K-Chief 600 Ship@Web

KONGSBERG

The Kongsberg Ship@Web system is designed to enable continuous access to primary vessel data both on-board the vessel and from ashore. The Ship@Web system can display data from the K-Chief 600 marine automation system.
The Ship@Web system provides a secure connection into an *isolated* K-Chief 600 system, based on state-of-the-art solutions. Based on web technology with a safe communication structure, Ship@Web also can be used to view and use historical data through applications such as Trend, Report and Export.

Experience

We installed the first computerized machinery automation system back in 1970. Since then we have accumulated more than 40 years of experience in manufacturing, installing, commissioning and servicing systems all over the world. The K-Chief 600 Ship@Web system is designed to meet the challenging demands of shipyards and ship owners.

Key features

Integration between the process network and the administrative network provides:

- Access to automation data.
- Organization and storage of data.
- Presentation and decision support.
- Automatic and manual ship reporting.
- Display sub-systems as eq. engine monitoring, power management, fire or tank systems and etc.
- Presentation of lists such as alarm views and process views.
- Presentation of counters, event logs, Exhaust Gas.
- Navigation structure identical with the K-Chief 600 system.

Ship@Web applications

The **Viewer** application displays online data generated by the K-Chief 600 automation system. Process information can be made available anywhere on-board a vessel through the ship's administrative network or in an office ashore using a standard personal computer.

Data is presented by using a user interface similar to that used by the Kongsberg K-Chief 600 system.

The **Trend** applicaton records and presents vessel process data generated by the K-Chief 600 automation system. It can also be used to create user defined tabular views.

The **Report** application provides reports based on online information generated by the K-Chief 600 automation system. Report data may be printed or stored as electronic PDF and XML documents. The application includes a predefined range of report templates. Through the Report Designer, the user may also create reports with self defined data.

The **Export** application provides online information from the K-Chief 600 automation system to third party recipients in the administrative network. Typical data recipients are Planned Maintenance Systems and Loading Computers.

System architecture

The Ship@Web system architecture is mainly a custom K-Chief 600 automation system with a server/ firewall solution installed.

The main role of the server is to be the connection point with external networks requiring information from the K-Chief 600 system. The server acts as a web server hosting applications which can be used from any location by using a normal web browser.

The server does not contain display or user interface units, but can be serviced remotely. It does not require any maintenance or operation by the crew on-board.

All computers connecting to the K-Chief 600 process LAN will be authorized by the firewall. This provides a high security level for the K-Chief 600 system, protecting the process LAN from unauthised access and other threats from the administrative network.

