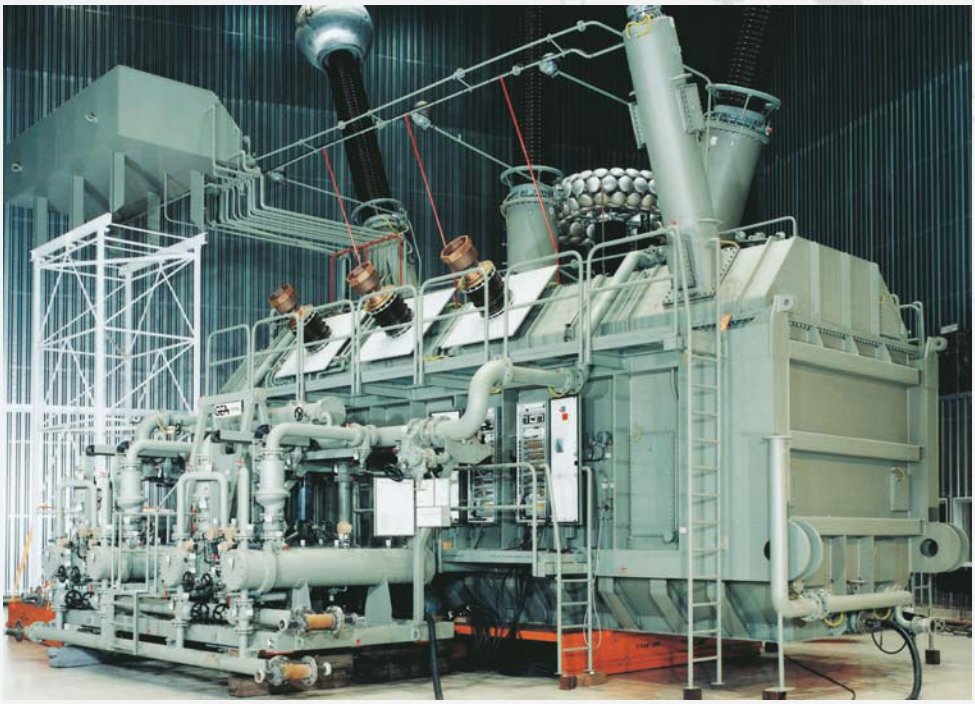
RUPLAN

BRANCH SOLUTION ELECTRIC UTILITIES / MUNICIPAL UTILITIES

Easily Accessible Quality-Assured Electrical Documentation

AUCOTEC

The Situation



Electricity is the indispensable basis of present-day economy. Its 100% availability is crucial no only for industrial enterprises but also for administrations, offices and ultimately private households as well.
Plants for generating and distributing electric power are therefore subject to special quality demands. This applies not only to the plants themselves but also to their documentation. Without high-quality, always up-to-date documentation it is impossible to safely and quickly maintain, service or reconstruct the plants. The handling of technical systems for energy generation and distribution is characterized by special features: The facilities to be constructed have a long life expectancy, the necessary rebuilding or extensions therefore are often not undertaken by the original plant construction company. A uniform and standardized plant documentation is thus the essential prerequisite for saving time and money spent for such measures. Only in this way is it possible to safeguard the continued use of older data stocks, necessary in view of the longevity of the plants. The quality of the plant documentation is also the decisive factor when it comes to reliably fulfil the maintenance obligations with optimized personnel placement.
The quality and reliability of the electrical documentation thus fundamentally influence the construction and maintenance costs. This aspect should be the prime selection criterion when selecting a CAE system. For this very reason the electrical CAE systems that support both the plant construction company and the user in creating and maintaining the documentation are the ones that take hold.

For 10 years meanwhile, with the RUPLAN EVU module a branch standard for electrical documentation has established itself that convinces by the utmost in quality, standardized documentation and most notably by the possibility to check the quality of the documentation.
Starting from the previously heterogeneous requirements of the single power supply companies, a branch research group formed by power companies, plant construction and engineering companies has together with AUCOTEC worked out this standard, which is continuously developed and supplemented by specifications concerning novel technologies.

For the companies that have already consented to use this standard, this has paid off economically. The maintenance and servicing costs could be reduced, due to automatic checks the documentation acceptance is restricted to a minimum, the circuit books are always complete and on a qualitatively supreme level.

