Case Study
Accelerating Open vRAN Deployment with Fujitsu Network Integration

The Customer

Customer: Mobile communications service provider
Location: Tokyo, Japan
Customer Base: Cellular subscribers
The Vision: Greenfield open vRAN network
The Solution: Wireless Integration (WI) Assist service

The Vision

A national mobile service provider is working to realize a revolutionary vision: the world's first end-to-end 5G-native mobile cloud network. The company has brought together an ecosystem of industry leaders, including Fujitsu, to solve the most challenging technical problems and bring this ambitious vision to life.

Validating both the performance and the smooth interoperation of network equipment from multiple vendors is an especially critical challenge for network deployments of this type. Fujitsu's Wireless Integration (WI) Assist solution provides expert testing and validation for the open vRAN network, helping to minimize project risk and verify interoperability.

The Fujitsu Solution

The Fujitsu WI Assist service solution minimizes project risk by providing comprehensive performance and functional testing of equipment supplied by selected vendors.

In the WI Assist model, the customer selects all the technology then also selects an integrator to conduct functional and performance testing and support. This service model assists with the complex integration process, with Fujitsu acting either partially or fully as an integration arm of the customer. Fujitsu also provides program management for the integration effort, and conducts tests either on behalf of or with the customer.

Fujitsu performs 4G and 5G Open Radio Access Network (O-RAN) integration, which involves multivendor functional and performance testing, on the customer's behalf, to ensure all network and regulatory requirements and expectations are met.

Fujitsu offers optional 4G-to-5G traffic migration and single-point-of contact O-RAN solution maintenance.
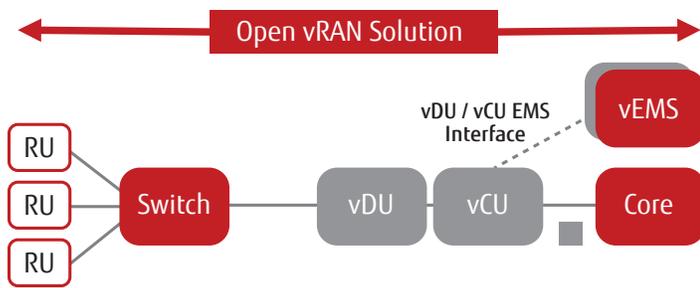
WI Assist Service Scope

Each release of the O-RAN solution is functionally and performance tested to validate all Key Performance Indicators (KPIs).The RU hardware is validated to ensure it complies with 3GPP standards and applicable telecommunications regulations.

Functional and performance testing is performed on each release of the following types of equipment provided to the customer by the selected vendors:

- Remote Unit (RU)
- Distributed Unit (DU)
- Central Unit (CU)

Open vRAN Solution

RU
RU
RU

Switch

vDU

vCU

vDU / vCU EMS Interface

vEMS

Core

The Fujitsu WI Assist solution

WI Assist Deliverables

Fujitsu provides several deliverables during and upon completion of the testing process and resolution of any issues:

- Version control for the full O-RAN solution
- Identification, tracking, and documentation of all issues and their resolution by the vendor(s) responsible
- A comprehensive report summarizing all systems integration activities and results

The Outcome

The customer launched the world's first fully virtualized, software defined mobile network compliant with O-RAN standards in April 2020, after taking less than two years to complete deployment. This rapid project execution was made possible in part due to the integration services offered by Fujitsu.

Why Fujitsu?

Fujitsu has decades of expertise and experience designing, integrating, building, operating and maintaining best-in-class multivendor network solutions, as well as in managing complex multivendor project supply chains. In the wireless space, Fujitsu not only supplies 4G and 5G O-RAN compliant RUs, but also has extensive 4G and 5G Open vRAN systems integration experience, including CU/DU integration based on an O-RAN profile specification, LTE and 5G NA/NSA performance testing, and 5G multivendor network functional and performance testing.

We have a long history of technology leadership in open networking, as well as extensive experience supporting open networks with O-RAN compliant RUs and products that support Open ROADM transport. Fujitsu is also the only vendor to provide a multivendor SDN controller, Virtuora® NC, that can enable real open networking.

Fujitsu is an active contributing member of the O-RAN alliance and the Open RAN Policy Coalition. We also participate in the Open Network Automation platform (ONAP). With our extensive integration capabilities and experience, Fujitsu is well-equipped to ensure that all components comply with the applicable open standards.

Our Track Record of Success in Open RAN Technology

- First O-RAN-compliant Sub6 5G NR RU, deployed at 2019 Rugby World Cup in Tokyo
- First commercially available open LTE Remote Radio Head (RRH) and 5G RU
- Field-proven O-RAN compliant RUs now shipping to carriers
- Japan's first commercial private 5G network (March 2020)
- Leading RAN vendor in Japan
- Founding member of the O-RAN Alliance

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