AVEVA™ InTouch HMI
formerly Wonderware

The World's #1 HMI

AVEVA InTouch HMI, formerly Wonderware powers more than 100,000 plants and factories around the world, helping to achieve world-class performance, reduce costs and improve product quality.

AVEVA InTouch HMI goes far beyond the ordinary HMI to deliver:

- Legendary ease of use
- Unlimited web and mobile access
- HMI that works everywhere
- 30-year history of protecting your engineering investment
- Native cloud integration for engineering efficiency and collaboration

Visualize, Control and Optimize Your Operations

The more complex your operations become, the more you need a common-sense, real-time view of your business. AVEVA InTouch HMI empowers innovators from around the world with the ability to standardize and visualize their entire enterprise.

Let AVEVA InTouch HMI take you beyond simplistic graphics to create meaningful content that will drive enterprise-wide operations productivity and cost savings.

AVEVA InTouch HMI empowers operators to optimize routine human interactions with industrial automation systems. Our unique situational awareness libraries provide operators the contextualized information they need to address abnormal situations quickly and accurately — before they impact operations. The result is a quantifiable net increase in operator effectiveness, improving operator interpretation time by up to 40%.

What's New in the 2020 Release?

InTouch Unlimited - Technical and Commercial Flexibility like never before

InTouch Unlimited is a new offer. InTouch Unlimited is more than just a new commercial model. It offers customers new value and architectural flexibility never offered before.

This capability addresses the need for cost efficient enterprise-wide accessibility. Now every company can access the most powerful HMI software in the market without having to compromise your standard.

The powerful features include:

- Unlimited read-write clients; including web-based, native mobile and RDS clients
- Un-restricted IO
- Industrial strength Historian with web reporting
- Development tools
- IO communication drivers
- Redundancy
- Native cloud support
- Built-in technical support & version updates

InTouch Unlimited

InTouch HMI + Historian + Unlimited Clients + Communication Drivers + Development Tools
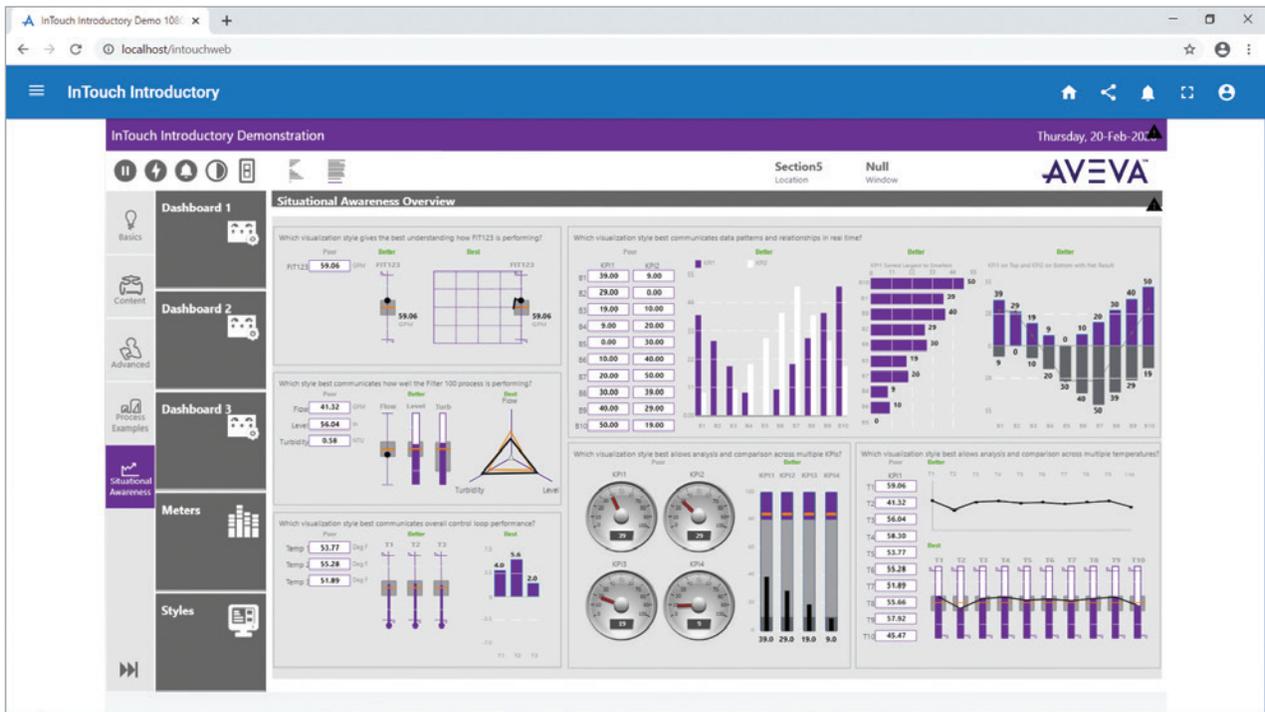
Modernization of stand-alone InTouch Applications

This new release presents thousands of new and legacy InTouch users opportunity to benefit from modernization through Industrial Graphics, richer animations, multi-touch, web access and more! This release brings the power of Industrial Graphics and frame windows to all InTouch HMI legacy users. This is foundational to deliver stand-alone InTouch applications in a web browser using InTouch Web Client. Moreover, this will provide the familiar WindowViewer-like experience across web browsers.

