

2005

STANDARDS

January-December

R E P O R T



Society of Cable Telecommunications Engineers

Change

As I look back over my five years in the cable industry, I am astounded at how vibrant it is. Coming from the computer vendor community, I was no stranger to technology and the ways that it changed – but the information technology industry is stable and predictable compared to cable. If 2004 was a transition year, as I noted in last year's report, 2005 was back to the usual dynamism that has characterized the industry. Certainly the number of brand new standards decreased; we saw that coming the year before as the backlog of work was reduced. But there has been significant work on improvements to existing standards as well as exciting new work in key areas like Digital Program Insertion.

But the biggest change I see in the industry, from a standards perspective, is the interaction and even competition between standards organizations. This reflects the increasing interaction and competition in our industry as new entrants in the business, whose roots are not in the cable industry, make their presence known. As all the market players work toward providing a full range of services, it is inevitable that the standards "business" will be affected.

It is important to understand that providing similar services reflects on the increasing convergence of the technology used to provide that service. But while technologies converge, the same cannot be said for standards organizations. Each reflects not only the technology being standardized, but the legacies of technology and culture that made them what they are today. So as industry competition increases, so too will competition between standards developers – cable people, telephony people, and internet people bring different perspectives to the table in their different groups.

Competition can be good for everyone, and standards are no exception. As cable experts participate in IETF for internet standards or 3GPP for telephony standards, the industry as a whole will gain. Our success at SCTE will then depend on being the leader in some areas and the integrator/adaptor in others, depending on what the industry wants. Because we can never forget that it is our members who set the direction for the program as well as providing the resources to make it happen. And given our membership today and their people that work in the SCTE Standards Program, I'm confident that SCTE will continue to be a leader in standards no matter how much change occurs.



Stephen P. Oksala
SCTE Vice President, Standards

About the SCTE Standards Program

The SCTE Standards Program is dedicated to providing standards to help the cable telecommunications industry prosper. SCTE standards cover a wide range of industry needs from F-connectors to protocols for high-speed data access over cable and digital program insertion. For example, several of SCTE's digital video standards were selected as the core of the "plug and play" agreement between cable operators and consumer electronic manufacturers.

Accredited by the American National Standards Institute (ANSI), SCTE is recognized by the International Telecommunication Union (ITU) and works in cooperation with the European Telecommunications Standards Institute (ETSI).

SCTE's Standards Program is made possible thanks to the generous support of our standards members (listed on page 8). Membership is open to any individual or organization willing to participate and pay the membership fee. For more information on membership requirements, benefits and fees, visit the Standards section of the SCTE website at www.scte.org or call 800-542-5040.



Society of Cable
Telecommunications
Engineers

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Meeting and surpassing the needs
of the cable industry

SCTE STANDARDS STAFF



Stephen P. Oksala
Vice President, Standards

In his position as SCTE Vice President of Standards, Steve is responsible for a wide-ranging standards program for the cable telecommunications industry covering topics from connectors to cable modems. Prior to joining SCTE at the beginning of 2001, he spent 35 years with the Unisys Corp., including 13 years as director of standards and regulatory compliance. He also held management positions in system design, hardware design, operating systems and languages, and applications development.

He has been a member of the Board of Directors of the American National Standards Institute since 1990, and is currently in his second term as a Board Vice Chairman. He chairs the Board National Policy Committee, which is responsible for domestic standards and government relations policy. He was the 1999 recipient of the ANSI Edward Lohse medal for standardization in Information Technology and has twice won awards in the World Standards Day paper contest. He has testified before Congress on several occasions on the subject of standards and conformity assessment and the role of government in these processes.

He holds a BSEE from the University of Michigan, and an MBA from Wayne State University.



Thomas Russell
Director of Standards

Tom provides primary administration of SCTE's Digital Video (DVS), Hybrid Management Sub-layer (HMS) and Emergency Alert Systems (EAS) subcommittees, along with technology expertise across the entire SCTE Standards Program.

He has an extensive background in both broadband access and consumer electronics from previous engineering and marketing positions at companies such as Philips Broadband, Thomson Consumer Electronics, and OnePath Networks. His past standards development activities include contributor and leadership roles in the telco industry.

He has a bachelor's degree in computer science from Syracuse University and an associate's degree in electrical technology from Suffolk Community College.



Robin Fenton
Manager, Standards Operations

Robin is responsible for the operational aspects of the SCTE Standards Program; meeting coordination, copyright management, and the program's administrative interface with ANSI. Robin also represents SCTE in ANSI's Organizational Member Forum and is a member of the ANSI Board of Standards Review. She is also responsible for supporting the development of standards within the Interface Practices Subcommittee (IPS), Cable Applications Platform Subcommittee (CAP), and Data Standards Subcommittee (DSS).

She holds a bachelor's degree in mass communications from Mansfield University.

2005 Program Activities

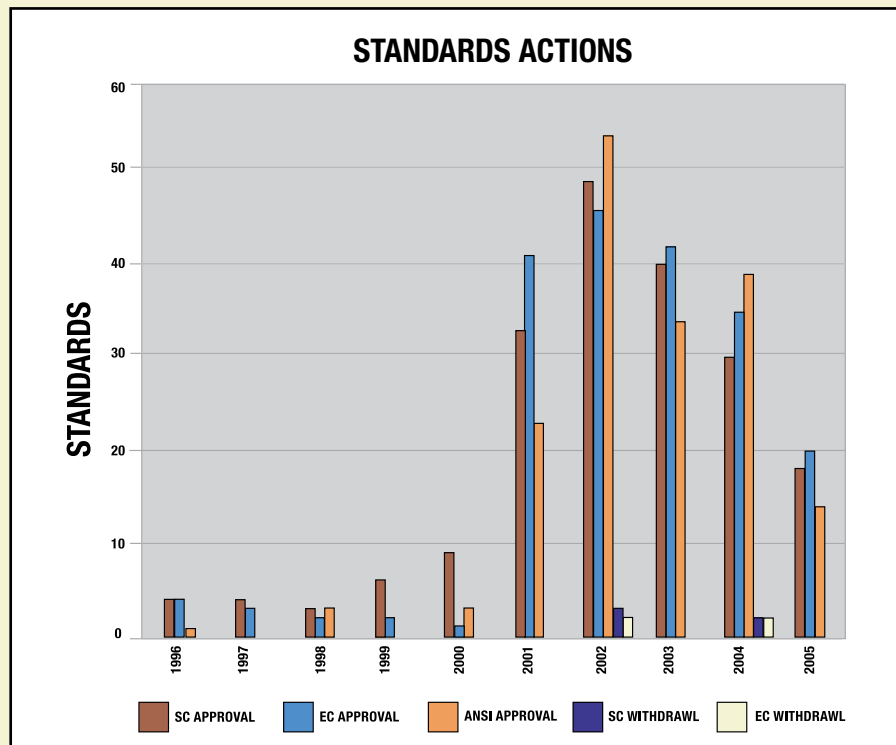
In 2005 the SCTE standards program continued to produce new and revised standards to support the cable telecommunications industry. Our membership grew from 138 organizations to 143, and we have begun to see participants from areas such as content production becoming involved in standardization of digital video systems. And as of the end of the year we had over 700 individual participants from those members involved in the various subcommittees and working groups.

