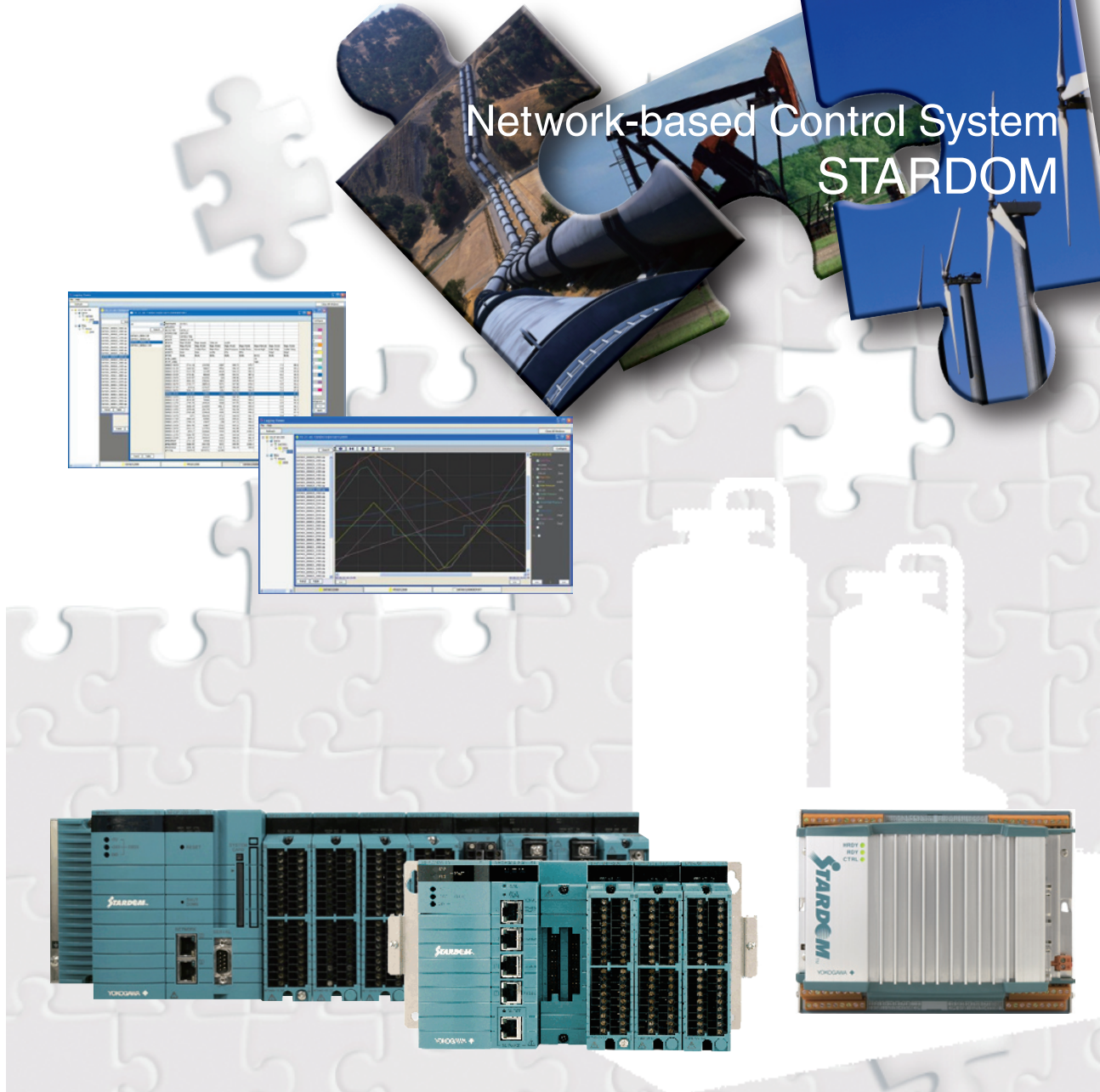


Network-based Control System STARDOM



InfoWell

Information Processing and Transmission Package

InfoWell is a software package running on the autonomous controller FCN/FCJ. It provides web graphics, data logging and e-mailing of alarms.

InfoWell provides the user with the ability to view control application data on the FCN/FCJ remotely using the embedded Web server, e-mail and Java functions.

Graphics are created using an intuitive graphic building tool and the user does not require any programming knowledge or skills to make use of InfoWell functionality.

Bulletin 34P02P51-01E

<http://stardom.biz>

What is InfoWell?

