O-RAN ALLIANCE Advances Open and AI-Driven RAN Standardization by Setting Priorities for Scaled Deployments and Collaboration towards 6G

- O-RAN ALLIANCE operator members shared deployment experiences aligning on key near-term priorities to further accelerate O-RAN deployments worldwide
- O-RAN ALLIANCE continues laying the foundation for AI adoption in RAN
- O-RAN ALLIANCE is working with 3GPP to coordinate efforts towards a unified vision for 6G
- These directions, and more, were covered in the O-RAN ALLIANCE Summit at MWC Barcelona 2025 – watch session recordings!

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At the recent O-RAN ALLIANCE Summit at MWC Barcelona 2025, the O-RAN ALLIANCE (O-RAN) highlighted substantial progress made throughout 2024 and near-term priorities for its future efforts.

Abdu Mudesir, Chair of the Board of O-RAN ALLIANCE and Group CTO, Deutsche Telekom said: "O-RAN ALLIANCE continues to uphold its core mission, ensuring that openness fosters interoperability and innovation to drive vendor diversity and competition, intelligence integrates AI to enhance network efficiency and management, and virtualization enables flexible, cloud-based RAN deployments for scalability and cost efficiency."

O-RAN ALLIANCE operator members shared deployment experience aligning on key near-term priorities for implementation specifications, which are pivotal for scaling O-RAN deployments worldwide. These include:
- High-performance, interoperable open fronthaul to enable efficient massive MIMO operations
- Advanced AI-driven network management and control through a mature RAN Intelligent Controller (RIC) and a decoupled Service Management and Orchestration (SMO)
- Enhanced security, with an expanded security assurance program and the adoption of Zero Trust Architecture (ZTA) to safeguard O-RAN ecosystems

Intelligence, along with openness and virtualization, has been a sustained key goal of the O-RAN ALLIANCE. AI support was embedded into O-RAN Architecture from the beginning, including support for hierarchical RICs and open interfaces enabling intelligent RAN management and control. Throughout 2024, O-RAN ALLIANCE continued laying the foundation for AI adoption in RAN to address the priorities expressed by operators. Notable advancements include:
- RIC-enabled energy saving and massive MIMO optimization
- RAN Information Exposure (RAIE) framework, enabling third parties to optimize their own innovative applications based on O-RAN network status information
- Enabling AI/ML life cycle and data management with the decoupled SMO and R1 interface

Standardization and government institutions, ATIS (North America), ETSI (Europe), Ministry of Internal Affairs and Communications (Japan) and TTA (Republic of Korea) described their regional approaches to support open RAN. Adopting O-RAN ALLIANCE specifications into national standards ensures world-wide alignment and avoids fragmentation. Funding initiatives support open and intelligent RAN R&D and trials, boosting private sector innovation.

O-RAN supports vertical industries—such as healthcare, manufacturing, transportation, and more—by providing a flexible, intelligent, and open network architecture that can be customized to meet the specific needs of various sectors. Industries' interest is centered on intelligent RAN for custom network behavior. O-RAN-based solutions enabled specialized high-performance uplink connectivity for events like Paris Olympics in 2024. Open principles pave the way for expansion of terrestrial RAN into satellite coverage solutions.

As the telecom industry progresses towards 6G, the O-RAN ALLIANCE is working with 3GPP to coordinate efforts towards a unified vision for 6G, building on 3GPP's architecture evolution. This collaboration aims to ensure a seamless integration of O-RAN ALLIANCE's open and intelligent RAN solutions with the broader 6G ecosystem, ensuring that the specifications and standards are consistent and complementary.

About the O-RAN ALLIANCE Summit at MWC Barcelona 2025

These directions, and more, were covered in the O-RAN ALLIANCE Summit at MWC Barcelona 2025. The Summit provided a comprehensive update on the state of O-RAN, sharing insights on operational experience, regional views on open RAN initiatives, and applications in key industry verticals. The Summit explored the future evolution of 3GPP and O-RAN ALLIANCE architectures towards 6G.

The Summit featured 24 distinguished speakers across six sessions:
- State of O-RAN
- O-RAN ALLIANCE - Enabling Continuous Innovation: AI in the RAN, Security, Efficiency, and More
- Towards Open RAN Deployments at Scale: Applying Operational Experience
- Future Evolution of 3GPP and O-RAN ALLIANCE Architectures for 6G: Pathways and Cooperation
- Regional Views on Open RAN Activity & Outlook
- Applying Open RAN to Industry Verticals

Watch the O-RAN ALLIANCE Summit session recordings to learn more.

About O-RAN ALLIANCE

The O-RAN ALLIANCE is a world-wide community of mobile operators, vendors, and research & academic institutions operating in the Radio Access Network (RAN) industry. As the RAN is an essential part of any mobile network, the O-RAN ALLIANCE's mission is to re-shape the industry towards more intelligent, open, virtualized and fully interoperable mobile networks. The new O-RAN specifications enable a more competitive and vibrant RAN supplier ecosystem with faster innovation to improve user experience. O-RAN based mobile networks at the same time improve the efficiency of RAN deployments as well as operations by mobile operators. To achieve this, the O-RAN ALLIANCE publishes new RAN specifications, releases open software for the RAN, and supports its members in integration and testing of their implementations.
For more information, please visit www.o-ran.org.

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