

IEEE

Broadcast Technology Society Newsletter

The technologies to deliver information and entertainment to audiences worldwide, at home and on the go.

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Newsletter Deadlines

The BTS Newsletter welcomes contributions from every member. Please forward materials you would like included to the editor at BTSEditor@ieee.org. Here are our deadlines for upcoming issues:

Issue	Due Date
Spring	January 23, 2013
Summer	April 26, 2013
Fall	July 22, 2013
Winter	October 28, 2013



BTS Symposium Event Draws 140 Participants

By Paul Shulins
BTS Symposium Co-Chair

ALEXANDRIA, VA.

The 62st annual Broadcast Technology Society Symposium took place Oct. 17–19 at the Westin Hotel here, with more than 140 paid registrants from all over the world assembling for three days of informative, lively, and relevant presentations on radio and television engineering.

This year's symposium was again deemed a huge success, from not only a content perspective, but also as measured by attendance, and financially as well, with good sponsor participation.

First-Day Tutorials

The event kicked off with a tutorial session on "IP in Broadcasting," co-chaired by Rich Chernock, and Bob Surette. The morning papers included a presentation on important elements in network structure by Pat Waddell and Joel Wilhite. Other morning presentations included an overview of the SMTE 2022 family of standards, audio distribution in an IP-based network, IP-based control in a broadcast facility, and media streaming directed to small screen devices.

Following a Frontline video presentation on cell tower accidents, a working box lunch session took place with

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President's Column

William Meintel, BTS President



You have probably noticed that this issue of the **Newsletter** is very small. For an explanation and a plea for help please read our editor, James O'Neal's, column. While it is the job of the editor to keep the publication on schedule, solicit content and promote the general well being of the publication my job as president of the society is different. My responsibility is to the overall health of the society of which the **Newsletter** is one part. My duty is to look at all the pieces and assess their contribution to the overall goals, provide support and guidance where necessary to those activities that are doing well and look for ways to fix or eliminate problems with those that are not.

In my previous column I discussed my thoughts on our Fall Symposium and the action that has been taken to attempt to revitalize it. When I formed the committee to look into it I told the chair that everything was on the table, including elimination of the Symposium. Every activity that the society undertakes has a cost associated with it, be it in dollars and/or volunteers' time, and we need to use both to achieve the greatest benefit to our members and our industry.

By now you probably have figured out where I am heading with this discussion. This **Newsletter** has a problem and it is not the fault of our hard working editor, James O'Neal, or our support staff at IEEE headquarters. Both have done an outstanding job trying to make it work. Unfortunately the problem lies with our members who don't support the **Newsletter** by providing content.

As I see it we have two courses of action to fix this problem. The quick fix and the easy way out is to just eliminate the publication and reallocate the resources to other activities. Since I believe that a newsletter can be a very beneficial tool for an organization and I am not one to give up easily, I don't like that option. The other course of action is for you the membership to step up and show some support. BTS has roughly 2,000 members worldwide, if once a year just two percent of you would provide an article, that would provide more than sufficient content to not only sustain the **Newsletter**, but also to grow it into a very worthwhile publication.

There are a handful of you that contribute on a regular basis and your effort is greatly appreciated. On the other hand,

I don't think it is too much to ask that the rest of you take a small amount of your time to give something back to the Society and to your industry. We can't all be takers; someone has to be a giver. I know we have many members that are involved in very interesting work and all we ask is that you share some of your experiences and knowledge with the rest of us. Even if you don't think your work is interesting it may well be to those of that don't know anything about. I always enjoy reading about things that I am interesting in but don't know anything about. Those types of articles don't need to be deeply technical and in fact those that provide just a basic understanding of the subject are likely to appeal to a wide audience.

Also don't worry about the quality of your writing skills or your mastery of the English language; we can help with that part if you will just give us your story. Also be aware that anyone can contribute. We will gladly accept content from people who are not BTS or IEEE members, so if you have a colleague who is willing to share something please encourage and facilitate it. Who knows, we might even gain a new member in addition to a contributor.

