FRAME of REFERENCE

Rebecca Ruscito, NYCOM Counsel

Mobilitie and Small Cell Providers
How to Deal with the Proliferation of This New Telecommunications Technology

Today's mobile phones are used for so much more than making calls. Between accessing websites, listening to music and podcasts, and streaming high definition videos, mobile devices are using ever-increasing amounts of bandwidth, and the technology enabling this ever-expanding demand for data capacity is continuously evolving. To meet these changes, the next generation of wireless internet service will require the densification of wireless infrastructure through the propagation of small cell networks.

Unfortunately, the regulatory landscape has not kept pace with the developing technologies. Consequently, local officials are left with policies that currently do not address the real-world implementation of this new technology. This article will discuss the technological trends necessitating the expansion of small cell networks, the anticipated federal regulations arising from the proliferation of these new technologies, and recommendations to assist cities and villages in preparing for this new era of telecommunication service and control.

Today's Wireless Technology

Internet of Things

Much like the evolution of mobile phones, the internet itself is changing. The internet is no longer a solitary destination for websites and search engines. Instead, the internet is being used to transmit data between a variety of connected devices to provide users with integrated experiences. This is known as the Internet of Things (IoT). Devices utilizing the IoT have become assimilated into how we manage ourselves and our environments, and include a variety of home-based technologies like Roku, smart TVs, the Amazon Alexa, Google Home, Nest Thermostat, and a myriad of home security devices, as well as wearable technologies like smart watches and fitness trackers.

While smart devices are perhaps our most direct association with the IoT, many more smart technologies are not in our homes or available on our phones. Factories, businesses, and the healthcare industries utilize this technology to track inventories, manage machines, ensure security, increase efficiency, minimize expenses, and save lives.[1] As evidenced here, everything is becoming dependent on internet connectivity. Job applications, banking, scholarships, educational opportunities,

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telehealth services, all rely on robust and consistent internet access. Meeting the ever-growing need in the IoT era will rely on the dissemination of the next generation of wireless service and the small cell systems that are needed to supplement the network.

Implementation of 5G and the Proliferation of Small Cell Networks

Fifth generation wireless service (5G) is the latest iteration of wireless technology. While no official definition of 5G exists, the different generations of wireless technology are indicative of the technological advancements that have increased transmission.[2] The standards for 5G will not be formally established until 2018 at the earliest, but it is expected that the new network system will provide markedly higher speeds and increased capacities than the existing cellular networks.[3] 5G will transmit larger quantities of data much more quickly than previous generations of wireless service.

A major weakness of the 5G technology, however, is its significantly reduced transmission distance. Consequently, 5G service will require the propagation of small cell antenna systems to provide such bolstered wireless service. In other words, the next generation of wireless technology will need many more cells to cover the same area covered by current technology. Small cell networks are already used by wireless companies to increase range, coverage, and capacity in densely populated areas that cannot be sustained by existing cell towers. The term "small cell" is generally used to identify low-powered radio access nodes that boost wireless internet service. The cells communicate with a larger network, but increase service only within a limited geographic area, ranging from approximately 30 feet to 1.2 miles. In contrast, traditional cell towers, or macrocells, provide service at ranges up to 20 miles. Distributed antenna systems (DAS) also function as a network of antenna nodes connected to a common provider to deliver wireless service within a defined area or structure.

Both DAS and small cells are considered micro systems that transmit wireless signals within a specific zone, use less power than traditional towers, and densify the network's capacity and coverage. The limited ranges of the existing DAS and small cell networks, however, are insufficient to deliver 5G service to the areas currently covered by 4G technology. Wireless service and infrastructure providers are proposing to fill this gap by increasing their use of the municipal right-of-way (ROW). In particular, Mobilitie, a privately held telecommunications infrastructure company, is negotiating, and in some instances demanding, access to utility poles within the ROW.

