



Boingo Wireless

Customer

Boingo Wireless

Challenge

Delivering seamless, high-performance connectivity in high-density airport environments where both passengers and critical operations require reliable networks.

Requirements

Converged network solutions that combine airport distributed antenna systems (DAS), Wi-Fi, and private 5G networks to serve diverse connectivity needs across 130+ airports and transportation hubs worldwide.

Solution

Implementation of Ookla's comprehensive tools including Cell Analytics for cellular planning and Ekahau for Wi-Fi design and optimization, enabling data-driven network decisions.

Featured products

Revolutionizing Airport Connectivity: How Boingo Leverages Ookla's Comprehensive Network Intelligence

Airport network connectivity has evolved from a luxury service to critical infrastructure, powering essential operations throughout airport terminals across the world. Boingo Wireless, a global leader in airport distributed antenna systems (DAS), Wi-Fi, and private 5G networks, understands this better than anyone. With a customer portfolio spanning over 130 airports and transportation hubs worldwide, Boingo is transforming the travel experience for both passengers and operations through cutting-edge wireless technologies.

As airports have evolved into smart, hyper-connected hubs, the demand for reliable, high-speed connectivity has skyrocketed. Passengers expect to stream, work, and stay connected during their entire time at an airport, from check-in to takeoff. Additionally, airport operations teams rely on wireless networks to power critical security infrastructure, check-in kiosks, and logistics systems.

“Seamless, high-performance connectivity is now critical infrastructure. By leveraging cutting-edge wireless technologies and comprehensive insights, we empower airports to deliver exceptional passenger experiences and enhanced operational performance.”

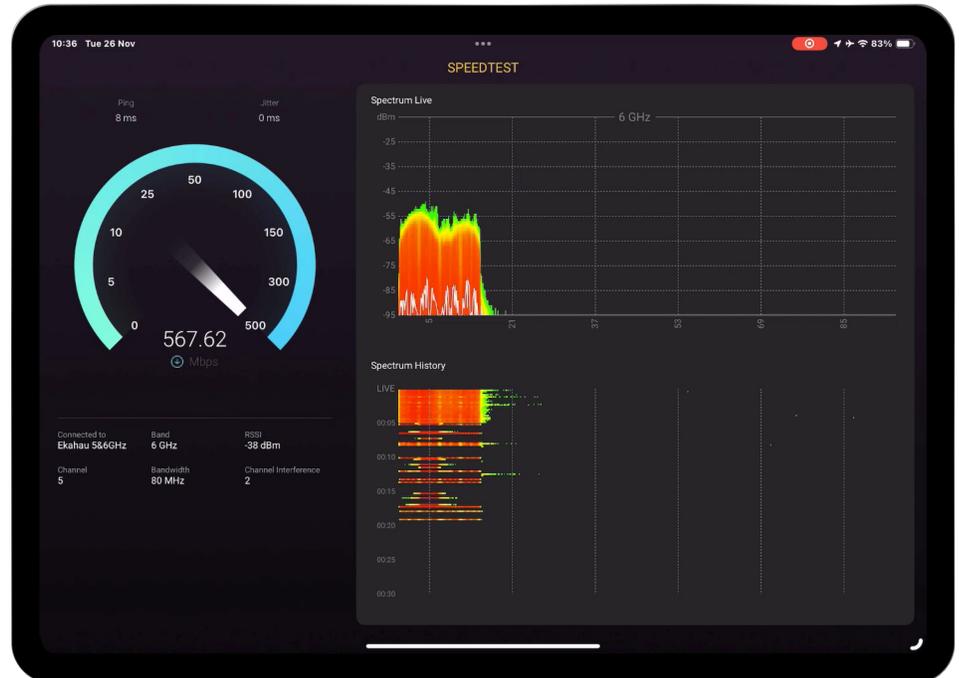
Derek Peterson, Chief Technology Officer at Boingo



Ookla provides comprehensive connectivity insights that help organizations optimize networks and enhance digital experiences. Our multi-source datasets and advanced analytics offer unique, actionable insights for improving network performance and user satisfaction. Boingo harnesses Ookla's powerful tools for their network deployments, specifically **Cell Analytics**® for cellular planning and **Ekahau**® for Wi-Fi design and optimization. These products work together to enable Boingo to make data-driven decisions, efficiently allocate resources, and deliver fast, reliable wireless solutions in complex, high-density airport environments.

“Ookla has been a great partner. We are using Cell Analytics for usage patterns around cellular networks, and we’re also using Ekahau which helps us design, manage and optimize our Wi-Fi networks.”