Seamlessly convert existing native InTouch windows to Industrial Graphics with one click.

Also, this latest release no longer requires installation of SQL Server to use Industrial Graphics in standalone applications. This drastically improves the performance of installing the product, creating new applications, opening, launching and saving applications and provides the ability to distribute InTouch HMI applications by simply copying the application folder across machines.

Native integration of InTouch to AVEVA Historian, formerly Wonderware

AVEVA InTouch HMI supports a high-performance native interface to historize InTouch tags to the AVEVA Historian.

You can choose between archiving data to the traditional local historical log file (*.lgh file), to the AVEVA Historian, or to both! Additionally, this functionality provides store and forward capability when historizing.

AVEVA Historian automatically calculates historical summary data (average, minimum, maximum, standard deviation, and time duration in a particular state). This aggregated information can easily be displayed in InTouch HMI which greatly enhances the operators' situational awareness.

Leverage the Cloud for enterprise-wide Collaboration

AVEVA InTouch HMI 2020 delivers tighter integration to AVEVA Connect, namely:

- AVEVA Cloud Insight, our historian in the cloud
- AVEVA Cloud Integration Studio which now offers AVEVA Drive cloud storage.
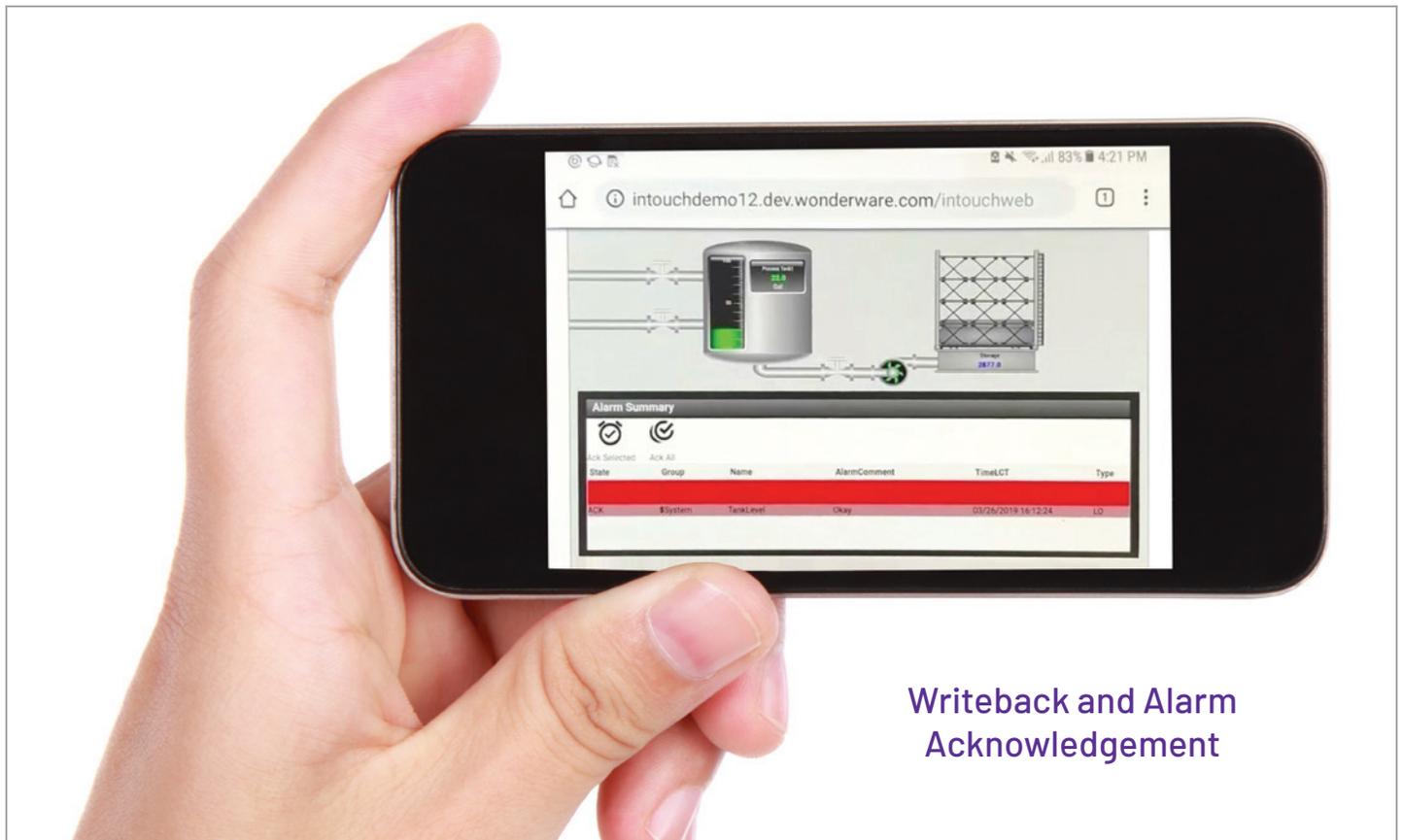
The Insight publisher can be accessed from InTouch Application Manager and InTouch WindowMaker, making it easy for users to send tag configuration and data from an InTouch application to AVEVA Cloud Insight for operational reporting, charting and dashboarding.