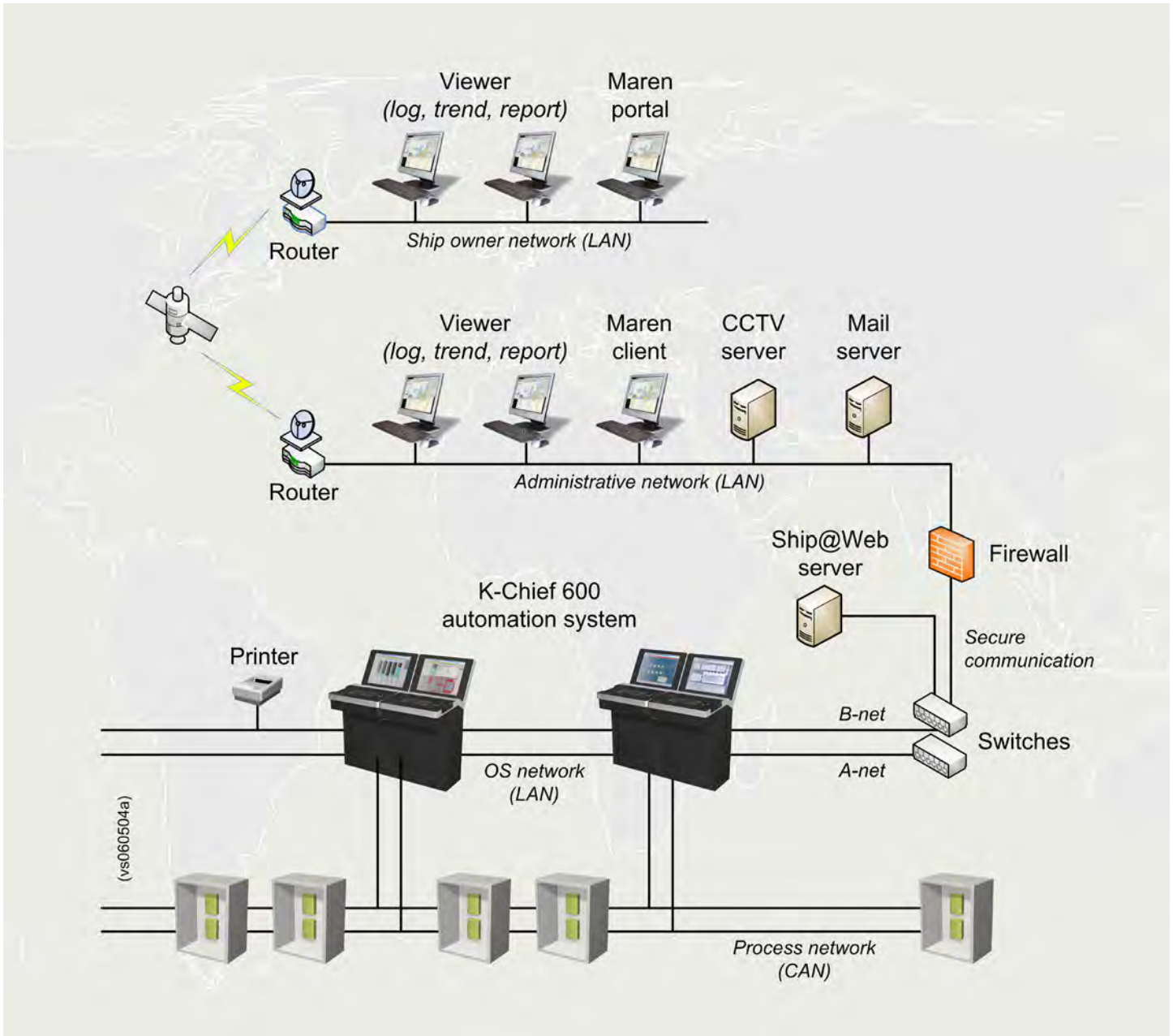
System access

The Ship@Web system can be accessed from several locations:

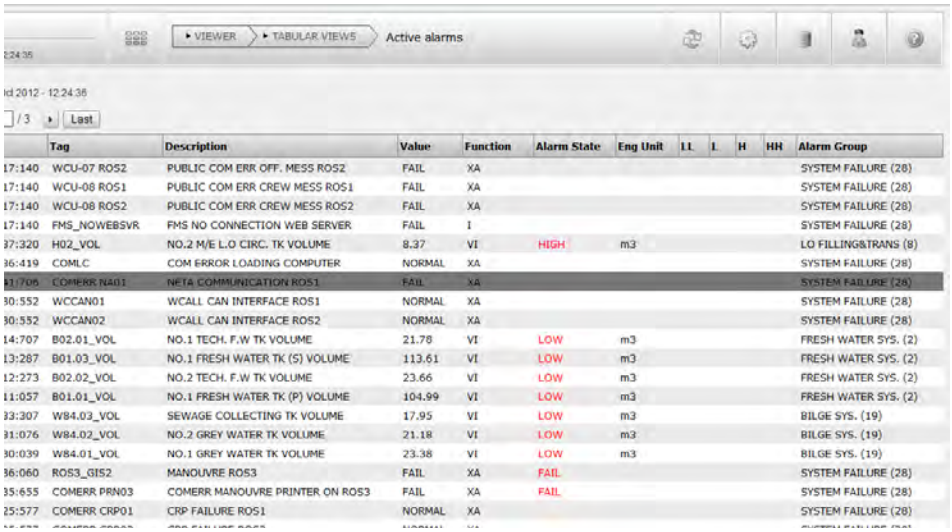
- From the ship's administrative network: This communication is typical when the crew wants information from the K-Chief 600 system to offices and cabins located on the ship. This data can be used for further analysis and comparison, live view of process views and trends and so on.
- From shore or external networks: This communication is typical when the ship owner wants information from the K-Chief 600 system to shore or headquarter. This data can be used for further analysis and comparison, snapshots of process views, logbook pages, bunker reports and so on.

