



President's Column

Core Values of a Professional Society

■ Madhu Gupta

As I prepare to take over as the president of IEEE Microwave Theory & Techniques Society (MTT-S) in 2013, much of what I need to do is well-understood. The first is my tasks: the President is a volunteer who coordinates, directs, assists, or guides other Society volunteers in conducting the business of the Society internally, and represents the Society externally. The second is the means for accomplishing those tasks: the President must do so through developing a jointly shared vision with the volunteers; motivating and facilitating the pursuit of that vision; being a model volunteer to set an example for others; using the powers of persuasion; helping choose among alternatives; and yes, resolving disagreements. The third is the process to be followed: the Society's operations manual provides great details on how things must be run. What is not so well known are the core values of our Society that are our guiding principles.

The MTT-S does have its constitution, bylaws, and operations manual publicly available on our Web site (www.mtt.org), as does our parent organization IEEE, and we inherit



many other guidelines and procedures from IEEE, including an IEEE code of ethics. Is this not sufficient guidance for the Society's work? If the IEEE mission and vision, policies, and procedures were indeed sufficient, then all IEEE Societies, and other operating units within IEEE, would have identical characteristics. Although we may tend to de-emphasize inter-Societal differences in the interest of presenting a harmonious image, careful observers are well aware that there

are significant differences among the IEEE Societies. As one example, some of our sister Societies are more egalitarian than us—they accept virtually



Madhu Gupta
(m.gupta@ieee.org)
is the 2013 president
of the MTT-S.

NEW! 25 MHz to 6 GHz **SIGNAL GENERATORS**



70 dB Power Range

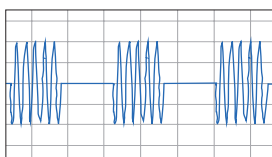
only **\$2695** ea.

Rugged, portable, USB-controlled generators for production test
Sweep or hop across wide frequency and power bands, trigger a single pulse or a continuous pulse train, use a pair for third-order intercept tests, or slip one into your laptop case and take it on the road! Our simple-to-use GUI will have you up and running in minutes, with almost any PC.* Like all of our portable test equipment, the new SSG-6000 is compatible with most test software,* adding capabilities and increasing efficiency without busting your budget!

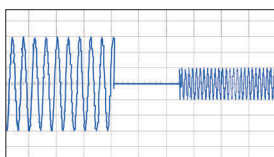
* See data sheets for an extensive list of compatible hardware and software.

Synthesized signal source for accurate, reliable testing

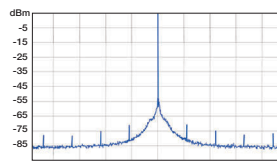
Signals within 1 ppm for frequency and 0.25 dBm for power (-60 to +10 dBm), low harmonics (-50 dBc), frequency resolution from 3 Hz, trigger and reference ports in and out, and a 3-msec settling time help you get the data you need from complex, high-speed testing plans. Just go to minicircuits.com for specifications, performance data, and everything you need to make your choice — and get it in your hands as soon as tomorrow!



NOW! Pulse widths from 1µs.



Frequency and power hopping.



Low spurious.

Mini-Circuits...we're redefining what VALUE is all about!

Mini-Circuits®
ISO 9001 ISO 14001 AS9100

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661



The Design Engineers Search Engine finds the model you need, Instantly • For detailed performance specs & shopping online see

minicircuits.com

IF/RF MICROWAVE COMPONENTS



all papers submitted to their conferences for presentation, which MTT-S does not; indeed conferences which indiscriminately accept papers have had their sponsorship by the MTT-S withdrawn (although the conferences may continue to exist, or even get their papers archived in IEEE *Xplore*). As another example, the MTT-S relies almost entirely on committees of volunteers to conduct virtually every aspect of Society business and manage our activities (and only very recently has assigned certain specific duties, such as record keeping and routine processing, to some part-time staff) and has no Administrators and Executive Officers at the IEEE Headquarters in Piscataway, N.J.

What Are the Core Values?