In addition, InTouch WindowMaker integrates to the AVEVA Drive, which allows HMI designers to share Industrial Graphics across teams and sites further empowering engineering efficiency and roll out of graphical standards across an organization.

HMI builders can continue to design Industrial Symbols locally, then when ready drag and drop symbols to cloud storage making them instantly available to others. Graphics in the cloud can be used and edited by other users. This provides a powerful way for users to maintain and share their standards across teams and sites.

Native Mobile Apps for Android and iOS

Remote and local operators experience the same look and feel on tablets and smart phones with support for touch centric pan and zoom functionality including ability to write back and acknowledge alarms.
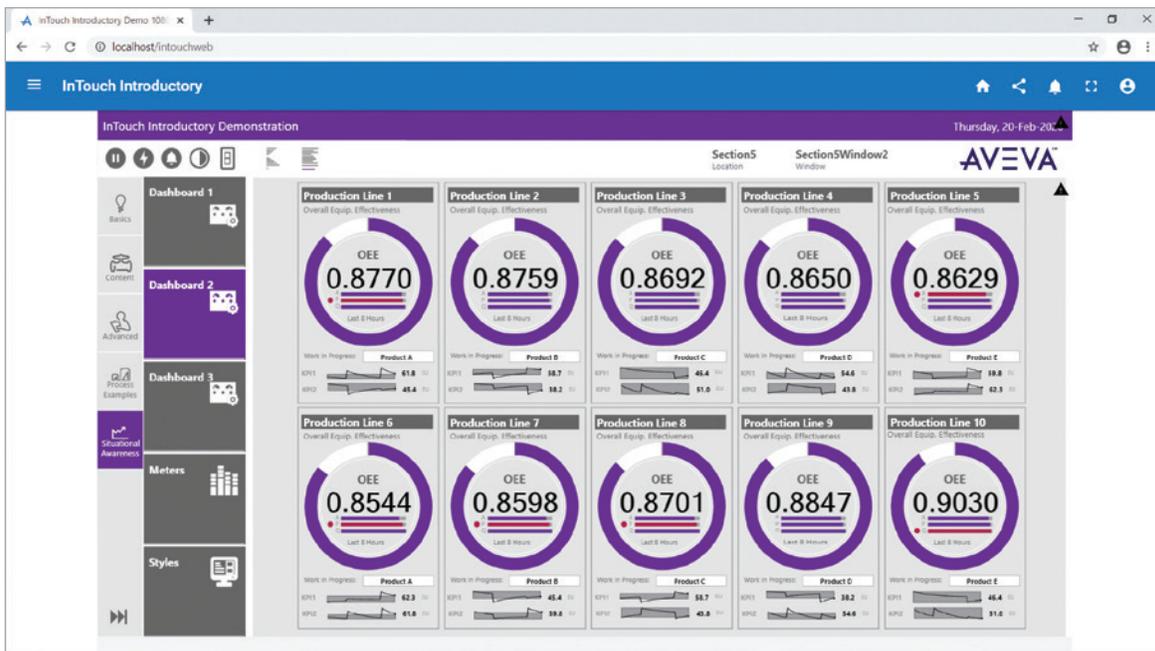

Writeback and Alarm Acknowledgement

Carousel HTML5 Widget

AVEVA InTouch HMI 2020 introduces support for web widgets, which are reusable controls designed with web technology. The first web widget shipped with the product is the carousel widget. The carousel widget enriches AVEVA InTouch HMI and the InTouch Web Client enabling sequential display of a selected set of graphics, automatically rotating them at a configurable predefined interval. Think of it as a "slide show" of symbols.

This has multiple uses but it is perfect, for example, for use with Smart TVs with built-in web browsers or wall mounted display monitors where you need to rotate between multiple producton dashboards with KPIs or operational information on a periodic interval.

New Application Manager: Modern UI and workflow improvements

InTouch HMI introduces a new Application Manager. But it's far more than just a change in look. Existing workflows have been improved and new ones added.
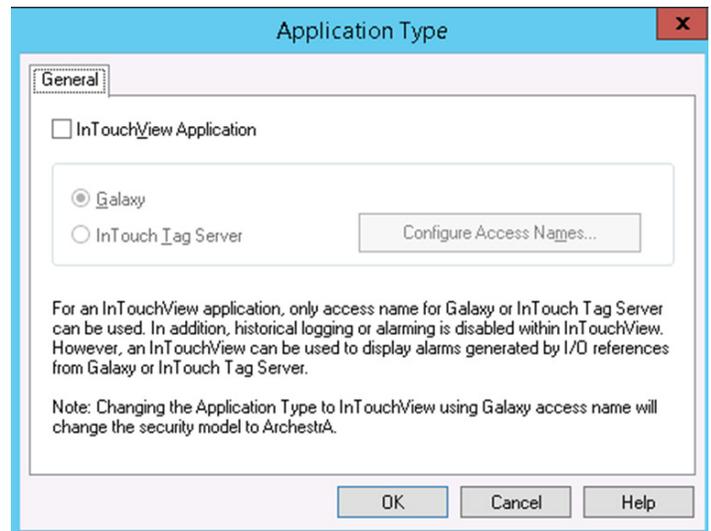
Three different views are available: A list view, a tiled view and a detailed view (classic).

