Radio TechCheck



The NAB Labs Newsletter for Radio Broadcast Engineers

September 22, 2014

NextRadio, HD Radio Featured at 2014 Radio Show

Once again the Radio Show (September 10-12, 2014, Indianapolis, Ind.) offered an outstanding opportunity for the radio industry to catch up, network, and learn about the latest and greatest radio broadcasting technologies. This week's Radio TechCheck offers a brief summary of some of the exciting events and developments from this year's Show.

NextRadio Updates Its App

On the first day of the Show, Emmis
Communications and its subsidiary
TagStation, LLC held a press conference on
the Show floor to unveil what was billed as
"NextRadio version 2." Speaking at the
press conference were Emmis President
and CEO Jeff Smulyan and Emmis CTO
Paul Brenner. Schedule for release in early
2015, this new version of the NextRadio
hybrid radio app (shipped with Sprint
phones and also available at the Google
Play store) will include a number of new
features including:



- A NextRadio introductory tutorial which will run upon installation, helping users understand the capabilities and how to use the features of the app;
- Live Guide, a first-of-its-kind visual tuning interface that displays local station choices by real-time album art or custom schedule content. Shown in the photo above at the press conference are Emmis CTO Paul Brenner (at left) and Emmis Director of Product Development Ben Husmann demonstrating the Live Guide feature on a smartphone mockup display. Each album image on the Live Guide display corresponds to a song playing at that moment on an Indianapolis radio station that is using the TagStation interactive software;

- NextRadio app navigation has been streamlined into a "drawer" that puts all user options in
 one easy-to-find place as well as in-app tutorials showing listeners how to interact with their
 local stations, a behavior change that can grow radio's position in the mobile ad business;
- Dynamically-driven related content "cards" will accompany station songs and programming
 events to provide the listener with more information about the live broadcast while providing the
 station with extended advertiser and promotion options. These may include upcoming concerts,
 record release dates, recently played, next up on-air, and more.

Emmis believes that all of these changes, along with improved frequency locating accuracy, will make the radio listening experience easier, more immersive, and more enjoyable. A video of the NextRadio press conference is available here.

iBiquity and TagStation Announce Partnership on Integrated Automotive Platform



iBiquity Digital Corporation, the developer of digital HD Radio technology for AM and FM radio, and TagStation, LLC, developer of the TagStation data service and the NextRadio smartphone app, announced in a press conference from the HD Radio booth on the Radio Show exhibit floor an agreement to develop an integrated automotive platform that combines their technologies and services. This announcement was made by Robert Struble, President and CEO of iBiquity, and Jeff Smulyan, President and CEO of Emmis (see photo, Struble is on the

stage at left and Smulyan is at right). Struble and Smulyan explained their belief that the combination of HD Radio and TagStation will blend the best of broadcast technology and IP-delivered services to enhance the in-car user experience and unlock the full potential of connected services.

"HD Radio Technology has enjoyed tremendous success in automotive adoption and is now supported by all major car manufacturers as well as over 2,300 US radio stations," said Smulyan. "That success and their commitment to developing innovative broadcast solutions, made this joint development a logical next step in the evolution of the NextRadio/TagStation platform."

Struble added, "The TagStation team has demonstrated a unique understanding of broadcast business opportunities and the mobile applications space. Their development expertise and ability to rapidly deploy valuable consumer services has driven their success to date with Sprint." Struble continued,

"We look forward to working with the exceptional team to bring these services and an enriched broadcast user experience to HD Radio listeners."

The agreement also provides for expansion of the TagStation platform in international markets and provides a framework for expanding NextRadio and HD Radio Technology in mobile devices. For additional information, visit the <u>iBiquity web site</u> or the <u>TagStation web site</u>.

Change of Leadership for NRSC DRB Subcommittee

It was announced at the Radio Show that Glynn Walden, senior vice president, CBS Radio, and Jackson Wang, president and CEO, e-Radio, Inc. have been selected to co-chair the National Radio Systems Committee's (NRSC's) Digital Radio Broadcasting (DRB) Subcommittee. The NRSC is a technical standards-setting body co-sponsored by NAB and the Consumer Electronics Association (CEA).

Walden, recipient of the 2004 NAB Engineering Achievement Award for radio, has been active in the DRB Subcommittee since its founding. In his previous capacity as Vice President of Broadcast Engineering for iBiquity Digital Corporation, he wrote the in-band/on-channel (IBOC) technical and regulatory specifications for what would eventually become the HD Radio digital radio system.



Wang is the founder of e-Radio, a smart grid communications solutions company. His career spans the Canadian military where he was an aerospace engineering officer, the private sector as a systems engineer with Litton Guidance and Control Systems on the U.S. Tomahawk Cruise Missile Program, and in the public sector with the Ontario Ministry of Transport where he was a senior project manager specializing in public private partnerships.

Messrs. Walden and Wang succeed Andy Laird, former VP and CTO of Journal Broadcast Group, who has served at the helm of the DRB Subcommittee since 2007, when he succeeded Milford Smith, VP of radio engineering with Greater Media, as Smith became (and still is) the NRSC Full Committee chair. Shown in the photo above are Smith (at left) and Laird (at right), immediately following the presentation of a commemorative plaque to Laird honoring his years of service to the NRSC.

During Laird's tenure, a number of important NRSC documents were developed including the latest revision of the NRSC digital radio Standard, NRSC-5-C, which described significant new capabilities including operation with asymmetric digital sidebands (AM and FM band), operation with increased digital carrier power (FM band), and operation with reduced digital bandwidth (AM band).

