

## **Telco operators handed boost in quest to connect apartment complexes with 5G Fixed Wireless Access**

A new project has been launched by Broadband Forum to help connect Multi-Dwelling Units (MDUs), such as apartment complexes, with 5G Fixed Wireless Access (FWA) to help reach up to multi-gigabit connectivity speeds.

The “Fixed Wireless Access Extension” project from Broadband Forum’s Wireless Wireline Convergence (WWC) Work Area will focus on reusing the existing property infrastructure cabling to extend FWA connections.

Telco operators can realize greater scalability, shortened deployment times, faster time to revenue, and achieve OpEx and CapEx savings. Apartments can be reached using the existing property infrastructure cabling, such as twisted pair or coaxial cabling, from the attic or basement of the building.

“Mobile operators are investing heavily to acquire spectrum space and base station infrastructure,” said Helge Tiainen, of InCoax Networks, a Broadband Forum member. “They then seek a fast return on investment by turning DSL customers into 5G FWA subscribers. By using the cabling already available in the building, it will save operators’ time and money, and give consumers a better broadband experience.”

“This project will have a huge impact on how telco operators can deploy 5G FWA connections in metropolitan areas,” Mr. Tiainen continued. “Since the deployment of FWA infrastructure has already been initiated, it is fundamental that we solve the MDU reachability challenge faced by the broadband industry today.”

One issue commonly faced when using 5G mmWave technology, is the difficulty sending mmWave signals through walls. Gigabit and multi-gigabit services require operators to use mmWave within the 24 – 100GHz spectrum to reach the service speed criteria. At these high frequencies, signal strength can be attenuated as much as 45dB through each wall resulting in the 5G mmWave in-door coverage being uncertain and, in many cases, not possible.

A further challenge needs to be overcome if FWA modems are installed on the rooftop of an MDU as expensive Ethernet cabling must be laid to each apartment. Today, typically one FWA modem for each subscriber is deployed on the rooftop. In a large MDU this could require more than 100 modems to be deployed, which presents the challenge of finding adequate rooftop space, the required RF separation, and co-site interference issues.

“Broadband Forum is aiming to address and solve these challenges by leveraging the existing in-building infrastructure, such as telephone wiring or coaxial cabling, to extend 5G FWA to each apartment within a hotel block or apartment complex,” said Christele Bouchat, Nokia and Wireless Wireline Convergence Work Area Co-Director at Broadband Forum. “We have launched this project to bring tangible benefits to operators and make the rapid and efficient delivery of multi-gigabit connectivity for residents and building owners a very real possibility.”

For more information about Broadband Forum, visit: <https://www.broadband-forum.org/>.

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#### **About the Broadband Forum**

Broadband Forum is the communications industry’s leading open standards development organization focused on accelerating broadband innovation, standards, and ecosystem development. Our members’ passion – delivering on the promise of broadband by enabling smarter and faster broadband networks and a thriving broadband ecosystem.

Broadband Forum is an open, non-profit industry organization composed of the industry’s leading broadband operators, vendors, thought leaders who are shaping the future of broadband, and observers who closely track our progress. Its work to date has been the foundation for broadband’s global

proliferation and innovation. For example, the Forum's flagship TR-069 CPE WAN Management Protocol has nearly 1 billion installations worldwide.

Broadband Forum's projects span across 5G, Connected Home, Cloud, and Access. Its working groups collaborate to define best practices for global networks, enable new revenue-generating service and content delivery, establish technology migration strategies, and engineer critical device, service & development management tools in the home and business IP networking infrastructure. We develop multi-service broadband packet networking specifications addressing architecture, device and service management, software data models, interoperability and certification in the broadband market.

Our free technical reports and white papers can be found at <https://www.broadband-forum.org/>.

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