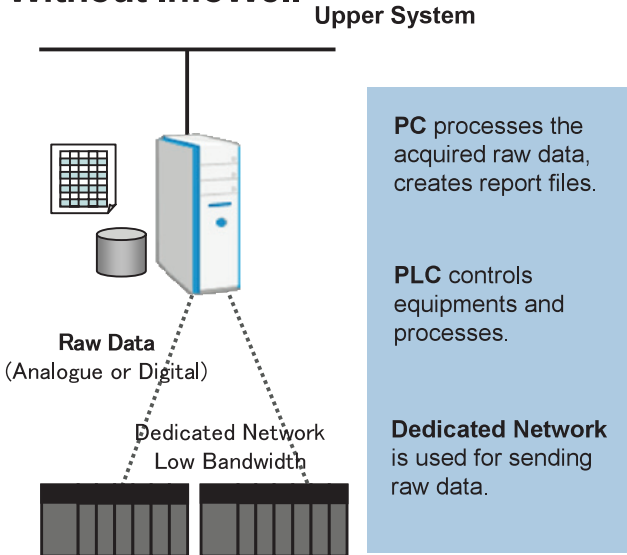
Enjoy the latest IT Technology on the controller without programming

InfoWell is a software package that runs on the autonomous controller FCN/FCJ.

While control applications are running on FCN/FCJ, InfoWell processes and transmits control applications data using PC-oriented IT technologies embedded on the controllers, such as Java, Web and e-mail.

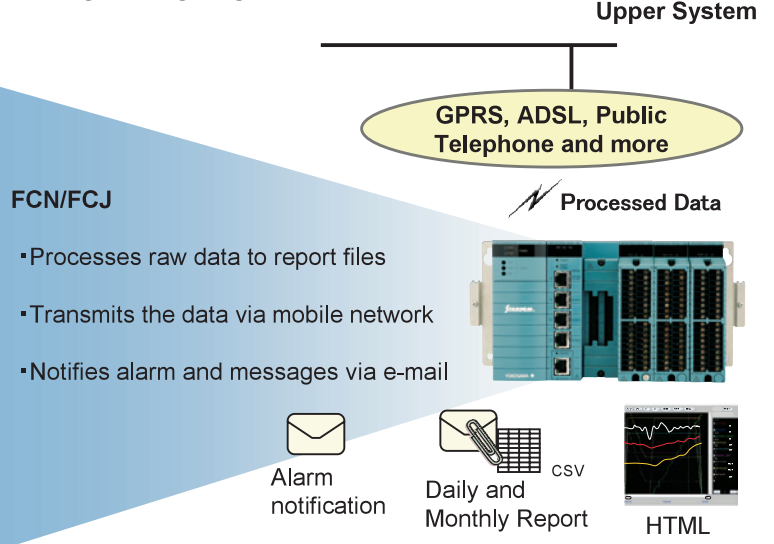
In spite of using Java technology, InfoWell does not require any Java programming skill. Graphic windows are automatically created and data are logged by specifying data to be monitored.

Without InfoWell



Periodic acquisition of raw data burdens the network performance and security. To connect the upper system with secured communication performance, data acquisition PLC is often required.

With InfoWell



Process control and raw data processing are performed on the industrial-use controller FCN/FCJ. To secure the communication performance, processed data is transmitted to the PC when it is required.

Your Benefits

■ Minimize Cost for Remote Control and Monitoring

With the conventional system, PC-based Human Machine Interface (HMI) acquires and processes the raw data. However PCs are unreliable in harsh or remote conditions and maintaining PCs and HMI software by patching and updating them increases the Total Cost of Ownership (TCO).

With InfoWell, process data and equipment status are monitored on the Web browser by connecting the PCs with FCN/FCJs whenever they are needed. And report files created on FCN/FCJs are automatically transmitted by using ftp functions embedded in FCN/FCJs.

Due to the integration of PC and PLC functions, FCN/FCJs contributes to cost reductions in control infrastructure.



■ Improve Maintenance Efficiency

With a conventional system, process and equipment data are logged on PCs or SCADA. Maintenance people monitor the current equipment status with hand terminals and calls the maintenance center to get the past and current equipment status.

With InfoWell, process and equipment data are not only logged but also daily and monthly reports are automatically created on FCN/FCJ. A maintenance person inspects equipment by referring to the past trend data and current status on Web browser in the field.



■ Agile Action in Unexpected Situation

With a conventional system, the operator or maintenance person monitors the fields 24hours, 7days a week to avoid unexpected situations. They keep informing the maintenance person about the equipments status.