If you are making resolutions for the New Year, I encourage you to make one of them a commitment to provide one article a year to the **Newsletter**. Even if it takes you eight hours to write the article, that is less than 0.1 percent of the number of hours in a year. As I said before, I don't think that is too much to ask. Also you get the benefit of having your work in front of not only our entire membership but to anyone that can access the Internet. All the **Newsletters** (including back issues) are posted on the BTS Website and are available to the public at no charge. You also might even get some useful feedback and/or a networking opportunity.

I have laid out the options now it is up to you to make a decision. Should we fold the **Newsletter**, or are you willing to help make it a viable part of our Society. Something must be done and the choice is yours. I welcome your comments and suggestions as to how we should proceed.

As society president, I also welcome your input about any other issues affecting BTS.

Bill Meintel
President
wmeintel@ieee.org

From the Editor

James E. O'Neal, BTS Newsletter Editor



As is readily apparent, this is a somewhat more abbreviated issue of the **Newsletter** than usual. When I inherited the editorship of the publication, we were two issues behind schedule and had entirely missed publication of an issue the previous year. It has been my goal ever since to close this gap and this is my solution.

I don't like to cut corners, but I'm faced with the reality that this is a necessary measure to get us back on track. Once again, it's a choice between waiting for sufficient content to arrive fill the publication to a level to which our readers have become accustomed, or to produce an abbreviated "bulldog" edition.

Hopefully, this is the last time that I will have to make such a decision.

However, as your editor, I do continue to have a problem in accumulating—in a timely fashion—sufficient content to fill the publication, and at the same time, content that is of sufficient quality and interest to ensure that the time spent in reading the Newsletter is a worthwhile experience.

As some of you are aware, I retired from fulltime activities in the field of broadcast engineering, and wanting to stay busy, began a second career on a fulltime basis as technology editor for a national publication. Such publications are very much deadline driven and have no trouble in filling space, as there's a fairly large stable of paid writers to call on for stories delivered in a timely manner. It's a totally different situation at the **Newsletter**, as everything is done on a voluntary basis; however, just like a commercial publication, we still need content and still have deadlines to meet.

I need to make a special appeal to our membership to continue to provide material for our **Newsletter**. While we do have some members that are very good about this, it's not really enough. I find that I'm writing a fairly large share of the material that goes into the publication and having to borrow and repurpose content from other IEEE and outside publications more and more in order to fill the pages and provide something other than stock "filler" announcements. From time to time, I've appealed to some of you to provide stories about what you're doing in connection with yours jobs, or other items that would be of interest to those in our organization. With a few notable exceptions, I haven't gotten much response at all. The common thread that I do

encounter is usually "I'm not doing anything interesting," or "I'd like to, but I just don't have the time." To address the first of these responses, as broadcast engineering continues to change and evolve, I have to believe that much of what we do in our jobs is interesting. Please give me a chance to decide. As for lack of time, many of those who do provide content for the **Newsletter** are employed on a fulltime basis, have families, maintain homes and cars, and attend to a host of other responsibilities, yet somehow manage to make time to contribute to the effort. Given the size of the overall BTS membership, if just one-tenth of us volunteered only a single story a year, there would be more than enough content to produce a very nicely-sized **Newsletter** each quarter. Please think about this as you read through the **Newsletter**. For each story, *someone* had to take time away from another activity to produce it, as there are no paid writers. Enough said.

Chapter reporting is another area that also goes begging. There are quite a few BTS chapters located in spots all around the world, yet we only have a handful of reporters who are diligent about sending reports of activities to the **Newsletter**. I don't belong to a BTS chapter, as there is no Washington, D.C. area BTS group; however, I do belong to other professional societies that do have a regular calendar of activities, and I also receive another IEEE publication, **The Scanner**, which spotlights the activities of other IEEE Washington-area societies and groups. There's always a lot of news there. I can't believe that BTS chapters—where they do exist—are any different. You must have meetings involving guest speaker presentations, do broadcast facility tours, or engage in other such group activities on a regular basis, or you wouldn't be a chapter. Please share reports on some of these presentations and activities with us. I'm sure that other BTS members in the United States and other parts of the world would also be interested in learning about them. (Please be sure to include plenty of good photos too.)

Let's see if we can make the Newsletter grow and thrive in the new year!

I hope all of us enjoyed a very merry and festive holiday season, and would like to extend my wishes for health, happiness, and prosperity in 2013.

