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# **Minutes, Technology Group on Distribution 9 February 2005**

**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)

9 February 2005, 10:00 a.m. until 4:00 p.m. EST  
National Association of Broadcasters  
1771 N Street, N.W. Washington, D.C.

### 1. WELCOME, INTRODUCTIONS, AND DETERMINATION OF QUORUM

Chairman Bill Miller (SMPTE) 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 reminded all participants of the confidentiality requirements of this meeting and the ATSC Patent Policy.

Chairman Miller 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 Miller asked for consideration of the draft agenda, distributed to the T3 reflector on January 28 with an update posted on February 4 (**Attachment 2**). Mike Dolan (TBT) requested that item 16 (Architecture Team) be moved up to follow item 13. This change was accepted by the committee and the draft agenda was approved as modified.

### 3. APPROVAL OF THE DRAFT MINUTES OF THE 16 NOVEMBER 2004 MEETING

Chairman Miller called members attention to the draft Minutes of the November 16 T3 meeting, distributed to the T3 reflector on February 1 (**Attachment 3**). Mr. Whitaker reported that a spelling correction had been identified by Mr. Dolan in Section 9. Additional spelling corrections were identified by Chairman Miller and Graham Jones (NAB). These changes were accepted by the committee. No further changes were requested and the document was approved as amended.

### 4. OPENING REMARKS

Chairman Miller noted that this is his first meeting as the Chairman of T3. He thanked the Board of Directors for the opportunity to serve ATSC in this capacity. He said he was honored and humbled to serve as the Chair of T3. He also announced his selection of T3 Vice-Chairs:

- Richard Chernock (Triveni), who continues in this role
- John Henderson (Hitachi), who will continue to serve as the Chair of T3/S10

Chairman Miller said Mr. Chernock and Mr. Henderson will assume specific roles in T3 activities, which will be announced at a later date. He also recognized Ralph Justus (CEA) for his many years of service to ATSC as the Chairman of T3.

### 5. COMMENTS BY THE PRESIDENT (MARK RICHER)

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

#### 5.1 Status of Ballots

Mr. Whitaker reported on the status of T3 ballots, specifically:

- **CS/52Br2**, “Digital Audio Compression (AC-3, E-AC-3), Revision B.” This ballot was issued on 14 December 2004 and closed on 11 January 2005. It was approved: 18 yes, 0 no, 5 abstain; editorial privilege 19 yes, 1 no, 3 abstain.
- **CS/101A**, “Advanced Common Application Platform (ACAP).” This six week ballot was issued on 13 October 2004 and closed on 24 November 2004. It was approved: 12 yes, 1 no, 9 abstain; editorial privilege 14 yes, 1 no, 7 abstain.

For membership ballots,

- **Board of Directors.** The ballot to elect four members and a chair of the ATSC Board of Directors was issued on 8 November 2004 and closed on 6 December 2004. The following Directors were elected: Robert Rast (Chair), Ed Barrett, Wayne Luplow, Michael McEwen, and Brian Smith.
- **2005 Budget.** The ballot on the ATSC 2005 budget was issued on 10 December 2004 and closed on 6 January 2005. It was approved: 40 yes, 0 no, 1 abstain.
- **PS/97**, “Software Data Download Service.” This ballot was issued 19 October 2004 and closed on 16 November 2004. It was approved: 28 yes, 0 no, 10 abstain; editorial privilege 27 yes, 2 no, 9 abstain.

## 5.2 2005 Goals

Mr. Richer reported that the ATSC Board of Directors approved the 2005 Goals at its January 19 meeting (**Attachment 4**). The Goals document includes a proposal to rename the “Technology Group on Distribution (T3)” to the “Technology and Standards Group (TSG).” The following specific goals were approved by the Board:

- Consider specialist group structure and reorganize as appropriate
- Revised PMCP with data broadcast/ACAP support to PS by May 9 (T3/S1)
- Guide to PMCP to PRP by September 21 (T3/S1)
- Revise A/53 to support E-AC3 by May 9 (T3/S6)
- Advance ENG to CS by December 14 (T3/S3)
- Advanced video coding to CS or PS by May 9 (T3/S6)
- E-VSB transport specifications to PS by May 9 (T3/S8)
- VSB signaling extensions to PS by May 9 (T3/S9)
- E-VSB Implementation Guidelines to PRP by September 21 (T3/S9)
- Revise A/90 and A/95, including harmonization with ACAP, by September 21 (T3/S13)
- E-VSB and new codec caption carriage to CS by May 9 (T3/S13)
- Conduct 5-year reviews of the following documents: 1) A/49 Ghost Canceling Reference Signal for NTSC, 2) A/63 Coding for 25/50 Hz Video, 3) A/80 Modulation and Coding Requirements for Digital TV (DTV) Applications over Satellite, and 4) A/64A Transmission Measurement and Compliance for Digital Television.

Discussion followed on specific elements of the 2005 Goals. Chairman Miller observed the consensus of the committee to support the proposal to rename T3 to TSG; he said he will report that feedback to the Board at their next meeting.

