



Proficy™ Real-Time Information Portal

Proficy Real-Time Information Portal 2.1 (formerly infoAgent™) is GE Fanuc Automation's breakthrough real-time information portal application, allowing you to gain business insight from all of your plant data in real time. This powerful application is an incredible resource for your business, providing visibility into plant floor operations. As a result, it enables real time decision support, continuous process improvement and enhances the return on your current and future IT investments.

Proficy Real-Time Information Portal provides a web-based solution that integrates all of your on-line and process-based systems with plant-wide connectivity, analysis and web-based visualization components.

This revolutionary application provides a common web client and reporting environment for a fully integrated solution that maximizes the value of your other GE Fanuc applications, as well as the data and content from your legacy and third party systems. By applying sophisticated trending, graphical presentation and statistical analysis to all of your on-line data, Proficy Real-Time Information Portal provides unique organization-wide views and insight into how your plant is operating, and how to improve it.



Proficy Real-Time Information Portal Features and Benefits

Robust Application Framework

Proficy Real-Time Information Portal 2.1 leverages Sun Microsystems Java to provide a rich, web base environment for developing and deploying visualization, analytical and reporting applications. As a pure web-based application, Proficy Real-Time Information Portal allows the end user unprecedented access to data and control over how to visualize and analyze it – all in a simple, easy to use and near-zero-maintenance environment that is script and HTML free.

- Web based configuration, runtime and administration environment requires no client install or maintenance.
- Script and HTML free environment means end users, not programmers, can customize Proficy Real-Time Information Portal displays, analysis and reports, and publish them directly to the web.
- Personalized and role-based navigation and security personalizes the user's experience, secures your data and simplifies compliance with the U.S. FDA's 21 CFR Part 11 Rule for Electronic Record Keeping.
- Easily convert interactive displays into reports for printing or saving in Adobe pdf format by adding heading and footers, and formatted grid expansion.

Time-based Data Analysis

Proficy Real-Time Information Portal provides an interactive analysis of real-time and historical data sources through trend charts, grids and data links, giving you insight into the operation of your plant for making crucial improvements to quality and efficiency.

- Connect and interact with plant-wide, real-time and historical data sources and interact and adjust system parameters with read/write capabilities.

- Visualize, annotate and analyze process data, strings or other information with the Time chart.
- Analyze your process by event (such as comparing batch or production runs) using the event component.
- Drill into detail data using intelligent grid components that allow data to be easily sorted, printed and exported.

Universal Web Client

A single web client that combines content from other GE Fanuc applications such as Proficy HMI/SCADA – iFIX and data from across all on-line data sources within the plant and the organization allows for real-time decision making at all levels. Solve your plant portal needs with a single script and in an HTML free environment.

- Combine the client functions of our full software family with information from legacy and third party systems on the same screen at the same time.
- Use the Proficy HMI/SCADA – iFIX JumpStart utility to automatically create portal content based on real-time Proficy HMI/SCADA – iFIX displays.
- Graphically create a library of parameterized SQL statements that interact with plant floor and corporate data stores. Proficy Real-Time Information Portal supports SELECT, INSERT, UPDATE, DELETE and CALL statements.
- Build and deploy sophisticated, web based, portal and cockpit applications with KPIs and drill down by linking forms components, buttons, hyperlinks, charts and more.

Graphical Presentation

Graphical presentation rapidly communicates essential information from more complex data sets for notification of alerts, status changes and

data summaries. Graphical presentation can also bring a familiar look and feel when moving plant floor applications to the web, providing:

- A complete graphics library of shapes, images, etc.
- Common graphical tools for drawing displays (align, group etc).
- Animation of shape properties from any data source and command actions for navigation and drill down.
- Jump Start import from SVG files for converting portions of graphics from other applications i.e., (Proficy HMI/SCADA – iFIX).

Enterprise-wide Quality

Enterprise-wide quality takes data from other GE Fanuc Quality applications (Proficy Shop Floor SPC, Proficy Quality) and other third party or legacy systems and provides SPC charts and components for monitoring and performing root cause analysis. This feature supports consistency, quality, Six Sigma and other continuous improvement initiatives across the plant and across the entire organization. As the web client for the entire GE Fanuc software portfolio, Proficy Real-Time Information Portal provides a consistent set of tools for analyzing and reporting disparate process, lab and shop-floor SPC systems, along with interfaces to off line six sigma tools such as Minitab. These tools include:

- A complete set of variable SPC charts, including control charts, histograms, pareto charts and correlation/regression charts.
- Control chart alerts based on Western Electric Stopping Rules.
- Calculated or supplied control limits for charts
- Quick Reports for drill down into any SPC chart and direct export of chart data to Minitab or Excel for offline analysis.

