MOBILE NETWORK BENCHMARKING AND TESTING
DRIVE TESTING
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Whether you are a network operator, a service provider, an infrastructure provider or a regulatory agency, benchmarking is becoming increasingly important.

The benefits of benchmarking
For operators, mobile network benchmarking enables insight into the subscribers’ experience and is critical for ensuring coverage and quality of service (QoS). In a world where mobile subscribers have little tolerance for failed/dropped calls and the inability to access data and applications, operators must know how well their QoS and subscribers’ quality of experience (QoE) compares with the competition and changes over time.

Service providers and operators alike need benchmarking measurements to ensure that they meet certain key performance indicators (KPIs) so that they can prove to subscribers and enterprise customers that they deliver the QoS that these customers pay for, and that their QoS is superior.

Infrastructure providers need benchmarking measurements to ensure that they comply with their service level agreements with network operators.

Regulatory agencies need benchmarking to ensure that the licensed operators in their nations deliver the required minimum level of service to consumers.

Impartial benchmarking
Ramboll offers impartial benchmarking using equipment from Ascom, capable of GSM, WCDMA and LTE of up to 4 speech and 4 IP channels in parallel and a scanner. Other network types and/or measurement types can be accommodated if needed.

The measurement channels can be used with different operators (benchmarking) or on the same operator performing different tasks (functional testing).

SpeechQuality Testing is with MOS (POLQA) evaluation, and IP data testing is with throughput measurements.

Drive testing
The vehicle that Ramboll uses for drive tests has been specially developed for this purpose. It is equipped with extra power supply to maintain sufficient and stable power to the test equipment and with fixed antennas in the roof to secure proper RF-conditions. Both the equipment and the antennas are frequently checked, and the entire setup meets the highest international standards.

Ramboll’s approach to drive tests is first of all to agree on the pre-planned driving route and measurement setup. During the drive tests, measurement results are monitored for validity by an electronic engineer with more than 10 years of experience in drive testing/test equipment. This ensures that faulty measurements are avoided. As an option, our engineer may report on any major network incidents detected during drive tests in order to make troubleshooting faster and easier.

The drive test data can be delivered with or without post-processing and/or reporting.

On locations where drive testing is not possible, such as indoor, we use portable equipment to document the actual coverage/ functionality.

Contact
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Technical description

• Dedicated measurement vehicle
• Dedicated drive test engineer
• Fixed roof-mounted antennas
• 4 mobile to mobile speech with MOS
• 4 IP data with throughput
• Frequency scanning
• GSM (2G), WCDMA (3G), LTE (4G)