It’s 5G Time

Imagine transferring data onto your handheld device 30 to 50 times faster than you can now. Picture an interconnected, automated transportation/traffic system so smart the bus catches you rather than the other way around. That’s the promise of fifth-generation, or 5G, wireless technology, which is both smarter and faster than anything we’ve seen.

“The importance of understanding 5G technology and what it can mean for local and state government cannot be expressed enough,” says North Carolina Representative Jason Saine (R), who sponsored legislation to set a standard regulatory process for installing 5G infrastructure in his state. “This technology can pave the way with how we as legislators make better and more informed policy decisions.”

The technology’s potential is wide-ranging, with proponents foreseeing advances in everything from health care and transportation to public safety. It will also play a key role in the growing “internet of things” environment, in which our devices “talk” to each other.

The result could be better service, reliability and capacity on the network. 5G is potentially so powerful, in fact, that some are claiming its deployment will bring about a fourth industrial revolution.

States With 5G Small Cell Laws

Danielle Dean is the director of NCSL’s Communications, Financial Services and Interstate Commerce Committee.
5G deployment depends on small cell technology. Small cells are wireless transmitters and receivers about the size of a picnic cooler or mini-refrigerator.

“It is crucial for the United States to lead the world in 5G advancements, especially with other countries making great strides,” says Hawaii Representative Takashi Ohno (D), who sponsored 5G legislation that the governor signed earlier this year.

**Striking a Balance**

State lawmakers are trying to strike a balance between industry’s desire to see infrastructure installed quickly and local concerns about how the new technology will affect their communities. Twenty legislatures have enacted bills that streamline regulations to enable small cell deployment. Lawmakers in some states set stringent requirements for state agencies and local governments responsible for administering small cell deployment. Others, like Hawaii, developed loose frameworks to guide local governments and agencies.

“In Hawaii, we took a big step forward in deploying 5G technology by instituting certainty in the permitting process while still allowing cities and counties to negotiate to address their needs with the industry,” Ohno says.

With these reforms, often referred to as small cell laws, lawmakers are taking into account the unique circumstances of their states and local environments. They’re paying special attention to concerns over access, control, safety and public health.

**Small Cell Snag?**

All this action toward deployment hit a roadblock in September, however, when the Federal Communications Commission approved the Declaratory Ruling and Third Report and Order, developed to address what it describes as “regulatory obstacles that have threatened the widespread deployment of these new services and, in turn, U.S. leadership in 5G.”

The order places substantial new time limits on local wireless siting reviews and pre-empts state small cell laws. State and local elected officials will continue “to play a key role in reviewing and promoting the deployment of wireless infrastructure in their communities,” according to the FCC, which says it will draw on the “balanced and commonsense ideas generated by many of our state and local partners in their own small cell bills.”

But several cities and counties aren’t buying that promise. At least 20 have challenged the rule as limiting their autonomy in the rollout of 5G wireless networks.

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**The City of the Future: Brought to You by 5G**

5G technology will serve as the backbone of smart city initiatives that use interconnected networks to manage transportation, communication, energy and other resources efficiently.

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**Oh, How We’ve Grown**

Five generations of wireless technology:

- **1980s / 1G** Analog technology allows the first wireless conversations from across the globe.
- **1990s / 2G** Short Message Service (SMS) brings us text messaging—a new way to chat and a new language to go with it.
- **2000s / 3G** Multimedia Messaging Service (MMS) lets us share more of our lives through photos and other media.
- **2010s / 4G** Live video and wireless broadband brings the world to us in real time on our smart devices no matter where we are.
- **2020s / 5G** By far the fastest, smartest technology the world has seen, sure to transform how we live, work and play.

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