

MAKE INTELLIGENT PLANT DECISIONS IN REAL TIME WITH WONDERWARE DATA ANALYSIS AND REPORTING CLIENTS

Wonderware data analysis and reporting clients put actionable information into the hands of the people most responsible for plant performance: operators, engineers and operations managers.

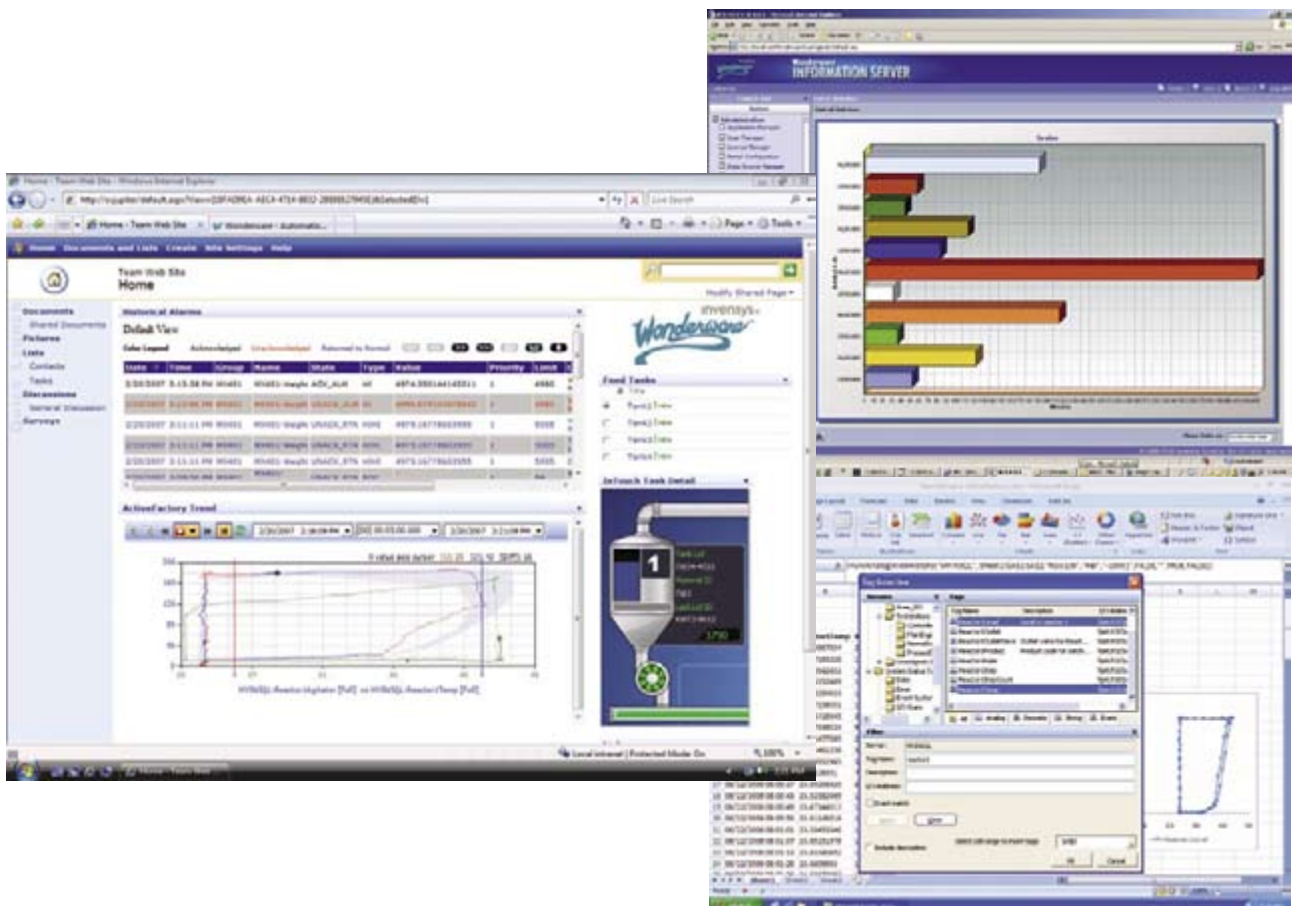
Wonderware data analysis and reporting clients deliver information from the primary information flows found in any manufacturing or industrial operations environment: **production management** information from your business systems to the plant floor and **performance management** information from your assets and activities to your business systems.