James O'Neal
Editor
BTS Newsletter
BTSeditor@IEEE.org

BTS Symposium continued from page 1

Tom Silliman providing a very informative and frank presentation on broadcast station protection in this era of broadband expansion.

The first-day afternoon tutorial covered computer simulation tools used by broadcasters, and was chaired by Eric Wandel. Afternoon papers included an overview of computer simulation tools used in broadcasting, allocation analysis, propagation analysis, antenna and RF component modeling, medium frequency simulation methods, IM and other interference studies, and RF simulation and compliance.

Following the conclusion of the day's business session a welcoming re-

ception was held in the hotel's Wright Room with entertainment provided by the Da Vinci Strings.

Symposium Relocation News

Thursday Morning's opening remarks by Symposium co-chairs David Layer and Paul Shulins, included news that the Symposium would be moved to San Diego, Calif. Next year, and would take place in San Antonio, Texas in 2014. The moves had been agreed upon by the AdCom after a committee assigned to improve symposium attendance presented its report indicating that the change in location might attract more BTS members.

The morning's technical session was chaired by Greg Best, and covered RF issues and technology. Paper topics included transmitting live television via bonded cellphone technology, efficient codec design, an update on the all-pass diplexer from ERI, FM transmitter considerations for improved FM analog/digital combining systems, interference from passive intermodulation, and a report on the incentive spectrum auction by the FCC's Bob Weller.

The Thursday luncheon was a joint BTS/AFCCCE event with a keynote address by Kevin Gauge, NAB executive vice president and chief technology officer.

Following the luncheon, the NAB's Lynn Claudy chaired an afternoon session on Mobile DTV, with papers covering field evaluation of mobile receivers for legacy ATSC, mobile EAS Systems, conditional access in Mobile DTV, the consumer launch of Dyle Mobile DTV, and audio considerations for Mobile DTV.

The manufacturer's reception in the hotel's Wright Room followed the afternoon session.

All About Audio

Friday morning's activities began with a session of audio for radio and television chaired by James O'Neal. Presenters included some industry giants, including Bob Orban, Frank Foti, Al Salci, Phil Owens, and Mary Ann Seidler. A panel discussion moderated by Paul Shulins followed the papers, and included all of the Friday morning presenters.

The annual awards luncheon followed the morning session, with event sponsors being recognized and a number of awards being bestowed on BTS members. The Matti S. Siukola Memorial Award for the best paper for 2011 was presented to Greg Best and Merrill Weiss by Guy Bouchard. A special Service Award went to Ed Williams, and additional awards were given to past Symposium Chairs, including Tom Silliman, Eric Wandel, David Layer, and Paul Shulins.



Symposium presenters and panelists found plenty of enthusiastic attendees poised to hear what they had to say.



(L-R) Amanda Temple, Jenn Barbato, and April Compertore journeyed from IEEE headquarters in Piscataway, N. J. to assist with Symposium operations.

Following the awards presentations, Sam Matheny, vice president of policy and information at Capitol Broadcasting, gave a spirited and somewhat tongue-in-cheek talk on “disconvergence” and the future of broadcasting, leaving many of his audience with smiles and some intriguing thoughts to take home.

Where Television May be Heading

Technical paper presentations followed the luncheon program, with Merrill Weiss chairing a session on the future of broadcasting. Topics included progress technologies for the next generation of digital terrestrial broadcasting, an overview of the Future of Broadcast Television (FOBTV) initiative, uses cases, and a look at the ATSC 3.0 initiative, which spells out propos-

als for the next generation of broadcast television.

In Conclusion

For the second year in a row, a virtual component was added to the symposium, with Tom Gurley leading a team of five committee members in organizing the high-definition Internet live streaming of Symposium events for those who were unable to Virginia. This streaming initiative effort also included an interactive component that allowed virtual attendees to interact with physical attendees, and even to pose questions to speakers in real time. In addition, the entire Symposium was recorded for access online for all paid attendees. Event sponsors again this year participated in a virtual exhibit

hall, which provided additional value to their sponsorship and more access for our attendees. A special note of thanks is due NewTek and Canon U.S.A, Inc., who provided streaming services and HD cameras respectively.

By all measures, this year’s event was a success, as it attracted a near record crowd and world-class presenters, offered a virtual attendance option and included more sponsors than ever before.

