O-RAN ALLIANCE Announces New Specifications, 3rd Global Plugfest and New Demonstrations of O-RAN Technology

- 48 specification documents released since July 2021
- 3rd O-RAN ALLIANCE Global Plugfest underway with 77 companies at 7 venues
- 18 O-RAN demos presented at MWC Los Angeles 2021 or O-RAN Virtual Exhibition

Bonn/Germany, October 22, 2021 – O-RAN ALLIANCE has released another set of technical specifications for open RAN published since July 2021. Initial versions of nine technical specifications comprise:

- O-RAN Non-Real-Time RAN Intelligent Controller (RIC) Architecture
- Near-Real-Time RIC and E2 Interface: Use Cases and Requirements v1.0
- O-RAN E2 Service Model: RAN Control (E2SM-RC) v1.0
- O-RAN O1 Interface specification for O-CU-UP and O-CU-CP towards the Service Management and Orchestration (SMO) framework
- O-RAN Acceleration Abstraction Layer FEC Profiles
- Infrastructure management services of the O2 interface
- O-Cloud Notification API Specification for Event Consumers
- O-RAN Xhaul Transport Testing Specification
- O-RAN Security Requirements Specifications

Another 39 technical documents bring extensions and new features to the existing specifications. All new specifications will soon be available on our website. To learn more, please read our blog post.

3rd O-RAN ALLIANCE Global Plugfest Underway with 77 companies at 7 venues
O-RAN ALLIANCE’s 3rd Global Plugfest has been in progress since summer 2021. 77 companies perform testing, integration or proofs of concept in 7 venues around the world. Technical work is planned to continue till the end of November 2021, with subsequent presentations of the results in our Plugfest Virtual Showcase.

18 demos of O-RAN technology prepared for MWC Los Angeles 2021 or the O-RAN Virtual Exhibition
Five O-RAN demonstrations are planned to be presented at the MWC Los Angeles 2021.

Parallel Wireless demonstrates its Open RAN, ALL G - 2G, 3G, 4G, and 5G, O-RAN compliant software platform showcasing an open, secure, and intelligent RAN architecture to deliver wireless connectivity, enabling people to be connected whenever, wherever, and however they choose. Visit the demo at South 2505Ex.

VMware Telco Cloud Platform RAN, powered by Dell EMC PowerEdge server and Intel FlexRAN, delivers flexibility to open RAN. The demo showcases the platform’s horizontal design and automation capabilities with 3 simple steps to deploy and programmatically provision the platform with Kubernetes to run Altiostar’s vRAN functions. Visit the demo at Booth 1210.

VMware demonstrates the power of VMware RIC SDKs, enabling its partners to accelerate the development of their xApp/rApp; creating a vibrant application ecosystem. We bring the intelligence and innovation to the RAN faster. Visit the demo at Booth 1210.

Northeastern University showcases how Colosseum can be used to (i) instantiate a fully programmable end-to-end network controlled by O-RAN-compliant near-real-time RIC; (ii) collect
performance datasets from the RAN, and (iii) implement AI-based control of the RAN through xApps and programmable software stacks. Visit the demo at **Booth 1444**.

**Cohere Technologies and VMware** demonstrate how Cohere’s 5G MU-MIMO Spectrum Multiplier xApp running on VMware RIC controls multiple UEs simultaneously in the same time and frequency slots to drastically boost capacity. Visit us to learn how we successfully demonstrated these technologies to a major European operator. Visit the demo at **Booth 1210**.

13 more virtual demos for MWC Los Angeles 2021 have enriched the **O-RAN Virtual Exhibition**:

**MiTAC** demonstrates a private 5G E2E O-RAN solution with O1 Interface based on 3rd Generation Intel® Xeon® Scalable Processors and integrated with an indoor O-RU which supports MIMO and 4T4R via Open Front Haul Interface.

**CIG and partners** demonstrate an open 5G small cell solution. The E2E solution comprises O-CU and O-DU in one O-DU box, with L2/L3 SW, L1 SW and HW from different vendors. Both O-DU and O-RU are designed with COTS components and open interfaces. A fronthaul gateway is also available as part of the open solution.

