# Real-Time Analysis and Reporting Software for Production and Performance Management

- ○ *Improve production efficiency by leveraging timely and accurate data*
- ○ *Proactively enhance your plant's profitability by taking action on information in real time*
- ○ *Respond faster to market opportunities*
- ○ *Create queries and run reports even if you have no SQL database knowledge*
- ○ *Simplify regulatory compliance with automated up-to-date reports*

Visualize    Analyze    Optimize

## PRODUCT HIGHLIGHTS

- Batch analysis tools **(NEW)**
- Improved look and feel **(NEW)**
- Historical data replay feature
- Next-generation plant data reporting and trending client
- .NET and ASP.NET software technology **(NEW)**
- Leverages ArchestrA technology **(NEW)**
- Leverages users' existing Microsoft Office skills
- Most complete integration with the IndustrialSQL Server plant historian
- Powerful library of ActiveX and .NET controls
- Enhanced Web security
- Powerful and easy-to-use query tool
- Supports FDA-validated applications
- Works with Wonderware Industrial Tablets and Touch Panel Computers

### Effectively Manage Production Performance Analysis and Reporting

Leading manufacturers constantly strive to improve plant performance because they know that increased plant efficiency can significantly boost profitability. By providing outstanding process trend analysis, ActiveFactory 9.0 software can empower these forward-thinking industrialists to achieve higher profits, better plant performance and a more astutely managed plant.

Wonderware's commitment to technological leadership and enabling better software solutions continue with version 9.0 of ActiveFactory software, which has been completely rebuilt using the ArchestrA industrial software architecture. The ArchestrA architecture leverages Microsoft's newest software technologies: .NET and ASP.NET. By tightening integration, these technologies

enable system developers to create some of the most advanced industrial applications in the industry while concurrently minimizing development costs and shortening project schedules.

### Improve Your Business with ActiveFactory Software

**Visualize** underlying plant process data with the Trend tool and use the Query tool to retrieve blocks of related information in a point-and-click environment. No SQL skills are required. ActiveFactory software can help plant personnel answer questions like:

- When the process disruption occurred on Line #1, what time did it start and did it affect total line output?

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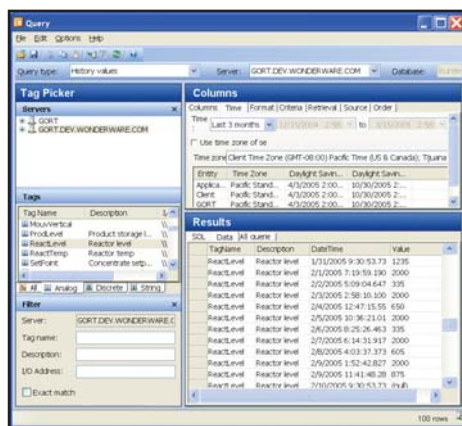Powering intelligent plant decisions in real time.

- How long has that machine been out of service?
- How does this batch compare to our baseline batch?

**Analyze** important plant processes by quickly adding real-time and historical process data. Data analysis and the creation of graphs and reports empower plant staff to quickly zero in on the root causes of costly process problems to answer questions such as:

- What has the average temperature been over the last two hours?
- Does the reduced output from Line #1 justify keeping it online?
- What are the differences in production between our three shifts?

**Optimize** plant processes by sharing knowledge and acting on information and detailed data trends. You'll be able to answer questions like:
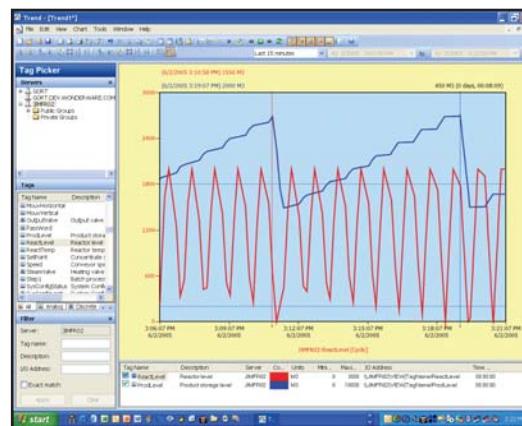
- Could the potential windfall from Line #2 compensate for the reduced output from Line #1?
- At the end of the last shift, was the effluent temperature so close to regulatory limits that it required round-the-clock surveillance?
- Can the switching operation be shortened, saving valuable production time?



