SICAM Diamond –
the Clever Alternative
to the Operator Station

Power Transmission and Distribution

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SICAM Diamond is a visualization and diagnosis system suitable for use with both Siemens telecontrol and station control technology. It is designed for substations which require a low-cost, simple-to-use, easily configured operating and monitoring system.
The use of modern Web technology allows the sub-station to be monitored from any location without the installation of special software.

Keep the Overview while Switching!

Event list

Single line diagram

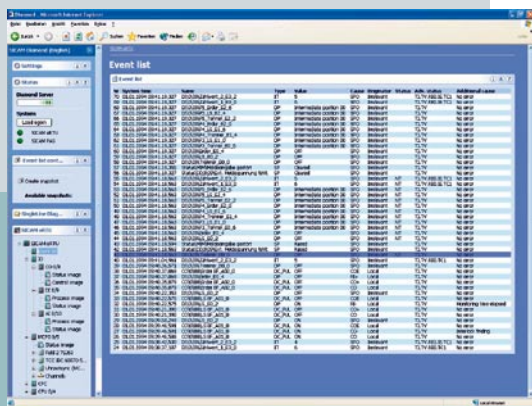**SICAM Diamond: for substations with decentralized station control technology**
In the past, stations with operating and monitoring workplaces were usually installed in central substations, which were often manned around the clock. As cost pressure increased, however, the use of these local operator terminals was increasingly dispensed with, which meant that the substation had to be operated in the field with no overall view of the plant. The low-cost SICAM Diamond, offering diagnostic functions in addition to ease of operation and monitoring, was therefore developed to supplement the very convenient SICAM PAS CC visualization system.

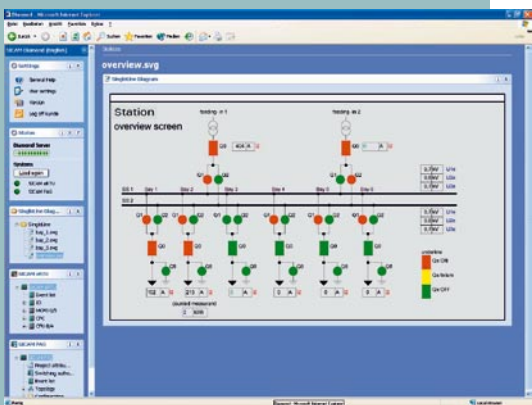**SICAM Diamond: for substations with centralized telecontrol technology**
The hallmarks of classic telecontrol technology are the parallel, central process link and data transmission to a higher-level network control center. Operating and monitoring systems are not usually provided and diagnosis of the telecontrol substation is only possible to a limited extent. In an emergency these stations are always controlled via an on-site switch panel. As this happens very rarely and there is no stationwide visualization, operating errors may possibly occur. Modern telecontrol devices such as the SICAM eRTU and the higher-level visualization and telecontrol diagnostics system SICAM Diamond now allow low-cost, user-friendly operation and diagnostics for these substations as well. This applies both to the industrial sector and to network operators (municipal utility companies, energy providers).
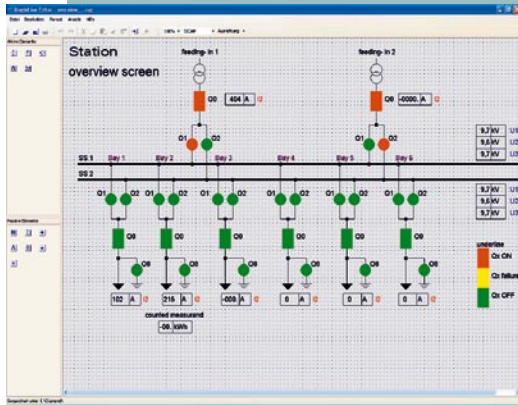
Systematic monitoring: SICAM Diamond
SICAM Diamond is a Web-based operating and monitoring system and uses a modern client-server architecture. The clients are platform-independent – all they need is a Web browser in order to access substations. This minimizes costs and the amount of resources required. This means that existing Intranet and Internet infrastructures can be used for data exchange. The Diamond server acts as data source and contains an Admin tool which regulates data administration and user rights.

