Editorial

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Reaching that Last Mile

This year is already proving to be a dynamic one for technology, as our homes, cars, wristwatches, and more become technology hubs. And we just saw a ruling that supported "net neutrality," which translates into an "open" Internet in the United States. Yet many fear that the Internet will suffer too much control, given the many rules imposed on it during the ruling. While I defer to the lawmakers and other experts on that front, I do have some concerns of my own. The largest one is probably that many areas across the globe still do not have access to the Internet.

Different solutions to the "last mile" problem have been posed over the years. In recent years, some particularly interesting approaches were, and are being, attempted by Google. According to *The Guardian* ("Google's Titan drones to take flight within months," March 3, 2015, www.theguardian.com), the company now intends to make Internet access more widely available via high-altitude atmospheric satellites.

At last month's Mobile World Congress, according to *The Guardian*, Google Senior VP of Products Sundar Pichai announced, "The drones will be used as atmospheric satellites, part of Google's plan to provide Internet access to areas without ground-based access and the 4 billion people currently without access." Leveraging its purchase of unmanned-aerial-vehicle (UAV) maker Titan Aerospace, Google will test-flight a set of lightweight, solar-powered, high-altitude drones. These drones will work in tandem with Google's "Project Loon" balloons, which were announced two years ago. At that time, 30 high-altitude balloons were evaluated for their ability to provide Internet connectivity to an area covering about 10,000 square kilometers. Using radio antennas, they could enable Internet access at a level similar to third-generation (3G) networks.

Meanwhile, Facebook has its internet.org initiative, which promises to "connect the next billion people to the Internet through free or subsidized mobile broadband." A sky dotted with Google drones and balloons could certainly help in disasters or in areas with no Internet, provided the solution is reliable. We'll have to wait to see if Facebook has any technology trials of its own that focus on making the Internet available across the globe. In the meantime, Google also unveiled plans to become a service provider. It looks like Silicon Valley is once again driving engineering opportunity and development. Providers of telecommunications equipment, infrastructure, and more, it may be time to meet your next partners—or clients. MW