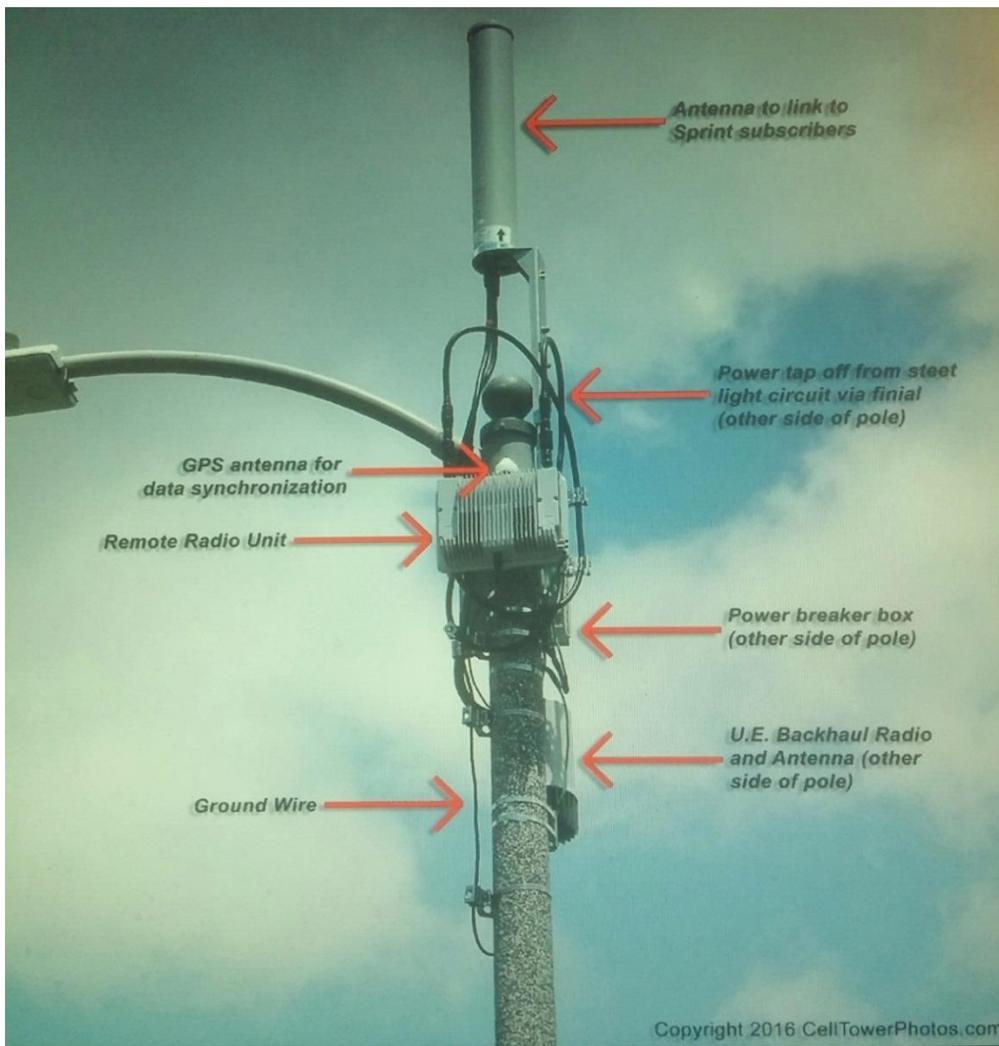


A number of communities have reported being contacted by telecommunications companies regarding the installation of small wireless facilities. The majority of these requests are taking two forms: requests from cellular carriers to deploy small cell equipment on existing structures or facilities and requests from recent entrants into the market to construct new infrastructure that will serve as locations for carriers to deploy their equipment.

On August 29, 2016, the DuPage Mayors and Managers Conference hosted a workshop on the regulation of small wireless facilities. Four speakers provided brief overviews of the technical and legal aspects of this issue and the approaches taken by several communities to address applications. The following is a recap of those presentations and the questions raised by the audience.