User interface

The user interface is an important feature. The Ship@Web user interface is carefully designed to support the operator in his daily routine. Moreover, the screen layout is similar to other Kongsberg systems, such as the K-Chief 600, hence the operator will be instantly familiar with all important system functions.



Active Alarms view - Always first in the viewer application.



	Tag	Description	Value	Function	Alarm State	Eng Unit	LL	L	H	HH	Alarm Group
17:140	WCU-07 ROS2	PUBLIC COM ERR OFF. MESS ROS2	FAIL	XA							SYSTEM FAILURE (28)
17:140	WCU-08 ROS1	PUBLIC COM ERR CREW MESS ROS1	FAIL	XA							SYSTEM FAILURE (28)
17:140	WCU-08 ROS2	PUBLIC COM ERR CREW MESS ROS2	FAIL	XA							SYSTEM FAILURE (28)
17:140	FMS_NOWEBSVR	FMS NO CONNECTION WEB SERVER	FAIL	I							SYSTEM FAILURE (28)
37:320	H02_VOL	NO.2 M/E L.O CIRC. TK VOLUME	8.37	VI	HIGH	m3					LO FILLING&TRANS (8)
36:419	COMLC	COM ERROR LOADING COMPUTER	NORMAL	XA							SYSTEM FAILURE (28)
31:706	COMERR N401	NETA COMMUNICATION ROS1	FAIL	XA							SYSTEM FAILURE (28)
30:552	WCCAN01	WCALL CAN INTERFACE ROS1	NORMAL	XA							SYSTEM FAILURE (28)
30:552	WCCAN02	WCALL CAN INTERFACE ROS2	NORMAL	XA							SYSTEM FAILURE (28)
14:707	B02.01_VOL	NO.1 TECH. F.W TK VOLUME	21.78	VI	LOW	m3					FRESH WATER SYS. (2)
13:287	B01.03_VOL	NO.1 FRESH WATER TK (S) VOLUME	113.61	VI	LOW	m3					FRESH WATER SYS. (2)
12:273	B02.02_VOL	NO.2 TECH. F.W TK VOLUME	23.66	VI	LOW	m3					FRESH WATER SYS. (2)
11:057	B01.01_VOL	NO.1 FRESH WATER TK (P) VOLUME	104.99	VI	LOW	m3					FRESH WATER SYS. (2)
33:307	W84.03_VOL	SEWAGE COLLECTING TK VOLUME	17.95	VI	LOW	m3					BILGE SYS. (19)
31:076	W84.02_VOL	NO.2 GREY WATER TK VOLUME	21.18	VI	LOW	m3					BILGE SYS. (19)
30:039	W84.01_VOL	NO.1 GREY WATER TK VOLUME	23.38	VI	LOW	m3					BILGE SYS. (19)
36:060	ROS3_GIS2	MANOUVRE ROS3	FAIL	XA	FAIL						SYSTEM FAILURE (28)
35:655	COMERR PRN03	COMERR MANOUVRE PRINTER ON ROS3	FAIL	XA	FAIL						SYSTEM FAILURE (28)
25:577	COMERR CRP01	CRP FAILURE ROS1	NORMAL	XA							SYSTEM FAILURE (28)

Viewer application

The Viewer is interfaced with a K-Chief 600 process network (LAN) **on-board** the vessel, providing approved users online access to this critical information.
For example, a Chief Engineer could check primary engine room or other critical parameters any time of day or night from his office.

Viewer primary functions are:

- Displays logged vessel data using a user interface similar to that used by K-Chief 600 systems.
- Displays process mimics from the K-Chief 600 system.
- Displays a complete history of alarms registered on-board the vessel.
- Displays alarms, tag values and history through list views such as Active Alarms, Alarm History, Tag summary, Event History, Inhibit tags, Overriden tags, Counters, Tank list etc.
- Provides owner/operators with an overview of primary vessel data, allowing better shore-side support of ships and their crews.

