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AUDIO engineering society, Inc.
Pacific Northwest Section

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March 1994 Meeting Notice

“Performance Assessment of Reduced Bit Rate Coders”

Dr. Richard C. Cabot, Audio Precision, Inc.

DATE: Monday, March 7, 1994 - 7:30 PM

PLACE: KUOW-FM Studio B, 306 Communications Bldg
University of Washington campus, Seattle

DIRECTIONS: Main campus entrance is NE 45th and 17th NE. Parking on campus is \$2.25; stop at the gatehouse upon entering to pay and get directions.

Most audio coders developed in recent years make use of psychoacoustics to reduce the data rate required for transmitting or storing digital audio data. These coders are inherently nonlinear and do not pass all of the information applied to them on to their output. This makes evaluation with conventional test techniques difficult and makes the results a poor predictor of audible performance. The presentation will describe continuing work at developing methods for characterizing and comparing low bit-rate coders. A new test method which models the masking characteristics of the auditory system will be described and demonstrated. The technique is implemented on a digital signal processor which computes the masking effects of the test signals on the distortion products created by the coder. The results of measurements on several different coders will be compared.

(Ed. note: Low bit-rate coders include such systems as DCC, MiniDisk, and Dolby AC-3)

Richard C. Cabot is currently Vice President and Principal Engineer of Audio Precision Inc., a firm specializing in audio test and measurement equipment for the audio industry. Dr. Cabot is also President of the AES. He is a frequent contributor to professional audio industry magazines, technical society journals and books. Dr. Cabot received BSEE, MSEE and MS Mechanics from Rensselaer Polytechnic Institute, Troy, NY. He earned a Ph.D. in electrical engineering, also from Rensselaer, for work in sound localization in multi-channel reproduction systems. He is a fellow of the AES, a senior member of the IEEE, and a member of ASA, Tau Beta Pi, Eta Kappa Nu, and Sigma Xi. Dr. Cabot is a registered professional engineer in the fields of acoustical and electrical engineering in the state of Oregon and has been an active consultant in the audio field. He has been granted numerous US patents and has several additional pending.

NON-MEMBERS ARE WELCOME TO ATTEND

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