

Planning the Way in Global Radio Communications

Espen Davidsen, Director of Telecom and Utilities, Teleplan Globe, tells InterComms about their innovative products



Espen Davidsen
Director of Telecom & Utilities,
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Espen Davidsen is a computer systems professional with over 15 years experience in communication systems and holds a MSc in Distributed Information Systems.

He studied Computing Science before becoming a software developer and later system architect, project manager and senior consultant for communication system deliveries and SCADA solutions for the oil & gas industry.

To be able to spend more time focusing on communication systems Espen joined Teleplan Globe in 2014.

Q: Teleplan Globe is part of Teleplan, established in 1959, you work through many industries from Defence to Utilities, can we talk about the Telecommunications Division: how it was established, the geographic areas that you cover and industries that you serve?

A: The Telecommunications Division, together with the Defence Division, are the fundamental pillars in Teleplan Globe's history going back to the very start. From planning and commissioning large landline projects worldwide in the 60's through to the 80's and then moving on to cellular radio planning from the mid 90's it has been a natural step for us to continue into new areas where large scale communication solutions are important.

Both telecom operators and utilities are now facing new

challenges related to automatic reading of smart meters and this requires cost effective nationwide solutions. Our customers are using our products and expertise to reduce the complexity in planning communication solutions across technologies covering large areas and large numbers of meters.

Teleplan Globe serves our customers globally, directly or via our partner network.

Q: You have two established families of products, ASTRIX and CARMEN, if we could discuss ASTRIX first, your radio planning system. ASTRIX, would I be correct in saying, looks to help all service providers at different stages of service deployment from basic 2G through to 4G, so it's an effective tool to grow with, as well as handle existing issues?

A: You are right, ASTRIX is a system for radio planning used by telecom operators and radio planning consultants to plan, analyse and optimize cellular networks. Based on a





- ▶ general radio core framework, and a number of specific technology modules we support all of the most used technologies and can calculate detailed combined coverage plots across technologies and frequencies.

ASTRIX is also being used for planning critical communication infrastructure such as the Norwegian Public Safety Network based on TETRA. Lately we have worked on special application of ASTRIX for maritime networks, and developed and verified specialized propagation models for maritime and near-shore environments.

The new ASTRIX Cloud Solution makes the power of ASTRIX available also to smaller organizations not ready for installing and maintaining a large enterprise solution on-premise.

Q: If we could move on to CARMEN, looking at a very cutting edge tool, that can be used to plan for IoT and data collection devices, how flexible is CARMEN and how do you see industry using it; do you have any examples?

A: CARMEN is one of very few solutions in the market that is designed especially to help the smart meter vendors and/or the DSO's to plan an optimal communication infrastructure for their smart metering projects. As I've already mentioned, Teleplan Globe has a long history, and broad experience of development and delivery of tools to plan communication technology, leveraging the most advanced GIS technology. It was based on this experience that we developed CARMEN.

Although CARMEN initially was developed with the utility market in mind, we see that the solution can also be easily adapted to include new market trends such as IoT and other types of data communication technology and communication devices.

In our opinion CARMEN is a very flexible solution. The solution provides basic coverage and performance analysis that ensures effective planning and documentation in the planning phase. Based on available data, the users are able to calculate the optimal localization of the communications equipment, which minimizes the cost related to the installation of it. The users are able to prepare procedures and to provide guidelines for the installation of the infrastructure. An example is that one can provide installation instructions in advance. Instructions which describe the optimal placement of the antenna, or the optimal choice of the correct antenna type. The user

interface is modern and intuitive and provides the user with state of the art tools for planning and analysis.

As I've stated earlier, CARMEN can be used by a set of market players that are responsible for planning the communication infrastructure. CARMEN is currently being used to plan the communication for more than 2 million of in total approximately 2.7 million smart meters in Norway. Our customers range from typical smart meter vendors that are responsible for planning the communication for their meters in their client projects, to vendors that specialize in delivery of the communication systems.

Q: With technology advancing in all the sectors you work in, what are the main problems facing these industries? And how is Teleplan Globe working to fix these and keep your clients ahead?

A: IT will become more business related, thus more crucial to commercial players. More and more units will in the future communicate with each other and/or with other locations. Our experience is that the main challenges our customers are facing is to have full control over the quality of how these units communicate. How the communication infrastructure best can be planned, from a quality perspective, but also from an economical perspective, are frequently asked questions that we receive.

A lot of organizations are providing infrastructure of great importance to the public and have therefore a greater responsibility to deliver quality to their users. CARMEN was initially developed to plan radio mesh communication technology, as this is the key communication technology used in the Norwegian utility market. But moving ahead to other markets will mean that we meet other requirements. Other types of communication technologies, such as PLC, is also of great importance to our customers. We have therefore, in cooperation with leading vendors, started the work to implement functionality for other communication technologies into CARMEN as well.

As you see, we like to work closely with our customers to quickly solve both the problems of today and the problems of tomorrow.

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