The core values of any organization are a small set of the characteristics and tenets that 1) define who the organization is, 2) will not change with time, and 3) continue to provide guidance and inspiration, despite changes in the operating environment of the organization [1]. The organization would hold those values even if they do not bestow an operational advantage. While the goals, strategies, and practices of an organization may evolve with time, or due to technological advances, the core values are much more enduring and timeless. Many superior organizations, professions (such as law or nursing), and businesses make a dedicated effort to identify their core values, and arrive at a short list of core values, usually no more than four or five.

Why Are Core Values Important?

Should we be concerned about identifying and articulating the core values, or just get on with the business of the Society, and not fall in the philosophizing and pontificating trap? Core values are important because they serve as the over-arching guiding principles when making choices, and because it is critical to distinguish the timeless, unchanging principles from that which should be open to change. They announce to the world what we

stand for, and what governs our choice of goals and actions. They provide a way of ensuring that our activities are aligned with our inherent characteristics, and are purposeful from the long term point of view. They serve as an anchor in turbulent times and as beacons when we are lost in the fog of multiple options and on-going activities.

So What Are the Core Values of MTT-S?

Since such a list of core values does not exist, I propose the one in Table 1.

While the list may be new, the items on the list are long-established by tradition and practice. Core values shape our practices, and our practices are the evidence that we actually have and maintain the core values listed below.

Excellence

Quality consciousness permeates everything we do: we attempt to select the highest quality papers for our journals and conferences; we seek the most competent experts to lead our technical committees; we select the most distinguished and knowledgeable speakers for our meetings; we present recognitions and awards to the most qualified and deserving professionals; and we select the most dedicated volunteers to run the affairs of the Society. It is amply clear to anyone who has closely

Core values are important because they serve as the over-arching guiding principles when making choices, and because it is critical to distinguish the timeless, unchanging principles from that which should be open to change.

watched the working of the Society that MTT-S operates like a meritocracy. Why such a heavy emphasis on quality? The short answer is that we must maintain the tradition of quality to continue to earn the trust and respect, because that is the key to the success of MTT-S. That is the reason why our publications are the gold standard in our discipline; the received pool of papers is so large that we can be selective; our request for help from world-class experts is treated as an honor rather than a chore; our collaboration and spon-