## 5.3 Other

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

- Mr. Richer announced that ATSC and NAB will combine forces to present a DTV technology demonstration area at the upcoming NAB Convention in Las Vegas (April 16 to 21). Nearly a dozen organizations have signed-up so far to participate in event. He said planning is still underway and that additional positions remain open for the technology demonstration area, which will be outside the South Hall on the upper level.
- Mr. Richer called attention to the ATSC Annual Meeting, set for May 10 from 8:00 a.m. until 5:00 p.m. at the Hilton Crystal City in Arlington, VA. He noted that the next T3 and AS meetings are clustered around the annual meeting—a day before and a day after, respectively. All meetings will be held at the hotel. He encouraged members to RSVP for all of the meetings directly from the ATSC website at: [http://www.atsc.org/technicalmeetings\\_may.html](http://www.atsc.org/technicalmeetings_may.html). He said planning continues for the event, and that sponsorship opportunities remain.

## 6. BRIEF REPORTS ON ACTIONS FROM THE PREVIOUS MEETING

Chairman Miller called attention to the action items developed at the November 16 meeting of T3:

- 1) The Chairs of T3/S6, T3/S8, and T3/13 review the previous discussions on closed caption carriage, together with interested parties from those three groups, review the old decisions for applicability today, including development of a document that states the reasons for those decisions, and then determine a technical recommendation for consideration by T3.  
*Completed.* This work has begun in S13-1. Mr. Dolan gave a report on where the work currently stands.
- 2) Graham Jones to lead an AHG on PMCP Extensions, consisting of Mike Dolan, Craig Smithpeters, and other interested parties, and bring back recommendations to T3 as appropriate.  
*Completed.* Mr. Jones reported that an initial meeting was held after the last T3 meeting and that additional work has been undertaken
- 3) Jerry Whitaker to update the posted version of CS/T3-614A to show a CS period ending 10 February 2005.  
*Completed.*
- 4) Bill Miller to forward to Jerry Whitaker CS/52Br1 with appropriate updates for the issuance of a T3 ballot as a Proposed Standard.  
*Completed.*
- 5) Bob Rast, Bill Miller, Wendy Aylsworth, and Craig Tanner to draft a document summarizing the one-versus-more-than-one new codec issue for T3 consideration.  
*Carried forward.*
- 6) Dane Ericksen to chair a new Specialist Group on ENG, T3/S3, the first task of which is to come back with a proposed Scope, a clear statement of need, and a work plan.  
*Closed.* The first meeting of T3/S3 was held on February 4 and a draft Scope was agreed to. The specialist group is currently drafting a Work Plan, which will be provided to T3 prior to the May 9 meeting.
- 7) Jerry Whitaker to post an appropriate note to the T3 and “admin” reflectors calling attention to the T3/S3 work.  
*Completed.*

- 8) Jim Williams to lead an AHG of T3 focusing on SRM issues. The AHG is to develop a Requirements Document, with input from appropriate organizations and individuals, and to develop a Work Statement, keeping in mind the T3/S8 output previously given.

*Carried forward.* The AHG has been formed with participation from a wide range of individuals and firms. Mr. Williams is working to set up a first meeting date. Mr. Richer encouraged the AHG to focus on what, if anything, ATSC should do in this area. The AHG will make this recommendation to T3 which will forward its own recommendation to the Board.

- 9) Jerry Whitaker to assist Jim Williams in setting up the necessary resources for the SRM-AHG, including a reflector and Web space as required.

*Completed.*

- 10) Jerry Whitaker to update the posted versions of CS/T3-606A, CS/T3-608A, and CS/T3-609A to show a CS period ending 10 February 2005.

*Completed.*

- 11) Craig Smithpeters and T3/S2 to work on comment resolution of the CS/101A ballot and to report back on progress at the February 9 T3 meeting.

*Closed.* This item is on the agenda.

- 12) T3 specialist group chairs to draft their target goals for next year and forward them to Mark Richer.

*Completed.* The ATSC Board of Directors approved the 2005 Goals at its January 19 meeting.

- 13) Sam Narasimhan to prepare a detailed report on the current MPEG activities for distribution to T3. [2004-09-23]

*Closed.* Mr. Narasimhan noted that he had posted a background document on Class-A MPEG liaison status. He said he will post a summary of relevant MPEG standards to the T3 reflector prior to the next meeting. Mr. Allison suggested that T3 should establish a process for developing liaison input to MPEG, now that we have Class-A liaison status. Mr. Dolan suggested the establishment of an email list devoted to this subject. Mr. Whitaker took an action item to set up a reflector for the AHG and to post a note to the "admin" reflector inviting participation.

## **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. He did note that the Board passed a resolution at its January 19 meeting stating that a change summary document should accompany letter ballots in order to make sure that proposed changes are identified in a clear, informative way. Tom Hankinson (ABC) explained some of the background of this issue. He said the idea is to make the discovery of changes easier. Mr. Chernock suggested that the summary remain with the document when it is published so that users know in general what has been modified from the previous version. Chairman Miller recognized that additional guidance will be needed as we go forward, but added it is not a discussion we need to have today. Chairman Miller said he will work with the specialist group chairs and ATSC staff to develop specific guidelines to address this requirement.



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

Mark Eyer (Sony), Chair of T3/S8, reported on current activities within the specialist group (**Attachment 6**).