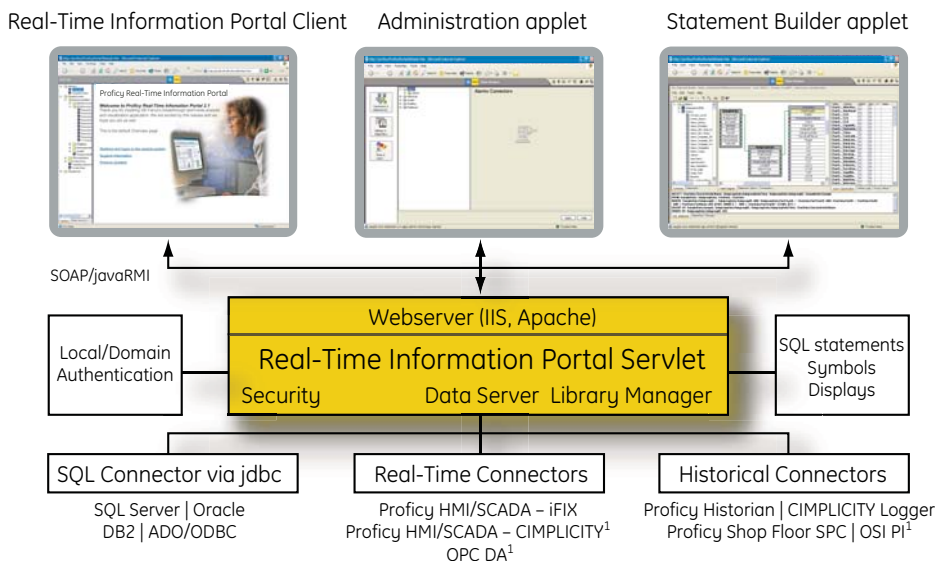
System Architecture

Proficy Real-Time Information Portal 2.1 is a web-based java application that runs under the Microsoft IIS webservice.

Proficy Real-Time Information Portal includes three client applets: the Client, which supports both runtime and configuration mode; the Administrator and the Statement Builder. Applets are downloaded and run inside the java runtime engine running within a web browser.

The server runs the Proficy Real-Time Information Portal Servlet, which provides file and user management and the connector infrastructure.

SQL-based connectors use jdbc drivers installed on the server to connect to relational data sources, while real-time and historical connectors use local or remote api interfaces¹. See page 7 for versions and software requirements for connectors.



¹ Proficy HMI/SCADA – CIMPLICITY, OPC and OSI PI connectors are remotable, allowing for connector installation on remote systems. When a connector is remotated it communicates back the Proficy Real-Time Information Portal server through TCP/IP.

Proficy™ Intelligent Production Solutions

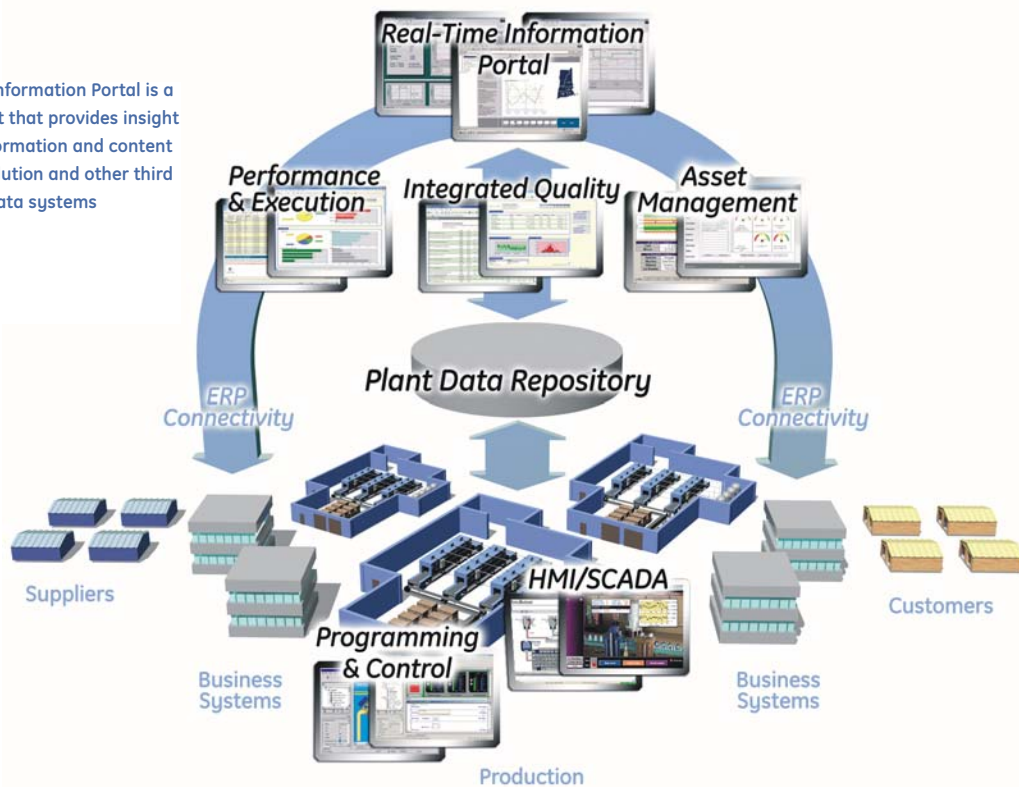
For years, manufacturers throughout the world have recognized the critical link between production efficiency and profitability. But as new competitive pressures emerge, even the most successful companies are being forced to continually streamline their operations.

