Multi-Vendor Integration builds reliability from within

Vodafone Germany utilizes its established Multi-Vendor Test Center (MVTC) in Düsseldorf, to ensure reliable end-to-end innovation, performance and cost-efficiency for its network. Throughout many of the activities in the MVTC, Vodafone benefits from Ericsson’s experience in Multi-Vendor Integration and Performance Testing.
“Ericsson combines experience in multi-vendor network performance testing with excellent telecoms know-how.”

Christian Tralle, Head of Reference Test Network and Solutions, Vodafone
Foundation for success

As the leading mobile operator in Germany, Vodafone sought to gain an increased competitive edge in the market. Its Multi-Vendor Test Center (MVTC) plays a crucial role in ensuring network and service quality for subscribers. The center acts as a reference network, providing a staged 2G and 3G environment in which the operator can monitor network performance, ensuring zero-fault products and minimized time-to-market. The center is also able to test new developments and products for the operator before releasing them on the live network. The results of MVTC testing and verification informs decision-making activity that affects the entire company.

Responding to increased complexity in the network, the MVTC was established in 1996 to create a test environment mirroring the behavior of the live network and forming a ‘product platform’ for purchase decisions and trials, as well as terminal verification for products prior to launch. The MVTC is used by more than 250 specialists and accommodates an average of around 40 test activities every day. The range of activity within the center includes R&D, prototyping, engineering, network integration, load and stress, performance, functionality and conformance verification. All system technology vendors are located on the same test floor, with functional reference to Vodafone’s network.

In February 2003, Ericsson was requested to assist in developing Vodafone’s end-to-end network performance and functionality. The MVTC team had suspected that bottlenecks in the testing facility network could be going undetected and so Vodafone immediately initiated a performance improvement project with Ericsson as part of its overall performance-testing program. The project began with a detailed analysis of the performance data captured, in order to find out whether the bottlenecks actually existed.

With the immediate issue dealt with, the project team scrutinized the overall performance testing process. This included establishing Key Performance Indicators, researching and testing various tools that would generate end-to-end traffic in the MVTC and analyzing measurement results. In each instance Ericsson offered the operator access to independent consulting and systems integration expertise.

Multi-vendor expertise

Ericsson’s MVTC team recommended a selection of new tools and strategies for using the test facilities more cost-effectively. One of the tools
put forward was Moniq, developed by Ericsson for the intelligent end-to-end performance evaluation of a multi-vendor mobile network.

As part of the project Ericsson also applied its multi-vendor systems integration expertise, leveraging the experience of the globally active Global Services Delivery Center in Germany in order to develop a series of prototype testing solutions tailored to specific areas within Vodafone. The prototypes, which integrate with existing test platforms, can be applied in trials to assess testing effectiveness.

Although Ericsson has a long history of cooperation with Vodafone in Germany – having supplied much of its 2G and 3G infrastructure, as well as hardware and services for the MVTC – the performance improvement project focused on Ericsson’s ability to offer independent consulting and systems integration expertise.

Dr Michael Lutterbeck, Multi-Vendor Integration Engineer, Ericsson, describes the challenges of the project: “Starting with a vague suspicion of performance problems, we had to develop the whole project structure, to define KPIs and test cases and to find the right tools. Analyzing a multi-vendor and multi-technology environment required a broad knowledge of different areas like the UMTS radio network and the IP world. In addition, we had to meet high customer expectations within a very short time-frame.”

Partner of choice

Christian Tralle, Head of Reference Test Network and Solutions, Vodafone, explains the choice of Ericsson as its consulting partner on this project: “As a consulting partner, Ericsson combines experience in multi-vendor network performance testing with excellent telecoms know-how. Ericsson understands our needs.”

Based on such fast and accurate analysis work Ericsson was contracted by Vodafone for a follow-up assignment to implement the strategies that were proposed, as well as consulting activity to measure general performance and propose tools for practical customer-specific prototyping.
The goal of this prototyping was to cooperate with different departments within Vodafone on possible solutions for effective tailor-made performance measurements. Recommendations were also made on integrating this activity into the existing Vodafone test automation platform.

Tanja Schmidt-Kriechbaum, Project Manager, Ericsson, sums up the success of the activity: “The goal is to support customers with extensive expertise in multi-vendor network performance testing gained over many years, rather than with particular products or set solutions. In this project the strength of Ericsson’s offering is the competence of its people. I am delighted that Vodafone views Ericsson as an ongoing systems integration consulting partner, offering truly independent advice, regardless of the network hardware vendor.”

On-going excellence

A number of additional projects have been developed from the original project due to the excellent operational work and the level of trust Vodafone has developed in Ericsson. Ericsson has also applied its multi-vendor systems integration skills to develop a series of prototype testing solutions tailored to specific areas within Vodafone. The prototypes, which integrate with existing test platforms, can be applied in trials to assess testing effectiveness.

The MVTC has evolved not only to mirror the live network, but has also become a new platform for nodes and other items. Individuals will come to the MVTC to see what nodes will be able to achieve in terms of the wider network. In particular, as part of the Performance Improvement Project, Ericsson’s project team successfully became Vodafone’s consulting partner of choice, not only reacting to network problems, but proactively solving multi-vendor issues for the operator.

Strength and flexibility

Key factors in this success for Vodafone have been a solid base of technical competence, as well as the maintenance of high visibility of activity and honesty between the companies. All of this has been built upon a long-term relationship of trust with Vodafone and Ericsson’s high level of expertise, based locally in Düsseldorf, as well as calling on unmatchable global experience with multi-vendor activity.

Falko Schmidt, Head of Section Test Projects, Vodafone, points out the major benefits delivered to operations at the MVTC: “Flexibility and in-depth knowledge are the key factors in helping my team to simulate every test scenario, at any time, with the highest possible quality and cost-efficiency.”
Highlights

Customer
Vodafone Germany

Challenge
To identify multi-vendor network issues more effectively as well as develop high-quality terminal verification tools and processes.

Ericsson Solution
Multi-Vendor Integration supported by Business Consulting.

Customer Benefits
- Individually developed tools and prototypes
- Reliable multi-vendor test network for product development and verification
- Improved network reliability.

Key Success Factors
- Technical multi-vendor experience and expertise
- Close cooperation with a long-term partner
- Service delivery from within Vodafone’s test center
- Commercial awareness of Vodafone’s strategies.