Mike Finley, Chief Executive Officer at Boingo



Ekahau Sidekick 2 Spectrum Analysis and Integrated Speedtest Performance Testing

Unlocking New Possibilities with 6 GHz Wi-Fi

The introduction of 6 GHz Wi-Fi gives high-density network environments like airports additional channels to support network capacity and efficiency, and Boingo is leading the charge in harnessing the potential of the latest Wi-Fi technology.

Boingo is able to design, deploy, and optimize 6 GHz networks in complex airport settings through Ekahau's Wi-Fi measurement and RF modeling capabilities. According to Peterson, "Ekahau tools support the design and management of Boingo networks, helping us ensure optimal performance and reliability."

Ekahau's tools allow Boingo to develop strategic channel plans that avoid interference and maximize throughput, while providing heatmap visualizations of key performance indicators like signal strength, signal-to-noise ratio, and channel interference.

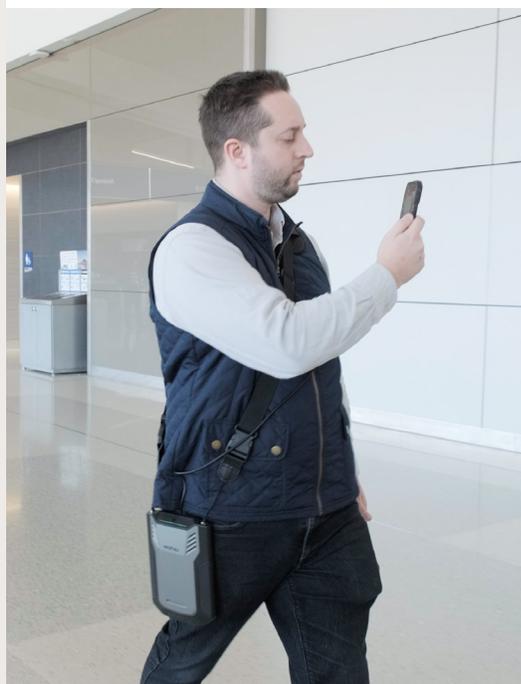
By walking airports with the Ekahau Sidekick 2, a state-of-the-art Wi-Fi diagnostic and measurement device, Boingo engineers can accurately measure wireless networks in challenging, high-density airport environments. The Sidekick 2 provides Boingo engineers with accuracy and reliability in network validation and troubleshooting, with its advanced

features including enterprise-grade tri-band Wi-Fi radios, custom-built 3D antennas, and a built-in spectrum analyzer. This powerful tool allows Boingo to proactively identify and address potential sources of interference, ensuring optimal performance and a seamless user experience for the millions of passengers who rely on Boingo's airport wireless networks.

"The Sidekick 2 helps us measure signal strength, helps us identify interference, and helps us validate the network design. When you have all of those working together, you know you're going to have a great connected experience."

Mike Finley, Chief Executive Officer at Boingo

In recent Wi-Fi deployments, Boingo has observed improvements in network performance, with increased throughput and reduced congestion in high-traffic areas. This translates to smoother experiences for passengers and more reliable connectivity for critical airport systems. With high-performing 6 GHz-capable networks, Boingo is future-proofing airports for next-generation applications.



5G Takes Off in Airports

Increasingly, delivering an optimal user experience is not about choosing between Wi-Fi or 5G, but rather ensuring that both technologies are available and can complement each other to deliver a seamless experience for users. Boingo recognizes this need and is at the forefront of providing a unified, high-performance, converged network solution for airports.

To help ensure optimal 5G network performance and user experiences, Boingo utilizes Ookla's Cell Analytics, a powerful platform that provides comprehensive insights into wireless service quality, RF measurements, data usage, user density, and cell site locations.

