

CUSTOMER PROFILE: E-PLUS GROUP, GERMANY

With over 18,000,000 customers, E-Plus Mobilfunk GmbH & Co. KG (E-Plus Group) is Germany's third largest mobile telecommunications network operator. Headquartered in Düsseldorf, the company has been the fastest and most profitable growing provider in the German mobile telecommunications market since 2006. With annual revenues of €3 billion, or approximately US\$4,284,000,000, E-Plus Group employs 2,500 people in Germany.

THE CHALLENGE

As a basis for the company's radio network planning, E-Plus Group was using a digital terrain model (DTM) based on individual maps of the German federal states, each more than 20 years old, and each with very different vertical accuracies. This resulted in miscalculations and errors – "steps" or walls – in the company's elevation models. "You can imagine what happens to radio waves if they hit such artificial, and wrong, barriers," said Senior Expert Frank Schwedler, Geographic Information Systems (GIS) & Geo Data Group at E-Plus Group.

"We needed a more precise model of the terrain without anomalies to help us optimize our investments and ultimately to gain the highest customer satisfaction," he said. "We calculate how many customers we cover and the number of radio cells needed based on our DTM. Models based on bad data give us unrealistic results, and we might build too few base stations or too many."

"The superior level of detail, the more precise and more homogeneous dataset, and the ability to make better propagation models is easily worth our investment."

Frank Schwedler, Senior Expert, Planning and Solutions GIS and Geo Data Group, E-Plus Group

SUMMARY

CHALLENGE

With over 18,000,000 customers, E-Plus Mobilfunk GmbH & Co. KG (E-Plus Group) is Germany's third largest mobile telecommunications network operator. As a basis for the company's radio network planning, the company needed a more precise digital terrain model of the terrain.

SOLUTION

E-Plus Group now uses NEXTMap® products, including DTMs, plus a 30-kilometer buffer of the surrounding countries.

RESULTS

E-Plus Group chose Intermap based primarily on the cost/performance ratio. With better radio propagation models, the company can make better investment decisions leading to increased customer satisfaction.

THE SOLUTION

A new requirement analysis by Schwedler revealed that to gain optimum results in its radio network planning, E-Plus Group needed a DTM with vegetation and buildings removed. Schwedler's team researched several digital mapping companies, discovered Intermap Technologies®, and asked for a presentation. "We compared Intermap's data to our old resources and saw a much more precise option with many more details and anomalies are no longer present, he said."

After running successful quality checks in-house and externally with the University of Stuttgart, E-Plus Group purchased digital elevation models created by the Intermap's proprietary interferometric synthetic aperture radar (IFSAR) technology. The company now uses NEXTMap® products, including DTMs, plus a 30-kilometer buffer of surrounding countries.

Schwedler noted E-Plus Group previously bought datasets of a single country because there are differences between scanner technologies, which cause inaccuracies between countries. "There is no need to adjust the datasets in the border regions when you have NEXTMap," he said, "because you get a homogenous dataset across borders. This was another crucial factor in our decision to purchase from Intermap."

IMPLEMENTING THE SOLUTION

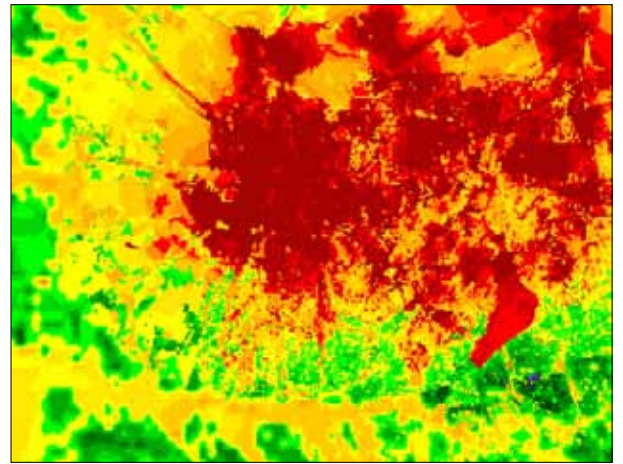
E-Plus Group began using the Intermap dataset within its radio propagation software in June 2009. The company has since made several additional quality checks, "all with excellent results," according to Schwedler.

"In the delivery phase, Intermap answered all of our questions," he said. "Every time we needed additional datasets for our testing we got them and any initial problems have been solved to our complete satisfaction. It's a pleasure to work with the people from Intermap."

THE RESULTS

E-Plus Group chose Intermap based primarily on the cost/performance ratio. "The superior level of detail, the more precise and more homogeneous dataset, and the ability to make better propagation models is easily worth our investment," Schwedler said.

With better radio propagation models, the company can make better investment decisions leading to increased customer satisfaction. "From the initial testing, the improvements were quite visible and impressive to E-Plus Group's management and key to their buying decision," he said. "I have already recommended Intermap to many of our contacts and other companies and in the telecommunications industry."



A screenshot of E-Plus' planning and optimization tool showing a field strength prediction with the areas in red being well-supported (good coverage and signal strength).

THE INTERMAP ADVANTAGE

ACCURACY

"We compared Intermap's data to our old resources and saw a much more precise option with many more details and anomalies are no longer present."

AFFORDABILITY

"The superior level of detail, the more precise and more homogeneous dataset, and the ability to make better propagation models is easily worth our investment."

AVAILABILITY

"In the delivery phase, Intermap answered all of our questions. Every time we needed additional datasets for our testing we got them and any initial problems have been solved to our complete satisfaction."

USABILITY

The company has since made several additional quality checks, "all with excellent results."



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