### 8.1 Status Report

Mr. Eyer reported on the status of T3/S8 ad-hoc groups, specifically:

- **S8-1, E-VSB Transport.** Mr. Eyer reported that S8-1 has drafted language alerting mux designers to possible issues regarding the receiver transport buffer, applicable to certain E-VSB mix ratios. The exact language was finalized at the T3/S8 meeting on January 25. T3/S8 also agreed to publish “B” versions of CS/T3-608 and CS/T3-609. T3/S8 identified certain additional issues in CS/T3-608 and CS/T3-609 and directed S8-1 to address them. Changes are anticipated for CS/T3-608B to include a review DVB TR 101154 and consideration of low bit-rate applications. Changes are also anticipated for CS/T3-609B to include updates to reflect the latest SMPTE VC-1 draft. Mr. Eyer indicated that liaison with DVB was important to complete work on CS/T3-608B. Mr. Richer asked him to send an appropriate request that he could forward to Professor Reimers at DVB.
- **S8-3, Program Metadata.** Mr. Eyer reported that a statement of requirements has been developed by S8-3. Brian Smith (Philips) noted the discussion of this work at the Application Subcommittee yesterday. He suggested that T3 needs to stay up to date on this effort.
- **S8-4, Transport Standards Update.** Mr. Eyer reported that eight open issues remain in the A/53C and A/65B update work, with 41 issues closed. He said several proposed resolutions still require review, including: 1) clarification of still pictures requirements, 2) multiple same-tag descriptors in one loop, and 3) `process_cc_data_flag`– coordination with CEA-708-B. Mr. Eyer said that redline drafts of A/53C and A/65B updates are available on the [atscmembers.org](http://atscmembers.org) Web site:

[..\\Web\\atscmembers\\sg\\S8\\S8-4\\documents\\A\\_53C\\_updates\\_markup\\_rev\\_6.doc](http://..\\Web\\atscmembers\\sg\\S8\\S8-4\\documents\\A_53C_updates_markup_rev_6.doc)

[..\\Web\\atscmembers\\sg\\S8\\S8-4\\documents\\A\\_65B\\_updates\\_markup\\_rev\\_7.doc](http://..\\Web\\atscmembers\\sg\\S8\\S8-4\\documents\\A_65B_updates_markup_rev_7.doc)

Chairman Miller asked Mr. Chernock, Chair of S8-4, to prepare a bullet summary of the changes being proposed by the AHG for A/53C and A/65B. Mr. Chernock said S8-4 would begin working on the change document, and added that he hoped to have the proposed revisions to A/53C and A/65B ready for formal consideration in time for the next T3 meeting.

- **S8-6, Content Identification.** Mr. Eyer reported that this AHG is reviewing recent amendments to ISO/IEC 13818-1, some of which (Amendments 1 and 4) overlap A/57A. He said T3/S8 has suggested that S8-6 review and update the original requirements document.

### 8.2 Recommendation of Advancing T3-606 for Ballot at Proposed Standard

Mr. Eyer noted that CS/T3-606A, “Amendment 1 to A/65B,” has been stable since last August. This document describes PSIP requirements for the robust stream and defines an “unassociated/small screen” service type (0x06). He said the specification is codec-agnostic.

Mr. Eyer reported the consensus recommendation of T3/S8 to advance CS/T3-606A to a T3 letter ballot as a Proposed Standard. He noted that the document could not be published in its

present form because it has a normative reference to a work in progress within ATSC. Mr. Eyer **moved** on behalf of T3/S8 to send CS/T3-606A to a ballot of T3 as a Proposed Standard. Discussion following on specific items relating to this document. Chairman Miller called the question. It was **approved** on a show of hands vote.

#### 8.3 Recommendation to Extend Candidate Standard Status of CS/T3-608B and CS/T3-609B to 10 May 2005

Mr. Eyer reported that T3/S8 has determined CS/T3-608B, the AVC version of the A/53C amendment, requires further work to address low-bitrate applications and to check for alignment with certain DVB specifications. Regarding CS/T3-609B, the VC-1 version of the A/53C amendment, T3/S8 agrees that further work is needed to align with the latest SMPTE work. Therefore, Mr. Eyer reported the consensus recommendation of T3/S8 to extend the Candidate Standard status of CS/T3-608B and CS/T3-609B to 10 May 2005. Discussion followed on the planned changes, some of which have dependencies on work underway within T3/S6.

Mr. Eyer **moved** that the Candidate Standard status of CS/T3-608B and CS/T3-609B be extended to 10 May 2005. Mr. Luplow asked about the dependencies of these documents on other specifications being developed within ATSC. Comments on this question were offered by Mr. Allison, Mr. Eyer, and Mr. Waddell. Ralph Justus (CEA) suggested the exact answer is that these documents are waiting for a decision from T3/S6 on new video codecs. Mr. Allison argued that the technical work on the E-VSB documents should continue in the various specialist groups, and that it would be up to T3 to decide how each will move forward. Chairman Miller called the question. It was **approved** on a show of hands.

#### 8.4 ATSC Management of RRT rating\_region

Mr. Eyer noted that A/65B states that ATSC shall be the registration authority for assignment of rating\_region values, and that Section 6 of the Code Point Registry lists values 0x01 through 0x04. He pointed out that no rules and procedures are in place regarding assignment of rating\_region codes by ATSC. He said T3/S8 suggests that procedures and rules should be established.

Mr. Richer said that an RRT assignment policy was previously set by ATSC Executive Committee and is still in effect. He said the Board may wish to revisit this issue, but for now the EC policy is the process we will follow. The policy, approved by the Executive Committee on 27 June 2000 is as follows:

“The ATSC Executive Director (President) will be responsible for assigning RRT numbers, notifying the EC (Board) and waiting 14 days for the EC (Board) to review the assignment before it would become official.”

Mr. Whitaker took an action item to work with Mr. Richer and Mr. Dolan, as chair of the Architecture Team, to draft text for inclusion in the Code Points Registry calling attention to this process.