Current Telecommunication Regulation Does Not Quite Fit the Model

The Telecommunications Act of 1996 (TCA) provides the main framework of regulation for wireless providers and limits the power of local governments to regulate the siting of wireless facilities in the ROW.[4] The statute prohibits municipalities from giving preferential treatment to any telecommunication provider or from treating telecommunication providers on a discriminatory basis. While 47 U.S.C.A. § 253(c) acknowledges the right of state and local governments to manage public rights-of-way and to require fair and reasonable compensation from telecommunication providers' use of the ROW, state and local governments regulations and ROW policies may not have the effect of "prohibiting personal wireless service."[5]

In 2012, as part of the Middle Class Tax Relief and Job Creation Act, Congress amended the TCA and further limited municipal authority over the ROW by restricting the instances in which local governments may deny applications to modify existing towers and base stations.[6] Section 6409(a) of the Act, provides that local governments must grant all wireless facility siting modification requests that do not substantially change the physical dimensions of a tower or base station.[7] The Federal Communications Commission (FCC) subsequently interpreted "substantial change" to constitute: (1) an increase to the existing height of the tower by more than 10%, or by the height of one additional antenna array from the nearest existing antenna, not exceeding twenty feet, whichever is greater; (2) the installation of more than the standard number of new equipment cabinets; (3) an addition of an appurtenance to the body of the tower that would protrude more than twenty feet or more than the width of the tower at the level of the appurtenance, whichever is greater; or (4) an excavation outside the current tower site.[8] Despite this guidance, the FCC qualified their interpretation stating that the size limits may be exceeded when reasonable alternatives do not exist.[9]

The FCC also interpreted § 6409(a) to apply to all wireless facilities. The Commission explained, "Given Congress's decision not to use the pre-existing definition from another

statutory provision relating to wireless siting, we believe the scope of a 'wireless' tower or base station under Section 6409(a) is not intended to be limited to facilities that support "personal wireless services."[10] This has created some ambiguity as to whether § 6409(a) applies to utility poles in the municipal ROW. Generally, towers are defined as structures "built for the sole or primary purpose of supporting FCC-licensed antennas and their associated facilitates."[11] Therefore, local governments may be entitled to impose more restrictive standards relating to siting applications and modifications on their own property. This distinction hinges on whether the local government is acting in its regulatory capacity or as a property owner.

Approximating the activities of the wireless providers before them, wireless facility developers are looking to this provision of the TCA when proposing to install small cell systems in the ROW. The FCC specifically states that § 6409(a) applies to DAS and small cell systems, thus it is reasonable to interpret the TCA as protecting infrastructure companies and service providers alike. Until specific guidance is provided by the FCC, the commissioners' stated objectives and proposed rulemaking forecast how the TCA will be interpreted for the next generation of wireless service deployment.

Anticipated Regulation

FCC Aspirations and Objectives

On May 3, 2016, FCC Commissioner Michael O'Reilly spoke at a Commission-sponsored workshop examining solutions to DAS and small cell positioning: "I continue to hear legitimate complaints about localities placing hurdles in front of small cell deployments. Issues range from permitting problems and excessive fees to forced rolling agreements and de facto moratoria. Site approvals in rights-of-way, which are especially important for small cell systems, appear to be particularly problematic. Such cases are worthy of the Commission considering using its preemption authority."[12] Commissioner O'Reilly then spoke about a community in Florida that had prohibited small cell towers in the public ROW. "That's simply outrageous," he proclaimed, "These are services that Americans in their very [own] communities want, and they can only be acquired by building networks."[13]

Commissioner O'Reilly is one of the three sitting FCC Commissioners who have all asserted the need for increasing meaningful broadband access, promoting 5D deployment, and lessening the burdens telecommunications companies face when making siting applications.[14] Chairman Ajit Pai debuted his Digital Empowerment Agenda in September of 2016, calling on the FCC itself to establish a program that would provide financial incentives for internet service providers to bring high speed broadband to economically deprived areas, advance digital opportunities in rural America, and

aggressively ensure local governments do not impede broadband deployment. Pai calls for the FCC to use the authority granted by TCA to preempt local regulations that prohibit or have the effect of prohibiting "the ability of any entity to provide wired or wireless service."[15]

