



FCC MANDATES PSIP Program and System Information Protocol

"We conclude that adoption of ATSC A/65B (PSIP) into our broadcast transmission standards will serve the public interest. As pointed out by commenters, during the development of PSIP, the ATSC carefully considered which elements of PSIP should be mandatory and which should be optional." the FCC Report & Order

The United States Federal Communications Commission (FCC) incorporated the entire ATSC Program and System Information Protocol for Broadcast and Cable (A/65B) into its rules without making any changes or taking any exceptions. All stations are required to comply with the PSIP Standard within 120 days after publication of the Report & Order in the Federal Register.

PSIP offers benefits for both viewers and broadcasters. For the viewer, PSIP permits suitably equipped receivers to build an on-screen grid of channels and program information for all DTV services. In addition, the viewer can conduct a seamless surf from NTSC to HDTV to SDTV. For broadcasters, PSIP maintains local brand identification through the "major channel number." As the FCC determined, PSIP provides a method for DTV receivers to identify a DTV station and to determine how a receiver can tune to it. PSIP identifies both the DTV channel and the associated NTSC channel, and enables DTV receivers to associate the two channels, making it easier for viewers to tune to the DTV station even if they do not know the channel number. In addition to identifying the chan-

nel number, PSIP tells the receiver whether multiple program channels are being broadcast and, if so, how to find them. It also identifies whether the programs are closed captioned, and conveys available v-chip information.

The FCC mandatory requirements include:

- ◆ Master Guide Table - which must have valid linkages to other tables
- ◆ System Time Table - which must contain time accurate to within one second when sent (each second)
- ◆ Virtual Channel Table - which must at least contain the NTSC channel number for each 'major' channel entry, and which the FCC said they expect to contain accurate TSID, service type, modulation mode, source Id and Service location descriptor
- ◆ At least the first four Event Information Tables (EIT), which must contain the Caption Service Descriptor (when DTV closed captions are present); and the Content Advisory Descriptor (when broadcasters choose to provide such advisories). The FCC further stated they expect to have correct program titles to inform consumers about which programs are planned to be broadcast. ■

"This recent FCC action has been expected for nearly a year, as virtually no one spoke in opposition when the FCC announced their intention to require broadcasters to conform to the mandatory aspects of A/65B. The FCC noted that the provisions included in the standard itself were established by agreements made between the affected industries, and saw no reason to deviate from those agreements." Mark Eyer, Sony and Chairman of the ATSC T3-S8 Working Group



the standard

Let Me Hear Your MetaData Talk... PMCP Powers PSIP

The Programming Metadata Communication Protocol (PMCP) jumps into the DTV spotlight as the FCC mandates the ATSC Program and System Information Protocol (PSIP) for Broadcast and Cable. On November 10, PMCP was elevated to ATSC Standard A/76. And, it couldn't come at a better time.

"Because PSIP and other DTV metadata is originated or processed by several separate systems and equipment, up to now there have been some difficulties in communicating the metadata to the PSIP generator. Implementing PMCP will help ensure that transmitted

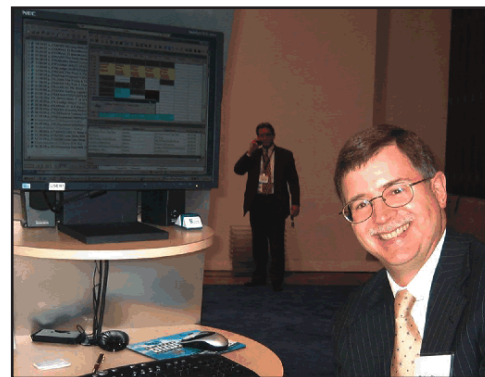
ment of the ATSC DTV system, PMCP is also extensible for other types of metadata, and can convey private information within the current data structure.



Graham Jones of NAB and chair of T3/S1, the ATSC specialist group on PSIP.

PSIP information is complete and correct, with minimum manual intervention by the broadcaster," stated Graham Jones of NAB and chair of T3/S1, the ATSC specialist group on PSIP.

PMCP, based primarily on Extensible Markup Language (XML), enables broadcasters and manufacturers to more easily interconnect systems that process PSIP and other DTV metadata such as traffic, program management, listing service, automation, MPEG encoder and the PSIP generator. Targeted primarily at PSIP, an essential ele-



Peter Storer, Peter Storer Associates sits in front of a screen showing a trial implementation of PMCP metadata communications at the 2004 National Association of Broadcasters (NAB) Conference.

"With the XML schema being both human and machine readable, PMCP implementation becomes a more simplified process by specifying exactly which elements are allowed in messages, their relationships, individual attributes and data types," stated Peter Storer, Peter Storer Associates, and a member of ATSC.