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Single line editor

SICAM Diamond for operation and monitoring – the benefits:
- reliable implementation of switching actions thanks to a comprehensive overview of the station
- cost and resource-optimized access to substations via Web-based clients
- higher operating safety thanks to uniform, intuitive user interface

In addition to the diagnostic functions, SICAM Diamond provides a number of other functions for operating and monitoring the process:
- The process and system status messages as well as the switching actions are logged every millisecond to an event list.
- Selected messages can be routed to an alarm list that can be configured for alarm acknowledgement.
- Archiving: The content of the event list as well as measured values and count values – combined in groups – can be archived in month-specific files for a period of 12 months. The archive files can be downloaded via the intranet/Internet and further analyzed, for example, in Microsoft Excel.
- SICAM Recpro saves the fault records automatically called up from the protective devices via SICAM PAS to a fault record archive. This archive can be accessed via the intranet/Internet using SICAM Diamond for visualization, analysis and downloading.
- Graphical system diagrams can be generated for system management using an optional single line editor.

Unlike conventional operating and monitoring systems, SICAM Diamond can be configured quickly and without a long training period even by less experienced users.

SICAM Diamond:
configuration made easy
The basic configuration for SICAM Diamond is obtained by importing the export files that are generated from the planning tools of a Siemens telecontrol device or station control technology device. Thus all relevant process variables are available in the event list, the alarm list and the process image.
This reduces the effort for setting the parameters for SICAM Diamond to the creation of system diagrams, as well as to the selection of messages for inclusion in the alarm list and of measured values for archiving.

More than access protection: the Admin tool
Access rights to the SICAM Diamond can be administered using the Admin tool. In this way different users can be given the appropriate rights. The Admin tool can also be used to integrate and configure the energy distribution plant that is to be displayed. Status information provides the operator with a quick overview of the system status.
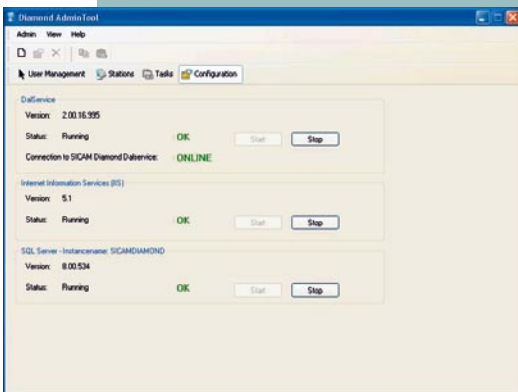
Visualization at its simplest:
the single line editor
This tool can be used to create single line diagrams quickly and easily using the symbols and typical elements provided. They are integrated into the diagram using drag and drop. Different colors can be selected for the visualization of the switching statuses ON, OFF, FAULT and to display the system status of the links.
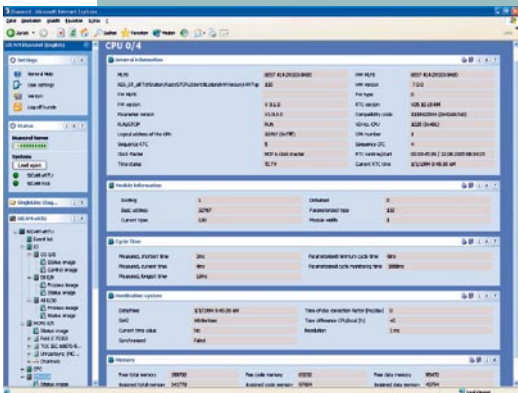
Perfect analysis: the diagnostics tool
The SICAM Diamond diagnostics tool can be used to monitor the main components and functions of the telecontrol or station control technology. The system provides detailed information on process variables, the components used and communication links. Switching commands can also be executed in a list view without the optional single line display, which can be extremely useful during commissioning and configuration.
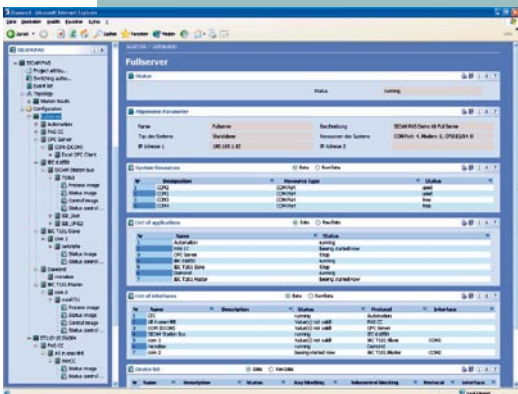
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- **simple configuration** through the use of automatically generated import files
- **reliable, in-depth diagnosis** possible by every client
- **simple administration** of access rights with the Admin tool
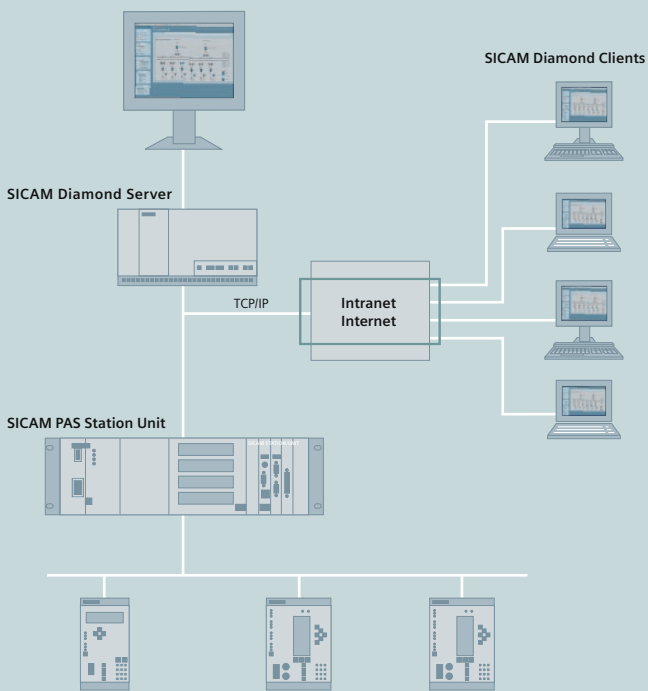- **simple to adapt and adjust** if the station is extended/modified