As in previous years we continue to emphasize the completion of standards, including processing them through the American National Standards Institute (ANSI) as American National Standards.

Approval actions by the Subcommittees, Engineering Committees and ANSI were down from 2004 as seen in the "Standards Actions" chart. This reflects the completion of significant work during the previous year and a build-up of new work in process that did not complete in 2005.

We began the year with 144 standards, 140 of them approved as American National Standards by ANSI. During 2005 we added to our portfolio another 10 standards for a total at the end of 2005 of 154, a 6.5% increase. 147 of those were approved by ANSI at year end, an increase of 7 standards, or 5%. The "Standards Approved" chart shows 2005 compared to other years. Completion of work was again fairly evenly divided among the subcommittees, with IPS leading the group, as seen in the "Subcommittee Standards Production" chart.

On the operations side, we continued to provide the *SCTE Standards Bulletin* four times a year, and the annual *SCTE Standards Report*. Our Standards Alert system, which provides email notice of the approvals of new standards and new projects, now has a mailing list of 328 people interested in the SCTE standards process, an increase over 2004 of 19%. Signing

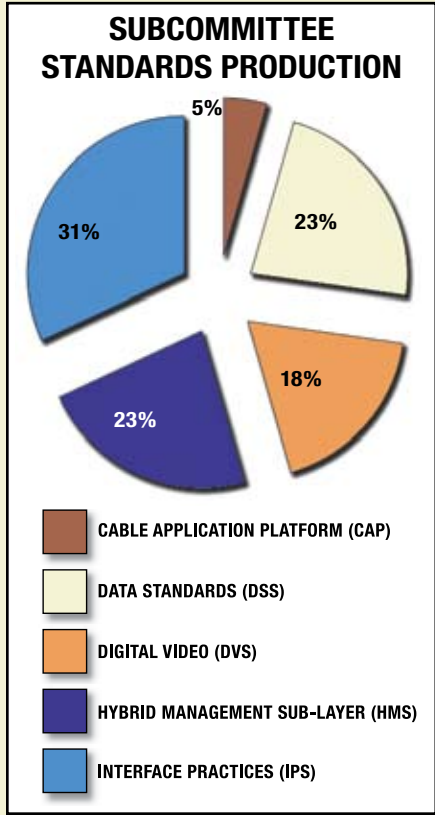


up for the Standards Alert is easily done from the standards section of the SCTE website, www.scte.org.

Three events of significance marked 2005. The first was in early in the year when we successfully completed our five year ANSI audit. The issues found by the auditor were minor, and our response to the auditor's report resulted in approval by ANSI's Executive Standards Council with virtually no changes in our procedures. The second occurred at Cable-Tec Expo® in June, when Alan Amato of Times Fiber – a key participant for many years in the IPS Subcommittee – became the winner of the first annual SCTE Excellence in Standards award. Alan beat out some very impressive candidates, and we look forward to this award as an ongoing way to recognize the good work done by our volunteers. The third event came in August, when SCTE celebrated the tenth anniversary of ANSI accreditation. We have come a long way since then!

The website remains popular, and visitors continue to download approved standards in electronic form at no charge. By the end of 2005 our standards were being downloaded at a rate of around 32,000 per month. The most popular standards continue to be the DOCSIS™ 1.0, 1.1 and 2.0 (DOCS) series of standards. The runners-up were:

- SCTE 55, *Digital Broadband Delivery System: Out of Band Transport Part 2: Mode B*
- SCTE 18, *Emergency Alert Message for Cable*
- SCTE 40, *Digital Cable Network Interface Standard*
- SCTE 28, *Host-POD Interface*
- SCTE 25, *Hybrid Fiber/Coax Outside Plant Status Monitoring Part 3: PS to T Interface*
- SCTE 87-1, *Graphic Symbols for Cable Telecommunications Part 1: HFC Symbols*
- SCTE 07, *Digital Video Transmission Standard for Cable Television*



Subcommittees

The standards subcommittees continued their practice of meeting from one to four times a year face-to-face, utilizing industry trade shows (SCTE's Conference on Emerging Technologies SCTE's Cable-Tec Expo®, the NCTA National Show, and CableLabs® summer and winter meetings) as well as separate meetings across the U.S. However, most of the work is done through the use of e-mail reflectors and FTP sites, with the participants proposing documents and discussing them through special drafting groups on a continuous basis.

These subcommittees – whether in meetings or online – are the heart of the SCTE standards process; this is where the standards consensus development is done. The following details the accomplishments of those groups during 2005.

CABLE APPLICATIONS PLATFORM SUBCOMMITTEE (CAP)

CAP participants spent the year 2005 working on a revision to SCTE 90-1, *SCTE Applications*

Platform Part 1: OCAP 1.0 Profile. This revision, approved by ANSI at the end of the year, brings the standard into conformance with the technical specifications issued by CableLabs®.

CHAIRMAN'S INTERNATIONAL ADVISORY COMMITTEE (CIAC)

CIAC advises the Engineering Committee on international standards activities, primarily the work of International Electrotechnical Commission (IEC) Technical Committee 100, *Audio, Video and Multimedia Systems and Equipment* and its technical areas TA 4, *Digital system interfaces and protocols* and TA 5, *Cable networks for television signals, sound signals and interactive services*. During 2005 the CIAC began reviews of documents from TC 46, *Cables, wires, waveguides, R.F. connectors, R.F. and microwave passive components and accessories* and its Subcommittee SC 46A, *Coaxial cables*. During 2005 CIAC reviewed 226 documents (a 50% increase over 2004), and recommended SCTE positions on 67 different standards approvals and new projects (an increase of 34% over 2004.)

