Proficy HMI/SCADA – iFIX
New Features
VERSION 5.8

November 2013

The new features of iFIX 5.8 include:

- Improved Picture Scaling with the iFIX WorkSpace
    - New Upgrade Picture to Screen Independent Enhanced Coordinate Expert
    - New Button Caption Converter
    - New Picture Properties for the Enhanced Coordinate System
    - New Zoom to Fit
    - Picture Zoom Behavior Changes
    - Updates to Creating Pictures E-book
- Security Enhancements
- iFIX - SOA Service Provider
- Support for new Microsoft Windows Software
- Enhanced Failover Improvements
    - Mission Control and SAC
    - ScadaSyncMonitor
    - ScadaRoleManager
    - Database Manager
    - Maintenance Mode
- Updates to the iFIX Automation Reference
- Support for Marathon everRun MX and everRun Extend Product
- New Icons

CAUTION: If you installed the iFIX 5.8 Alpha and want to upgrade your setup to the final release version, you will need to uninstall iFIX and reinstall it. Any development work that might have been done using the Alpha build including maintaining, pictures, SCU, dynamos, database, schedules, and so on is not supported.

TABLE OF CONTENTS

1. Improved Picture Scaling in the iFIX WorkSpace

Starting in iFIX 5.8, there is a new and improved coordinate system (Enhanced Coordinates) that allows you to scale pictures better in the WorkSpace. This option is enabled for all new graphics. Existing legacy graphics remain in their original coordinate system until you upgrade them to the new Enhanced Coordinate System. The Enhanced Coordinate System features independence from restricting screen resolutions.

a. New Upgrade Picture to Screen Independent Enhanced Coordinate Expert

A new 'Upgrade Pictures to Screen Independent Enhanced Coordinate' expert allows you to convert legacy (iFIX 5.5 and earlier) Logical Coordinate System pictures and dynamo sets to the new Enhanced Coordinate System. A picture upgraded to the Enhanced Coordinate System retains its original aspects even when viewed on screens with different resolutions. You can upgrade one, some, or all the pictures with the Upgrade Pictures to Screen Independent Enhanced Coordinates dialog box.

During the upgrade process, the expert performs many tasks including:

- Saves the pictures in the legacy coordinate system to an Upgrade backup folder before the picture is upgraded. This allows you to revert back to the original picture at a later time.
- Checks the position of each object within the pictures as it is upgraded.
- Creates a log file each time the expert is run and identifies objects that reside outside the document's extents. You can examine the log file to determine if your picture needs to be changed and then modify the document extents accordingly.

After a picture is converted to the Enhanced Coordinate System, a new icon appears for it in the system tree (to differentiate it from the older style pictures)

You can confirm the upgrade by using the Property Window to examine the new Picture Properties for the Enhanced Coordinate System. For a listing of these properties, refer to the New Picture Properties for the Enhanced Coordinate System section.

b. New Button Caption Converter

In addition, a Button Caption Converter allows you to scale Button Caption objects (text) to fit Enhanced Coordinate System graphics. The Button Caption Converter expert converts the caption text to scale across zoom factors and screen resolutions and overlays an object on the original command button caption. Using the Button Caption Converter, you can scale one, some, or all of the command button captions in a picture. This is useful when viewing pictures and text with Zoom to Fit. The Button Caption Converter supports the Enhanced Coordinate System only.

c. New Picture Properties for the Enhanced Coordinate System

The Enhanced Coordinate System uses the following new properties to reflect the height, width, and coordinate system for pictures:

- DocumentHeightEx - Specifies the document height in postscript points.
- DocumentWidthEx - Specifies the document width in postscript points.
- Enhanced Coordinates - Identifies the picture coordinate system as either: True (Enhanced Coordinate System) or False (legacy Logical Coordinate System)

d. New Zoom to Fit

With the Enhanced Coordinate System, a Zoom to Fit option resizes the entire picture area to fit the current window size while suppressing scroll bars. The objects within the picture do not change their logical position and dimensions even when the picture is brought to a new screen resolution, which is different from the resolution on which the picture was developed. Zoom to Fit does not change the location of the objects/shapes within your picture, but scales the picture for viewing only.

e. Picture Zoom Behavior Changes

With the Enhanced Coordinate System, Zoom acts differently. That is, with the legacy Logical Coordinate System, you had to decrease the Zoom Factor to increase the Zoom Percentage. With the Enhanced Coordinate System, you must increase the Zoom Factor to increase the Zoom Percentage.