The demand for speed, agility and responsiveness in your production operations has never been greater – transforming not only how you manage production assets, but how you do business. As a result, real-time production management is now a cornerstone of any profitable company. And Proficy is the cornerstone of real-time production management.

Proficy is an open, powerful Intelligent Production Solution that provides the plant automation, analysis and execution capabilities that every manufacturer needs, along with the connectivity to the business environment that every company craves. And whether you implement an entire group of applications or simply install an individual module to meet a specific production need, Proficy enables you to incorporate the right solution for your business at any time – regardless of your current automation infrastructure.

Imagine a seamless, cohesive and entirely modular infrastructure that brings the worlds of business and manufacturing together as one – from GE, the company that has set the worldwide standard of excellence for both. The implications for your success are endless.

Proficy Real-Time Information Portal is a universal web client that provides insight and analysis to information and content from the Proficy solution and other third party and legacy data systems



Performance and Agility for the Real-Time Enterprise

GE understands that businesses today are under continuous pressure to increase productivity and improve profitability.

The Proficy solution integrates a full range of easy-to-use applications and services to continuously improve your level of productivity. It has been developed to build intelligence into your processes – gathering, analyzing, and transforming data into information and enabling you to act in real-time to optimize results.

Proficy connects the equipment on your floor, business systems and decision-makers. This closed-loop experience ensures that production runs smoothly, efficiently and with greater profitability.

With Proficy, you'll have the resources to meet your greatest manufacturing challenges, through a combined set of capabilities including:

- **Plant Intelligence** – Making business sense out of plant data in real time
- **Asset Management** – Optimizing profitability by managing equipment and other plant assets
- **HMI/SCADA** – Improving production performance with plant floor visualization and control
- **Programming and Control** – Allowing you to develop Motion, PLC and PC Control and visualization applications in a single integrated environment
- **Software Services** – Maximizing your software investment through GE support, training, and professional services

Proficy Real-Time Information Portal

Proficy Real-Time Information Portal 2.1 is a breakthrough web-based portal system that provides advanced analysis, reporting and visualization capabilities. As the web client for the entire GE Fanuc product family as well as other third party plant systems, Proficy Real-Time Information Portal brings together all of your process and on-line data and presents and analyzes it so that decisions can be made in real time, based on all the information available. For the first time, users throughout your facility and throughout the world now have access to production data how and when they need it – all at the click of a mouse. Proficy Real-Time Information Portal provides this connectivity to your plant data with a robust set of analysis and visualization components – all in a personalized web portal environment that was developed specifically to meet your industry's strict requirements.

Proficy Real-Time Information Portal is available in both Historian and Enterprise Edition to meet your specific needs. Both versions include a wide range of features and functionality that enables you to significantly improve your overall understanding of what is happening across your plant.

Proficy Real-Time Information Portal Application Framework

The Proficy Real-Time Information Portal application framework provides the common platform with which Proficy Real-Time Information Portal applications are developed and deployed. It provides data connectivity and a host of client functionality that is available in both editions of the software.

Data Connectivity

Proficy Real-Time Information Portal supports a direct connection to real-time, historical and SQL-based data sources. It allows you to visualize and analyze information from virtually any plant source, including PLC/DCS systems, SCADA/HMI solutions, plant wide historian, lab system, MES, ERP or MRP systems.

Linked Content / Hosting

The Proficy Real-Time Information Portal system tree will provide an easy way to link to content from other systems and sources, without leaving the application.

Customization of System Tree and Subfolders

The system tree makes it easy for users to organize displays and information in a way that makes sense to the end users.

Natural Presentations

Users can drag and drop information from the system tree directly onto Proficy Real-Time Information Portal displays. Proficy Real-Time Information Portal will automatically present the information in the most appropriate way.

Read / Write Support

Read and Write support is available through several components, including data links, command objects and the grid. Using these components, users can optionally write back to data sources.

Pens and Pen Groups

Pen Groups are used to apply generic pen lists and for trending objects. This powerful capability reduces development time, since multiple pen groups can be applied to a single display at run-time to provide views of different data.