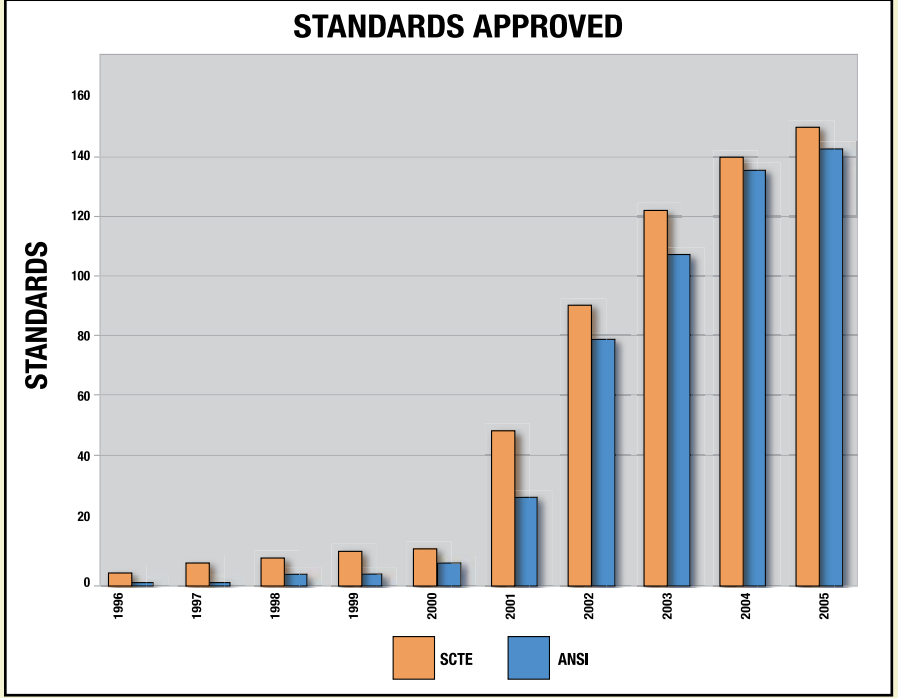
DATA STANDARDS SUBCOMMITTEE (DSS)

During 2005 DSS approved updates of SCTE

23-1 and 23-3, the DOCSIS™ 1.1 RFI and OSS standards. On completion of the approvals, DSS formally took over maintenance responsibility for these documents from CableLabs®. DSS also agreed to revise the first thirteen standards in the SCTE 24 (IPcablecom) series, which should be completed by the middle of 2006. Other DSS standards approved during 2005 included SCTE 24-20, *Requirements for Preferential Communications over IPcablecom Networks*, a new standard in the IPcablecom series submitted by the US Government's National Telecommunications and Information Administration (NTIA); SCTE 106, *DOCSIS® Set-top Gateway Interface Specification*; and SCTE 107, *Interface Requirements for Embedded CableModem Devices*.

DIGITAL VIDEO SUBCOMMITTEE (DVS)

DVS approved one new standard in 2005 – SCTE 105, *Uni-Directional Receiving Device Standard for Digital Cable*. Two revisions were also approved; SCTE 30, *Digital Program Insertion Splicing Application Program Interface* (which is adopted internationally as International Telecommunication Union (ITU) Recommendation J.280), and SCTE 43, *Digital*



Video Systems Characteristics Standard for Cable Television.

The Subcommittee also initiated revision projects for a number of existing standards; SCTE 28, *Host-POD Interface*, and SCTE 54, *Digital Video Service Multiplex and Transport System for Cable Television*, are part of the suite of six standards incorporated into FCC regulations as part of the "plug and play" agreement. SCTE 18, *Emergency Alert Message for Cable*, is a joint project with the Consumer Electronics Association (CEA) and is published as ANSI Joint Standard J-STD-042. Other standards now under revision with completion expected in 2006 are SCTE 07, *Digital Video Transmission Standard for Cable Television*; SCTE 19, *Methods for Isochronous Data Service Transport*; SCTE 21, *Standard for Carriage of NTSC VBI Data in Cable Digital Transport Streams*; and SCTE 67, *Applications Guidelines for SCTE 35 2001*.

DVS is also working on new standards using 'cutting edge' technology. Working Group 1 (Video and Audio Services) is working on a new project, Video Characteristics for H.264-AVC Coding for Cable Television, which will identify video usage profiles for the conveyance of AVC data in SCTE 54 compliant transport networks.

DVS Working Group 5 (Digital Program Insertion) continues work on numerous projects to enhance the ability to insert content such as advertising into the main program stream. To address live programming such as sporting events, the group is working on protocol standards for Traffic System to Ad Insertion Communication, Network/Program Provider to Traffic System Communication, and Functional Overview and Applications Guidelines. They are also working on "Client-based" standards which move some of the intelligence for content insertion into devices installed in the home, with set-tops and other devices storing and selecting ad content based on demographics and household preferences. Client Based Targeted Advertising Functional Scope and Client Based Targeted Advertising System

Architecture define the topology, and the details are filled in with Client Based Targeted Advertising Inband Signaling, Client Based Targeted Advertising Command and Control, and Targeted Advertising Systems Interface Application Programming Interface.

EMERGENCY ALERT SYSTEMS SUBCOMMITTEE (EAS)

The EAS Subcommittee provides analysis and support for the Emergency Alert System from a cable industry perspective. The group met in 2005 to discuss current issues with the EAS system, recommendations from the US government's Media Security and Reliability Committee (MSRC), the AMBER alert system, and franchise-required alerts. The Subcommittee is looking forward to the outcome of the FCC's current investigation into emergency alerting, raising the possibility of new technology and new architectures and thus new standards.

HYBRID MANAGEMENT SUB-LAYER SUBCOMMITTEE (HMS)

HMS reached a milestone in 2005 with the approvals of SCTE 110, *Hybrid Fiber/Coax Outside Plant Status Monitoring: Alternative Power Supply to Transponder Interface Bus (PSTIB) for HMS Transponders*, as a supplement to SCTE 25-3 for use in DOCSIS® networks, and SCTE 112, *HMS/DOCSIS Transponder for Outside Plant Power Supply* as an alternative to SCTE 25-1 to provide for the use of DOCSIS® communication protocols with a CMTS.

