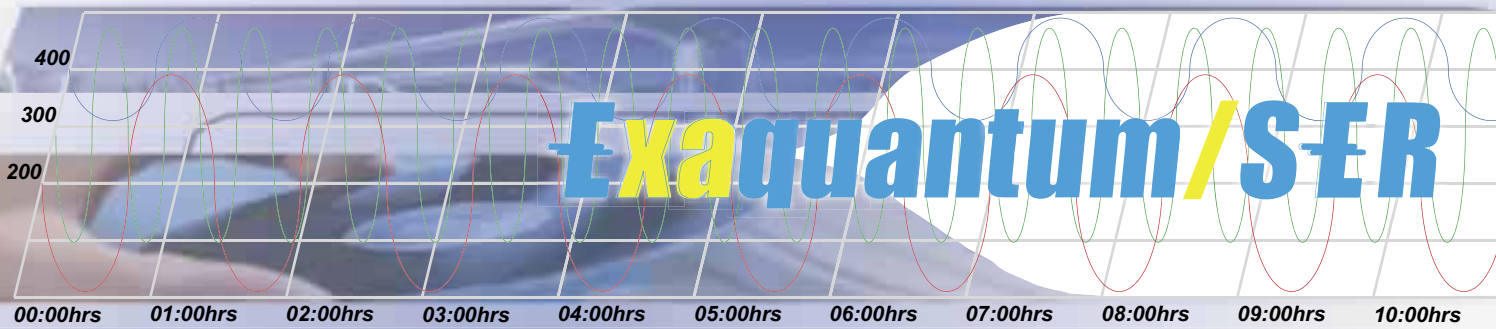


Inform, empower, enable...



...the next generation

SEQUENCE of EVENTS
RECORDER



Yokogawa's Enterprise Technology Solutions for Real-Time Business Management

ENTERPRISE

To view the enterprises objectives through the customers eyes, and provide management information and control system support to meet these objectives.

TECHNOLOGY

Application of technology for business gain.

SOLUTIONS

Optimum solutions that satisfy the customer's needs, wants and expectations.

Exaquantum/SER is an event driven integrated reporting system that acquires alarm & event messages and point data from plant monitoring and control systems and stores them in a single database.

Sequence of Event Reports are generated on request from web clients. The user initially defines a time period for the report content which results in all messages from all available sources being displayed.



Features Overview

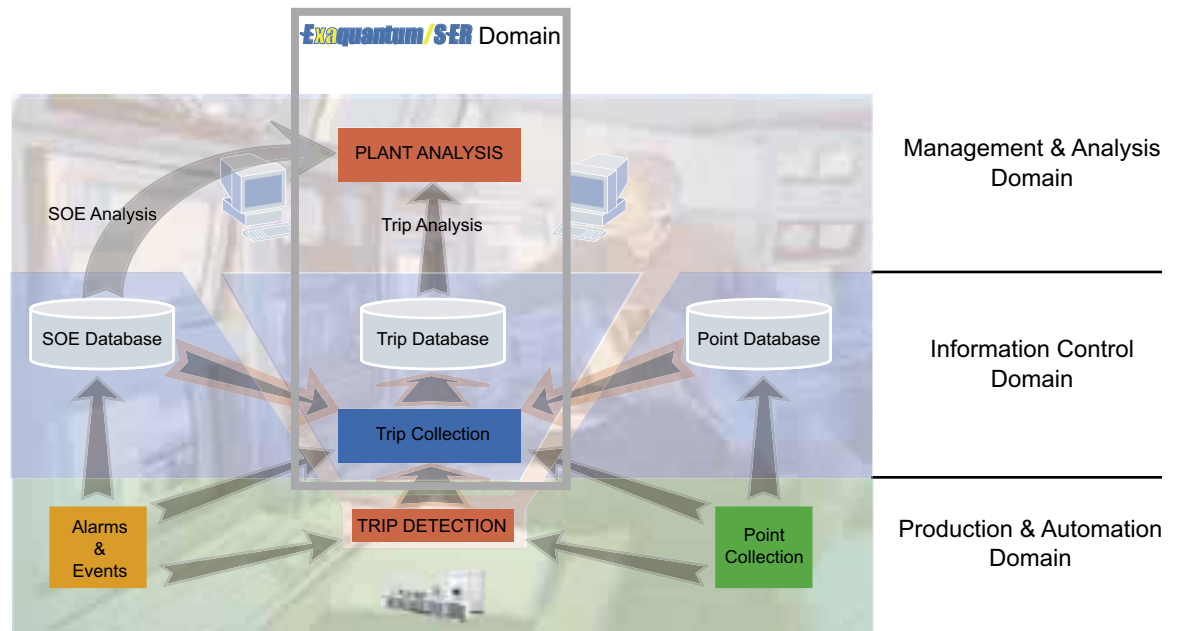
Web-enabled interface

Collation of multiple data sources

Post event trip analysis

Comprehensive event filtering

Exaquantum/SER is an integrated Sequence of Events and Trip Reporting System combined with a powerful trip report configuration tool and web based user interface.



