

Approved Minutes
Advanced Television Systems Committee, Inc.
Board of Directors Meeting
National Association of Broadcasters, Washington, DC
January 31, 2002

1. Call to Order; Determination of Quorum; Approval of Agenda

President Mark Richer called the meeting to order at 10:00 AM at the NAB in Washington, DC. Attendees and phone participants introduced themselves (**Attachment 1**).

Mr. Richer suggested modifying the draft agenda (**Attachment 2**) by moving the AS report after item three, and considering the resolutions (5) to form the Budget and Finance and (6) Bank Account signers after the chairman is elected. The agenda with these modifications was approved.

2. Incorporation Resolutions

Mr. Richer presented the Resolution for the Board to consider (**Attachment 3**). Ralph Justus, CEA, moved to adopt the Resolutions 1, 2, 3, 4, 7, 8, 9, 10, 11 at once as presented. The motion was seconded and approved unanimously.

3. Election of the Chairman

Robert Plummer, DirecTV, recommended that the election of a chairman take place in executive session with observers. There was a roll call and it is noted for the record that Board members Glenn Reitmeier, IEEE; William Check, NCTA; Regis Crinon, Intel; and, Edward Caleca, PBS were not present. Joseph Flaherty, CBS, moved to accept the election procedure proposed by Victor Tawil (MSTV) on January 29 (**Attachment 4**). The motion was seconded and approved unanimously.

Philip Livingston, Panasonic Broadcast, was elected to serve as Chairman for one year. Ralph Justus moved to unanimously ratify Mr. Livingston's election. The motion was seconded and approved unanimously.

4. Report of the President

a) Membership Report

Mr. Richer presented the membership report (**Attachment 5**).

b) Status of Letter Ballots

Mr. Richer reported the status of letter ballots (**Attachment 6**).

c) Financial Report

Mr. Richer gave the financial report for 2001 (**Attachment 7**), noting that some expenses for the year have not been billed and paid yet. He reported that approximately \$440,000 in dues has been collected for 2002.

d) MOU with the ATSC Forum

Mr. Richer reported that the Memorandum of Understanding with the ATSC Forum has been reviewed by ATSC counsel and is currently under review by the ATSC Forum. He said that it

should be finalized soon and he will sign it on behalf of the ATSC.

e) DTV Store at NAB2002

Mr. Richer reported on the DTV Store exhibit sponsored by ATSC, CEA, and NAB at the NAB convention in April 2002. Mr. Richer explained that in addition to the latest DTV products, there will be a DASE demonstration and that he hopes to also show PSIP and closed captioning. He said that CEA and ATSC members had been invited to become sponsors of the DTV Store for a financial contribution of \$3,000. ATSC Forum, Digital Stream Technologies, Dolby, LG, Mitsubishi, Panasonic, Philips, Samsung, Sharp, Sony, Thomson, and Zenith have committed to sponsor the exhibit.

f) Goal for new Board

Mr. Richer suggested that the Board consider ways to promote the proper use of ATSC standards with upper management in the broadcast industry. This topic will be discussed when considering the Goals for 2002.

5. Formation of a Budget and Finance Committee

Mr. Livingston opened discussion on establishment and membership of the Budget and Finance Committee. Wendell Bailey, NBC, moved that the committee have seven members – 5 JCIC members and 2 others. The motion was seconded and approved. Victor Tawil moved that Joe Flaherty, CBS, and Phil Livingston, Panasonic, serve as the non-JCIC members on the Budget and Finance Committee. The motion was seconded and approved. Ralph Justus, CEA, moved that Lynn Claudy, NAB, serve as the Chair of the Budget and Finance Committee. The motion was seconded and approved.

6. Election of Vice Chairs

Victor Tawil, MSTV, moved that the Board elect Jay Adrick, Harris, and Lynn Claudy, NAB to serve as Vice-Chairs in order to assist the Chairman. The motion was seconded. Discussion followed regarding the role of these positions. Mr. Tawil said vice-chairs would be advantageous since the chairman's position is now voluntary and not a full-time paid position. They could share responsibility in representing the ATSC at events, provide guidance on decisions, and offer more visibility for the organization. The motion was unanimously approved.

7. Bank Signatures

Ralph Justus, CEA, moved that the resolutions (**Attachment 8**) naming Mark Richer, Tara Healy, and Lynn Claudy as authorized bank account signers to be adopted. The motion was seconded. The motion was approved without amendment.

8. Report of the Applications Subcommittee

Ira Goldstone, Tribune, said that the AS had met the previous day. He reported that the group had a very productive discussion on 8VSB robust mode applications. He summarized the group's recommendations concerning related standards work. Discussion followed on the impact of the proposed work. Ralph Justus moved that the Board take the recommendations of AS and assign T3 this work as described in **Attachment 9**. The motion was seconded and approved.

9. Affirmation of Major ATSC Policies

Peter Symes, SMPTE, moved to adopt the major policies - Dues, Patent Policy, and the

Copyright and References - as presented with the changes made to modify references from the Executive Committee to the Board of Directors. The motion was seconded and approved.

10. Appointment of Ralph Justus as T3 Chair

Brian Smith, Philips, moved that Ralph Justus be appointed Chairman of T3. The motion was seconded and approved.

11. Formation of the Nominating Committee

Mr. Richer reviewed the policy from the Bylaws on the membership and role of the Nominating Committee. Membership will be the five JCIC members, up to three current directors, and at least three non-director member representatives. The committee should develop a nominating process. Robert Plummer, DirecTV, moved that Jay Adrick be appointed Chairman of the Nominating Committee and that he seek input on how to proceed, and report back to the Board at the next meeting. The motion was seconded and approved.

12. Adoption of Procedures Document

Mr. Richer presented the Procedures Document (**Attachment 10**) for adoption. Peter Symes, SMPTE, moved that the Procedures Document be adopted. The motion was seconded and approved. The document will be designated Doc. B-4.

13. Consideration of Retirement Policy

The Board moved to discuss the retirement policy in executive session without observers. In executive session, Mr. Richer briefed the Board on issues related to the proposal made by Robert Graves for an ATSC retirement policy. The board expressed concern over its ability to act in a timely manner in the matter of continuation of health insurance for Mr. Graves, and on a motion by Ralph Justus, the Board empowered a subcommittee comprised of Phil Livingston, Jay Adrick, Lynn Claudy and Mark Richer to review the situation regarding Mr. Graves health insurance and take appropriate action. The Board instructed the subcommittee to find a fair but cost-effective solution, and in the interest of an expeditious solution authorized the subcommittee to commit up to \$15,000 to resolve the issue.

14. Ad Hoc Group on Interoperability

Bernard Lechner reported that the ad hoc group had completed a document (**Attachment 11**). Discussion followed on how to proceed with the document. Suggestions were made to name the document a "White Paper"; to put the information in layman's terms; and, to include the impact on what will happen in each scenario. Many members supported 1) the idea of additional input from the industries involved and 2) allowing the distribution of the White Paper - including to the FCC DTV Task Force. Ralph Justus, CEA, moved that comments on the current version be solicited by February 15. The Ad Hoc Group will then review comments and prepare the White Paper for discussion at the March 7 Board meeting. The motion was seconded and approved. Board members are encouraged to share the draft document with other industry organizations, but should seek approval of the ATSC President before distribution outside of the ATSC Membership.

15. Goals for 2002

Mr. Richer suggested that Board members should take a larger role in promoting the complete and proper use of the ATSC standards, especially among broadcast executives in both technical and non-technical positions. It was agreed that this topic be added to the next meeting's agenda for discussion. Brian Smith, Philips, said that he would add this to the Goals

for 2002. Mr. Luplow, Zenith, moved that the Goals for 2002 be approved with this addition, but noted there were no timeframes for completion. Mr. McEwen offered that the motion be amended to include that progress reports on the goals be given every other meeting. Mr. Luplow accepted this amendment. The motion was seconded and approved. The approved Goals for 2002 is **Attachment 12**.

16. Annual Meeting

Mr. Richer announced that the annual meeting is scheduled for May 15 in Washington, DC. He solicited input on what to focus on at this meeting. Suggestions included inviting members of the FCC DTV Task Force to participate as speakers or on panels, and to invite representatives of SMPTE, SCTE, CableLabs and other groups working on standards to discuss harmonization. Mr. Richer agreed to work on an agenda that would reflect these suggestions.

17. T3 Report

Ralph Justus reported that T3 has not had a meeting since December 12. He invited members to the next meeting on February 13.

18. IS Report

Mr. Allison provided a written report (**Attachment 13**) on the status of IS activities.

19. Other Business

Mr. Richer reported that DASE is now a Candidate Standard and may be balloted as a standard in a few months. He said T3/S17 DASE would hold a meeting in South Korea in May. He added that many companies there are working to implement DASE and he encouraged Board members to attend this meeting. He acknowledged and thanked Glenn Adams and Aninda DasGupta for their leadership as chairs of T3/S17.

Mr. Richer said that he has resigned from his position as Head of the U.S. Delegation for the ITU-R 6P group.

There was discussion regarding the recent actions of DVB to purposefully report incorrect information on countries that have adopted ATSC. A letter from Mr. Livingston will be drafted stating concern for this behavior that will be sent to the Chair of DVB.

Michael McEwen, CDTV, reported that NABA will have meetings in Mexico with the Ministers of Communications and Economics to discuss DTV. He invited Mr. Richer to attend on behalf of ATSC.