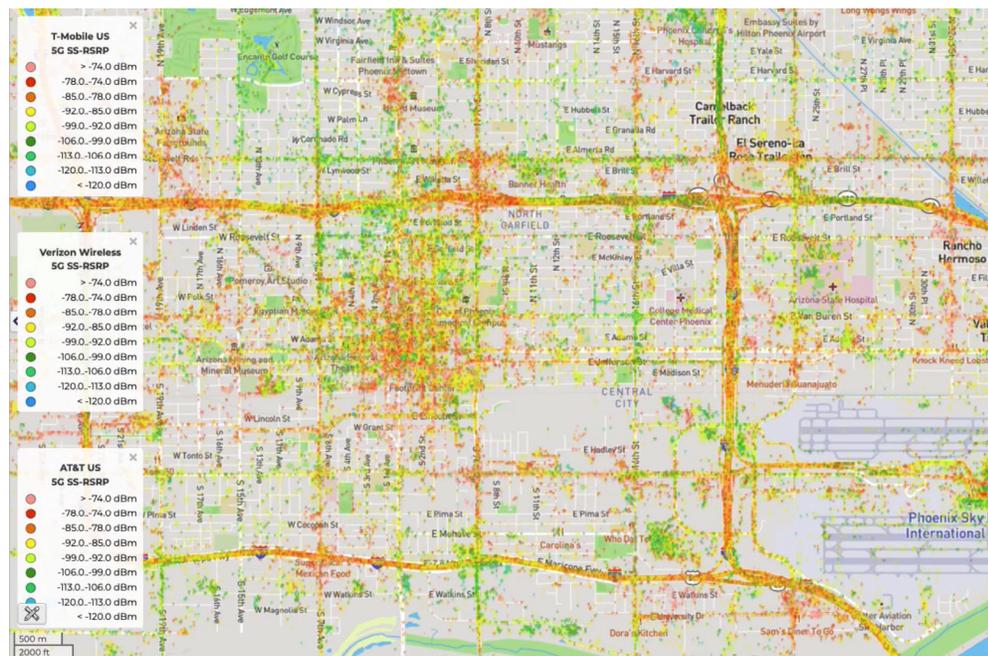
Cell Analytics leverages crowdsourced data on network performance, coverage, and signal measurements from Speedtest®. The platform offers comprehensive network performance visualization, covering both outdoor areas and indoor spaces. It captures performance variations across multiple levels in complex structures such as airports, from ground floors to upper levels. This information empowers Boingo to make data-driven decisions for their 5G network deployments.

“Ookla’s Cell Analytics data supports our 5G deployments. By identifying areas with poor coverage, we can ensure gaps are filled so that our networks deliver strong, reliable and seamless coverage, and can support even the most demanding use cases.”

Derek Peterson, Chief Technology Officer at Boingo

The platform enables Boingo to rapidly assess networks inside individual terminals, allowing for targeted engineering efforts. This granular insight helps evaluate existing network performance, quality, and availability. Cell Analytics also offers historical performance views, validating the impact of infrastructure investments.

With Cell Analytics, Boingo is transforming the airport experience for cellular connectivity, working toward providing seamless service for passengers and enabling advanced applications for network operation teams. Boingo’s 5G networks, informed by Ookla’s comprehensive network intelligence, are raising the bar for cellular networks in high-density airport environments.



Mobile Signal Strength Visualized in Cell Analytics

Excelling in Ookla's Airport Performance Analysis

Boingo's work with Ookla has been instrumental in transforming airport connectivity, enabling them to design, deploy, and optimize world-class wireless networks that are among the top performing wireless networks in the U.S. and globally, according to [Ookla's airport Wi-Fi performance metrics](#). By leveraging Ookla's comprehensive network intelligence, including Ekahau's Wi-Fi tools and Cell Analytics, Boingo has been able to unlock the full potential of cutting-edge technologies like 6 GHz Wi-Fi and 5G, delivering exceptional experiences for passengers and enhanced operational efficiency for airports.

The results speak for themselves. Airports like Phoenix Sky Harbor International Airport (PHX), Austin-Bergstrom International Airport (AUS), and Honolulu's Daniel K. Inouye International Airport (HNL) have all benefited from Boingo's expertise, achieving outstanding connectivity performance that sets them apart. At PHX, for example, mobile speeds have reached an impressive median download speed of 295.94 Mbps, while Wi-Fi download speeds clocked in at 151.28 Mbps.



Conclusion

With Ookla's industry-leading network intelligence tools providing valuable insights, Boingo is well-equipped to meet the challenges of the future head-on.

Derek Peterson explains just how important data is for Boingo to achieve high-performance networks:

“We're a converged network provider, and we believe you need a combination of Wi-Fi, private networks, and 5G to serve all the different connectivity needs inside a venue. Each technology has its purpose. But here's the thing: data is key. Without solid data, you can't make informed decisions or come up with informed solutions to problems. It's that simple. Data drives our ability to understand and solve connectivity challenges effectively.”

As the world of air travel continues to evolve, Boingo, aided by Ookla's comprehensive network intelligence, contributes to the innovations that enhance airport connectivity worldwide.