



# Audio Engineering Society – New York Section

## NEWSLETTER – MEETING NOTICE

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The New York Section of the Audio Engineering Society invites all folks who are actively involved in professional audio to join us for a most informative evening. Students are especially welcome.

**Tuesday, February 10th, 2009**

**The New School Jazz Performance Space**

**55 West 13th Street, Between 5th and 6th Avenues**

**Fifth Floor**

Meet and Greet 6:30 P.M.

Presentations 7:00 P.M.

## A Discussion of Audio Over IP

Host: **David K. Bialik** - DKB Broadcast Assoc.

Speakers: **Kevin Campbell** – APT, **Howard Mullinack** – Wheatstone

Broadcast, like most areas in the economy, is looking for less expensive ways to transport audio while maintaining a quality product.

Kevin Campbell is Senior Vice President of Worldwide Hardware Sales for APT and currently oversees the company's sales activities across the globe. Kevin has worked with APT since 2003, holding a number of positions within the company including VP Operations North America and VP European Sales. He has tremendous experience of working alongside both commercial and national broadcasters worldwide as they upgrade and improve their audio networks. He has presented technical papers on IP Audio Broadcasting and was instrumental in the production of APT's widely-used "Practical Guide to IP Audio Networking".

Kevin will be presenting "20 Things You Should Know Before Migrating Your Audio Network to IP." As broadcasters work to seize the perceived advantages of IP connectivity for program content transfer, the industry is becoming increasingly aware that an IP network presents a completely different set of challenges to anything that came before and that migration is not something to be undertaken lightly. This paper provides the broadcaster will an overview of all the key considerations and challenges involved in setting up an IP audio network.

Some of the 20 points covered are: Why Should I Migrate to IP? What type of link should I use? Unicasting or Multicasting? What delay can I expect and how can I minimize it?

Howard Mullinack is director of marketing at Wheatstone Corporation. He has been in broadcasting for more than 40 years, starting as an engineer and chief at various Boston stations. Many of you know him for his 14 years at Orban where he headed up product management and sales. He left Orban to become CEO of Graham-Patten, followed by five years as marketing and product manager of SAS. Howard joined Wheatstone this past summer, involved in marketing communications and product development.

Howard will be discussing the Wheatstone E-SQUARE Audio-Over-IP architecture. This is a new second-generation studio facility audio routing and mixing system. E-SQUARE uses Gigabit protocol, greatly simplified setup, and only embedded processing (no PCs required for operation). Wheatstone manufactures both traditional TDM and Audio-Over-IP systems, so this presentation will address the design decisions that went into E-SQUARE as well as the strengths, weaknesses, and tradeoffs that go into each of the prevalent technologies, helping the user choose the system best suited to their facility.

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#### NY SECTION ADVISORS

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Last Section Meeting: Report by **Roger Johansen**  
Tuesday January 13<sup>th</sup>, 2009

#### **Take Me Out To The Ballgame;**

Sound System Design for a Ballpark

Presenters: **Sam Berkow** - SIA Acoustics, **Will Parry** - AVI/SPL



L-R: David Prentice, Will Parry, Sam Berkow

45,000+ seats, irregular shape, three levels, hard surfaces (brick, concrete, steel), and open to the elements. How do you design a sound system to reach all the fans with all the sounds of the game; from the opening line-ups to Gary Glitter's "Rock and Roll Part 2"?

At the January meeting Sam Berkow of SIA Acoustics and Will Parry of AVI/SPL looked at the problems and the design solutions reached at Oriole Park at Camden Yards, Baltimore. This talk addressed the design process and issues one confronts when designing, specifying, bidding, awarding, installing, commissioning and operating a sound system for a major league sports facility.

It takes a combination of software and expertise to translate the two dimensional architectural drawings into a three dimensional audio environment with predictable and pleasing results. Large-scale sound reinforcement requires balancing the fixed acoustics of the space with the flexible electronic and transducer elements to create intelligibility and excitement in what can charitably be called a challenging environment. Camden Yards opened in 1992, 17 years later the sound system was considered dated and not acceptable for the present state of the art for stadium sound. Camden Yards originally cost 117 million dollars to build and accommodates 48 thousand people. It originally utilized the 1980's concept of one big sound system offering power and durability. In 2009 the concept of stadium systems was now distributed systems that offered impactful music and sound. The challenge that both Sam and Will faced was the installation of a new sound reinforcement system for Oriole Park which would involve planning bidding ordering subcontracting, constructing, installing, aiming, voicing, testing, measuring, listening (measuring again) and servicing an audio system which will be exposed to the elements and operate through three seasons from spring rains through summer's heat and humidity, and into early autumn snowfalls. And of course, every fan dreams of an October Classic.

The process that both SIA Acoustics and AVI/SPL undertook first involved defining the functional requirements of the facility and attempting to utilize existing infrastructure while identifying unique structural requirements of the stadium and how they relate to the goal of producing an impactful music and sound experience for each fan in the park no matter where they are seated. The decision was made to both replace the now-dated discrete signal-processing units with a DSP-based system and to replace the present speaker system with a distributed-cluster system utilizing much of the present wiring and infrastructure. The system had to be installed in the off-season, which involves doing all the outdoor work in the cold of a Northeast winter and have everything tested and working for opening day. Sam Berlow pointed out that the sound system must be functional on opening day because the stadium sound system also acts as the emergency notification system for the facility and the stadium cannot legally open without this system in place. The final install included both EAW and JBL speakers and a new Yamaha console with additional Aphex vocal strips for the main vocal mics.

The AES NY Section is pleased to thank our underwriters for their continued support, **NHT** and **Studio Consultants, Inc.** We also appreciate the support and assistance of **Christopher Hoffman** and the **New School University**.

Remember to check our web site for the latest updates and information <http://www.aes.org/sections/ny/>

**PLEASE POST... This is an open meeting ... EVERYONE IS WELCOME TO ATTEND**