The Viewer application can also be used to provide the interface to an office **ashore**. This allows a shore-based user in near real-time to observe the same information as available to watch officers in the Engine Room aboard the vessel in question.

Trend application

The Trend application provides an effective tool for displaying and trending data in the K-Chief 600 automation system. This gives the user an effective tool for visualizing logged data without using an operator station and up to 365 days of data can be displayed in one single view.
The user can turn on/off interpolation and choose whether to show actual points. Data can also be exported from the views as comma separated files.

The Trend application may be used for trending information such as fuel consumption, compressor recycle time, power production or other key parameters in the automation system.

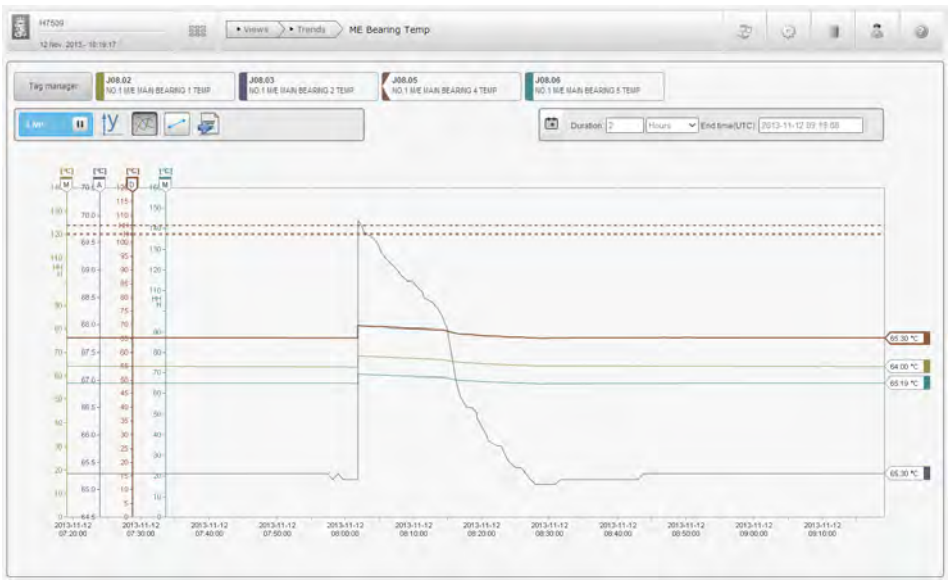
The Trend can be utilized in a number of ways. Typical uses of the application include:

- To record specific tags to observe the changes in a selected value over time.
- To aid in tuning controllers.
- To monitor the condition of vessel components such as the main engine, compressors, pumps and auxiliary engines.
- To provide data for establishing the chain of events leading up to a particular incident.
- To facilitate track keeping of high-frequency trends and long term parameter analysis.
- To provide a permanent record or basis for analysis of events such as equipment start/stop or emergency shutdown.