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

Chairman Miller relinquished the chair to Vice Chair John Henderson. Mr. Miller, the outgoing Chair of T3/S6, gave the report for the specialist group (**Attachment 7**). He announced that Pat Waddell (Harmonic) will be taking over as the Chair of T3/S6.

### 9.1 Extension of Candidate Standard Status for CS/T3-614A

Mr. Miller reported the consensus recommendation of T3/S6 that the Candidate Standard period for CS/T3-614A, the proposed new Annex G to A/53C, be extended to 10 May 2005 to track other A/53C-related work. Accordingly he **moved** on behalf of T3/S6 that the Candidate Standard period for CS/T3-614A be extended until 10 May 2005. Chairman Henderson called the question. It was **approved** on a show of hands.

### 9.2 Resolution of Comments on PS/52B

Mr. Miller called attention to a posting on February 8 from Craig Todd (Dolby) regarding the comment resolution work on PS/52Br2 (**Attachment 8**). He reported that comments were received during the T3 ballot and that, in his capacity as Chair of T3, he asked Mr. Todd and Mr. Allison work on comment resolution. While that work was underway, Dolby discovered certain additional items needing attention. Mr. Todd said Dolby requests that the membership ballot of PS/52Br2 be delayed so that further modifications can be considered. He said there are two reasons for this request:

- The addition of a new feature, LFE downmix
- Correction of specific errors that have recently been discovered

Details are given in the attachment.

Mr. Todd said Dolby would like to work within T3/S6 to formally propose and vet the planned changes to PS/52Br2. When this work is complete (expected in early- to mid-March), he said Dolby would ask T3/S6 to forward the revised document to T3.

Mr. Miller outlined the specific process being proposed:

- 1) T3 Chair to delay the PS/52B membership ballot, per provisions in the ATSC By Laws.
- 2) T3/S6 to draft a revised version of PS/52B that incorporates comment resolution, the LFE downmix solution, and other appropriate updates by mid March.
- 3) T3 to authorize today a T3 letter ballot of the revised PS/52B when T3/S6 is finished with the document.

Assuming the timeframe outlined above, the ballot would close by May 1, which should allow sufficient time for comment reconciliation (if comments are received during the ballot) prior to May 9 T3 meeting.

Mr. Miller **moved** that T3 follow this course of action, specifically: “**moved** that T3 authorize a T3 letter ballot of an updated version of PS/52Br2 as output by T3/S6 following consideration and review by the specialist group. **Second** by Mr. Allison. The motion was **approved** by a show of hands.

### 9.3 Draft Annexes F to A/53 for AVC and VC-1

Mr. Miller reported that work continues to develop the draft A/53C Annex F documents specifying the AVC and VC-1 coding systems. The current versions of the documents are given below:

- For AVC: T3S6-277r5, [..\Web\atscmembers\sg\S6\2005\T3S6-277r5\\_WD\\_A53C\\_AnnexF\\_AVC.doc](..\Web\atscmembers\sg\S6\2005\T3S6-277r5_WD_A53C_AnnexF_AVC.doc)
- For VC-1: T3S6-269r7, [..\Web\atscmembers\sg\S6\2005\T3S6-269r7\\_WD\\_A53C\\_AnnexF\\_VC1.doc](..\Web\atscmembers\sg\S6\2005\T3S6-269r7_WD_A53C_AnnexF_VC1.doc)

Mr. Miller reported that bit stream verification has been completed for the VC-1 bit streams and verification of the AVC bit streams is pending.

#### 9.4 Other Issues

Mr. Miller reported that T3/S6 has begun a discussion on the use of 1080P/60, which provides for a higher level of quality than any of the other 1080 formats. This format is supported by AVC (Level 4.2) and VC-1. He said the question of whether we should include 1080P/60 in the specifications of new codecs is being discussed in an AHG established for this purpose (S6-1). Comments on the 1080P format were offered by several members, including Glenn Reitmeier (NBC) who noted a high level of interest in 1080P at the recent CES show. Mr. Miller encouraged interested T3 members to participate in the T3/S6 AHG discussion group.

Mr. Miller also called attention to the AVC High Profile tool set, which adds variable block size and other functions. He said it is not part of original AVC submission (standardized since then by MPEG). He said T3/S6 is considering whether this Profile should be included and if so, in all image formats or just HD.

Regarding the use of still pictures and low delay modes in the TS-E stream, Mr. Miller said this must be worked out for all three codecs—MPEG-2, AVC, and VC-1. He said it will require some work in T3/S8 as well, since still pictures/low delay impacts A/53C Annexes A, C, and F, and may have some bearing on captions.

The meeting broke for lunch at 12:15 p.m.

The meeting resumed at 1:00 p.m.

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

Craig Smithpeters (Cox Comm.) reported on current activities within the specialist group (**Attachment 9**).