Mobilitie Petition

Not long after the Commissioners individually expressed their expectation of unencumbered and widespread broadband access, Mobilitie petitioned the FCC in November 2016 for a declaratory ruling regarding access to municipal ROW.[16] Again, Mobilitie is a telecommunications infrastructure developer seeking to gain access to the ROW for the purpose of installing small cell systems and towers. Specifically, Mobilitie is petitioning the FCC to define the terms of TCA § 253(c) and broaden the statute's applicability to infrastructure and facility developers.[17]

Mobilitie is requesting the FCC to define (1) the "fair and reasonable compensation" that municipalities may impose under § 253(c) to be limited to the costs of issuing permits and managing the ROW; (2) "competitive neutral and nondiscriminatory charges" as those that do not exceed the same charges imposed on similarly situated providers; and (3) "public disclosure" as requiring localities to make available the rates imposed on other providers.[18] Mobilitie also argues that wireless broadband is the latest "essential" or universal telecommunications service required by the American people, and as such, companies engaged in disseminating wireless infrastructure must receive the protections of the TCA and the same access to the ROW afforded to telecommunications service providers.[19]

As the science and technologies surrounding wireless telecommunications continue to develop and evolve, the subtleties between service providers and developers may no longer be relevant for TCA analysis. Articulating this reality and appealing to the objectives articulated by the Commissioners of the FCC, Mobilitie argues that their interpretation of the TCA will "stop excessive and unfair rights-of-way fees that are impeding wireless broadband deployment . . . and thus accelerate [increased] investment in network infrastructure – investment that is necessary to support the American public's exploding demand for wireless broadband."[20]

Notice of Proposed Rule Making and Notice of Inquiry

Responding to Mobilitie's petition and readiness concerns regarding 5G network deployment, the FCC issued a Notice of Proposed Rule Making (NPRM), in March 2017, with the intent of accelerating the proliferation of broadband and removing barriers to infrastructure development.[21] The NPRM acts as a "comprehensive review of the legal framework" through which the Commission may act to remove or reduce these perceived regulatory barriers to wireless infrastructure deployment.[22] Accompanying the NPRM, was a Notice of Inquiry (NOI), which will examine the

application and definitions of the TCA to determine if updating the policies promulgated under the statute is necessary.

The NPRM articulates an urgent need to remove unnecessary state and local regulatory impediments to broadband deployment and a willingness by the FCC to utilize its preemption authority to achieve that goal.[23] Specifically, the NPRM seeks comments to assist in the FCC's examination of the following: (1) how local rules and processes affect the speed and cost of infrastructure deployment; (2) what time limits should apply to local review and when deemed-granted provisions should apply to siting applications; and (3) the use and impact of state and local moratoria on siting application review.[24] The NOI's examination of the TCA will also assess ways to streamline federal regulations that may slow the deployment of broadband facilities. Through the NPRM and NOI, the FCC will evaluate how to best mitigate barriers, costs, and impediments to the deployment of wireless services wireless.

Preparing for the Future

Expectations

Taken together, the commentary by the FCC commissioners and the framework for the proposed rulemaking make it clear that the FCC believes tremendous delays and costs are being levied on providers by state and local governments. Municipalities that charge developers franchise fees for ROW use and require application procedures are perceived as preventing infrastructure investment and stymying the rapid deployment of "advanced wireless broadband service to all Americans."[25] As a result of this impression, municipal officials should anticipate the application of the TCA to telecommunications providers and infrastructure developers alike and expect the FCC to use its preemption authority to restrict local regulation of the ROW.