20. Schedule of Board of Director Meetings

Following is the schedule for ATSC Board of Directors meetings in 2002:

Mar. 7 (NYC); May 14 (PM only); June 27 (Chicago); Aug. 15; Oct. 22 (PM only) in LA.
Dec. 18.

21. Adjournment

Mr. Livingston thanked NAB for hosting the meeting and Wayne Luplow and Zenith for providing lunch. The meeting was adjourned at 3:45 PM.

Attachments

- Attachment 1: Attendance list
- Attachment 2: Draft agenda
- Attachment 3: Proposed Resolutions
- Attachment 4: Procedure for electing a chairman
- Attachment 5: ATSC Membership report
- Attachment 6: Letter Ballot report
- Attachment 7: Financial Report
- Attachment 8: Bank Resolutions
- Attachment 9: Recommendations to T3
- Attachment 10: Procedures Document
- Attachment 11: Ad Hoc on Interoperability Report
- Attachment 12: Goals 2002
- Attachment 13: IS Report

**ATSC Board of Directors Meeting
Attendance List
January 31, 2002**

Board Members Present

Jay Adrick, Harris
Wendell Bailey, NBC
Lynn Claudy, NAB
Joseph Flaherty, CBS
Ira Goldstone, Tribune
Tom Hankinson, ABC
Ralph Justus, CEA
Wayne Luplow, Zenith
Michael McEwen, CDTV
Sam Narasimhan, Motorola
Robert Plummer, DirecTV
Brian Smith, Philips
Peter Symes, SMPTE
Victor Tawil, MSTV

Board Members Absent

Ed Caleca, PBS
Regis Crinon, Intel
Glenn Reitmeier, IEEE
Bill Check, NTCA

ATSC Members and Guests

ATSC Chairman	Phil Livingston (Panasonic)
ATSC President	Mark Richer
ATSC Secretary	Christy Kehlbeck
ATSC Technical Director	Jerry Whitaker*
ATSC Treasurer	Tara Healy
ATSC IS Chairman	Art Allison
ATSC T3/S8 Chair	Bernard Lechner
Echostar	William Beals
IEEE	Michael Isnardi*
NCTA	Andy Scott
Samsung	C.B. Patel
Sony	John Godfrey
Triveni Digital	Nandhu Nandhakumar

Revised Draft Agenda
Advanced Television Systems Committee, Inc.
Board of Directors
NAB, 1771 N Street, NW, Washington, DC
January 31, 2002 from 10:00 AM to 3:30 PM

1. Call to Order; Determination of Quorum; Approval of Agenda
2. Incorporation Issues
 - a. Articles of Incorporation [Resolution 1]
 - b. Adoption of Bylaws [Resolution 2]
 - c. Election of Officers [Resolution 3]
 - d. Voting Members [Resolution 4]
 - e. Budget & Finance Committee [Resolution 5]
 - f. Bank Accounts [Resolution 6]
 - g. Bill of Sale, Assignment and Assumption [Resolution 7]
 - h. Fiscal Year [Resolution 8]
 - i. Tax Matters [Resolution 9]
 - j. General Authorization [Resolution 10]
 - k. Corporate Seal [Resolution 11]
3. Election of Chairman
4. Report of the President (M. Richer)
 - a. Membership Report
 - b. Status of Letter Ballots
 - c. Financial Report
 - d. MOU with the ATSC Forum
 - e. Other
5. Affirmation of Major Policies
 - a. Dues
 - b. Patent Policy
 - c. Copyright and References
6. Appointment of Mr. Justus as T3 Chair
7. Formation of Nominating Committee
8. Adoption of Procedures Document
9. Consideration of Retirement Policy
10. Interoperability Ad-Hoc Report
11. 2002 Goals Ad-Hoc Report (B. Smith)
12. Annual Meeting (M. Richer)
13. T3 Report (R. Justus)
14. IS Report (A. Allison)
15. AS Report (E. Caleca / I. Goldstone)
16. Other Business
17. Schedule of Future Board Meetings
Jan. 31; Mar. 7 in NYC; May 14 (PM); June 27 in Chicago; Aug. 15; Oct. 22 (PM); Dec. 18.
18. Adjournment

Proposed Resolutions

1. Articles of Incorporation

RESOLVED, that the Articles of Incorporation as filed with the Mayor of the District of Columbia on January 3, 2002 are approved and accepted and that a copy of the Articles of Incorporation be inserted in the minute book of the Corporation as a part of the records of the meeting.

2. Bylaws

RESOLVED, that the bylaws submitted and reviewed at the meeting hereby are adopted as the bylaws of the Corporation, and that the secretary be and hereby is instructed to cause a copy of the bylaws to be inserted in the minute book of the Corporation.

3. Officers

The following persons are nominated as officers of the Corporation to serve until their respective successors are elected and qualify:

President: Mark S. Richer

Secretary: Christy Kehlbeck

Treasurer: Tara Healy

RESOLVED, that the above persons are elected to the offices set before their respective names to assume the duties and responsibilities fixed by the bylaws and to serve until their respective successors are elected and qualify.

FURTHER RESOLVED, that the secretary of the Corporation is authorized to procure all minute and record books required by law or necessary in the business of the Corporation.

FURTHER RESOLVED, that the treasurer of the Corporation is authorized and directed to pay all charges and expenses incident to or arising out of the organization of the Corporation.

FURTHER RESOLVED, that the officers of the Corporation are authorized to commence the transaction of business by the Corporation as of the date of the meeting, or as soon hereafter as may be practicable, and to apply for the issuance or transfer of such licenses or permits and to take all action necessary or appropriate to enable the Corporation to lawfully carry on the business proposed to be done in the Articles of Incorporation.

4. Voting Members

The following organizations are recognized as Voting Members of the Corporation without further application in accordance with the bylaws of the Corporation:

Aastra Technologies Limited
ABC
Acterna
ACTV
Axcera
Advanced Television Technology Center
Agnew Tech II
Aircode (Korea)
Alticast, Inc.
Antiference Ltd. (UK)
ARTEAR (Argentina)
Astro Systems
BarcoNet - N.A.
Baylor University - Telecommunications
Bitstream, Inc.
Broadcom Corp.
Broadlogic, Inc.
C & S Technology Inc. (Korea)
Canadian Digital Television Inc.
Canal Plus (France)
CAPER (Argentina)
CBS Broadcast Group
Chinese HDTV Technical Executive Expert Group
Clear Channel
Communications Research Centre (Canada)
Computer Modules, Inc.
Conexant (UK)
Consumer Electronics Association
Continental Electronics Corporation
Cox Broadcasting, Inc.
Daewoo Electronics Co., Ltd. (Korea)
Decisionmark
DemoGraFX
Dielectric Communications
Digital Stream (Korea)
Digital Vision (Sweden)
DirecTV
Dolby Laboratories, Inc.

Dotcast, Inc.
DTVIA (China)
Eastman Kodak Company
Echostar Communications Corporation
EEPDA of R.O.C (Taiwan)
Equator Technologies
ETRI (Korea)
Extensible Formatting Systems, Inc.
Faroudja Division of Sage, Inc.
FACTS
Florida Atlantic University
Four Media Company
France Telecom
Global Technologies (Korea)
Global Telemann Systems, Inc.
Harmonic
Harris Corporation
Hicks & Associates
Hitachi America, Ltd.
HKPC (China)
Hubbard Broadcasting, Inc.
iBlast
IEEE
ITRI (Taiwan)
Intel Corporation
iSurf TV
ITELCO-USA Inc.
KSAI Electronics
Ktech Electronics Co.
Leitch, Inc.
Liberate Technologies
Linx Electronics
Lysis S.A. (Switzerland)
Media Sourcing
Metabyte Networks
MetaTV, Inc.
Microsoft Corporation
Microtune
Miller & Kreisel Sound Corp.
Mindport, Inc.
MIT Advanced TV & Signal Processing Group
Mitsubishi Consumer Electronics America, Inc.
Mixed Signal Technologies
Motion Picture Association of America

Motorola, Inc.
MSTV
NagraVision
National Association of Broadcasters
National Cable Telecommunications Association
NBC
NCAM
nCUBE
NEC America - Broadcast Equipment Company
News Corporation
Newtec America, Inc.
NHK General Bureau of America
Nielsen Media Research
NIST
NTV International (NTVIC) (Japan)
NxtWave Communications
OpenTV
Oren Semiconductor
Pace Micro Technology
Panasonic AVC
Panasonic Broadcast Systems Company
Pangeatech Inc.
ParkerVision, Inc.
Pegasus Broadcast Television
Philips Electronics North America Corp.
Pioneer Electronic Corporation
PowerTV, Inc.
Public Broadcasting Service
Ravisent Technologies
Research Channel
Rohde & Schwarz
Rosum Corporation
SAMPO Corporation of America
Samsung Electronics America, Inc.
SANYO Manufacturing Corporation
Sarnoff Corporation
Scientific Atlanta
Scottsdale Television Labs
Sencore, Inc.
Sharp Electronics Corporation
Sinclair Broadcast Group, Inc.
Skystream Networks
Skyworth (China)
Snell & Wilcox

Society of Broadcast Engineers
SCTE
SMPTE
Sony Electronics, Inc.
Sony Pictures Entertainment
ST Microelectronics
Sun Microsystems, Inc.
Tandberg Television
TCL Electronics
TSTC / IC2
Tektronix
Tektronix Cambridge Ltd.
Telcordia Technologies
Telecom. Labs CHT (Taiwan)
Teleview (Korea)
Televisa (Mexico)
Telos
Teralogic, Inc.
Thales Broadcast & Multimedia
Thomson Consumer Electronics
Toshiba America Consumer Products, Inc.
Tribune Broadcasting Company
Triveni Digital, Inc.
Turner Engineering, Inc.
TUXIA Inc.
TV - UNAM
TVia, Inc.
Universal Studios
Verizon
Verticalband Ltd. (UK)
Warner Bros.
Wind River
Wohler Technologies, Inc.
WRAL-HD
Zenith Electronics Corporation
Zenus Technologies, Inc.

