

KEYNOTE TALK

The Urgency of Electromagnetic Compatibility (EMC)

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Abstract –

Electromagnetic compatibility (EMC) has been a recognized part of engineering practice since the 1950s. Before that time, there was little incentive to address EMC. Electromagnetic interference (EMI) was regarded as an occasional nuisance, as when atmospheric storms would cause crackling noise in AM broadcast receivers. In 1954, military leaders sponsored the first of a series of conferences held to address what was then called radiofrequency interference (RFI). The sponsors and the engineers attending the conferences recognized the risk posed by interference. The 70 years since then have seen the growth of high-speed digital circuitry, wireless technology, and vastly expanded spectrum use. Because so much of our modern life depends on uncorrupted electronic operation, EMC has an urgency far beyond resolving a simple radio nuisance. EMC engineers are in a position to raise EMC awareness so that both the technical and non-technical population can understand EMC's importance and value. This presentation will touch on some EMC history and how our dependence on electronic and wireless devices shapes commerce, communication, and public safety.

Speaker:



Tom Braxton has worked in electromagnetic compatibility (EMC) since 1981, with experience at AT&T Bell Laboratories/Lucent Technologies, Shure Incorporated, and as an independent consultant.

Tom is President-Elect of the IEEE EMC Society, an IEEE Life Senior Member, and is the author of numerous EMC-themed articles for online and print publications. He chairs Technical Committee TC1 on EMC Management and was General Chair of the 2005 IEEE International EMC Symposium in Chicago, as well as Vice-Chair of the 1994 Symposium, also in Chicago. Tom chairs the EMC engineer certification standing committee and serves as Vice-Chair and Program Chair of the EMC Society Chicago Chapter. Tom is also chair of C63 Subcommittee 5 on Immunity Testing and Measurements.

An iNARTE-Certified EMC Engineer and iNARTE-Certified ESD Engineer, Tom holds a BSEET from Purdue University, an MSEE from the Illinois Institute of Technology, and Amateur Radio license WB9VRW.