Another great benefit of PMCP is that it references, and is complementary to, existing ATSC standards. It supports the ISO standard V-ISAN for unique identification of program content and carries all the information needed in one message structure for:

- ◆ Transport Stream
- ◆ Virtual Channels
- ◆ PSIP Events
- ◆ Programs
- ◆ System Time Table
- ◆ Directed Channel Change Table
- ◆ Regional Ratings Table
- ◆ Private Information

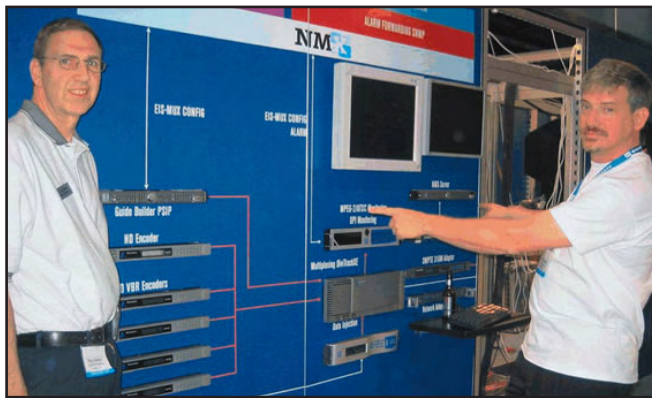
(see PMCP Powers PSIP on page 3)

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PMCP Powers PSIP

(continued from page 2)

“One of the things that became very clear, was the amount of variable conditions involved in defining PMCP. In the past, the programmers just told the traffic department what programs would air



Joel Wilhite, Harmonic and Ray Maker, KIRO-TV, operate the Harmonic display that demonstrates metadata communication from Harmonic equipment to a Triveni PSIP generator.

in the future. That information filtered out to the press and media services, and then to station master controls. In other words, a lot of sneaker netting. We knew right away, if PMCP was going to

be implemented, the dynamic workflow of stations would have to drastically change,” said Ray Maker of KIRO-TV in Seattle. “After countless phone conferences and in-person meetings, a standard was developed that addressed all aspects of the industry including software, hardware, automation, traffic, program management and broadcasters.”

More information on “Programming Metadata Communication Protocol” PMCP A/76, and Program and System Information Protocol for Broadcast and Cable (A/65B), is available on the ATSC web site at: www.atsc.org/standards.html. More information on FCC regulations and guidelines is available on the FCC web site at: www.fcc.gov.

If your company is interested in a PSIP/PMCP “Boot Camp” to learn from the experts on how to implement and maintain this federally mandated standard, please contact Lisa Hester at lhester@atsc.org or 202.872.9160. ■

ATSC PSIP Seminar at the 2005 Technology Retreat

ATSC is pleased to team up, once again, with Hollywood Post Alliance to conduct a PSIP seminar at the 2005 Technology Retreat, January 25th – 28th, at the Rancho Las Palmas Marriott in Palm Springs, California.

As in the past, the Technology Retreat focuses on new, exciting, informative, cutting edge technology presented by a group of top technological minds from across the country, and around the world. A highlight of this year’s retreat will be an in-depth presentation of PSIP by Mark Eyer, chairman of the T3/ S-8 working group that first developed, and now maintains, A/65B.

For information on this event, please send an email requesting more information to ekramer@hpaonline.com.

Registration can be done online at: www.hpaonline.com ■

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Screen capture courtesy of Samsung, ATSC member.

The Advanced Television Systems Committee (ATSC) is conducting a one-day seminar on implementing the "Advanced Common Application Platform" (ACAP) on Dec. 7 at the Radisson Barcelo Hotel in Washington, DC. Television enters a whole new realm with the roll-out of ACAP, and everyone in the industry who plans or implements digital technologies has something to gain from the seminar.

The seminar will include numerous presentations outlining how ACAP will provide consumers with advanced interactive services, while offering content creators, broadcasters, cable service providers, satellite operators and consumer electronics manufacturers with the technical details necessary for the development of interoperable services and products. The program also includes demonstrations with a focus on real-world implementation strategies.



Craig Smithpeters, Cox Communications, a leader in the development of the ACAP technology.

It's not too late to register for this in-depth seminar on the ATSC specifications for interactive television. The cost is \$400 for members and \$475 for non-members. For more information on ACAP, seminar presentations and on-line registration, visit www.atsc.org. You can also register by email at seminars@atsc.org or call Lisa Hester at 202-872-9160, ext. 5. For detailed information on the hotel, directions on how to get there, special rates and to make reservations, visit the hotel website at: www.radisson.com/washingtondc.