Planning for the 2013 Symposium is already underway, with co-chairs Paul Shulins and David Layer considering ways to top the success of this year’s event as it moves to the West Coast.

Additional details about this year’s event are available at the BTS Website, www.ieee.bts.org.

John Reiser once again kept the Symposium’s audio flowing.

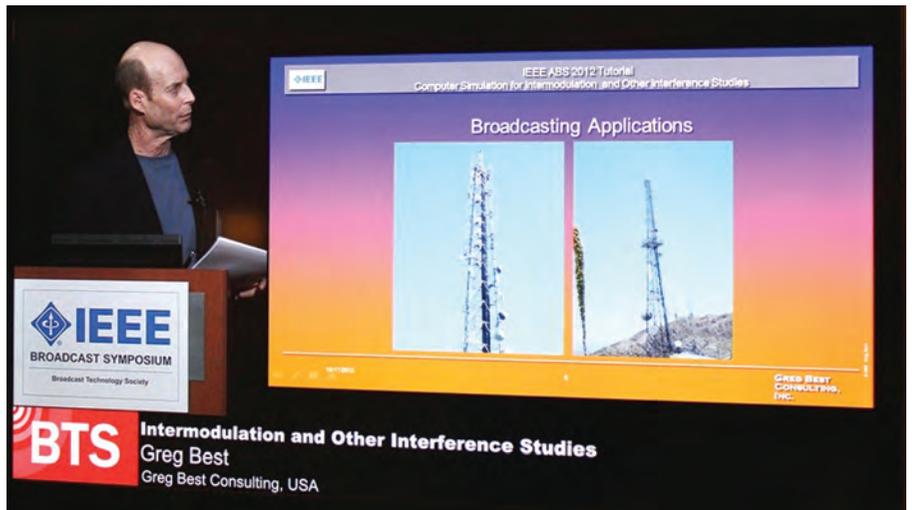


Ed Williams was at the ready to make sure presenters were never without a microphone.





James Fang was on hand to make sure presenters' PowerPoint files were loaded and at the ready.



For the second year in a row, Symposium events were streamed live to the World Wide Web, with NewTek providing equipment and operators, and Canon U.S.A, Inc. furnishing the high-definition video cameras.



Lennie Nelson (L), NewTek video content producer, and Josh Garcia, NewTek events technical coordinator, kept video and audio flowing to the World Wide Web.



Skip Pizzi (L) and Jay Adrick enjoy the food and hospitality at the Wednesday evening "Welcome" reception.



AdCom member "Tino" Trainotti traveled from Buenos Aires to participate in the Symposium.



The Da Vinci Strings have become a perennial favorite at the Alexandria Symposia, and once again provided entertainment at the Wednesday evening reception.

This year's event attracted a large number of attendees and sponsors alike. Wheatstone's Phil Owens was on hand both to demonstrate his company's latest audio products and to present a paper on audio networking.



Audio legend Bob Orban was also at this year's Symposium with information on measuring loudness controller performance. He also participated in the Friday morning panel discussion on audio.



NAB's Kevin Gage Addresses BTS/AFCCE Luncheon

By James E. O'Neal

ALEXANDRIA, VA.

Kevin Gage, executive vice president and chief technical officer of the National Association of Broadcasters provided the keynote address at the Thursday, Dec. 18 joint BTS/AFC-CEE Symposium luncheon, in which he underscored the importance of U.S. broadcasting services in the rapidly changing communications environment.

"As the technology leaders of this industry, every one of you can make truly a difference on the issues that are confronting us this year, next year and in the future that impact our industry," said Gage. "If we don't defend this industry that we care so deeply about, the ability of local stations to serve their communities by providing life-saving information and news and weather and updates will be hampered."

Gage cited the service that local broadcasters provided during times of crisis, especially in connection with natural disasters.

"I'd like to take this opportunity to talk about where we see radio and television heading in the future and how we're working to overcome the challenges and to secure a vibrant future for broadcasters," said Gage. "The word 'courage'—that's what comes to mind when we talk about broadcasters and the service they play in their communities." This was clearly evident in late August when Hurricane Isaac struck the Gulf region, bringing powerful winds and pounding rain to communities in Florida, Louisiana, and Mississippi. Broadcasters quickly stepped in and ran to the forefront in fulfilling their role as first informers, giving warnings and providing nonstop coverage of the hurricane's path.