The new list and tiled views give better visibility to the details of InTouch HMI applications and make several operations available directly from the tiles. Workflow improvements include for example, streamlining the application creation process which reduces 9 steps to only 2.

New InTouch Tag Server Client License

A common architecture is that of a Tag Server architecture. This new license will allow WindowViewer to run and only connect to a remote InTouch Tag Server, as a 'Tag Server Client'.

This is an extension of the InTouchView Application licensing which will now allow users to choose between "System Platform Galaxy" or "InTouch Tag Server" as the remote data source. This enables more cost-effective solution for tag server applications where there is no need for local IO connectivity, alarming, etc.

Features & Functionality of AVEVA InTouch HMI

Access from Any Device, Anywhere, Any Time

AVEVA offers the most comprehensive portfolio of secure, web-based visualizations of your real-time automation solutions including InTouch Web Client and AVEVA InTouch Access Anywhere. From full high fidelity remote real-time control to casual real-time production monitoring are now at your fingertips leveraging any HTML5-compliant web browser with zero client installation, zero maintenance! Moreover, the world's favorite HMI is also fully mobile and works natively on tablets and smartphones. InTouch Web is ideal for following:

- Mobile Operators and Business Management
- Read Only or Read Write
- TVs / wall mounted monitors around plant facility
- Embedding of HMI Graphics in Business Enterprise Portals
- Runs on both Microsoft Windows Server or Workstation OS

In addition, for remote operators, InTouch Access Anywhere is an extension to InTouch that provides industry's most secure access to InTouch applications via any HTML5-compliant web browser. It enables users to securely monitor, control and troubleshoot plant equipment or process from any location, on any device, at any time.

- Remote Operators with Full Process Control
- Read Only or Read Write
- High fidelity access to entire InTouch Application including scripts/.NET & Active X controls
- Ideal for use beyond DMZ using Secure Gateway
- Runs only on Microsoft Windows Server

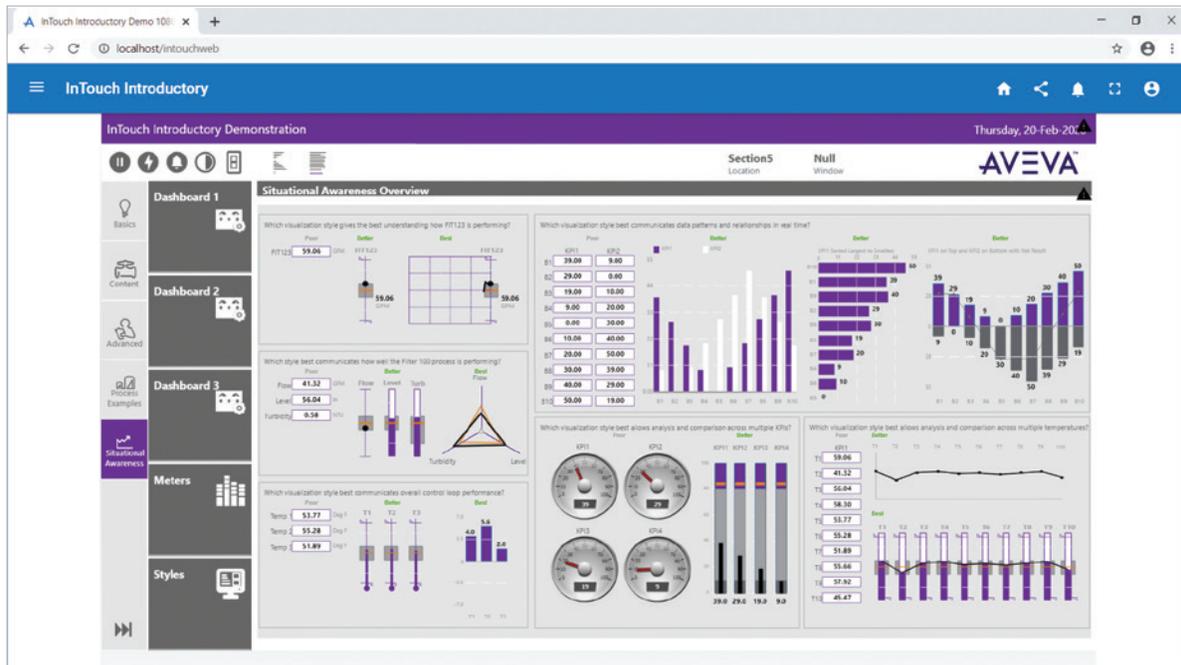## Versatility and Extensibility through Open Standards

InTouch is an open and extensible HMI with intuitive graphical animation and scripting capabilities that provide incredible power and flexibility for application designers. InTouch HMI offers the ability to use vector graphics, bitmap graphics, library symbols, .NET controls and legacy ActiveX controls. Industrial Graphics support embedded .NET controls, giving you the freedom for unrestricted application extensibility without programming.

