Atlanta
March 2016

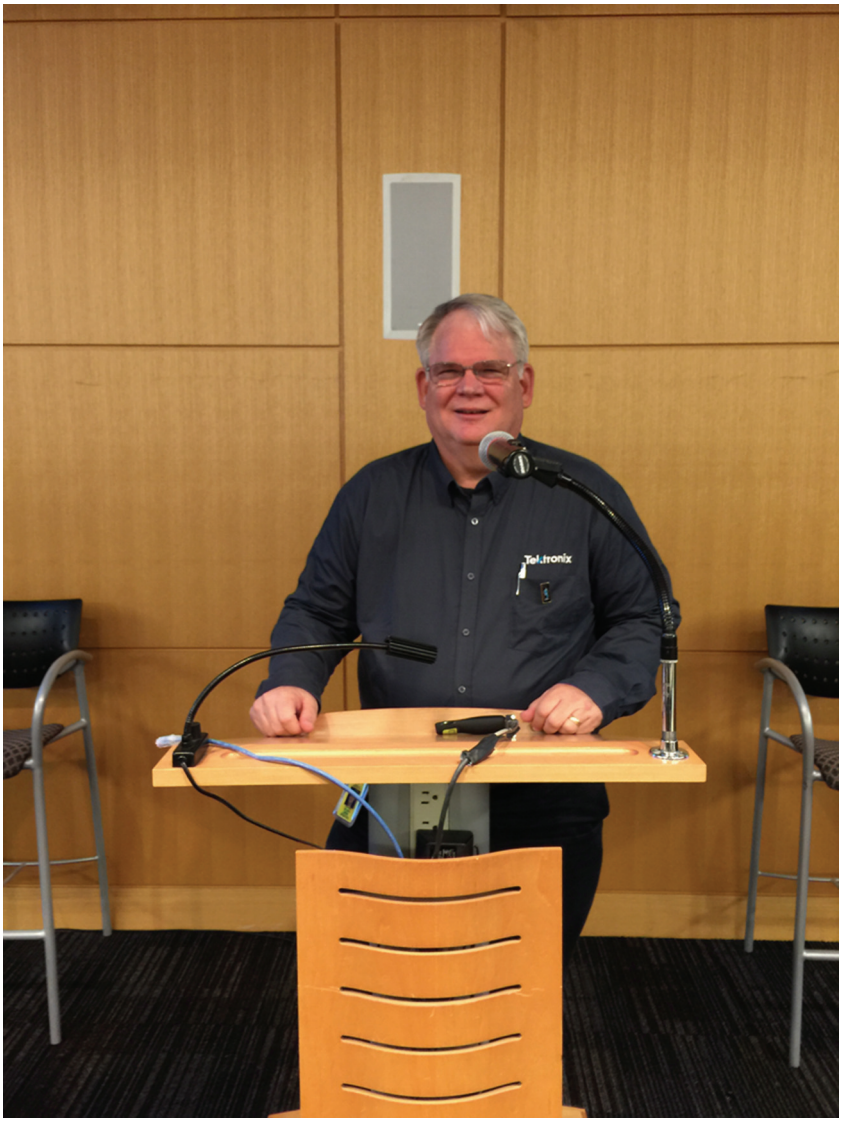
Industry professionals gathered at Turner Broadcasting in Atlanta, Ga, on 14 March, for a presentation on Precision Time Protocol (PTP) by John Bradford, senior applications engineer at Tektronix. Bradford began with a nostalgic look at how reference signals have evolved over the years. Earliest devices were locked with horizontal drive, vertical drive, and composite blanking, which then became burst flag and subcarrier as color made its appearance. Over time, this cross-faded to black burst and, more recently, to tri-level sync.

Enter the video over IP era. Three different systems are finding acceptance for signal transport, namely, Adaptive Sample Picture Encapsulation (ASPEN), SMPTE ST 2022, and Alliance for IP Media Solutions (AIMS). While the end result is similar, they each go about packetizing audio and video differently. ASPEN deals with audio, video, and metadata individually. It uses MPEG-2 Transport Streams, ST 302 for audio, and ST 2038 for ancillary data. SMPTE ST 2022 (the high-data-rate version as defined in parts 5 and 6) carries HANC and VANC data directly mapped. Since the video payload is frame centric, finding HANC information can be a bit tricky. ST 2022 also uses Realtime Transport Protocol (RTP), which includes time stamps. Because of the small packet size, packet headers amount to about 5% overhead, even though the headers are small. AIMS supports Video Services Forum (VSF) 03/04 (TR03 and TR04). AIMS uses the AES67 suite of digital audio standards, as well as RTP with Realtime Messaging Protocol time stamps. With video over IP, having a reference also sent over IP makes great sense.