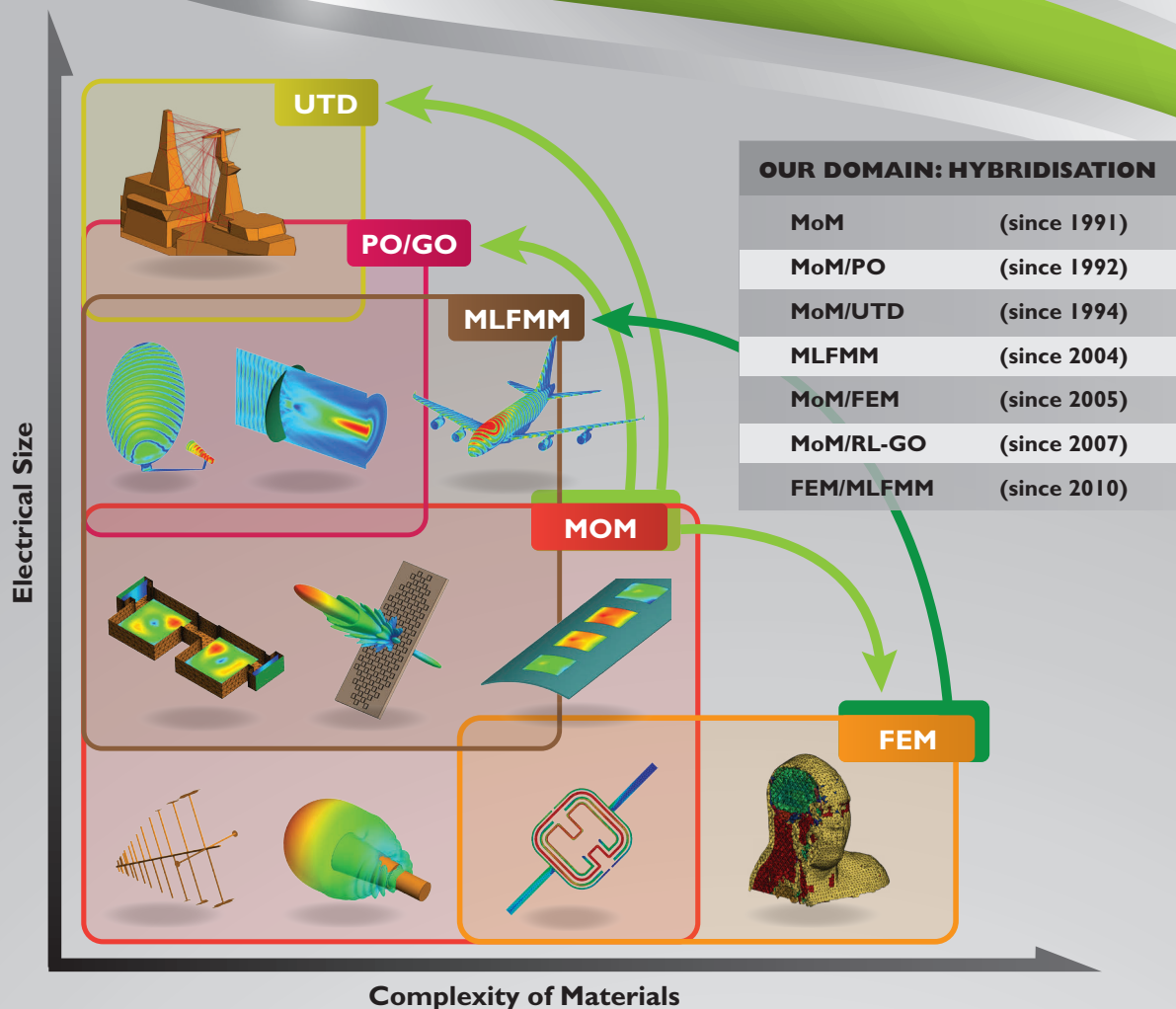
sorship is eagerly sought and viewed as a stamp of approval; our ways of running our conferences are emulated the world over; and our logo is viewed as a seal of quality (and therefore sometimes “borrowed” and misused—which is flattering but frowned upon!). None of this would be possible without the quality.

Disciplinary

The “Field of Interest” (or FOI) of the MTT-S encompasses the discipline of RF and microwave engineering, and provides the context for all of our activities; serving its needs is our *raison d’être*. We contribute to innovation in our discipline by identifying, evaluating, disseminating, cumulating, consolidating, and recognizing advancements in that discipline. Advancement of this discipline motivates us to publish journals, organize conferences, conduct local chapter activities, present educational materials, develop standards, and award accomplishments in the discipline. While our world leadership in these activities is well known and established, numerous other ancillary activities that we undertake in service of the discipline may not be so well known—such as supporting the youth educational programs in STEM

Table 1. The core values of the IEEE MTT-S.

- 1) Excellence: Dealing with only the highest quality technical information
- 2) Disciplinary: Serving the needs of our field of interest
- 3) Fairness: Fair and equal treatment of all
- 4) Beneficence: Helping the careers of professionals in the discipline



One Product. Multiple Solvers.

FEKO includes several computational methods, each optimised for different problem types. Due to a long history of hybridising different techniques, FEKO has been at the forefront of the efficient analysis of complex, low and high frequency problems. The Method of Moments, Finite Element Method, Multilevel Fast Multipole Method, Uniform Theory of Diffraction, Physical Optics and Ray-Launching Geometrical Optics are all available in the standard package.

Additional Applications: Antenna Design, Antenna Placement, Waveguide, RF Components, Microstrip Circuits, EMC, Cable Coupling, Radomes, RCS, Bio-EM.