Symbols & Substitutions

Substitutions or symbols can be used to populate displays with different datasets at run-time. This increases productivity by providing a way to re-use displays, or to set the context of a display.

Data Export and Reporting

Displays and Charts can be quickly and easily printed by right-clicking the mouse and selecting Print. Quick Reports supported by Quality components provides a simple way to document the descriptive statistics and detail information behind SPC analysis.

Data Export

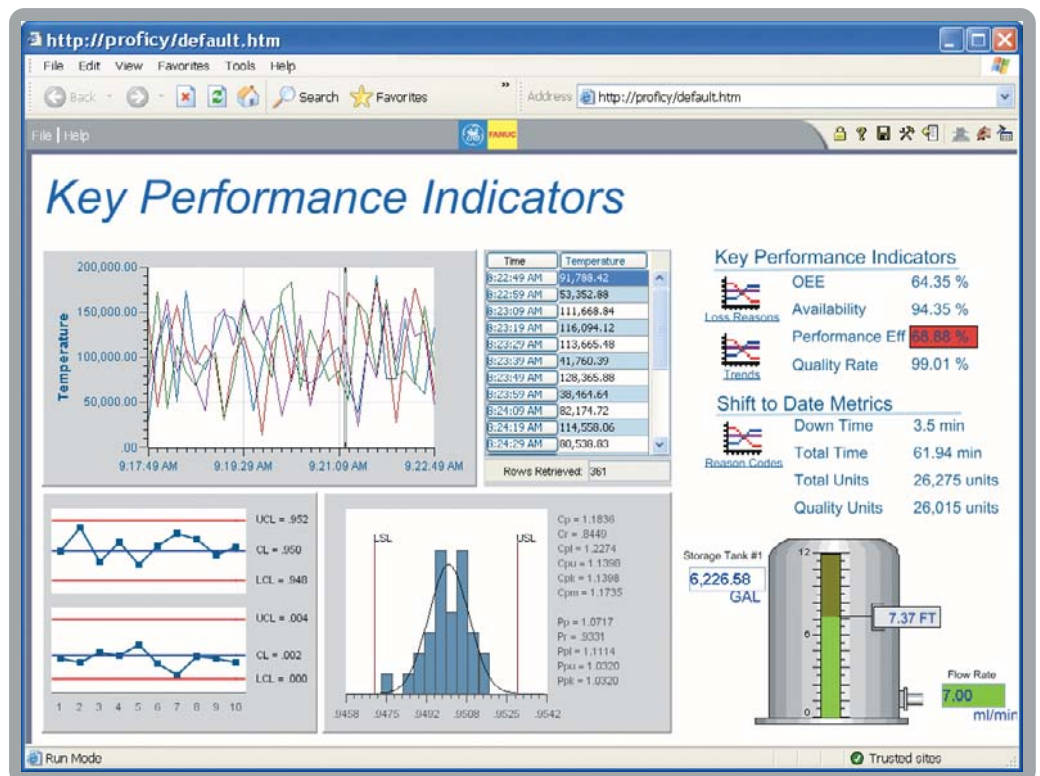
Data can be easily exported to a comma separated variable (CSV) file format, or copied to the clipboard for desktop applications.

Thumbnails

Proficy Real-Time Information Portal chart components can be reduced and displayed as "thumbnail" icons on the screen, which pop up in their own window when double clicked.

Natural Printing

Report generation is a key part of any portal. Natural Printing allows users to easily create printed or saved reports from interactive displays with a single click. Reporting can include headers, footers and page breaks, and can expand and scale the contents of grids.



Proficy Real-Time Information Portal Historian Edition

The Proficy Real-Time Information Portal 2.1 Historian Edition is a sophisticated trending and analysis application for making business sense out of plant-wide time based process data. It is an easy-to-use, yet powerful client tool developed for the best-in-class Proficy Historian plant-wide database and extended to connect to a host of real-time and historical data sources. Historian Edition provides users with a comprehensive solution for visualizing and analyzing time-based data from throughout the plant. Typical applications include:

- Process Trending
- Monitoring and Diagnostics
- Event and Production Trending
- Ideal or Golden Batch Analysis.

Charts, Grid & Display Components:

A robust set of Charts and Tabular Components are included in the Historian Edition for sophisticated analysis and visualization of data:

Time-Series Trend Charts

Analyzing time-series data is easy with Proficy Real-Time Information Portal's Trend Chart functionality.

Event Charts

Event trends allow data to be queried and displayed by criteria other than time; i.e., batch ID or serial number.

Text Trending

String or Text values can be trended on the Y-axis. Transitions, or string value changes, can be identified by examining the step-like patterns.

XY Plots

XY plots give you the power to plot values and compare them against each other.