SMPTE began work developing PTP as SMPTE standard. In 2015, SMPTE ST 2059-1 was released as a "version 1" document. ST 2059-1 explores signal generation and the alignment of devices. PTP starts with a master clock, which uses Global Positioning System as its reference. Typically, there are at least two master clocks, although a very unique feature is that any PTP clock has the capability to take over the duty of master clock, depending on how a system is configured.

Bradford went into detail on setting up a system, possible pitfalls to avoid, and some pointers on how to troubleshoot a PTP system. Thanks to John Bradford and Doug Keltz, regional account manager at Tektronix, for an excellent presentation and for providing the evening's dinner.

—Richard Perin
Secretary/Treasurer



Speaker John Bradford addresses attendees at the Atlanta Section meeting in March.

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Atlanta
April 2016

On 11 April, members of the Society of Broadcast Engineers, the Society of Satellite Professional International, SMPTE, guests, and students from Georgia Perimeter College gathered for a meeting titled "Drones, Drones, Drones." Greg Agvent, senior director of news operations for CNN, was the first to present to the more than 60 attendees. "Drones are a disruptive technology," he began. Despite issues of ethics, privacy, and free speech that are often addressed, Agvent opted instead to talk about the technology aspect, as well as the impact they were having on gathering and delivering news. Using drones commercially requires a Federal Aviation Administration "333 Exemption" of which few have been given. CNN was fortunate to receive such an exemption.

CNN is currently exploring three types of systems. Tethered drones are small devices that are connected to equipment on the ground. A cable carries power from ground up to the drone, and a second cable carries video down. This method, while limiting the radius of flight, allows drones to stay airborne for relatively long periods of time. Free-flight drones are battery-operated, self-contained units. Fixed wing devices are essentially "airplane" drones. While they lack the ability to hover, they are able to fly longer distances faster and more efficiently. CNN currently uses two people per drone. One person serves as pilot, while the other serves as the camera operator. Currently, there are about 1.9 million drones in the U.S. By 2020, that number is expected to rise to 4.3 million.

Lamar Ellis and Roman Molla from "FlyWorx" then addressed the group. They offer drone video services for hire to the production community. They discussed practical aspects of drone use, such as battery life, liability, and payloads, and suggested many unobvious uses for drones. Thanks to FlyWorx and Digital Glue for providing the evening's dinner and to Dick Tauber for coordinating the meeting.

—Richard Perin
Secretary/Treasurer

New York
March 2016

On Wednesday, 16 March, Chuck Diehl and Mike Strein produced the meeting on "Video over IP in a Production Environment." The event, which was held at AT&T's video facility, had more than 160 attendees. Scott Beckett of AT&T provided a history of the building. Speakers included John Mailhot, Imagine Communications; Paul Briscoe, Evertz Corp.; Deon LeCointe, Sony Professional Solutions of North America; and Wes Simpson, Telecom Product Consulting. These presenters represented groups who have positions on video over IP protocols, including the AIMS and ASPEN community, Sony's Network Media Interface (NMI), and VSF. Questions were prepared ahead of time to keep the presenters focused on how these protocols will work together and address typical production issues.

Wes Simpson discussed the TR03/TR04 standards from the VSF (http://www.videoservicesforum.org/) and how it would take advantage of production features of separate IP address audio, video, and metadata. He also addressed how the VSF and SMPTE would handle new audio standards and mezzanine compression.

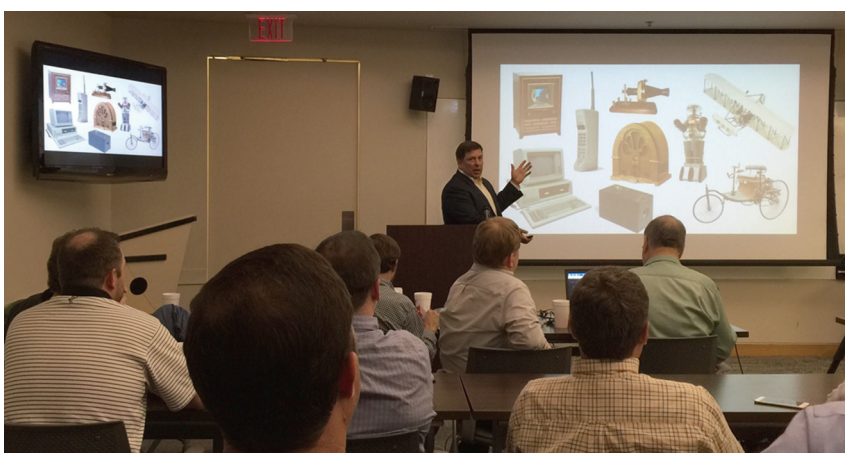
John Mailhot presented on AIMS initiatives (http://www.aimsalliance.org/), which focus on VSF/SMPTE implementations. He explained how these operate in a video over IP production environment. He showed full IP system diagrams and stated that they have a customer using this today.