Data analysis and reporting clients from Wonderware can deliver production and performance information easily to all groups within your organization such as operations, maintenance, engineering, planning, quality, purchasing and receiving. These clients are ideal for delivering decision-making information to groups tasked with plant-wide initiatives such as lean manufacturing, Six Sigma or other productivity improvement programs.

Wonderware offers two types of Data Analysis and Reporting Clients with ActiveFactory Desktop trend and analysis and Wonderware's Information Server Web-based clients. These enable manufacturers to build the comprehensive production and performance management system needed to drive a plant to the next level of productivity and operational excellence.

ActiveFactory software is designed to provide a rich, desktop-based analysis and reporting experience. It is typically used by an engineer or advanced user charged with preparing reports for other users. It features ad hoc analysis capabilities with no restrictions on the functions available and full resolution of process data.

Wonderware Information Server Web clients are designed for the more casual user who relies on a Web browser to access real-time dashboards, pre-designed reports of plant activities as well as the occasional requirement for *ad hoc* analysis.



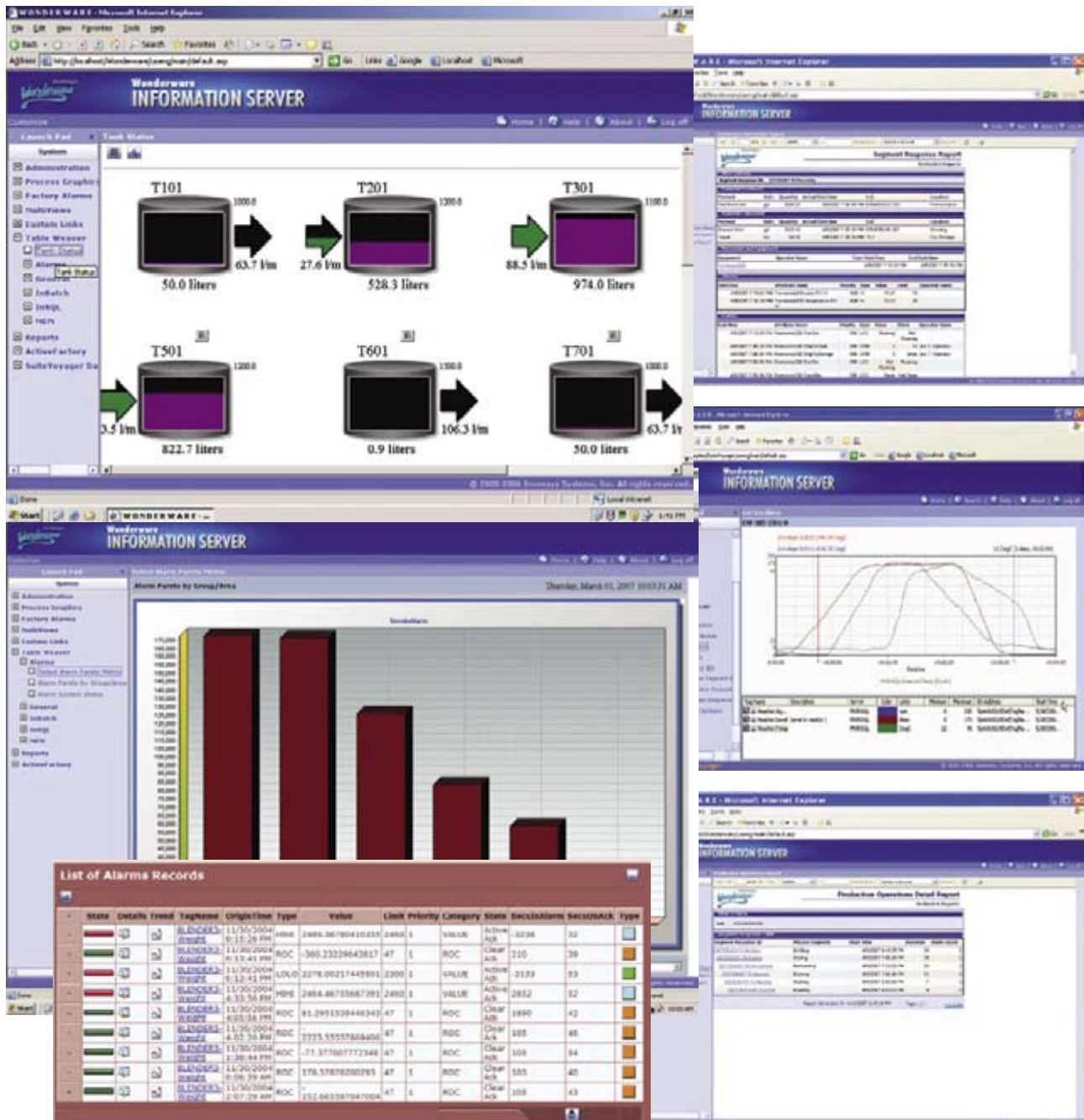
INFORMATION SERVER WEB CLIENTS — DELIVERING PRODUCTION AND PERFORMANCE MANAGEMENT INFORMATION TO THE ENTERPRISE