#### 10.1 Status Report

Mr. Smithpeters reminded the committee that the T3 ballot on the ACAP specification closed on 24 November 2004 and passed by vote of 12 yes, 1 no, and 9 abstain. He reported that 123 comments were received from 7 organizations and that T3/S2 has engaged in ballot comment resolution for the past two months, holding one face to face meeting and three teleconferences. He said 65 comments have been resolved and 58 remain to be resolved, some of which might require substantive changes. He went on to summarize the primary ballot comment issues:

- Many comments are of a nature that can not be resolved by T3/S2. For example, ballot comment #7: “Recommend conformance testing to insure compatibility with OCAP and interoperability. Comcast is concerned that there is not a compatibility or conformance test that requires ACAP to insure implementers of OCAP and ACAP applications to work properly.” Similar comments were received by Time Warner Cable and Cox Communications.
- ACAP currently references SCTE 90-1, which is based on OCAP 1.0-I08; this is an out of date version of OCAP.
- ATSC rules prevent direct reference to the Cable Labs OCAP 1.0 spec

Mr. Richer, noting the previous bullet item, said it is possible for the ACAP document to reference OCAP. He said that is a Board-level discussion, but it is possible.

Mr. Smithpeters went on to outline the proposed T3/S2 work plan and schedule:

- Continue to resolve ballot comments through regular calls
- Revise the specification based on agreed solutions

- Submit the revised ACAP specification to T3 for review and consideration prior to the May 9 meeting

Chairman Miller expressed concern that ACAP and OCAP seem to be drifting apart. He expressed the hope that any variations will tend to be self-correcting.

Mr. Richer noted that, with ACAP a Proposed Standard, a delay in the ballot of PS/101 needs to be granted by the President or Chair of T3. He expressed the hope that the delay would not extend beyond the May 9 T3 meeting. He suggested a firm plan to resolve the comments that can be resolved with appropriate action by T3.

Andy Scott (NCTA) stated that the comment resolution process is moving forward with good progress. He said the changes being made are improving the specification.

Chairman Miller asked Mr. Smithpeters to post to T3 a summary sheet of the “irresolvable by T3/S2” comments received during the ballot. Meanwhile, Chairman Miller said he and Mr. Richer will consider the 120 day ballot delay issue, as provided for in the By Laws.

Mr. Jones inquired about the ETRI proposal for extensions to PMCP to address ACAP. Mr. Smithpeters said he will raise the issue once again in T3/S2 and attempt to get specific input from T3/S2 to T3/S1.

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

Charles Einolf (UPN) reported on current activities in the specialist group (**Attachment 10**).

### **11.1 Status Report**

Mr. Einolf called attention to the T3/S9 Work Plan, document T3/S9-257 (**Attachment 11**). He noted that the current goals and objectives of T3/S9 are to:

- Develop a specification to facilitate extensibility in VSB enhancements
- Develop a draft Implementation Guidelines on Enhanced 8-VSB
- Examine proposed enhancements to E-VSB
- Maintain ATSC standards that involve RF Transmission

Mr. Einolf went on to review the Work Plan milestones and tasks completed so far.

Mr. Einolf reported on work within the various AHG within T3/S9, specifically:

- **S9-1 Multiple Transmitter Networks.** Mr. Einolf reported that work is underway to develop a Corrigendum to A/110 to address various issues.
- **S9-2 E-VSB Implementation Guidelines.** Mr. Einolf reported that work on this document continues, with good progress to date. He said T3/S9 is seeking feedback from T3 members on the draft IG, which can be accessed from the atscmembers.org Web site. See: [http://www.atscmembers.org/sg/S9/s9\\_2/documents/T3S9-2-014r8.doc](http://www.atscmembers.org/sg/S9/s9_2/documents/T3S9-2-014r8.doc). Mr. Einolf asked that T3 approve the distribution of this document to the ATSC member/contributor list. Chairman Miller suggested the use of the “admin” reflector, and asked Mr. Einolf to forward the document along with a cover letter to Mr. Richer.
- **S9-3 Signaling Extensions and Enhancements.** Mr. Einolf reminded the committee of the work item to devise a method for signaling extensions and enhancements to Annex D of A/53C. He said the requirements document has been completed (**Attachment 12**).

### 11.2 Request for Approval by a T3 Voice Vote of a Corrigendum for A/53C with Amendment 1

Mr. Einolf reported that Broadcom has identified an error with the new Annex D of the published version of A/53C with Amendment 1. He said T3/S9 has prepared a draft corrigendum to correct this problem (**Attachment 13**). Specifically, the proposed change is:

A/53C, Annex D (as documented in Amendment No. 1), Section 5.8.1, Option 2 should read: “if (s>=312)”

Mr. Einolf reported the T3/S9 consensus recommendation that T3 approve this Corrigendum by voice vote to expedite membership approval. Mr. Einolf so **moved**. Chairman Miller called the question, It was **approved** on a show of hands.

Mr. Richer asked Mr. Einolf to work with Mr. Whitaker to draft text describing the reason(s) for the change, which will accompany the membership ballot.

Mr. Richer reminded Chairman Miller that the Board has requested a Work Plan from T3/S9 relating to enhanced transmission. Mr. Miller said he would report on the current T3/S9 Work Plan at the next meeting of the Board.

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

John Henderson (Hitachi), Chair of T3/S10, reported there have been no meetings of the specialist group since the last T3 meeting. He said T3/S10 is continuing to look for interesting reception sites to document.

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

Mike Dolan (TBT), Chair of T3/S13, reported on activities within the specialist group (**Attachment 14**).

#### 13.1 A97 Clarification

Mr. Dolan noted that A/97, “Software Data Download Standard,” has been published on the ATSC Web site. He said a clarification on one or more points might be in order, and that a corrigendum may be ready in time for consideration by T3 on May 9.

#### 13.2 A/90 and A/95 Revision

Mr. Dolan reported that work continues on A/9x harmonization with the ACAP transport specification. He said open A/90 issues include usage rules for DST vs AIT. Mr. Dolan said there was no progress to report on the planned A/95 revision, adding the schedule for completion of this work is uncertain.