Deon LeCointe focused on Sony's NMI (http://www.sony.co.uk/pro/press/sony-pr-ibc-2014-networked-media-interface) and its interaction with the ASPEN Community. He addressed all questions and concerns as referenced to those protocols and presented system diagrams of IP systems and large future sporting events. He gave numerous examples of Sony products being used in these systems.

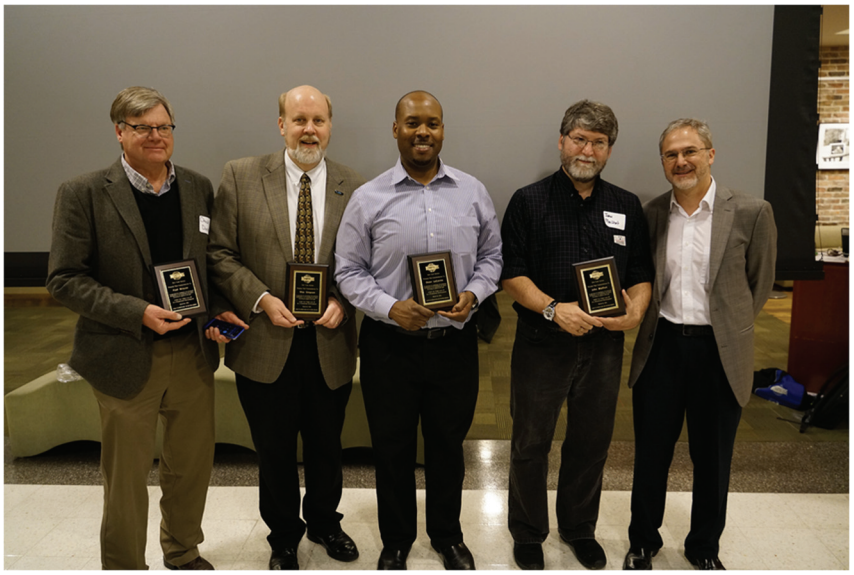
Paul Briscoe, in his presentation, highlighted the ASPEN Community (http://aspen-community.com/) and mentioned that there are more than 20 customers currently using ASPEN. He also stated that all IP video systems should be able to interact, as all of these IP production protocols share a common physical transport network. The primary differences of these IP protocols are encapsulation methods.

A video of the meeting is posted on the NY SMPTE website: www.smpteny.org.

—Bruce Follmer
Section Chair



Speaker Greg Agvent discusses Drones at the Atlanta April meeting.

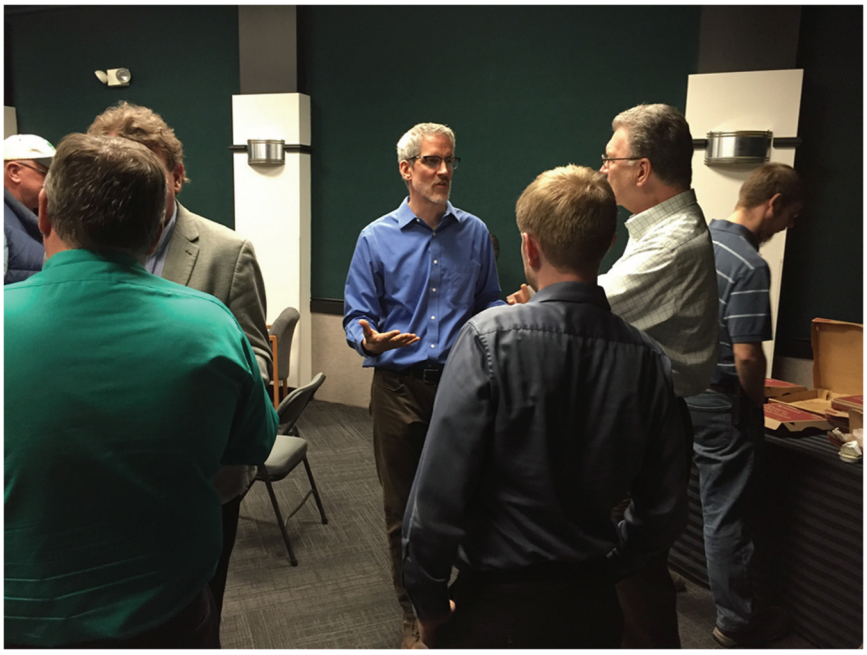


Participants for the New York Section meeting in March (L-R): Chuck Diehl (holding Paul Briscoe's plaque), Wes Simpson, Deon LeCointe, John Mailhot, and Mike Strein. *Photo courtesy of Mark Forman Production*.