Alarm Plots and Grid

Assign alarm limits to plot lines, allowing pen line colors to change when limits are exceeded. View, filter and sort Proficy HMI/SCADA – iFIX alarm histories stored by the Proficy HMI/SCADA – iFIX Alarm ODBC service.

Tabular Data – Grid

The grid components provide a tabular view of data from any Proficy Real-Time Information Portal data source, including relational data, historical and real-time sources.

Datalinks and "Roll-Ups"

Datalinks enable you to display numeric values on a Proficy Real-Time Information Portal screen. Roll-ups, or post-processed information such as total, average, minimum and maximum values over a range, can also be presented in a display.

Quick Analysis

Quickly view trends and analyze detailed data using Quick Analysis capabilities. Quick analysis allows users to drill down into different data values using a simple click of the mouse.

Named Times and Time Ranges

Support for Named Times and Time Ranges can be provided, simplifying and unifying configuration settings. Named ranges can be applied to displays and display components, making it easier to view data by named shift, period or other named combinations. Named times are shared system-wide and appear through the display components and within the time component.

Axis Stacking and Chart Transparency

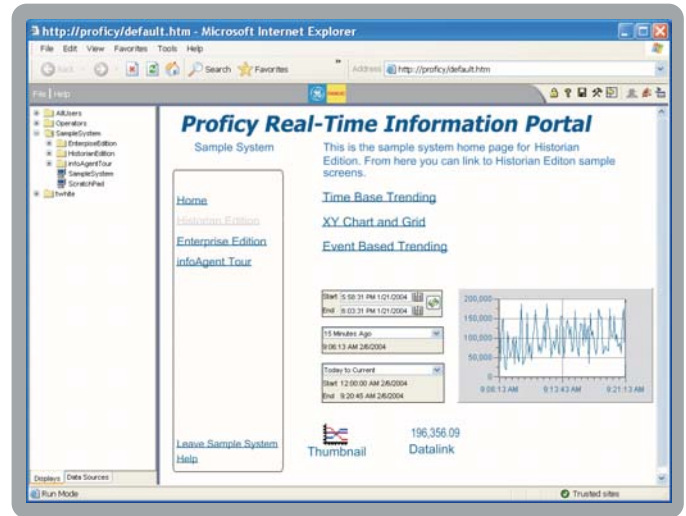
Proficy Real-Time Information Portal charts incorporate Axis Stacking and Chart Transparency, powerful features that make it easy to compare data.

Annotations for Process Optimization

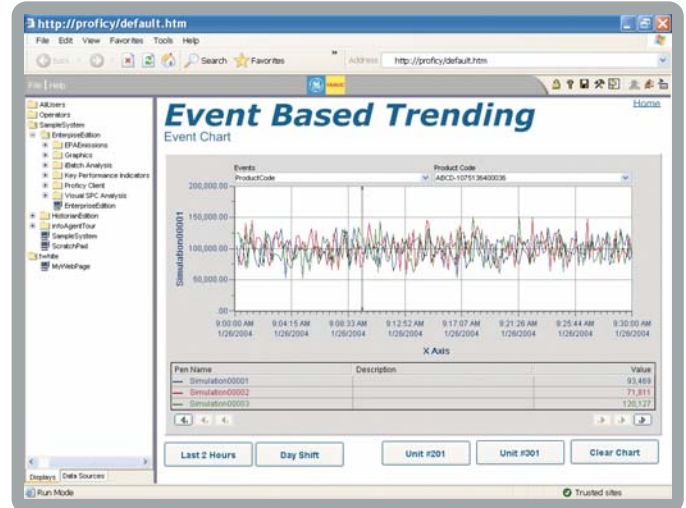
Annotations and comments can be added to charts and grids and stored in the Proficy Historian, then easily edited and displayed. You can add, store, and retrieve comments, providing an explanation of process anomalies and other production events.

Display Scrolling

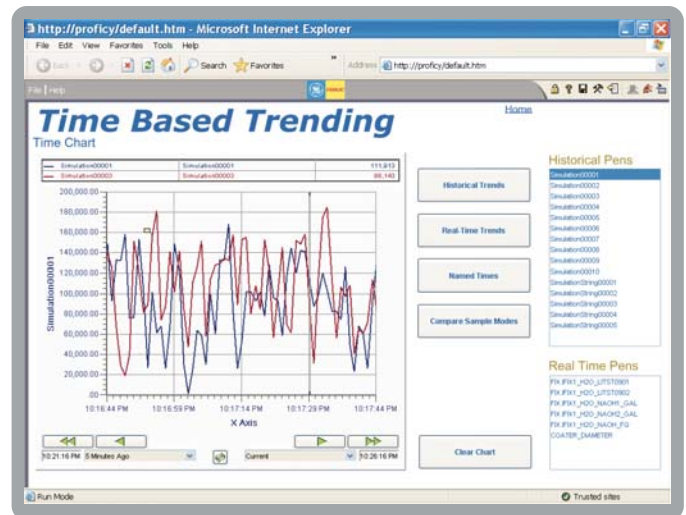
Display Scrolling allows an entire display to be navigated through time by using one set of scroll buttons.