### Technical Aspects of Small Wireless Facilities

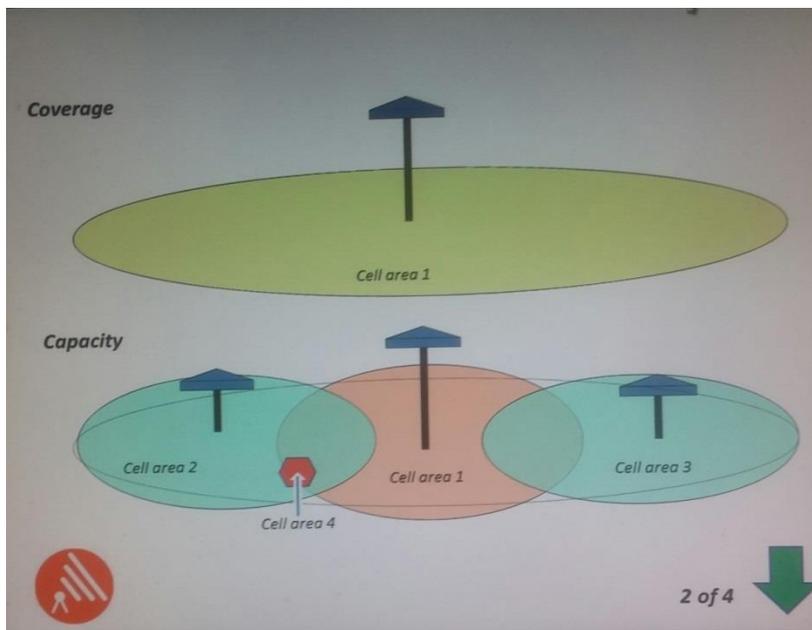
The first presenter was Stuart Chapman. Chapman is the president of Municipal Services Associates, Inc., and has a substantive background of more than 35 years of experience working on telecommunications related projects.



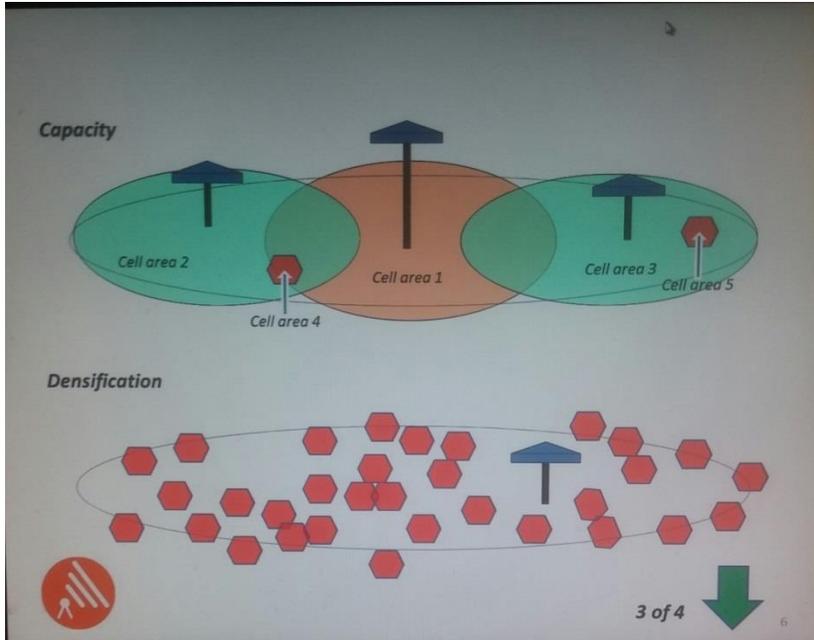
(Anatomy of a small cell)

