



From the Editor's Desk

The March of Wireless Technology

■ **Madhu S. Gupta**

One of my memorable activities as a youngster was going out on Boy Scout camping trips. I am not sure what I enjoyed more about scouting trips—being out on a trip or the excitement of preparing for one. An enjoyable part was packing all the supplies and necessities for the trip, along with gear that could conceivably be needed in some hypothetical far-fetched exigencies—all of them considered essential accompaniment, in keeping with the “preparedness” spirit of boy scouting. Since all this had to be fitted in a backpack, to be carried on hikes without becoming unbearable, there was a premium on compactness. I remember my scarf that could double as a bandage and a sling; a fork, knife, and spoon all folding into one handle; as well as a screwdriver, can opener, and saw in one Swiss army type knife. Then there were the flashy compact gadgets for showing off and bragging—a combination flashlight, whistle, and magnetic compass, for instance. That training must have had a lasting, or at least lingering, effect on me; years later, I would buy a nine-in-one tool

that included pliers, wrench, hammer, etc., and spend years working for a company on compaction of MMIC chips and tighter microwave packaging for T/R modules in a phased-array radar.

So one might think I would be delighted with the current trend in consumer wireless products. You no longer have to wear a wristwatch; your cell phone doubles as a clock, automatically corrected for time zones and daylight saving time. It can play computer games, ring with Christmas carol tunes, access the Internet, receive GPS signals, double as a television remote control, and will soon be able to communicate with your air-conditioner, oven, and garage-door opener. Not only has the cell phone crept to the position just below oxygen in the list of human necessities, it has become the modern Swiss army knife. Yet, I am not elated.

A step above the two-in-one type products are the me-too type products—those that attempt to reach the performance level of another product. Today we find that the cell phone is trying to become a camera, the camera screen serves as a mini computer monitor, the computer monitor doubles as a television receiver, and the TV with its high resolution is trying to compete

with paintings. The required technological feats are by no means trivial. But mere new technology is not enough; the significant new products offer new, previously unavailable, functionality.

Novelty is not an easy goal to achieve, as a look back to the history of any technology reminds us. Lest the current competition between cable, land-line, cellular, and wi-fi service providers appears to be new, we reprint, on page 42, an editorial from the *IRE Transactions on Microwave Theory and Techniques* on the subject of “wire” versus “wireless” communication, that appeared a half century ago. The editorial is also of interest because its author, A.G. Clavier, was the second president of the MTT-S from July 1953 to June 1954. Hopefully it will help in keeping a balanced perspective.

Ultimately, a new technology will be judged by its degree of impact on a product, an industry, or the entire society. Innovations in technology occur at many different levels of depth. The shallow ones are frequent, the deeper ones have a wider influence, and the truly fundamental ones impact our way of life. Wireless technology has the promise to be the latter, this year’s crop of products notwithstanding. Please wait for the wireless nirvana—next year, maybe.



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