

# WBA Releases Updated Operator Managed Wi-Fi Reference Architecture to Improve Residential Wi-Fi Experience

*Phase 2 OMWi Framework introduces open-source solutions and industry standards to streamline deployment, improve interoperability, and reduce operator reliance on proprietary systems*

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-- The [Wireless Broadband Alliance \(WBA\)](#), the global industry body

dedicated to improving Wi-Fi standards

and services, has today released an updated [“Operator Managed Wi-Fi \(OMWi\): Reference Architecture and Requirements”](#) technical report. This update includes enhanced technical and operational requirements and introduces open-source, OMWi-compliant implementations from

partners such as the [prpl Foundation](#), and RDK-B (<https://rdkcentral.com/>). It delivers a comprehensive framework for deploying and managing residential Wi-Fi, addressing global operator needs through the integration of key standards and open-source platforms.

The OMWi architecture integrates key industry standards, including Wi-Fi Alliance’s Wi-Fi EasyMesh™, Wi-Fi CERTIFIED Data Elements™, and Broadband Forum’s User Services Platform (USP) Data Models TR-369 and TR-181. These standards collectively ensure that the architecture is scalable and interoperable, guiding operators in engaging

with equipment vendors on shared specifications.

The updated framework concludes Phase 2 of the OMWi program, defining a standardized reference architecture that streamlines Wi-Fi management by unifying data collection, network configuration, and optimization processes across systems, reducing dependence on fragmented, proprietary solutions.



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*Tiago Rodrigues, CEO,  
Wireless Broadband Alliance*

Key industry players such as Airties, Nokia, Deutsche Telekom, prpl Foundation, MaxLinear, CableLabs, LGU+, RDK, and CommScope have actively demonstrated solutions based on the OMWi architecture, contributing to the development of a compliance mechanism.

The OMWi Framework addresses key needs for deploying and managing residential Wi-Fi to enable operators better manage the residential Wi-Fi experience for their customers:

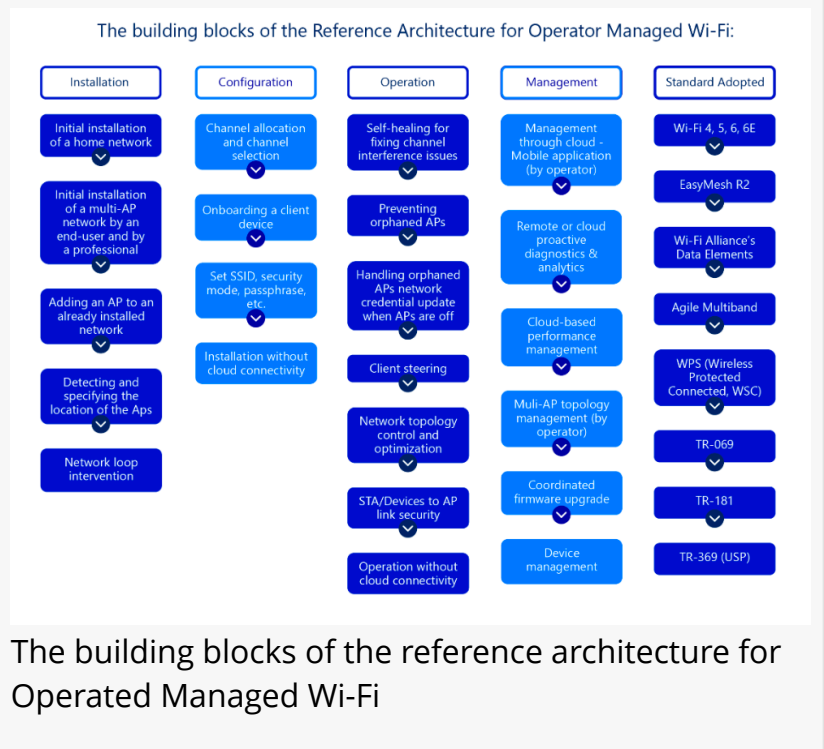
- **Standardized Wi-Fi Management:** With Wi-Fi as the primary means of internet access for most users, and ISPs increasingly handling Wi-Fi support, a standardized management solution is essential for avoiding proprietary systems that limit compatibility across vendors and hardware. The OMWi framework provides a unified approach to Wi-Fi management.