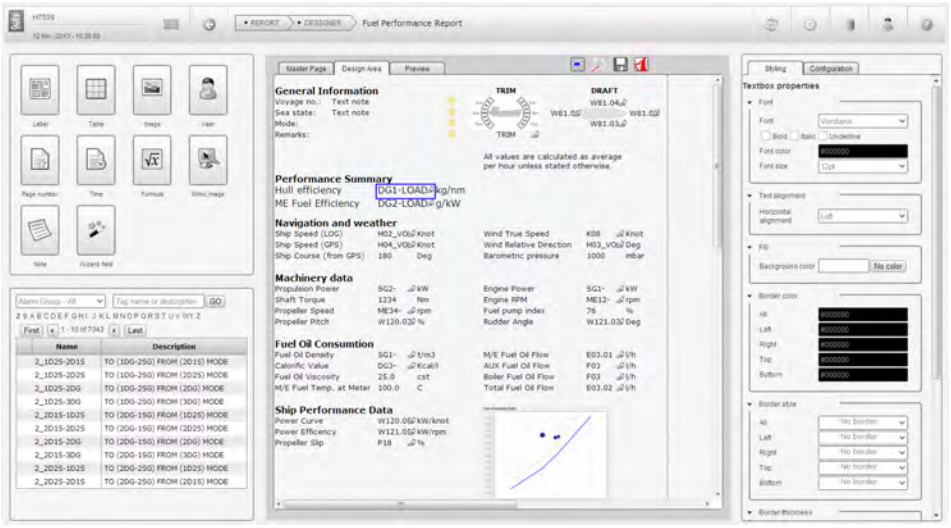
Export application

The Export application can export data from the K-Chief 600 system using comma separated files such as .csv, .txt, .log or .dat. The data is sent by e-mail or saved to an FTP server automatically at user defined intervals. A third party application can also get data by using specific URL's.

Trend view - Any combination of tags and time-span can be trended.



Report Design view - Customize your own reports.



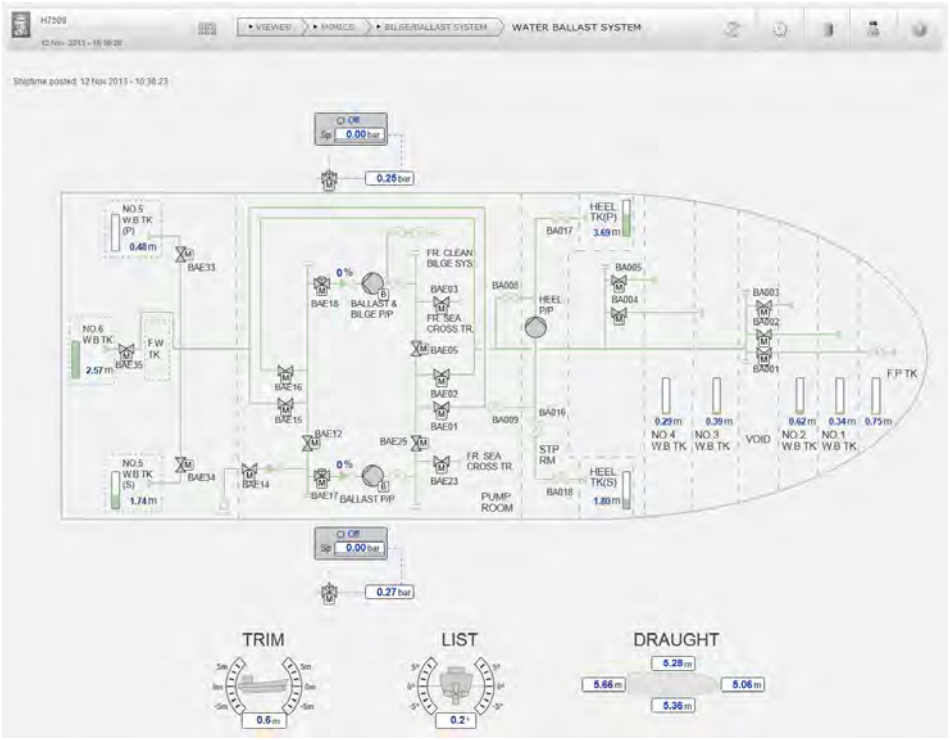
Report application

Depending on user privileges, the Report application consist of two modules - the **Report Designer** and the **Report Generator**.

The Report Designer makes it possible for the crew and ship owner to create customized report templates. The Report Generator makes it possible to generate reports for a given time interval based on the templates made by the Report Designer.

The Report application can be utilized in a variety of ways. Typical uses of the application are:

- Automatically generated reports from the automation system, including all connected equipment.
- Documentation of testing of critical processing systems.
- Create typical reports such as Daily report, Voyage report, Fuel Performance reports.
- User configured reports for components such as main engine, auxiliary engine and turbo charges.
- Reports can be exported automatically by e-mail or FTP.



Process view - All processes connected to the Kongsberg K-Chief 600 automation system are also displayed on the Kongsberg Ship@Web system in dedicated process views.

Technical specifications

Automation systems

The Kongsberg Ship@Web system is only compatible with the Kongsberg K-Chief 600 marine automation system.

Client computers

Supported web browsers are: Firefox, Chrome and Internet Explorer 8 (or newer).

Note! This datasheet is subject to change without prior notice.

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