

Link Budgets to Street Level: Systems Engineering for Urban Fixed Wireless

Deploying high-capacity wireless broadband in dense urban environments requires more than theoretical RF modeling; it requires a holistic systems approach that accounts for the "chaos" of the real world. This session explores the technical concepts behind a millimeter-wave technology stack originally developed at Starry.

We will move beyond the idealized link budget to discuss the systems engineering challenges of large-scale deployment, including the impact of dynamic environmental variables like rain fade and multipath, and the hardware-software trade-offs necessary for maintaining carrier-grade reliability. The talk will conclude with a perspective on the future of fixed wireless access (FWA) and its role in global connectivity.



About the Speaker: Ryan Lagoy currently works at Verizon (formerly Starry, Inc.) as the Hardware, Systems, and Manufacturing Director, developing and integrating new technology for internet applications. He previously worked at BAE Systems, in the Engineering Leadership Development Program. His interests and experience include systems engineering, RF/Microwave system design, electromagnetic theory and modeling, digital signal processing, and software development.