RESOLVED, that the above organizations are recognized as Voting Members of the Corporation without further application in accordance with the bylaws of the Corporation.

5. Budget and Finance Committee

RESOLVED, that there shall be a budget and finance committee of __ members of the Board of Directors which shall have the authority to exercise all of the powers of the Board in the financial affairs of the Corporation while the Board is not in session, and the budget and

finance committee shall prepare a proposed annual budget for the Corporation in accordance with the bylaws.

FURTHER RESOLVED, that _____, _____, _____
_____ be and are hereby designated as members of the budget and finance committee and _____
_____ be chairperson thereof.

6. Bank Account

RESOLVED, that the treasurer be and hereby is authorized to open bank accounts on behalf of the Corporation with Suntrust Bank and Independence Federal Savings Bank (the "Banks").

FURTHER RESOLVED, that until otherwise ordered, the Banks be and hereby are authorized to make payments from the funds of the Corporation on deposit with it upon and according to the check of the Corporation signed by any of the president, the treasurer, the vice chairman or the chairman of the budget and finance committee of the Corporation.

FURTHER RESOLVED, that the corporate banking resolutions of the Banks contained in the certificate which is attached hereto as Exhibit A are hereby approved and adopted, and that the appropriate officers of the Corporation are authorized and directed to execute such documents and take such action as may be necessary or appropriate to give effect to such resolutions.

7. Bill of Sale, Assignment and Assumption

Upon motion duly made, seconded and carried, it was

RESOLVED, that the president is authorized and directed to execute, on behalf of the Corporation, the Bill of Sale and to carry out for and on behalf of the Corporation all actions necessary and incident thereto to assume the entire property, assets, liabilities and business of ATSC.

8. Fiscal Year

Upon motion duly made, seconded and carried, it was

RESOLVED, that the fiscal year of the Corporation shall begin the first day of the month of January in each year and end on the last day of December of each year.

9. Tax Matters

RESOLVED, that the officers of the Corporation are authorized and directed to take any and all actions necessary to qualify the Corporation for exemption from federal income tax as a Membership organization under Section 501(c)(6) of the Internal Revenue Code.

FURTHER RESOLVED, that the officers of the Corporation are authorized and directed to take any and all actions necessary to qualify the Corporation for exemption from District of

Columbia income tax as a Membership organization under Section 47-1802.1 of the District of Columbia Code.

FURTHER RESOLVED, that the officers of the Corporation are authorized and directed to obtain for the Corporation a tax identification number and to take any and all additional actions necessary to ensure the compliance by the Corporation with federal and local tax laws.

10. General Authorizations

RESOLVED, that in addition to the specific authorizations heretofore conferred upon the officers of the Corporation, the officers of the Corporation be, and each of them is, authorized, directed and empowered to do or cause to be done any and all further acts and things, including the execution of any and all such further documents, papers and instruments, as they may deem necessary or appropriate in order to carry into effect the purposes and intent of the foregoing resolutions.

11. Seal

RESOLVED, that the seal of the Corporation shall consist of a circular impression or stamp bearing the name of the Corporation around the rim and the phrase "District of Columbia," the word "Incorporated" and the year of incorporation in the center.

FURTHER RESOLVED, that the seal, an impression of which appears below, is adopted as the seal of the Corporation.

Corporate Resolution and Certificate of Incumbency for Deposit Accounts

I, the undersigned hereby certify that I am the Secretary and custodian of the records of the Advanced Television Systems, Inc. a corporation duly organized and existing under the laws of the District of Columbia (the "Corporation"); that the following is a true and correct copy of certain resolutions duly adopted by the Board of Directors of said corporation at a meeting duly held on the 31 day of January, at which a quorum was present; and the following resolutions are in conformity, and not in conflict, with the charter and by-laws of said corporation and have not since been rescinded or modified.

Deposit Accounts

Resolved, that Suntrust Bank and Independence Federal Savings Bank ("Banks") be and are hereby designated depositories of this corporation; that any one of the officers listed immediately below be and is hereby authorized to enter into on behalf of this Corporation any of the Bank's checking, savings, time deposit, wire transfer, night deposit or cash management and corporate service agreements or other deposit account agreements; that this Corporation shall be bound by both the terms and conditions of said agreements and Bank's rules and regulations related thereto, all as now existing or as amended from time to time; and that any officer of this Corporation with the title shown below is hereby authorized on behalf of this Corporation to endorse for deposit with said Banks, or for negotiation or collection, any and all checks, drafts, certificates of deposit, savings certificates, items or other instruments or written orders for the payment of money payable to this Corporation, which endorsement, if any, may be in writing, by stamp, or otherwise affixed, with or without designation or signature of the person so endorsing, it being understood that all prior endorsement on such items are guaranteed by this Corporation, regardless of the lack of an express guarantee in the endorsement of this corporation.

Further resolved, that said Banks be and are hereby directed to honor, pay and charge to the accounts of this Corporation, without inquiry as to the circumstances of the issuance or application of the proceeds of checks, drafts, items or other written orders on any of this Corporation's accounts with the Banks, whether or not payable to, endorsed or negotiated by or for the credit of any person signing the same or any other officer of this Corporation, when signed by any two of the following officers of this Corporation with the title shown below.

Wire Transfer

Further resolved, that any of the officers of this Corporation with the title shown below are hereby authorized to execute the Funds Transfer Agreement to authorize the transfer of funds to other financial institutions or other accounts at the Banks by written instructions, telephone or terminal communication device and all the exhibits thereto, and to appoint persons from time to time who are authorized to request such transfers on behalf of the Corporation.

Officer Title:

President
Vice Chairman / Chairman of Budget and Finance Committee
Treasurer

Exemption

I certify that the above named corporation is eligible to earn interest in compliance with Regulation D of the Federal Reserve Act (12CFR 204) as a Non-Profit Organization that is operated primarily for Religious, Philanthropic, Charitable, Educational, Political or other similar purposes under the following section: 501 (C) (6)

General

Further Resolved, that the custodian of the records of this Corporation be and is authorized and directed to furnish said Banks a certified copy of these resolutions, which resolutions shall continue in full force and effect until written notice of the rescission or modification of the same has been received by the Banks, and the Banks have had a reasonable time to act on said change; and to furnish said Banks the names and specimen signatures of the persons named therein and such persons from time to time holding the positions named therein, on the Bank's usual form of signature card or on a form acceptable to the Banks.

I hereby certify that the following are the names and the specimen signatures of the authorized persons listed in the foregoing resolutions and that each person presently holds the title or designation indicated and has full authority for all acts noted herein.

Officer Name:

Officer Title:

Signature:

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed the seal of said Corporation this thirty-first day of January 2002.

Seal:

Title

Subject: [ATSC-board] Nomination of an ATSC Chairman
Date: Tue, 29 Jan 2002 17:32:01 -0500
From: Victor Tawil <vtawil@mstv.org>
To: "board@list.atsc.org" <board@list.atsc.org>

Dear Board Members -

With the restructuring of ATSC behind us, we are now faced with the difficult task of electing a volunteer Chairman for the organization at our January 31st Board meeting. Some of you may be interested in being considered for that position while others, such as myself, are not or cannot serve in that capacity. In an attempt to move this process forward, I am proposing a procedure by which the election of the ATSC Chairman can be conducted in a fair and equitable manner and would make the most efficient use of time in the Board meeting. Specifically I propose that:

1. We first develop a list of eligible candidates. All directors are eligible candidates. Directors that wish to make it known that they do not want to be considered for the Chairmanship position (such as myself) may reply to this email reflector by making such a statement preferably prior to the Thursday meeting, thus removing their names from the list of eligible candidates
2. A blind vote be held in Executive Session of the Board meeting whereby each Director votes for no more than two of the eligible candidates from the list of eligible candidates. The Chairman would be elected according to the person who received the most votes. In case of a tie, a run-off vote would be conducted.

Sincerely
VT

**ATSC Membership Report
January 31, 2002**

New Member:

ParkerVision, Inc. is a manufacturer of production automation equipment that facilitates the integration of data for interactive television.