Chapman provided an overview of the technical aspects of small wireless facilities and began with a description of the different types of cell sites. The largest, monopoles, can hold between 1 and 4 arrays (a type of antenna) and typically stand between 60 and 175 feet in height; taller monopoles are a rarity. Monopoles can serve large areas and large numbers of users, however, they can also very easily become congested. Small cells, in contrast, are mini cell sites that augment capacity in a given area. Verizon has recently been filing applications with communities to site small cells on existing utility poles, streetlights, traffic signals, and the like. There is usually one small cell to a pole, as trying to squeeze another onto the pole can become difficult and unsafe. Another problem with small cells is that they can provide a lot of visual clutter, particularly on well-traveled streets and highways. The smallest type of cell site is a DAS, or Distributed Antenna System, which is a series of antennas usually connected by a fiber optic line and small power line. A DAS is usually located in a confined space, like an auditorium or arena, but can also be found in larger areas as well, including college and municipal campuses. Several can be strung together to create a DAS network in a confined area.

Chapman reported that the reason communities are seeing a rapid uptick in small cells is because of capacity. Prior to the iPhone, carriers were keeping up with demand for coverage; however, coverage became strained as the popularity of iPhones took off. Macro cell sites are still being built to provide capacity for users of tablets, smart phones, and wearable wireless devices. Frequently, capacity needs may be clustered in small geographic areas. In order to fill in the gap in capacity and reach out to a particular cluster, carriers build small cells. Also, densification, particularly in urban and suburban areas, has become more critical to carriers. To keep up with demand, carriers “densify” by installing a number of small cells in the same area. As demand goes up, the need for densification becomes greater and greater. Up until 2007, capacity exceeded demand, but since then, capacity has been running behind.



(Coverage and capacity)



(Capacity and densification)

Chapman then provided a series of pictures of various cell sites. A small cell typically has an antenna, fiber and jumper cables, battery box, breaker switch, and a user backhaul radio. Battery boxes can easily become a visual obstruction or clutter, so Chapman recommended that municipalities make sure these boxes are mounted higher on poles, on the ground, or not mounted at all, in which case the antennas could be serviced directly by electricity and supplemental power located elsewhere in the system.



(Small cell)



(AT&T and Verizon poles in Berkeley)

DuPage Mayors and Managers Conference  
Workshop Recap: Small Wireless Facilities

Chapman also provided a picture of a Mobilitie tower along Golf Road in Rolling Meadows. The tower is between 80 and 100 feet high and has a wireless internet antenna on top so it can communicate with other towers. This tower will be the home of a Sprint small cell and also has enough room to house a second carrier. A pole of 120 feet could easily hold as many as three carriers. The unusual feature of this pole is that it does not yet have cabling and still needs to be connected to a network.



(Mobilitie tower in Rolling Meadows)

Chapman recommended that municipalities take a careful look at the design for a small cell or tower when an application and plans are filed. Issues involving zoning, proper use of right of way, aesthetics, and safety are all concerns that must be carefully considered. It is important to consider the size and weight of battery and radio boxes on poles, whether the small cell/pole is blocking traffic signs and signals, how far the pole is from the curb, and other potential safety violations.



(L.A. Double Small Cell)

## Federal and Local Laws and FCC Regulations

The next presenter was Jim Knippen. Knippen is a principal in the law firm Walsh, Knippen, Pollock & Cetina. Representative corporate clients include, or have included, the City of Wheaton, Village of Roselle, Forest Preserve District of DuPage County, and Village of Woodridge.

Knippen provided a basic overview of the federal and local laws and FCC regulations that affect the regulation of small wireless facilities. The United States Congress has decided that the expansion of cellular communications is something to be promoted. Many citizens want faster internet and communications and don't have a problem until cell installations are in their backyards.

*The U.S. Telecommunications Act (USTA)* is the fundamental underlying legal authority that establishes the platform for the deployment of telecommunications in the U.S. and includes small wireless facilities and DAS. The USTA provides that “nothing... shall limit or affect the authority of a state or local government or instrumentality thereof over decisions regarding the placement, construction, and modification of personal wireless facilities.” In other words, this fundamental law says local governments still have zoning authority and right of way control over the installation of these facilities. Therefore, municipalities can still use the model Right of Way Ordinance to regulate these facilities, with some limitations. The USTA limits local regulation by stating that local governments cannot: (1) unreasonably discriminate among providers of functionally equivalent services; (2) prohibit or have the effect of prohibiting the provision of personal wireless services; or (3) regulate the placement, construction, and modification of personal wireless services facilities on the basis of the environmental effects of radio frequency emissions. Unfortunately, the first two provisions are relatively ambiguous and present challenges for municipalities trying to adopt standards that will avoid lawsuits.