Ohio
March 2016

The Ohio Section meeting on 24 March was combined with SBE Chapter 52 and held at the Mills James Production lot in Columbus, Ohio, with approximately 50 members and guests in attendance. The evening's guest speaker was Scott Ramsayer (CTS, CCDA) from the market development and Industry relations professional systems group at Shure Incorporated, Niles, Ill. Ramsayer's topics, slide presentations, and discussions centered around the new U.S. Congressional/Federal Communications Commission (FCC) mandated spectrum reallocation changes expected to take place within the TV and wireless microphone broadcast spectrum, and their impact on the wireless microphone industry as a whole. He also discussed strategic issues, such as why the changes are occurring in the first place, as well as defining various key terms, such as incentive, reverse, and forward auctions, and their possible influences on the future home for wireless microphones.

Ramsayer outlined potential customer confusion that could exist after all of the FCC changes have been implemented completely across the U.S., in accessing open frequencies at any given point in time and locale. He also mentioned an online tool by Shure that searches for open/available wireless frequencies,



Scott Ramsayer addresses attendees at the Ohio Section meeting in March.

including white spaces, within any given area. Users are able to go to an online website or cellphone/tablet app to display a list of local open frequencies, thus avoiding interference to other area broadcast spectrum users. He added that some of the company's models of wireless microphones will have component features with additional built-in technologies to prevent the possibility of local interference and assure a reliable and continuous signal exchange with their home bases. A lively Q&A session followed the presentation.

—Gene L. Batey
Secretary/Treasurer

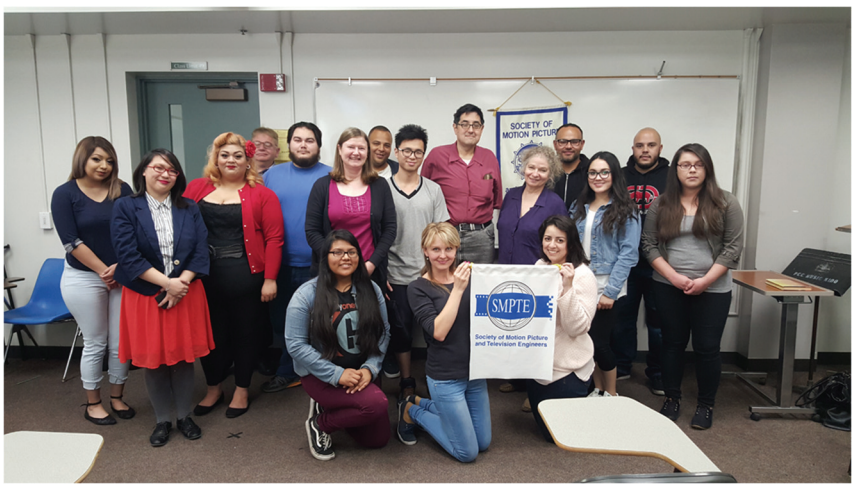
Pasadena City College Student Chapter March 2016

The Pasadena City College (PCC) student chapter held a meeting on 24 March on campus. Dan Watanabe, one of the guest speakers, was initially on the business end of the industry, working as a production executive for more than 25 years. He worked on television shows, including "Baywatch," "Air America," "Sirens," and numerous movies of the week, as well as game shows such as "Family Feud" and "To Tell the Truth." Watanabe currently runs the screenwriting critique group for the Greater Los Angeles Writers Society and consults with motion picture/television production company CRC Entertainment.

The other guest speaker, Sara Anne Fox, is a former development executive with a major Hollywood producer. She played a vital role in the conception and development of more than 25 screenplays, three published novels, and three produced films: *My Favorite Year*, *Nosferatu*, and *Quest for Fire*. For more than 20 years, Fox has used her skills as a writing coach and story editor with screenwriters and novelists to strengthen character development, clarify motivation, and improve story structure and plot.

