

Benchmarker II takes off into the Polish telecommunications market



Two of six Systemics-PAB drive test cars with the Benchmarker II testing solution installed in the trunk and the vehicle roof box (VRB), which hosts the devices, on the roof.

At a glance

In 2015, for the first time ever, the Polish Office of Electronic Communications (UKE) issued an independent benchmarking campaign to measure the performance of each of the four key mobile network operators in a fair and transparent way. The telecommunications service provider Systemics-PAB – a long-standing partner of SwissQual – won the competitive call for tenders and conducted the nationwide drive tests to analyze voice and data services.

Executive summary

- **Customer:** Systemics-PAB Group commissioned by UKE, the Polish national regulatory body for electronic communications, Warsaw, Poland
- **Task:** National benchmarking campaign
- **Challenge:** Develop a consistent methodology, execute tests and prepare visual reports assessing customer experience
- **Solution/product:** Benchmarker II fleet for countrywide drive tests
- **Key benefits:** Independent results that meet all standard KPIs and deliver comparable and reproducible results

The situation

Mobile phone use in Poland, as everywhere, is booming, and with it the transfer of data via wireless networks. According to UKE, in 2015 alone Poland experienced an increase of 115% in transferred data compared with 2014. For 2016, the leading Polish telecom portal, telepolis.pl, forecasts an increase of 150%. It therefore comes as no surprise that the Polish government aims to ensure a competitive and fair market, make certain that all requirements for public telecommunication networks are met, and actively push established trends as well as provide innovative information and communications services for all.

The framework of rules and recommendations to which telecommunications service licensees must adhere is defined, among others, by government agencies such as the Polish Office of Electronic Communications (UKE). One of the biggest challenges for these regulatory authorities is how to make sure that each mobile operator's performance is measured in an independent, fair and transparent way, and thereby obtain results that are measurable and reproducible.

The task

To verify that services are compliant with the expected quality level and, above all, to give consumers a transparent choice of reliable operators, in 2015, UKE President Magdalena Gaj decided to carry out independent network quality tests – the very first in the history of the telecommunications market in Poland. To analyze and benchmark Poland's four key market players, UKE issued a tender invitation to telecommunications service providers. The long-standing SwissQual partner Systemics-PAB won the project to develop a consistent methodology to execute independent tests to evaluate the quality of networks and customer experience. This required extensive drive tests across the country using the most reliable and cutting-edge measuring equipment: Systemics-PAB relied on Benchmarker II from the independent Swiss supplier SwissQual.

The mobile network testing solution features exclusive measurement and analysis capabilities that Systemics-PAB used to collect a vast amount of data, statistically analyze



For the drive tests, Systemics-PAB relied on Benchmarker II from the independent Swiss supplier SwissQual.

the KPIs and prepare visual reports that meticulously map the results.

Systemics-PAB conducted established, standardized voice and data services tests on all currently available technologies, including GSM, UMTS and LTE. In addition, the Polish provider of advanced telecom testing and measuring services also delivered data on Internet browsing and video streaming via YouTube, two of the most popular mobile data apps. And, unlike competitor products, SwissQual benchmarking systems offer a uniquely advanced video quality measurement that looks at the received data stream and image information at the same time.

In over 450 hours of drive testing, Systemics-PAB covered more than 20 150 km, conducting tests mainly in cities and urban agglomerations with a population of more than 50 000 to reach as many customers as possible. To obtain such a high density of measurements and deliver targets on time as well as to save costs and avoid expensive redrives, a measurement system must be utterly reliable, robust and accurate. With Benchmarker II, Systemics-PAB benchmarked the mobile network services that have a direct impact on user perception, from dropped call rates to voice speech quality to uploading and downloading speeds.

"It was the first time in the history of the Polish telecommunications market that an independent company conducted comprehensive measurements of all mobile operators' network quality. The presented measurements offer consumers information about specific parameters of various network services in a fair manner. This gives customers the opportunity to compare the quality of services offered by the network operators and make conscious

"Rohde & Schwarz mobile network testing, powered by SwissQual, offers the ideal solution, providing a true benchmarking approach for maximum transparency."