FEKO
Comprehensive Electromagnetic Solutions



www.feko.info

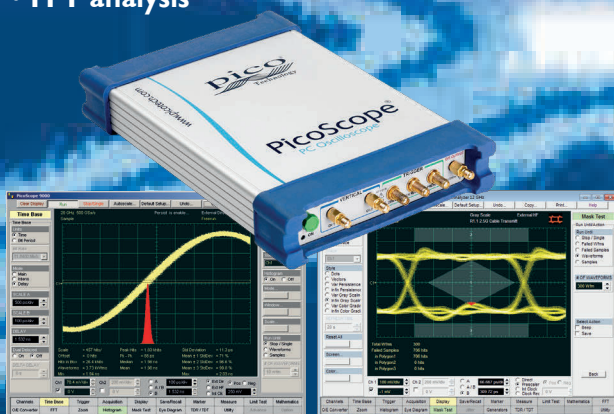
Global sales and technical support network:

Local distributors in Europe, North America, South America, Japan, China, South Korea, Singapore, India, Israel, Taiwan, South Africa

9200 SERIES

12 GHz SAMPLING OSCILLOSCOPES

- High speed serial data analysis
- Pre-compliance and verification testing of communication standards
- Eye diagram analysis, including 40 measurements for NRZ, RZ eye diagrams
- 48 measurements for electrical signal characterization
- Histogram analysis for accurate measurement of noise and jitter
- Mask testing with 44 standard masks built-in
- Pattern mask sync trigger
- Trigger up to 10GHz and clock recovery
- FFT analysis



Also available

- TDR /TDT Signal path characterisation of cables components and boards
- Built-in 100 ps step generator for TDR
- 8 GHz optical model

PicoScope model	9201A	9211A	9221A	9231A
12 GHz Sampling Oscilloscope	●	●	●	●
8 GHz optical-electrical converter			●	●
USB port	●	●	●	●
LAN port		●		●
Mask testing	●	●	●	●
Histogram analysis	●		●	●
Clock recovery trigger		●	●	●
Pattern sync trigger		●		●
Dual signal generator outputs		●		●
Electrical TDR/TDT analysis		●		●

www.picotech.com/RF928

(science, technology, engineering, and mathematics) fields through exposure to our discipline, and preservation of artifacts from this discipline in a museum as well as the historical sites related to our discipline (such as James Clerk Maxwell's house in Scotland).

Fairness

Like IEEE itself, the MTT-S is a nonprofit organization, so our actions and decisions are governed by ethics and common good, and not a profit motive. Moreover, like IEEE, the MTT-S is a transnational and equal opportunity organization, that welcomes all to participate in its activities, whether as authors, speakers, organizers, reviewers, volunteers, committee members, and officers, and indeed does draw people from all corners of the world. Our output is available world-wide, our activities are non-discriminatory by design, and our fairness is guaranteed by an open enunciation of our processes and their vigorous oversight (yes, we have rejected papers authored by the Society's Presidents, and the editors themselves!).

Beneficence

Although our activities benefit the mankind as a whole, the members of the Society, and other professionals who practice in this discipline, are the direct and most immediate beneficiaries. We help them fight technical obsolescence (caused by the relentless advancement of our discipline, to which we contributed in the first place!). We help them in their professional growth through networking and volunteering opportunities. We recognize and celebrate their accomplishments through dissemination, speaking engagements, and awards.

How Do We Maintain Our Core Values?

First, we actually live by them, and demonstrate our commitment to them when we drop the sponsorship of a conference after its evaluation (to maintain quality); introduce a new journal, conference, or workshops in an emerging area (to serve the discipline); fund a world-wide and free distribution of our magazine (for broader accessibility); or invest in developing educational products for members (to benefit professionals). Second, the process of selecting future volunteer leaders for the Society tends to place a premium on prior exposure to, and assimilation of, our values. And finally, the present article creates an opportunity to discuss and critique the core values, and canonize those that withstand the test of careful and thorough scrutiny.

No one, or organization, is perfect, and we must improve continuously. Being cognizant of our core values is one step towards that goal.

Reference

[1] J. C. Collins and J. I. Porras, "Building your company's vision," *Harvard Business Rev.*, vol. 74, no. 5, pp. 65-77, 1996.