*The FCC* has two additional requirements: (1) applications must be acted upon within a reasonable period of time; and (2) if the local government denies an application then it must provide a written opinion of why it is denied which must be supported by substantial evidence in the written record. Knippen said that “substantial evidence” means evidence that shows a rational basis for the denial.

A local government cannot sit on a site application and do nothing. In 2008, the FCC considered what constitutes a reasonable period of time. A local government has 90 days to act on completed applications for co-locations and 150 days for completed applications involving new power siting requests. If the local government does not respond within that time period, the carrier can sue. However, a municipality can still claim in court that the inaction was reasonable. Inaction does not give the carrier a right to installation.

In addition, a local government cannot unreasonably discriminate against similarly situated carriers. Knippen noted that the key word is “unreasonably” – a local government can discriminate as long as it is reasonable. A 4<sup>th</sup> Circuit Court of Appeals case found that a local government can discriminate and refuse the installation of a facility if it doesn't fit the aesthetics of the neighborhood. Knippen recommended municipalities look at their zoning ordinances as they may provide relief or guidance as to where to allow location of facilities.

*The Illinois Telephone Company Act (ITCA)* permits telecommunications carriers, including wireless communication providers, to install facilities in public rights of way. However, the location of the facilities is subject to the direction of the municipality. If the carrier submits an application, the

municipality has 10 days to respond if the installation includes excavation and 30 days to respond if it does not include excavation. Knippen noted that he doesn't think this statute works very well for the carriers because even if they specify a location for a facility, the municipality can tell them to place the facility at another location. If your municipality receives notice from a carrier regarding the installation of a facility, take a close look at the plans and request location before deciding whether to grant them.

*The Federal Pole Attachment Act* also regulates access to privately owned poles. The Act provides that "a utility shall provide a cable television system or any telecommunications carrier with non-discriminatory access to any pole, duct, conduit, or right of way owned or controlled by it. A utility like ComEd cannot refuse the request of a telecommunications carrier to locate on one of their poles unless it has public safety or welfare reasons.

*The Spectrum Act*, which can be found in the Middle Class Tax Relief and Job Creation Act of 2012, prevents any state or local government from denying modification of an existing wireless tower or base station that doesn't substantially change the physical dimensions of the tower or station. When a municipality gives someone a permit to establish a small cell on an existing pole, that pole is open for expansion or potential expansion in the future. A substantial change includes when an existing pole is increased by more than 10% or 10 feet, whichever is larger. A municipality cannot deny an application which doesn't substantially increase the presence of the pole. For example, if a carrier installs a pole and antenna that is 50 feet high, the municipality's maximum height per its right of way ordinance, the carrier has a statutory right to add an additional 9 feet in equipment.

Wheaton began working on regulating small wireless facilities 9 months ago. Four weeks ago it adopted amendments to its right of way and zoning ordinances and established a master license agreement which carriers have to execute before coming into Wheaton's right of way. After signing the agreement, a carrier has to file an application consistent with Wheaton's ordinance with the engineering department. After that point, the application is handled strictly on an administrative basis. Knippen noted that the basis for Wheaton's ordinance and master license agreement came from California, where they require site specific permits for each application as it comes through. There does not appear to have been a lot of litigation over the past two years in California, so the approach seems to have had some success with carriers. (Knippen recommended that municipalities not look to Wheaton's zoning ordinance as it has some peculiarities specific to Wheaton.)

## **Hinsdale and River Forest**

The next presenter was Michael MARRS. MARRS is a partner with the law firm of Klein, Thorpe, and Jenkins and concentrates his legal practice in the general counseling of local government entities. MARRS has spoken recently on municipal regulation of the placement of wireless telecommunications facilities at the IML Annual Conference and the Annual Conference of the Illinois Chapter of the American Planning Association.