#### 13.3 Caption Carriage in E-VSB and with New Codec(s)

Mr. Dolan reported that a separate email list has been formed for closed captioning work (S13-1). He said a requirements document is near finalization, and analysis of encapsulations is underway for embedding in the video stream or a separate PES stream. Mr. Dolan said that S13-1 is seeking input on the type of output document that might result from this work, presumably either an amendment to A/53C or a separate, stand-alone document. Chairman Miller suggested that, for a starting point, an amendment might be the best approach. Views on this question were offered by several members, including Mr. Allison, Mr. Krauss, and Mr. Narasimhan. Mr. Dolan said the group has set an aggressive goal for itself, targeting the May 9 T3 meeting as the date for a document that T3 can consider for elevation to Candidate Standard status. Mr. Dolan

encouraged members interested in this work to contact him and let Mr. Whitaker know so they could be added to the S13-1 reflector.

#### 13.4 Priorities

Mr. Dolan outlined the proposed priorities for T3/S13, specifically:

1. Caption carriage standard
2. Software download corrigendum
3. A/9x harmonization with ACAP transport

T3 members provided input to Mr. Dolan on the list of priorities. Mr. Allison questioned whether the A/97 update should rate a high priority level, since the standard has just recently been approved. He recommended lowering this item on the priority list. Mr. Jones suggested that A/9x harmonization should be moved up on the list to #2, to which Mr. Dolan agreed.

### 14. ARCHITECTURE TEAM

#### 14.1 Virtual Channel Number Registry Recommendation

Mr. Dolan reminded the committee of the request to develop some form of registry that would document major virtual channel numbers in the range 70–99. He said the Architecture Team studied the issue and recommends the following:

“ATSC publish a directory of the use of major channel numbers in the range of 70–99. The information collected and the disclaimers should include that shown in the attached web page (**Attachment 15**). It is important to emphasize that it is a directory (informative without any representation by ATSC) and not a registry. We suggest this information be posted publicly on the ATSC web site under the “News and Information” page analogous to the “Guide to DTV Standards”, or similar public location. Any broadcaster using one or more major virtual channel numbers in the 70–99 range can request that they be listed in this table. Additionally, we considered and specifically recommend against using the Code Points Registry for this purpose or amending A/53, Annex B to address the request.”

Mr. Dolan pointed out that, should the directory become popular, ATSC may wish to sort the table by region.

Mr. Dolan **moved** that T3 accept the consensus recommendation of the A-Team regarding the virtual channel informational service. **Second** by Art Allison. The motion was **approved** on a show of hands.

### 15. REPORT OF THE SPECIALIST GROUP ON PSIP METADATA COMMUNICATION, T3/S1 (GRAHM JONES)

Graham Jones (NAB), the Chair of T3/S1, outlined current activities within the specialist group (**Attachment 16**).

#### 15.1 Status Report

Mr. Jones reported that while no meetings of T3/S1 have taken place since the last T3 meeting, ongoing work of the committee includes the following:

- There is a current work item to register PMCP metadata terms in the SMPTE metadata dictionary. This effort will help implementation of programming metadata generation and

transport across multiple standards and protocols. A meeting is scheduled for February 14, in conjunction with SMPTE R30 and the S22 Data Exchange AHG, to demonstrate and test a new web-based Metadata Dictionary registration procedure. The T3/S1 work plan calls for the harmonization and registration to be completed by 30 June 2005.

- The Guide to the Use of the PMCP standard is a current work item, although progress is slow. The goal, as approved by the ATS Board, is to have this document to Proposed RP status by 21 September 2005.
- One of the T3/S1 goals is to have the PMCP extension for data broadcast/ACAP support ready for consideration by T3 as a Proposed Standard by May 9. ETRI is currently drafting the additions needed to the schema to achieve this goal, although the work has not yet been reviewed by T3/S1.

## 16. REPORT OF THE SPECIALIST GROUP ON ENG, T3/S3 (DANE ERICKSEN)

Dane Ericksen (SBE), Chair of T3/S3, outlined current work of the specialist group (**Attachment 17**).

### 16.1 Status Report

Mr. Ericksen reported that the initial meeting of T3/S3 was held on February 3. He said there has been a good level of participation in the specialist group, with 30+ reflector members and 15 participants in initial meeting. He said a draft Scope was discussed and agreed to. Mr. Ericksen said the committee also examined AS-040, "Requirements for Remote ENG Communications Standard," and formed an AHG (S3-1) to focus on studio-to-remote site communications utilizing the DTV system. Data return link (DRL) applications were discussed as well.

### 16.2 Scope Statement

Mr. Ericksen noted that the proposed Scope was distributed to the T3 reflector on February 4. Following subsequent discussion by the Architecture Team, a proposed addition to the document was offered by Mr. Richer (**Attachment 18**). Sterling Davis (Cox Broadcasting) **moved** that T3 accept the Scope as modified by Mr. Richer's input. **Second** by Merrill Weiss (MWG, Tribune). Discussion followed on specifics of the Scope. Mr. Krauss noted that the genesis of the work of T3/S3 was the AS study of ENG communications, and questioned whether the draft Scope was too broad. Comments on that point were offered by Mr. Allison and Mr. Weiss. Chairman Miller called the question. It was **approved** by a show of hands.

