

Central Texas, Dallas/Ft. Worth, Baylor University Student Chapter September 2017

A joint meeting of the SMPTE Central Texas Section, SMPTE Dallas/Ft. Worth Section, and the Baylor University Film and Digital Media SMPTE Student Chapter was held at Baylor University, Waco, TX, on 28 September with more than 100 in attendance. The meeting, hosted by Corey Carbonara in the Castellaw Communication Center, was titled “Displaying HDR (High Dynamic Range) & WCG (Wide Color Gamut).” Presenter Gary Mandle, Sr. product manager, Sony Electronics



Attendees at the joint meeting at Baylor University.

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Inc., provided an outline of the technical developments and elements of displaying images in HDR and WCG. Mandle works at Sony on the development of new display and imaging technologies as both a design engineer and product manager. He has been involved with the introduction of Sony's BVM and PVM CRT DTV model lineup, the introduction of LCD for professional monitoring, the implementation of Sony's digital cinema projection systems, both grating light valve and silicon x-tal reflective display technologies, and the development of Sony's current organic light-emitting diode technology, which recently was awarded both a Primetime Emmy from the Academy of Television Arts & Sciences and the first monitor technology to be awarded the SciTech Award from the Motion Picture Academy of Arts and Sciences.

The program was live streamed and is available on demand at:



Presenter Gary Mandle (l) and host Corey Carbonara (r).

<https://www.youtube.com/user/smpteconnect>

—Rick Reagan
Meeting Organizer

Hollywood September 2017

The meeting on 28 September, which explored ATSC 3.0, the next-generation digital-broadcast standard was held at the Linwood Dunn Theater in

Hollywood, CA. The event, combined with the Audio Engineering Society's Los Angeles Section and SMPTE, included approximately 157 attendees.

Richard Chernock, chair of the Advanced Technology Systems Committee (ATSC) Technology Group 3, discussed the group's progress toward finalizing ATSC 3.0 and how the new standard differs from ATSC 1.0.

Chernock spoke about the ATSC mission. He gave the audience an overview of ATSC 3.0 by explaining how ATSC 1.0 (A/53) was revolutionary in 1995, but 20 years later broadcast technologies and consumer viewing habits have radically changed. ATSC 3.0 is a response to these changes while designed to incorporate new technologies. ATSC 3.0 is not backward-compatible with ATSC 1.0 (8VSB/MPEG-2/HD/AC3).

ATSC 3.0 is consumer driven. The goal of ATSC 3.0 is to: (1) improve the television viewing experience, (2) add value to the broadcaster's service

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platform, and (3) address changing consumer behavior and preferences. As a result, ATSC 3.0 will:

- Have significantly higher data capacity
- Offer flexible spectrum use
- Have higher physical layer robustness
- Offer future extensibility and mobile/handheld support
- Offer hybrid broadcast + broadband delivery
- Have advanced A/V compression that supports immersive audio and ultrahigh-definition (UHD) video with full 10-bit depth, high dynamic range (HDR), and wide color gamut (WCG)
- Offer interactivity and personalization
- Offer potentially new business models and the ability to adopt new technologies



Attendees at the Hollywood Section meeting.

Chernock also provided an update on the status of the ATSC 3.0 standards committees and described the South Korean Launch of ATSC 3.0.

—Steve Wong
Secretary/Treasurer

Washington, D.C. September 2017

After a summer break, monthly meetings of the Washington, D.C., Section resumed on 21 September

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John Humphrey, speaker at the Washington, D.C., September meeting.

with a special joint session held in conjunction with the newly-created George Mason University (GMU) student chapter. The event

featured an in-depth look at HDR television imaging and display by John Humphrey, vice president of business development at Hitachi Kokusai Electronics America, and was held at the school's Fairfax, VA., campus television facility.

After refreshments and networking, the meeting was called to order by Greg Smalfelt, Section outreach committee chair and liaison to the GMU student chapter, who described the event as a three-fold affair: the regular Washington, D.C., Section meeting, an outreach effort to connect with students interested in television's technical side, and a tutorial on UHDTV and HDR.

In his remarks, Smalfelt described the functions and goals of the SMPTE organization, including education, mentioning that it was not solely for engineers, as its membership included content creators and others in the entertainment industry.

Smalfelt then introduced Washington, D.C., Section Chair, Tom


Hackett, who introduced other Section members in attendance, including several committee chairs who described some of the Section's activities and programs.

Humphrey was then introduced and began his presentation on HDR in television with a description of what constitutes HDR and what is necessary to produce HDR in a television system. He provided a full exploration of HDR and associated concepts and technologies by defining HDR terminology. Humphrey offered a short history of television dynamic range metrics, examining HDR standards, explaining wide color gamut, the different methodologies for handling HDR information in a television system, and more. His topics included compatibility among HDR and non-HDR display devices, the ITU-R BT.2100 standard dealing with HDR, and the optical-to-electrical/electrical-to-optical transfer function encountered in television systems.

Humphrey noted that HDR wasn't just a camera or display curve situation, but rather the complete end-to-end chain involving image capture, processing, encoding, transmission, and display.

Humphrey's presentation concluded with a Q & A session.

—James E. O'Neal
Section Manager



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