The Wonderware Information Server offers a single Web solution for aggregating and presenting plant production and performance management information over the Web or company intranet.

Information Server Web Clients enable employees across the enterprise to make better-informed decisions, based on accurate, real-time information. The full spectrum of Wonderware-generated content, including process graphics, trends and reports, is made available on a single Web site. This makes it easier for users to obtain the real-time and historical plant data they need to improve plant operations.

The Information Server also helps connect plant personnel with non-Wonderware data sources so they can access a plant's entire performance record.

Wonderware Information Server software is a key component of Wonderware's modular, sustainable family of real-time production and performance management solutions.



Engage the Entire Organization in Process Improvement through Improved Process and Manufacturing Visibility

To be most effective, plant managers need to engage the entire plant workforce in process improvement initiatives. Information is key to unlocking the creative talents of workers. Armed with up-to-date and accurate plant performance information, workers can solve process issues faster and discover hidden opportunities. Wonderware Information Server is the essential tool needed to deliver this vital information to the entire plant cost effectively.

Wonderware's Web solution aggregates a wide range of plant performance information including process trends, production reports, equipment downtime, equipment efficiency, production events and history including traceability and genealogy information. This can help reduce the time spent in department meetings because everyone has access to complete and accurate process information and the reasons for production losses.

Information Server Web Clients allow each plant worker to view just the information they need via personalized Web content – even in multiple languages.

Reduce Total-Cost-of-Ownership with Web Environment Designed for Engineers

Wonderware Information Server significantly reduces the need to have IT staff design, implement and maintain Web applications. Setup, layout and content management are designed to be performed by users with no programming knowledge.

It reduces the burden on plant IT personnel by lowering the technical barrier for creating and maintaining a plant information website, enabling users to perform ad hoc analysis and reporting using Microsoft® Office skills to dramatically increase visibility into actual operations and processes. Even enterprise-wide access to plant information can be achieved through centralized software administration and management.

Reduce Production Costs through Higher Plant Intelligence

Keeping production costs to a minimum is vital in today's competitive marketplace. One important way to reduce costs is through the optimization of production processes. To do this effectively requires accurate process data and a way to easily expose it to key operators, engineers and managers. Through better understanding of production processes, workers can improve plant intelligence and the ability to improve plant performance.

Information Server helps deliver accurate, timely plant data to personnel in a very cost-effective manner allowing people to be better informed on operations. The result is increased customer responsiveness through faster and more accurate identification of the actual state of production activities.

The Wonderware Information Server Web Client software can facilitate access to a broad range of real-time plant data sources including:

- Real-time and historical information from supervisory systems via charts, trends, data tables and graphical displays
- Information from the Wonderware Industrial Application Server, InTouch HMI software, I/O Servers, DDE servers and more
- Any database or historian that supports ADO/ODBC connections – such as the Wonderware Historian, InTouch alarm databases, Oracle databases and Microsoft SQL Server
- Third-party systems via open interfaces such as XML, OPC, OLE, SQL, Web Services, HTTP and SOAP
- ACAD drawings and HTML reports designed to be displayed over a browser (they can be incorporated into and viewed via the Wonderware Information Server)

Process Graphics Anywhere at Any Time

Real-time visualization and control of the manufacturing process can be viewed anywhere – via the Web or company intranet. Operations, plant management and engineering personnel can have a direct view into critical plant processes allowing better collaboration and troubleshooting. InTouch process graphics can be easily imported into the Wonderware Information Server and viewed via Information Server Web Clients, and process adjustments can be accomplished remotely using Information Server's optional write-back functionality.

