



October 1999 Meeting Notice

The DVD-Audio and Super Audio CD Formats

Jim Heckroth, Crystal Semiconductor

DATE/TIME: Wednesday, October 20, 1999 - 7:30 PM

PLACE: Jack Straw Productions Studio, 4261 Roosevelt Way NE, Seattle, WA

DIRECTIONS: From I-5, take the NE 45th St. Exit (Exit 169). Go Eastbound on NE 45th. Turn right onto Roosevelt Way NE (one-way Southbound). Jack Straw is on the right, at the corner of NE 43rd. Limited parking in the lot on the south side of the building, plus street parking.

This presentation compares the new DVD-Audio and Super Audio CD formats as they begin to compete for market share as the higher-end alternative to the familiar 16-bit, 44.1 kHz "Red book" audio CD. The presentation compares the physical layer and audio coding schemes (1-bit DSD vs. 24bit/192kHz PCM) between DVD-Audio and the Super Audio Compact Disc, as well as the schemes for encoding multi-channel audio. These include watermarking embedded in the audio stream, watermarking on the disk, encryption/decryption techniques, compression/ decompression techniques, and source material preparation. The presentation also considers the impact these alternate formats may have on perceived audio quality, as well as their impact on player architectures, D/A converter circuits, video and still image content, and the possibility of "hybrid disks."

Jim Heckroth is Marketing Manager for Professional Audio and Automotive Audio DSP products in the Crystal Semiconductor Audio Products Division, a division of Cirrus Logic. Jim received the B.S. in Electrical Engineering degree from S.U.N.Y. at Buffalo, and received the M.S. in Electrical Engineering and the M.S. in Engineering Management from Southern Methodist University (S.M.U.) in Dallas, TX. He has worked in design engineering and/or management positions at E-Systems Corp., Compaq Computer Corp., and National Semiconductor Corp. prior to joining Crystal. Jim's experience includes hardware design, software design, and engineering management of development programs for DSP-based speech processing, data communications modems, music synthesizers, and high-performance PC audio systems. Jim joined Crystal's Applications Engineering team in 1993. As manager of the Applications team for PCI Audio and Music Synthesis products, Jim has played a key role in the specification and design of new Crystal audio devices, and has been involved in the design of OEM audio products for key Crystal customers. Jim has and published a number of technical papers and articles while working at Crystal. Jim also moonlights as a musician and sound engineer, and maintains a multi-track analog, digital and MIDI recording studio in his spare time.

NON-MEMBERS ARE WELCOME TO ATTEND