**IPLOOK** demonstrates a full stack cloud-native and container-based system of end-to-end 4G/5G converged mobile core solution for operators and enterprises.

**STL** demonstrated 5G Small Cell Split 7.2 O-RU (GARUDA) Interworking with ASOCS 5G NR SA Evaluation Kit (Cyrus 2.0), based on O-RAN IoT profiles. The setup included STL O-RU and ASOCS EVK (DU, CU, Core VM and CPE). The scenarios demonstrated PDU session establishment (registration procedure), followed by CUS-plane and M-plane connectivity.

**University of Utah** showcases O-RAN-based, xApp-controlled RAN slicing using the experiment workflows in the POWDER platform. We combine O-RAN with an open-source mobility stack, provide a top-to-bottom RAN application via the RIC, and deploy in a realistic wireless environment. This software is open-source and packaged in POWDER to enable further experimentation.

**IS-Wireless** showcases the next level of software disaggregation in 5G OpenRAN with protocol layers working as independent VNFs on various computing platforms: O-DU VNF/CNF on Edge Cloud (COTS HW), O-CU VNF on Core/Regional Cloud. The company achieved E2E connectivity on 5G with split option 7.2 and option 2.

**Dell Technologies** is working with an open ecosystem of partners to develop validated solutions. Together with Intel, VMware, Mavenir, Dell has developed a cloud-native Open RAN reference architecture available as a technology preview. The reference architecture offers a complete solution deployed on Dell EMC PowerEdge XR11, XR12 and R750 servers.

**Rohde & Schwarz** provides an explanation and demo about the measurement of roundtrip latency on IP layer in O-RAN and legacy networks. The IP layer is the basis for the application layer latency. Real-time and interactive applications are rapidly increasing. These applications need to be supported by 5G and other technologies. A latency comparison over different network types can be achieved.

**VIAVI** demonstrates the power of test case libraries to accelerate validation of disaggregated network performance, interoperability and security according to O-RAN defined test specifications. The TM500 UE Emulator Test Case Libraries leverage unmatched TM500 functional coverage and VIAVI expertise.
Network performance is validated using extensive KPI monitoring and automated log analysis to quickly indicate compliance with the O-RAN test specifications.

**Keysight** and **Auray** partner in Auray OTIC and Security Lab for Certification and Badging of O-RAN solutions by performing Conformance Test, IOT Test and E2E Test services based on corresponding test solutions with a comprehensive mechanism ensuring openness, interoperability and conformity of O-RAN solutions from ecosystem players for both operators and vendor community.

**Keysight Technologies** showcases the Performance Benchmarking Solution (PBM) that directly controls Real UEs across device models and chipsets to automatically conduct tests as defined in TIFG E2E test specifications in both lab and field in a multi-vendor O-RAN environment.

**CMCC** and **Inspur** demonstrate a QoE assurance application deployed on the Near-RT RIC, providing the capabilities of QoE aware and intelligent RAN Control by collecting RAN measurements as well as sending control command (e.g., maximum MCS configuration) through E2 interface. This demo is validated in some industry scenarios.

**Juniper Networks** and **VIAVI Solutions** demonstrate successful transport of Open Fronthaul over a packet-switched network. Juniper’s ACX Series routers, used as CSR/HSR, provide fronthaul transport connectivity. VIAVI’s O-RU and O-DU emulators generate O-RAN compliant Open Fronthaul traffic (CU and M-plane), while VIAVI’s MTS-5800 fronthaul tester verifies the fronthaul transport/sync network.

**About O-RAN ALLIANCE**
The O-RAN ALLIANCE is a world-wide community of more than 300 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 standards will enable a more competitive and vibrant RAN supplier ecosystem with faster innovation to improve user experience. O-RAN based mobile networks will at the same time improve the efficiency of RAN deployments as well as operations by the 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](http://www.o-ran.org).

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