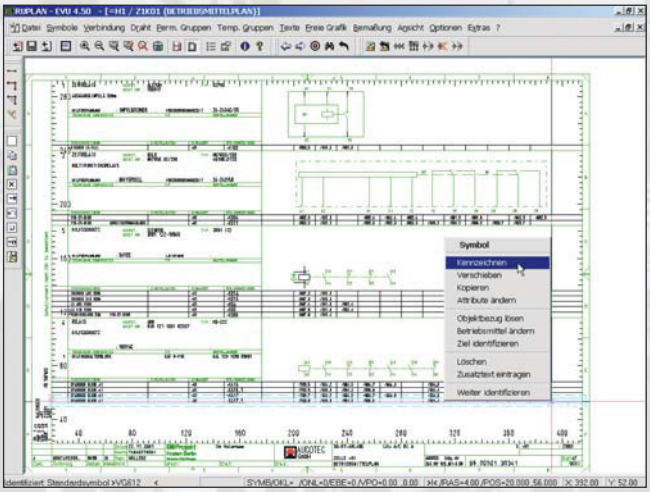
The solution:

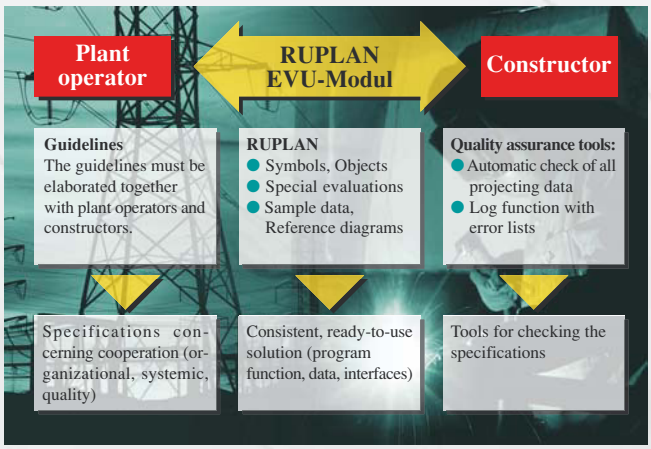
Like all branch solutions based on RUPLAN, this package consists of the three elements projecting guidelines, projecting solution and quality assurance tools.

Projecting guideline:
The projecting guidelines are the quality standards elaborated by the branch Power Supply research group concerning the labelling systematics, the standards and regulations, the specific documents with their special symbols and the representation of technical issues in the circuit books. Moreover the guidelines describe the method of operation that is to be used to obtain a branch-wide uniform documentation and error-free evaluation results. All innovations and extensions concerning these guidelines are combined in this branch research group, which consists of operating bodies, subcontractors and service providers; they are the basis for continuous further development. AUCOTEC implements the results and develops new releases of the branch solution at regular intervals.

- Standardized circuit book setup
- Rules for representation
- Labelling systematics
- Standards and Regulations
- Standard documents
- Specific symbols

Projecting solution:
- RUPLAN EVU is based on RUPLAN, the proven and powerful CAE system for electrical engineering RUPLAN EVU offers a package with a complete solution with automatic creation of all branch-related documents.
- The symbol library contains all symbols required for this branch.
- The extensive device database comprises all of the necessary technical data.
- A special tool for maintaining and selecting devices ensures comfortable handling.





Quality assurance tools:
Projecting guidelines can only be effective if compliance with them is checked. For this reason quality assurance tools have been created that automatically check compliance with the guideline. This is especially meaningful when projects are handed over from subcontractors to the operators. The subcontractor can check the flawlessness of his documentation already before handing it over, and the operator can be sure to get the documents in a uniform and error-free state.

With the use of RUPLAN EVU as branch standard both the operators and the plant construction companies can vastly reduce their costs. The plant construction companies do not have to take into account different requirements of their customers, and the operators get uniform documents from all subcontractors, thus considerably reducing the maintenance expenditures.