MARRS stated that as most local regulations have been directed at macro cells up to this point, there is no way to say there is a best way to regulate small wireless facilities today. There are currently more questions than answers and it is difficult to judge what will work, what will not work, and what kind of push back municipalities will receive. It is important to note that the telecommunications industry views local control as obstructionist and they will continue to work to minimize our ability to regulate. MARRS

encouraged municipalities and councils of governments to continue to share their experiences and advocate on behalf of local control.

Marrs' first experience dealing with the telecommunications industry was in 2012, when AT&T approached Hinsdale with a plan to roll out DAS in residential districts. AT&T planned to put 8 installations on ComEd poles and went through Hinsdale's permitting process; however, after the first installation, residents complained because they did not like its location. At this point, Hinsdale and Marrs started to look for ways to regulate installations going forward. AT&T provided feedback on the ordinance and was fairly cooperative because they wanted to maintain a good working relationship with the Village. Hinsdale built in an additional process for when a carrier wanted to put pole attachments in residential areas and gave staff the ability to dictate what is not a good location for various reasons.

In 2015, Marrs also developed an ordinance for River Forest. At that time, Palatine had an ordinance which added additional regulations to the right of way construction chapter. Marrs used the River Forest ordinance as a basis and made modifications from there. Marrs recommended that municipalities make modifications to their right of way ordinance, if they have not yet done so, and put in additional regulations that are very specific to small cell technologies. These modifications should include safety and aesthetics.

Marrs then discussed legislation which was introduced in the spring 2016 legislative session. SB 2785 would severely limit the ability of municipalities to regulate the location of small cells. Despite not advancing out of the chambers, the bill was passed out of the Senate Executive Committee by a vote of 17-0, which Marrs sees as an ominous sign that the telecommunications industry has placed a lot of money behind this issue. Even if SB 2785 does not pass this year, we will probably see similar bills in the near future. Marrs encouraged the audience to coordinate and aggressively fight this bill and others like it that may be filed in the future.

## Schaumburg

The final presenter was Rita Elsner. Elsner has been the assistant village attorney for the Village of Schaumburg since 1989. Elsner is a past chair of the IML Home Rule Attorney's Committee and Illinois Bar Association Local Government Section Council. She also worked with the Home Rule Attorney's Committee to draft IML's model Right of Way Ordinance.

Elsner provided a historical perspective of how things started out in Schaumburg and some of the other Illinois communities. Schaumburg's first foray into telecommunications systems started in 1999 when Schaumburg received a request from Metrocomm to put small boxes on top of lights poles and traffic lights to speed up service to their clients. Schaumburg approved the request expecting Metrocomm to pay rent. The paperwork was completed and boxes were installed before Metrocomm went bankrupt. Schaumburg learned that it is important to establish bonds or other ways to ensure the removal of abandoned equipment from public facilities.

Next, AT&T approached Schaumburg to place their equipment in the right of way for Project Lightspeed. Concerned, the IML Home Rule Attorney's Committee developed a model Right of Way ordinance, which was adopted by many communities. Schaumburg made modifications and used the ordinance to restrict the locations and numbers of AT&T's boxes within the right of way. Schaumburg also negotiated each location with AT&T.

Next, a company based in Great Britain approached Schaumburg about installing cable in the sewer lines. Schaumburg negotiated with the company and asked for bonds so if something went wrong, the Village could remove the cable lines from the sewers. The company asked Schaumburg if it would float some of the bonds because it did not have the money, but Schaumburg refused and the company departed.

More recently, Schaumburg has been dealing with Mobilitie and Verizon. Schaumburg negotiated a master license agreement with Verizon to allow them to use the Village's poles since most utility lines are buried throughout the community. Verizon is required to pay a flat \$250 fee per month per light pole and conduct engineering tests to make sure the light poles can hold their equipment. Schaumburg has placed height limitations in the agreement as well as a restriction on issuing monopoles in the right of way. Schaumburg is also working with Mobilitie toward an agreement.