HMS also began an effort to expand the use of network transponders to capture data on Voice over Internet Protocol (VoIP) traffic. This project, titled VoIP Quality Measures for HMS Transponders, is intended to provide MSOs with information that can be used to determine whether VoIP traffic is meeting quality targets. The group is also expanding its coverage with a project for a Management Interface for GigE Transport Devices.

Finally, HMS was busy during 2005 with several revision projects, approving new ver-

sions of SCTE 25-3, *Hybrid Fiber/Coax Outside Plant Status Monitoring Part 3: Power Supply to Transponder Interface*; SCTE 38-2, *SCTE-HMS-ALARMS-MIB Management Information Base (MIB) Definition*; and SCTE 38-6, *SCTE-HMS-GEN-MIB HMS Management Information Base (MIB) Definition*. Completion of the revision to 83-1, *HMS Inside Plant Management Information Base (MIB) Part 1: SCTE-HMS-HE-OPTICS-MIB*, is expected in early 2006.

INTERFACE PRACTICES AND IN-HOME CABLING SUBCOMMITTEE (IPS)

In 2005 the newly established IPS Working Group 7 continued to work on a broadband implementation guide for installation compliance with the National Electrical Code (NEC). The Working Group spent the first half of the year focused on interpreting NEC 100, 20 and 830 and the second half working on NEC 250, 810, 80, 90, 480 and Appendix B. They are also putting together a Frequently Asked Questions (FAQ) document.

IPS approved six standards in 2005: SCTE 114, *Test Method for Dimensions of Corrugated Subscriber Access Cable*; SCTE 111, *Specification for 5/8-24 Plugs, Male Adapters*; SCTE 109, *Test Procedures for Common Path and Intermodulation Distortion*; SCTE 86, *SCTE Fiber Optic Cable Types and Recommended Applications*; SCTE 44, *Test Method for DC Loop Resistance*; and a revision to SCTE 09, *Test Method for Cold Bend*.

IPS continues to work on a variety of projects including a performance-based version of SCTE 74, *Specification for 75-Ohm Braided Flexible RF Coaxial Drop Cables*; the completion of new projects SP 008, *Specification for Braided, 75 Ohm, Flexible RF Mini-Coaxial Cable*; SP-009, *Specification for 75 Ohm Flexible RF Mini-Coaxial Baseband Cable*; and SP 410, *Mini-cable connector specification*; and an update to SCTE 01, *"F" Port (Female Outdoor) Physical Dimensions*.

Engineering Committee Message

It is impossible to reflect on any year in the cable industry without change being a foremost theme and 2005 was no exception. Change can sometimes be unsettling but the SCTE professional staff and all the great volunteers who keep the standards program going continue to deliver the new and updated standards that are increasingly essential to the continued success of the cable industry.

Another theme for the cable industry is competition. Long gone are the days when cable installer trucks were chased down the street by those eager to sign up. The satellite industry now serves one of every four customers who choose a video service provider beyond over-the-air broadcast (broadcast only households are below 10% of total households). Last year I wrote that non-traditional video providers would begin delivering video using IP technology in the not-so-distant future and in only a year that future has arrived! And we can expect those offerings to grow. Cable broadband data service is facing more competition from telephone companies and even from municipalities, and cable telephony has always been about competing with incumbent providers.

Yet the cable industry is up to the competitive challenge and will continue to succeed by bringing new services to our customers following our long standing tradition of innovation, the final theme I wish to highlight. The cable industry has deep innovative roots from the very creation of the industry itself to advanced video services like video on demand or the creation of high speed Internet access. This innovative spirit is alive and well and will continue to foster new services including the integration of previously disparate services such as video, high speed data and telephony to simplify and improve the very lives of our customers.

I am convinced that developing and leveraging standards is becoming more and more critical to our future in all of these areas and I commend all of those who make the professional and personal commitment to make a difference through their support of the SCTE standards program. Of course there is so much more to be done so there are increasing needs for participation including from those with expertise in the newer areas that we are beginning to explore. If you are not already participating in the program consider becoming involved where you can make a real contribution to the future success of the cable industry – the SCTE standards program.



Charlie Kenamer
Chair, SCTE Engineering Committee and
VP Engineering, Standards & Industry Affairs, Comcast Cable Corporation



SCTE Engineering Committee

Charter:

The SCTE Engineering Committee is responsible for all standards and recommended practices activities of the Society. Any committees, subcommittees, and working groups necessary for standards and practices development will report to the Engineering Committee.



Chairman

CHARLIE KENNAMER
Comcast



MARK ALRUTZ
COMMSCOPE



TERRY W. BUSH
Trilithic



CLARENCE CALDWELL
Cox Communications



JAMES A. HAAG



**NICHOLAS F.
HAMILTON-PIERCY**
Rogers



STEVEN C. JOHNSON
Time Warner



RICHARD PRODAN
BROADCOM



MICHAEL L. SMITH
NEPTEC



Advisor

ANDREW SCOTT
NCTA

Engineering Subcommittees: SCTE's First Line of Offense

The SCTE Standards Program is conducted by technical subcommittees. These are the consensus bodies for standards development. The overall program is supervised by the Engineering Committee of the SCTE Board of Directors.

Cable Applications Platform (CAP) Subcommittee



CHAIRMAN
JEAN-POL ZUNDEL
Comcast

CHARTER:
To explore the need for SCTE involvement in the development of standards for applications platform through coordination with NCTA, FCC and other related organizations.

Data Standards Subcommittee (DSS)



CHAIRMAN
DAVID FELLOWS
Comcast

CHARTER:
To explore the need for SCTE involvement in the development of standards for data services delivery through coordination with NCTA, FCC and other related organizations.

Digital Video Subcommittee (DVS)



CHAIRMAN
PAUL J. HEARTY, PH.D.
Ryerson University

CHARTER:
To explore the need for SCTE involvement in the development of standards for digital video signal delivery through coordination with NCTA, FCC and other related organizations.