"Seven years after Hurricane Katrina, this was a fresh reminder of the lifeline role of local broadcasting. It was also a reminder that built-in radio in mobile phones is an effective way to inform people of impending danger. When phone service and Internet go down because of capacity constraints, the issue we see during many weather disasters is that radio stays on and that radio is still there. Now we understand that the wireless carriers are trying to do their part and they have implemented a text-based system which is called Wireless Emergency Alert or "WEA" to inform people during times of crisis, but its ability is limited."

Gage then asked rhetorically what would people do in time of crisis—turn to "Google" or tune in their local radio stations?



Kevin Gage

"No other form of communication can match the architecture of a one-to-many broadcasting system," he said.

Smartphones With a Secret

In keeping with his theme of local broadcasting as being the lifeline for citizens during an emergency, Gage noted that the NAB had surveyed the smartphone market to determine how many were equipped with broadcast radio receiving capability. The organization found that all of the top-10 best-selling phones in the U.S. market were all equipped with FM broadcast capability, but this feature was not activated in any of the phones. Gage offered that activating such broadcast radio reception capability would bring many opportunities for phone users, broadcasters and the wireless providers.

"We just need to continue educating our friends in the wireless industry about the benefits of providing their customers with built-in radio," Gage said. "Radio provides a great service to the public. Radio reaches more than 242 million American listeners each week and that number continues to grow each year. Eighty-one percent of Americans surveyed wanted local radio as a feature on their smartphone."

Insuring a Strong Future for All Broadcasters

In order to remain viable in the face of new consumer technologies, Gage encouraged broadcasters to take advantage of new technologies available to them, including digital, Internet streaming, and retransmission on FM translators for AM stations.

"We must ensure a strong vibrant future for the business so that radio and television can continue to successfully serve America's local communities," he said.

Gage called for additional emphasis to be placed on providing radio receiving capability in cell phones, and described his organization's efforts in examining technologies that could potentially strengthen the position of broadcasters. He also noted the impact of the FCC's "incentive auctions" and potential loss of television broadcast spectrum and admonished radio people to stay alert too.

"Radio broadcasters—you have to stay awake here. You need to stay engaged and educated on the spectrum incentive auction process. This shouldn't be seen as a TV-only issue. Radio station could be impacted by the subsequent repacking of TV stations. Towers that are shared by radio and TV stations may have to be powered down and new towers may have to be built."

Sam Matheny Provides Keynote Address at Awards Luncheon

By James O'Neal

ALEXANDRIA, VA.

The Friday Symposium luncheon is the occasion for presentation of awards and commendations, and this year a number of BTS members were honored.

Guy Bouchard was on hand to present an IEEE Special Service award to Ed Williams. Additional awards went to present and past Symposium chairs David Layer, Paul Shullins, Tom Siliman, and Eric Wandel. Greg Best and Merrill Weiss were honored with the presentation of the 2012 Matti M. Siukola Memorial Award given for the best paper delivered at the previous year's Symposium.

In addition, certificates of appreciation were also bestowed to several BTS members who assisted with the Symposium.

Once the awards ceremony was completed, Symposium co-chair, Paul Shullins introduced the luncheon keynote speaker, Sam Matheny, who is vice president of policy and innovation at Capitol Broadcasting.



Sam Matheny

In his presentation, Matheny introduced luncheon attendees to several new terms and concepts that are part of our 21st century environment, but are almost completely overlooked.

Skeuomorphism

Matheny began by introducing the term “Skeuomorphism” to more than a few puzzled members and guests.

“Skeuomorphism is a real thing, and you witness and participate in it every day when you’re using these smartphones,” said Matheny. “You have a touchscreen device yet when you go to type an e-mail or text, or whatever if you have the volume turned up it goes ‘chsk, chsk, chsk,’ just like a real typewriter. If you have a camera phone and you go to take a picture it makes a sound; it doesn’t have to, but that’s skeuomorphism. If you have an e-reader, it doesn’t just scroll through the way it does when you’re working in a Word doc; it actually has pages that you can turn and a little ribbon as a bookmark. These are all examples of skeuomorphism.”

Matheny further explained that skeuomorphism was the practice of taking a functional property of an item along when that object moves into a new medium.

