MEETING NOTICE!

AUDIO ENGINEERING SOCIETY, INC.
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AUDIO ENGINEERING SOCIETY, INC.
SAN FRANCISCO SECTION

SEPTEMBER 1999 VOL MXCXXIX

## Philips to launch DVD Recorders in mid-2000

Rushing to add video-recording capabilities to DVD players, Philips has become the first consumer electronics company to promise the launch of DVD video recorders in 2000, probably after midyear. The Dutch giant demonstrated a DVD video recorder based on the company-developed DVD+ReWritable (DVD+RW) Video format, at the Internationale Funkausstellung (IFA) 1999, Europe's largest consumer electronics show held this week.

In the demonstration, Philips showed that recordings made with a DVD video recorder on DVD+RW discs will play back on any existing DVD video players — those offered by competitors as well as by Philips. This drive by Philips to commercially launch its DVD+RW video-format-based DVD video recorder within a year comes as the industry faces the irreconcilable fragmentation of rewritable video-disk formats. Different camps are pushing several different rewritable formats including DVD-RW, DVD-RAM as well as Multimedia Video File (MMVF) developed by NEC.

Other consumer-electronics companies including Matsushita Electric and even Sony a co-developer of the DVD+RW format along with Yamaha, Ricoh, Hewlett-Packard and others remain silent on plans to offer digital video-disk recorders. They pointed out that recording capacity and picture quality enabled by the DVD+RW video format may not satisfy consumers' needs today. Other industry executives also expressed concerns over copy-protection issues. On a 4.7-Gbyte single-sided disc, the Philips-developed DVD+RW video format can record two to four hours of video. Meanwhile, Philips made it clear that it hopes to take advantage of the currently booming prerecorded DVD-video market, by offering consumers, sooner rather than later, a new DVD system featuring the best of both worlds: prerecorded high-quality DVD playback and home-recording capability.

DVD+RW is based on a phase-change optical technology using a 650-nm red laser. DVD+RW video is encoded in MPEG-2 with real-time variable bit-rate. It provides high bit-rates where necessary while no storage capacity is wasted in scenes with less dynamic video. For video applications, Philips' engineers designed the capability of "lossless linking." This feature is critical for maintaining compatibility between existing DVD disk technologies.

More specifically, because writing takes place at a constant bit rate, the process needs to be suspended and continued frequently, to support variable bit-rate encoding for the DVD+RW video format. So-called lossless linking prevents "hiccups" by filling buffers. It makes the format very efficient and suitable for random-write in data as well as video applications.

The DVD video recorder demonstrated by Philips at IFA was also able to do on-the-fly transcoding from a DV format to an MPEG-2-based DVD video format. The feature showed its potential capability to offer easy-to-use editing facilities, using a single DVD video recorder rather than requiring two video devices.

Moving pictures captured by a DV camcorder, for example, when connected through an analog jack, are first digitized and encoded onto a DVD+RW video disk in MPEG-2 format. Or, when linked through IEEE1394, the DV format can be transcoded onto the MPEG-2 DVD format at real-time inside the DVD video recorder. MPEG-2 codec and a separate transcoding chip, both designed by Philips Semiconductors are used inside the demonstrated DVD video recorder. The current DVD video recorder uses a so-called "constrained variable-bit-rate recording" with the maximum bit rate data at 10 Mbits/second.

Several consumer-electronics manufacturers, however, remain worried about Hollywood's potential concern over DVD video recorders. First-generation recorders won't feature watermarking capabilities, since the industry can't agree on the subject today. Philips plans to launch the DVD video recorder next year both in the United States and Europe.

# SEPTEMBER MEETING

**Subject**: ..... The Truth About Audio Cable
**Speaker**: ..... Steve Lampen, Belden Electronics
**Place**: ..... Cogswell College, Sunnyvale, CA
**Time and Date:** ..... Sept. 21st, 7:30 PM (refreshments at 7:00 PM)

The speaker is Steve Lampen, Technology Specialist Multimedia Products for Belden Electronics and his talk is entitled, "The Truth about Audio Cable". His talk will cover the construction of cable for audio, from microphone, to line, to speaker cable, with a special emphasis on how it is tested, how to compare the quality of different cables, and appropriate and inappropriate applications. Steve will also discuss the construction and measurement of digital cables such as AES/EBU balanced or coax cables, or S/PDIF cables. Steve will cover resistance, capacitance, inductance, impedance, skin effect, dielectric constant, velocity of propagation and many other factors used in the design and construction of cables. Come prepared with your hardest wire and cable questions!

Steve Lampen is Technology Specialist, Multimedia Products, for Belden Electronics Division, headquartered in Richmond, Indiana. Before this position he was Technology Development Manager, and an Audio-Video Specialist. He previously worked in distribution, and was an engineer and chief engineer at many Bay Area radio stations including KJAZ, KTIM AM-FM, KYA/KLHT, KMEL, KFOG/KNBR, KRE/KBLX and Sutro Tower. Steve is a member of SBE, SMPTE, AES (since 1969), and ACM. He has a Lifetime General FCC License, is an SBE Certified Radio Broadcast Engineer, and a BICSI Registered Communications Distribution Designer. His book, "Wire, Cable, and Fiber Optics" was published by McGraw-Hill, and his column "Wired for Sound" appears monthly in Radio World magazine.

Sandwiches and snacks will be served prior to the meeting.

## Directions

**From the East Bay** - Take 880 to 237 west. Exit on Mathilda Ave. north. Turn right on the frontage road and then left onto Bordeaux Drive. The meeting is in the auditorium.

**From the Peninsula** - Take 101 to 237 east. Exit on Mathilda Ave. north. Turn right on the frontage road and then left onto Bordeaux Drive. The meeting is in the auditorium.

# COMING EVENTS

Sept 12 - 16
IBC
Amsterdam, Netherlands

Sept 24 - 27
AES Convention
New York, NY

Sept 26 - 30
Embedded Systems Conf
San Jose, CA

Sept 28 - 30
COMDEX
Miami Beach, FL

# JOB BOARD

**APPLE COMPUTER**

**Audio Driver Software Engineer**
Experience writing driver-level and/or assembly code is required. Macintosh and Sound Manager experience is beneficial. Experience with C is needed. C++ experience is beneficial.

**Device Driver Engineer, Sound Controllers**
Must be able to develop driver specifications, schedules and test code to exercise the driver. Sound drivers will be written for several sound controllers used on Macintosh systems. Requires the ability to use software debugging tools and some hardware tools like scopes and logic analyzers. An understanding of computer generated sound techniques is a requirement. In-depth development experience in C & C++ are requirements of this position.

Please send your resume to:
Apple Computer, Brenda Barnes
techjobs@apple.com
fax 408-862-8192

Additional job openings are posted on the AES web page.

## San Francisco Section

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|---|---|
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