Resignations:

AGICOA
Extel
Hewlett Packard
IBM
LSI Logic
Viacom
Wavexpress
WHD-TV

Name Change:

ADC Telecommunications to Axcera

Total Members:

January 31, 2002 162

Letter Ballot Status

Letter Ballot Description	Vote	Comments
ATSC Ballots:		
Incorporation of ATSC	40 yes, 0 no, 0 abs, 131 nv	Approved December 31, 2001
Budget 2002	33 yes, 2 no, 2 abs, 133 nv	Approved December 25, 2001
T3 Ballots:		
Data Broadcast A/90 Amendment 1	20 yes, 0 no, 0 abs, 19 nv	Approved January 8, 2002
Editorial Priviledge	19 yes, 1 no, 0 abs, 19 nv	
Data Broadcast A/90 Corrigendum 1	19 yes, 1 no, 0 abs, 19 nv	Approved January 8, 2002
Editorial Priviledge	19 yes, 1 no, 0 abs, 19 nv	comment review
Data Broadcast A/90 Corrigendum 2	18 yes, 0 no, 1 abs, 20 nv	Approved January 10, 2002
Editorial Priviledge	16 yes, 1 no, 2 abs, 20 nv	comment review
Synchronized/Asynchronous Trigger Standard	15 yes, 0 no, 1 abs, 23 nv	Approved January 17, 2002
Editorial Priviledge	15 yes, 0 no, 1 abs, 23 nv	
IP Multicast Seeions over A/90		closes January 31, 2002
PSIP Guidelines - Recommended Practice		closes January 31, 2002
(Informational Doc) Code Point Issues Report		closes February 7, 2002

Advanced Television Systems Committee
2001 Financial Report
1/29/2002

	Approved 2001 Budget	Jan 1 - Dec 31 Actual	Projection 2001
Dues	\$1,150,040	\$1,150,991	\$1,150,991
Interest	26,400	22,663	22,538
Seminar income		5,438	5,488
Sales of ATSC Standard	0.00	400	400
TOTAL INCOME	\$1,176,440	\$1,179,492	\$1,179,417
Salaries	\$681,920	\$681,842	\$681,920
Taxes & Benefits	173,920	172,008	174,570
Travel & In-Town Expenses	59,500	48,623	49,112
TOTAL PERSONNEL & TRAVEL	\$915,340	\$902,473	\$905,602
Professional Fees	\$38,180	\$94,245	\$94,885
Leasing Expenses	50,150	45,746	46,370
Office Expenses	50,540	32,501	33,138
Business Taxes & Insurance	11,850	7,318	7,318
Meeting Expenses	15,000	26,974	28,656
Fixed & Non-Fixed Assets	8,500	1,168	2,378
Miscellaneous (includes ATTC)	76,550	79,286	80,076
TOTAL OTHER EXPENSE	\$250,770	\$287,238	\$292,821
CONTINGENCY	\$6,000		
GRAND TOTAL EXPENSES	\$1,172,110	\$1,189,710	\$1,198,423
ESTIMATED NET INCOME	\$4,330	(\$10,218)	(\$19,006)
Cash Balance on December 31, 2001	\$602,722		

Corporate Resolution and Certificate of Incumbency for Deposit Accounts

I, the undersigned hereby certify that I am the Secretary and custodian of the records of the Advanced Television Systems, Inc. a corporation duly organized and existing under the laws of the District of Columbia (the "Corporation"); that the following is a true and correct copy of certain resolutions duly adopted by the Board of Directors of said corporation at a meeting duly held on the 31 day of January, at which a quorum was present; and the following resolutions are in conformity, and not in conflict, with the charter and by-laws of said corporation and have not since been rescinded or modified.

Deposit Accounts

Resolved, that Suntrust Bank and Independence Federal Savings Bank ("Banks") be and are hereby designated depositories of this corporation; that any one of the officers listed immediately below be and is hereby authorized to enter into on behalf of this Corporation any of the Bank's checking, savings, time deposit, wire transfer, night deposit or cash management and corporate service agreements or other deposit account agreements; that this Corporation shall be bound by both the terms and conditions of said agreements and Bank's rules and regulations related thereto, all as now existing or as amended from time to time; and that any officer of this Corporation with the title shown below is hereby authorized on behalf of this Corporation to endorse for deposit with said Banks, or for negotiation or collection, any and all checks, drafts, certificates of deposit, savings certificates, items or other instruments or written orders for the payment of money payable to this Corporation, which endorsement, if any, may be in writing, by stamp, or otherwise affixed, with or without designation or signature of the person so endorsing, it being understood that all prior endorsement on such items are guaranteed by this Corporation, regardless of the lack of an express guarantee in the endorsement of this corporation.

Further resolved, that said Banks be and are hereby directed to honor, pay and charge to the accounts of this Corporation, without inquiry as to the circumstances of the issuance or application of the proceeds of checks, drafts, items or other written orders on any of this Corporation's accounts with the Banks, whether or not payable to, endorsed or negotiated by or for the credit of any person signing the same or any other officer of this Corporation, when signed by any two of the following officers of this Corporation with the title shown below.

Wire Transfer

Further resolved, that any of the officers of this Corporation with the title shown below are hereby authorized to execute the Funds Transfer Agreement to authorize the transfer of funds to other financial institutions or other accounts at the Banks by written instructions, telephone or terminal communication device and all the exhibits thereto, and to appoint persons from time to time who are authorized to request such transfers on behalf of the Corporation.

Officer Title:

President
Vice Chairman / Chairman of Budget and Finance Committee
Treasurer

Exemption

I certify that the above named corporation is eligible to earn interest in compliance with Regulation D of the Federal Reserve Act (12CFR 204) as a Non-Profit Organization that is operated primarily for Religious, Philanthropic, Charitable, Educational, Political or other similar purposes under the following section: 501 (C) (6)

General

Further Resolved, that the custodian of the records of this Corporation be and is authorized and directed to furnish said Banks a certified copy of these resolutions, which resolutions shall continue in full force and effect until written notice of the rescission or modification of the same has been received by the Banks, and the Banks have had a reasonable time to act on said change; and to furnish said Banks the names and specimen signatures of the persons named therein and such persons from time to time holding the positions named therein, on the Bank's usual form of signature card or on a form acceptable to the Banks.

I hereby certify that the following are the names and the specimen signatures of the authorized persons listed in the foregoing resolutions and that each person presently holds the title or designation indicated and has full authority for all acts noted herein.

Officer Name:

Officer Title:

[Mark Richer] _____

[President] _____

[Tara Healy] _____

[Treasurer] _____

[Lynn Claudy] _____

[Director] _____

Signature:

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed the seal of said Corporation this thirty-first day of January 2002.

Seal:

Title

ATSC
Board of Directors

Recommendations Concerning Utilization of a Robust Service Mode

ATSC T3/S9 is in the process of developing optional modes for the A/53 Standard that will support transmission of a “robust” stream. A major attribute of this stream is a reduction of the minimum carrier to noise threshold required for successful reception. While T3/S9 is defining the specifications for transmission, additional standards work is necessary to enable potential applications that utilize the robust stream. The goal is to develop the necessary specifications that give broadcasters the option to offer new services and receiver manufacturers the ability to implement new features and specialized devices. The following are recommendations concerning related standards activities that should be undertaken by T3:

1. T3 should consider a standard for video and audio coding to be used over the robust channel. Coding should be based on the most efficient technology available. A provision for non real-time video/audio service should be developed. An example of an application for the non real-time mode would be transmission of news, weather and traffic reports to receivers with an appropriate amount of cache storage. Non-real time carousel type transmission would simplify development of services to pedestrian and mobile devices. Specifications for content advisory and captioning should be considered.
2. T3 should consider a standard, or revisions to existing standards, to provide system information for discovery and tuning of current services in the robust mode.
3. T3 should consider a standard to associate video and audio services in the robust stream with services in the normal stream. Specifications for signaling of this association including synchronization should be developed. This association should enable the utilization of the robust channel as a “fall-back” service for the normal service.
4. T3 should consider extensions to PSIP, as used in the normal mode, that provide program information about services in the robust mode.
5. T3 should consider any necessary standards or revisions to existing standards (such as A/90) to support data broadcasting applications using the robust stream.

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Procedures

For

Technology Group and Specialist Group Operation

OF

ADVANCED TELEVISION SYSTEMS COMMITTEE, INC.

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for

Technology Group and Specialist Group Operation

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Procedures

for

Technology Group and Specialist Group Operation

1. Introduction.

1.1. The primary purpose of this document is to provide description of procedures for the operation of Technology Groups, Specialist Groups and other technical subcommittees of the ATSC. This document is intended to be consistent with the ATSC Articles of Incorporation and Bylaws, which shall take precedence in the case of any conflict.

2. Responsibility of a Chairperson

2.1. As administrative head of a Technology Group, Specialist Group, or other technical subcommittee, the chairperson is charged with the responsibility to conduct his or her subgroup's activities in a manner prescribed in or consistent with the Bylaws and the following sections of these procedures.

3. Appointment of Vice Chair

3.1. A chairperson of a Technology Group or Specialist Group may appoint a Vice Chair. In the case of the chairperson's absence, the Vice Chair will temporarily assume the responsibilities of the chair.

4. Appointment of Secretary

4.1. All Technology Groups and Specialist Groups must have a secretary to take minutes and track documents. A Vice Chair may also serve as the Secretary.

4.2. In the event that a group does not have a permanent secretary or if the secretary is not present, the chair may appoint any meeting attendee to act as secretary for that meeting.

5. Scope of Work

5.1. The Scope of Work of a Technology Group shall be established and revised in accordance with the ATSC Bylaws.

5.2. The parent group shall approve the Scope of Work of a Specialist Group or other subcommittee.

5.3. Technology Groups, Specialist Groups and other subcommittees should review their Scope of Work on an annual basis.

6. Work Plan

- 6.1. Technology Groups and Specialist Groups shall maintain a work plan, which includes major milestones and target completion dates.
- 6.2. A [template for creation of work plans](#) is available on the ATSC web site.

