

Wonderware Data Analysis and Reporting Software Solutions

MAKE INTELLIGENT OPERATIONS DECISIONS IN REAL-TIME

Wonderware Data Analysis and Reporting Software solutions put actionable information into the hands of the people most responsible for plant performance. These software solutions 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 Software 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 analysis and reporting software solutions are ideal for delivering decision making information to groups tasked with plant-wide initiatives such as asset management, lean manufacturing, Six Sigma or other productivity improvement programs.

Wonderware offers two types of Data Analysis and Reporting Software solutions: ActiveFactory software Desktop trending and analysis clients, and web-based Wonderware Information Server. These applications enable operations to build the comprehensive production and performance management systems needed to drive their company to the next level of productivity and operational excellence.

Wonderware 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 industrial activities as well as the occasional requirement for ad-hoc analysis.



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

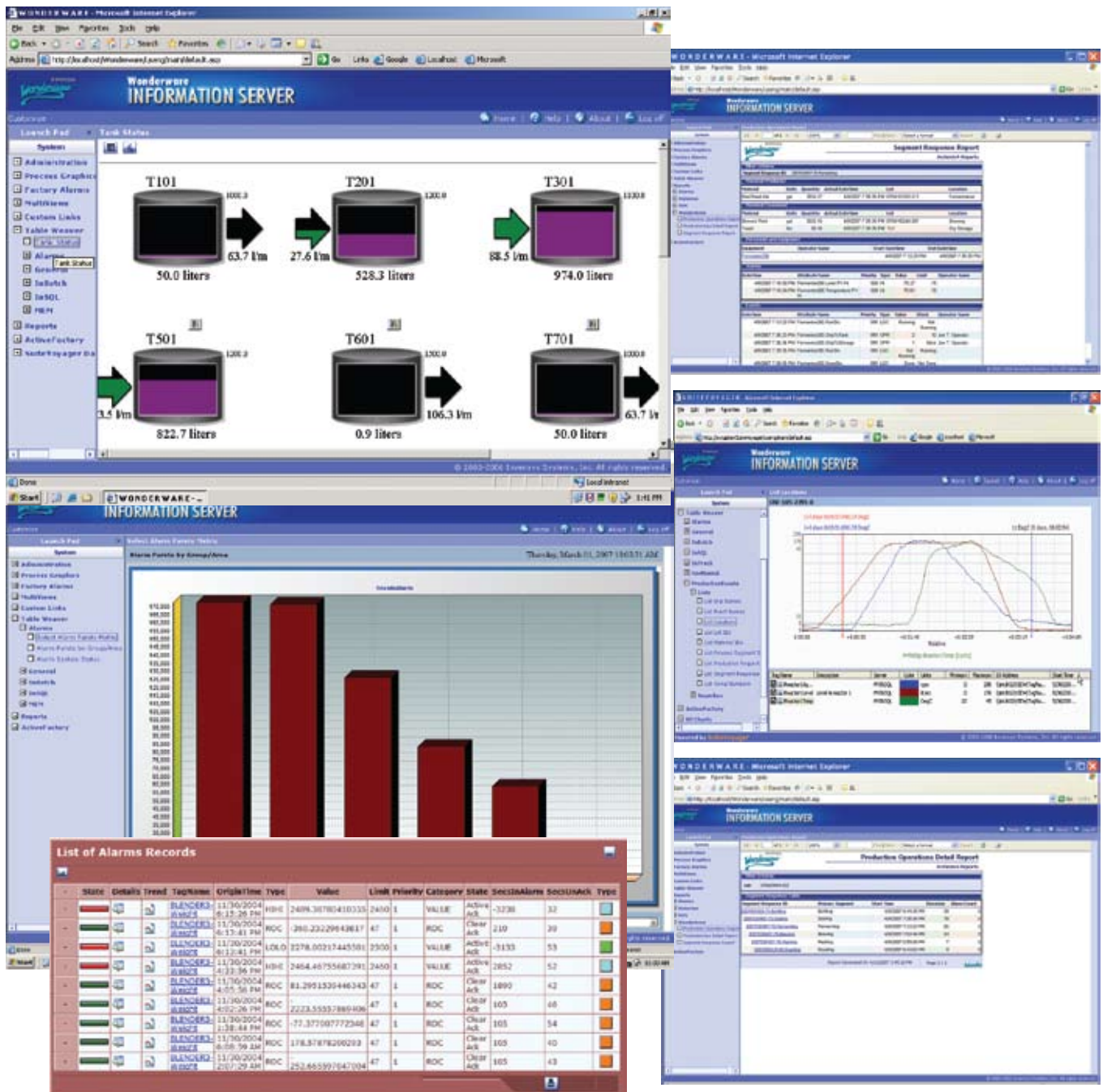
Wonderware Information Server software offers a single Web solution for aggregating and presenting operations and performance management information over the Web or company intranet.

Wonderware Information Server software enables 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 page. This makes it easier for users to obtain the real-time and historical data they need to improve operations.

