New and Advanced Features of InTouch HMI Machine Edition

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IoTView interface to Wonderware Online InSight

Benefits

- Capability of pushing data from devices such as Raspberry Pi into the cloud-based Wonderware Online Historian
- No gateways needed: directly from the Device to the Cloud
Mobile Access: Alarm and Events improvements

Benefits

Support for Proprietary Database format allows the user to not need an external relational database when saving Alarm and Event history and displaying it on Mobile Access

Enhanced filtering capabilities, allows user to have a better visibility of the issues and events that are being presented
New Library of Custom Widgets

TreeView

The TreeView custom widget allows the user to build and manipulate different nodes through a hierarchical graphical interface, with full support for both Viewer and Mobile Access.
The Calendar custom widget allows the user to build and manipulate events on a calendar with the precision of minutes.
New Library of Custom Widgets

Web Browser

- The WebBrowser is a simple Custom Widget that allows the user to host external content inside of their applications.

- It can be used to load
  - webpages,
  - pdf files,
  - MP4 videos
  - and any other content supported by the web browsers.
New Library of Custom Widgets

Pie Chart

Allows users to show their data in a Pie Chart or Donut charts.

Lots of Programming Languages

A full pie chart to show off label collision detection and resolution.
Allows users to display images from different formats, including animated GIFs, animated PNGs, SVG, among many others.

Allows the user to set a list of images and control the frequency used to switch them, creating advanced animations and effects.

Allows creating color masks that will be applied dynamically on top of the original image.
ITME2017 (v8.1)

October, 2017
Benefits

- Ability to visualize and interact (e.g.: acknowledge, filter, etc) with online and history alarms from devices based on different platforms and web browsers (HTML5), using a modern and intuitive user interface.
Benefits

- Ability to visualize and interact with the Smart Message native object from Studio Mobile Access (SMA) Thin Client stations (HTML5).
List Box on SMA Thin Clients (HTML5)

Benefits

- Ability to visualize and interact with the List Box native object from Studio Mobile Access (SMA) Thin Client stations (HTML5).
Push Button on SMA Thin Clients (HTML5)

Benefits

- Ability to visualize and interact with the Push Button native object from Studio Mobile Access (SMA) Thin Client stations (HTML5).
Benefits

- Ability to enable or disable dynamically multiple sections to stack the pens automatically in independent Y axis.
Native OPC UA Server for Windows and Linux

Benefits

- Native OPC UA Server allows Full Runtime, EmbeddedView, and IoTView to exchange data directly with external systems, such as ERPs, third-party HMI/SCADA systems, or Cloud-based systems, which provide a native OPC UA Client.
Native communication across platforms though OPC UA
Simplified Licensing Model

Higher Productivity  easy  Higher Competitiveness

✓ All licenses support unlimited number of concurrent communication drivers (limited by physical constraints)

✓ Native communication drivers for the electrical protocols (DNP/IEC) available for all licenses (Full Runtime, Embedded) – no longer an add-on.

✓ All Import Wizards (PanelBuilder™, PanelMate™, and FactoryTalk™) are enabled in the same add-on.

✓ License no longer restricts the type of Thin Clients, nor pre-defined packages of Thin Clients. The user can define the exact number of maximum Thin Clients that should be concurrently supported by the license.
Grid Control on SMA Thin Clients

Benefits

- Display information from any SQL Relational database using Studio Mobile Access (SMA) Thin Clients, hosted on web browsers that support HTML5
- Easily create dynamic web-based report using the native Grid control
- Publish screens from applications designed in previous version of the product and visualize the Grid control on SMA Thin Clients.
OPC UA Client for IoTView

Benefits

- Embedded OPC UA Client allows IoTView to exchange data with external systems or devices through a third-party OPC UA Server.
- Improve interoperability natively provided by IoTView, enabling embedded devices running Linux to be used as an edge device (“IoT Gateway”).
Benefits