*ActiveFactory Query provides powerful database querying capabilities and requires no knowledge of SQL.*

Easily publish data trends and plant performance management reports to the Internet via Wonderware's SuiteVoyager Web analysis software or the standalone ActiveFactory Web Server. Reports are fully interactive or can be locked down to show a snapshot in time.

On-demand and scheduled reports are available so that plant personnel can access vital plant information when they need it. In addition, because ActiveFactory software uses Microsoft Office technology, complicated and specialized reporting systems are no longer needed — saving time and money.



*ActiveFactory Trend easily displays all types of IndustrialSQL Server data, simplifying process analysis efforts.*

With ActiveFactory trends and reports, plant personnel can answer questions such as:

- How many times has the motor been started? Is it ready for maintenance?
- Can we trim some time off the forming process to drive up our production rate?
- What is our production across shifts?
- How can we prove to the manufacturer that the pump is still bad?
- Is the new process equipment delivering the forecasted ROI and specified performance targets?
- How does the new line compare with the older lines?
- If this month's domestic output exceeds plan, should the offshore activities be rescheduled?
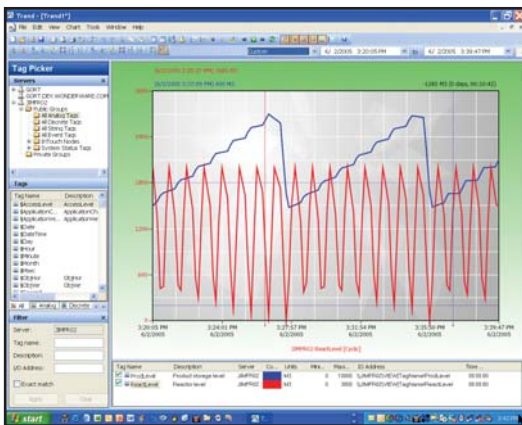
## MOBILE SOLUTIONS

ActiveFactory 9.0 software supports the Microsoft Windows XP Tablet Edition operating system as well as Wonderware's Industrial Tablets and Touch Panel Computers. Now, mobile workers can access vital real-time and historical plant data anywhere in the plant — streamlining process troubleshooting and saving valuable time.

## Powerful Process and Production Trend Analysis

Deliver real-time and archival traces of historian data in easy-to-understand charts that include analog, discrete, string or event data for notifying key personnel of significant plant process changes or incidents. Accelerate problem-solving and improve plant production awareness. ActiveFactory 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 line style, weight and color of each cursor.



*Create high-impact trend displays with powerful graphical configuration options.*

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

■ **Batch Analysis:** Drag and drop multiple incidences of the same tag onto a trend plot; then apply time offsets to compare an older batch to a current batch.

■ **Annotation:** Capture valuable process and operations data and store it with your process data. This contextual information is invaluable for understanding plant 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.

■ **(NEW) History Replay:** Select a time period from the past and click on the Replay button, found on the toolbar, to play back the data as if it were live

■ **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.

## Extensive, Configurable Production and Performance Reporting

In today's competitive manufacturing world, every employee in the plant must get involved with improving performance. Wonderware's ActiveFactory software enables this active participation by providing secure online access to sophisticated plant reports and data trends. Web-based reporting is fast, inexpensive and can reach a wide range of people — making it the ideal tool for engaging more employees in the plant performance improvement process.

ActiveFactory reporting and data trends are fully integrated with Wonderware's SuiteVoyager portal, which facilitates immediate access to vital plant information via an Internet browser. A wide range of critical plant information can be accessed using this software, including real-time and historical production data, key performance indicators (KPIs), real-time statistical process control (SPC) charts, equipment downtime information, overall equipment (OEE) effectiveness calculations, production traceability information, batch management information and much more.
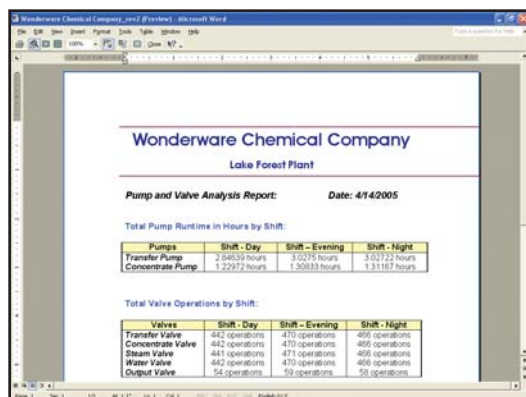
All of this content can be delivered to anyone, anywhere in the world, and can be customized to each user's particular role.