Emergency Alert Systems (EAS) Subcommittee



CHAIRMAN
STEVE JOHNSON
Time Warner

CHARTER:
To interface with the FCC and other interest groups and arrive at workable solutions to improve the CATV industry's involvement in the EAS program. The other interest groups include vendors, NCTA emergency committees, FEMA, hearing impaired groups, etc.

Hybrid Management Sub-layer (HMS) Subcommittee



CHAIRMAN
HUNG NGUYEN
Time Warner

CHARTER:
To specify a robust protocol suite to support cost-effective interoperability of management systems for the evolving Hybrid Fiber/Coax (HFC) network.

Interface Practices and In-Home Cabling Subcommittee (IPS)



CHAIRMAN
BRIAN JAMES, P.E.
B&W Engineering Services

CHARTER:
To develop standards for the cables, connectors and housings used in broadband telecommunications distribution plants.

Standards Members: Collaborating for Industry Advancement

The following organizations supported the Society's work and successes during 2005. To learn how your organization can benefit by joining this venerable group of industry leaders, check out our website, www.scte.org and click on the standards section.

ACI Communications	DoubleClick, Inc.	PRN, Inc.
Adelphia Communications	EGT, Inc.	RGB Networks Inc.
Adlink	Electroline	Rogers
Adtec Digital, Inc.	Entone Technologies	Ryerson University
Advance/Newhouse Communications	Foxcom	Samsung Information Systems America
Alpha Technologies	GCI Cable & Entertainment	Scientific-Atlanta
AM Networks	Hamilton Technologies	SCM Microsystems
American Cable Association	Harmonic	Scopus Video Networks
American Power Conversion Corp.	Harris Corporation	SeaChange International
Andes, Inc.	Hillcrest Communications, Inc.	Sedna Services, LLC
Andrew Corporation	Hitachi Home Electronics	Sharp Laboratories of America
Antronix Inc.	Holland Electronics	Sigma Designs, Inc.
ARRIS	ICM Corporation	SkyStream Networks, Inc.
Arroyo Video Solutions	ICTV	Sony
ATI Research	IMAKE Software & Services, Inc.	Sperber Communications
Atlas On Demand	Insight Communications	Stirling Connectors
Aurora Networks, Inc.	Integrated Cable Services, Inc.	Strongwell
B&W Engineering Services	INVIDI Technologies Corporation	Sunrise Telecom - Broadband Division
Belden Electronics Division	ITS/ETL SEMKO Testing Labs	Taikan
BigBand Networks	The Japan Cable Laboratories (JCL)	TANDBERG Television Inc.
BKtel systems GmbH & Co. KG	JVC Professional Products Company	Technology, Patents & Licensing
Black Arrow/DiMA Group	Knology	Telecom & Technology Policy
Blonder Tongue	Leitch Technology International	Terayon
Broadbus Technologies	Lode Data Corporation	Thales Broadcast & Multimedia
Broadcast Data Corporation	Matrix Test Equipment	Thomas & Betts
Broadcom	McR Group, Inc.	Thomson Consumer Electronics
CableLabs®	Mediacom	Three Star CATV Equipment Company
Cable One	Microtune Inc.	Limited
CableServ	MidAtlantic Consulting	TII Network Technologies, Inc.
Cablevision Systems	Mitsubishi Digital Electronics America, Inc.	Time Warner
Cauldron Solutions	Motorola	Times Fiber
CBS	MSA-Focus	Tollgrade
C-COR	Multilink	Trilithic
Cequel III	Nagra USA	Triveni Digital, Inc.
Charter Communications	National Association of Broadcasters	TTE Technology, Inc.
Cisco	NCTA	TVWorks
Coding Technologies AB	NDS	US Digital Television, LLC
Comcast	Nielsen Media Research	VCom Inc.
CommScope	NTIA/ITS	Vela Frontline
Comporium Communications	OpenTV, Inc.	Vidiom Systems Corporation
ComSonics, Inc.	Pace Micro Technology	Viewsonics
Conexant	Panasonic	Visible World
Confluent Photonics Inc.	Pangrac & Associates	Weather Channel
ConFocus Technologies, Inc.	Philips	Wegener Communications
Consumer Electronics Association	Phoenix Broadband Technologies, LLC	Williams Communications
Corning	Pioneer Communications	WISI
Cox Communications	Pioneer Electronics (USA)	YAS
Dolby Laboratories Inc.	PPC	Zenith

The SCTE Interface Practices Subcommittee (IPS) met at SCTE headquarters in Exton (suburban Philadelphia), Pa. on Sept. 28 to discuss various cable-related specifications. More than 25 individuals from 22 companies attended the full day meeting. ►



◀ Nick Hamilton-Piercy, Andy Scott, Steven Johnson and Clarence Caldwell (left to right) discuss business at the Engineering Committee meeting at the SCTE Conference on Emerging Technologies 2005 in Huntington Beach, CA.

Alan J. Amato (left) of Times Fiber Communications in Wallingford, Conn., is presented the inaugural SCTE Excellence in Standards Award by SCTE Engineering Committee chair Charlie Kennamer (right) at SCTE's Cable-Tec Expo in San Antonio. The annual SCTE Excellence in Standards Award was created this year to honor an SCTE Standards Program participant who has significantly contributed to both the technical standards program and the spirit of cooperation necessary for the success of voluntary standards. ►



Approved Standards

Standards approved in 2005 are bold and white.