System Architecture

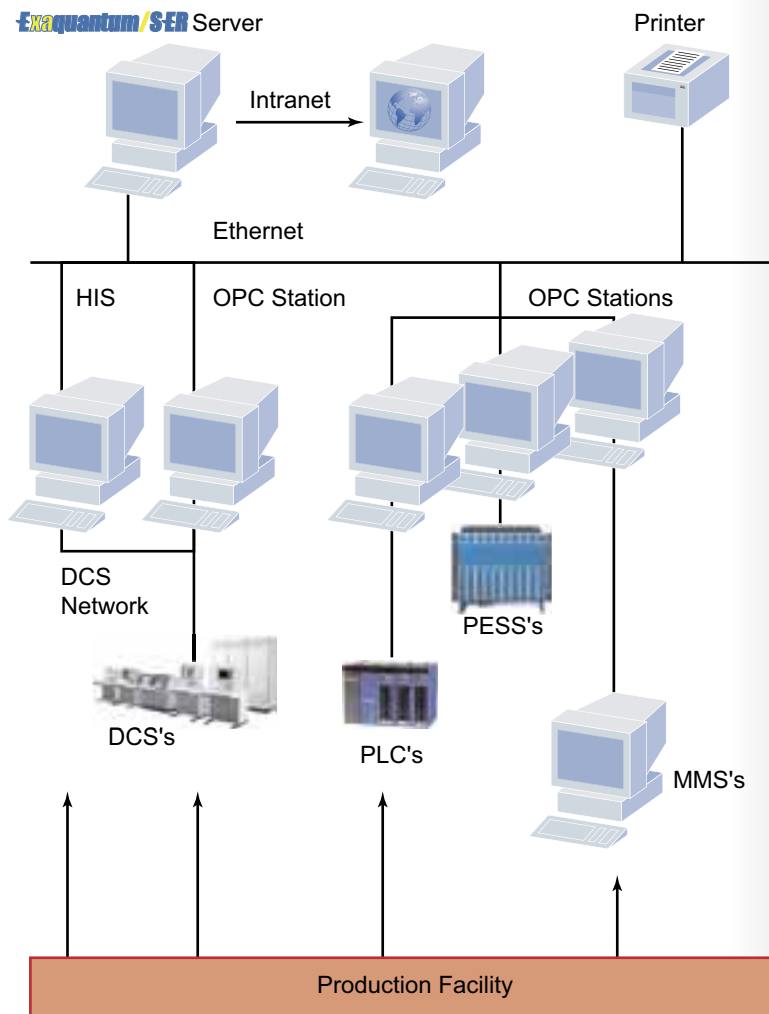
Operations within process-based industries are generally controlled and monitored by a variety of systems such as Distributed Control Systems (DCS's), Programmable Logic Controllers (PLC's) Programmable Emergency Shutdown Systems (PESS's) and Machine Monitoring Systems (MMS's).

When there is a plant upset, a plant trip or an emergency shutdown, a sequence of messages will be generated by each of these systems.

Using Exaquantum/SER, event messages from all systems can be integrated into a single database. This enables cross-platform analysis to be provided for the whole plant.

Collecting alarms and events surrounding a trip or shutdown allows the cause to be quickly located and remedial action to be taken.





Functionality Highlights

Web Based Report Viewing

By making reports available as web pages, they are accessible from any networked PC through Microsoft Internet Explorer, without the need for specific client software. Active server pages are used, enabling data to be displayed, sorted, filtered and then saved for future viewing, or printed to a local printer.

Utilising All Monitoring and Control Data

By integrating alarm & event messages and point data from all monitoring and control systems, a more detailed picture of overall plant activity is available.

Configured Reports for Specific Users

The Trip Report Configuration Tool may be used to configure trip reports for specific users. For example, a user controlling a process within a unit may create a trip report to show the status of all unit valves for a particular event such as an increase in pressure or temperature above a maximum value. It is then possible to quickly isolate the cause.



Key Features:

The key features of the Exaquantum/SER application are as follows:

Trip Report Functions:

Exaquantum/SER provides the following functions for producing and viewing trip reports:

Trip Report Configuration Tool:

The Trip Report Configuration Tool allows users to configure trip conditions for a specified event source and category.

The user interface provides the following report configuration features:

- A unique name and description for the report.
- Up to eight conditions for event attributes.
- A pre and post event time span for which messages and point data are included in the report.

Trip Monitor:

As messages are received, they are compared against configured trip conditions. Matching messages are detected by a Trip Monitor which then triggers the copying of alarms and events and point data in the Historian database into its trip report storage.