Wonderware Information Server software also helps connect personnel with non-Wonderware data sources so they can access overall performance records.

Wonderware Information Server software is a key component of the Wonderware modular, scalable family of real-time operations and performance management solutions.



Engage the Entire Organization in Process Improvement through Improved Operations Visibility

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

This Wonderware web-based solution aggregates a wide range of operations performance information including process trends, production reports, equipment downtime, equipment efficiency, operations events and history, including product 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.

Wonderware Information Server software enables each worker to view just the information they need via personalized Web content — even in multiple languages.

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

Wonderware Information Server software helps significantly reduce the need to have IT staff design, implement and maintain web applications. Set up, layout and content management are designed to be performed by users with no programming knowledge.

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

Costs Can Be Reduced through Higher Operations Intelligence

Keeping 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 their operations intelligence and the ability to improve performance.

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

Wonderware Information Server software can facilitate access to a broad range of real-time 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 Wonderware Historian software, InTouch HMI 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 can be incorporated into, and viewed via, Wonderware Information Server software

Process Graphics Anywhere at Any Time

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

Rich Data Analysis

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

Operations and Performance Reporting

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

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

- OEE and equipment downtime reports, and KPI dashboards from Wonderware Performance software
- Wonderware Performance and Operations software 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 Wonderware Historian software
 - Integrated historian tag navigation, date/time selection and simple drop-down selection of powerful Wonderware Historian software data retrieval modes
 - Publish reports to Wonderware Information Server software website, or save on a local PC

Secure and Easy to Implement Web Solution

To keep operations information safe and secure, Wonderware Information Server software is delivered with built-in safeguards 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 software
- **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

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

Wonderware Information Server 3.1 software consists of:

WEB CONTENT SERVER

The Web Content Server provides a Portal infrastructure for building an operations information website, customized to your company's requirements.

Web Server framework:

- Home Page
- Portal personalization with Multi-view Windows
- Centralized administration & management
- Integrated Security
- Extensive Search
- Multi-language 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

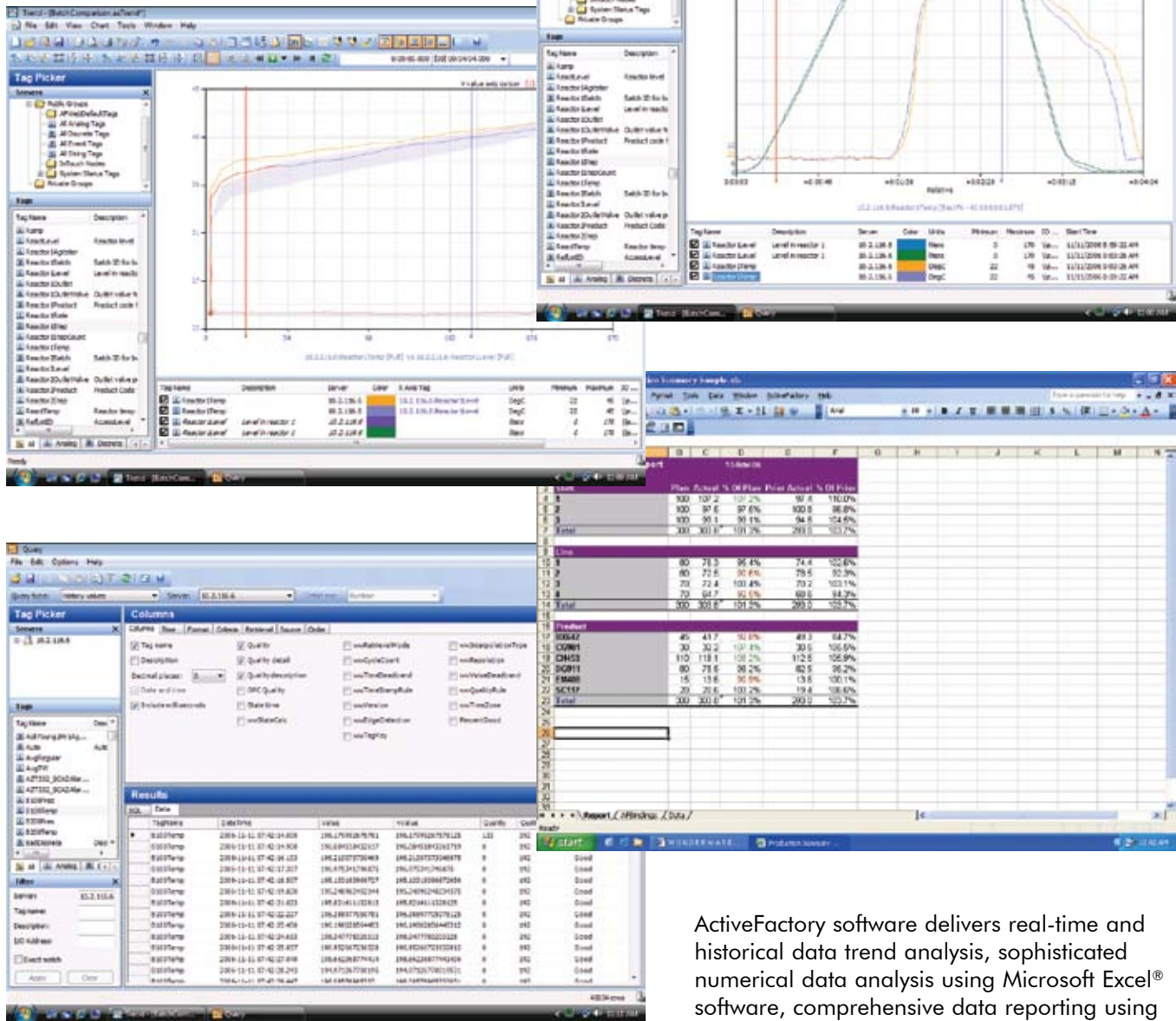
Web Clients:

Personnel can use Wonderware Information Server software to access the broad range of operations information delivered by the Wonderware Information Server software Web Content Server.

Web Clients provide:

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

ACTIVEFACTORY SOFTWARE — DATA ANALYSIS AND REPORTING CLIENTS FOR WONDERWARE HISTORIAN SOFTWARE



Wonderware ActiveFactory® trending, analysis and reporting software offers a suite of desktop clients that maximize the value of data stored in Wonderware Historian software. ActiveFactory software has been designed to enable easy access to operations and process data through simple point-and-click dialogs. Using information from ActiveFactory software, 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 software trends and reports to the Web or company intranet.

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

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

Identify and Resolve Costly Process Bottlenecks and Variances with ActiveFactory Software

Every manufacturing or industrial operations facility has process bottlenecks that rob profits and reduce operations 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 operations data. ActiveFactory software Trend can provide detailed, real-time data on equipment, enabling 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 Historian software, enabling a complete view of operations 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 operations to the most important assets and help ensure that their facilities 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 process problems. Traditionally, operations data reports were created by experts and rarely available on an ad-hoc basis. Now, personnel with Microsoft Office skills can quickly create reports using included sample templates to help troubleshoot process issues. There is no need to request scarce plant IT personnel to create special reports.

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

The use of regular operations reports is an important part of the decision-making process at many manufacturing and industrial operations facilities. IT personnel tasked with creating and maintaining operations reports now have a new tool for streamlining data queries to pull important information out of the huge volume of process data stored in Wonderware Historian software. 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 now uses these data retrieval modes to dramatically reduce the time needed to create sophisticated data queries. Users can add new content to existing operations reports or create new reports that were difficult or impossible to create in the past.

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

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

ArchestrA Technology Integration Provides Unmatched Scalability and Functional Richness

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

The Wonderware System Platform software (including Wonderware Application Server, Wonderware Historian and Wonderware Information Server software) provides ActiveFactory software with the ideal platform for an enterprise-wide operations and performance management solution. Functional modules such as Wonderware Operations and Performance Software add additional plant visibility, analysis and reporting capabilities, further expanding the value of the system.

Powerful Trend Analysis from ActiveFactory Software

ActiveFactory software's 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 software 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, times associated with those values, average values, ranges, etc. Summary statistics can be calculated for the entire trend interval or only for 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 features 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 facility'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 Operations Performance Reporting

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

Microsoft Excel's powerful customization options enable non-technical personnel to create rich 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 operations personnel. Integrated with ActiveFactory Query, ActiveFactory 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. ActiveFactory Query provides a wide range of standard query types and also enables users to save favorite queries for reuse.

Extensibility

ActiveFactory software contains a powerful library of component-based .NET and ActiveX controls for software developers and systems integrators. ActiveFactory software control objects are 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. These controls work with Wonderware 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 software consists of:

■ Trend

A powerful desktop data trending tool for Wonderware Historian software. It provides a wide range of charting and formatting capabilities, enabling users to create highly informative data analysis charts for faster troubleshooting and process improvements.

■ Query

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

■ Workbook

This Microsoft Excel add-on simplifies the creation of process data reports using Wonderware Historian software data. Workbook reports can be published to the Wonderware Information Server web solution for widespread distribution.

■ Report

The Microsoft Word add-on creates custom operations reports using Wonderware Historian data. Report integrates Query to build highly focused reports tailored to specific user requirements.

■ Control Objects

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

■ Web Reporting

Trend and Workbook can be published via a simple menu selection to Information Server software, Wonderware's web content management software. Information Server aggregates operations and business data into a powerful Web-based operations and performance management solution.

Wonderware Information Server software and ActiveFactory software Reports offer users both local and web-based capabilities for trending, analysis, and reporting of real-time and historical data. Whether you choose to distribute your reports corporate-wide, or utilize for local process control and optimization, Wonderware provides you with reporting and visualization products that leverage your existing investments in Wonderware technology.



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Contact Wonderware or your local Wonderware Distributor for more information about industrial automation and information software solutions.

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