Rich Data Analysis

- Trend charts
- X-Y Scatter plots
- Batch trend charts

Production and Performance Reporting

Reports from a host of Wonderware software solutions can be viewed via Information Server Web Clients. These include:

- ActiveFactory Workbook performance and analysis reports
- Dynamic, drill-through Table Weaver reports and data displays

- OEE and equipment downtime reports and KPI dashboards from the Equipment Performance Module
- Equipment Operations Module reporting including:
 - ◆ Production events and formula reporting (usage & set-points)
 - ◆ Material consumption including comparisons of “plan vs. actual”
 - ◆ Consumption and genealogy of materials, equipment, personnel and production events related to a lot, batch or serial number
 - ◆ Complete traceability and genealogy reporting to help you comply with governmental regulations
- Integration with Microsoft SQL Server 2005 Reporting Services
 - ◆ Leverage powerful report configuration capabilities of Reporting Services
 - ◆ Simplified connectivity to the Wonderware Historian
 - ◆ Integrated historian tag navigation, date/time selection and simple drop-down selection of powerful Wonderware Historian data retrieval modes
 - ◆ Publish reports to Information Server website or save on local PC

Secure and Easy to Implement Web Solution

To keep plant information safe and secure, the Wonderware Information Server is delivered with safeguards built-in to protect information from unauthorized access and prevent users without privileges from performing certain functions. Security features include:

- Integrated Microsoft Windows® operating system authentication. Users must be authenticated before they can access the Wonderware Information Server
- Encryption/security. Secure Sockets Layer (SSL), Digital Certificates and Single Sign-On protections
- Firewall-friendly. The portal can be placed inside a DMZ
- Portal roles. The portal administrator assigns Read, Write and Administration privileges
- Publishing rights. Users must be assigned remote and local publishing privileges

Information Server software is exceptionally easy to use and enables plant personnel to quickly build a plant information website by providing the entire website framework, home page and configuration tools out of the box.

Information Server 3.0 consists of:

Web Content Server

The Web Content Server provides:

Portal infrastructure for building a plant information website customized to your company's requirements.

Web Server framework:

- Home Page
- Portal personalization
 - ◆ Multi-view Windows
- Centralized administration & management
- Integrated Security
- Extensive Search
- Multilingual Support

Integration:

- Microsoft SharePoint Services
- Microsoft SQL Server 2005 Reporting Services

Intelligent Content Linking:

- Table Weaver provides streamlined content linking & powerful drill-through capabilities
- Alternative data displays for richer data visualization
 - ◆ Trends
 - ◆ Bar charts
 - ◆ InTouch SmartSymbol displays