**ACAP Seminar in Washington, D.C.
December 7, 2004 • Radisson Barcelo Hotel**

Presentations and demonstrations by the industry experts, including Craig Smithpeters who has lead the development of ACAP for over three years, include (not necessarily in this order):

1. Welcome & Introduction
Craig Smithpeters, Cox Communications
2. The Relationship Between ACAP, OCAP and MHP, Jon Piesing, Phillips
3. Transport & Interaction Channel Overview
Azita Manson, Power TV
4. Next Generation ACAP Platforms
Rajesh Khandelwal, Panasonic
5. ACAP Application Development and Satellite Infrastructures, John Card, Dish Network
6. Conformance Test of Data Broadcast
Jin-Young Yang, TTA
7. Implementation Status of ACAP in Korea
Gun Bang, ETRI
8. ACAP Declarative Environment Overview
Glenn Adams, XFSI
9. ACAP Carousels/Coral ACAP for Deployment of iTV Services, Jean Marcher, Thales
10. Presentation and demonstration to be announced, Eric Lee, Aircode
11. Presentation and demonstration to be announced, Darren Forster, Softel – USA

**ATSC would like to thank the sponsors
of the ACAP Seminar...**



Jolly Good Fellows

Phil Livingston, Panasonic, and chairman of the ATSC Board of Directors, has been named a 2004 SMPTE Fellow. These notable ATSC members have also been elevated to Fellow: Michael Dolan, Television Broadcast Technology (TBT); Preston Davis, ABC Television Network; Wendy Aylsworth, Warner Brothers; Charles Dages, Warner Brothers; James Edwards, Tektronix, Inc.; Susan Gwynn-Handley, Eastman Kodak; Robert Plummer, DirecTV Inc.; and David Wiswell, Panasonic. ■

Profile: Ralph Justus, CEA

The ATSC Technology Group on Distribution (T3), at its November 16 meeting, expressed their gratitude to Ralph Justus for his long service as T3 Chair. Mr. Justus became the acting chair of T3 in late 1998 and was elected chairman on February 23, 1999. He was instrumental in guiding many new DTV standards and revisions of existing standards through the ATSC process. The November 16 meeting, held at the headquarters of the Public Broadcasting Service in Alexandria, VA, was his last as chair, having served the maximum number of terms allowed under the ATSC Bylaws.

“Ralph’s service as chair of T3 has been extraordinary” said ATSC President Mark Richer. “ATSC members who attend T3 meetings appreciate his ability to guide the group through complex issues in an efficient manner.”

Mr. Justus brought a lifetime of experience to T3. As Supervisory Electronics Engineer of the Federal Communications Commission (FCC) Television Branch, and a staff engineer in its AM and FM Branches, Mr. Justus was on the leading edge of technology when it began to evolve in the late seventies and early eighties. In 1983, he left the FCC to become the Director of Engineering, Regulatory and International Affairs for the National Association of Broadcasters (NAB) where he worked on issues involving broadcast radio and television technologies, auxiliary and satellite systems, spectrum management, proceedings at federal agencies including the Federal Communications Commission, Environmental Protection Agency, Federal Aviation Administration, the Department of State, and participation in the International Telecommunication Union.

In February 1991, the Consumer Electronics Association (CEA) offered him the position of Director of Engineering. For the next eight years, Mr. Justus worked on radio and television system design and performance, high-definition television, digital radio systems, TV antennas, audio technologies, regulatory activities before the FCC, and consumer electronics/cable television compatibility. In 1999, CEA appointed him Vice President of the Technology & Standards Department. Today, he guides the domestic and international technology policy and standards development activities of the association, as well as managing and overseeing a broad range of technology programs, government regulatory initiatives and research issues related to the consumer electronics industry.

Mr. Justus holds a Bachelor of Electrical Engineering degree from the Georgia Institute of Technology in Atlanta, Georgia, and is a member of: the Society of Motion Picture and Television Engineers; the Institute of Electrical and Electronic Engineers’ Consumer Electronics Society (currently President); Electromagnetic Compatibility Society; Broadcast Technology Society (former President); the Audio Engineering Society; the U.S. National Committee of the ITU-Radiocommunication Sector; the U.S. National Committee of the International Electrotechnical Commission.

Mr. Justus, his wife, Patricia Donnelly and son, Charles reside in Bethesda, Maryland. His leisure activities include golf, sailing, snorkel diving, reading and playing drums. ■



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The ATSC is an international, non-profit organization developing voluntary standards for digital television. The ATSC has member organizations representing the broadcast, broadcast equipment, motion picture, consumer electronics, computer, cable, satellite, and semiconductor industries.

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Welcome Wagon

ATSC would like to welcome its newest members, Sunext Design and Quantum Data Inc., to the ATSC team. We eagerly anticipate their contributions to the DTV standards currently being developed in the ATSC, and we know their participation will have an immeasurable effect on the future of digital television. ■

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The Standard 2005 Edition

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