InTouch HMI allows you to connect to any device or back-end system by using standard interfaces, such as OPC UA, OPC DA, SQL, SOAP, HTTP/S, .NET for external connectivity. Open connectivity allows real-time plant data to become integral part of business.

Situational Awareness for Operator Effectiveness

InTouch HMI has an extensive library of graphical symbols, wizards, templates and elements that provides rich user experience and high contextualization. The graphics have built-in quality processing and diagnostic indication, enabling you to rapidly determine root causes of abnormal situations. Millions of preconfigured and pretested combinations and orientations of symbols are available making this the largest graphics library on the planet.
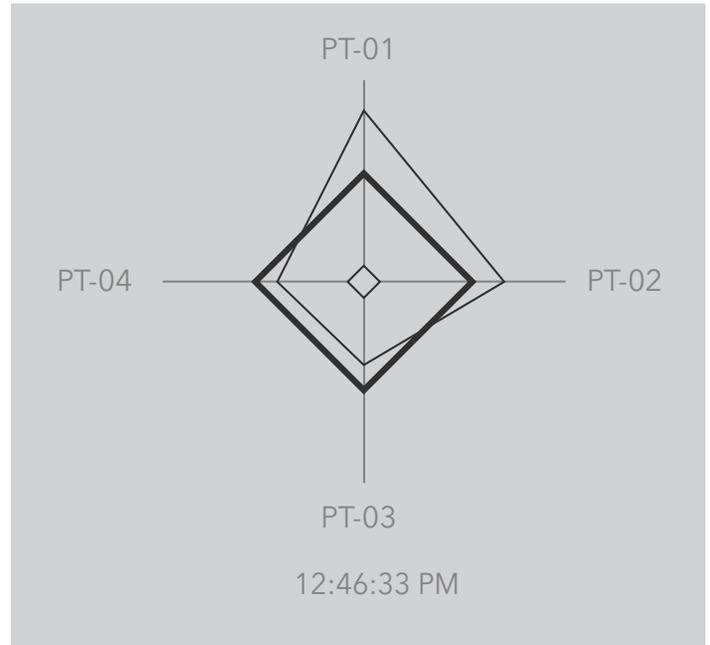

The Situational Awareness Library of Industrial Graphics is AVEVA's unique approach to presenting actionable information in less time to operators. Library symbols may be used out-of-the-box or customized as needed. You may add your own new or modified symbols, or you may create your own special libraries of symbols to suit your engineering and development requirements.
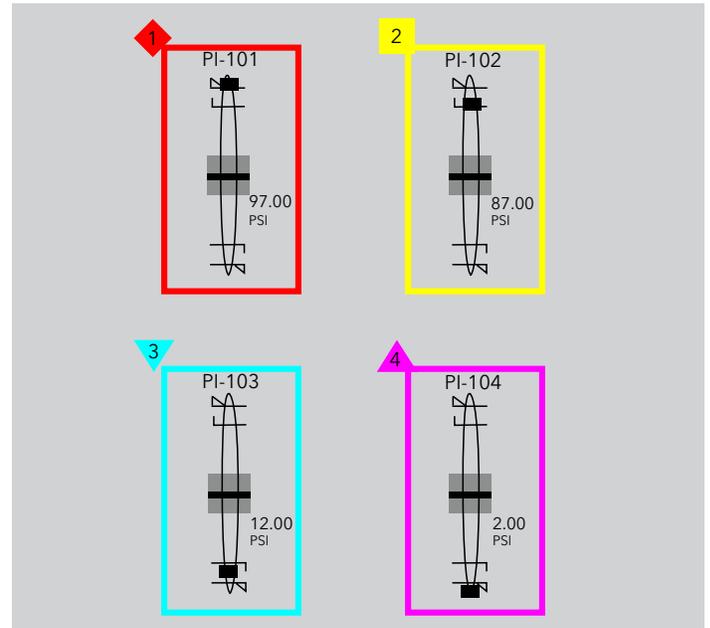
- Dashboard Symbols
- Alarm Symbols
- Trend Symbols
- Equipment Symbols
- Input Symbols
- Instrumentation Symbols
- Status Symbols
- Advanced Symbols – Polar Star
- Equipment Symbols – Valves, Agitator, Tank
- Many other Symbols – Level Meter, Hand Switch, Output Bar, etc.