Time Based Analysis



Event Based Trending



Interactive Analysis of Time Based Data

Proficy Real-Time Information Portal Enterprise Edition

The Proficy Real-Time Information Portal 2.1 Enterprise Edition is an advanced plant-wide analysis solution for integrating process and product-based data into a common web view portal system. Extremely easy-to-use, 100% web-based and customizable by end-users, the Proficy Real-Time Information Portal Enterprise Edition provides Production Managers with a powerful method for driving real-time performance management and continuous improvement throughout the organization.

Typical applications include:

- Real-Time Performance Management, including Key Performance Indicators (KPIs)
- Web-based Product and Process Data Integration and Reporting
- Remote Monitoring and Analysis
- Robust Batch and Event Trending Analysis and Reporting
- Quality Analysis and Reporting
- Relational Database Interfacing.

Proficy Real-Time Information Portal Enterprise Edition includes all the features of the Historian Edition, plus critical functionality for deploying more advanced web-based information applications.

Relational Database & OPC Support:

ODBC, JDBC, OLEDB

Different communication methods and drivers are supported for communicating with relational databases. This includes support for communication to ODBC sources, OLEDB providers and native JDBC drivers for specific databases such as Oracle, DB2 and Microsoft SQL Server.

Statement Builder

Users can graphically create re-usable SQL statements or queries that can be used throughout the Proficy Real-Time Information Portal system. These reusable statements can be easily created by graphically selecting the appropriate database fields.

Commands

Support for SQL Insert, Update, Delete and Execute and Call commands are supported.

Statement Binding

Proficy Real-Time Information Portal's advanced SQL engine allows the results from SQL statements to be quickly and easily bound to Proficy Real-Time Information Portal display components. Parameterized statements are supported with parameters linked at run time from other components on the display. Statements can be triggered automatically or on command from other controls. Queries can be reused and applied to any type of display components as needed.

Key Performance Indicators

Proficy Real-Time Information Portal integrates with Proficy Efficiency which provides an easy method for Proficy Real-Time Information Portal users to monitor key performance indicators (KPIs) being derived by Proficy Efficiency.

In addition, ad-hoc Calculations and Expressions can be created within Proficy Real-Time Information Portal to perform a wide variety of KPIs.

Additional Charts, Grids and Display Components:

Pie, Bar and Line Chart

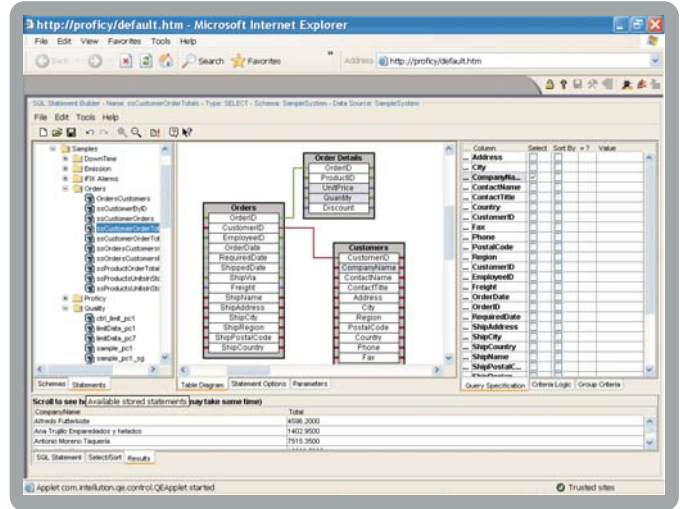
These additional chart components allow users to graphically represent data from any Proficy Real-Time Information Portal data source.

Hierarchical Data

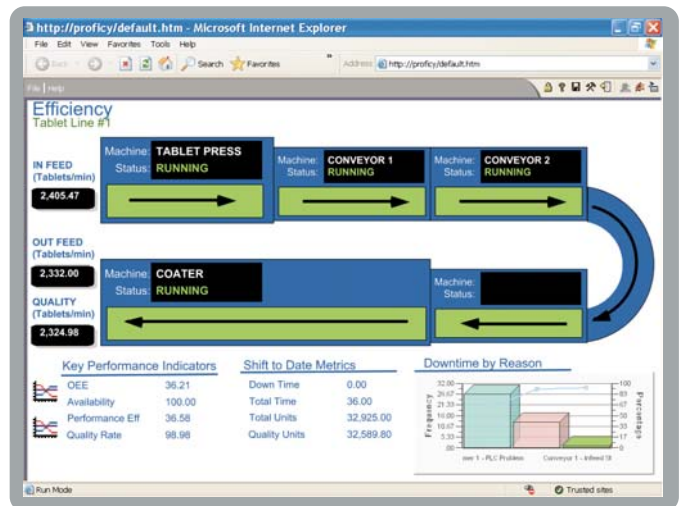
The tree component will present data from any Proficy Real-Time Information Portal data source in a hierarchical or "grouped" fashion. The tree can be used to display and organize information and can be used to trigger queries and other analyses.

