



In Memoriam

Earl McCune

Earl McCune passed away suddenly on 27 May 2020 in Santa Clara, California, at the age of 63. A professor at the Delft University of Technology in The Netherlands, he was also active as a volunteer for several IEEE functions. He had a passion for energy-efficient RF communications, which in 2013 inspired his role as a founder of Eridan Communications, Inc., Mountain View, California. He provided profound leadership based on his ability as a visionary. His key technical interests were in low-power-consumption RF circuits and devices, general modulation with an emphasis on angle modulation, polar signal processing, frequency synthesis and integrated modulators, spread spectrum, and analog and digital signal processing. Since 1975, he was specifically interested in merging the technology bases of analog/RF and digital. His specialty was in RF and modulation metrology.

Prof. McCune earned his B.S.E.E./C.S. degree (cum laude) from the

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Earl McCune, 1956–2020.

University of California, Berkeley, in 1979. He went on to earn his M.S.E.E. degree in radio science from Stanford University in 1983 and his Ph.D. in electrical engineering from the University of California, Davis, in 1998.

His education launched him on an outstanding career. After cofounding Eridan Communications, he held the position of chief technology officer there. From 2009 onward, he owned his own company, RF Communications, which he created to give back to the RF industry. From 2006 to 2009, he was with Panasonic in their PEARL facility, a corporate R&D laboratory formed by Panasonic's acquisition of Tropian in April 2006 (for the first two years, he was the managing director). Answering to the corporate R&D

operation in Japan, he was responsible for all aspects of operation, technology, and intellectual property developments at PEARL. Prior to that, he was employed at a variety of companies including Proxim, Digital RF Solutions Inc., Cushman Electronics, Watkins-Johnson, Hewlett-Packard, Siliconix, and NASA's Ames Research Center. At each of these facilities, he held high-level positions that combined technical and management responsibilities.

In addition to his work in industry, Prof. McCune's legacy includes two textbooks: *Practical Digital Wireless Signals*, published in 2010, and *Dynamic Power Supply Transmitters*, published in 2015, both by Cambridge University Press. Besides writing textbooks, he was invited to author and/or coauthor six book chapters and more than 80 articles and papers for journals, conferences, and trade publications. His work also resulted in his name appearing on 93 patents. Additionally, he shared his experience with the microwave and RF industry as an emeritus IEEE Microwave Theory and Techniques Society Distinguished Microwave Lecturer, a member of multiple IEEE conference committees, and chair of the Energy-Efficient Communications Hardware Standards Working Group.

Prof. McCune was a unique individual in that he was able to envision

solutions to problems and plan for the future. That vision and commitment will be missed by the IEEE communities that relied on his expertise in developing standards, guiding a road map for future network generations, and willingly providing necessary reality checks. Although his time at Delft was sadly cut short, the staff and students of the Microelectronics Department will always remember him for his boundless enthusiasm, humor, and unselfish commitment to education and research in wireless communication. His expertise and devotion were to radio electronics and—equally importantly—to bringing all kinds of students, scientists, and businesspeople together and inspiring them with his ideas and dreams.

Aside from his technical talents, Prof. McCune had a sly sense of

humor and, like many Silicon Valley originals, a deep-seated allergy to authority and pretension. He was the first to point out that four decades of experience mostly meant four decades of mistakes to learn from. And, when it came to questioning authority, he was always happy to lead by example. He was stubbornly attached to the value of his own judgment over conventional wisdom. This stubbornness paid off handsomely in the 20 years he put into proving the commercial potential of polar transmitters. And, who knows? ... In another 20 years, the world may yet come to agree that touchscreen keyboards on mobile phones are clearly inferior to physical ones, an issue on which he was equally stubborn.

Prof. McCune was also, like many Silicon Valley originals, an idealist,

and his most deeply held ideal was that, with enough time and patience, anyone could be taught—or, to be more specific, anyone could learn for him or herself with a bit of guidance. His gift as a teacher was the ability to help people learn from their own experience—to point them in the direction of an interesting experiment or unlikely source of data and then largely get out of the way of the learning that unfolded. The greatest encouragement he offered his students, formal and informal, was his genuine interest in their insights and discoveries. His generosity with his time, his patience, and his attention will be deeply missed by everyone who was lucky enough to count him as a teacher and mentor. He is survived by his wife, Barbara.



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