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## Easy Real-Time Production Data Mining

Easily and rapidly mine the data stored in your SQL data sources. No prior knowledge of SQL is needed to access and analyze this information. Users can also designate Favorite Query types for easy access to commonly used or specialized queries.

The Query function dynamically generates and executes SQL queries based on criteria provided by the user in an easy-to-use, point-and-click interface. It includes a tag browser that finds and selects individual tags or entire public or private tag groups.



*ActiveFactory Report helps users create valuable plant data reports by leveraging existing Word skills and real-time and historical data within the IndustrialSQL Server historian.*

## Data-Mining Features

■ **Data Results:** You can create highly useful data value queries such as Live Value, History Value, Summary Value, Time Running and Annotations. Data Formatting, Value Criteria, Time Range, Retrieval Mode and Data Source are among the parameters available for selection. Users can change tag selections, time periods and other query parameters. The Query function automatically reruns the query, providing instant results.

■ **Tag Configuration:** Tag configuration queries such as Tag Details, Number of Tags and Tag Search easily expose tag configuration data for review or modification.

■ **Alarms & Events:** Tag alarm and event queries such as Alarm History, Alarm Limits, Event History Values and Event Snapshot are available so that important tag alarms and events can be provided to plant decision-makers and problem-solvers.

■ **Database:** Queries are also provided to enable easy system maintenance. Queries such as Server Version, Storage, Storage Size Available and Storage Start Date are available to system administrators to better inform them of system operation and performance issues.
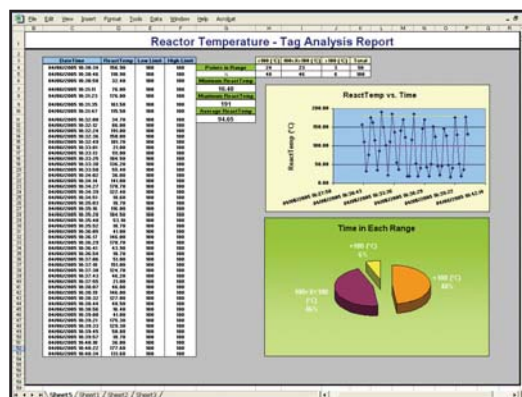
## EXTENSIBILITY

### ActiveFactory Control Objects

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 9.0 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.

### Other Data Sources

Although ActiveFactory software is designed to tightly integrate with Wonderware's IndustrialSQL Server plant historian, it supports access to other data sources as well. As with Microsoft Query and other SQL query tools, a user can manually build and execute queries against other online SQL databases to take advantage of ActiveFactory formatting features. Users can view data from the IndustrialSQL Server plant historian alongside data from other sources.



*ActiveFactory Workbook gives Microsoft Excel "point-and-click" access to IndustrialSQL Server data for reporting and analysis.*

## CUSTOMER SUPPORT

Wonderware's Customer Support Services Program makes it easy to receive up-to-date Wonderware software and associated applications. To learn more about this valuable program, which maintains and often increases the value of industrial software applications, please contact your local sales representative.

## ACTIVEFACTORY SOFTWARE AND OTHER WONDERWARE PRODUCTS

**Wonderware's IndustrialSQL Server Historian - A Storehouse of Valuable Information**

One of the keys to improved performance often lies hidden within the plant's rich storehouse of plant data. Wonderware's IndustrialSQL Server plant historian has been firmly established as the world's most popular historian for production and performance management since its introduction in 1997. Wonderware has sold more than 14,000 IndustrialSQL Server software licenses to leading manufacturers around the world. Thus, Wonderware's historian has captured trillions of vital details about plant operations, which empowers our global customers to improve production and performance management.

But how can all that data be transformed into valuable plant information and ultimately into better plant performance?