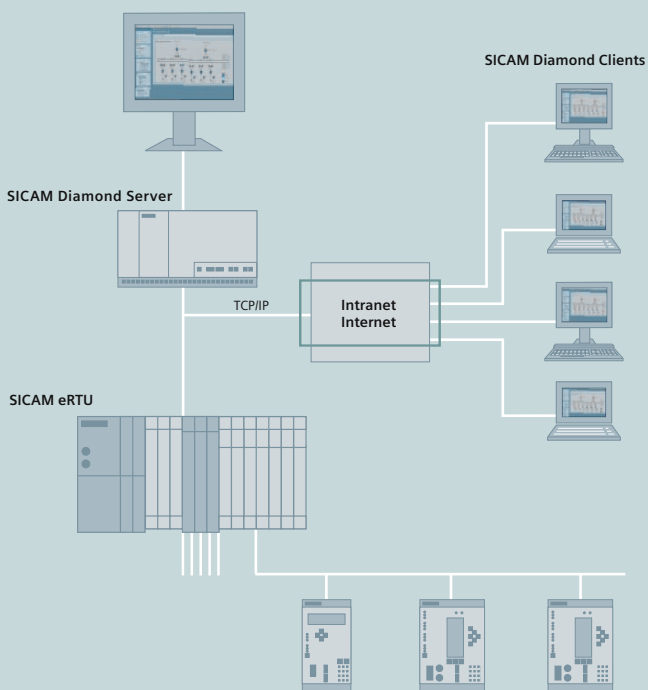

The Admin tool

SICAM eRTU and CPU diagnostics

SICAM PAS and full server diagnostics

SICAM Diamond with SICAM PAS station control technology

SICAM Diamond Clients

SICAM Diamond Server

TCP/IP

Intranet
Internet

SICAM PAS Station Unit

SICAM Diamond with SICAM eRTU telecontrol technology

SICAM Diamond Clients

SICAM Diamond Server

TCP/IP

Intranet
Internet

SICAM eRTU

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If you have any question about
Power Transmission and Distribution,
our Customer Support Center
is available around the clock.

Tel.: +49 180 / 524 70 00
Fax: +49 180 / 524 24 71
(Subject to changes, e.g.: 12 ct/min.)

E-mail: support.energy@siemens.com
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