"Form" Components

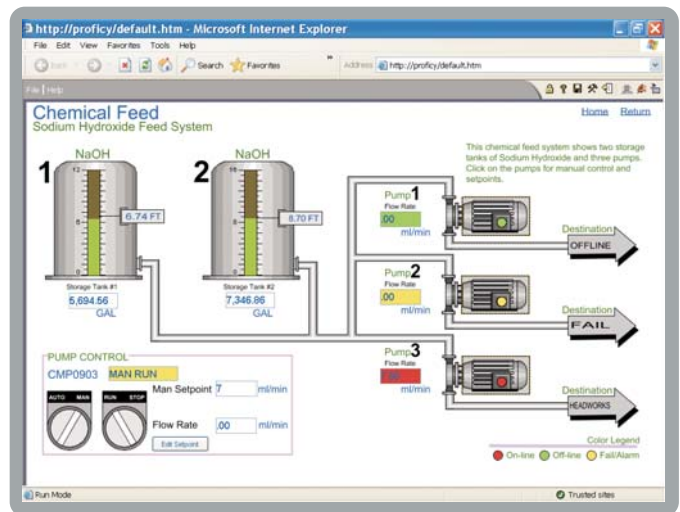
Support standard form components, including a list box, combo box and text box will be included for use in applications. These components make building interactive queries simple.



Statement Builder



Key Performance Indicators



Graphical Presentation

Graphical Presentation

The graphical shape library allows for the development of graphical display elements that communicate alerts, plant status and key metric indications.

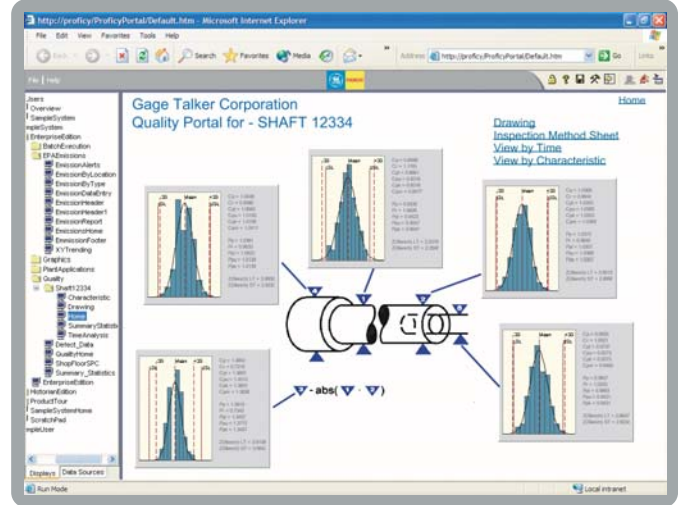
The shape library includes: line, polyline, polygon, rectangle, rounded rectangle, oval, arc, chord and pie, with all properties exposed. Shapes can be animated from any data source for size, color, position, visibility, caption and fill.

Enterprise Wide Quality

Using Proficy Real-Time Information Portal quality charts, you can clearly understand and improve process quality and variation. Simple and powerful SPC analysis components, combined with the flexibility and versatility of Proficy Real-Time Information Portal's web-based application framework and connectivity, make it an ideal solution for analyzing plant data, controlling plant processes and identifying the root causes of process failures.

Enterprise Edition provides a comprehensive set of quality charts with advanced statistical capabilities. The components in the quality module include variable control charts, histogram, Pareto, C, Np, and U charts. A correlation chart aids in finding correlations between data sets for root cause analysis.

As the common web client for the full GE Fanuc software family, Enterprise Edition provides analysis and reporting of quality metrics and alerts, and helps drive continuous improvement.



Statistical Quality Control Charts

SPC analysis can also be applied to other quality and plant systems, such as plant-wide historian, LIMS and shop floor SPC packages, to give a comprehensive and consistent approach to measuring and managing quality and process improvement that is visible to the entire organization.