Elsner finished by recommending municipalities take a careful look at applications. Mobilitie has come to Schaumburg several times, but the Village has been able to stop the shot clock by notifying Mobilitie that they have not provided the information the Village needs. (See more about the shot clock below.)

## Q&A

After the presentations, the panel took questions from the audience. A summary of the questions and the panel's answers follows.

Q: Does Roselle have a master license agreement with Mobilitie?

A: No, Roselle is currently working on amending its zoning ordinance and potentially adopting a master license agreement.

Q: Can you explain how the shot clock works?

A: To stop the shot clock, a municipality must provide notice to the applicant requesting additional information within 30 days of receiving the application. The notice must be very specific and detailed about what information is missing. The clock starts again when the applicant provides the municipality with that information. If the municipality receives a non-response or insufficient information, it has a second opportunity to stop the clock. The municipality has 10 days from the official response to notify the applicant that their response was insufficient and that the clock is again stopped, or "tolled", until they provide specifically what was requested. If they still fail to provide the information, the municipality can once again stop the clock.

Q: Can you only toll the shot clock if an application is officially submitted?

A: If the carrier is making an inquiry, it is not considered an application. The municipality should look at its standard right of way application and see if it fits small cell applications. If it doesn't, then the municipality should look at amending the application when it amends its ordinance.

Q: What are the economics of applications for small cells and DAS?

A: The type of traffic that a micro cell or small cell generates versus a macro cell dictates the economics to a significant degree. The type of traffic that a macro cell generates can generate thousands of dollars a day for the carrier. As a result, rents carry more value because of that high value traffic component. Small cells do not carry as much traffic so they are not the same value economically to the carrier as a macro cell. Small cells cannot be placed on the same scale as a macro cell. Rent for a small cell will typically run from 1/4 to 1/10 of the rent on a macro cell. The rent largely depends on where the cell is

DuPage Mayors and Managers Conference  
Workshop Recap: Small Wireless Facilities

located—if a small cell is located in a high traffic area around a major route or highway, or that area carries a lot of foot traffic, then that small cell might mandate a higher rate than if it were placed on a quiet street in a neighborhood.

Q: Is the value of each DAS even less than a small cell?

A: DAS is a different animal with respect to economics. A DAS is usually found in a confined area, like a building or campus, and rent will be established between the landlord, the carrier, and the network builder. The carrier pays the network builder and then the landlord charges the carrier rent. The rent depends a lot on the value of property and the negotiations the landlord has with the carrier. Rent for a DAS can vary wildly.

Q: If you charge one carrier \$250 in rent, but another carrier \$350, are you discriminating?

A: No, the rent is based on location, not on one carrier versus another. If a carrier wants to locate a small cell in the middle of downtown, then that carries a higher value than if they put it in a park that gets less foot traffic. However, it is important to note that your municipality may be competing with ComEd in terms of location of small cells. ComEd may permit a carrier to put its small cell on ComEd's pole for less money. The FCC has come out with regulations about what utilities can charge and it is not a lot of money. Unless a carrier really needs the municipal pole because of its location, your municipality might be in competition with ComEd or another utility.

Q: What does Schaumburg allow as the maximum height of a pole?

A: 35 feet.

Q: Does Schaumburg's ordinance prevent Mobilitie from installing a 120 foot monopole?

A: Yes, it says no new poles. Then it becomes a matter of whether the carrier can show that this location is their only alternative. If the right of way is running next to private property, there may be other options. Also, there is an argument that the carrier is already providing communication services; they just want to bump up speed or capacity with the new installation. One might argue that the carrier doesn't really need a pole here and the municipality isn't denying them anything. Furthermore, a 120 foot pole is a huge aesthetic issue. Based on the 4<sup>th</sup> Circuit Court case mentioned earlier, in some cases aesthetics are a legitimate zoning purpose. So aesthetics still remain a viable zoning control under the circumstances.

Q: How does your community deal with liability when a small cell is placed on a municipal pole or light?

