InTouch 2014 – What’s New in the World’s #1 HMI

Transformational Value
Wonderware® InTouch® 2014, the newest version of the world’s favorite Human Machine Interface (HMI) software, delivers truly transformational value. By improving real-time visibility into your processes, InTouch greatly improves operator effectiveness and increases control of your processes to simplify and enforce standardization and change management.

Breakthrough Advanced Engineering Tools
InTouch 2014 delivers a breakthrough in advanced engineering tools delivering faster time to value, more effective HMI design, better trouble shooting, and ease of application maintenance. InTouch includes numerous new visual enhancements to improve the ability to identify and address abnormal situations before they impact operations. The powerful new tools in InTouch 2014 are more than just a library of ‘graphics’; they enable application builders to focus on creating content and to easily assemble effective HMI applications for simplicity, agility and performance.

Realize → React → Resolve
InTouch 2014 makes it easy to implement and encourage best practices to bring clarity, consistency and meaning to integrated data. With InTouch 2014, both experienced and entry-level operators are more easily able to identify, understand, react to and resolve abnormal situations, which also provides a unique solution to the industry-wide challenge of a retiring workforce.

PROBLEMS SOLVED

Adapt to Change
Today’s operations and plants are becoming larger and more complex with expanded data requirements, increased monitoring load, more alarms, and greater agility requirements. What’s more, the role of the operator is expanding, which increases the knowledge and expertise requirement yet reduces the time available to dive deeply into any one area. Knowing “what happened” is no longer sufficient; operators need the ability to better interpret and understand information, to know “why,” and to proactively determine how real time changes may affect the future.

Increase Operator Understanding
The industrial world is moving towards organizational empowerment. With workforce transition, experienced workers retiring in greater numbers and younger operators joining the workforce, the need for accelerated knowledge transfer to turn novice workers into experienced workers is greater than ever.

Predictive Capability
Wonderware InTouch 2014 essentially adds years of experience to operators by enhancing the ability to see trends as they are forming, logically predict what may happen, take corrective actions to address problems before they get out of hand, and avoid catastrophic events; all in less time and with greater accuracy and confidence than alternative solutions.
IMPROVED REAL-TIME VISIBILITY INTO YOUR PROCESS

Achieve improved operator awareness and productivity, reduce operational risks, response time, and system downtime

Wonderware InTouch 2014 brings real-time visibility to a new level and transforms the way industrial user interfaces and HMIs are defined, moving from merely presenting data to the next evolution of displaying Information in context. Instead of developing just a library of “symbols”, the new features of InTouch enable application developers to focus on creating highly contextualized and interpretive visual content and assembling the most effective HMI applications and user interfaces for operational excellence and abnormal situation management. With InTouch 2014, the success rate of exception handling can be improved by 37% and the total time required to complete tasks can be reduced by 41%.

Situational Awareness Symbol Wizards: InTouch 2014 includes an easy to use extensive set of ArchestrA® Graphics that provides the necessary information in a clear and intuitive way, enhancing abnormal situation awareness while minimizing errors by allowing operators to more clearly understand their environment and maximize productivity. The Situational Awareness Library with Symbol Wizards makes it easy for application developers to create highly intuitive visual content and custom applications specific to an event. Utilizing this Library can improve operator situation interpretation time 40% faster.

• Dashboard Symbols
• Alarm Symbols
• Equipment Symbols
• Input Symbols
• Instrumentation Symbols
• Status Symbols
• Advanced Symbols – Polar Star
• Equipment Symbols – Valves, Agitator, Tank
• Many other Symbols – Level Meter, Hand Switch, Output Bar, etc.

Situational Awareness Library of Symbols fully leverages the new Alarm Borders, Element Styles, Symbol Wizards, and theAnimations described below. In addition, the Symbols can be customized to meet any customer specific needs or standards. For example, use a library Symbol to immediately accomplish 80% of what you need, then customize the remaining 20%, saving engineering time and capitalizing on Invensys™ symbol design best practices.

One of the new advanced Wizards is the Polar Star which shows a set of related process values on ‘spokes’ that form a visual polygon. As values change along the length of the spokes, the changing shape of the polar star’s polygon is easily recognizable by operators who can react quickly to abnormal process conditions. Each spoke contains a set of custom properties to set value set points, alarm limits, and coordinate set point locations for the normalized process value. When a process value changes from its set point location on a spoke, the animation changes the shape of the polar star polygon.
**Alarm Annunciations:** Alarm Annunciations are ‘Triple Coded’ to convey critical information in three ways: Color, Shape, and Text. This ensures unambiguous interpretation of alarms for faster operator reaction time and fewer mistakes. Color coded Alarm border animations around graphics clearly indicate the level of alarm state to help operators quickly identify abnormal situations and take corrective action in the proper order of priority. Alarm border animations can be configured to blink, remain solid, or change based on UnAcked, Acked, or return to normal situations. Severity Levels indicated by unique shape, color, and level number are displayed directly next to a Symbol for quick, clear, concise information contextualization. These animation capabilities are delivered fully configured and fully functional and require no scripting.

**Trend Pen:** Trend Pen is a new animated graphic element that enables an operator to immediately identify not only a current data value but also the recent data historical trend in a specific absolute fixed time range (e.g. 8am to 5pm) or in a moving window time range (e.g. last hour), enabling an operator to instantly distinguish recent activity and dramatically improve predictability of potential future events and handling ‘potential’ issues before they become full alarms or events. An operator can return to their screen and see a quick historical trend of what happened while they were away.
GREATER CONTROL OF YOUR PROCESSES

Facilitate business-wide standardization, tighter integration, and faster knowledge transfer

Symbol Locking: Symbol Locking supports enforcement of corporate graphic standards and consistency of applications across the enterprise while allowing and tracking any necessary customizations at lower levels of the business.

