



# Broadband Services for MDUs



**Broadband  
Communities**  
**2021 • SUMMIT**



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## Broadband Services for MDU's

The challenges in making in-building wireless work – It goes without saying that MDU residents want ubiquitous and seamless wireless connectivity. How do property owners ensure that connectivity is available and what part do both the providers and owners need to play?

The goal of this session is to help clarify persistent confusion about all these service options and what they really mean to a property owner and their residents.



## The Importance of Wireless Services

- Residents want **seamless** connectivity
- Building owner should have control
- **Speed, security & reliability**
- Competitive advantage + increased valuation
- **Support for Smart Building IoT**

# Cellular 5G vs. 4G

## What's New

- 10X the speed
- Data rates of 10 Gbps
- Less than half the latency
- 200x the device counts using all frequencies

## Implications

- Small cells/ small coverage area
- Shorter coverage range
- Geared for IoT in which faster response time is required
- Worse building penetration than 4G
- IoT security concerns
- Small cells can be used inside

# WiFi6: The “In-Building 5G”

## What's New

- OFDMA – solves interference issues
- Increased device capacity
- Reduces battery usage of devices
- +1 Ghz spectrum in 6 Ghz band
- Multipath TCP
- Hotspot 2.0

## Implications

- New protocol: 92 dedicated device connections at 14 Mbs per AP
- Longer battery for IoT devices
- Wi-Fi available spectrum per building is 10X greater than cellular spectrum available in a large city
- Roaming from Wi-Fi to Cell and back without need for authentication

# Cost Comparison

|            |                  |
|------------|------------------|
| Active DAS | \$ 2.50/ sq. ft. |
|------------|------------------|

|                             |                  |
|-----------------------------|------------------|
| Small Cell – single carrier | \$ 1.00/ sq. ft. |
|-----------------------------|------------------|

|             |                 |
|-------------|-----------------|
| Passive DAS | \$ .75/ sq. ft. |
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| WiFi Calling | \$ .40/ sq. ft. |
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