7. Meetings

7.1. Scheduling

- 7.1.1. The chairperson of each group is responsible for calling meetings at intervals necessary to handle its work. There is no fixed timetable, and these intervals may vary according to the status of the work. However, meeting notices must be distributed as specified in the Bylaws.
- 7.1.2. When scheduling meetings, efforts should be made to avoid conflicts with other ATSC or related industry meetings. However, it is understood that this may not always be possible.
- 7.1.3. The ATSC shall not be responsible for costs incurred in conducting a meeting, although some meeting expenses may be offset if deemed appropriate by the ATSC President.
- 7.1.4. The group chair shall provide the following information to the ATSC office:
 - Date and times of meeting
 - In person or conference call; if in-person, indicate location or request that the ATSC locate a venue.
 - Request for phone bridge
 - A/V needs
 - Number of expected attendees and/or call participants

7.2. Announcement

- 7.2.1. Meetings shall be announced on the appropriate email reflector or distribution list.
- 7.2.2. All Technology Group & Specialist Group meetings shall be listed on the ATSC Web site.

7.3. Conference call participation

- 7.3.1. Participants in ATSC technical activities are encouraged to attend in-place meetings in person. At the discretion of the chairperson, dial-in teleconference capability may be provided. However, the quality of the system cannot be guaranteed and the use of the conferencing system shall not unduly interfere with the meeting. The chair may discontinue use of the conferencing system if it becomes disruptive to the meeting.
- 7.3.2. In some situations it may be more practical to have groups meet by conference call rather than an in-place meeting. Meetings by conference call shall follow normal procedures and rules.

7.4. Agenda

7.4.1. In preparation for a meeting, the chair shall draft an agenda. The agenda shall be reviewed at the beginning of the meeting and revised if necessary by the group.

7.4.2. The following agenda items are required for all Technology Groups and Specialist Groups:

Consideration of Draft Agenda
Approval of Minutes from Previous Meeting
Next Meeting Date & Location

7.4.3. A [template for creation of agendas](#) is available on the ATSC web site.

7.5. Attendance List

7.5.1. All meeting attendees shall sign an attendance list and non-disclosure statement (described in section 9.20) in a form similar to the [sign in sheet template](#) available from the ATSC Web Site. Those who participate by phone must send an email to the group secretary confirming participation and adherence to the non-disclosure statement.

7.6. Minutes

7.6.1. The chairperson and secretary shall ensure that accurate minutes are kept of all meetings.

7.6.2. The minutes of a meeting shall reflect all actions and decisions taken at the meeting. The minutes shall also contain summaries of the discussions of such items and of such other material items as to which no action was taken. At the request of a meeting participant, brief written comments or objections provided by the participant shall be attached to the minutes provided that the statement is read to the meeting participants prior to the close of the meeting.

7.6.3. The secretary or chair, for the purpose of writing and confirming the minutes, may record meetings.

7.6.4. Minutes of all meetings shall include an accurate attendance list. At the discretion of the chairperson of a technology group, minutes may carry a running attendance summary as an aid in identifying eligibility to vote on standards issues.

7.6.5. Minutes shall be in a form similar to the [template for minutes](#) available from the ATSC web site.

7.6.6. A copy of the draft technology group minutes shall be sent to the ATSC for review prior to distribution. No technology group minutes shall be distributed to the mailing list prior to such review.

7.6.7. Minutes of a meeting should be reviewed, revised as necessary and approved at the next meeting of the group.

7.6.8. Approved minutes are the official record of the meeting.

7.6.9. The chairperson and secretary of each group shall maintain a complete file of the meeting minutes.

7.6.10. The chair shall also furnish the ATSC office with a copy of all minutes

8. Communications

- 8.1. Technology group members and observers should be advised that inquiries from the press for information are to be referred to the President or Chairperson of the ATSC.
- 8.2. All members, observers and invited attendees at all technology group and subgroup meetings shall be requested to execute and honor the following nondisclosure agreement:

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.

Any persons refusing to sign this agreement shall be asked to leave the meeting.

9. Use of email reflectors & web site

- 9.1. ATSC maintains email reflectors and a “Members Only” area of its web site to facilitate the work of the Committee.
- 9.2. ATSC reserves the right to charge a reasonable fee to non-members who wish to subscribe to ATSC email reflectors or access the “Members” only area of the website.
- 9.3. All users of the ATSC “Members Only” area of the ATSC web site and subscribers to ATSC email reflectors including those operated by other organizations on behalf of ATSC may not disclose information exchanged on these reflectors or posted in the “Members Only” area of the ATSC web site without authorization from the President or Chairperson of ATSC, or the chairperson of the applicable Technology Group or Specialist Group.

10. Document numbering and logs

10.1. All Technology Groups, and Specialist Groups should number documents based upon the following format:

ATSC [group] Doc: [#]
[Date of original]
Revision [#] [Date]
Revision [#] [Date]
Revision [#] [Date]

Example:

ATSC T3/S8 Doc. – 437
4 April 2001
Rev. 1 - 3 May 2001
Rev. 2 - 25 June 2001
Rev. 3 – 3 July 2001
Rev. 4 – 10 July 2001
Rev. 5 – 11 July 2001

10.2. All Technology Groups and Specialist Groups shall maintain a document log in a format consistent with the document log template available on the ATSC web site.

11. ATSC Style Guide for Technical Documents

A detailed style guide has been developed to assist authors and editors of ATSC technical documents in the production of works that will ultimately become ATSC Standards, Recommended Practices, or Engineering Guides. The guidelines given in the document, along with the companion template, are intended to make the process of generating documents easier for all of those involved in the effort. The [ATSC Style Guide](#) can be found on the ATSC Web Site:

12. Comment Resolution

12.1. Upon completion of technology group ballots, the technology group should review and consider all comments. A record of these comments and their disposition should be provided to the ATSC office in a format similar to the comment resolution template available on the ATSC website.

12.2. Upon approval of documents by the ATSC membership, the originating Technology Group shall review all substantive comments and consider them in future revisions of the document.

13. Intellectual Property

13.1. Chairs of Technology Groups and Specialist Groups shall make participants aware of ATSC's Patent Policy (E/21) and Copyright and Reference Policy (E/120). Chairs of Technology Groups and Specialist Groups shall notify the President of ATSC any known issues regarding these policies.

14. Candidate Standard

- 14.1. Upon elevation of a Working Draft to Candidate Standard status, the document will be made publicly available on the ATSC web site.
- 14.2. Candidate Standards should include the following note:
- 14.3. This specification is being put forth as a Candidate Standard by the [] Specialist Group. This document is an editorial revision of the Working Draft (T#-#####) dated []. All ATSC members and non-members are encouraged to review and implement this specification and return comments to [email address]. ATSC Members can also send comments directly to the [] Specialist Group. The ATSC believes this specification is stable. The specialist group may still update it, but only to clarify it's meaning. If, unexpectedly, serious problems are found, it will be returned to Working Draft status. Otherwise, it is expected to progress to Proposed Standard after a duration of [] as Candidate Standard.

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DIGITAL CABLE INTEROPERABILITY

I. Introduction

Digital cable interoperability means that content providers, including terrestrial broadcasters, can deliver digital television programming to consumer-owned digital television receivers over cable television distribution plants. The availability of retail-market cable-ready digital television receivers is an important element in achieving digital cable interoperability that has been and still is highly desired by most of the major stake holders – including consumers, cable television operators, broadcasters, content providers and consumer electronics manufacturers. The consumer expects the same convenience that exists today with analog cable-ready television receivers, where a cable-ready television receiver can be purchased off-the-shelf at retail and be connected directly to the cable television system to receive a basic service package, and perhaps some premium services, without requiring a separate set-top box supplied by the cable operator. The cable operator seeks to minimize capital expenses and operational burdens required by having to stock, deliver and manage digital set-top boxes. The cable operator would like to be able to establish, at the lowest possible cost, a subscriber relationship with a basic tier of services, which can be easily upgraded to premium services. Broadcasters and content providers want assurance that their digital program offerings are universally available in cable television homes and consumer electronics manufacturers want to be able to offer a wide variety of cable-ready digital television products having features that are differentiable in the marketplace.

Cable operators and the consumer electronics industry have indeed taken an important step towards achieving these objectives by establishing the CEA/NCTA Technical and PSIP Agreements of February 21, 2000 that recommended a technical solution for cable operators and consumer electronics manufacturers. The Agreements¹ specified that cable operators carry basic programming services in-the-clear, that cable-ready digital television receivers be able to receive, navigate and tune to such basic services, and that cable-ready digital television receivers also be equipped with a standardized POD (Point-Of-Deployment) module interface that can accept a POD module supplied by the cable operator to allow descrambling of premium subscription services. In December 1999, prior to the CEA/NCTA Agreements, CEA adopted EIA/CEA-818, Part II of which is a standard for a cable-ready digital television receiver that will support the services defined in the CEA/NCTA Agreements. Subsequent to the filing of the Agreements with the FCC on February 21, 2000, the FCC adopted a Report and Order that defines three types of cable-ready digital television receivers. The Type 1 cable-ready digital receiver supports the basic and premium services defined in the CEA/NCTA Agreements.

The ATSC strongly supports the spirit and approach of the CEA/NCTA Agreements and the related ATSC, CEA and SCTE standards and urges that all industry

¹ These Agreements, filed with the FCC on February 21, 2000, were the result of intense negotiations between CEA and NCTA.

segments work together to implement both the spirit and the detail of the Agreements as rapidly as possible.

This document provides an overview of the standards, agreements and rules that relate to digital cable interoperability. The need to update the February 2000 Agreements is addressed. A number of implementation issues are enumerated, and because of their importance in enabling consumer electronics manufacturers to design, build and successfully market a Type 1 cable-ready digital television receiver, this document also lists several non-technical issues that must be resolved. This document does not address the important problem of ensuring interoperability between terrestrial broadcast digital television signals and the existing proprietary digital set-top boxes currently deployed in cable systems, nor does it address issues relating to must-carry or retransmission consent.