By leveraging the combined benefits of ActiveFactory 9.0 software and the IndustrialSQL Server historian, production and engineering personnel can harness real-time production data out of the box. Empowered with the right data, they can quickly and easily create rich, detailed real-time data analysis reports and share them across the manufacturing enterprise — significantly improving plant performance.

**Share Vital Information with Wonderware's SuiteVoyager Portal**

ActiveFactory analysis and reporting software can also be combined with Wonderware's SuiteVoyager Web analysis software to provide the timely, accurate and diverse plant data needed to intelligently manage plant performance and improve operations.

ActiveFactory 9.0 software does not require specialized training in order to generate and disseminate detailed real-time and historical plant process information. The SuiteVoyager portal also integrates content to offer real-time traceability, genealogy, batch and SPC information, as well as downtime and OEE analysis.

The combination of SuiteVoyager and ActiveFactory software offers a variety of benefits:

■ **Corporate Portal Integration:** You can use the SuiteVoyager portal to expose valuable plant data within SAP's mySAP CRM, Microsoft SharePoint servers and other corporate portals.

■ **Personalized Navigation:** Manage your own lists of published reports using the SuiteVoyager portal's navigation panel. SuiteVoyager software empowers you to control which ActiveFactory content is available to each user.



*ActiveFactory software provides valuable real-time data analysis and reporting data to SuiteVoyager Web analysis software.*

■ **Embedded Trends:** You can export ActiveFactory trends, embed them within InTouch applications and include them in SuiteVoyager views. SuiteVoyager software gives you complete control over which ActiveFactory Trend plot functions users can access — from cursors and scaling tools to controlling which tag data can be shown.

■ **MultiViews:** Create KPI dashboards of ActiveFactory Reports and Trends within a SuiteVoyager MultiView window, which can display Web parts such as .asp and .html files.

■ **Delivery Across Firewalls:** ActiveFactory 9.0 software can deliver vital plant information across firewalls from the plant floor to the enterprise, without compromising the

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security of either system. Within a local network, where direct connections to the IndustrialSQL Server historian are generally supported, iTrend's full analysis capabilities may be available. In more restrictive environments, static trends are displayed.

## ACTIVEFACTORY AND MICROSOFT OFFICE

### Leverage Your Employees' Existing Skills

ActiveFactory software's Microsoft Excel and Word add-ins can be ideal for developing standard or ad-hoc plant performance reports and for data analysis. Create useful reports, such as those that list all operator notes from the last shift or the peak temperature from each batch. Training requirements for plant personnel are minimized by leveraging existing Microsoft Excel and Word skills.

Also, Microsoft Excel's powerful customization options enable non-technical personnel to create rich plant reports, maximizing your return on investment. ActiveFactory 9.0 software supports the latest versions of Microsoft Word and Excel software — providing the most up-to-date reporting functionality.

Active Factory add-ins combined with Microsoft Word and Excel functions enable tight integration to the IndustrialSQL Server historian. Functions include the following:

- **Tag Search:** Quickly search for tags from connected IndustrialSQL Server historians. ActiveFactory 9.0 software can connect to multiple IndustrialSQL Server historians, enabling access to process data for the purposes of reporting and analysis.

- **Data Values:** Add IndustrialSQL Server tag data to an Excel workbook by simple point-and-click operations. Live, historical and aggregate data from the IndustrialSQL Server historian can be made available and refreshed via the Refresh Sheet function.

- **Query:** ActiveFactory Queries can be embedded into Microsoft Excel workbooks.

- **Functions:** Data functions can be converted, edited and refreshed via point-and-click operations.

## SPECIFICATIONS

### Compatible Operating Systems

- Microsoft Windows XP Professional
- Microsoft Windows XP Tablet Edition
- Microsoft Windows 2000
- Microsoft Windows 2000 Terminal Services

### Compatible Microsoft Office Suites

- Microsoft Office 2000
- Microsoft Office 2003
- Microsoft Office XP

### Recommended Historian

- Wonderware's IndustrialSQL Server historian, Version 8.0 or higher, Standard and Enterprise Editions

### Recommended Web Analysis Software

- Wonderware's SuiteVoyager software, Version 8.0 or higher

### Recommended Browser

- Microsoft's Internet Explorer, Version 6.0 or higher