- With the Logical Coordinate System - Zooming In (greater than 100%) is applied by reducing or decreasing the viewport; thus, the zoom factor is less than 1. ZoomOut increases the viewport, thus, the Zoom Factor is greater than 1.
- With the Enhanced Coordinate System - Zooming In to a picture increases the zoom factor, and Zooming Out reduces or decreases the zoom factor.

The following table lists the zoom percentage and corresponding zoom factor for each coordinate system. For example, a zoom percentage of 200% is represented as a zoom factor of 0.5 for the Logical Coordinate and 2 for with the Enhanced Coordinates System.

Zoom Percentage	Zoom Factor	
	Logical Coordinate	Enhanced Coordinate
50%	1.5	0.5
100%	1.0	1.0
150%	0.25	1.5
200%	0.5	2.0

f. Updates to Creating Pictures E-book

There is new, valuable information throughout the Creating Pictures e-book. Helpful hints for upgrading legacy pictures to the new Enhanced Coordinate System are included on the following topic pages:

- Picture Coordinate System
- Upgrading a Picture to Enhanced Coordinates
- Selecting Zoom to Fit
- Converting a Button Caption
- Controlling a Picture's Magnification
- Tips: Sizing and Locating a Picture

g. Read Known Issues

Be sure to read the Known Issues tab for issues you may encounter.

NOTE: Please be aware that any pictures that you upgrade with the ALPHA will not be supported in the iFIX 5.8 final release.

2. New Security Enhancements

To protect your information from unauthorized sources, iFIX 5.8 provides the following security features:

- The Network Password is now masked and case-sensitive when you enter it in the SCU's Network Configuration dialog box.
- There is a new field called Password Confirmation in Network Configuration dialog box in the SCU. The user is now required to enter the password twice (the second time for confirmation).
- Due to security enhancements, if the SCU file is copied to a different machine, a popup message appears warning you that it is invalid when the SCU file is open and/or when iFIX starts. You will be required to enter the network password in SCU if you need to establish network connection with the Enforce Trusted Computing enabled.

3. New iFIX - SOA Service Provider

The new Proficy iFIX - SOA Service Provider allows you to access iFIX tags and get active alarms in Proficy Workflow. Proficy Workflow clients can read and write iFIX tags and fields, and get active alarms by connecting the Proficy Workflow Server to Proficy iFIX.

The iFIX - SOA Service Provider consists of the Proficy iFIX Data Provider and the Proficy iFIX Service Provider components. The Proficy iFIX Data Provider provides services to publish iFIX tags to the Proficy Workflow server. The Proficy iFIX Service Provider provides services to connect Workflow to the iFIX node and allows you to read and write iFIX tags and fields and get active alarms.

For more information on this new feature, refer to the Using the iFIX - SOA Service Provider e-book

4. New Microsoft Windows Software Supported

iFIX 5.8 supports the following new software:

- Microsoft ®Windows® 8 (32-bit or 64-bit) Professional or Enterprise Edition
- Microsoft® Windows® Server 2012, Standard or Enterprise Edition.
- Microsoft® Windows® Embedded Standard 7, Service Pack 1

For more information on supported software and hardware, refer to the Getting Started guide.

IMPORTANT: Currently, Environment Protection is not supported on Microsoft Windows 8 and Microsoft Windows Server 2012.

5. New Product Names

iFIX WebSpace has been replaced with Proficy WebSpace. The Proficy WebSpace continues to provide an easy-to-use, full-featured web client that enables you to extend, expand and enhance your new or existing HMI/SCADA iFIX system.

6. Enhanced Failover Improvements

The following improvements are provided to enhance alarm distribution and data synchronization in an Enhanced Failover configuration. In addition, there are improved system operations during Maintenance Mode and SCADA failover.

a. Mission Control and SAC

The following improvement was made to the Mission Control with SAC tab selection screen:

- Status box shows accurate SAC Average and Max Time.

b. ScadaSyncMonitor

The following improvements were made to the ScadaSyncMonitor screen:

- Detects when ScadaSync.exe is running or not running. On the ScadaSyncMonitor screen, a red transport lines area indicates that ScadaSync.exe is not working and a message displays under the navigational buttons. A green transport lines area indicates that ScadaSync.exe is running and there is no message under the navigational buttons.
- The status of both the local and remote nodes display at the top of the ScadaSyncMonitor screen.

c. ScadaRoleManager

Enhancements to ScadaRoleManager include the following:

- Detects absence of TCPTASK when ScadaRoleMgr determines that a SCADA node does not have a good network connection.