- Automatic check of all projecting data
- Saves time and reduces costs of acceptance
- Avoids correction cycles

Municipal Utilities package:
For plant operators that maintain and service supplied plants but do not want to carry out their own project planning, AUCOTEC has with its Municipal Utilities package developed a low-cost solution that enables these customers to also partake in the advantages of the branch standard. Instead of the CAE system RUPLAN it is here the RUPLAN viewer that is integrated, which offers comfortable navigation through the plant documentation. Smaller changes during maintenance can be documented via redlining notes in the documents, the realization of the circuitry is then carried out by the plant construction company.
The important point here is that also in the Municipal Utilities package quality assurance tools are available that can be used to check the quality of the documentation in the acceptance procedure.

The performance features

RUPLAN basic system:
- Intuitive handling due to ergonomically optimized user interface
- Graphic editor for the schematics
- Online reference technology
- Navigation capability over all project data
- Drawing and revision management
- Multi-user capability
- Project management
- Symbol editor
- Freely configurable user interface
- Complete symbol libraries
- Parts lists
- Device lists
- Contents tables
- Terminal lists

Device database:
- Complete device library
- Efficient search functions
- Comfortable device data maintenance
- Uncomplicated import/export

Cabinet layout:
- Automatic assignment from the item management and placement function
- Dimensioning function

PLC coupling:
- Bidirectional assignment list exchange
- Automatic circuit diagram creation

Branch-specific evaluations and documents:
- Special terminal diagrams with editing options
- Cable lists
- Resource schedule
- Cross-reference list
- Wiring list

Quality assurance tools:
- Automatic check of all projecting data
- Log function with error lists

Projecting guideline:
- Specification of quality standards
- Standardized circuit book setup
- Labelling systematics
- Standards and Regulations
- Documents
- Specific symbols

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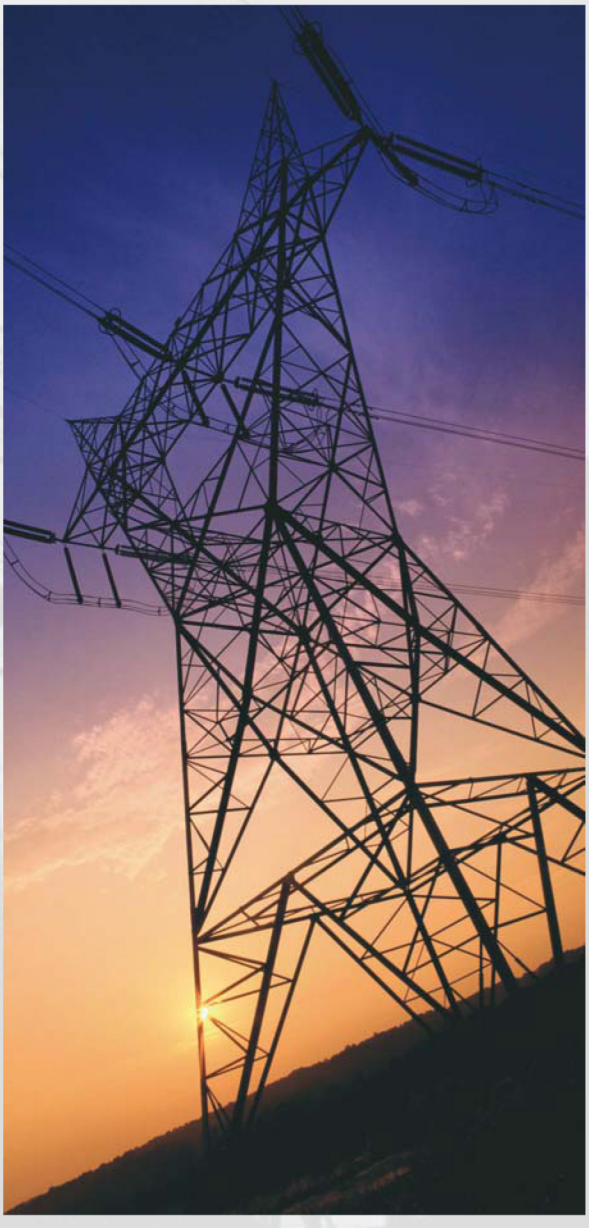
Advantages

All advantages at a glance:

- Uniform, widely used branch standard
- Proven since 10 years and continuously improved
- High-quality plant documentation
- Similar documents from all subcontractors
- Branch-specific documents
- Expenditure reduction for maintenance and servicing
- Saves time and reduces costs of acceptance
- Cost advantages for revision management
- Free choice of supplier for reconstruction work
- Further development of the standard by open branch research group



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