## 17. OTHER BUSINESS

### 17.1 Liaison Reports

Chairman Miller reported that VC-1 is currently out for SMPTE FCD ballot, the final stage for technical comments. The FCD ballot closes on March 1. He went on to outline in general terms for expected timetable for moving the document forward.

### 17.2 Reopen Consideration of EAS in ATSC (Rich Chernock)

Mr. Chernock reminded the committee of the discussion at T3 some months ago regarding emergency alert functionality as it relates to ATSC. He suggested that it might be worthwhile to define a mechanism for sending emergency messages within the ATSC transport. Mr. Richer



noted that this issue was discussed by the Applications Subcommittee some time ago. He suggested that T3 might want to return this issue to the Board for further consideration.

Mr. Eyer noted there are legacy issues involved and that any solution would need to be considered carefully. Mr. Dolan asked for clarification whether this functionality would involve textual messages, reminding the group of the AS discussion on streaming text. He suggested there might be some synergy in this regard.

Mr. Reitmeir said this is a timely subject and should be put before the Board. Guy Bouchard (CBC) agreed and urged work in this area, noting that coordination with SCTE would be important.

Chairman Miller observed the consensus of the committee to take this issue to the Board for further consideration and guidance. He asked Mr. Davis and Mr. Chernock to assist in this effort.

#### **18. SCHEDULE OF NEXT T3 MEETING**

The next meeting of the ATSC Technology Group on Distribution will be held on 9 May 2005.

#### **19. ADJOURNMENT**

There being no further business before the committee, the meeting was adjourned at 2:45 p.m. EST.

## Action Items Developed at this Meeting

The following action items were developed at today's meeting. Items carried forward from a previous meeting are noted by [date]:

- 1) Chairman Miller to report to the ATSC Board of Directors the consensus of T3 to support renaming of the Technology Group on Distribution to "Technology and Standards Group."
- 2) Sam Narasimhan to post a summary of relevant MPEG standards to the T3 reflector prior to the May 9 meeting.
- 3) Jerry Whitaker to set up a reflector for an MPEG Liaison AHG and to post a note to the "admin" reflector inviting participation.
- 4) Mark Eyer to forward to Mark Richer a liaison request relating to DVB TR 101154 and other documents as appropriate.
- 5) ATSC staff to issue a T3 letter ballot on CS/T3-606A as a Proposed Standard.
- 6) Jerry Whitaker to update the posted versions of CS/T3-608B and CS/T3-609B to indicate that the Candidate Standard period ends on 10 May 2005.
- 7) Jerry Whitaker to update the posted version of CS/T3-614A to indicate that the Candidate Standard period ends on 10 May 2005.
- 8) Pat Waddell and T3/S6 to consider proposed corrections and updates to PS/52Br2 and, upon consensus agreement in the specialist group, to forward said document to ATSC staff for issuance of a T3 letter ballot.
- 9) Craig Smithpeters to post to T3 a summary sheet of the "irresolvable by T3/S2" comments received during the T3 ballot of PS/101.
- 10) Charles Einolf to forward the latest version of the E-VSB Implementation Guidelines document to Mark Richer, along with an appropriate cover letter, for distribution to the ATSC "admin" reflector.
- 11) Charles Einolf to forward to ATSC staff the Corrigendum on A/53C with Amendment 1, Annex D, (T3S9-259) for issuance of a membership ballot. Mr. Einolf is also to work with Jerry Whitaker to draft text describing the reason(s) for the change, which will accompany the membership ballot.
- 12) Chairman Miller to report to the Board on the current T3/S9 Work Plan.
- 13) ATSC staff to review the consensus recommendation of the A-Team regarding the virtual channel informational service and develop a Web-based service accordingly.
- 14) Chairman Miller to report to the Board renewed interest on the part of T3 in conveying emergency messages using the DTV system and to ask for guidance.
- 15) Dane Ericksen and T3/S3 to bring to T3 at its May 9 meeting a draft Work Plan and statement of need.
- 16) Bob Rast, Bill Miller, Wendy Aylsworth, and Craig Tanner to draft a document summarizing the one-versus-more-than-one new codec issue for T3 consideration. [2004-11-16]
- 17) Jim Williams to lead an AHG of T3 focusing on SRM issues. The AHG is to develop a Requirements Document, with input from appropriate organizations and individuals, and to develop a Work Statement, keeping in mind the T3/S8 output previously given. [2004-11-16]

- 18) Jerry Whitaker to work with Mark Richer and Mike Dolan, as chair of the Architecture Team, to draft text for inclusion in the Code Points Registry calling attention to the current RRT process.

