Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Streamlining Deployment of Small Cell Infrastructure by Improving Wireless Facilities Siting Policies	)	WT Docket No. 16-421
	)	
Mobilitie, LLC Petition for Declaratory Ruling	)	
	)	

COMMENTS OF
GOVERNMENT WIRELESS
TECHNOLOGY & TELECOMMUNICATIONS ASSOCIATION

The Government Wireless Technology & Telecommunications Association ("GWTCA"), through counsel and pursuant to Section 1.415 of the Commission's Rules, 47 C.F.R. §1.415, hereby respectfully submits the following Comments in the above-reference proceeding.[1]

The Government Wireless Technology & Communications Association ("GWTCA") is a newly-established non-profit trade association created to advocate on behalf of government and non-government users of wireless technology and communications in the public service industries, such as public transit. GWTCA's membership includes government agencies, manufacturers, engineers and consultants working on a variety of issues impacting represented users. As government agencies and transit operators often provide infrastructure locations for implementation of telecommunications facilities, GWTCA has a significant interest in this proceeding.

[1] *See*, *Comments Sought On Streamlining Deployment Of Small Cell Infrastructure By Improving Wireless Facilities Siting Policies*, DA 16-1427, released December 22, 2016; *Order*, DA 17-51, released January 12, 2017.

The FCC's request for Comments on the streamlining deployment of small cell infrastructure by improving wireless facilities siting policies comes at a time where there is already a lot of discussion and actions being taken by some states (such as Ohio[2] and Virginia[3]), and many localities. It also comes at a time when the commercial wireless broadband operators are struggling to keep up with demand, increasing the need to construct 5G mini-cells and Distributed Antenna Systems (DAS).

However, this is also a time when many local jurisdictions feel as if the Federal rules and regulations for wireless siting are already overstepping the proper reach of the Federal government. There is also a belief that some of the states, essentially for political and none technology related issues, are stepping on the toes of the local planning commissions, board of supervisors and city councils. There does not appear to the GWTCA to be one clear path forward to provide for the needed number of new small cell and DAS deployments.

From a local jurisdiction's point of view, their residents are already uneasy about microcell sites, and in many cases, have already pushed back against microcell sites in what residents consider to be their own front yard. Even with the current Federal law preventing health issues from being a reason to deny a permit, some local residents have heard about issues with smart meters,[4] with Wi-Fi Hot spots[5] in public, and within their own homes, creating an atmosphere of distrust.

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[2] Inside Towers Report Ohio Enacts Small Cell Deployment: Limits Local Government www.insidetowers.us7.list-manage1.com/track/click?u=d1b803ea3d99f4c1c1335a213&id=bc4527f511&e=ab48b87758.

[3] Friends of Municipal Broadband http://d19cgyi5s8w5eh.cloudfront.net/eml/Ppcuk8mmSjyB6b2vISF25A?e=aseybold%40andrewseybold.com&a=lXI2cu18Qfqd0tz7XHIpqQ&f=&t=1.

[4] San Diego Gas and Electric Bulletin: Radio Frequency Concerns for Smart Meters http://www.sdge.com/residential/about-smart-meters/radio-frequency-concerns.

[5] HPS: Human Exposure to Radio Frequency Form Wireless Local Area Networks, Kenneth R. Foster, Professor of Bioengineering, University of Pennsylvania https://hps.org/hpspublications/articles/wirelessnetworks.html.

Many communities have required the utility providers to work towards undergrounding all or some existing utilities, limiting opportunities for co-location.[6] There are a number of communities where the only poles in evidence along a residential or commercial street are the street lights, and many communities have standardized on a design that blends in with the area in order to not be obtrusive.

Solutions must remain flexible, while at the same time providing the network providers with the ability to quickly, easily and cost effectively extend their macro cell based networks. Consideration must also be given to non-wireless providers, which are interested in providing gigabit broadband services to homes and businesses via fiber to the home, fiber to the street, one-to-one and one-to-many short hop wireless connections, and/or gigabit wireless connections which traverse longer distances and serve a cluster of housing units.[7]

Residents are already pushing back against local planning departments over new poles on a street, or adorning a street light with one or more antennas and microcell equipment. As discussed previously, the GWTCA believes that there is not a single set of solutions which will work in every state and every local jurisdiction. The Commission should review the Comments and Reply Comments, and proceed in a manner designed to minimize what is perceived as more interference in local issues by the Federal Government. At the same time, the FCC should facilitate the ability for those who desire small cell and DAS deployments to be able to work with local officials and arrive at appropriate solutions.