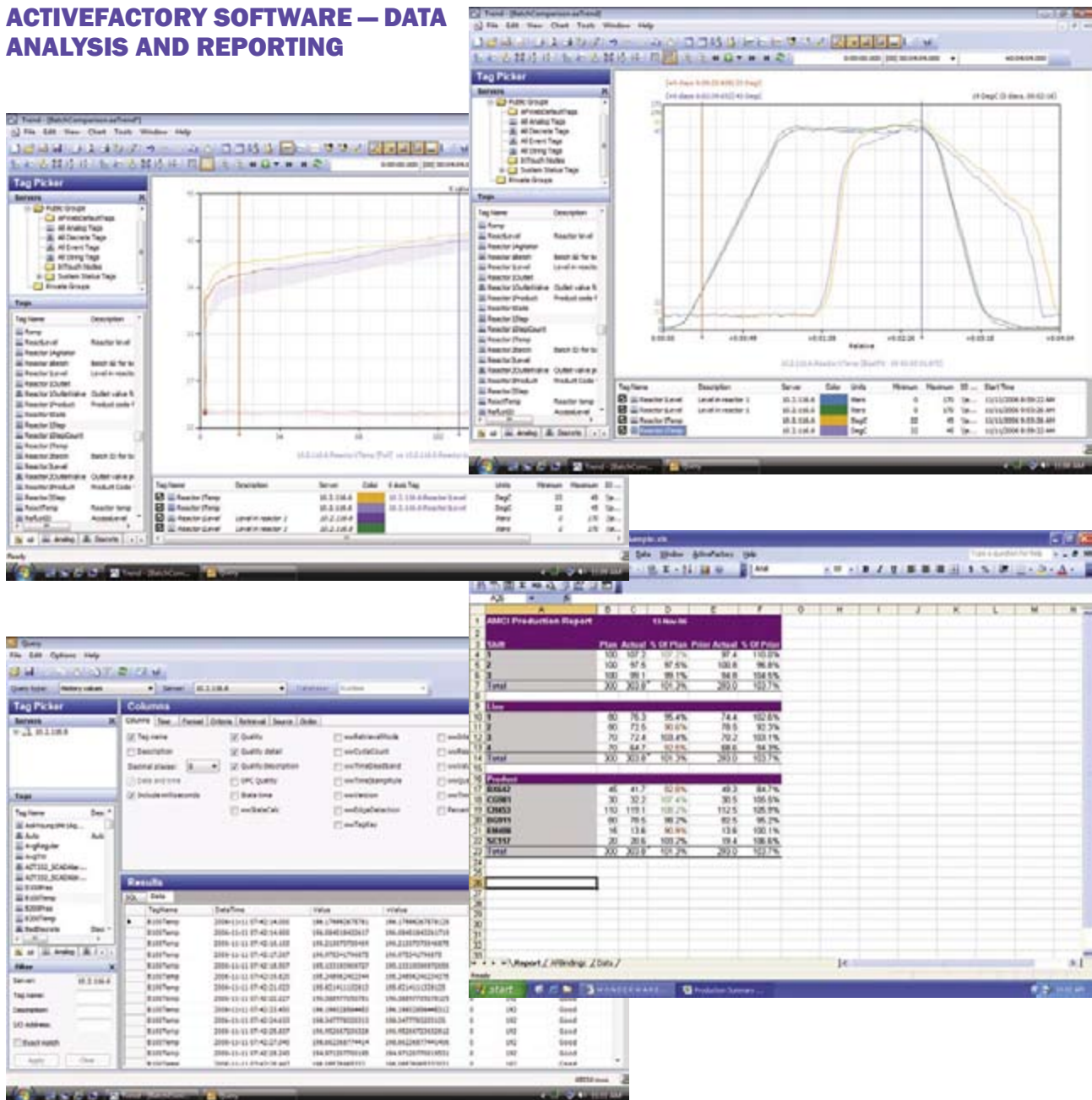
Web Clients:

Plant personnel use Information Server Web clients to access the broad range of plant information delivered by the Information Server Web Content Server.

Web Clients provide:

- User-specific views of plant performance tailored to particular work responsibilities.
- Immediate access to process displays, trends, reports and more. Problems can be identified and fixed faster.
- Access to plant performance data from any Web-enabled PC. Plant personnel can participate in process improvement and troubleshooting even when they are away from the plant.

ACTIVEFACTORY SOFTWARE — DATA ANALYSIS AND REPORTING



Wonderware's ActiveFactory trending, analysis and reporting software offers a suite of desktop clients that maximize the value of data stored in the Wonderware Historian. ActiveFactory software has been designed to allow easy access to plant and process data through simple point-and-click dialogs. Using information from ActiveFactory, plant workers can quickly troubleshoot problems, study potential operational inefficiencies and eliminate the time-consuming process of locating data.

ActiveFactory software delivers real-time and historical data trend analysis, sophisticated numerical data analysis using Microsoft Excel® software, comprehensive data reporting using Microsoft Word, powerful database querying capabilities and the capability to publish ActiveFactory trends and reports to the Web or company intranet.

Web access to published ActiveFactory historical and real-time information is made simple via the Wonderware Information Server Web content access capabilities. Information Server aggregates a wide range of Wonderware and third-party content in one simple-to-configure and manage Web Content Management solution.