ANSI/SCTE 01 1996R2001	(formerly IPS SP 400), “F” Port (Female Outdoor) Physical Dimensions
ANSI/SCTE 02 1997	(formerly IPS SP 406), “F” Port (Female Indoor) Physical Dimensions
ANSI/SCTE 03 2003	(formerly IPS TP 007) Test Method for Coaxial Cable Structural Return Loss
ANSI/SCTE 04 1997	(formerly IPS TP 407), “F” Connector Return Loss
ANSI/SCTE 05 1999	(formerly IPS TP 408), “F” Connector Return Loss In-line Pair
ANSI/SCTE 06 1999R2004	Composite Distortion Measurements (CSO & CTB)
ANSI/SCTE 07 2000	(formerly DVS 031), Digital Video Transmission Standard for Television
ANSI/SCTE 09 2005	Test Method for Cold Bend
ANSI/SCTE 10 2001	(formerly IPS TP 002), Test Method for Flexible Coaxial Cable Impact Test
ANSI/SCTE 11 2001	(formerly IPS TP 014), Test Method for Aerial Cable Corrosion Protection Flow
ANSI/SCTE 12 2001	(formerly IPS TP 102), Test Method for Center Conductor Bond to Dielectric for Trunk, Feeder and Distribution Coaxial Cables
ANSI/SCTE 13 2001	(formerly IPS TP 103), Dielectric Air Leakage Test Method for Trunk, Feeder and Distribution Coaxial Cable
ANSI/SCTE 14 2001	(formerly IPS TP 700), Test Method for Hex Crimp Tool Verification/Calibration
ANSI/SCTE 15 2001	(formerly IPS SP 100), Specification for Trunk, Feeder and Distribution Coaxial
ANSI/SCTE 16 2001	(formerly IPS TP 204), Hum Modulation
ANSI/SCTE 17 2001	(formerly IPS TP 216), Carrier to Noise (C/N, CCN, CIN, CTN)
SCTE 18 2002	(formerly DVS 208), Emergency Alert Message for Cable, approved as a joint standard with CEA as ANSI-J-STD-042-2002
ANSI/SCTE 19 2001	(formerly DVS 132), Standard Methods for Isochronous Data Services Transport
ANSI/SCTE 20 2004	Method for Carriage of Closed Captions and Non-Real Time Sampled Video
ANSI/SCTE 21 2001	(formerly DVS 053), Standard for Carriage of NTSC VBI Data in Cable Digital Transport Streams
ANSI/SCTE 22-1 2002	(formerly DSS 02-05) DOCSIS 1.0 Radio Frequency Interface
ANSI/SCTE 22-2 2002	(formerly DSS 02-03) DOCSIS 1.0 Baseline Privacy Interface
ANSI/SCTE 22-3 2002	(formerly DSS 02-04) DOCSIS 1.0 Part 3: Operations Support System Interface
SCTE 23-1 2005	DOCSIS 1.1 Part 1: Radio Frequency Interface
ANSI/SCTE 23-2 2002	(formerly DSS 02-10), DOCSIS 1.1 Part 2: Baseline Privacy Interface Plus
SCTE 23-3 2005	DOCSIS 1.1 Part 3: Operations Support System Interface
ANSI/SCTE 24-1 2001	(formerly DSS 00-02), IP-Cablecom Part 1: Architecture Framework for the Delivery of Time-Critical Services Over Cable Television Networks Using Cable Modems
ANSI/SCTE 24-2 2001	(formerly DSS 00-01), IP-Cablecom Part 2: Audio Codec Requirements for the Provision of Bi-directional Audio Service Over Cable Television Networks Using Cable Modems
ANSI/SCTE 24-3 2004	IP-Cablecom Part 3: Network Call Signaling Protocol for the Delivery of Time-Critical Services over Cable Television Using Data Modems
ANSI/SCTE 24-4 2004	IP-Cablecom Part 4: Dynamic Quality of Service for the Provision of Real-Time Services over Cable Television Networks Using Data Modems
ANSI/SCTE 24-5 2001	(formerly DSS 00-10), IP-Cablecom Part 5: Media Terminal Adapter (MTA) Device Provisioning Requirements for the Delivery of Real-Time Services Over Cable Television Networks Using Cable Modems
ANSI/SCTE 24-6 2001	(formerly DSS 00-11), IP-Cablecom Part 6: Management Information Base (MIB) Framework
ANSI/SCTE 24-7 2001	(formerly DSS 00-12), IP-Cablecom Part 7: Media Terminal Adapter (MTA) Management Information Base (MIB) Requirements

ANSI/SCTE 24-8 2001	(formerly DSS 00-13), IPCablecom Part 8: Network Call Signaling Management Information Base (MIB) Requirements
ANSI/SCTE 24-9 2001	(formerly DSS 00-14), IPCablecom Part 9: Event Message Requirements
ANSI/SCTE 24-10 2002	(formerly DSS 02-16) IPCablecom Part 10: Security Specification
ANSI/SCTE 24-11 2001	(formerly DSS 00-16), IPCablecom Part 11: Internet Signaling Transport Protocol (ISTP)
ANSI/SCTE 24-12 2001	(formerly DSS 00-17), IPCablecom Part 12: Trunking Gateway Control Protocol (TGCP)
ANSI/SCTE 24-13 2001	(formerly DSS 00-18), IPCablecom Part 13: Electronic Surveillance Standard
ANSI/SCTE 24-14 2002	(formerly DSS 02-11) IPCablecom Embedded MTA Primary Line Support
ANSI/SCTE 24-15 2002	(formerly DSS 02-12) IPCablecom Interdomain Quality of Service
ANSI/SCTE 24-16 2002	(formerly DSS 02-13) IPCablecom Management Event Mechanism
ANSI/SCTE 24-17 2002	(formerly DSS 02-14) IPCablecom Audio Server Protocol
ANSI/SCTE 24-18 2004	(formerly DSS 02-17), IPCablecom CMS to CMS Signaling
ANSI/SCTE 24-19 2004	(formerly DSS 02-18), IPCablecom CMS Subscriber Provisioning Specification
ANSI/SCTE 24-20 2005	Requirements for Preferential Telecommunications over IPCablecom Networks
ANSI/SCTE 25-1 2002	(formerly HMS 005) Hybrid Fiber/Coax Outside Plant Status Monitoring - PHY Layer
ANSI/SCTE 25-2 2002	(formerly HMS 004) Hybrid Fiber/Coax Outside Plant Status Monitoring - MAC Layer
ANSI/SCTE 25-3 2005	Hybrid Fiber Coax Outside Plant Status Monitoring - Power Supply to Transponder Interface Bus (PSTIB) Specification v1.1
ANSI/SCTE 25-4 2002	(formerly HMS 074) Hybrid Fiber/Coax Outside Plant Status Monitoring Power Supply to Transponder Interface Acceptance Test Plan
ANSI/SCTE 26 2004	Home Digital Network Interface Specification with Copy Protection
ANSI/SCTE 27 2003	(formerly DVS 026), Subtitling Methods for Broadcast Cable
ANSI/SCTE 28 2004	Host-POD Interface Standard
ANSI/SCTE 29 2001	(formerly IPS TP 215) Torque Requirements for Bond Wire Penetration of Bonding Set Screw
ANSI/SCTE 30 2005	Digital Program Insertion Splicing API
ANSI/SCTE 31 2001	(formerly IPS TP 018) Test Method for Measuring Diameter Core
ANSI/SCTE 32 2001	(formerly IPS TP 010) Test Method for Ampacity
ANSI/SCTE 33 2001	(formerly IPS TP 015) Diameter for Drop Cable
ANSI/SCTE 34 2001	(formerly IPS TP 500) Core Depth Verification
ANSI/SCTE 35 2004	Digital Program Insertion Cueing Message for Cable
ANSI/SCTE 36 2002	(formerly HMS 028), SCTE-ROOT Management Information Base (MIB) Definitions
ANSI/SCTE 37 2003	(formerly HMS 072), Hybrid Fiber/Coax Outside Plant Status Monitoring SCTE-HMS-ROOTS Management Information Base (MIB) Definition
ANSI/SCTE 38-1 2004	Hybrid Fiber/Coax Outside Plant Status Monitoring SCTE-HMS-PROPERTY-MIB
ANSI/SCTE 38-2 2005	Hybrid Fiber/Coax Outside Plant Status Monitoring SCTE-HMS-ALARMS-MIB
ANSI/SCTE 38-3 2002	(formerly HMS 024), Hybrid Fiber/Coax Outside Plant Status Monitoring SCTE-HMS-COMMON-MIB
ANSI/SCTE 38-4 2002	(formerly HMS 027), Hybrid Fiber/Coax Outside Plant Status Monitoring SCTE-HMS-PS-MIB
ANSI/SCTE 38-5 2002	(formerly HMS 025), Hybrid Fiber/Coax Outside Plant Status Monitoring SCTE-HMS-FIBERNODE-MIB
SCTE 38-6 2005	Hybrid Fiber/Coax Outside Plant Status Monitoring - SCTE-HMS-GEN-MIB
ANSI/SCTE 38-7 2002	(formerly HMS 050), Hybrid Fiber/Coax Outside Plant Status Monitoring SCTE-HMS-Transponder-Interface-Bus(TIB)-MIB
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ANSI/SCTE 38-10 2003	(formerly HMS 115), Hybrid Management Sub-layer Management Information Base (MIB) Part 10: SCTE-HMS-RFAMPLIFIER-MIB
ANSI/SCTE 38-11 2004	HMS Headend Management Information Base (MIB) SCTE-HMS-HEADENDIDENT-MIB