- **Enhanced Architecture and Interoperability:** Release 2 expands the architecture to support multi-AP mesh networks, topology management, and self-healing, making it easier for ISPs to manage complex deployments. It supports interoperability with Wi-Fi standards up to Wi-Fi 7, enabling integration of diverse AP configurations and third-party applications.

- **Streamlined Deployment:** Phase 2 emphasizes smooth deployments with features like automatic configuration, mobile app installation guidance, loop prevention, and optimized channel management, ensuring stability in various settings.



Tiago Rodrigues, CEO of the Wireless Broadband Alliance



- **Advanced Operation and Self-Healing:** New self-healing features, including automated channel management and client steering enhance resilience. The architecture also supports offline operation, enabling local control when cloud connectivity is unavailable.
- **Remote Management and Diagnostics:** Remote diagnostics allow operators to proactively monitor network performance, reducing on-site calls and enhancing user satisfaction while ensuring data protection.
- **Firmware and Security Enhancements:** A coordinated firmware upgrade system supports secure updates across multi-AP networks, with WPA3 security for end-to-end protection.
- **Real-World Implementations and Industry Support:** Phase 2 includes practical examples from the prpl Foundation and RDK-B, aiding faster adoption. Broad industry support highlights the architecture's relevance and alignment with future Wi-Fi needs.

Tiago Rodrigues, CEO of the Wireless Broadband Alliance, said: "The updated OMWi framework is a key step forward in helping operators better manage the residential Wi-Fi experience for their customers, which has become the principal way devices access the internet in the home. Introducing open-source OMWi compliant implementations will drive greater cross industry interoperability for data collection, remote management and mesh formation. The move away from countless proprietary standards will be cost-effective for operators and improve the end-user experience."

Metin Taskin, WBA Board Member and CEO & founder of Airties, added: "Airties is proud to help lead this working group of industry leaders and share our expertise deploying operators' managed Wi-Fi experiences across both RDK and prpl communities. This OMWi 2.0 report specifies the industry standards and open-source solutions to simplify integrations and deployments, enabling ISPs to focus more of their efforts on improving the quality of experience for their broadband customers. Ultimately, we recognize that is the key for operators to improve customer satisfaction, lower churn, reduce expenses, and increase revenues."

Pedro Caldeira dos Santos, Executive Head of Broadband Products and Services, remarked: "Deutsche Telekom is proud to contribute to the OMWi initiative, which marks a transformative step in the evolution of residential Wi-Fi. By integrating open standards and fostering cross-industry collaboration, the OMWi framework empowers operators to deliver a seamless, high-quality Wi-Fi experience to millions of customers worldwide. This effort underscores our commitment to innovation, interoperability, and ensuring that our customers enjoy the best in connectivity solutions."

Dr. Leonard Dauphinee, VP & CTO of Broadband Group at MaxLinear, highlighted: "MaxLinear commends WBA's efforts to coalesce multiple open standards from the broadband industry into a cohesive reference architecture for Operator-Managed Wi-Fi. MaxLinear is helping to

commonize WBA's architecture by developing a fully compliant open-source implementation of OMWi in the prpl Foundation.”

Justin Doucette, Nokia Head of Wi-Fi, added: “Nokia is proud to co-chair the WBA OMWi Reference Architecture working group to fulfill the needs of CSPs as it relates to open standards in the Managed Wi-Fi market. Nokia recently deployed the world’s first production version of Corteca Home Controller with Singtel that supports end-to-end Wi-Fi management and optimization based on OMWi. By implementing open standards, Corteca allows CSPs to work in a multi-vendor environment with faster innovation cycles, to differentiate, improve user experience, increase ARPU, and reduce operating costs.”

Phase 3 to offer certification program for vendors and service providers

In Phase 3, expected to begin in 2025, WBA plans to launch a compliance program that will include an expanded telemetry component and an endorsed testing suite. This suite will offer a self-service test kit or authorized lab testing, providing vendors and service providers with an accessible path to OMWi certification. Certified organizations can assure customers of consistent, reliable functionality across OMWi-compliant networks, solidifying OMWi as an industry standard.

Learn how OMWi provides a comprehensive framework for deploying and managing residential Wi-Fi by downloading “Operator Managed Wi-Fi: Reference Architecture and Requirements” technical report (<https://wballiance.com/omwi-phase-2/>), and visiting the WBA Resources pages of the Wireless Broadband Alliance website (<http://wballiance.com/resources/wba-white-papers>).

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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