A: The Wheaton ordinance contains standard indemnification and hold harmless clauses and insurance requirements. Schaumburg also has insurance requirements.

Q: Should a municipality have any special provisions for public employees that have to work on streetlights that are close to transmission or receiving equipment?

A: There must be adequate climbing space for the person servicing the streetlight. In examining the plan for a small cell mounted on a streetlight, the public works department or village engineer needs to be careful to make sure there is adequate climbing space and adequate proximity to conduct work without being interfered with by the carrier's equipment. The smaller this equipment gets, the less of a problem this will be. The public works department should speak with the carrier about how they are going to be able to service the streetlight without interfering with the carrier's antenna, battery box, radio, etc.

DuPage Mayors and Managers Conference  
Workshop Recap: Small Wireless Facilities

Q: Does a small cell have an emission that could be considered harmful and do you need to have the carrier shut the site down while work is being done?

A: As a matter of precaution, the small cell site should be turned off when the streetlight or signal is being serviced, even though a small cell has relatively small emissions. The carrier should demonstrate to the village that the site is off and indicate the protocols they use to shut down the site, including the battery backup.

Q: Rather than a master license agreement, would it be more valuable to strictly negotiate with Mobilitie on the location of each pole?

A: Because the carrier is leaving equipment permanently in the right of way, which Wheaton has a fiduciary obligation to protect for its citizens, Wheaton decided to go with a master license agreement. Wheaton felt it needed contractual control as well as an ordinance. Once a carrier signs the master license agreement and submits a site specific application, they simply have to go through Wheaton's administrative process. Schaumburg also required Verizon to sign a master license agreement before applying for each installation.

Q: Is Mobilitie a utility?

A: No, Mobilitie is not a utility. In other states, Mobilitie has represented itself as a utility in an effort to get its foot in the door with municipalities. Municipalities have the impression Mobilitie is a utility so they must have rights under state statute. Mobilitie has also gone so far as to call themselves an authority in other states, which has led to confusion for municipalities. However, Mobilitie was caught and Mobilitie's CEO has made comments about how the company is going to be more transparent about what they are.

Mobilitie is also not a retailer like AT&T or Verizon; it is not covered under the Simplified Municipal Telecommunications Tax. If Mobilitie claims it is a retailer, ask them for a copy of their telecommunications tax return. If they don't pay the tax, they are not afforded the same protection. Mobilitie is a tower builder. They want to use your municipality's right of way, or the county's, or IDOT's, to build their network. It is very important to find out exactly what Mobilitie wants to do in your municipality's right of way so you can make an informed decision. If Mobilitie evades your request for more information, then you may have no choice but to deny them.

Q: Does your municipality not have to use the shot clock with Mobilitie?

A: Although Mobilitie is not a provider, they are providing telecommunications services. Your municipality probably still has to use a shot clock.

Q: What about Sprint?

A: Remember that Mobilitie has a deal with Sprint to use the poles. Sprint will still have to file an application with your municipality to put a small cell on Mobilitie's poles.

Q: Is Mobilitie a Competitive Local Exchange Carrier (CLEC)?

A: Ask Mobilitie to provide you with documentation for that claim.

Q: What about Crown Castle or T-Mobile?

A: Crown Castle International Corp. has been focusing down south and has reportedly made it as far north as Naperville. Crown Castle is a tower owner and a network builder and it is building fiber optic to link Mobilitie facilities in some areas. Also, Crown Castle bought up a lot of assets of former carriers and now leases to Verizon and T-Mobile. Your municipality may want to find out if Crown Castle provided adequate notice if they bought a carrier's tower in your community so you know where the rent is

DuPage Mayors and Managers Conference  
Workshop Recap: Small Wireless Facilities

coming from and who to contact when there is a problem. T-Mobile will be making a push for small cells next year, but where they plan to start is still in question. Seattle will likely be one of their first markets.

Q: If your municipality has an area with existing utility poles and municipally-owned streetlights, can you effectively say that you don't want any additional poles put in the right of way?

A: The panel thinks so but recommends your municipality look at its right of way ordinance and make changes as is necessary.