With InfoWell, detection of unexpected situations can be notified to the maintenance person directly from FCN/FCJs via e-mail at an early stage. Even if an unexpected situation occurs, they can analyze the cause of the equipment malfunctions by referring to Sequence Of Event (SOE) files.



“Control” + “InfoWell” = “Autonomous Solution”

By encompassing PLC-oriented IT technologies, “InfoWell” (Information Processing and Transmission Package) and “Control” can be integrated into one controller. InfoWell minimizes your “COST” and “TIME”.

Operation and Monitoring in the fields

Just connect your laptop to the controller



Process data can be monitored and operated on Web browser.
You do not need to keep tracking of software upgrade since dedicates HMI software is not required.

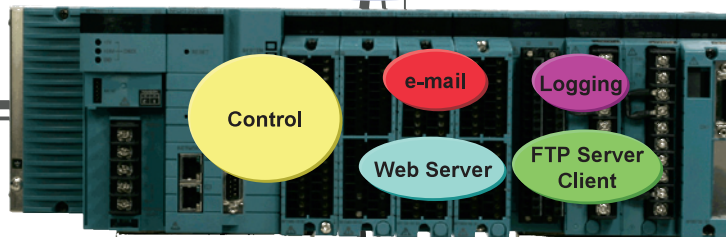
Message via e-mail

Agile in the unexpected situation



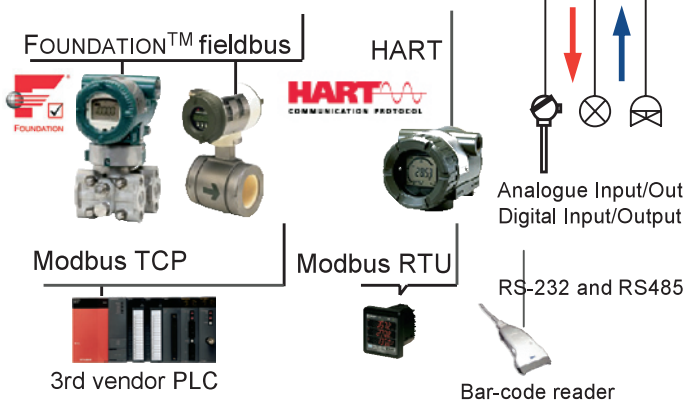
FCN/FCJ sends alarms and messages via e-mail. You can use the messages for maintenance purpose such as the notification of aging deterioration, exchanging parts besides monitoring process status.

Intranet, ADSL, GPRS, and more



Various Connection

Enjoy the digital field network



Various network interface enable FCN/FCJ to connect with various field devices.

[Communication Portfolios]

- Modbus Communication Portfolio
- DNP3 Communication Portfolio
- FA-M3 Communication Portfolio

Data Processing and Logging

Secure your precious data



InfoWell periodically logs process data on the system card, and also creates the daily, monthly and yearly report files.

Those files on the controller can be viewed with a Web browser in trend and table format.

You can receive them as attachments of e-mail or upload them at specified times and when you need them.

Control in Parallel

~ Process control on reliable controller ~

Control applications run while logging files.

They are programmed using the five languages of international standard PLC language IEC 61131-3 (FBD, LD, ST, SFC, IL). With a rich portfolio, such as NPAS for regulatory control. With these functions, complex loop control (including cascade, feedforward and adaptive gain) are easily programmed.

Applicable Field for InfoWell



- Oil & Gas Wellhead
- Oil & Gas Pipeline
- Gas Station Metering System
- Cogeneration System
- Truck Delivery Monitoring
- Environment Monitoring



- Wind Turbine Monitoring
- Sewage Treatment
- Water Distribution
- Irrigation System
- Reservoir Monitoring
- Micro Brewery

