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Radio TechCheck



The Weekly NAB Newsletter for Radio Broadcast Engineers

Robert du Treil and Thomas Keller to Receive 2011 NAB Engineering Achievement Awards

NAB presents its Radio and Television Engineering Achievement Awards each year at the NAB Show in Las Vegas. The awards, first established in 1959, are given to individuals for their significant contributions which have advanced the state of the art of broadcast engineering. This year's winners, Robert du Treil (Radio) and Thomas Keller (Television) will be honored at the Technology Luncheon on Wednesday, April 13, 2011.

Radio Engineering Achievement Award Winner L. Robert du Treil, Sr.



L. Robert "Bob" du Treil, Sr. is a consummate broadcast engineering consulting engineer with over 50 years of experience in the business. Currently Bob is a consultant to the firm which bears his name – [du Treil, Lundin & Rackley, Inc. \(DLR\)](#) – and which for many years he served as owner and president. While over his long and accomplished career he has been involved in all aspects of radio and TV engineering consulting activities, he is perhaps best known for his contributions to international discussions on mediumwave (AM) directional antenna technology which took place within the International Telecommunication Union (ITU) in the early 1980s.

Bob has the reputation of being a very creative consultant, very adept at visualizing design possibilities for transmitting antennas and what might be accomplished with the modification of other stations' facilities and/or revision of foreign station notifications. Many believe that there are radio stations operating today with facilities that would never have been built except for Bob's "out of the box" creative thinking and his deft ability to make innovative proposals to the FCC in cases without clear-cut precedents.

In addition to working with clients, Bob has published a number of papers and articles and made presentations to national, state and local broadcast engineering groups over the years. A notable example of this, and one of great importance to U.S. broadcasters, is his authorship of instructional documents which provided the basis for discussions regarding AM directional antenna technology during the ITU Region 2 Conference that revised radio station allocation engineering standards and procedures in 1980 and 1981. Bob had the good fortune of working with his father, L.J. N. du Treil, a broadcast engineer who worked for the Marconi Wireless Telegraph Company, the Federal Radio Commission (predecessor to today's FCC), and then started his own consulting business, as well as his son, L. Robert Du Treil, Jr., who today works at the firm which bears Bob Senior's name.

Prior to his association with DLR, Bob worked for a number of other engineering consulting firms including Jules Cohen & Associates, L. J. N. du Treil & Associates (Bob's father's firm), and John H. Mullaney & Associates. Bob received a BSEE from Louisiana State University at Lafayette, La. in 1961, and is a member of the Institute of Electrical and Electronic Engineers (IEEE), the Society of Broadcast Engineers (SBE) and the Association of Federal Communications Consulting Engineers (AFCCE), having served as president.

Television Engineering Achievement Award Winner Thomas B. Keller



Thomas B. (Tom) Keller has had a remarkable career with over 50 years of outstanding significant contributions to and leadership of broadcast engineering technology development for the U.S. television broadcast industry. Currently, Tom is president of T. Keller Corporation a technology consulting firm that has developed and led extensive and novel laboratory and field studies of new technologies for broadcasting.

A number of innovative television technologies have been developed under Tom's leadership. While director of engineering at WGBH, he was responsible for the development of an early computerized captioning system for the hearing-impaired, allowing high-speed, in-picture captioning of programs such as the late evening broadcast of the ABC Captioned News. He was also responsible for the engineering of one of the first Electronic Field Production programs ever produced for network release and for the development of a multichannel recording system used for the Boston Pops, Boston Symphony, NAT Operas, allowing for a 16-track audio recording, multi-track electronic video editing and creation of the final mix down to mono and stereo tracks for television broadcast.

As director of engineering at the Public Broadcasting Service (PBS) he was responsible for engineering development projects including: captioning for the hearing-impaired; multichannel network distribution, and a UHF transmitter efficiency improvement project which, together with NAB, NASA and Varian, led to the creation of a High Efficiency Klystron Tube. In addition, Tom chaired the EIA Broadcast Television Systems Committee, Subcommittee on Multichannel Television Sound (BTSC/MTS) that developed the enabling standards that resulted in the BTSC stereo audio system used for NTSC television for which a technical Emmy was awarded.

From 1981-1988 Tom was the head of NAB's Science and Technology department. During his tenure Tom was instrumental in establishing the Advanced Television Systems Committee (ATSC) which was created by the JCIC (Joint Committee for Intersociety Coordination) whose members included SMPTE, NAB, NCTA, EIA and IEEE. In addition he oversaw the Advanced Television Terrestrial Broadcast Project in Washington, D.C. which provided transmission/reception of early HDTV technologies used for demonstrations to the FCC and Congress.

As a consultant in the early 1990's, Tom was the first to propose discrete multichannel audio services for HDTV as part of the activities of the FCC Advisory Committee on Advanced Television Services. He is a Lifetime Fellow of SMPTE and a senior member of the Broadcast Technology Society of the IEEE.

CEA's Brian Markwalter to Keynote NAB Broadcast Engineering Conference

The Internet Tsunami is washing over broadcast receivers. Will the rising tide lift all boats?



Or will it capsize those who are not prepared? Come hear Brian Markwalter's keynote address at the Broadcast Engineering Conference on Sunday, April 10 at 9:00 a.m. titled, *Tsunami Warning – Internet Washing over Broadcast Receivers* will attempt to answer these questions.

In Brian's words, "In the beginning there was AM radio. Then came FM, doubling the number of channels on a radio receiver. Many years later came satellite radio, doubling the number of channels again. Now radio receivers are being connected to the Internet and the number of channels isn't just doubling, it's increasing exponentially.

Television receivers have evolved similarly. They started with VHF, then expanded into UHF. Then cable and satellite TV spread across the land, dramatically increasing the number of channels on a typical receiver. But now, as TV receivers plug into the Internet, the amount of content available seems almost infinite.

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What does this mean for traditional AM, FM and TV receivers? That's what this talk will be about."

Brian Markwalter is Vice President of Research and Standards for the Consumer Electronics Association (CEA) representing the \$180 billion U.S. consumer technology industry. Brian is responsible for overseeing CEA's ANSI-accredited standards development operation, market research capability and represents CEA's technical interests in industry and international venues related to digital television, broadband access, spectrum management, standards and intellectual property, smart grid and energy efficiency. He holds BS and MS EE degrees from the Georgia Institute of Technology. For additional information visit the [NAB Show Broadcast Engineering Conference Web page](#).



IEEE Broadcast Technology Society Issues Call for Papers

A Call for Papers has been issued for the 2011 IEEE Broadcast Symposium, to be held October 19-21, 2011, in Alexandria, Va. The Symposium Committee seeks timely and relevant technical papers relating to all aspects of broadcast technology, in particular on the following topics:

- Digital radio and television systems: terrestrial, cable, satellite, Internet, wireless
- Mobile DTV systems (all aspects, both transmission and reception)
- Technical issues associated with the termination of analog television broadcasting
- Transmission, propagation, reception, re-distribution of broadcast signals
- AM, FM, and TV transmitter and antenna systems
- Tests and measurements
- Cable and satellite interconnection with terrestrial broadcasters
- Transport stream issues – ancillary services
- Unlicensed device operation in TV white spaces
- Advanced technologies and systems for emerging broadcasting applications
- DTV & IBOC reception issues and new technologies
- ATSC and other broadcast standards developments
- Broadcast spectrum issues – re-packing, sharing

The submission deadline for abstracts is May 1, 2011. There is additional information on the [Symposium](#) on the [IEEE Broadcast Technology Society](#) website.

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