Element Styles: Typically, HMI applications are developed over time and by many engineers, which could lead to inconsistent standards, use of colors, text, and alarm or event indicators. Element Styles ensure a customer defined HMI look and feel across the enterprise regardless of whom or when it was designed. Every screen across the enterprise can have the same methodology for presenting information in context so that any operator in any plant will understand information in the same consistent manner. Create standardized colors, indicators, text formats, and more to improve operator training, reduce operator confusion, and enable operators to more quickly orient to the critical information without the need for interpretation. All this is engineered and managed in a single user friendly Element Styles Editor tool.

Using the centralized management and deployment capability of the Development Studio, one click can update your applications globally.

- Element Styles (Set Standards) Functionality in ArchestrA Graphics
- InTouch Supports Element Styles Animation within embedded ArchestrA Graphics symbols
- Implement Element Styles standards in Situational Awareness Library Symbols

The two screens below are identical except for Element Style. Create customer-defined standardized colors, indicators, text formats, and more for your entire application in one Editor Tool.
HIGHER ENGINEERING PRODUCTIVITY

Advanced engineering tools for faster application development, quicker troubleshooting, increased productivity, and easier application maintenance

Symbol Wizards: The new patent-pending Symbol Wizards enable maximum flexibility and standardization in configuration and orientation of symbols while minimizing application assembly and maintenance effort. Symbol Wizards enable engineers to choose custom configuration options such as graphical elements, scripts, and custom properties and automatically assemble them into a single composite symbol. Composite symbols with multiple configurations reduce the number of required ArchestrA Symbols that need to be created for an application.

Again, no programming or external toolkit needed as Symbol Wizards are defined, created, and managed in a single environment.

Each Symbol Wizard can be easily configured into many different visual and functional symbols.
**Animation Capabilities:** InTouch 2014 includes the ability to animate many of the Graphics and Element Styles. Graphic animations are directly linked to real-time data values to dynamically reshape the multi-point Graphic elements as data changes. This animation capability automates high level geometric mathematical formulas to enable engineers to create animated Pie Charts, Polar Stars, Polylines, Curves, Polygons, and Closed Curves that visually reshape in real-time. Direct, indirect, and associated relationships of multiple data points can be visually represented in a graphic to enable operators to clearly understand when a process is within acceptable boundaries or which part of the process is out of alignment or possibly moving out of alignment. This animation transforms mere static graphics into contextually rich moving pictures to make them even more effective.

- Supports a number of built-in animations, including Points Animation (polygons, rectangles, polar star), Element Styles Animation, Start / Sweep Angle Animation of Arc, Chord and Pie graphic elements.
- Enables the implementation of Element Styles standards in Situational Awareness Library and other symbols

**Content-aware Script Editor:** A comprehensive new “Auto-Complete” behavior in the Script Editor anticipates the engineer’s next move and provides intelligent choices that match the likely intent. InTouch 2014 consolidates all scripting work within one development environment and helps shorten script engineering time by 40%.

Some of the new features are as follows:

- Auto-complete in Script Editors and Graphic Editor Expressions
- Line-numbers, Multi-level undo, automatic syntax checking
- Multi level Undo-Redo
- Line Numbering
- Consistent color coding
- Syntax error indication

**Quick Script Exception Handling:** InTouch 2014 enables rapid trouble shooting and debugging of scripts using powerful exception handling. It comes with new Logging functions for error, warning, and trace to simplify the process of debugging scripts.

**XML Import or Export Capability:** Expanding further upon Invensys' Open Format philosophy, InTouch 2014 now permits publishing of graphic elements in an open format schema to support the programmatic import and export of graphic elements and most animations with advanced editors.
SUPPORT OF INNOVATIVE, NEW TECHNOLOGIES

Always on the leading edge of supporting the latest technologies

InTouch 2014 supports the latest Microsoft operating systems: Windows 8 and Windows Server 2012 and the newest mobile platform from Microsoft: Windows 7 Embedded.

InTouch 2014 supports HTML 5, the global standard markup language for structuring and presenting content in web browsers. InTouch Access Anywhere, the newest extension of InTouch, is based on HTML 5 technology and provides access to InTouch applications via HTML5-compliant web browsers. InTouch Access Anywhere enables visualization, collaboration and execution at various levels of your organization with zero client installation and zero maintenance. InTouch Access Anywhere enables users to securely troubleshoot plant equipment from any location, on any device, at any time. Now your mobile workers can take InTouch 2014 applications with them anywhere in the plant, helping them stay informed and in control of all your vital processes.

InTouch 2014 also supports the latest database technology from Microsoft.

- Microsoft SQL Server 2012 SP1 (both 32 and 64bit)
- Microsoft SQL Express 2012 SP1
- Microsoft SQL Express 2008 SP2 ?Express 2012? (both 32 and 64bit) with SQL Server Management Studio Express (SSMSE). SSMSE provides a convenient graphical management console for managing back-ups, security configuration, Alarm History and many other functions. SQL Express provides a smaller software footprint requiring less disk space and is simple to install and configure.

Contact your Wonderware distributor today to learn more about upgrading to InTouch 2014.
Sample screens of Situational Awareness Symbols

The top screen indicates normal readings.

The Target Graphics are different from one screen to the other, indicating that the situation has changed.

The Pie Charts are different from one screen to the other, indicating that the situation has changed.

Also, the bottom screen contains two pink square symbols which indicate that there are two abnormal states for the operator to realize, react to, and resolve.