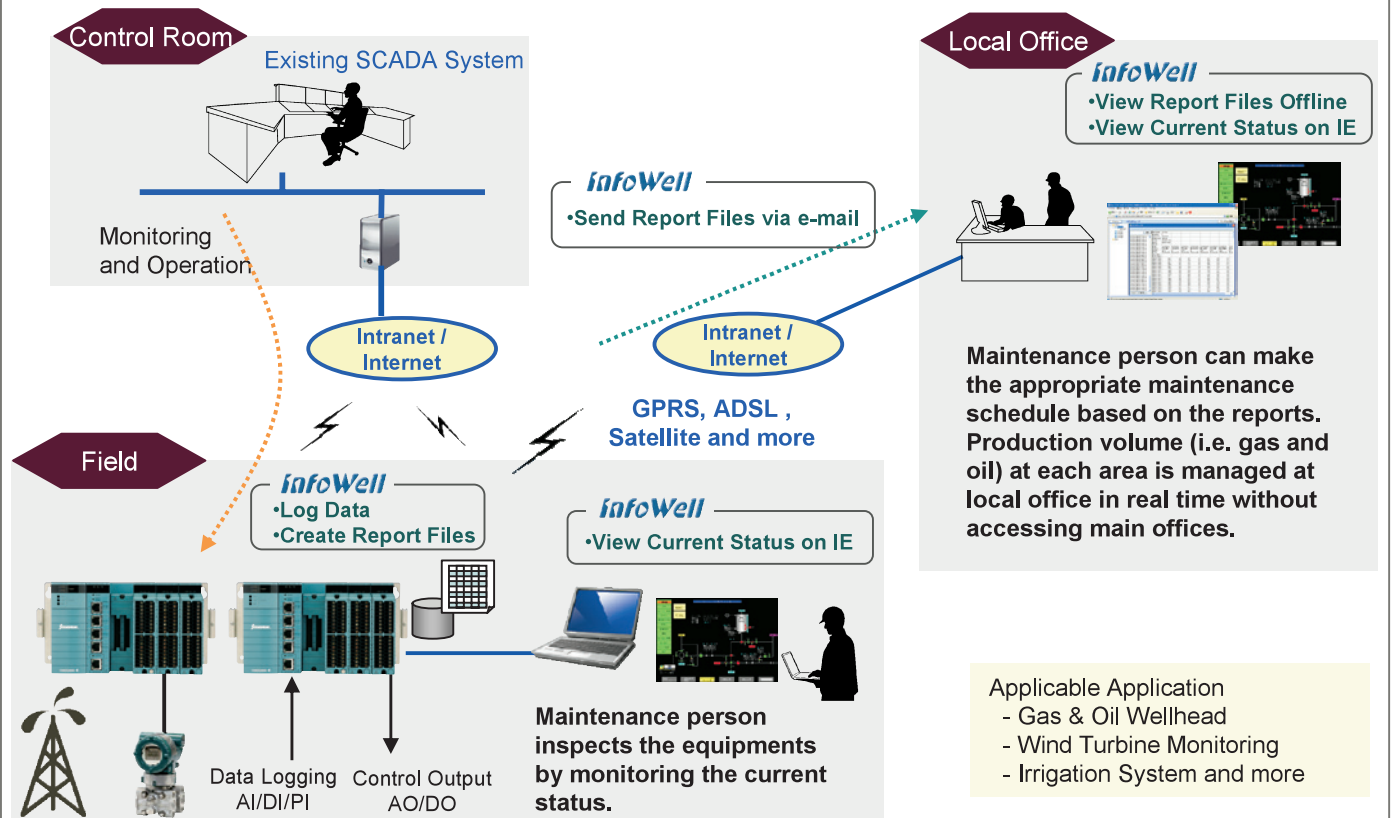
Application Examples for InfoWell

InfoWell brings the remote monitoring innovation to your fields.

