focus infocom

Shaping the future of 5G, IoT and beyond

Delivering expertise, tools and solutions

Experience and expertise

Wireless connectivity is driving other technological developments and enables a multitude of other business models.

The potential of IoT is already visible, as well as other mobile communication technologies used in machine-to-machine communication. 5G will further extend these possibilities.

Focus Infocom provides you with the expertise, tools, resources and services you need to leverage mobile communication technologies and to make fact-driven strategic decisions

Whether you are taking your first steps in this sector or whether you want to improve and expand on what you have already achieved, we are here to support you with our solutions.

With our service portfolio we can support your business model in many ways:

- Delivery of tools and systems
- Task-specific campaigns
- Complete operation and ongoing operational monitoring, processing of data
- Assistance in communication with suppliers and evaluation of offered solutions

With our commitment to standards and our engagement in standardization bodies, for example the creation of Technical Reports for the 5G and IoT ecosystems, we are at the edge of and shaping technical developments. We can build on this expertise to create high-quality client specific metrics.

Data-based investments

Solid information is the basis for every investment decision. We offer the hardware, software and resources to reliably generate this foundation.

The common basis of all solutions are systems that provide insight into the quality of service from the user's point of view.

To this end, they perform the same activities as real users: making phone calls, surfing the internet, watching videos and using various apps.

Depending on the type of information you need, you can choose from a set of building blocks that together provide a 360° view of the available coverage.
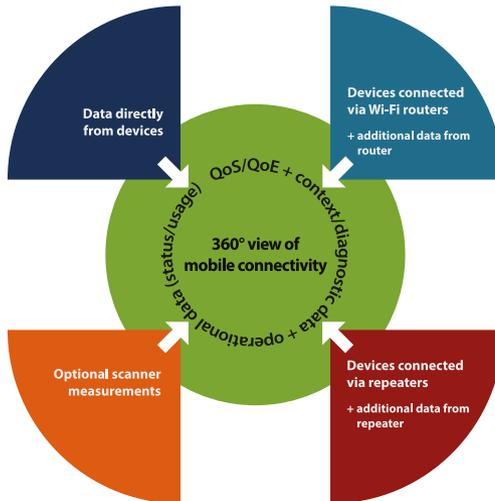
Measurement purposes

User **Service**

conventional context

QoS/QoE

IoT context

User **Machine** **Service**

Load measurement

- Evaluate a system/ service from a user's or device's point of view

- Evaluate the business value of a service

- Provide information about the capacity of a network

- Evaluate the change of individual device QoE under increasing total load

IoT   Metrics

Stationary and mobile use cases in an Internet of Things (IoT) context require quality testing both before and after installation, and diagnostic data in the case of failure.

For typical use cases like Smart Metering, Predictive Maintenance, parking locators etc., decent coverage is vital for the fulfillment of the service, especially in deep-inhouse or other locations with high RF attenuation.

Focus Infocom provides all the tools necessary for these use cases, from data collection to post processing.

High-performance mobile communication technologies enable new classes of services that can be used in both B2C and B2B, such as VR, AR and Mixed Reality applications. For such applications, the right set of QoS KPIs as a measure of their business value can be critical to the success of such services and their use in their respective business models. In our standardization work, we have contributed significantly to the development of useful quality metrics in this area. This expertise can be put to work for you.

Example Tableau™ dashboard showing different KPI.

Measurement types and systems

Permanent measurements require robust solutions that collect data unattend year in year out. They thus generate high information density and statistical validity. Our ACT family of autonomous measurement systems is ideal for this type of measurement and available in different shapes and sizes.

Campaigns For campaigns we offer two types of systems: **XGMA SP** are multi-channel measurement systems made for benchmarking, for example to compare different networks or multi-user scenarios.

ACT systems, on the other hand, are completely autonomous. They reduce the necessary personnel input and help to keep the total cost low.

Crowdsourcing Smartphone only based measurement systems like our **ACT LSP** are ideal for crowdsourcing scenarios. For these use cases it is important that measurements can be performed directly on non-modified user devices.

SAM is sort of an electronic remote control for apps. While SAM performs the same actions as users on their smartphones—sending or receiving a message, uploading or downloading an image, pushing a button etc.—these actions are measured to provide a real end-to-end customer perspective. KPIs can be defined per use case and as needed. SAM can be implemented in almost all of our measurement systems.
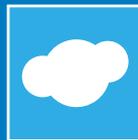
Leveraging data

Post Processing

Post processing makes data meaningful, and various types of reports present this data in an easy to understand and versatile way.

Reports are mainly based on direct measurement data, but can also include diagnostic and status data from secondary sources such as on-board repeaters in trains, Wi-Fi routers and other systems.

Internationally standardized KPIs provide information about the key characteristics of the system or network under test.

In addition to "static" report documents and presentations, we offer dynamic reports based on Tableau™ that allow users to interactively filter data, visualize it geographically, zoom into maps with the required resolution, and navigate the information as needed.

Processing large amounts of data
Focus Infocom's post processing suite FIMAS was designed from the ground up with maximum performance and ease of use in mind.

It is the ideal solution for data intensive benchmark measurements, and the perfect tool for diagnosis, optimization and reporting. It also supports machine learning approaches.

Geo Views for all KPIs give you a detailed, locally resolved overview about each KPI.
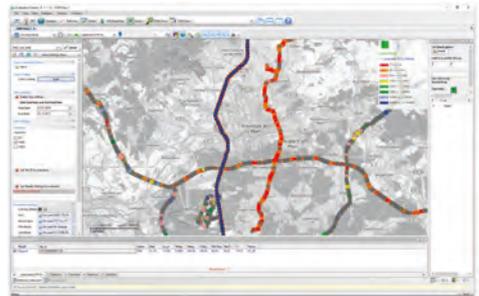
Get in touch!

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All data in this booklet anonymized for confidentiality reasons.

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