


How Carriers Can Deliver More Bandwidth and 5G-Ready Capabilities in Urban Environments

A background image showing a city skyline at night with a network of white lines and dots overlaid, representing wireless connectivity.

Wireless connectivity is an essential part of modern life. Like any always-available utility, we depend on wireless networks to deliver on-demand news, entertainment, messages, voice communication services—and much more—to our smartphones and other mobile devices.

Wireless connectivity truly works like magic—until it doesn't.

For mobile device users, maintaining sufficient wireless signal strength to power the features that we've come to rely on is increasingly problematic, particularly in metropolitan areas with high density of buildings and a limited number of wireless towers. A large and growing number of devices compete for a limited supply of wireless bandwidth, which is provided by a finite number of transmitters. Signal quality is diminished when too many users attempt to access the wireless signal and overburden the capacity of the carrier's network. The result is spotty service, dropped calls and poor reception.

Part of the problem also has to do with the materials now used in building construction. Steel, concrete and energy-efficient windows are among common building materials that can disrupt, reflect or degrade incoming wireless signals.

With an estimated 80 percent of mobile traffic originating or terminating within a building, carriers are looking for a way to address the increasing demand for wireless connectivity within buildings and dense urban environments.

Segra's in-building wireless technologies provide a turnkey solution that addresses the requirement for more bandwidth and better network coverage for wireless consumers.

In-building wireless solutions off-load wireless traffic from the local macro tower to local networks within lit buildings, ensuring signal strength is improved for consumers within the building, as well as increasing the performance and network coverage of the macro tower. Transferring traffic from high-rise buildings, campuses, crowded stadiums and hotel properties to in-building wireless networks helps ensure that end-users stay connected and enjoy the best mobile experience possible.

In addition, consumers are looking forward to 5G connectivity that will provide a faster, more advanced network connection than ever before, and put pressure on carriers to deliver a superior end-user experience. However, providing 5G capabilities requires large amounts of bandwidth availability as well as the need for devices to be closer to transmitters for short RF band lengths. By installing lit buildings with in-building wireless transmitters, carriers can prepare for the bandwidth requirements of 5G connectivity.

Segra's In-building Wireless solution is efficient and quick to deploy, and was designed with the direct input from partners who require carrier-grade technologies. By leveraging Segra's already-in-place dense fiber network, Segra helps carriers ensure that customers stay connected and are better prepared for 5G capabilities.

To learn more about Segra's In-Building Wireless, visit www.segra.com/inbuilding.

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