“It’s meant to take something that’s new and make it

comfortable and make it familiar,” said Matheny. “I think that skeuomorphism is a really tangible and modern-day way of thinking about our past and how it will apply to our future.”

He then moved from “skeuomorphism” to “diconvergence.”

“We are in a period of diconvergence,” said Matheny. “If you are typing in Microsoft Word, and you type in the word ‘diconvergence, there’s going to be a little squiggly red line under it, and that’s probably about right, because it’s trouble and you need to pay attention to it.”

Matheny explained that a good working definition of “diconvergence is “a difference or conflict in interests, wishes, and technologies that come together from different directions to add, eventually to meet in chaos” and offered some examples:

A ‘Television’ Is No Longer Just a ‘Television’

“You’ve got televisions that aren’t just displaying broadcast content anymore. They have personal applications that you are able to install and run, and when you think about many, many—not all, but many—of these personal applications, they are meant for smaller screens, or were initially designed for smaller screens. They’re typically personal—my Facebook page, my Twitter account—it may be information I don’t want to put in a communal environment and have everybody look at with me, but nevertheless here it is and it’s available on your big screen TV—diconvergence.

“On the other end of the spectrum, you’ve got content that has traditionally been built for communal enjoyment—for the big screen, for the living room—and we are trying to take it and put it on ever-smaller screens and private devices or devices that have typically been private....”

Diconvergence, as applicable to broadcasters, said Matheny, is trying to take the broadcast system we have and make it do everything from transmitting SD-quality video to a handheld viewing device all the way to delivering 8K ultra high-definition images to an 80-inch screen.

“This is diconvergence at its finest,” said Matheny. “But this is our challenge and this is the world that we live in, so what is a broadcaster to do? We have a lot of great engineers and they are going to approach this thing systematically—they are going to study the variable, they are going to create an equation, and they are going to have a party, and that party is going to be ‘BYOD’ or ‘bring your own device.’”

A Changing Broadcasting Landscape

“We as broadcasters are going to have to embrace the idea that we are in a ‘bring your own device’ world, and they’re going to run the gamut in terms of what they are and how people will use them.”



Paul Shullins (far left), David Layer (2nd from right) and Tom Silliman (far right) applaud Ed Williams who received a Special Service award.



(L-R) Merrill Weiss and Greg Best were joint recipients of this year's Matti M. Siukola Award, which was presented by Guy Bouchard.

Matheny called attention to the plethora of handheld devices and television delivery modalities that exist today, and also the rise of social media and interaction that are part of today's connected world.

"Every one of them is moving really fast...stuff is smaller, stuff is cheaper, is more feature-rich and can be replaced so often that it's almost perishable," said Matheny. "And we can't slow down...we can't hem and haw for too long...[even] the water cooler [conversation] has moved—it is now on Twitter; it is now on Tumblr..."

"There was a debate the other night and there was a phrase that was used by one of the candidates that had a lot of instant attraction in the social world. That was when

Governor Romney said he was looking for women to hire and people brought him 'binders full of women.' Within 60 seconds of him saying 'binders full of women' there was already a Twitter hashtag for it, there were already people posting about it, and there were a variety of images that people had posted [about it].

Matheny noted as a direct result of the interaction between broadcast television and social media, there were thousands and thousands of images of this type created and posted on the Web shortly after the Romney remark.

"This is the world that we're going to have going forward and it's going to be faster than it is today," observed Matheny. "When you are in a BYOD broadcasting world, we are really talking about a shift. I also believe that social ratings are going to begin to grow in importance. They are already starting to impact the story line—not just maybe what turns people in debates but in actual programs. Where producers and editors are seeing what the social response is and are using that.

"I also believe that social ratings are going to begin to grow in importance. They are already starting to impact the story line—[which] producers and editors are seeing what the social response is and are using that. Producers and editors are seeing what the social response is and are using that."

Matheny remarked that today's broadcasters have a wonderful set of tools and technologies available to them today, but they also caught in a squeeze for more spectrum from other interests

and also changing viewer habits.

"We need to adopt the attitude of thinking about our business as a continuous and constant development and a continuous deployment," Matheny said. "We can't have a 50 year standard anymore. We've got to develop a mechanism by which we can continue to innovate."