Proficy Real-Time Information Portal Connectors

GE Fanuc Connectors	Versions	Additional software requisites
Proficy HMI/SCADA – iFIX Real Time and ODBC Alarm History	Versions 2.5 and above	Requires Proficy HMI/SCADA – iFIX runtime on the Proficy Real-Time Information Portal server
Proficy HMI/SCADA – iFIX ODBC Alarm History	Versions 2.5 and above	May require client access license for relational database used
FIX 32	Version 7.0 and above	Requires FIX32 runtime on the infoAgent server
Proficy HMI/SCADA – CIMPLICITY	Version 5.0 and above	Requires Proficy HMI/SCADA – CIMPLICITY patch file (free download)
Proficy Historian	Version 1.0 and above	Requires a single Proficy Historian CAL
OPC DA	1.0 and 2.0 DA servers	
Proficy HMI/SCADA – CIMPLICITY Logger	Version 5.0 and above	Requires client access license for relational database used
Proficy Shop Floor SPC	Version 5.3 and above	

External Connectors	Versions	Additional software requisites
OSI PI	PI 2, 3 Systems	Requires PI API installed either remotely or locally to the server
Oracle*	8i R2-R3 (8.1.6-8.1.7) 9i R1-R2	Requires Client license
SQL Server*	7.0 2000 2000 SP1 2000 SP2 2000 SP32 2000 Enterprise Edition	Requires Client license
DB2*	Windows, UNIX, Linux, Linux/s390 v7.1, v7.2, v8.1 OS/390 v6.1 z/OS and OS/390 v7 AS/400 V4R5, V5R1, V5R2	Requires Client license
ADO/ODBC*	Version 1.0 and above	May require Client license

Proficy Real-Time Information Portal 2.1 includes a number of Plant Intelligence connectors to other GE Fanuc applications which are included in both editions of the software. Optional external connectors to third party or industry standards are also available. In addition, Proficy Real-Time Information Portal has a collector toolkit so that additional connectors can be developed based on your specific needs.

*Available on Enterprise Edition only

Proficy Real-Time Information Portal 2.1 System Requirements

Proficy Real-Time Information Portal Server

Hardware:

Minimum

Pentium III 1GHz & 1 GB RAM

Recommended

Pentium IV 2 GHz & 2 GB RAM or better

Software Operating System:

Microsoft Internet Information Server (IIS)
Web server v5

Windows 2000 Server or Advanced Server, SP3
or Windows 2003 Server

Proficy Real-Time Information Portal Clients

Microsoft Internet Explorer v5.5 or higher

Support for Java 2 Runtime (provided)

One of the following:

- Windows NT v4.0 SP6 or higher
- Windows 2000 SP3 or higher
- Windows XP SP1 or higher

Proficy Real-Time Information Portal 2.1

GE Fanuc's Proficy Real-Time Information Portal gives you unprecedented visibility into your production, providing real-time access to information from all the on-line data sources throughout your operation. Proficy Real-Time Information Portal is a key part of achieving a full Plant Intelligence solution for your business. Proficy Real-Time Information Portal 2.0 is available in both Historian and Enterprise editions to suit your specific needs.

Proficy Real-Time Information Portal Historian Edition

The Proficy Real-Time Information Portal Historian Edition is a powerful and flexible historian client tool that provides visualization and analysis of time-based data from historical and real time data sources.

Proficy Real-Time Information Portal Enterprise Edition

The Proficy Real-Time Information Portal Enterprise Edition includes all the enhancements and features found in the Historian Edition, as well as many others. Enterprise Edition transforms plant data into business sense with organization-wide visibility, graphical visualization and advanced analysis and statistics. It provides a common web client for Plant Intelligence, third party and legacy plant systems.

Proficy Software Modules:

Real-Time Information Portal
Proficy Real-Time Information Portal

Plant Performance and Execution

Proficy Batch Analysis
Proficy Batch Execution
Proficy Efficiency
Proficy Production
Proficy Tracker
Proficy Machine Tool Efficiency

Integrated Quality

Proficy Quality
Proficy Non Conformance Reporting
Proficy Shop Floor SPC

Plant Data Repository
Proficy Historian

Asset Management

Proficy Enterprise Asset Management
Proficy Remote Monitoring & Diagnostic
Proficy Change Management

HMI / SCADA

Proficy HMI/SCADA – iFIX®
Proficy HMI/SCADA – CIMPLICITY®
Proficy View – Machine Edition

Programming & Control

Proficy Logic Developer – Machine Edition
Proficy Motion Developer – Machine Edition

GE Fanuc Support & Services:

Proficy GlobalCare Support
Proficy Professional Services
Proficy Training

GE Fanuc Automation Information Centers

Americas:
1-800-GE FANUC or (434) 978-5100

Europe, Middle East and Africa:
(352) 26722-1

Europe, Middle East and Africa (CNC):
(352) 727979-1

Asia Pacific:
86-21-3222-4555

Additional Resources

For more information, please visit
the GE Fanuc web site at:

www.gefanuc.com