Local HMI in the Field

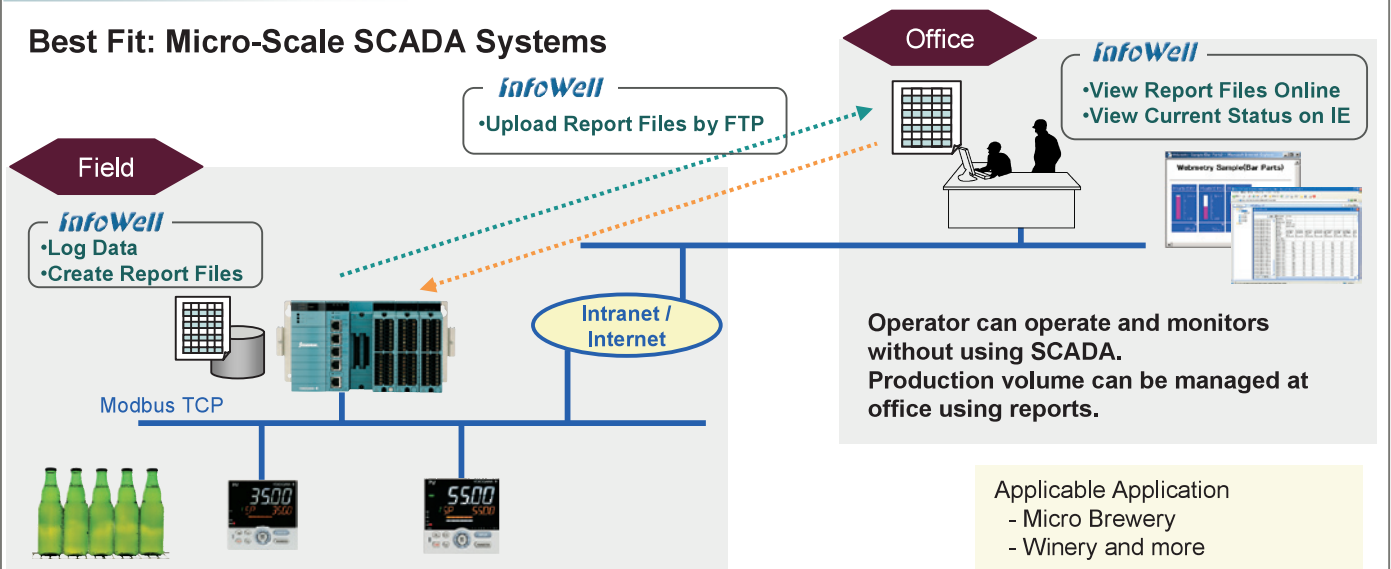
“Add-on Local HMI Improves Maintenance Efficiency”

Best Fit: InfoWell Add-on to Large Scale SCADA System



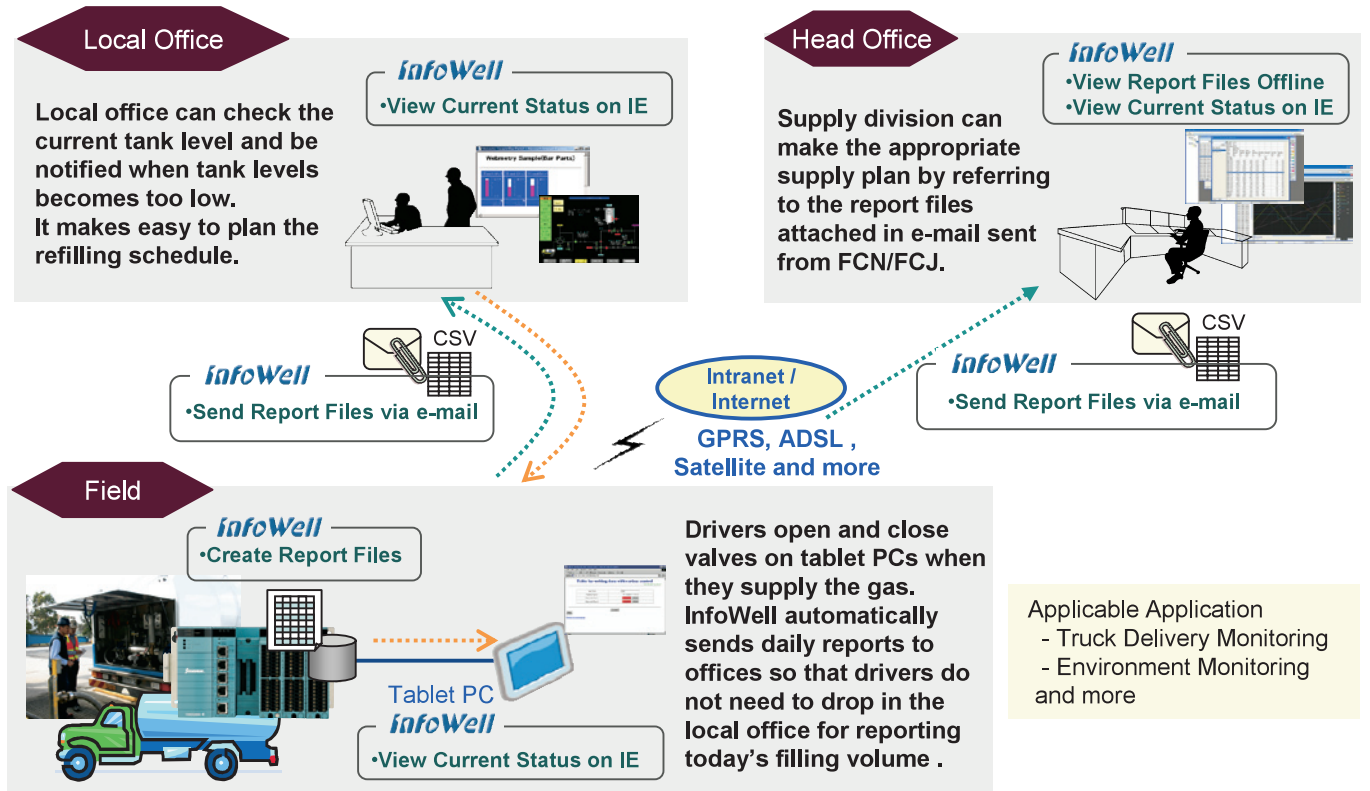
Stand Alone SCADA System “Remote Monitoring Minimizes The Cost of Ownership”

