

Radio Club of America
NEWS RELEASE – For Immediate Release
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**Leonard Kahn of Kahn Communications,
Hugo Gaggioni of Sony
speak at Radio Club of America Technical Symposium**

RED BANK, N.J. — Nov. 30, 2006 — Speaking at the Radio Club of America Technical Symposium on Nov. 17, 2006, Leonard Kahn, president of Kahn Communications, warned of the danger of cellular system overload and explained the advantages of Cam-D, a digital AM broadcasting technology he developed. A second speaker, Hugo Gaggioni, chief technology officer for the Broadcast and Production Systems Division of Sony Electronics, detailed worldwide trends in high-definition television (HDTV) broadcasting. He forecast that U.S. broadcasters would increasingly embrace HDTV in favor of lesser-quality digital-TV multicasting and that sales of liquid-crystal display (LCD) TVs would outpace other TV receiver technologies.

The two executives are engineers by education and experience. They both hold many patents for their inventions.

Kahn warned that an increasing reliance on cellular telephone networks to disseminate streaming audio and video in a fashion that supplants broadcast signals leaves consumers vulnerable to interruption of emergency information. Kahn said that during a disaster, or even the threat of a disaster, such as a possible terrorist bomb scare involving multiple, synchronized devices in several cities, would lead to “the worst problem you ever saw: People racing to go on the cell phone, and what happens? You get overloads, instantly. It will be 100 percent overload,” not only preventing calls from going through, but also interrupting quasi-broadcast emergency information dissemination over the cellular network.

“What is the solution to this?” Kahn asked. “It is called *AM radio*. This whole thing of substituting the cell phone with radio built into it—the requirement of the use of it—that is the overload problem I’m so fearful of,” he said.

Known in part for inventing technologies for AM broadcasting, Kahn explained his latest development, Cam-D. “It means ‘compatible amplitude modulation—digital.’ It rhymes with ‘candy’ because it’s a *sweet* system,” he said.

Kahn said the Cam-D system is confined in bandwidth—plus and minus 8 kHz—and reduces interference, in contrast with the competing iBiquity system—plus and minus 30 kHz—which he said causes so much interference, it doesn’t work during nighttime hours.

“Can you imagine the average person who buys a radio—an expensive radio, or an inexpensive radio, I don’t care—and they take it home, and it doesn’t work at night? I’m having trouble explaining that to the lawyers. ‘You mean it doesn’t work *well* at night?’ they respond. No. I mean *it doesn’t work at all.*”

Kahn said that 12 full-time stations are using Cam-D. He said the system boosts station coverage by a conservative factor of three times. He emphasized the system’s compatibility, meaning conventional receivers can tune Cam-D broadcasts and take advantage of reduced interference and increased coverage. Cam-D receivers, not yet available, would be required to hear the substantially improved audio quality offered by the digital signal.

Sony's Gaggioni said that a few years ago, U.S. TV broadcasters debated whether to use their digital channels for one HDTV signal or for multiple standard-definition television (SDTV) signals. "In SDTV, the picture we receive in our homes is like a DVD movie, 480 lines by 720 pixels. An HDTV signal is 1080 lines by 1920 pixels—five times the definition," he said, adding that CBS, NBC and HBO adopted the 1080 system.

"Another format is 720 lines by 1280 pixels. ABC adopted that one," he said. Industry sources indicated that the 720 system responds better to fast-action images in sporting events such as those broadcast by ESPN, a sister cable network to ABC under Disney ownership.

Gaggioni said networks originate HDTV signals at the highest quality, but signal transporters such as satellite-to-home distributors and cable TV system operators sometimes degrade the signals to save bandwidth. He showed a diagram comparing a signal originated by CBS and what a satellite provider delivered to the home after "they cannibalize the signal. The signal is a far cry from what the broadcaster sends," he said.

Regarding the rollout of HDTV, Gaggioni said, "On terrestrial TV and cablecasting, there are about 90 hours a week of prime-time HDTV programming. Cable systems have more than 900 hours on cable. The use of film for production is diminishing rapidly."

Speaking about the various receiver technologies, Gaggioni said, "The cathode-ray tube of glass is dying. Most manufacturers have stopped making glass. Rear projection is improving. The bulk is in LCD panels. LCD will grow in volume and lower cost. Only two suppliers are maintaining plasma. They have a lot of pressure from the lower cost and high quality of LCD. The tendency is to go full-size, full-resolution DTV with a 65-inch, 1920-by-1080-pixel LCD from Sharpe that Sony will introduce. Right now, the norm is to get 46-inch displays under \$3,000. But everyone is moving away from the lower resolution."

Looking to the future, Gaggioni said that research labs in Japan are promoting the next-generation, super-high-vision digital technology with 8000-by-4000-pixel resolution. "This is something that I don't think I will be here to see. This is 20 to 30 years in the future. There is a lot of research behind this," he said.

The Radio Club of America hosts its afternoon Technical Symposium annually on the Friday before Thanksgiving. It is open to anyone with no admission fee. The symposium precedes the organization's annual banquet, during which it gives achievement awards to broadcasters, wireless telecommunications professionals and radio amateurs.

About the Radio Club of America:

The Radio Club of America is the world's oldest radio communications society, founded in 1909 to promote cooperation among those interested in the advancement and scientific study of radio communications. Formed by a small group of dedicated radio amateurs and experimenters nearly a century ago, the Radio Club of America counts among its founding membership the best in the radio communications industry, including Maj. Edwin H. Armstrong, David Sarnoff, Louis Hazeltine, John V. L. Hogan, Paul Godley and Allen B. DuMont. Today, the Radio Club of America is composed of modern pioneers who are advancing the field of RF communications. The Radio Club of America gives its members the opportunity to network with other industry professionals, to raise money for scholarships and to record radio communications history so that future pioneers may continue to build on the Club's strong foundational cornerstone. For more information, go to www.radioclubofamerica.org.

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Editors:

A high-resolution photo of Hugo Gaggioni is available here:

http://news.sel.sony.com/en/image_library/corporate_images/detail?archive=0&page=19

Photos of Leonard Kahn and photos from the Technical Symposium are available on request.

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