments 1A and 2 to A/65A, and to deliver said document to T3 in advance of its December 2 meeting for consideration of approval to the status of Proposed Standard.
- 4) All specialists groups are directed to consider whether any revisions and/or updates are necessary to A/53B annexes to keep in line with the changes and updates made to Annex C.
- 5) Miller to report to T3/S6 that T3 has directed the specialists group to address the issue of the Emergency Audio track in A/53B Annex B and to consider removing the receiver requirement therein to state that Emergency Audio should be in the main audio track when present.
- 6) Richer to report to the Applications Subcommittee the consensus recommendation of T3 that AS consider future directions and uses of emergency alert services.
- 7) Weiss to forward to ATSC staff the Working Draft Transmitter Synchronization Standard—T3/S9-131, with appropriate editorial changes—for the issuance of a four week ballot of T3 as a Candidate Standard for a period ending July 31, 2003.
- 8) Dolan to work with ATSC staff to resolve editorial issues relating to the Application Reference Model Standard for the purpose of posting the document on the ATSC Web site after certain normative reference issues are resolved.
- 9) Dolan to work with ATSC staff to address certain substantive issues identified during the ARM ballot comment review process and to bring back to T3 at the December 2, 2002, meeting a plan for moving forward.
- 10) Adams to inform T3/S17 that it has been charged with resolving editorial comments received during the membership ballot of DASE-1 for the purpose of preparing a final document for publishing on the ATSC Web site.
- 11) Richer to report to the Board of Directors the following resolution, agreed to unanimously by T3:

“T3 urges Mr. Richer to continue to seek means of harmonizing OCAP and DASE and related standards, and to urge the ATSC Board of Directors to consider allocating the necessary resources to pursue this goal as expeditiously as possible.”
- 12) Dolan to report to the Architecture Team the directive of T3 to analyze a recently identified code points collision and to report back with a recommendation to T3 at its next meeting.
- 13) Dolan to report to the Architecture Team the direction from T3 to address the following question: “How should the enhancements relating to robust mode

transmission be structured; e.g., as a single standard or revisions to existing standards?”

- 14) Whitaker to follow up with SCTE and other SDOs on the Code Points Registry project and report back to T3 at the next meeting on progress made.
- 15) Dolan to report to the Architecture Team the direction of T3 to analyze certain requirements contained in the ATSC Normative Reference policy and to report back to at the next T3 meeting with recommendations going forward.

Attachments

Attachment 1: Attendance List

http://www.atsc.org/sg/T3/2002_10_08/documents/Attachment_1_t3_attendance.doc

Attachment 2: Draft Agenda

http://www.atsc.org/sg/T3/2002_10_08/documents/Attachment_2_draft_t3_agenda_10_8_02.doc

Attachment 3: Draft Minutes of August 14 Meeting

http://www.atsc.org/sg/T3/2002_10_08/documents/Attachment_3_t3_585_draft_t3_minutes_8_14_02.doc

Attachment 4: Draft T3/S6 Scope Statement

http://www.atsc.org/sg/T3/2002_10_08/documents/Attachment_4_T3S6_200_Scope.doc

Attachment 5: Draft T3/S6 Work Statement

http://www.atsc.org/sg/T3/2002_10_08/documents/Attachment_5_T3S6_201_Work_Statement.doc

Attachment 6: Revised T3/S6 Work Statement

http://www.atsc.org/sg/T3/2002_10_08/documents/Attachment_6_T3S6_201_Work_Statement_final.doc

Attachment 7: T3/S8 Status Report

http://www.atsc.org/sg/T3/2002_10_08/documents/Attachment_7_S8_Status_Report_10-8.ppt

Attachment 8: Working Draft A/65B

http://www.atsc.org/sg/T3/2002_10_08/documents/Attachment_8_A65B-Draft-clean.pdf

Attachment 9: Preliminary Working Draft A/54A

http://www.atsc.org/sg/T3/2002_10_08/documents/Attachment_9_T3_586_A_54A_working_draft_rev0.doc

Attachment 10: T3/S9 Status Report

http://www.atsc.org/sg/T3/2002_10_08/documents/Attachment_10_T3S9_Report_10_08_02.ppt

Attachment 11: Working Draft Transmitter Synchronization Standard

http://www.atsc.org/sg/T3/2002_10_08/documents/Attachment_11_Draft_Trans_Sync02_09_30.pdf

Attachment 12: T3/S13 Status Report

http://www.atsc.org/sg/T3/2002_10_08/documents/Attachment_12_S13_204R0_Status.ppt

Attachment 13: T3/S14A Working Draft DTH Satellite Standard

http://www.atsc.org/sg/T3/2002_10_08/documents/Attachment_13_S14A_100R7.pdf

Attachment 14: T3/S16 Status Report

http://www.atsc.org/sg/T3/2002_10_08/documents/Attachment_14_T3_S16_status_report_oct-7-02.doc

Attachment 15: Proposed 2003 Meeting

http://www.atsc.org/sg/T3/2002_10_08/documents/Attachment_15_Proposed_2003_Meetings.xls