

# New Wireless Broadband Alliance Report Drives Seamless Wi-Fi and Private 5G Interworking for High-Speed, Low Latency Private Enterprise Networks

*Report outlines technical innovations and standards for converged Wi-Fi and Private 5G Networks, streamlining management, reducing costs, and enhancing user experience in enterprise environments.*

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EINPresswire.com/ -- [The Wireless](#)

[Broadband Alliance \(WBA\)](#), the global

industry body dedicated to driving the seamless and interoperable service experience of Wi-Fi across the global wireless ecosystem, has today announced the release of [Private 5G and Wi-Fi Convergence Report: Phase 2 - Technical Considerations](#).



The convergence and coexistence of Wi-Fi and Private 5G play an important role in shaping the future of wireless networking."

*Tiago Rodrigues, CEO,  
Wireless Broadband Alliance*

This report builds on the [phase 1 report](#) – which highlighted key use cases and the crucial role Wi-Fi infrastructure plays in optimizing 5G performance – to now present advanced architectural strategies and technical solutions for seamless interworking between the two technologies.

Since 2017, WBA has led efforts to demonstrate the benefits of converged licensed and unlicensed wireless technologies, focusing on integrating 5G and Wi-Fi. While

private 5G and Wi-Fi have aligned technically and complement each other, their distinct characteristics make them suitable for different use cases and market needs.

Technological advances like WBA OpenRoaming™ and enhanced Quality of Service (QoS) in Wi-Fi have further bridged performance gaps, allowing for coexistence that reduces operational costs,



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Logo of the Wireless Broadband Alliance

simplifies management, and improves user experience across diverse environments.

This report outlines the next phase of integration, including architectural considerations, providing a comprehensive roadmap for enterprises seeking to leverage both networks to maximize performance, efficiency, and cost savings.

This convergence will allow enterprises to utilize the high-speed, low-latency benefits of 5G alongside the broad coverage and flexibility offered by Wi-Fi, tailored to different use cases and industry demands.

Architectural and technical proposals for convergence

Notable proposals include using RADIUS-based AAA infrastructure for 5G device authentication, enabling network operators to unify identity management and policy enforcement across both Wi-Fi and Private 5G.

This integration allows for a singular policy to be enforced on all sessions from a given device, whether connected via Wi-Fi or 5G, simplifying network management and improving user experience. The report is a comprehensive exploration crafted by experts from leading tech companies including Broadcom, Cisco, Nokia, Aruba (an HPE Company), Boldyn Networks, Intel, and many others within the WBA.

Additional proposals include:

- Wi-Fi Fast Transition Domain to include Private 5G – A standardized approach for bootstrapping keys on Wi-Fi access based on the key material generated from the 5G access



Tiago Rodrigues, CEO of the Wireless Broadband Alliance



Private 5G and Wireless Convergence Report: Phase 2 - Technical Considerations

authentication. This helps in reducing number of messages exchanged during the initial attach. Proposed is a method and technique for leveraging session keys generated in 3GPP access (5G/LTE) and leveraging 802.11r capability of Wi-Fi infrastructure to derive the Fast Roaming (FT) Keys, as the user moves from private 3GPP access to Wi-Fi access. This approach results in a drastic reduction of connection establishment time to Wi-Fi access, upwards of 90%.

- Indication of Identical Services on another Radio Access Technology (RAT) – The network will maintain a mapping of Service Name/Network Identifier in one access, with the corresponding identifiers in the other access. Both the Wi-Fi and Private 5G access networks will have awareness of these service mappings.
- IP Address Preservations and Seamless Mobility – Enabling a multi-access capable piece of user equipment (UE) to attach to both Wi-Fi and Private 5G access networks and have distinct IP address configuration on an access basis. Application-binding to the access is based on the UE policy.

The report explores several other technical solutions, such as Service Functions, which are extensively deployed in most networks providing features such as security, WAN acceleration, and server load balancing.

It also covers how a device connectivity status can be shared across networks for optimizations, and how latency can be improved by moving user plane traffic in Wi-Fi and Private 5G access networks.

Tiago Rodrigues, CEO of the Wireless Broadband Alliance, said: “The convergence and coexistence of Wi-Fi and Private 5G play an important role in shaping the future of wireless networking. It will not only help establish the standards needed to ensure its technical success for operators, network owners, enterprises and users, but provide clear advice on the architectural considerations for such converged implementations.

In many environments, the coexistence of Wi-Fi and Private 5G is essential, and there is significant value in realizing synergies between these two technologies to increase competitiveness and reduce operational costs by the elimination of redundant functions, simplifying management, and greatly improving end-user experiences.”

Developing new convergence standards in 2025

A new phase will begin in 2025, focused on developing new industry standards, including RAT Roaming, Access Traffic Steering (ATSSS), and Quality of Experience (QoE) metrics. This convergence strategy will set new benchmarks for network interoperability, security, and user-centric services, enabling enterprises to harness the strengths of both 5G's speed and reliability and Wi-Fi's coverage and flexibility.

Matt MacPherson, Wireless CTO at Cisco, added: “Wi-Fi meets the demands of most enterprise

customers. However, the convergence of Wi-Fi and Private 5G elevates capabilities by offering policy-based segmentation aligned with business needs. By combining Wi-Fi and Private 5G with a unified policy, enterprises gain control. Cisco is excited to collaborate on this pioneering report, which provides the architectural and technical guidance enterprises need to leverage the combined strengths of both networks.”

Download the “Private 5G and Wi-Fi Convergence Report: Phase 2 - Technical Considerations” for more information on methods for internetworking between these two technologies and realizing the potential of their coexistence. <https://wballiance.com/private-5g-and-wi-fi-convergence-phase-2/>

#### About the Wireless Broadband Alliance

Wireless Broadband Alliance (WBA) is the global organization that connects people with the latest Wi-Fi initiatives. Founded in 2003, the vision of the WBA is to drive seamless, interoperable service experiences via Wi-Fi within the global wireless ecosystem. WBA’s mission is to enable collaboration between service providers, technology companies, cities, regulators and organizations to achieve that vision.

WBA undertakes programs and activities to address business and technical challenges, while exploring opportunities for its member companies. These initiatives encompass standards development, industry guidelines, trials, certification, and advocacy.

Its key programs include NextGen Wi-Fi, OpenRoaming, 5G, IoT, Smart Cities, Testing & Interoperability and Policy & Regulatory Affairs, with Member-led Work Groups dedicated to resolving standards and technical issues to promote end-to-end services and accelerate business opportunities.

Membership in the WBA includes major operators, service providers, enterprises, hardware and software vendors, and other prominent companies that support the ecosystems from around the world. The WBA Board comprises influential organizations such as Airties, AT&T, Boingo Wireless, Boldyn Networks Broadcom, BT, Charter Communications, Cisco Systems, Comcast, HFCL, Intel, Reliance Jio, Telecom Deutschland and Turk Telekom.

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