Pawel Biskupski, CEO Systemics-PAB



decisions. Besides practical information for users, the measurements reveal Poland's high quality of mobile services compared with other European countries. After the drive tests, we will continue measuring the quality of our mobile network services on trains," says Magdalena Gaj, President, UKE Poland. Systemics-PAB will conduct the measurements on trains by using two portable and smart-phone-based Freerider III benchmarking solutions from SwissQual.

The solution

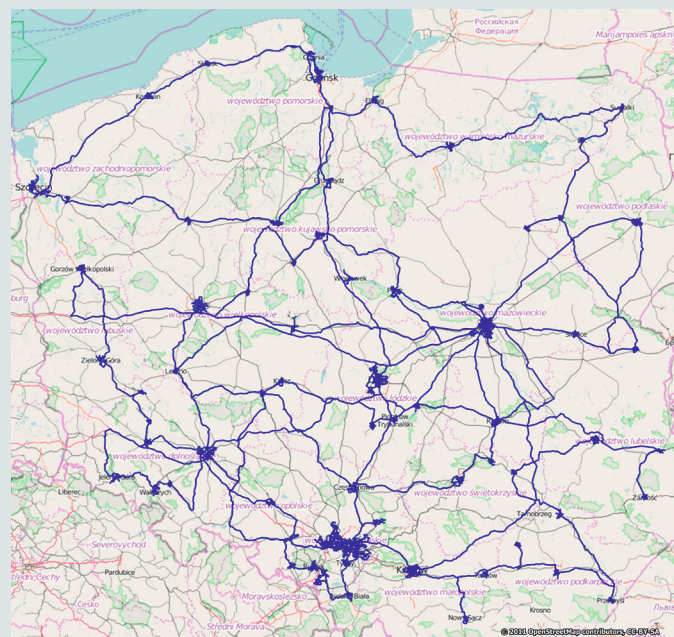
Apart from verifying mobile operators' compliance with the agreed service level agreements (SLA) and the latest industry key performance indicators (KPI), the UKE also requested verification of the actual level of quality of service (QoS) and quality of experience (QoE) as perceived by

the end-user. This requires measurement conditions that are as realistic as possible, using common commercial devices with real mobile operator firmware as test devices. Fulfilling these requirements and also ensuring an accurate and uninterrupted data collection process, Benchmarker II from SwissQual provides extensive functionalities to test voice, data, video and messaging from a real end-user perspective, including complete information about the physical RF environment.

"With the Benchmarker II test unit mounted in cars, we are ideally equipped to carry out independent and highly reliable campaigns that our customers greatly appreciate," says Łukasz Zbiciak, Technical Manager at Systemics-PAB, who supervised the first countrywide benchmarking campaign.

The customer and long-standing partner

Systemics-PAB, founded in 1990, is a leading company in quality of experience benchmarking services. The provider of test and monitoring systems for mobile networks performs vendor-independent network quality measurements and advanced optimization services across mobile network technologies. A full active member of the European Telecommunications Standards Institute (ETSI) and the Groupe Speciale Mobile Association (GSMA), Systemics-PAB helps operators understand issues affecting quality in their networks and works with them on quality improvement initiatives. Headquartered in Poland and actively present in Russia, Germany, Austria, Ireland, Switzerland, Jordan, Canada and Malaysia, SwissQual is one of their key partners when performing independent campaigns with test units mounted in cars for drive tests or carried in a backpack for walk tests.



With a fleet of six Benchmarker II measurement solutions, Systemics-PAB covered more than 20 150 km in less than four weeks.

Service that adds value

- ▮ Worldwide
- ▮ Local and personalized
- ▮ Customized and flexible
- ▮ Uncompromising quality
- ▮ Long-term dependability

About Rohde & Schwarz

The Rohde & Schwarz electronics group offers innovative solutions in the following business fields: test and measurement, broadcast and media, secure communications, cybersecurity, radiomonitoring and radiolocation. Founded more than 80 years ago, the independent company which is headquartered in Munich, Germany, has an extensive sales and service network with locations in more than 70 countries.

Mobile network testing

The company's broad and diverse product portfolio for mobile network testing addresses every test scenario in the network lifecycle – from base station installation to network acceptance and network benchmarking, from optimization and troubleshooting to interference hunting and spectrum analysis, from IP application awareness to QoS and QoE of voice, data, video and app-based services.

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PD 5214.6774.32 | Version 01.02 | December 2016 (ch)
Benchmarker II takes off into the Polish telecommunications market
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