In addition, when installed on Wonderware Industrial Tablets or Touch Panel Computers, ActiveFactory software gives mobile workers access to real-time data trends and reports anywhere in the plant.

ActiveFactory software is a key component of Wonderware's modular, sustainable family of real-time production and performance management solutions.

Identify and Resolve Costly Process Bottlenecks and Variances with ActiveFactory Software

Every manufacturing or industrial operation facility has process bottlenecks that rob profits and reduce plant performance. ActiveFactory software provides real-time trend plots and reports that help identify process bottlenecks, enabling decision-makers to focus their resources on removing them.

In the same respect, sustainable and profitable business performance requires physical processes to be operating continuously at their maximum capabilities. However, process inefficiencies are difficult or impossible to discern without accurate, real-time and historical plant data. ActiveFactory Trend can provide detailed, real-time data on plant equipment, allowing engineers, operators and managers to quickly identify any deviations from expected process values, and ensure that variances between similar processes are constantly reduced.

ActiveFactory software is fully integrated with Wonderware's Historian software, enabling a complete view of plant performance. This increased understanding of current as well as historical performance of equipment and processes helps the user assess which assets are doing well and which ones need attention. Using this valuable information, managers can shift production to the most important assets and help ensure that their plants meet order commitments and remain competitive.

Accelerate Problem-Solving with Quick and Powerful Ad Hoc Reports with Microsoft Office 2007

Having detailed, accurate and timely plant data reports that can be easily created on an ad hoc basis is crucial to the process of exposing the root causes for costly plant process problems. Traditionally, plant data reports were created by experts and rarely available on an ad hoc basis. Now, plant personnel with Microsoft Office skills can quickly create a report using included sample reports to help troubleshoot plant process issues. There is no need to request scarce plant IT personnel to create special reports.

Create More Informative Production Reports with Less Effort Using Powerful Data Retrieval Modes

The use of regular production reports is still an important part of the decision-making process at many manufacturing and industrial operations plants. Plant IT personnel tasked with creating and maintaining production reports now have a new tool for streamlining data queries needed to pull important information out of the huge volume of plant process data stored in Wonderware Historian. New data retrieval modes supported include time-in-state, "best fit," time-weighted average, integral (rates), rate of change (slope), counter rollover and others. ActiveFactory software can now use these data retrieval modes directly to dramatically reduce the time needed to create sophisticated data queries. Users can add new content to existing production reports or create new production reports that were difficult or impossible to create in the past.

Save Time and Money Building Customized Industrial Web Applications with ActiveFactory Controls

Production workers and decision-makers directly benefit from easily available plant data. Today, Web delivery of plant data is becoming the norm. ActiveFactory software provides many .NET or ActiveX® controls for adding trend data or other plant information to custom web applications. This enables web designers to add valuable plant data to a company's web applications in a fraction of the time needed to create the content manually.

ArchestrA Integration Provides Unmatched Scalability and Functional Richness

ActiveFactory software is built from the ground up using ArchestrA technology, which allows unprecedented scalability and functional richness in industrial applications. Manufacturers can now build complete production and performance management solutions using the single, integrated development platform that ArchestrA delivers — saving time and development resources. Applications can start small and grow into a complete plant-wide or enterprise solution as requirements dictate or evolve.

The Wonderware System Platform (including Wonderware Application Server, Wonderware Historian and the Wonderware Information Server) provides ActiveFactory with the ideal platform for a plant-wide production and performance management solution. Functional modules such as the Equipment Performance Module and the Equipment

Operations Module add additional analysis and reporting capabilities, further expanding the value of the system.

Powerful Trend Analysis

ActiveFactory real-time and historical trending capabilities meet the demands of engineers who troubleshoot or analyze processes by providing the following rich product features:

■ Real-Time Trending – Live Mode

Click on the Live Mode button to select automatic or “live” updating of trend data, enabling real-time data analysis. Viewing live data trends has never been easier.

■ Precise Value and Time Analysis

Using two vertical time-axis cursors, easily view and compare precise values at different points in time. The ActiveFactory Trend feature displays the value and time at both cursors and automatically calculates the time and value differences between cursor positions. Horizontal value-axis cursors make it easy to compare values across the trend interval. Easily customize the chart background, line style, weight and color of each cursor.