## Attachments

- Attachment 1.** Attendance List (\* denotes attending by telephone)  
[http://www.atscmembers.org/sg/T3/2005\\_02\\_09/documents/Attachment\\_1\\_attendance\\_02\\_09\\_05.xls](http://www.atscmembers.org/sg/T3/2005_02_09/documents/Attachment_1_attendance_02_09_05.xls)
- Attachment 2.** Draft Agenda  
[http://www.atscmembers.org/sg/T3/2005\\_02\\_09/documents/Attachment\\_2\\_draft\\_t3\\_agenda\\_02\\_09\\_05-rev\\_1.doc](http://www.atscmembers.org/sg/T3/2005_02_09/documents/Attachment_2_draft_t3_agenda_02_09_05-rev_1.doc)
- Attachment 3.** Draft Minutes from T3 Meeting of 16 November 2004  
[http://www.atscmembers.org/sg/T3/2005\\_02\\_09/documents/Attachment\\_3\\_T3-621r2.doc](http://www.atscmembers.org/sg/T3/2005_02_09/documents/Attachment_3_T3-621r2.doc)
- Attachment 4.** 2005 Goals  
[http://www.atscmembers.org/sg/T3/2005\\_02\\_09/documents/Attachment\\_4\\_ATSC\\_Goals\\_2005.ppt](http://www.atscmembers.org/sg/T3/2005_02_09/documents/Attachment_4_ATSC_Goals_2005.ppt)
- Attachment 5.** MPEG Class-A Liaison Background  
[http://www.atscmembers.org/sg/T3/2005\\_02\\_09/documents/Attachment\\_5\\_Class\\_A\\_liaison-Chapter3.html](http://www.atscmembers.org/sg/T3/2005_02_09/documents/Attachment_5_Class_A_liaison-Chapter3.html)
- Attachment 6.** T3/S8 Status Report  
[http://www.atscmembers.org/sg/T3/2005\\_02\\_09/documents/Attachment\\_6\\_T3S8-575r1\\_S8\\_Status.ppt](http://www.atscmembers.org/sg/T3/2005_02_09/documents/Attachment_6_T3S8-575r1_S8_Status.ppt)
- Attachment 7.** T3/S6 Status Report  
[http://www.atscmembers.org/sg/T3/2005\\_02\\_09/documents/Attachment\\_7\\_T3S6\\_status.ppt](http://www.atscmembers.org/sg/T3/2005_02_09/documents/Attachment_7_T3S6_status.ppt)
- Attachment 8.** Craig Todd Report to T3 on PS/52Br2  
[http://www.atscmembers.org/sg/T3/2005\\_02\\_09/documents/Attachment\\_8\\_PS\\_52Br2\\_T3\\_Ballot\\_Comment.doc](http://www.atscmembers.org/sg/T3/2005_02_09/documents/Attachment_8_PS_52Br2_T3_Ballot_Comment.doc)
- Attachment 9.** T3/S2 Status Report  
[http://www.atscmembers.org/sg/T3/2005\\_02\\_09/documents/Attachment\\_9\\_T3S2-048.ppt](http://www.atscmembers.org/sg/T3/2005_02_09/documents/Attachment_9_T3S2-048.ppt)
- Attachment 10.** T3/S9 Status Report  
[http://www.atscmembers.org/sg/T3/2005\\_02\\_09/documents/Attachment\\_10\\_T3S9\\_Status.ppt](http://www.atscmembers.org/sg/T3/2005_02_09/documents/Attachment_10_T3S9_Status.ppt)
- Attachment 11.** T3/S9 Work Plan Draft Revision  
[http://www.atscmembers.org/sg/T3/2005\\_02\\_09/documents/Attachment\\_11\\_T3S9-257-Work\\_plan.pdf](http://www.atscmembers.org/sg/T3/2005_02_09/documents/Attachment_11_T3S9-257-Work_plan.pdf)
- Attachment 12.** T3/S9 Requirements for E-VSB Signaling  
[http://www.atscmembers.org/sg/T3/2005\\_02\\_09/documents/Attachment\\_12\\_T3S9-246-Requirements.pdf](http://www.atscmembers.org/sg/T3/2005_02_09/documents/Attachment_12_T3S9-246-Requirements.pdf)
- Attachment 13.** T3/S9 Corrigendum on A/53C with Amendment 1, Annex D  
[http://www.atscmembers.org/sg/T3/2005\\_02\\_09/documents/Attachment\\_13\\_T3S9-259-A53C\\_Corrigendum.pdf](http://www.atscmembers.org/sg/T3/2005_02_09/documents/Attachment_13_T3S9-259-A53C_Corrigendum.pdf)
- Attachment 14.** T3/S13 Status Report  
[http://www.atscmembers.org/sg/T3/2005\\_02\\_09/documents/Attachment\\_14\\_S13-273R0-Status.ppt](http://www.atscmembers.org/sg/T3/2005_02_09/documents/Attachment_14_S13-273R0-Status.ppt)
- Attachment 15.** Example Virtual Channel Number Listing Format  
[http://www.atscmembers.org/sg/T3/2005\\_02\\_09/documents/Attachment\\_15\\_VirtualChannelsR1.htm](http://www.atscmembers.org/sg/T3/2005_02_09/documents/Attachment_15_VirtualChannelsR1.htm)
- Attachment 16.** T3/S1 Status Report  
[http://www.atscmembers.org/sg/T3/2005\\_02\\_09/documents/Attachment\\_16\\_T3-S1\\_report\\_r1.doc](http://www.atscmembers.org/sg/T3/2005_02_09/documents/Attachment_16_T3-S1_report_r1.doc)
- Attachment 17.** T3/S3 Status Report  
[http://www.atscmembers.org/sg/T3/2005\\_02\\_09/documents/Attachment\\_17\\_T3S3\\_Status\\_r1.ppt](http://www.atscmembers.org/sg/T3/2005_02_09/documents/Attachment_17_T3S3_Status_r1.ppt)

**Attachment 18.** T3/S3 Draft Scope, Revised

[http://www.atscmembers.org/sg/T3/2005\\_02\\_09/documents/Attachment\\_18\\_T3S3-001r1-redline.doc](http://www.atscmembers.org/sg/T3/2005_02_09/documents/Attachment_18_T3S3-001r1-redline.doc)