Best Fit: Micro-Scale SCADA Systems



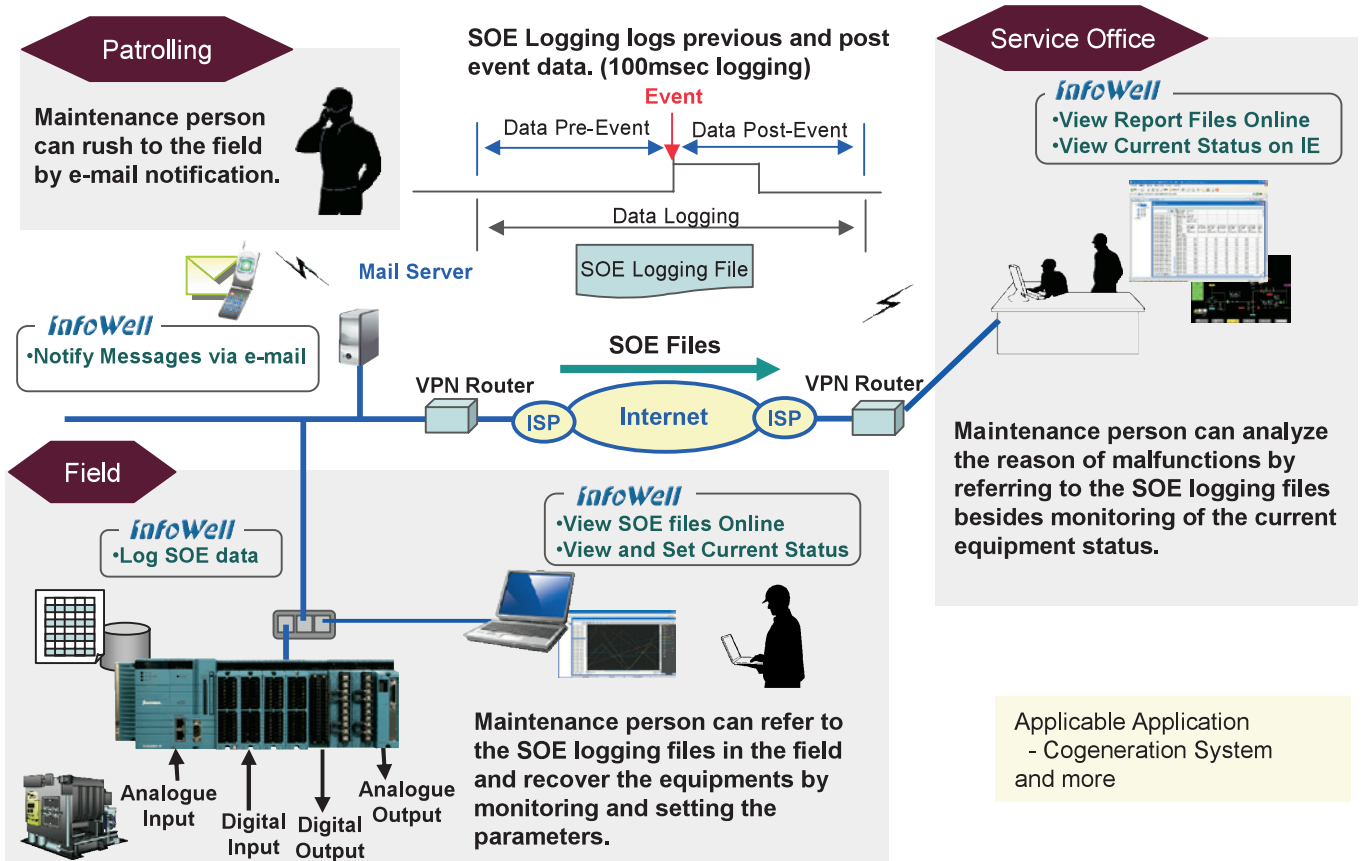
Automatic Metering System “Flexible System Configuration Does Not Choose Location”

