



Mahta Moghaddam

Antennas in Our Daily Life

Have you ever tried searching for the word *antenna* on the Internet? Well, I recently did just that, and Google returned 153,000,000 results. The most popular topics had something to do with TV antennas. The “images” tab showed predominantly reflector (“dish”), log-periodic, and Yagi-Uda antennas. It was pleasing to see that these antennas are so popularly recognized. But then I had to scroll down about 200 images or so to see a picture of a patch antenna or any other planar antenna. Somewhat surprised, I became tempted to conduct my own poll of the people on the street to ask them if they were aware that their mobile phone had an antenna—or that their tablet and laptop, or the global positioning system in their car, or their highway toll device, or the security tag attached to merchandise in their favorite store had antennas. I didn’t do it.

Given the nine-figure count of Google search results, you can understand that it was pleasing to see that the IEEE Antennas and Propagation Society made it to the top 40 (we were at number 34), but the fact that we did not turn up in the top ten made me feel a bit of rivalry with Best Buy and Amazon. With good certainty, after all, we can claim

that individuals and groups belonging to our Society have designed and developed antennas used or referenced in the 30-something most popular antenna websites. We can also claim, with even more certainty, that our Society has been home to designers and developers of planar, low-profile, and/or small antennas used so pervasively in personal communication and sensing devices, which, I dare say, outnumber the global number of TV sets by a factor of three to four. That public poll may not be such a bad idea.

We can claim that individuals and groups belonging to our Society have designed and developed antennas used or referenced in the 30-something most popular antenna websites.

Our antennas and propagation community has led the development of antenna technologies and their applications for several decades. It has made breakthroughs in understanding and exploiting the propagation of electromagnetic signals transmitted and received by antennas. We strive to

capture exactly these breakthroughs and developments in *IEEE Antennas and Propagation Magazine* and to bring recognition to the outstanding work that our community does. The current issue is no exception: In feature articles by Alvarez et al., Best, Khalichi et al., Costanzo and Costanzo, Gregory et al., and Gao et al., you will read about state-of-the-art methods and optimization techniques for designing or modeling various innovative antenna configurations and topologies, including small and low-profile antennas. Amendola et al. describe the antenna design and signal analysis for a radio-frequency-identification-based system used to classify various types of human motion, with applications in health care and security. This article has inspired the cover design for this issue. Eteng et al. discuss antenna performance considerations for the challenging application of nonradiative energy transfer, with applications in proximity charging.

With this issue, we also kick off the new format for this magazine. It might take a few iterations before we reach an optimal point. You can accelerate that process by letting me know what you think!

Digital Object Identifier 10.1109/MAP.2015.2443561
Date of publication: 21 August 2015

