



# Transforming Real-Estate with Mobile Edge Clouds

Real estate owners who want to attract and keep tenants must first fully understand their broadband connectivity needs. In both commercial and residential properties, broadband connectivity is as fundamental a need as water and power. In fact, the US federal courts now define connectivity as a utility.

But while fixed broadband is available in virtually all buildings, wireless mobile broadband is not as commonplace. Most buildings – whether single-use or mixed-use including retail, office space and residential space – rely on services they receive from outdoor cellular networks for voice service, and respond to mobile data connectivity with Wi-Fi networks. While that all sounds good, in truth the outdoor cell networks do not always perform well or consistently, particularly in public spaces.

That's a big problem for property owners and their tenants. Recent studies show that Americans spend 70% of their online time on a smartphone, and the average browsing time on a smartphone is double the average browsing time on a desktop.<sup>1</sup> Fortunately there is a solution for real estate owners – unlimited wireless access using virtualized mobile edge clouds and Distributed Antenna Systems (DAS). These solutions work at full speed, support any or all carriers, and they work with any device. The technology relies on virtualized base stations, which are fully scalable and secure. Better yet, this approach enables property owners to own and control their cellular network, not the mobile operators. A mobile edge cloud frees building owners and tenants alike from the limitations and unreliability of carriers, Wi-Fi and cable.

<sup>1</sup>comScore MMX Multi-Platform

## Benefits

### Guaranteed Service Delivery for All Wireless Carriers

- The asset is pre-wired to support all wireless carriers: tenants can switch carrier for corporate devices or in the case of a BYOD policy – support all devices used on premises
- 'Always-on' cellular services
- Scalable capacity

### IT-Managed

- Multi-vendor Open Mobile Edge Cloud (OMEC) with monitoring and control
- Simple integration with Cloud Automation tools

### IoT Backbone on a Private, Cloud-Based LTE Network

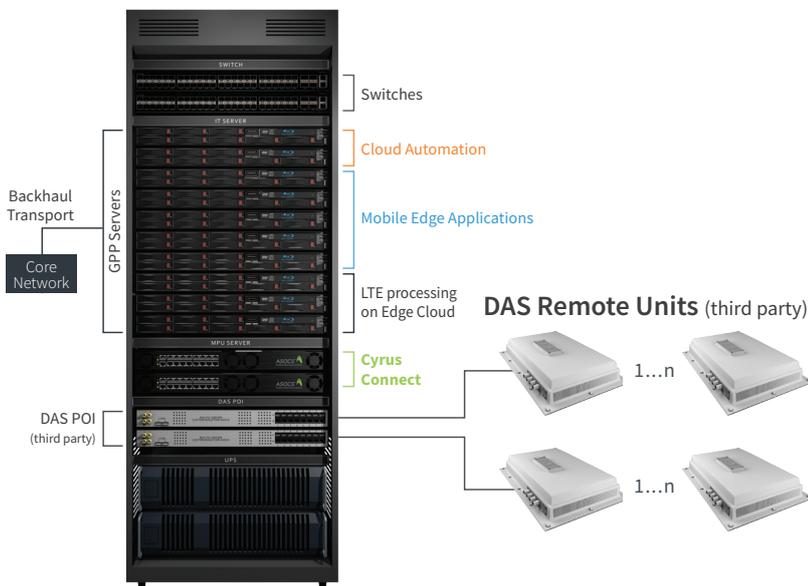
- A private, highly secure, reliable and high-capacity, personalized private LTE network – owned and operated by the tenant, not connected to the carrier network
- Supports all cellular-based IoT applications, including security, video surveillance, smart building sensors: energy, HVAC, lighting
- Cellular access software is installed on a cloud architecture - tenants leverage the private cloud to host additional applications: video analytics, location tracking



**Cyrus: The edge cloud that serves the needs of diverse tenants**

- Corporate offices – Supports BYOD, cellular service from any provider, security, and improved experiences around mobile video conferencing
- Residential – Media consumption is moving to mobile and TV-connected devices; mobile edge clouds replace cable saving tenants money and make it easier to support the trend of residents accessing content from multiple providers on mobile devices; devices such as televisions are not tied to a physical hard-wired connection such as cable
- Retail – Provides rich analytics and insight into shopping habits, mobile device location, point of sale opportunities, all of which keep shoppers in the store longer

**Example: Multi-sector End-to-End Solution**



**Key Takeaways:**

Mobile edge cloud solutions offer building owners and tenants the most options for their broadband needs, while providing the greatest value for each dollar spent on connectivity. The benefit of mobile edge clouds is that they are scalable and easily installed in single- and multi-use facilities, providing far more attractive total cost of ownership over existing solutions. Simply put, mobile edge cloud solutions provide building owners a competitive edge over buildings without this capability.

**TCO for a large commercial building, such as a mixed-use facility with retail stores, offices and residences:**

Assumptions for 3 Carriers deployment:



32 story office building,  
37,500 sq. ft. /floor  
▶ 1.2 million sq. ft. total



Device / 100 sq. ft.  
▶ 4,000 devices per Carrier  
▶ 12,000 devices total



Total Bandwidth demand  
▶ 280 Mbps per Carrier  
▶ 840 Mbps total



Cost per sq. ft.  
▶ \$0.31 per Carrier  
▶ \$0.93 total for 3 carriers



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