He noted in conclusion that broadcasters still have "a very real and sincere community service obligation" and broadcasters have to continue to deliver to remain viable.

"That has to be part of our future," said Matheny. "And I think for all of the technology and development that we are doing, we are going to be able to deliver on that better than ever and that our best days are indeed ahead of us."

Chapter Reports

Beijing

David Layer, a BTS distinguished lecturer, presented a talk on digital radio for the Beijing, China BTS chapter on Nov. 8, 2012 at Beijing's Tsinghua University.

Some 40 individuals were on hand for the presentation, including university faculty members and students, editors from several publications, along with representatives from the Third Institute of China Electronic Technology Group Corp., the Institute of Acoustics Academia Sinica, the State Administration of Radio, Film and Television, and the Communication University of China.



Layer's presentation, "Digital Radio—Looking Back, Looking Forward," provided a brief review of the history of radio technology, focusing on the differences between analog and digital radio broadcasting, as well as the "enabling technologies" necessary for the introduction of digital radio services. He then discussed the status of the transition to digital radio around the world, in particular the U.S. transition to in-band/

on-channel digital radio. Finally, Layer offered his thoughts on the need for a transition to digital radio technology and the importance of localism and community service to the future competitiveness of terrestrial radio.

The three-hour seminar was followed by discussions about digital radio broadcasting technologies and corresponding applications.

Washington

While there is no BTS Section in Washington, D.C., there is a very active Society of Motion Picture and Television Engineers Section there, and a fairly large number of broadcast engineers in the area. The SMPTE Section has for several years combined its annual holiday party with the Washington chapter of the Society of Broadcast Engineers, and this year, a special invitation was extended to BTS members in the District of Columbia/Maryland/Virginia area.

The Dec. 6, 2012 event drew some 65 attendees representing all three professional societies, and also marked a relocation of the party to a new venue, the Buca di Beppo Italian restaurant in downtown Washington. There was no program—just a pleasant evening with plenty of good food and drink, story swapping, and good fellowship among those of the broadcast engineering community and their wives and significant others. The SMPTE Section has extended a cordial invitation to BTS and SBE members to attend the organization's regular monthly programs and also hopes that area BTS will take part in the merriment when next year's holiday party rolls around.



BTS President Bill Meintel and your editor enjoyed the hospitality at the Washington D.C. Section SMPTE holiday party.

Upcoming Events

of Interest to BTS Members

- **Feb. 18–22, 2013** – Hollywood Post Alliance Retreat – Indian Wells, Calif.
- **March 2–5, 2013** – NRB Convention & Exposition; Nashville, Tenn.
- **April 6–11, 2013** – NAB Show and Exhibition; Las Vegas, Nev.
- **April 15, 2013** – Deadline for submitting abstracts for prospective papers for Fall IEEE Broadcast Symposium.
- **May 4–7, 2013** – Audio Engineering Society 134th Convention; Rome, Italy
- **June 4–7, 2013** – IEEE International Symposium on Broadband Multimedia Systems and Broadcasting (BMSB); West London, U.K.
- **Sept. 12–17, 2013** – IBC 2013 Conference and Exhibition; Amsterdam, Netherlands
- **Sept. 18–20, 2013** – Radio Show; Orlando, Fla.
- **Oct. 9–10, 2013** – Broadcast India; Mumbai, India
- **Oct. 9–11, 2013** – IEEE BTS Annual Broadcast Symposium; San Diego, Calif.
- **Oct. 17–20, 2013** – Audio Engineering Society 135th Convention; New York
- **Oct. 29–30, 2013** – Society of Broadcast Engineers National Meeting; Indianapolis, Ind.

If you have information on broadcast-related events that may be of interest to other Broadcast Technology Society members, please submit them at least three months in advance to the **BTS Newsletter** editor at BTSeditor@ieee.org.

IEEE Broadcast Symposium

9-11 October 2013

San Diego, CA USA

Call for Papers

Final deadline for abstracts:
15 April 2013



Please mark your calendar to attend the **2013 IEEE Broadcast Symposium** to be held in San Diego, CA on 9-11 October 2013 (exact venue TBA). This Symposium is produced by the IEEE Broadcast Technology Society.