ANSI/SCTE 39 2001	(formerly IPS TP 108) Test Method for Static Minimum Bending Radius for Coaxial Trunk, Feeder, and Distribution Cables
ANSI/SCTE 40 2004	Digital Cable Network Interface Standard
ANSI/SCTE 41 2004	POD Copy Protection System
ANSI/SCTE 42 2002	(formerly DVS 311) IP Multicast for Digital MPEG Networks
ANSI/SCTE 43 2005	Digital Video Systems Characteristics Standard for Cable Television
SCTE 44 2005	Test Method for DC Loop Resistance
ANSI/SCTE 45 2002	(formerly IPS TP 211) Test Method for Group Delay
ANSI/SCTE 46 2002	(formerly IPS TP 209) Test Method for AC to DC Power Supplies
ANSI/SCTE 48-2 2003	(formerly IPS TP 403A2) Test Procedure for Measuring Relative Shielding Properties of Active and Passive Coaxial Cable Devices Using H-P Magnetic Close Field Probe
ANSI/SCTE 48-3 2004	(formerly IPS TP 403B1), Test Procedure for Measuring Shielding Effectiveness of Braided Coaxial Drop Cable Using the GTEM Cell
ANSI/SCTE 49 2002	(formerly IPS TP 114) Test Method for Velocity of Propagation
ANSI/SCTE 50 2002	(formerly IPS TP 115) Test Procedure for Measuring Regularity of Impedance of Coaxial Cable
ANSI/SCTE 51 2002	(formerly IPS TP 116) Method for Determining Drop Cable Braid Coverage
ANSI/SCTE 52 2003	(Formerly DVS 042) Data Encryption Standard Cipher Block Chaining Packet Encryption
ANSI/SCTE 53 2002	(formerly DVS 051), Methods for Asynchronous Data Transport
ANSI/SCTE 54 2004	Digital Video Service Multiplex and Transport System for Cable Television
ANSI/SCTE 55-1 2002	(formerly DVS 178) Digital Broadband Delivery System: Out Of Band Transport Part 1: Mode A
ANSI/SCTE 55-2 2002	(formerly DVS 167) Digital Broadband Delivery System: Out Of Band Transport Part 2: Mode B
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ANSI/SCTE 57 2003	(formerly DVS 507) System Information for Satellite Distribution of Digital Television for Cable and MMDS
ANSI/SCTE 58 2003	(formerly IPS TP 208) AM Cross Modulation Measurements
ANSI/SCTE 59 2002	(formerly IPS TP 005) Test Method for Center Conductor Bond to Dielectric
ANSI/SCTE 60 2004	(formerly IPS TP 013), Test Method for Interface Moisture Migration Double Ended
ANSI/SCTE 61 2002	(formerly IPS TP 016) Test Method for Jacket Web Separation
ANSI/SCTE 62 2002	(formerly IPS TP 205) Measurement Procedure for Noise Figure
ANSI/SCTE 63 2003	(formerly IPS TP 113) Test Method for Voltage Withstand of Outer Jacket
ANSI/SCTE 65 2002	(formerly DVS 234) Service Information Delivered Out-of-Band for Digital Cable Television
ANSI/SCTE 66 2003	(formerly IPS TP 006) Test Method For Coaxial Cable Impedance
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ANSI/SCTE 68 2003	(formerly IPS SP 211) Drop Passives: Matching Transformers 75 Ohm to 300 Ohm
ANSI/SCTE 69 2002	(formerly IPS TP 017) Test Method for Moisture Inhibitor Corrosion Resistance
ANSI/SCTE 70 2002	(formerly IPS TP 112) Insulation Resistance Megohmmeter Method
ANSI/SCTE 71 2003	(formerly IPS SP 004) Specification for Braided, 75 Ohm, Coaxial, Multi-Purpose Cable
ANSI/SCTE 72 2002	(formerly IPS TP 404) Test Method for Axial Load Temperature Cycling
ANSI/SCTE 73 2002	(formerly IPS TP 004) Test Method for Insertion Force of Connector to Drop Cable Interface
ANSI/SCTE 74 2003	(formerly IPS SP 001) Specification for Braided 75 Ohm Flexible RF Coaxial Drop Cable
ANSI/SCTE 75 2002	(formerly IPS TP 219) Test Point Accuracy
ANSI/SCTE 76 2003	(formerly IPS SP 207) Antenna Selector Switches
ANSI/SCTE 77 2002	(formerly CMS WG4-0001) Specification for Underground Enclosure Integrity
ANSI/SCTE 78 2003	(formerly IPS TP 011) Test Method for Transfer Impedance
ANSI/SCTE 79-1 2003	(formerly DSS 02-01) DOCS 2.0 Part 1: Radio Frequency Interface
ANSI/SCTE 79-2 2002	(formerly DSS 02-07) DOCS 2.0 Operations Support System Interface