Tightened shot clock regulations and prohibitions on municipalities' moratoria on processing wireless siting applications are probable changes proposed by the NPRM. The NPRM specifically contemplates "deemed-granted" remedies for missing shot clock deadlines.[26] Under this type of requirement, a municipality must act on a wireless siting application within the appropriate shot clock deadline or the application or modification will be deemed granted.[27] This deemed-granted requirement may also involve an "irrebuttable presumption," in which a municipality is required to act on the application or modification or forfeit the opportunity to challenge the application or placement of a telecommunications structure.[28] Similarly, the NPRM provides that the 2009 FCC Shot Clock Order likely preempts local governments from imposing moratoria on processing siting applications and states, "We see no reason to depart from this conclusion." Therefore, we may reasonably expect that the FCC will use its authority to impose both of these restrictions.

Recommendations

While it may be disingenuous to suggest that the development of wireless infrastructure is impeded solely because of the costs imposed by local governments in New York State, the application of the TCA to infrastructure providers is unavoidable. The TCA acts to prevent state and local governments from impeding the delivery of personal wireless service. Without small cell networks and DAS nodes, the deployment of the next generation of wireless infrastructure will be hampered.

Cities and villages may best manage the changing landscape of wireless service by applying local ROW use regulations in a uniform manner to all wireless siting applications and installations. Establishing fee structures that are reasonably related to the providers' use of the ROW and applying equivalent charges to similarly situated applicants will also be critical in preparing for the anticipated FCC regulations. Moratoria on reviewing applications should be eliminated, as this is the regulation most likely to emerge from the NPRM. Consequently, local officials are strongly encouraged to proactively adopt rules and regulations regarding telecommunications use of the municipal ROW and poles therein.

The next generation of wireless internet service will require far more networks and small antenna systems than we have previously experienced and the siting for each of these nodes will require coordination and participation by local governments. Understanding that the objectives articulated by the FCC to enhance and deliver meaningful internet service are important and valuable may help cities and villages conceptually prepare for the inevitability of federal regulation and broadband deployment. Implementing reasonable and nondiscriminatory regulations, however, will ensure municipalities are equipped to manage the newest method of delivering wireless internet service.

For more information relating to the regulation of telecommunication services or to obtain copies of the references cited herein, please contact NYCOM Counsel Rebecca Ruscito at (518) 463-1185 or via email at rebecca@nycom.org.

Endnotes

1. A Guide to the Internet of Things, Intel (2017), available at http://www.intel.com/content/www/us/en/internet-of-things/infographics/guide-to-iot.html.
2. Sascha Segan, What is 5G? PCMAG.COM, May 1, 2017, available at http://www.pcmag.com/article/345387/whatis5g.
3. Id. at 3.
4. 47 U.S.C.A. § 253.
5. 47 U.S.C.A. § 253(c).
6. 47 U.S.C. § 1455.
7. Id.
8. FCC Public Notice, DA 12-2047. (Dated January 25, 2013).
9. Id. at 2.
10. Id at 3.
11. Id.
12. Michael O'Rielly, Distributed Antenna Systems (DAS) and Small Cell Solutions Workshop, FCC, May 3, 2016.
13. Id.
14. See generally, Ajit Pai, A Digital Empowerment Agenda, FCC, September 13, 2016; and Mignon Clyburn, #Solutions2020 Call to Action Plan, FCC Public Notice, December 19, 2016.
15. Pai, supra note 14.
16. Mobilitie, LLC, Petition for Declaratory Ruling, Before the FCC November 15, 2016.
17. Id. § 253(c) of the TCA refers to 47 U.S.C. § 253.
18. Id.
19. See generally, Petition, supra, note 16.
20. Petition, supra, note 16, at 1-2.
21. Notice of Proposed Rule Making, FCC-CIRC 1704-03, Docket No. 17-79, March 30, 2017.
22. Id. at i.
23. Id. at 3.
24. Id. at 3-13.
25. Notice of Proposed Rule Making, supra, note 22, at i.
26. Id. at 4.
27. Id.
28. Id. at 5.