Best Fit: Mobile Systems



Trouble Shooting of Utility “Agile Action in Analysis and Recovery of Equipment”

Best Fit: Utility Monitoring



Function	Description	Graphic	Logging	E-mail	Web
Remote Monitoring	Monitoring of the equipment and process on Web browser	◎	○		○
Remote Operation	Operation of the equipment and process on Web browser				◎
Logging	Reference of the past data		◎		
Report	Daily, Monthly, and yearly reports including maximum, minimum, average and total		◎	○	
Alarm and Message	Alarm and messaged notifications via e-mail			◎	
SOE (100msec)	Analysis of the equipment malfunctions		◎		

【List of Licenses for FCN/FCJ *1】

InfoWell consists of the following licenses.



- E-mail Application Portfolio License
NT8013J



- Web Application Portfolio License
NT8012J
- Graphic Portfolio License
NT8014J



- Logging Portfolio License
NT8016J



- InfoWell License Package
NT8017J

【List of Licenses for FCN-RTU】

The following CPU model is required when using InfoWell functions.

<CPU Model>

- NFCP050-S1

<Embedded Licenses>

- PAS Portfolio License : NT8001J
- Web Application Portfolio License : NT8012J (*2)
- Graphic Portfolio License : NT8014J
- Logging Portfolio License : NT8016J (*2)
- Modbus Communication Portfolio License : NT8035J

* 1: InfoWell package does not support duplexed CPU configuration. Transmission time of e-mail depends on e-mail server and infrastructure status.

* 2: The use of some functions for these portfolios is restricted. Please refer to the general specifications for the detailed information.

InfoWell Easy Engineering

Fill In the Form (FIF) type easy engineering method

[E-mail & Web Application Portfolio]

- Fill-in-the-blanks type configuration.
- Define the contents of alarms and messages for the e-mail body

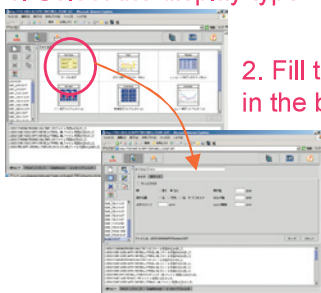
[Graphic Portfolio]

- Place the graphic parts on the bitmap

[Logging Portfolio]

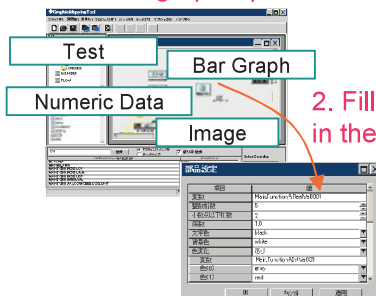
- Specify the data to be logged and report type

1. Select the display type



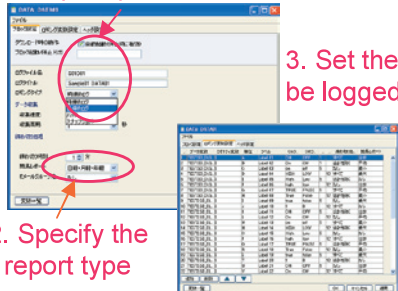
2. Fill the data in the blank

1. Place the graphic part on the bitmap



2. Fill the data in the blank

1. Specify the data collection time



3. Set the data to be logged

2. Specify the report type

E-mail Application Portfolio
Web Application Portfolio

Graphic Portfolio

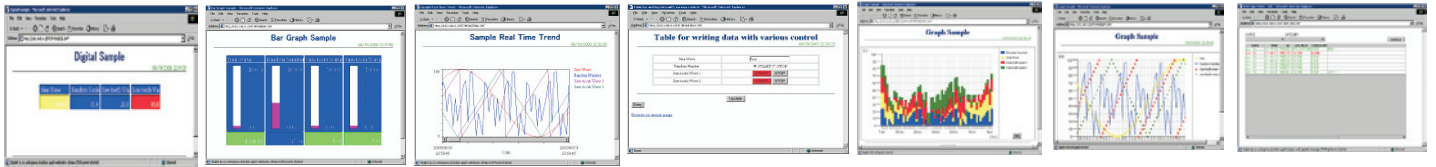
Logging Portfolio

InfoWell Features

Web Application Portfolio



Various type windows are prepared for monitoring and operating of the equipments. Web browser (IE) is only required for displaying them.