The Symposium Committee seeks timely and relevant technical papers relating to all aspects of broadcast technology, in particular on the following topics (**new topics for 2013 shown in RED**):

- Digital radio and television systems: terrestrial, cable, satellite, Internet, wireless
- Mobile DTV systems (all aspects)
- Cellular broadcast technologies
- Streaming delivery of broadcast content
- Non-real time (NRT) broadcast services
- "Second screen" technology and services
- Transmission, propagation, reception, re-distribution of broadcast signals
- AM, FM, and TV transmitter and antenna systems
- Broadcast tests and measurements including: co-site interference practices; prediction, measurements and mitigation
- Cable, satellite interconnect w/ terrestrial broadcast
- Transport stream issues
- Translator issues
- Broadcast audio including: CALM act
- Regulatory issues
- Ancillary services
- Unlicensed device operation in TV white spaces
- Next-gen broadcast platforms including: ATSC 3.0, FoBTV
- Reception issues for digital TV & radio
- ATSC & other broadcast standards developments
- Broadcast spectrum issues – re-packing, sharing
- Broadcast studio design & construction including: IT requirements for broadcast, redundancy & survivability

Call for Tutorials: proposals for half-day tutorials are also solicited based on the topics listed above.

Call for Panels: proposals are solicited for panels on technology, application, business, and policy-related issues and opportunities for the broadcasting industry.

Prospective presenters are invited to submit extended abstracts of 500-1000 words by e-mail to bts@ieee.org. Please indicate that the abstract is submitted to the *2013 IEEE Broadcast Symposium*, and include the corresponding author's full name and contact information including: affiliation, address, e-mail, and phone number. **Final deadline for abstracts is 15 April 2013.**

For more information about the IEEE Broadcast Technology Society, visit our web site: bts.ieee.org.



Save The Date!



Please mark in your calendar to attend the 8th Annual IEEE Broadband Multimedia Systems and Broadcasting conference (<http://www.ieee-bmsb.org/>) to be held at Brunel University in Uxbridge, London, on 4th – 7th June 2013. This conference is organised by the IEEE Broadcast Technology Society.

The conference seeks timely and relevant technical papers relating to all aspects of broadcast technology, in particular on the following topics:

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. Multimedia systems and services <ol style="list-style-type: none"> 1.1 Mobile TV 1.2 IPTV & Internet TV 1.3 DTV and broadband multimedia systems 1.4 VoD, interactivity, datacasting 1.5 Field trials and test results 1.6 Content management 1.7 Service deployments 1.8 Future of Broadcasting 2. Multimedia devices <ol style="list-style-type: none"> 2.1 Display technology 2.2 Acquisition technology 2.3 Set-top box and home networking 2.4 Mobile, portable, and handheld devices 2.5 Program guides and navigation 3. Multimedia quality: Performance evaluation <ol style="list-style-type: none"> 3.1 Performance evaluation 3.2 Objective evaluation techniques 3.3 Subjective evaluation techniques | <ol style="list-style-type: none"> 4. Multimedia processing <ol style="list-style-type: none"> 4.1 Audio technology 4.2 Video coding and processing 4.3 Content adaptation and scaling 4.4 Error resilient and concealment 4.5 Rate control 4.6 Retrieval and indexing 4.7 3-D and multi-view video 4.8 Content protection and watermarking 5. Transmission and networking <ol style="list-style-type: none"> 5.1 Channel modeling and simulation 5.2 Channel coding, modulation, multiplexing 5.3 Signal processing for transmission 5.4 Propagation and coverage 5.5 Congestion control 5.6 Traffic and performance monitoring 5.7 Networking and QoS |
|---|--|

Provisional Program can be found on: <http://www.ieee-bmsb.org/program.htm>

Prospective authors are invited to submit extended abstracts of about 1000 words by e-mail to bts@ieee.org. Each abstract must include at least two key words chosen from the topics mentioned above.

Please indicate that the abstract is submitted to the IEEE International Symposium on Broadband Multimedia Systems and Broadcasting 2013, and include the corresponding author's full name and contact information including: Affiliation, address, e-mail and phone number.

Important dates:

Submission of extended abstracts: January 7th, 2013

Notification of acceptance: February 28th, 2013

Submission of camera-ready paper: May 1st, 2013



All inquiries to john.cosmas@brunel.ac.uk



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