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5G network technology brings a lot of advantages … and risks

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One of the biggest technological revolutions is taking place right now around the world, and it will bring about an entirely new way of using the internet to interact with each other and with the many products and services we rely upon. The revolution is 5G, and its rollout is contentious, fraught with concern and promise, and inevitable.

5G is software-based and "virtualizes" a network that currently relies on hardware relays that connect to wireless devices. A software network, as opposed to a hardware network, will usher in a slew of innovative applications to take advantage of the vastly increased wireless connectivity, but will also present new and complicated data supply chain and cybersecurity risks. The decentralized virtual (software) network provides an incredible opportunity for speed, but also thousands of points of contact that hackers can take advantage of.

"5G will be a physical overhaul of our essential networks that will have decades-long impact. Because 5G is the conversion to a mostly all-software network, future upgrades will be software updates much like the current upgrades to your smartphone," wrote Tom Wheeler and David Simpson. "Because of the cyber vulnerabilities of software, the tougher part of the real 5G 'race' is to retool how we secure the most important network of the 21st century and the ecosystem of devices and applications that sprout from that network."

Tom Wheeler, former chairman of the U.S. Federal Trade Commission, has been especially vocal about the need to focus on cybersecurity and data management regarding 5G. He has a primer on the technology, which, along with these two articles from *The New York Times* and *Politico*, are useful for understanding the basics.