- In addition to Windows Embedded Standard 7, EmbeddedView licensing model was improved to support Windows Embedded Standard 8 (including Windows 8.1 Embedded Industry Pro), and Windows 10 IoT Enterprise as well.
- Enhances portability of EmbeddedView runtime across multiple platforms.
Benefits

- Layer to support encryption (SSL) and Authentication (User Name and Password) for native communication drivers that implement protocols where these interfaces are applicable, such as MQTT.
- Provides an easy configuration interface to improve the security of communication interfaces implemented by the product.
Password change through LDAP

Benefits

- Support to set/change the Active Directory’s users passwords from the application, during the runtime, using the built-in function $SetPassword().
- Support the Password Aging policy configured on Active Directory, prompting the user to change the password during the runtime.
- Improved integration with Active Directory through the native LDAP interface.
Dynamic Device IP on ITMEViewApp object for WSP

Benefits

- Exposes the Device IP property of the ITMEViewApp object for Wonderware System Platform (WSP), allowing the user to get or set its value dynamically through ArchestrA scripts.
- Enables the configuration of redundancy, by changing the Device IP dynamically.
Screen Gestures
Swiping

Benefits

- Easily identify swiping gestures on the screen and trigger actions accordingly. For example, navigate through screens swiping on the touch screen interface.
SMA Thin Client
Zoom Modes

Benefits

- Allow the user to select the zoom mode that best fits the project on different platforms and devices. Single Screen Scaling option provides backward compatibility to behavior available in previous version 7.1.
Benefits

- High performance when developing, maintaining, and troubleshooting applications. Results displayed immediately, even in large projects.

- Ability to look for any references throughout the project and replace terms efficiently and reliably.
Support for MATH Task on IoTView

Benefits

- Ability to execute custom logic to manipulate data in background, with execution control.

- Support for hundreds of built-in functions to transform data into meaningful information before presenting it.
Support for DB/ERP Built-in functions

Benefits

- Ability to execute SQL transactions with remote SQL Relational Databases, such as Microsoft SQL Azure, Microsoft SQL Server, Microsoft Access MDB, Microsoft Excel XLS/XLSX, Oracle, MySQL, etc.

- Modify external databases (Insert, Update, Delete, Create, Drop, etc) and get information from external databases (Select).
SMA - Mobility

Support for Trend Control on Studio Mobile Access Thin Clients (HTML5)

Benefits

- Ability to visualize online and history data from tag values on multiple devices based on different platforms and web browsers (HTML5), using a modern and intuitive user interface.
Support for Custom Widgets

Benefits

- Ability to integrate third-party web-based controls into the HMI/SCADA project screens.
- Engineers with HTML/JScript can easily create Custom Widgets and define Properties/Events through the IDE. Users can use the Custom Widgets on the local Viewer and Thin Clients.
Data Input with native virtual keypad/keyboards

- Support the mobile device’s language
- Consistent with the native virtual keyboard provided by the mobile device’s operating system
- Support for both numeric and alphanumerical input
Migration Tool

Import Wizard for FactoryTalk™ ME/SE (Add-On)

Benefits


Note: Manual adjustments can be done after executing the automatic conversion.
Interoperability

New and Updated Communication Drivers and Tag Integration

MQTT → IoT / Industry 4.0
KAWR → Robotics
SNMP → IT
SITIA → PLC + Tag Integration
20+ Updated drivers

Benefits

- Enable integration of multiple devices and systems from the plant-floor to the ERP/Cloud in a seamless manner.
- Increase productivity and quality through native tag integration for tag-based devices.
ITMEViewApp object for WSP

Best in class solution integrating local HMIs with central SCADA system, increasing productivity and quality

✓ Seamless IDE integration
✓ ArchestrA Galaxy Repository
✓ Automatic point mapping
✓ Event-driven value communication
✓ Synchronized Alarm Status
✓ Native support for Wonderware Historian
✓ Remote Management and Deployment
Multiple Screens Support on SMA Thin Clients

Support for Screen Groups (e.g.: Header, Footer, Menu, etc.)