II. Standards, Agreements, Specifications and Rules

There are a large number of standards, agreements, specifications, and FCC rules that relate to the interoperability of consumer electronics products with cable television systems. The relevant documents are listed in the attached tables I through VI as follows:

- Table I ATSC Standards
- Table II CEA Standards
- Table III SCTE Standards
- Table IV CEA/NCTA Agreements
- Table V OpenCable Specifications
- Table VI FCC Rules

By and large, the published ATSC, CEA and SCTE standards listed in Tables I, II and III and referenced in the CEA/NCTA Agreements provide a consistent set of standards that will enable a Type 1 cable-ready digital television receiver to be connected directly to a receiver-ready digital cable television system to provide basic analog programming and both basic and premium digital programming to the viewer.

The key standards in the ensemble are the Network Interface Standard, SCTE DVS-313r5 and the Host-POD Interface Standard, SCTE DVS-295r5. These standards reference many other ATSC, CEA and SCTE standards, some of which also reference these standards. The CEA/NCTA Agreements also reference many ATSC, CEA and SCTE standards, but they do not reference DVS-313r5 and DVS-295r5 since neither standard existed in February 2000. As a consequence there are some inconsistencies between the Agreements and the standards. An update to the Technical Agreement is required to make it consistent with DVS-313r5 and DVS-295r5; the PSIP Agreement should also be revised to clarify its meaning in certain respects. These needs are discussed further in Section IV below.

III. Brief History of the Development of the Network Interface and Host-POD Interface Standards

A. Network Interface Standard

1. EIA/CEA-818 Part I, approved in December 1999 was the initial document.
2. The CEA/NCTA Technical Agreement filed in February 2000 was the second document.
3. DVS-313r5 approved in April 2001 is the final document.

B. Host-POD Interface Standard

1. DVS-131r7 approved in January 1999 was the initial document.
2. DVS-295 introduced in January 2000 was the second document.
3. DVS-295r5 approved in November 2001 is the final document.

IV. Need to Update the Technical and PSIP Agreements

The Technical Agreement predates the adoption by SCTE of the Network Interface Standard, DVS-313r5, by over one year and, as a result, there are a number of differences between the documents. No industry participant has asserted that DVS-313r5 fails to provide a technical structure that will enable digital terrestrial broadcast signals to be delivered over cable. Therefore the Technical Agreement should be updated to match it.

The PSIP Agreement, "Carriage of PSIP over Cable Plants", describes requirements, implementation scenarios and an implementation plan for the carriage of PSIP data over cable television plants. Certain aspects of the Agreement require clarification, either by modification or replacement of the document. Two specific issues are:

- The Agreement does not explicitly address Virtual Channel data and EPG data as separate entities. The Agreement clearly states that "(t)hese requirements are aimed at the *carriage* of PSIP through the distribution chain and not its creation." The intent of this qualification, as understood by those participating in the drafting of the Agreement, was that it applied only to EPG data, and that, obviously, in-band Virtual Channel data would, in some instances, have to be created by the cable operator. In fact, the PSIP Agreement states elsewhere that "if a digital Transport Stream (TS) includes one or more services carried in-the-clear, that TS shall include virtual channel data in-band in the form of ATSC A/65". Otherwise, it would not be possible to navigate in-the-clear programs without a POD module in place. Nevertheless, some in the cable community have said that they believe that it is not necessary to provide in-band Virtual Channel data unless the content provider supplies it. The PSIP Agreement should make it absolutely clear that Virtual Channel data must always be present in-band on all

Transport Streams that carry programs in-the-clear, whether or not any EPG data is available from the content provider.

- The second need for clarification in the PSIP Agreement relates to carriage of event information (EPG) data. The Agreement states that "(w)hen sent out-of-band, event information data shall conform to SCTE DVS-234r1 (profiles 4 or higher)." It is not clear whether this requirement is intended to apply to all event information data, regardless of its source, or only to event information data that is supplied by the content provider. Again the PSIP Agreement needs to make it clear that this requirement applies to all event information data, regardless of its source.

V. Implementation Issues

This Section discusses a number of technical and operational issues that relate to the implementation of the CEA/NCTA Agreements to enable support of Type 1 cable-ready digital television receivers. None of these issues is a show-stopper; the necessary standards are in place. Cable operators will, in some cases however, need to obtain the necessary hardware and software to implement the Agreements.

A. Interoperability Testing (Plugfests)

Although the Network Interface and Host-POD Interface Standards, DVS-313r5 and DVS-295r5, are completed, they have not been fully tested. There is a strong need to conduct interoperability tests (frequently called plugfests) that will fully exercise these important interface standards. CableLabs has conducted limited tests of these standards as part of the OpenCable program, but full testing of all supported functions has not been done.

B. Need to Simulcast System Information

Current digital set-top boxes do not support the POD-Host Interface and many aspects of the operation of the current digital set-top boxes, particularly the navigation functions, require proprietary System Information that is different from, and incompatible with, that specified in the CEA/NCTA Agreements and defined in the appropriate ATSC, CEA and SCTE standards. Consequently there is a severe chicken-and-egg problem. There are no cable television systems that will currently support a Type 1 cable-ready digital television receiver built to the EIA/CEA-818C Part II standard, and until there is certainty that there will be such cable television systems, there will be no Type 1 cable-ready digital television receivers. Compliance with the ATSC, CEA and SCTE standards that will support Type 1 cable-ready digital television receivers while continuing to support the millions of proprietary set-top boxes that are in place will require that certain System Information be simulcast for as long as the proprietary set-top boxes are in use. The required extra bandwidth is small and should not be a burden to cable operators.

C. Re-Multiplexing

Since the modulation method and data rate on cable differ from the ATSC 8-VSB standard, cable headends will, in general, have to de-modulate and re-modulate terrestrial broadcast signals picked up off-air. It may also be necessary to re-multiplex the broadcast signal. Different scenarios may apply if the broadcaster delivers the signal directly to the cable headend. In any event, it is likely that two broadcast signals will be combined into a single 38-Mbs Transport Stream for delivery using 256-QAM. The re-multiplexing will require rebuilding the PSIP information, MGT, VCT, EIT's etc. Also, the out-of-band Service Information required to construct the System Information defined in DVS-234r1 as well as the System Information required to support existing legacy set-top boxes must be provided to the out-of-band data transmission system. In most cases it will be necessary to derive some of this information from the terrestrial broadcast PSIP.

D. In-Band PSIP

The CEA/NCTA Agreements require that PSIP in accordance with ATSC A/65A be present on all Transport Streams that carry programs in-the-clear. Depending on the source of the programs to be carried on a Transport Stream, the PSIP information, both the Virtual Channel Table and the EIT's, is likely to have to be rebuilt at the cable system headend.

E. In-Band PSI

The CEA/NCTA Technical Agreement, EIA/CEA-818C and DVS-313r5 all require that the caption service and content advisory descriptors be present in the PMT. ATSC A/65A requires them to be present in the PMT for cable transmission, but their presence in the PMT is optional for terrestrial broadcast. If broadcasters do not include the descriptors in the PMT, it will be necessary to insert them at the cable headend. There is a need to ensure that packet replacement and timing are done correctly.

F. Out-of-Band System Information.

The CEA/NCTA Technical Agreement, EIA/CEA-818C Part I, DVS-313r5 and the PSIP Agreement all require out-of-band System Information as defined in DVS-234r1. The CEA/NCTA PSIP Agreement explicitly requires profile 4 or above for event information data. Profiles 4-6 require AEIT data. In the case where the data for the AEIT's is derived from the PSIP information contained in a terrestrial broadcast signal, it will be necessary to convert the EIT data to AEIT format.

G. Channel Numbering

Terrestrial broadcast uses a two-part channel number, whereas cable systems use a single-part number. The SCTE standards provide the ability for cable to label a

channel with either a single-part or a two-part number either with in-band PSIP or with out-of-band System Information. Terrestrial broadcasters believe that they have the right to maintain the two-part number both in-band and out-of-band and cable system operators believe that they have the right to relabel a broadcast program with a single-part number both in-band and out-of-band. Receiver manufacturers believe that the in-band and out-of-band labels, whether two-part or single-part, should be the same to avoid consumer confusion. This is not a technical issue since the standards will support all possibilities.

H. Use of 8-VSB Modulation

EIA/CEA-818C Part I explicitly specifies parameters for 8-VSB and 16-VSB. DVS-313r5 and the Technical Agreement do not specify parameters for 8-VSB and 16-VSB. The FCC has acknowledged the use of 8-VSB on cable. Although the documents are not consistent, this is not a technical issue. The cable television industry has said that it does not intend to use 8-VSB or 16-VSB beyond some current temporary situations that are being phased out. The broadcasters and some television receiver manufacturers feel strongly that 8-VSB and/or 16-VSB should not only be allowed on cable, but also encouraged. Since EIA/CEA-818C Part II requires Type 1 cable-ready receivers to accept 8-VSB signals, there is no operational problem.

VI. Non-Technical Issues

Non-technical issues are a larger obstacle to achieving digital cable interoperability than the need to update the CEA/NCTA Agreements and the Implementation Issues discussed in Sections IV and V above. The non-technical issues listed in this Section are issues that are of great concern to terrestrial broadcasters and consumer electronics manufacturers and are presented from the perspective of those industries. Since the cable television industry declined to participate in the drafting of this white paper, we have been unable to include the non-technical issues that may be of great concern to the cable industry.

