

Richard C. Cabot PhD

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Professional Experience

Qualis Audio, Inc. (2007 to present) President, Chief Technology Officer

- Design and development of surround sound monitoring equipment
- Represent the company at trade shows and technical conferences

Qualis Test Systems, Inc. (2005 to present) President, Chief Technology Officer

- Design and development of test and measurement equipment
- Represent the company at trade shows and technical conferences

XFRM, Inc. (2002 to present) President, Chief Technology Officer

- Consulting in product definition, engineering and evaluation
- Development of new technologies, principally in audio and digital signal processing .

Audio Precision (1998 to 2001) Vice President, Chief Technology Officer

- Management authority for engineering, documentation and computer support groups totaling 20 managers, engineers, writers and technicians.
- Responsible in partnership with President for general corporate management.
- Develop corporate strategic direction.
- Chief architect for new products.
- Represent the company at technical conferences on audio.
- Represent the company's interests on international standards committees.

Audio Precision (1984 to 1998). Vice President, Principal Engineer.

- Managed several dsp engineers and consultants.
- Responsible in partnership with three other founders for general corporate management.
- Develop corporate strategic direction.
- Specific responsibility for research and development of new digital signal processing technologies.
- Represent the company at technical conferences on audio.
- Represent the company's interests on international standards committees.

Tektronix (1978 to 1984). Design Engineer, Project Leader.

- Responsible for design of audio frequency test and measurement products.
- Project leader on SG5010 programmable audio oscillator.
- Design engineer on AA501 audio distortion analyzer.
- Design engineer on 067-0938 audio distortion measurement fixture.
- Represent the company at technical conferences on audio.

Rensselaer Polytechnic Institute (1977 to 1978) Instructor

Duties included teaching undergraduate electrical engineering and acoustics classes and supervising independent study projects in audio and acoustics by undergraduate students.

National Science Foundation (summer 1977) Principal Investigator

Developed and proposed a research project "Amplified Sound as a Source of Acoustic Trauma", to study the effects of amplified sound on hearing acuity. Served as principal investigator after grant was funded. Duties included directing research, supervising 5 student researchers, drafting final report.

Other Business Experience

Member, Board of Directors, Momentum Data Systems, Fountain Valley, CA, 2002 to present

Education

- MBA, 2001, Pepperdine University (Malibu, CA)
- Ph.D. Electrical Engineering, 1977, Rensselaer Polytechnic Institute (Troy, NY)
- M.S. Mechanics, 1976, Rensselaer Polytechnic Institute (Troy, NY)
- M. Eng. Electrical Engineering, 1975, Rensselaer Polytechnic Institute (Troy, NY)
- B.S. Electrical Engineering, 1975, Rensselaer Polytechnic Institute (Troy, NY)

Professional Accomplishments

- Registered Professional Engineer in Electrical and Acoustical Engineering in the State of Oregon.
- Numerous patents on various electrical circuit techniques and digital signal processing techniques.
- Published and/or presented numerous papers in the fields of audio frequency electronic circuit design, digital signal processing, acoustics and the perception of sound.
- Fellow of the Audio Engineering Society (AES). Previously held the posts of President, International VP, Western Region VP, Governor, Publications Policy Committee Chair, Convention Papers Chair, Digital Audio Measurements Standards Committee Chair, Journal Review Board Member.
- Senior Member of the Institute of Electrical and Electronics Engineers (IEEE).
- Member of the European Association for Signal Processing (EURASIP).
- Member of the Acoustical Society of America (ASA).
- Member of Sigma Xi (a scientific research honorary society)
- Member of Eta Kappa Nu (an electrical engineering honorary society).
- Developed and Chaired the AES International Conference on Audio Test and Measurement (1992).
- Former Signal Processing Editor of Sound and Video Contractor Magazine.

Patents

US 8214200 Fast MDCT (modified discrete cosine transform) approximation of a windowed sinusoid
US 8077883 Intelligent solo-mute switching
US 7692686 Method and apparatus for coding format autodetection testing
US 5995914 Method and apparatus for asynchronously measuring frequency shifted signals
US 5818240 Method and system for measuring signal transfer characteristics in the presence of WOW, flutter and intermodulation distortion
US 5749047 Method and apparatus for recognizing a test signal and determining signal transfer characteristics therefrom
US 5748001 Method and apparatus for fast response and distortion measurement
US 5649304 Method and apparatus for communicating auxiliary information in a measurement signal
US 5475315 Method and apparatus for fast response and distortion measurement
US 5420516 Method and apparatus for fast response and distortion measurement
US 5265201 Master-slave processor human interface system
US 5247458 Method and apparatus for testing a digital system for the occurrence of errors
US 5136267 Tunable bandpass filter system and filtering method
US 5089981 Hybrid form digital filter
US 4631522 Method and circuit for compensation of a multiplying digital-to-analog converter
US 4560957 Oscillator fine tune circuit
US 4560950 Method and circuit for phase lock loop initialization
US 4546270 Sample and hold droop compensation circuit
US 4344029 Automatic IM distortion test selector
US 4302738 Noise rejection circuitry for a frequency discriminator
CA 1164066 Automatic intermodulation distortion analyzer

Four additional US applications for technology in the Qualis Audio Sentinel are pending.

Political Experience

Appointed by Governor Kitzhaber to the Oregon Central Business Registration Coordinating Council, advising state government on streamlining the registration and regulation of businesses in Oregon.

Professional Consulting Experience

Pioneer Laser Entertainment, Long Beach CA. Tested and evaluated 2 models of power amplifiers.

Biamp Systems, Portland OR. Designed a graphic equalizer, a parametric equalizer, redesigned a four channel limiter, two power amplifiers, redesigned a multi-channel mixing console, wrote numerous user manuals.

BGW Systems, Hawthorne CA. Designed a portable powered mixing console including equalizers.

Audio Control, Lynnwood WA. Redesigned their real time analyzer filter bank to ANSI specifications.

Broadcast Electronics, Quincy IL. Designed a cross-correlation based automatic tape head azimuth error corrector.

Interactive Technology, Portland OR. Designed an interface circuit and noise filter for connecting a photometric probe to the company's television data transmission equipment.

Yamaha Professional Products, Buena Park CA. Redesigned a graphic equalizer to reduce noise.

References available upon request