When cable TV was first introduced into American cities and towns, service was usually provided by a single entity, which accessed homes and businesses using the existing utility poles.

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[6] Multiple News articles from multiple Cities presently engaged in undergrounding utilities https://www.google.com/webhp?sourceid=chrome-instant&ion=1&espv=2&ie=UTF-8#q=cities+which+are+undergrounding+utilities.

[7] The San Diego Union-Tribune 1/10/2017: Is Google Fiber going wireless for the last mile? http://www.sandiegouniontribune.com/business/technology/sd-fi-google-internet-20161104-story.html.

In the case of wireless services, it is not practical to permit only one company to gain sole access to the residential and commercial areas of local jurisdiction. However, it may not be possible for a jurisdiction to provide like access to every commercial network operator and provider of gigabit fixed wireless services. Again the dilemma here is how to provide open access to all who request it, satisfy the residents of the community and keep the amount of permitting requests to a manageable number in each jurisdiction.

The End User Community

Ultimately, the customers for broadband wireless services are consumers and business people whose life has now come to revolve around their wireless devices. These are the people who are demanding more and more services for lower costs, more data speeds and data capacity, and the ability to use their wireless devices not matter they are located. However, many of these same customers are also the ones who put pressure on the local planning commissions to stop the growth of wireless communications sites or to make sure that any new site is not in their yard.

With the advent of DAS, small cell (5G) and point-to-point gigabit wireless services, the number of citizens who are expressing concerns is increasing around the country.[8] In these cases, many of the issues are the same: Health (which may not be considered a reason for denying a permit application), surrounding proximity to housing, the fear of home devaluation, and of course the aesthetics of the installation. As the country adds hundreds of thousands more microcells and DAS systems, the number of citizens concerned with the aesthetics of their communities will also increase.

The most obvious method for providing for planned growth using DAS and Microcells would be to require system sharing, with a single node being used by all of the wireless

[8] https://sites.google.com/site/nocelltowerinourneighborhood/home/wireless-smart-meter-concerns/resident-campaigns-in-other-states.

broadband service providers. In 5G spectrum, which has so far been identified at 3.5 GHz and higher, there is sufficient bandwidth capacity to locate a single microcell to cover an area and provide unique portions of the spectrum for all of the different wireless operators. If this were a requirement, it would go a long way towards satisfying the requirements of the wireless service operators, as well as local jurisdictions and perhaps residents. It is understood by the GWTCA, however, that the issues of small cell placement go beyond 5G networks, and include street to building wireless communications links (to reduce the cost of fiber optic deployments), since these systems have different requirements.

Opposition to such deployments, regardless of the existence of regulation, is the belief that wireless networks pose health hazards, despite contrary evidence. This was recently exemplified by Strongsville, Ohio which plans to regulate small cells deployment for health and safety reasons, in order to counter act Ohio's SB331 state zoning law.[9]

Many local jurisdictions and their residents, while continuing to demand better broadband speeds and capacity, are not pleased with having to see antennas, metal boxes, and other items cluttering up their street lights and/or adding to the clutter of the electric or telephone poles running down their street. Coupled with the confusion of what entity controls the local jurisdictions rights-of-way, there is escalating resentment. It is incumbent upon all parties to work together to provide a set of solutions which will meet the needs of the commercial broadband customers, keep the communities happy with placement policies and service levels, provide for fair and open competition between wireless suppliers, and to provide the network operators with as much flexibility as possible.

[9] Ohio Municipalities Fight Back Against State and Carriers with Zoning Rules, Inside Towers https://insidetowers.com/cell-tower-news-ohio-municipalities-fight-back-state-carriers-zoning-rules/?utm_source=Inside+Towers+List&utm_campaign=d826a24e47-EMAIL_CAMPAIGN_2017_02_13&utm_medium=email&utm_term=0_af16c4fc22-d826a24e47-91417089&goal=0_af16c4fc22-d826a24e47-91417089.