■ Analysis of Summary Statistics

Easily access summary information about all displayed tags, including minimum and maximum values, the times associated with those values, average values, ranges, etc. Summary statistics can be calculated for the entire trend interval or for only the period between time cursors. Summary statistics data can be saved or printed.

■ Batch Trend Analysis

Drag and drop the same tag onto a trend plot to compare an older batch to a current batch. Time offsets and relative time mode facilitate the analysis of batch trend data.

■ Annotation

Capture valuable process and operations data and store it with your process data. This contextual information is invaluable for understanding process performance and becomes part of your plant’s data record – making future optimization and troubleshooting activities more efficient and effective. The Annotation feature automatically captures the user’s name and the time and date of the entry.

■ History Replay

Improve your understanding of process issues, major incidents and new operator training by playing back process history as if it were live.

Now, history playback speeds can be selected from a range of 1/2 to 128 times normal speed.

■ Zoom

To reveal even more detailed information, zoom into a portion of a chart by selecting a region of the chart or by decreasing the amount of time shown on the trend. Zoom Out and Undo Zoom can also broaden the time period.

Leverage Microsoft Office for Plant Performance Reporting

Users can leverage Microsoft Excel skills with ActiveFactory Workbook, a Microsoft Excel add-on. Create standard or ad hoc plant performance reports without the need for scarce IT resources. Publish Workbook reports to the Web for even more impact on plant performance using Wonderware’s Information Server web solution.

Microsoft Excel’s powerful customization options enable non-technical personnel to create rich plant reports, maximizing return on investment. ActiveFactory software supports the latest versions of Microsoft Excel software, providing the most up-to-date reporting functionality.

ActiveFactory Report, the Microsoft Word add-on, enables users to create custom production reports that automatically update when opened, ensuring only current information is available to plant personnel. Integrated with ActiveFactory Query, Report provides access to real-time or historical process data from the Wonderware Historian, minimizing the need for specialized IT resources.

Easy Real-Time Data Mining

The ActiveFactory Query function dynamically generates and executes SQL queries based on criteria provided by the user in an easy-to-use, point-and-click interface. No prior knowledge of SQL is required. It includes a tag browser that finds and selects individual tags or entire public or private tag groups. Users can easily and rapidly mine data stored in SQL data sources. Query provides a wide range of standard query types and also allows users to save favorite queries.

Extensibility

ActiveFactory software contains a powerful library of component-based .NET and ActiveX controls for software developers and systems integrators. These controls integrate with Wonderware’s container applications, such as InTouch HMI software, as well as third-party container applications, such as Microsoft’s Internet Explorer and the Visual

Basic development system. ActiveFactory control objects were developed using .NET and C# software technology, enabling them to be seamlessly integrated into today's .NET-based custom industrial applications — saving significant development time.

ActiveFactory software consists of:

■ Trend

Powerful desktop data trending tool for the Wonderware Historian (IndustrialSQL Server). It provides a wide range of charting and formatting capabilities designed to allow users to create highly informative data analysis charts for faster troubleshooting and process improvement

■ Query

ActiveFactory software's easy-to-use desktop tool for creating database queries does not require the need for SQL expertise. Query can be used in tandem with ActiveFactory Trend, Workbook or Report. It can also be used as a standalone querying tool for the Wonderware Historian or any SQL-compliant database.

■ Workbook

The Microsoft Excel add-on is designed to simplify the creation of process-data reports using Wonderware Historian data. ActiveFactory Workbook reports can be published to the Wonderware Information Server web solution for broad distribution across the plant.

■ Report

The Microsoft Word add-on enables users to create custom production reports using Wonderware Historian data. Report integrates ActiveFactory Query to allow the creation of highly focused reports tailored to specific user requirements.

■ Control Objects

ActiveFactory provides a powerful library of component-based .NET and ActiveX controls for accelerating the development of custom industrial applications. Trend plots, tag selection, time/date selection and other important functions or displays are available.

■ Web Reporting

ActiveFactory Trends and Workbooks can be published via a simple menu selection to Information Server, Wonderware's web content management software. Information Server aggregates plant and business data into a powerful Web-based production and performance management solution.



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