

Infrastructure Modeling

Autodesk® Topobase™

Autodesk MapGuide®

AutoCAD® Raster Design

Customer Success Story



Autodesk's high-performance software and competent project management were key to the successful development and implementation of the new network information system NIS 2.0 at Kabel BW.

"With Autodesk and FNT we have found two business partners who fit the bill. They are flexible and financially sound, and they were always prepared to cater to our requirements, even if these deviated from the norm."

Ulrich Hoffmann

Head of Network Development and Project Manager for NIS 2.0 at Kabel BW

Kabel Baden-Württemberg GmbH & Co. KG

Value-added network information

Autodesk® Topobase™ and Command increase efficiency at Kabel BW.

The Project

A modern network information system must support the entire range of network operator processes– from planning to construction and the documentation of inventory to quick and efficient directory services. The system in use at Kabel BW – in full, Kabel Baden-Württemberg GmbH & Co. KG (www.kabelbw.de) – no longer met these requirements.

Following a project tender, the company decided in September 2008 to opt for Autodesk®Topobase™ and FNT's Command. The scope of supply of the two software packages is perfectly balanced: Autodesk Topobase models the location and status of the networks and their components, while Command is used to manage the entire network inventory. A key consideration was achieving the greatest possible data continuity – meaning that ideally the relevant data for any work process should be available at the press of a button, so to speak, without any redundant data storage.

The entire project was completed in some twelve months, with the new network information system in production since May 2010. Autodesk Consulting acted as prime contractor and coordinated the other software suppliers and service providers as well as the Kabel BW departments involved. The first positive effects are on the horizon; they range from a noticeable improvement in network planning processes and in information services to precise valuation of assets.

The Business Challenge

Kabel BW, as the Heidelberg-based Kabel Baden-Württemberg GmbH & Co. KG is known, has approximately 2.3 million customers and ranks among the largest cable network operators both in Germany and in Europe. Every second household in the German federal state of Baden-Württemberg is a customer. The company supplies fast Internet with speeds of up to 100 Mbit/s, telephone and TV (triple play). Furthermore, Kabel BW customers can receive up to 400 analogue and digital TV stations (including HDTV) as well as 150 radio channels.

The glass fibre network currently comprises around 72,000 km of coaxial and around 10,000 km of glass fibre cable; it includes redundancy and is therefore extremely reliable. Twenty network centres serve 3.6 million households. 90% of the lines belong to Kabel BW, while only 10% of the lines are rented. Thus Kabel BW is able to guarantee very high stability and fast data transmission rates even in rural areas.

A total of nine of the company's departments, with functions ranging from the planning of the different networks and network operation to documentation, project management and IT, contributed and submitted requirements on a company-wide documentation and information system named "NIS 2.0".

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"NIS 2.0 offers us continuous, high quality documentation. Thanks to the detailed information we will not only be able to troubleshoot more quickly, but prevent network faults from occurring in the first place."

Ulrich Hoffmann

Head of Network Development and Project Manager for NIS 2.0 at Kabel BW

Kabel BW
Einfach clever.

The Solution

A geographic information system was required with the prime function of locating components of the network – but this alone was not sufficient. The desired functionality of NIS 2.0, Kabel BW's network information system, included its supplying information on equipment in installations rooms and the ability to capture highly detailed technical data.

Autodesk® and FNT-GmbH from Ellwangen near Stuttgart therefore collaborated to offer a joint solution based on standard software and giving Kabel BW the best of two worlds: on the one hand, the Autodesk Topobase geospatial data management technology, Autodesk Topobase Web – including Autodesk MapGuide as a planning and information system – plus AutoCAD Raster Design for processing the scanned data, and on the other hand FNT's Command software suite for managing the network inventories.

A new systems interface was implemented to facilitate a smooth exchange of data between the two systems. This interface was the only software that had to be developed from scratch – entirely in keeping with Kabel BW's guidelines. Project manager Ulrich Hoffmann explains: "We didn't want to make ourselves dependent on customized programming. Therefore we looked for solutions which could be adapted to our requirements solely through configuration. Moreover, the technical tasks should be kept strictly apart: redundant data storage is an absolute 'no go.'" Autodesk and FNT fulfilled these criteria as well as all further requirements: the total package is web-based; the software companies are flexible, financially sound partners who are also willing to fulfil non-standard demands; and the respective contacts are in the vicinity of the customer. The role of prime contractor was carried out by Autodesk Consulting, whose team had to accommodate the needs of many parties:

- The nine corporate divisions at Kabel BW who would be using the system
- The development and project departments on Autodesk Consulting and at FNT, which use different processes and approaches
- An external IT service provider who is currently hosting the NIS
- Suppliers of other software solutions that had to be integrated, such as an error management system and a central address service

The migration of the inventory data began six months after project start. Approximately 1.5m conduit nodes and 160,000 conduit segments were migrated in the coax division. Then the old system was switched off and staff began to use NIS 2.0.

During this pilot phase performance was optimized, processes were improved and errors were corrected. Since the new system is considerably more comprehensive than the old, a vast amount of data has to be re-entered initially. This applies both to technical data and to plans. "We have actually scanned in most of the paper plans, but in order to use them properly, we have to create GIS objects in Autodesk Topobase and inventory in FNT Command," explains Ulrich Hoffmann. "We can use the raster data as a template, but automatic vectorisation is not possible, since we use the opportunity to check the factual accuracy of every plan. This takes time, but pays off in the end."

The Result

Kabel BW staff are no longer confronted by the dilemma of whether to work with Autodesk Topobase or with FNT, as NIS 2.0 presents a unified interface. The workflow between the two systems is perfect: You can start with a geographical location, such as a conduit node – therefore starting with Autodesk Topobase – and have the technical data on a component of the cable infrastructure, e.g. a house connection, displayed. Or you begin with the information on an infrastructural element – i.e. in Command – and get to the exact point of installation with a single click. The first improvements are slowly showing, but Ulrich Hoffmann is convinced that efficiency at Kabel BW will improve noticeably in the coming months. "NIS 2.0 is helping with all our processes. From planning to implementation and on to documentation – we are already seeing distinct improvements. Above all, we are getting continuous and high-quality network documentation." Such documentation helps to locate and address network problems more easily. "Third parties can view detailed information about the network online, without the red tape. Thus you know from the beginning where our cables are located, and can get your excavator in the right spot." Ultimately, financial controlling will also benefit from the new system: "We can evaluate our assets more easily and more accurately, precisely because everything is available in a single database."

Learn More

To find out more about the time- and money-saving benefits of Autodesk Topobase and other Autodesk applications, visit us at www.autodesk.de/topobase.

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