A. Receiver Requirements

The EIA/CEA-818C Standard and the OpenCable CFR-OCT-UDC-INT03-010515 Specification both define requirements for cable-ready television receivers. EIA/CEA-818C Part II addresses an FCC Type 1 receiver, whereas the OpenCable specification addresses an FCC Type 2 receiver by including the 1394 interface as a requirement. There are many other differences. The OpenCable specification has not been updated to reflect the latest version of DVS-313. Also, the OpenCable specification is silent on how the navigation function is supported in the receiver.

B. Compliance by Cable Systems with SCTE Interface Standards

Since the SCTE Interface Standards are voluntary standards, there is no assurance that cable system operators will comply with them. In fact, although many current systems largely comply with the Network Interface standard, there are no digital set-top boxes in use that support the POD-Host Interface. Also the current set-top boxes use proprietary System Information.

C. Availability of In-Band EPG Data

Cable system operators have said that they will not generate in-band EPG data in the form of PSIP EIT's, but that they will carry it if the content provider supplies it. There is significant interest on the part of terrestrial broadcasters and a number of cable network programmers to supply in-band PSIP EIT's, but there are no firm commitments to do so. Although work is underway in the cable industry to put the infrastructure in place to carry PSIP EIT's, there is no firm commitment to an established timetable.

D. POD-Host Interface Copy Protection

The CEA/NCTA Agreements are silent on the issue of copy protecting the POD-Host Interface, but the SCTE Standards are not. DVS-295r5 specifically references DVS-301r3, which, in turn, references the POD-Host Interface Licensing Agreement (PHILA). PHILA, in turn, requires that cable-ready television receivers be certified to comply with OpenCable Specifications that include requirements in addition to the copy protection function, e.g., diagnostics.

E. Receiver Certification

CableLabs believes that it has the authority to require that all cable-ready digital television receivers must be certified by CableLabs to comply with OpenCable Specifications. Receiver manufacturers disagree and believe that self-certification of compliance with EIA/CEA-818C should be sufficient.

F. POD Rental Cost

Since POD modules will be required to obtain premium services, the rental cost to consumers of the POD module compared to the rental cost of a proprietary set-top box is a concern.

G. OCAP

The cable industry has announced that OCAP is the solution to digital cable interoperability. Although OCAP, like DASE, may eventually play an important role in enabling advanced cable services, it is not necessary to have OCAP to implement the basic and premium services contemplated by and agreed to by CEA and NCTA as expressed in the February 2000 CEA/NCTA Agreements. It is now nearly two full years since the Agreements were filed with the FCC;

shifting to OCAP is certain to cause a significant further delay in the availability of cable-ready consumer digital television receivers.

January 29, 2002

B.J. Lechner

TABLE I
ATSC Standards Documents
Relating to Cable Interoperability

Document Number	Title	Topic	Status
A/52A	Digital Audio Compression (AC-3) Standard	Audio	Approved. Stable.
A/53B	ATSC Digital Television Standard	Video, Audio, Transport and Transmission	Approved. Stable.
A/65A with Amendment 2	Program and System Information Protocol for Terrestrial Broadcast and Cable	PSIP	Approved. Stable. Being Revised.
A/90	ATSC Data Broadcast Standard	Data Transport	Approved. Stable.

B.J. Lechner
November 18, 2001

Revised
December 11, 2001

TABLE II
EIA/CEA Standards Documents
Relating to Cable Interoperability

Document Number	Title	Topic	Status
EIA-23	RF Interface Specification for Television Receiving Devices and Cable Television Systems	RF Interface Performance Requirements	Approved. Has placeholder for yet-to-be agreed values
EIA/CEA-542-A	Cable Television Channel Identification Plan.	Cable Frequency Plan	Approved. Stable.
EIA/CEA-544-A	Low-Frequency Immunity of Tuners in a Cable System	RF Interface Performance Requirements	Approved. Stable.
EIA-CEA-679-B Part B	National Renewable Security Standard (NRSS)	POD Module Interface	Approved. Needs to be updated.
EIA/CEA-818-C Part I	Minimum Requirements for Receiver Compatible Digital Cable TV Systems	Digital Cable Network Interface Requirements	Approved. Stable. Being Revised.
EIA-CEA-818-C Part II	Minimum Requirements for Cable-Compatible Digital TV Receivers	Digital Cable-Ready Receiver Requirements	Approved. Stable. Being Revised.
EIA/CEA-814	Emergency Alert Message for Cable	Emergency Message Standard. Identical to DVS-208r8	Minor problem identified. May need to be revised.
EIA/CEA-608-B	Line 21 Data Services	NTSC Captioning and Other Data	Approved. Stable.
EIA/CEA-708-B	Advanced Television Closed Captioning	Content Advisory Standard.	Approved. Stable.
EIA/CEA-766-A	U.S. and Canadian Rating Region Tables (RRT) and Content Advisory Descriptors for Transport of Content Advisory Information Using ATSC A/65-A Program and System Information Protocol (PSIP)	Content Advisory Standard.	Approved. Stable.

EIA/CEA-819	Cable Compatibility Requirements for Two-Way Digital Cable TV Systems	Two-Way Digital Cable Network Interface and Cable-Ready Receiver Requirements	Approved. Being Revised.
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November 18, 2001

B.J. Lechner

Revised

December 11, 2001

Revised

January 29, 2002

TABLE III
SCTE Standard Documents
Relating to Cable Interoperability

Document Number	Title	Topic	Status
DVS-031r5	Digital Video Transmission Standard for Cable Television	QAM Specifications	Approved. Stable. ITU Standard.
DVS-053r7	Standard for Carriage of NTSC VBI Data in Cable Digital Transport Streams	608-B Captions, etc.	Approved. Stable.
DVS-157r1	SCTE Standard Methods for Carriage of Closed Captions and Non-Real Time Sampled Video	608-B captions, etc.	Approved. Stable.
DVS-167r2	Digital Broadband Delivery System: Out-Of-Band Transport - Mode B	Scientific Atlanta OOB System	Approved. Stable.
DVS-178r3	Digital Broadband Delivery System: Out-Of-Band Transport - Mode A	Motorola OOB System	Approved. Stable.
DVS-194r3	Home Digital Network Interface Specification Proposal with Copy Protection	1394 with 5C	Approved. Stable.
DVS-208r8	Standard: Emergency Alert Message for Cable	Emergency Message Standard	Minor problem identified. May need to be revised.
DVS-234r2	Service Information Delivered Out-Of-Band for Digital Cable Television	Defines Cable OOB SI Profiles.	Approved. Stable.
DVS-241r1	Digital Video Service Multiplex and Transport System for Cable Television	Transport standard. Defines in-band SI.	Being revised. May be controversial.
DVS-258r4	Digital Video Systems Characteristics for Cable Television	Defines Cable video formats.	Approved. Stable. Revision 4 not yet published.
DVS-295r5	Host POD Interface	Defines physical interface and signaling protocols.	Approved. Stable. Does not support VOD, etc.

DVS-301r3	POD Copy Protection System	Defines copy protection system protocols. References PHILA.	Approved. Controversial due to PHILA license terms. Also may be easy to defeat.
DVS-313r5	Digital Cable Network Interface Standard	Defines the network interface. References many other standards.	Approved. Stable.
DVS-051r2	Methods for Asynchronous Data Services Transport	Asynchronous Data Transport	Approved. Stable.
DVS-132	Methods for Isochronous Data Services Transport	Isochronous Data Transport	Approved. Stable.
DVS-311r5	IP Multicast for Digital MPEG Networks	IP Multicast	Approved. Stable.

B.J. Lechner
November 18, 2001

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January 29, 2002

TABLE IV
Open-Cable Specifications Relating to Cable Interoperability

Document Number	Title	Topic	Comment
CFR-OCS-UDC-INT02-000419	Core Functional Requirements for Set-Top Terminal for Uni-Directional Cable	Set-Top Box Specification	Over one year old.
CFR-OCT-UDC-INT03-010515	Core Functional Requirements for Terminal Device for Uni-Directional Cable	Cable-Ready Digital TV Receiver Specification	Revised in May, 2001.
DVS-313r5	Digital Cable Network Interface	Specifies the Network Interface	Identical to DVS-313r5
IS-POD-131-INT07-010803	Host POD Interface	Specifies Physical Interface and Signaling Protocols	Similar to DVS-295
IS-POD-CP-INT05-010515	POD Copy Protection System	Defines Copy Protection System Protocols	Similar to DVS-301

B.J. Lechner
November 18, 2001

Revised
December 11, 2001

Revised
January 29, 2002

TABLE V
February, 2000 CEA/NCTA Agreements

Table	Topic	Comment
Technical Agreement	Defines the Network Interface.	Needs to be updated to reflect DVS-313r5.
Carriage of PSIP over Cable Plants	Defines Requirements for Carriage of PSIP over Cable Plants.	Needs revision or replacement to clarify certain issues..