Support for Popup and Dialog Screen Styles

Studio Mobile Access (SMA) Thin Clients

Platforms: Agnostic
Host: Web Browser agnostic
Technology: HTML5
Support for Web Servers using CGI interfaces

The Power of choice!
Use the Web Server (HTTP Server) you want.
IoTView™ Runtime Edition – Platform Agnostic

Global
Project Tags
Classes
System Tags
Security System (local mode)

Graphics (SMA Thin Client)
Screens
Screen Groups
Project/Library
Symbols

Tasks
Alarm Online
Trend (remote database)

Drivers
MOTCP
ABTCP
SOFTP

IoTView™
Native OPC UA Redundancy

- OPC Server Hot/Stand-by swap
- Cascading Redundancy
- Dynamic control per connection
- Dynamic monitoring of the status

Easy configuration >> High reliability
Enhanced Symbols

1000+ Linked Symbols free-of-charge

Optimized for higher performance
Optimized Collaboration Server

Offline Mode Supported
Higher Performance and Reliability!

Capability to compare any configuration file, merge changes from multiple application engineers and support for Revision Control. Also interact with the Team Foundation Server, allowing Application Lifecycle Management (ALM).

- Integrated Interface for Microsoft Visual Studio Team Foundation Server
- Native revision control
- Multi-user collaboration
- History of changes – traceability
- Security System – access control
- Backup/restore built-in control
- Multi-version comparison and merging options
Support for Windows 10

100% Compatibility with applications designed in previous versions

Evolve protecting your investment!

2013
ITME
Windows XP
Windows Embedded Standard 7
Windows Embedded Compact 6 / 5

2015
ITME v8.0
Windows 10 / 8 / 7
Windows Server 2012 / 2008
Windows Embedded Standard 7
Windows Embedded Compact 7 / 6 / 5
Linux / Vxworks
Optimized Tag Integration
Native integration with Wonderware Historian

Native interface to save/retrieve data to/from the Wonderware Historian

Built-in store and forward feature

Layer of abstraction based on the History Format for each Trend Worksheet.
Support for **scripting** on the Studio Mobile Access (SMA) Thin Client, based on platform independent HTML5 technology.

Enhanced the development environment, allowing the user to configure **common properties from multiple objects** selected on the screen editor.

Created built-in functions **GetAlarmCount** and **GetAlarmInfo**, allowing the user to access information about the online alarms during the runtime, via script.

Enhanced **CEView** (runtime for Windows Embedded Compact) to support pictures in additional formats, such as **PNG, GIF, TIFF, and EXIF** (in addition to BMP and JPG that were already supported). The operating system image must provide the required libraries to support such formats.

Add support for **Chinese-Simplified MUI** (in addition to Chinese-Traditional) in the development environment of InTouch Machine Edition.
Native Debugging tools for Scripts

Native support for debugging tools integrated in the development environment

Add break points to scripts

Simply move the mouse over variables to monitor their current value

Improved Database Spy

Monitor variables in the integrated
Watch the sequence of execution
Analyze the status of each runtime task
Multi-touch Interface

- Zoom In / Zoom out screens
- Pan screens
- Grow & Shrink objects (Size animation)
- Drag objects (Position animation)
- Rotate objects (Rotation animation)
- Dual or Multi-touch command (Command animation)
- Touch events (Command animation)
- Built-in Inertia effect
Dynamic Configuration

Tags Database Built-in Functions
Create, Modify, Delete tags and its properties during the runtime

Screen XML API Add-On
Create screens in XML and convert them to binary format during the runtime

Create Templates that can be configured during the runtime.
Ideal for OEMs and Machine Builders!
Collaboration Server

Capability to compare any configuration file, merge changes from multiple application engineers and support for Revision Control. Also interact with the Team Foundation Server, allowing Application Lifecycle Management (ALM).