One of the advanced Symbol 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.
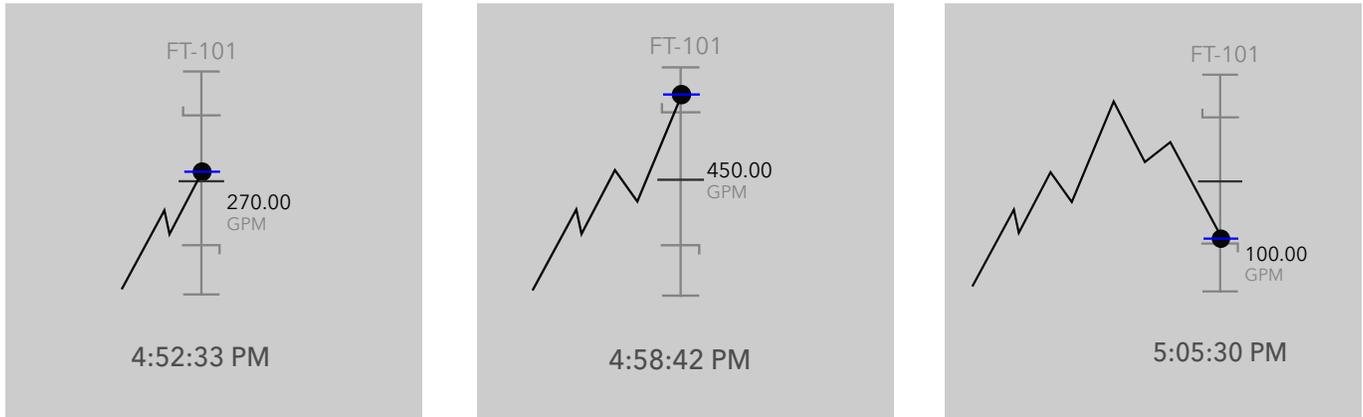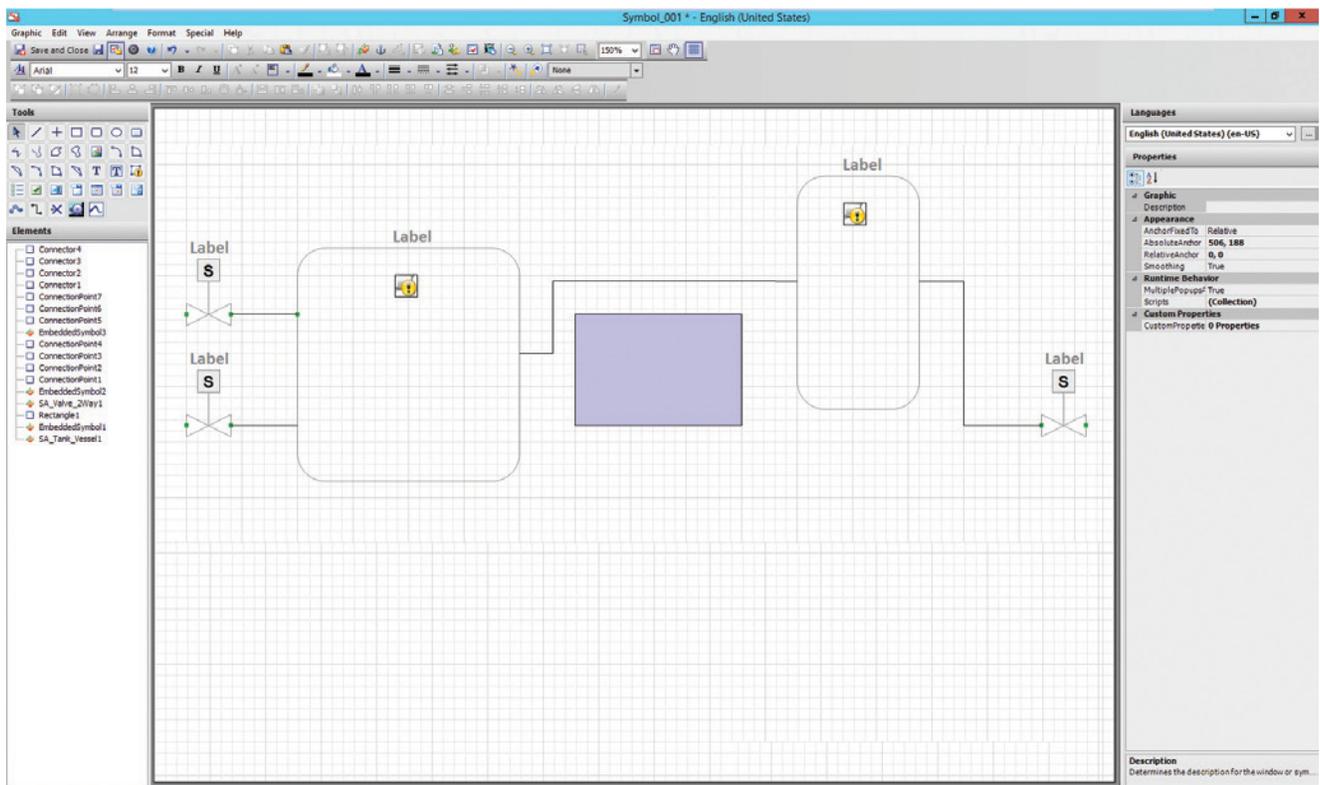

Polar Star - abnormal

Triple coded for faster Operator reaction and prioritization

AVEVA

Trend Pen: Easy to configure, Single Pen and Multi-Pen Trend Symbols provide not only a current data value but also the recent data historical trend in a specific absolute fixed time range or in a moving window time range, enabling an operator to instantly distinguish recent activity and dramatically improve predictability of potential future events and handling issues before they become full alarms or events.

