

# Case Study



ENSURE SUPERIOR SERVICE LEVELS  
THROUGH HIGH-PERFORMANCE TESTING  
AND VALIDATION

## CHALLENGES

- ⊗ Deliver outstanding performance to meet customer satisfaction requirements
- ⊗ Voice remains fundamental to mobile network operators
- ⊗ Provide independent test and validation capabilities to meet required service levels

**A leading mobile network operator in Tunisia benefited from Polystar's independent network validation tools and services. The operator, offering GSM, GPRS and 3G services, has more than five million subscribers and has achieved 99 per cent coverage of the population.**

*“Polystar could offer independent network validation tools and services that would be trusted, and provide the verification required before full migration to the new network core.”*

The core mobile network must deliver outstanding performance in order to meet customer satisfaction requirements. In particular, the ability of the mobile core to function under high levels of voice traffic is something that must be guaranteed. Despite growth in Internet traffic, voice calls remain fundamental to the business of the mobile network operator.

The operator had taken delivery of a new mobile network core. The core network elements, including the MSC and Media Gateway (MGW), were based on a new, high-performance ATCA hardware platform. As part of the contract, network core supplier was required to provide independent verification of network performance and functionality to ensure that it met the required service levels.

While necessary, it was not sufficient to provide lab-based test results or to use their own in-house test solutions.

To meet these requirements, Polystar was selected to provide independent test and validation capabilities for the services in question. Polystar is the premier supplier of Service Assurance, Network Monitoring and Test solutions to leading telecom operators, service providers and network equipment manufacturers around the globe.

As such, Polystar could offer independent network validation tools and services that would be trusted by both the operator and the core supplier, and provide the verification required before full migration to the new network core.

## SOLUTION

- ⊗ Solver, Polystar's high performance load generation, stress and feature test tool
- ⊗ Schedule simulations of RAN for GSM/GPRS, UMTS and LTE networks
- ⊗ Test multiple interfaces in parallel
- ⊗ Measure speech quality

Polystar's expert and experienced team worked on-site in close cooperation with the field staff from the mobile operator and core supplier to design an appropriate test schedule. The schedule was intended to simulate real-life situations as much as possible and this required close liaison between the parties.

*"Solver was delivered with each desired interface (AoSDH, luCSolP and SIP). With Solver, it was possible to simulate the RAN and test each of these interfaces to the core MSC and Media Gateway (MGW) simultaneously."*

The plan created by Polystar's experts included detailed call profiles and success criteria and was agreed by all parties.

Polystar deployed its Solver solution for the test process. Solver is a high-performance load, stress and feature test tool for SIP, PSTN, 2G, 2.5G, 3G and 4G networks.

It provides the ability to simulate the Radio Access Network (RAN) for GSM/GPRS, UMTS and LTE networks, emulating the impact of large numbers of connected mobile subscribers. Solver provided the high-capacity solution required for the load and functional testing.

For the 3G and GSM mobile operator, it was important to test multiple interfaces in parallel. As a result, Solver was delivered with each desired interface (AoSDH, luCSolP and SIP). With Solver, it was possible to simulate the RAN and test each of these interfaces to the core MSC and Media Gateway (MGW) simultaneously.

In addition to testing the capacity of the network core, Solver was also able to measure speech quality using PESQ algorithms, as well as a selected range of individual features. The solution is automated, enabling efficient performance of the agreed tests.

## RESULTS

**With the co-operation between all stakeholders, all of the agreed test scenarios were passed to the satisfaction of the operator, ensuring timely migration of services and launch of the new network core.**

*“The combination of Polystar and Solver helped control costs and ensure resources were deployed effectively”*

By conducting such rigorous tests, the operator is well prepared for the on-going management and evolution of its network, as a clear baseline for performance has been established.

The use of the Solver solution, supported by Polystar’s trusted, independent team enabled service launch on time and on budget. The combination of Polystar and Solver helped control costs, ensure the operator’s resources were deployed effectively, and that the mobile network core provider could reliably demonstrate the performance of its solution.

## ABOUT POLYSTAR

Polystar enables Communications Service Providers to achieve excellence in CEM, Big Data Analytics, Service Assurance, Network Monitoring and High Performance Testing. We help operators to simplify their CEM strategies and provide a seamless customer experience across multiple touch-points. Polystar’s real-time network and customer insights uncover a goldmine of data, which yields indispensable analytics to CSPs. Polystar is recognised as one of the fastest-growing companies in Sweden. Since Polystar’s foundation in Stockholm in 1983, we have experienced continuous and sustainable growth, and evolved to a global presence, serving our customers in over 50 countries.

For more information, please visit [www.polystar.com](http://www.polystar.com)

## BENEFITS

- Independent verification of new network core, including MGW and MSC
- Confidence in new network components and their capabilities
- On-time and on-budget service migration and launch
- More likely to deliver required customer satisfaction and retention levels
- Reliable measurements taken to provide baseline for future maintenance and network evolution