- Integrated Interface for Microsoft Visual Studio Team Foundation Server
- Native revision control
- Multi-user collaboration
- History of changes – traceability
- Security System – access control
- Backup/restore built-in control
- Multi-version comparison and merging options
SMA Thin Client (HTML5)
OPC UA Client for Windows CE

- First HMI/SCADA software in the market to support OPC UA on the Microsoft Windows Embedded CE operating system (in addition to other Windows platforms).
- Increased security (built-in authentication), flexibility, and control.
Graphical Enhancements

- **Performance Enhancements**
  The screen switch greatly improved, especially on devices powered with slower processors (e.g.: ARM processors with low CPU power). Benchmark tests indicated that, in average, screen switch time is twice as fast on this version.

- **Graphical Editor Enhancements**
  Tab order editor and Textbox Active Object
Localization for the Development Environment

Entwickeln Sie Ihr Projekt in Ihrer Sprache!

Desenvolva seu projeto em seu idioma!

Développez votre projet dans votre langue!

Entwickeln Sie Ihr Projekt in Ihrer Sprache!

あなたの言語でプロジェクトを開発！

Develop your project in your language!
Statistical Process Control (SPC) information one click away!
Optimized trend history module, designed to load millions of values from SQL Relational Databases with high performance!
Native support for Security Socket Layer (SSL), made it easier and securer than ever to send emails from InTouch Machine Edition!
Native LDAP support

Support for ADAM Server in addition to standard LDAP Servers.
Integrate your project to the Active Directory (Users and Groups).
OPC XML and Multi-thread OPC DA 2.XX-3.00

- OPC DA 2.05
- OPC UA
- OPC .NET
- OPC XML/DA (2.x,3.0)
Native Communication Drivers (IEC104 and DNP)

Native drivers for standard protocols used in the Electrical Industry.

IEC-60870-5-104 (IE104 driver)
DNP3 (DNP driver)

* Add-on license required
Modern development Environment

Modern look-and-feel, increased productivity

- Ribbon interface
- Dock interfaces
- Larger Object Properties dialog
- Create custom pallets of colors

Open more than one document (tab) simultaneously
Graphic Enhancements

- New 3D button styles
- Link icons (.ico, .bmp, .jpg, .gif, .png) to buttons
- Apply dynamic rotation to imported graphics during runtime
Trend Control Enhancements

- Fill area below each pen (optional transparency 0-100%)
  - Color
  - Pictures or Patterns (.bmp)
- Add pictures or text (notation) on top of the trend control
Native Intellectual Property Protection

Do you or your customers have custom scripts?

What about graphics or other functionality you would like to protect?
Security Enhancements

- Integrate the project with Microsoft Active Directory – domain – security system using the LDAP protocol
- Share security system settings among several stations
- Import/Export security system settings
- Cache security system authentication information
- Associate “users” with multiple “groups”
- New security system configuration wizard
Runtime Localization

- Reduce errors, eliminate misunderstandings.
- No longer a manual “fill out the table” process
- Now a one-click online translation
- New easy-to-use interface
Instead of scripting, easy-to-use configuration forms for:

- SMTP
- FTP
New and Updated Native Communication Drivers

No extra charge, built-in, installed

- CAN/CANopen (master or slave)
- Eaton ELC (PLCs)
- Opto 22
- Siemens (SIEME, SIETH, SIPPI)
- BACnet
Run as a Service

InTouch Machine Edition can run as a Windows service. This virtually eliminates accidental shutdown of critical applications by operators.

Because increased uptime is mandatory in today's facilities, running as a service also allows ITME to start even when no users are logged on to the computer. This is perfect for remote installations or recovery from power failures.

Running ITME runtime as a service increases the security of the system, blocking unauthorized users from slipping in and making any changes before launching the graphic interface.
Support for .NET Controls under Windows XP includes:

- Support for Properties, Methods and Events.
- Embedded user-friendly interface allowing the user to link tags to Properties and Methods, and to link expressions to Events. Does not require scripting to integrate the object in the project.
Using Linked Symbols, the user can create, modify and customize his/her own library of symbols and re-use them in many different projects. After editing the MASTER SYMBOL once, the changes are replicated to all instances of this symbol in the application, improving productivity during application development.