Additional information about the NRSC, including information on becoming a member, is also available on the NRSC's website.

35th Anniversary of Formation of NRSC Recognized



The 35th anniversary of the formation of the NRSC was recognized at the 2014 Radio Show. The NRSC was formed by NAB and the Consumer Electronics Association (CEA) – through its precursor organization the Electronic Industries Association (EIA) – and held its first meeting in New York City in October, 1979. A press release announcing that first meeting is available here.

Since then, the NRSC has become a focal point for the U.S. radio industry's development of technical standards and the advancement of broadcast radio technology. NRSC Standards have been incorporated into the rules of the Federal Communications Commission (FCC) and have guided the manufacture of radio receivers and broadcast transmission equipment. More recently, NRSC Guidelines documents have helped the broadcast industry manage the transition to digital radio and support new data broadcasting features.

To recognize this anniversary, a breakfast reception was held at the 2014 Radio Show just prior to the

convening of the NRSC Subcommittee meetings held at the Show, at which brief remarks were made by Sam Matheny, NAB EVP and CTO, Mike Bergman, Senior Director Technology & Standards, CEA (on behalf of CEA President and CEO Gary Shapiro), and Milford Smith, Vice President, Radio Engineering with Greater Media and current NRSC Full Committee chair. Additionally, a new NRSC logo and public web page were unveiled, both designed by the NAB Marketing team. This new web page is "mobile friendly" as demonstrated by the screen capture shown here, of the web page viewed in a Chrome browser on an Apple iPhone 4s.

Layer Receivers CEA Technology Leadership Award at Radio Show

NAB Senior Director, Advanced Engineering David Layer was presented with a 2014 Consumer Electronics Association (CEA) Technology Leadership Award during the NRSC's 35th anniversary reception at the Radio Show. Making this presentation was Mike Bergman, Senior Director Standards & Technology at CEA. Shown in the photo at right are Bergman (at left), Layer (center) and Milford Smith, current NRSC chair (at right).



CEA presents the Technology & Standards Leadership

Award each year to one or more individuals for "their commitment to excellence as evidenced by the extent and consistency of their overall, ongoing participation in CEA's Technology & Standards program ... for significant contributions to CEA's Technology & Standards program to advance the state-of-the-art in consumer electronics ... [and] demonstrated industry leadership through active participation."

In his prepared remarks Bergman said: "This year, the NRSC's 35th year, it is appropriate that the award go to someone who has contributed so much to this group, to radio and to radio standards. This individual has been with the NRSC for close to 20 years. When you consider the phrases 'extent and consistency,' 'significant contributions' and 'demonstrated industry leadership,' there is certainly no shortage of names. NRSC is home to a host of award-winning engineering talent."

"But over the past two decades, one individual has contributed many hours to the efforts of the NRSC." Bergman noted that Layer "has participated in a thousand discussions and more; and he has set a standard of excellence by example and by insistence on quality."

Layer, who has been with the NAB since 1995, and is NAB's staff representative to the NRSC, is not the first NAB Technology department staff person to be so honored. In 2012, Art Allison, then Senior Director, Advanced Engineering with NAB (and now retired) was also a recipient of the CEA Technology Leadership Award, for his work with ATSC and CEA standards-setting groups.

NAB Labs Futures Park Solicits Exhibitors



Know someone who might be interested in exhibiting their mediarelated technology R&D projects at the 2015 NAB Show? NAB Labs is now accepting applications to participate in the 2015 NAB Labs Futures Park at the Las Vegas Convention Center, Las Vegas, Nev., April 13-16, 2015. NAB Labs Futures Park is a reserved area of the NAB exhibit floor that exclusively features mediarelated technology R&D efforts in progress around the world. For a quick look at last year's Futures Park, visit <u>nablabs.org/projects</u>. The Park is a popular venue for both exhibitors and attendees, and receives considerable press attention every year.

NAB supplies complimentary exhibit space to all organizations accepted for participation in Futures Park. Expressions of interest or questions should be directed to Katy Armstrong at karmstrong@nab.org. Applications for exhibition space must be received on or before December 5, 2014.

Just Released: NAB's Legal Guide to Broadcast Law and Regulation – 6th Edition

To guide the industry in the 21st century, NAB's Legal Department and leading attorneys have prepared the only up-to-date, comprehensive broadcast regulatory publication: *NAB's Legal Guide to Broadcast Law and Regulation*. Known for years as the "voice" for broadcast law, this publication addresses the full range of FCC regulatory issues facing radio and television broadcasters, as well as intellectual property, First Amendment, cable and satellite, and increasingly important online issues. It gives practicing attorneys, in-house counsel, broadcasters and other communications industry professionals practical "how to" advice on topics ranging literally from "a" (advertising) to "z" (zoning).

NAB's Legal Guide to Broadcast Law and Regulation is available to keep you current on changes in the law, significant court decisions, FCC rules, agency policies and applied solutions. Buy it from NABStore.com.

TAP Webcasts Available On Demand

Available On Demand: Technology Apprenticeship Program (TAP) <u>Webcasts on the Evolution of Car Radio and the Connected Car</u>. Check out this year's TAP engineering webcasts, the final project to the six-month technology program

Important Dates and Upcoming Events

137th International AES Conference

October 9 - 12, 2014

Los Angeles, CA

2014 IEEE Broadcast Symposium

October 15 - 17, 2014

San Antonio, TX