



Enabling Wireless Networks Everywhere

New York State Legislature
April 2017



Wireless Infrastructure Powers Your World



How Wireless Works

1 DATA SESSION STARTED

Whether you're reading your news feed or watching a video, your smartphone encodes your data request into digital packets of information.

1

2 CONNECTION MADE

Using radio waves, your smartphone sends your encoded request to the nearest cell site.

2

3

REQUEST ROUTED

Your request is routed from the base station to your wireless carrier's central switch via fiber optic or copper cable.

4

OUT TO THE WORLD AND BACK

From the carrier's central switch, your data request is processed and sent to its final destination. The sequence is then reversed and the data is sent back through the same channels to your smartphone – all in a matter of milliseconds.

Wireless infrastructure is typically built in two forms:



Macro Sites

Poles, towers, or other tall infrastructure (rooftops, water towers, billboards), typically > 50', that host antennas from several different carriers at once.



Small Cell Sites

Small antennas placed on new or existing poles or other support structures that complement tower coverage in areas of heavy demand.

Your Wireless World

TOWERS

Wireless providers install equipment on cell towers.

A tower can provide wireless voice and data services to a large geographic area.

ROOFTOPS

Where towers aren't feasible, wireless providers install antennas on buildings.

SMALL CELLS

Wireless providers install small nodes on signs, streetlights, utility poles, and other existing infrastructure. This adds much-needed capacity to dense urban areas, residential neighborhoods, stadiums, universities, and places where large crowds assemble.

Key Wireless Infrastructure Terms

Coverage

The geographic area where mobile service is provided. Coverage is needed to increase wireless access and availability within an area.

Capacity

The amount of traffic a network can handle at one time without getting congested. Additional capacity is needed to handle the transmission of photos and videos over the network as smartphones and other data-hungry devices become ubiquitous.

Collocation

When multiple wireless carriers share a common support structure. Collocation maximizes use of existing support structures, reduces visual clutter, and avoids unnecessary duplication of towers and other infrastructure.

Congestion vs. Capacity

Wireless congestion happens when too many devices try to use the same cell site at once.

With increased data usage, all that extra demand can quickly overload a cell site's capacity.

The best way to relieve wireless congestion is to add new wireless facilities.

New innovations, like small cells, allow networks to add more capacity in densely populated or high-traffic areas, which can mean better service for everyone.

WIA & NYSWA Policy Positions

- **Promote shared use or collocation**

Share wireless infrastructure whenever possible to make the most of existing structures before building new facilities.

- **Encourage common standards**

Common regulatory standards can be used to strike the right balance by preventing a cumbersome review process and ensuring strong and reliable service while supporting local control.

- **Ensure Access to Public Rights of Way**

Access to public rights of way for smaller infrastructure (poles, antennas, and support structures) will continue to be an important part of providing wireless services.

NYSWA – WIA MEMBER

Working Together

NYSWA was the first association to join WIA as a State Wireless Association Program (SWAP) member in 2014.

WIA & NYSWA continue to work collaboratively to promote and advance the wireless industry through education and service in New York State.

More information about WIA can be found at www.wia.org and NYSWA at www.nyswa.org



Speaker

Speaker

Chris Fisher – President, NYSWA

Managing Partner, Cuddy & Feder LLP

Christopher B. Fisher, Esq. is a founding board member and has served as President of the New York State Wireless Association since 2012. Under Chris' leadership, NYSWA established its Wireless Forum Conferences in NYC, published a statewide wireless economic impact report, expanded its advocacy with State leaders in Albany and has otherwise provide new and improved opportunities for NYSWA members to do business in New York. Chris also contributes to the wireless industry nationally as a member of WIA's Innovation and Technology Council and HetNet Forum, where he focuses his efforts on mobile infrastructure deployment.