B.J. Lechner
November 18, 2001

Revised
December 11, 2001

Revised
January 29, 2002

TABLE VI
FCC Requirements
Relating to Cable Interoperability

Document	Topic	Citation
Jan 18 2001 R&O in CS 98-120+ (FCC 01-22)	Carriage of 8-VSB	Para 76. Will permit cable systems to remodulate to QAM. Option for first purchasers and certain cable systems.
Jan 18 2001 R&O in CS 98-120+ (FCC 01-22) 47 U.S.C. §534(b)(6) and 47 CFR§ 76.57(a)	Channel Number Requirements	Para 83 in Jan R&O: Channel mapping protocols in PSIP...address... nondiscriminatory treatment of TV stations...
Sept 14, 2000 R&O in PP 00-67 (FCC 00-342)	Definition of Cable-Ready Digital TV Receivers	Para 24: Digital cable ready 1; Para 25: Digital cable ready 2; Para 26: Digital cable ready 3
June 1998 Report & Order in CS 97-80	Separable Security and Retail Availability of Navigation Devices	Para 49: Separable Security Para 13 and throughout: Retail availability

B.J. Lechner
November 18, 2001

Revised
December 11, 2001

Revised
January 29, 2002

DRAFT

Goals & Objectives 2002

a t s c
Advanced Television Systems Committee

11/1/01

Primary Goals - 2002

- Administrative: Complete the Corporate Transition
- Financial: Increase Revenues To Min. Break-Even
- Technical: Complete DASE 1 & VSB Enhancements
- Relationship: Significantly Improve Cooperation With Cable Standards Groups
- Promotion: Help Establish a Successful Separate Organization to Promote DTV & ATSC Standards

a t s c
Advanced Television Systems Committee

11/1/01

Other Administrative

- Implement improved meeting phone conferencing
 - Purchase/Lease phone bridge or change service provider
- Expand e-mail reflector support
 - Add ad-hoc committees
 - Increase level of self sufficiency by expanding staff technical knowledge
- Improve web site
 - Provide more frequent updates to member products and services
 - Monthly updates
 - Provide more frequent updates to member press release area
 - Improve security for "Members Only Area"
 - Enable dues payment by credit card

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Advanced Television Systems Committee

11/1/01

Other Administrative

- Implement recommendations from auditors*
 - Develop policy and procedures manual
 - Develop and implement investment policy
 - With approval of Budget & Dues Subcommittee
 - Implement remaining accounting procedures
- Undertake additional staff training
 - Learn web creation tools
 - Acquire additional Quickbooks (accounting software) training
 - Advanced training for primary user
 - Basic training for "back up" staff

** Primary recommendations have already been implemented*

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Advanced Television Systems Committee

11/1/01

Educational Activities

- Seminars
 - Plan and conduct a minimum of two major seminars on ATSC Standards
- SBE
 - Support Ennes workshops
 - Provide speakers on ATSC standards and technical activities
 - Support development of DTV questions for SBE certification program
- Articles in trade magazines
 - A minimum of four ATSC related articles
- Presentations at major industry trade conferences and meetings
 - A minimum of two presentations

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Newsletter

- Publish quarterly
- Expand educational content

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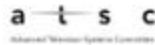
11/1/01

Membership

- Develop new membership promotion materials
- Form Board "Membership Committee"*
 - Survey members
 - Consider ways to make ATSC more valuable to its members
 - Better explain value of membership
 - Organize and conduct a recruitment drive to obtain 10 new members
- Develop "Use of Logo" policy *

***Requires Board Action**

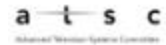
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Process

- Implement due process changes incorporated in bylaws and procedures documents
- Maintain list of normative reference organizations and accepted document types

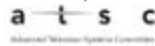
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Major Technical Activities

- Standards and Recommended Practices
 - Complete DASE (if not completed in 2001)
 - To extent possible, harmonize DASE with OpenCable's OCAP, DVB's MHP, etc.
 - Complete technical work on VSB enhancements
 - Revise A/53 to incorporate VSB enhancements
 - Complete DTH Satellite Standard
 - Complete data broadcast synchronization standard ("triggers")
 - Complete transactional services standard (or identify alternative solution)
 - Complete work on advanced EPG functionality
 - Revise A/54 (Guidelines to ATSC DTV Standard A/53)
 - Conduct 5-year review of A/63 (Coding for 25/50 Hz Video)

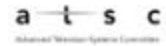
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Major Technical Activities

- Implementation Subcommittee
 - Identify System issues and recommend appropriate action
 - Identify PSIP implementation issues and potential solutions
 - Identify RF implementation issues and potential solutions
 - Identify captioning implementation issues and potential solutions
 - Identify data broadcast implementation issues and potential solutions
 - Develop and maintain a list of DTV-related standards

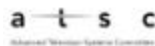
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Applications Subcommittee

- Document 2 new applications of DTV with initial requirements

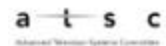
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Promotion

- Determine and resource the appropriate level of promotional activity for markets supported directly by ATSC
- Complete and implement a formal affiliation and working agreement with the separate DTV Forum group for activities in other markets.

11/1/01



Relationship with Cable Industry

- Appoint Liaison With Cable Industry
- Promote Interoperability between ATSC/OpenCable
- Establish Harmonization Effort for DASE/OCAP

11/1/01



ATSC ATV Implementation Subcommittee [IS]
Report of Status, January 31, 2002

The ATSC Implementation Subcommittee last met on Tuesday, 15 January 2002, at the offices of Wiley, Rein and Fielding, in Washington, D.C.

IS Actions

CC Implementation Guideline (IS/233) was completed and forwarded to SMPTE, with the recommendation that it be adopted as an Engineering Guideline.

The IS recommends to T3 that the timing accuracy specification for the time present in the STT be no greater than +/- 1 second.

PSIP Implementation Working Group (PSIPWG)

The IS PSIP Working Group Scope of Work, was approved by the IS. Twenty-five people have signed up on the reflector, but it is light on broadcaster participation, and their participation was solicited. Three conference calls have been held and a list of control information had been developed. A permanent chair is being sought.

RF Issues Working Group (RFWG)

A preliminary assessment of the real-world installation indicated that in a typical installation, the UHF field strength required for reception is significantly higher than the Minimum Usable Field Strength per the FCC Planning Factors - and the impact of multipath has not been included. This is a work in progress, and comments on the methodology and the resulting amount were requested from IS members. A similar analysis for HVHF and LVHF is planned, and then the RFWG feels portability and mobility considerations must be addressed.

Systems Evaluation Working Group (SEWG)

The central focus of the last two meetings has been Directed Channel Change. The SCTE mechanisms and the need to have one method for both cable and broadcast are being discussed. A list of issues to be addressed by SEWG has been developed.

Other active topics in SEWG include broadcast distribution system latency and emission timing issues. Analysis has revealed a minimal 20 second delay throughout the network-to-home path, and it was suggested that this be widened to 30 seconds, as a more manageable figure. The two documents will be merged and refined.

Closed Captioning Working Group (CCWG)

Chairman Gerry Field is attempting to restart the group, and has solicited participation from interested ATSC members. It was mentioned that a standard DTV caption authoring language would be desirable and the CCWG will look into this issue.

Field Interoperability Evaluation Working Group (FIEWG)

The initial purpose of the plugfests appears to have been fulfilled, and it is felt that the limit of the benefit that may be derived from gathering together has been reached. There has been a transition to acquiring test material in recorded form. Anecdotal discussions of lip-sync problems have greatly diminished, believed to be in no small part due to the past plugfests. The last plugfest tested some true 708 captioning for the first time. Additional 708 caption testing has been offered by WGBH in Boston for the next six months. The Model Station is to be commended for their contribution to the past plugfests, which facilitated the wide distribution of over-the-air signals.

There was a discussion about involving the cable industry in the plugfest process, as it was pointed out that there are standards that have been formulated by SCTE for terminal devices (receivers) which are voluntary, and there is no way to force companies to use them, and no "plugfest" type activity to test these.

Standards Indexing and Access Ad Hoc Group

The ATSC Standards Inventory, IS/225, was posted to the IS website today. Jerry Whitaker was commended for his work on this project. The on-line simple representation of IS/225 is being prepared.

Education and Training Ad Hoc Group

A permanent chair is still being sought to replace Jerry Whitaker who is serving as interim chair. Several articles were published in the trade press last year, and a number are cued up for this year. Past articles have been published in Broadcast Engineering, and efforts are underway to also publish in TV technology and TVB. There will be a standards seminar in February in St. Louis.

Recently, Mr. Whitaker and Rich Chernock attended an Ennis Foundation workshop at the Nashville section of SBE. Attendance was good. Special recognition is owed to Rich who filled in with an MPEG-related paper at the last minute. There will be at least one and possibly three Ennis Foundation programs in 2002. Sunday morning at the NAB Broadcast Engineering Conference will be filled with a special session on PSIP.

The one-day PSIP and Data Broadcast tutorial at last year's ITS Technology Retreat was very successful. ATSC has been invited back to the 2002 Technology Retreat. A DTV FAQ is a new project for the EIT AHG. This would appear on the ATSC website. Mr. Whitaker solicited contributions of material for this project.

SBE certification Q & A's have been provided and SBE was pleased with the input.

Control System Conference <Top Down II?> (DTV Station Operations)

This involves addressing remaining subjects from the previous Top Down conferences, especially in the control plane and the monitoring plane. Broad industry participation is required to make this meaningful. The IS agreed we need to canvas station groups and equipment manufacturers, and determine whether the time is right to have this given the current economic situation among broadcasters. This issue will be raised again at the next IS meeting.

ARIB Communications: Assessment and Response

The IS addressed responding to a liaison communication from ARIB about content identification. SMPTE is also working in this area. The implementation of V-ISAN is an ATSC issue. On the topic of the Home Servers Dictionary, having world-wide program numbering systems is far from being resolved. It was opined that Japan should be encouraged to buy into the V-ISAN idea, rather than developing its own number. A response to ARIB on this particular issue urging that they, like ATSC, work with SMPTE on this, which response should be coordinated with SMPTE is being drafted.

The next IS meeting will be Thursday, March 14, 2002 at NAB.

The following meeting will be Thursday, May 16, 2002 at NAB.