Web Based Reports:

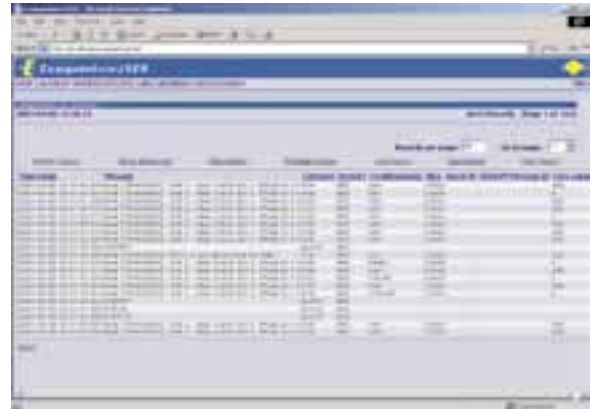
Exaquantum/SER's powerful reporting features are provided to users through a number of standard web pages.

Trip Report Features:

The data to be displayed in a trip report is defined using the Trip Report Configuration Tool. Through on-screen selections, the user is further provided with the option of specifying a time period for which to display data.



Exaquantum/SER Home Page



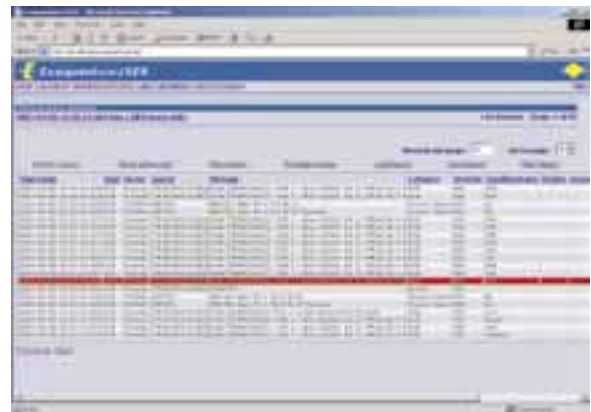
Exaquantum/SER Report

Multiple Sub-system Interfaces:

Exaquantum/SER interfaces through Exaopc to Centum, Triconix and Modicon sub-systems. This product interfaces through Exaopc to the following:

- Triconix
- Modbus
- Hathaway
- ABB
- Speedtronic
- GE-Mark VI
- Bently Nevada

The above interfaces allow the software installation process to be flexible.



Exaquantum/SER Trip Report

Other **Exaquantum** Product Family Members

Exaquantum/SER is part of the Exaquantum product family. Exaquantum is one the most comprehensive Plant Information Management Systems (PIMS) available for industry. Exaquantum acquires data from all facets of a business. This data is then transformed into easily usable, high-value information that can be widely distributed to assist decision-making processes to improve production efficiency and profitability.

Exaquantum PIMS

Exaquantum PIMS is the core element of the Exaquantum product family. It provides comprehensive analysis, reporting and trending capabilities enabling production optimisation. Key Performance Indicators can be closely monitored to support continuous improvement programmes.

Exaquantum / Batch

Exaquantum/Batch provides a complete analysis and reporting environment for batch production. The system has been designed with FDA 21 CFR Part 11 compliance and hence provides a high-value information source in both validated and non-validated environments. Exaquantum/Batch can also be used in support of 6 Sigma programmes and will link to many different DCS's using proven OPC technology.

Exaquantum/Batch is a world first in using the OPC Batch standard as it's primary interface.

Yokogawa Marex Limited

ENGLAND

34 Medina Road
Cowes
Isle of Wight
PO31 7DA
England
Tel +44 (0) 1983 296011
Fax +44 (0) 1983 291776
E-mail info@ymx.yokogawa.com
www.ymx.yokogawa.com



Yokogawa Worldwide

JAPAN

Yokogawa Electric Corporation
World Headquarters
9-32, Nakacho 2-chrome
Musashino-shi, Tokyo 180-8750
Japan
Tel (81) 422 52 5535
Fax (81) 422 55 1202

EUROPE

Yokogawa Europe B.V.
European Headquarters
Databankweg 20
3821 Al Amersfoort
The Netherlands
Tel (31) 334 64 1611
Fax (31) 334 64 1610

THE AMERICAS

Yokogawa Corporation of America
American Headquarters
2 Dart Road, Newnan
Georgia 30265-1040
USA
Tel (1) 770 254 0400
Fax (1) 770 251 2088

ASIA PACIFIC

Yokogawa Electric Asia Pte. Ltd.
South East Asia Headquarters
Bedok Factory, 5 Bedok South Road
Singapore 469270
Singapore
Tel (65) 241 9933
Fax (65) 444 6252

MIDDLE EAST

Yokogawa Middle East E.C.
Middle East Headquarters
P.O. Box 10070, Manama, Bahrain
Building 577, Road 2516, Busaiteen 225,
Muharraq Bahrain
Tel (973) 358100
Fax (973) 336100

AUSTRALIA

Yokogawa Australia Pty. Ltd.
Australian Headquarters and NSW Branch
Centrecourt D1, 25-27 Paul Street North,
North Ryde, N.S.W. 2113,
Australia
Tel (61) 2 9805 0699
Fax (61) 2 9888 1844

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