ANSI/SCTE 80 2002	(formerly DVS 161) In-Band Data Broadcast Standard including Out-of-Band Announcements
ANSI/SCTE 81 2003	(formerly IPS TP 210) Surge Withstand Test Procedure
ANSI/SCTE 82 2003	(formerly IPS TP 220) Test Method for Low Frequency and Spurious Disturbances
ANSI/SCTE 83-1 2003	(formerly HMS 108) HMS Inside Plant Management Information Base (MIB) Part 1: SCTE-HMS-HE-OPTICS-MIB
ANSI/SCTE 83-3 2004	Hybrid Fiber/Coax Inside Plant Status Monitoring SCTE-HMS-HMTS-MIB
ANSI/SCTE 83-4 2004	(formerly HMS 133) HMS Common Inside Plant Management Information Base (MIB) SCTE-HMS-HE-RF-MIB
ANSI/SCTE 84-1 2003	(formerly HMS 111) HMS Common Inside Plant Management Information Base (MIB) Part 1: SCTE-HMS-HE-COMMON-MIB
ANSI/SCTE 84-2 2004	HMS Inside Plant Management Information Base (MIB) SCTE-HMS-HE-POWER-SUPPLY-MIB
ANSI/SCTE 84-3 2004	HMS Inside Plant Management Information Base (MIB) SCTE-HMS-HE-FAN-MIB
ANSI/SCTE 85-1 2003	(formerly HMS 112) HMS HE Optics Management Information Base(MIB) Part 1: SCTE-HMS-HE-OPTICAL-TRANSMITTER-MIB
ANSI/SCTE 85-2 2003	(formerly HMS 113) HMS HE Optics Management Information Base(MIB) Part 2: SCTE-HMS-HE-OPTICAL-RECEIVER-MIB
ANSI/SCTE 85-3 2004	(formerly HMS 118), HMS Inside Plant Management Information Base SCTE-HMS-HE-OPTICAL-AMPLIFIER-MIB
ANSI/SCTE 85-4 2003	(formerly HMS 119) HMS Common Inside Plant Management Information Base SCTE-HMS-HE-OPTICAL-SWITCH-MIB
ANSI/SCTE 86 2005	SCTE Recommended Optical Fiber Cable Types for Outside Plant Trunk and Distribution Applications
ANSI/SCTE 87-1 2003	(formerly CMS WG6-0001) Graphic Symbols for Cable Telecommunications Part 1: HFC Symbols
ANSI/SCTE 88 2003	(formerly IPS TP 003) Test Method for Polyethylene Jacket Longitudinal Shrinkage
ANSI/SCTE 89-1 2004	IPcable2Home Standard - Part 1: Cable Home Networking 1.0
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SCTE 90-1 2005	SCTE Application Platform Standard OCAP 1.0 Profile
ANSI/SCTE 91 2004	(formerly IPS SP 500), Specification for 5/8-24 RF & AC Equipment Port, Female
ANSI/SCTE 92 2003	(formerly IPS SP 501) Specification for 5/8-24 Plug (Male), Trunk and Distribution Connectors
ANSI/SCTE 94-1 2003	(formerly HMS 131) HMS Common Inside Plant Management Information Base SCTE-HMS-HE-RF-AMP-MIB
ANSI/SCTE 94-2 2003	(formerly HMS 132) HMS Common Inside Plant Management Information Base SCTE-HMS-HE-RF-SWITCH-MIB
ANSI/SCTE 95 2004	HMS Inside Plant HMTS Theory of Operation
ANSI/SCTE 96 2003	(formerly IPS TP 200) Cable Telecommunications Testing Guidelines
ANSI/SCTE 97 2004	(formerly DSS 02-15), Metadata Requirements for Video-On-Demand in Cable Networks
ANSI/SCTE 98 2004	(formerly IPS TP 400) Test Method for Withstand Tightening Torque - 'F' Male
ANSI/SCTE 99 2004	(formerly IPS TP 401), Test Method for Axial Pull Connector/Drop Cable
ANSI/SCTE 100 2004	(formerly IPS SP 007), Specification for 75 Ohm Smooth Aluminum Subscriber Access Cable
ANSI/SCTE 102 2004	(formerly IPS TP 502), Cable Retention Force Testing of Trunk & Distribution Connectors
ANSI/SCTE 103 2004	(formerly IPS TP 405), Test Method for DC Contact Resistance, Drop cable to F-Connectors and F81 Barrels
ANSI/SCTE 104 2004	Automation System to Compression System Communications Applications Program Interface (API)
SCTE 105 2005	Uni-Directional Receiving Device Standard for Digital Cable
ANSI/SCTE 106 2005	(formerly DSS 04-02) - DOCSIS Set-Top Gateway (DSG) Specification
ANSI/SCTE 107 2005	(formerly DSS 03-05) - Embedded Cable Modem Device Specification
SCTE 109 2005	Test Procedure for Common Path Distortion (CPD)
SCTE 110 2005	Hybrid Fiber Coax Outside Plant Status Monitoring: Alternative
SCTE 111 2005	Power Supply to Transponder Interface Bus (PSTIB) For HMS Transponders
SCTE 112 2005	Specification for 5/8-24 Plug, Male Adapters
SCTE 114 2005	HMS / DOCSIS® Transponder for Outside Plant Power Supply
	Test Method for Dimensions of Corrugated Subscriber Access Cable

The SCTE Standards Program provides an American National Standards Institute (ANSI)-accredited forum for the development of technical specifications supporting the cable telecommunications industry.

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