The best answer for many of these issues is to require the sharing of resources, including fiber access to the areas, common small cells with shared capacity (and shared costs) for all who qualify as a network, internet, TV, and/or telephone provider. It took many years to get to the point with macro cell sites where operators were willing to share a common cell site and today this is required by many jurisdictions. However, sharing a tower and ground facilities, while still maintaining independent radio access and back-haul solutions, is much different than requiring combined infrastructure to be provided and shared by all of the potential providers.

Technologies are also moving forward quickly. New technologies being implemented include fifth generation small cell wireless, fiber to the pole and wireless fiber to the home, and even a wireless hub mounted on a residential roof top which in turn provides broadband services to other homes in the area.[10] Other companies are working on broadband over satellite, broadband on hot air balloons, broadband on the bellies of airliners, and UAVs which can stay airborne for days or weeks.

Many new methodologies for delivering broadband to both mobile and fixed locations will require at least two different radio frequency solutions, one to get high-speed broadband to the outside of a structure or area and another to penetrate the structure. One of the reasons that Municipal Wi-Fi has been a failure in some areas is that the implementing entity provided Wi-Fi broadband access to street level, but did not provide another method of moving the broadband signals into buildings.

The GWTCA believes that most, if not all, forms of communications and entertainment will be transmitted, at least partially, by wireless services. Wireless delivery may be entirely wireless, the last 10 miles (or mile), the last 1000 yards, 100 feet, or 10 feet. Each of these methods will require some type of transmitter/receiver, antenna and other equipment to be

[10] http://www.gigaband.com.

deployed near the customer. Vendors will need to consider aesthetics in order to satisfy the concerns of the local population that is concerned with the visual appearance of installed systems, as well as the number of systems in a given block.

It is easy to imagine that on a given street in some cities, each telephone pole and/or street light is adorned with 2, 3, 4 or more different devices, all built to different standards. What is needed for aesthetic purposes could cost more per cell than the actual wireless devices. However, in the long run the extra expenditures for cosmetic appearance will be less expensive for the network provider, compared to the expense of a different permitting process at a different cost from one jurisdiction to another.

The Politics of Rights of Way

In some areas, there is a dichotomy of positions on siting at the state and local level. As a result, an entity seeking to provide the greatest access possible with the least aesthetic impact is stymied by different regulations at the federal, state and local levels. The end result is delayed implementation, higher costs to build (and ultimately higher costs for consumers) and a frayed relationship between all of the involved parties.

This is an untenable situation for everyone. For entities which maintain rights of ways across multiple jurisdictions, there is frustration with different requirements for access to the rights of way and how infrastructure can be utilized. GWTCA members have rights of way which cross not only local jurisdictional boundaries but in many instances, such as railroads, cross multiple state boundaries. Entities that are in the process of deploying or permitting technologies to be deployed on these rights of way face issues of different permitting processes, different sets of fees, and differing acceptance by the local jurisdictions. These organizations

want to be a productive part of the wireless and local communities, but the dizzying array of regulations stymies innovation.

Organizations which have access to rights of way which cross multiple boundaries are looking for common requirements which are reliable, reducing the need to spend months or years (plus untold dollars) working with multiple different types of permitting processes. Unfortunately, the current structural situation does not yield such a result.

The FCC, Congress, and other federal entities are all trying to find ways to provide access to broadband services across the digital divide. The solution is to provide common guidelines across the various rights of way in order to provide a known path for those who are deploying or would like to deploy small cell systems as well as point-to-point and point-to-multipoint last mile wireless systems, and the fiber required to provide the capacity to these devices.

The GWTCA recommends that the FCC empower a task force, consisting of rights of way owners, vendors, city planners, mayors, governors and relevant federal agencies. The task force should be charged with the tasks of simplifying the processes, of protecting the aesthetics of neighborhoods, and protecting communities and those living in close proximity to these rights of way. Further, the task force should work expeditiously. The Commission should also create an awareness campaign, with community outreach, geared to education of the myriad of issues to be considered, and addressing the trade-offs between ubiquitous access and ubiquitous infrastructure.

The GWTCA recognizes that there are many ideas about how to proceed, as evidenced by the filings already submitted in this matter. However, the goal is to simplify, not complicate, the process. At the same time, there should be as much consistency as possible.

WEREFORE, the premises considered, it is hereby requested that the Commission act in accordance with the views expressed herein.

Respectfully submitted,

GOVERNMENT WIRELESS TECHNOLOGY & COMMUNICATIONS ASSOCIATION

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