Three snapshots over time of a Trend Pen

Connection Points and Connectors: Every HMI design includes graphic elements and connectors between elements, such as a pipe, wire, or line. Much of the design time goes into connecting graphic elements to one another. For most HMIs, this connecting can be a tedious effort and can prove especially frustrating when graphics are repositioned in the design phase or even if the graphic is required to move at runtime as a result of animation. Connection Points and Connectors provide resilient connections between graphics with simple point, click, drag and drop operations. With these new features, whenever graphics are repositioned, either in design or runtime, the Connectors adjust and move with the graphics to maintain the connections.

Breakthrough Advanced Engineering Tools

Design, distribute and enforce graphical component standards for greater application consistency and optimized application design and maintenance using Element Styles, Numeric Formatting, and graphic protection. Shorten initial and maintenance design phases using graphic template change propagation which enables engineers to make a change once and propagate it throughout the entire application.

Resolution Independence

In a world where more devices of diverse form factors abound, users more often find the need to design applications of uncommon sizes or simply to design an application for displays the designer has no access to. InTouch now allows users to design applications in a target resolution different from the development machine.

Resolution independent graphics can be resized or stretched without losing original visual quality. This improves window display performance, and can be designed in one resolution and reused without distortion in a different resolution.
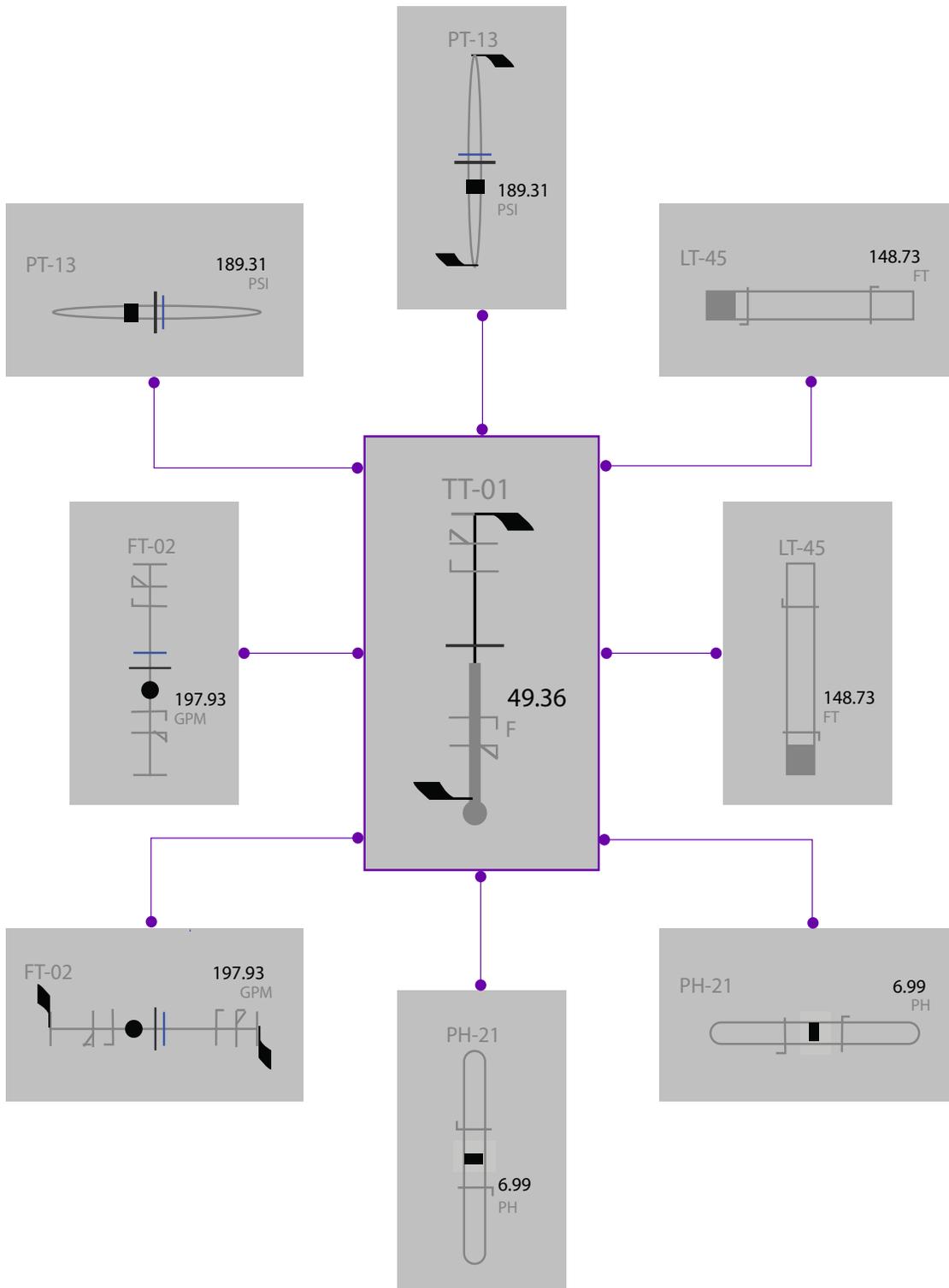
Element Styles

Element Styles ensure a customer-defined HMI look and feel across the enterprise regardless of whom or when it was designed. 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, one click can update your applications globally.