- Sets the initial node status (ACTIVE or STANDBY) quickly and provides a message to its log file when it detects a partner at startup.
- Allows the primary node to go active when the ScadaRoleManager detects an inactive secondary node to ensure that when nodes are started simultaneously, one node will have a cold start.

d. Database Manager

- The Database Manager connects to a redundant SCADA node by specifying the physical node name instead of the logical node name. You can explicitly choose the SCADA node and therefore are not subject to connection failover.

e. Maintenance Mode

- Upon exiting Maintenance Mode, alarm acknowledgements and simulation register changes made on the secondary SCADA node are copied to the primary SCADA node.

For information on Enhanced Failover enhancements, refer to the "Enhanced Failover" e-book.

7. Updates to the iFIX Automation Reference

The following new properties and methods were added to the iFIX Automation Interface:

- **EnhancedCoordinates Property** - This read-only property specifies whether the current pictures uses screen independent coordinates (Enhanced Coordinates) or the legacy Logical System Coordinates.
- **DocumentHeightEx Property** - Specifies the height of the document in postscript points for the Enhanced Coordinate System.
- **DocumentWidthEx Property** - Specifies the width of the document in postscript points for the Enhanced Coordinate System.
- **ZoomtoFit Method** - Enables or disables the 'Zoom to Fit' feature on a picture using the Enhanced Coordinates System.
- **ConvertToEnhancedCoordinate Method** - Converts the x or y coordinates of a point in legacy Logical Coordinates to the corresponding value in Enhanced Coordinates.
- **ConvertToOriginalCoordinates Method** - Converts the x or y coordinates of a point in Enhanced Coordinates to the corresponding value in legacy Logical Coordinates.
- **ScrollToPosition Method** - Scrolls the picture to a specified position using X and Y coordinates. For use on a picture using the Enhanced Coordinate System only.

For more information on the new properties and methods, and for updates to existing properties and methods, refer to the iFIX Automation Reference e-book.

8. Support for Marathon everRun MX and everRun Extend Product

iFIX 5.8 has been tested with Marathon Technologies everRun MX, and everRun MX Extend Software products. Testing was performed using Marathon everRun MX 6.1.1.

GE Intelligent Platforms will support the functional operation of the iFIX 5.8 product that is running on a supported operating system in a validated Marathon everRun MX environment. GE Intelligent Platforms cannot guarantee performance of the software in a Marathon everRun MX Protected Environment due to the wide range of parameters associated with the hardware, configuration, memory settings, 3rd party software and network performance all of which can affect performance. GE Intelligent Platforms cannot provide support related to the performance of the software running in a Marathon Protected Environment if determined that the issue is related to the Marathon Protected Environment. GE Intelligent Platforms does not provide support for configuration of hardware, networking, and IT security parameters associated with the protected environment.

It is the responsibility of the customer to ensure that the performance of the iFIX 5.8 software and application are adequate to meet the needs of their runtime environment. GE Intelligent Platforms does not support issues related to functionality that is not available as a result of running in the Xenserver virtual environment. Examples include the functionality of card level drivers such as Genius, DH/DH+, SA85 as well as functions requiring direct video access. GE Intelligent Platforms cannot guarantee the functionality or performance of 3rd party products used with the application. The customer needs to check with the vendor of those applications for their ability to run in a virtualized environment.

Each Marathon Technologies everRun MX instance that is using our software is required to have a valid license.

It is recommended that you consult the Marathon web site for questions concerning compatibility issues with Hardware and Software before installing Proficy iFIX 5.8.

http://www.stratus.com/Services/CustomerSupport/everRun-Always-On-Application-Availability-Support

9. Features No Longer Supported Starting in iFIX 5.8

- FIX Desktop
- Screen regions in the Viewport are now obsolete.

10.   New Icons in iFIX

The WorkSpace, the SCU, and other areas of iFIX now display new and improved icons.

11.   Items No Longer Included on the iFIX DVD

- FIX Desktop Installer
- The iFIX Sample System
- iFIX WebSpace (now replaced by the Proficy WebSpace DVD)
- Proficy Historian for SCADA (it now has its own DVD)

About GE Intelligent Platforms

GE Intelligent Platforms is an experienced high-performance technology company and a global provider of software, hardware, services, and expertise in automation and embedded computing. We offer a unique foundation of agile and reliable technology providing customers a sustainable competitive advantage in the industries they serve, including energy, water, consumer packaged goods, government & defense, and telecommunications. GE Intelligent Platforms is headquartered in Charlottesville, VA. For more information, visit www.ge-ip.com.