Watanabe and Fox both discussed the historical, cultural, and professional influence of early television, particularly the Desilu production company and "I Love Lucy" series, in addition to their experiences on the business and creative sides of the entertainment industry, emphasizing story development and the collaborative process. They conducted an impromptu screenplay pitch session with students to illustrate the process and provide feedback on story development.

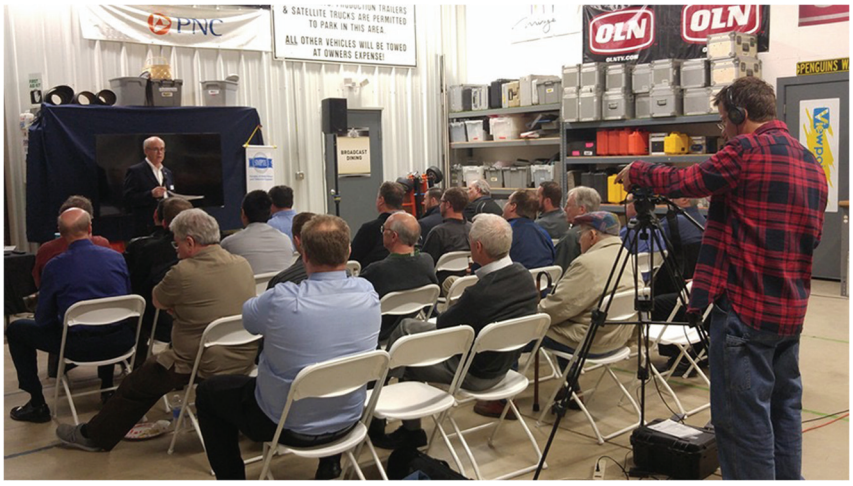
—Barbara Naylor
Faculty Advisor



PCC students gather for a photo at the Chapter meeting in March.

Pittsburgh April 2016

The Pittsburgh Section meeting on 6 April was held at Viewpoint Productions in Pittsburgh, Pa., with 32 attendees. Networking and refreshments, sponsored by Multidyne, preceded the program, which began with the announcement of the upcoming Section elections and the opportunity for candidates to speak. Attendees were also reminded of the Section's Audio Master Class, and members were urged to participate in the annual Section survey, which will be used by Section leadership to develop the monthly event



Speaker John Beavers addresses attendees at the Pittsburgh Section meeting in April.

Herbert Jay Dunmore.

and Master Class program plan for the 2016-2017 season.

The meeting topic, "Utilizing Unmanned Aerial Systems (UAS) for Cinema and Television Productions," was presented by John Beavers, president of 7LineMedia. He discussed the growth of this new industry within the realm of film and television production, Federal Aviation Administration regulations and insurance requirements, new on-set procedures and staff requirements, and future technology aimed at making UAS safer and easier to operate. The presentation included a half hour of flight and camera operation demonstrations, as well as a Q&A session.

—George Hoover
Section Chair

Washington, D.C.
March 2016

The Washington, D.C., Section went on the road to Baltimore, Md. on 2 March, where Loyola University hosted the meeting. Conducting the March meeting at the school has become a tradition of sorts and is done to encourage student participation in Section activities and also to generate an interest in the Society among future television and film industry workers.

The meeting began with time set aside to socialize and enjoy refreshments. This was followed by a greeting from Herbert Jay Dunmore, manager of Loyola's GreyComm television studio facility. Dunmore then screened a student-produced video presentation featuring SMPTE members discussing the value of membership in the organization. Greg Desimone, a Loyola television production student, then talked about the relationship of the school with SMPTE and some of the department's ongoing activities that involve SMPTE, including a video project about ultra-high-definition television.

Following Desimone's presentation, Section Chair Tom Hackett, introduced the section managers in attendance and conducted a short business meeting, mentioning future Section activities, including


Karl Kuhn describes the February HPA event to Section meeting attendees.

the "Bits by the Bay" on 25–26 May, the regional technology conference hosted by the Section. Hackett then introduced the meeting's featured speaker, Karl Kuhn, SMPTE Eastern Region Governor and a Tektronix senior field video application engineer.

Kuhn described his attendance at the recent Hollywood Professional Alliance (HPA) conference and encouraged students to attend future HPA sessions and take advantage of the many benefits offered. He then highlighted some of the presentations from this year's HPA, including the ATSC 3.0 standard, expanded color space, PTP, and SDI over IP.

Kuhn's presentation was followed by a tour of the school's new television studio and control room facility, which was constructed with a large amount of hands-on student involvement. The meeting was well attended by both students and Washington, D.C., Section members and managers who made the 50-mile trek to Baltimore.

—James E. O'Neal
Section Manager