Symbol Wizards

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 Symbols that need to be created for an application.

Each symbol Wizard can be easily configured into many different visual and functional symbols

XML Import or Export

XML Import or Export Capability: Expanding further upon our Open Format philosophy, InTouch HMI supports 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. Pull third party graphics such as CAD drawings directly into your HMI saving time and maintaining complete integrity of the original graphic.

Application Templates

Another great productivity tool, Application Templates allow users to start the design of a new HMI application from a base template instead of starting from scratch, saving hours and hours of engineering. Application Templates can be as simple as a navigation framework or as rich as the user desires.

System Integrators can reuse their engineering in multiple projects, OEMs can deliver base applications to their end users, and new users can get started in a shorter time.

Application Templates can be selected via a template browser which provides a thumbnail preview of the templates. Users can organize Application Templates in a folder structure of their choice, by resolution, by industry, by customer, by engineering team, etc. A number of Application Templates are available out-of-the-box. Users can create their own Application Templates.

Window Templates

InTouch windows can now be defined as templates so new windows can be created from them and inherit window properties, content and scripts; another productivity feature that helps save engineering time.

Scripting

The software supports both simple and advanced scripting and offers hundreds of in-built script functions. Recent enhancements include auto-complete in Script Editors and Graphic Editor Expressions, line numbering, multi-level undo-redo, automatic syntax checking, consistent color coding in line highlighting, syntax error indication.

Security & Reliability

Microsoft Windows Authentication – grants permissions to InTouch HMI users authenticated on a domain controller or local computer, based on user identity and group affiliations.

Encrypted web communications support for SSL & HTTPS.

Access-Level Password Security – limits user capabilities in the InTouch HMI application based on areas of responsibility and authority.

FDA traceability electronic signature security supports Secured and Verified Writes in conformance with 21CFR11 establishing different users to secure and verify an action. In addition, users can enter a comment when performing the secured and verified write.

Ability to Run InTouch as a Windows service (Faceless), typical use is in tag server architecture.

Localization

InTouch HMI is fully supported in English, German, French, Japanese and Simplified Chinese. It offers localized development environment to enable non-English speaking engineers to design and develop HMI applications in their native language.

Language Assistant — Great for OEMs, SIs, Global Customers: An Excel Add-in that improves the management and accuracy of off-line HMI language translation and accelerates the execution and delivery of projects using the Runtime Language Switching capabilities in InTouch. Benefits include more efficient translation projects that result in improved translation accuracy and consistency, reduced costs and faster project deliverables.

Enhanced User Experience

Rich Animations

InTouch HMI 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.

Pan and Zoom

Pan and Zoom provides a simple, intuitive way to interact with your visualization applications in a modern multi-touch hardware environment. Pan and zoom can also be enjoyed using keyboard and mouse in addition to a multi-touch interface. Zoom level is also accessible programmatically, enabling powerful tasks such as application clutter/de-clutter and more.

InTouch, Simply the best HMI Investment!

With over thirty-year history of never leaving any customer behind, InTouch consistently provides seamless upgrade path year over year that protects customer's investments in InTouch applications. With this latest release, an InTouch application implemented decades ago can still run, unchanged, without re-engineering application in a modern user experience! Simply the best HMI investment you can make.

Value-add cloud capability provides ability to develop applications, analyze production data and improve operations without incurring IT on-premise costs. Whether you are ready to migrate to a cloud environment today, or you simply want the flexibility to do so in the future, AVEVA Flex subscription provides the underlying infrastructure to make that transition when you are ready.

Technical Specification

Client OS (64 bit) - InTouch HMI 2020, InTouch Web Server 2020

- Windows 8.1 Pro and Enterprise
- Windows 10 1803 Pro, Enterprise, and IoT Enterprise
- Windows 10 1809 Pro, Enterprise, and IoT Enterprise
- Windows 10 1903 Pro, Enterprise, and IoT Enterprise
- Windows 10 1909 Pro, Enterprise, and IoT Enterprise
- Windows 10 Enterprise 2016 LTSB
- Windows 10 Enterprise 2019 LTSC
- Windows 10 IoT Enterprise 2016 LTSB
- Windows 10 IoT Enterprise 2019 LTSC

Server OS (64 bit) - InTouch HMI 2020, InTouch Web Server 2020, InTouch Access Anywhere 2020

- Windows Server 2012 Data Center (Not Standard Edition)
- Windows Server 2012 R2 Embedded (64-bit) (Full image)*
- Windows Server 2012 R2 Standard and Data Center
- Windows Server 2016 LTSC Standard and Datacenter
- Windows Server 2019 LTSC Standard and Data Center (Desktop Experience)
- Windows Server IoT 2016 LTSB
- Windows Server IoT 2019 LTSC

* InTouch Access Anywhere Server and Secure Gateway not supported on Windows Server 2012 R2 Embedded

For more information on AVEVA InTouch HMI please visit:
sw.aveva.com/monitor-and-control/hmi-supervisory-and-control/intouch-hmi-standard-edition

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