**Numeric Data
In Real Time**

**Bar Graph
In Real Time**

**Trend
In Real Time**

Table

Bar Graph

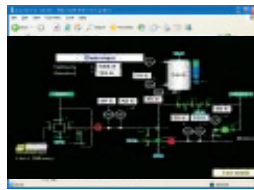
**Line-segment
Graph**

Message

Graphic Portfolio



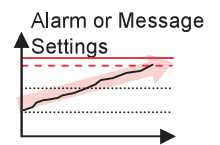
To view the data in your desired ways, various graphical parts such as numeric box, bar graph are prepared. Photos and blue prints are available as a background images to make the graphic more expressive.



E-mail Application Portfolio



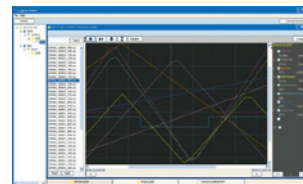
Alarms and messages generated by FCN/FCJs are automatically sent via e-mail by using FCN/FCJ mail functions. Receiving e-mail requires the general mail reader such as outlook.



Logging Portfolio



The application data collected and logged on the controller are viewed in both table and trend format. Data on the controller can be viewed online (connecting with FCN/FCJ) and offline (on PC after uploading files). Log files are uploaded to PC using the collection tool, periodically or whenever required.



Trend Format

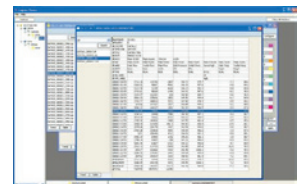


Table Format

Logging & Report Function

InfoWell logging portfolio logs data and creates daily, monthly and yearly reports.

Data Logging : Logs the control application data on the controller as follows

- Periodic Data Logging : High speed (1 to 60seconds) and low speed (1 to 60 minutes)
- Batch Logging : High speed (1 to 60seconds) and low speed (1 to 60 minutes)
- Snapshot Logging : Continuous and trigger
- SOE Logging : 100msec or longer
- Message Logging : Alarm and event messages

Report : Creates report files from log data

- Report type : Daily, monthly and yearly report
- Closing data : Minimum, maximum, average and total

Logging View

Logging data is displayed on a Web browser online and on the Logging Viewer offline in a multi-window display. Trend and table format displays can be configured.

- Trend Format : Up to 10 pens per page can be assigned.
- Table Format : Up to 40 items can be viewed.

Logging Configuration Tool

Logging can be configured offline and online using the configuration tool called "Logging Configurator".

Logging File Collection

Multiple logging files from the multiple controllers are periodically collected using a logging tool called "Logging File Collector".

E-mail

Logging and report files are sent as e-mail attachments.

Autonomous Controller FCN/FCJ Features

Software

■ International Standards Programming Language

• The Logic Designer engineering tool for the FCN/FCJ supports the five languages of the International Electrical Commission's IEC61131-3 programming language (FBD, LD, ST, SFC, IL).

■ Reuse of Programs

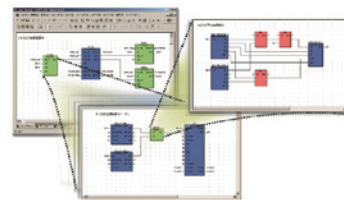
• The programmes can be divided into Program Organization Units (POU), which enables the reuse of the logic.

■ Rich in Portfolios and Templates

• Regulatory control blocks such as PID, PVI are provided and various programming samples are also available.



Engineering Tool
"Logic Designer"



Hardware

Three types of controllers are available to fit for the required purpose. They are designed for industrial-use with high spec control functions.

High Speed Control
10msec CPU Scan

Explosion Protection
FM Non-Incendive Class I Division 2
CENELEC ATEX Type "n"
CSA Non-Incendive

Advanced Self Diagnosis
Self diagnostic functions

Various Interface
FOUNDATION fieldbus, HART, Modbus
PROFIBUS-DP, Analogue, Digital, RTD,
TC, Isolated, Channel-isolated

FCN : Redundant Model

The FCN offers high reliability with redundant control, network and power supply. They are also scalable by adding expansion units.



FCN-RTU: Low Power Consumption Model

The FCN-RTU is the best fit for remote applications with low power consumption and wide temperature range (-40°C to 70°C). It is designed to work with solar power supplies.



All-in-One Model

In spite of the compact size, FCJ supports redundant networking and two RS-232 ports. With embedded IOs, it covers many small size applications.



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IN ADVANCE

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WITH AGILITY

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