

success stories



Areva T&D Systems implements a uniform engineering tool

"The exchange between the locations in different countries has become distinctly simpler and more efficient. Thanks to its ease of operation, our users have quickly become used to the new tool."

Olivier Hapetian, Electrical CAD Control Manager at Areva T&D Systems

Areva T&D Systems develops solutions for transmitting current from the power plant to the end user. The company is a 100% subsidiary of the Areva group with headquarters in Paris. With its 68 industrial locations and a wide network covering more than 100 countries, Areva belongs to the global market leaders for power transmission and distribution.

The company's 25,000 staff members concentrate on two lines of business: the development and control of increasingly complex power supply systems and the setup and operation of high and medium voltage installations. The engineers need a complete and precise technical documentation to design such electrical systems. For example the cabling, the cabinets and the control consoles must be given in detail.

Initial situation

Up to now, each department had its own solutions for creating electrical schematics and technical documents. The French branch office for example had internally developed a CAD tool that was not adopted by any location in Germany, Great Britain or Switzerland. Moreover the design of some tools had been developed decades ago. This lack of uniformity impeded the communication between the countries.

Several solutions – particularly the system used at the French locations – were moreover no longer able to meet the demands, a fact that reduced the quality of the technical documentation. To eliminate sources of error, Areva T&D

decided to automate its engineering processes and to provide the different locations with a common multiuser tool.

Solution

Before standardizing the work processes and CAD tools, the engineers thoroughly analyzed all requirements of the different Areva T&D units. The goal was to determine which software product designed for electrical engineering best meets the demands. A study group determined the functions the new software package was to include.

Four engineering tools were the final contestants. "In the end we decided in favor of the Engineering Base solution from Aucotec", reports Olivier Hapetian, Electrical CAD Control Manager at Areva T&D Systems. "The current version uses Microsoft Office Visio 2007. Moreover Engineering Base contains a quality management tool enabling us to create an error-free documentation." It took just a few months of development time to adapt the software to the needs of Areva T&D Systems. Already during implementation, the company got a number of licenses so that some selected staff members could familiarize themselves with the program. These users first of all created a database with symbols, catalogs and schematics. Later on they trained their colleagues at the different locations. The new system was readily accepted, reports Hapetian: "Our staff members are familiar with the Office environment. This has simplified the introduction of the program."

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Benefits

Engineering Base offers unique editing options, for example it can design the model of an electrical installation using just the basic data – it is no longer necessary to generate a draft in advance. Moreover different objects can be associated alphanumerically in Engineering Base. Dieter Gellrich, sales manager at Aucotec, presents another advantage: "Many electrical engineering objects can be edited quickly and simply as in an Excel document using worksheets. The point is: The objects are immediately updated."

The current Engineering Base version uses Microsoft Office Visio 2007 as graphic editor for visualization. It takes the technicians only a few steps to create complex schematics of components, circuits or cable diagrams. "Office Visio is designed for creating hierarchical graphics and diagrams using flexible connections and shapes. Thus it is ideally suited for use in electrical engineering", says Gellrich.

The operating steps are carried out online and in real time. Moreover it is possible to automate changes and complex processes. Programming with Microsoft Visual Basic for Applications or Microsoft .NET Framework can be done via an integrated application program interface (API).

Engineering Base has already considerably simplified the cooperation of 130 users. "A project realized in France can now be accompanied by other locations", Hapetian explains: "The exchange between different countries is now distinctly easier and more efficient, projects run more smoothly."

Thanks to its ease of operation, the users have quickly become used to the new tool. Another advantage for Areva T&D Systems: "The flexibility of the tool makes it easier for us to offer our customers custom-made solutions", thus Hapetian.