Create the Linked Symbol

Edit your own Custom Properties

Insert the Linked Symbol into the application screens and assign tags and/or values to it.

After inserting the symbol, the user can determine whether to keep the link with the MASTER Symbol or not.

Save the MASTER SYMBOL in the library.
Microsoft Visual Script Language (VBScript) is a simple, standard and flexible scripting language that allows you to implement logics and algorithms within the ITME application.

- Built-in VBScript editor with IntelliSense.
- Support for syntax, operators, functions and standards from VBScript, integrated to the Studio tags and functions database.
- Ability to create your own variables and procedures (functions and/or sub-routines).
- Easy interface to access to properties, methods and/or events from COM objects, including ActiveX controls.
- Ability to execute the logics in any platform that supports VBScript, including MS Windows NT/2K/XP (ITME Server station), MS Windows CE (CEView) and MS Internet Explorer - Web Thin Client.
Native Configuration Integration with Excel

Microsoft Excel compatible (copy/paste data and follow the same standards)

Tab-based interface increases productivity
ActiveX Interface Enhancements:

- Support for Events in addition to Properties and Methods.
- Embedded user-friendly interface allowing the user to link tags to Properties and Methods, and to link expressions to Events. Does not require scripting to integrate the object in the project.
Tools for FDA 32 CFR Part 11

Security System
- Password Size
- Password Aging
- E-signature
- Auto Lock-up user

Event Logger
- System Events
- Process Events
- User Events
- Read-Only signed reports
✓ Support for third-party SQL Relational Databases such as SQL Server, MS Access, Oracle, Sybase and others, via standard ADO.NET providers.

✓ Embedded ADO.NET interface for all history tasks (Alarms, Events and Trends) as well as for the native Grid object.

✓ Database connectivity from any platform supported by ITME or CEView (including Windows CE and PocketPC), through the unique Studio Database Gateway, which provides connection to the database through a standard TCP/IP link.

✓ User-friendly interface which does not require scripting or SQL knowledge to configure the database interface.

✓ Support for Secondary Database in the modes “Redundancy” or “Store and Forward,” increasing the reliability of the system and avoiding loss of data.
Native Serial Communication Encapsulation

Communication Drivers Enhancements:

✓ Option to dial to a remote site automatically and connect a remote device (e.g. PLC) through modems connected with the standard phone line.

✓ Option to encapsulate the protocol from any serial communication driver available in ITME (or CEView) under TCP/IP or UPD/IP, to exchange data with remote devices (e.g. PLCs) through an “Ethernet to Serial converter.”
Remote Management

- Connect to remote runtime stations from the Development Station (ITME) through any valid TCP/IP link, such as Ethernet, Wireless Ethernet (IEC 802.11), Internet, Dial-Up connection.

- Download the local application to the target station; Import the application from the target station; Install or upgrade the System Files (e.g.: CEView runtime software); License remotely; and Start or Stop the application remotely.

- Implement changes on the screens from the development station and download them as soon as the changes are saved (On-line Remote Configuration).
Remote Troubleshooting

- Debug the application running in the remote target stations from the development station.
- Monitor tags, Force tags or execute Expressions remotely.
- Monitor events and log the protocol communication remotely.
PanelBuilder32® Import Wizard

Closed Platform
(Black Box)

Panel Builder Report File

Open Architecture

- Flexibility
- Expansibility
- Connectivity

TCP/IP
OPC Server Gateway

OPC Client

Over 150 Drivers

Web (HTML & XML)

ADO

PanelBuilder32® Import Wizard

Over 150 Drivers

TCP/IP

OPC Server Gateway

OPC Client

Over 150 Drivers

Web (HTML & XML)

ADO
PanelMate® Import Wizard

Closed Platform
(Black Box)

Open Architecture
✓ Flexibility
✓ Expansibility
✓ Connectivity

TCP/IP
OPC Server Gateway

OPC Client

Over 150 Drivers

Web (HTML & XML)

ADO
Life Is On
THANK YOU