Course Description

The tag-based InTouch 2014 R2 course is a 4-day, instructor-led class focused on Modern InTouch application design. The course provides a fundamental understanding of the basic principles of the Wonderware visualization module and the steps to develop a Human Machine Interface (HMI) system for your specific plant floor. You are guided through setup, layout, best practice concepts, features, and functions of the InTouch software. Hands-on labs reinforce concepts and features.

Objectives

Upon completion of this course, you will be able to:
- Create a Modern InTouch Application
- Build an HMI with Situational Awareness
- Construct a Key Performance Indicator display
- Configure a DA Server
- Establish communications with I/O-aware programs
- Create, export, and import tags
- Test and monitor tags
- Build a custom symbol
- Visualize advanced interactive data presentations
- Configure InTouch Alarms
- Manage live and historical alarms
- Configure Security
- Configure, log, retrieve, and export InTouch history
- View data in Real-time Trends
- Back up and Restore an InTouch application
- Distribute an application to the production environment

Audience

Plant floor operators and managers, system administrators, system integrators, and other individuals who need to use InTouch software in manufacturing processes

Prerequisites

- Manufacturing industry experience (recommended)

Course Outline

Module 1 – Introduction

Section 1 – Course Introduction

This section will familiarize you with the objectives and agenda for this course. It also outlines Wonderware products and how InTouch meets the human-machine interface requirements for visualization.

Section 2 – InTouch Software Overview

This section introduces the InTouch HMI, the benefits of using InTouch, and its key capabilities. It also provides an overview of its features.

Section 3 – System Requirements and Licensing

This section describes the operating systems and other software requirements the host computer must meet prior to installing InTouch 2014 R2 (version 11.1).

Section 4 – InTouch Application Types

This section defines the different types of InTouch applications.

Module 2 – Window Layout and Basic Navigation

Section 1 – Window Design and Navigation using WindowMaker

This section provides an overview of using WindowMaker and WindowViewer. It also describes how to design a windows layout.

Module 3 – InTouch Tagname Dictionary

Section 1 – The Tagname Dictionary

This section explores tags and the Tagname Dictionary.

Section 2 – I/O Configuration

This section discusses the data acquisition components.

Section 3 – Tag Viewer

This section describes the Tag Viewer and how to view, save, and import watch windows. It also discusses Dot Fields and how to interpret value, time, and quality information in a watch window.

Section 4 – DBDump and DBLoad

This section explores using the DBDump and DBLoad utilities to streamline the development of large amount of tags.

Section 5 – Miscellaneous Tag-Related Items

This section describes the Cross Reference Utility, Tag use counts, and how to find and delete tags.

Module 4 – Situational Awareness Visualization

Section 1 – HMI Displays with Situational Awareness

This section explains the capabilities and usage of the Situational Awareness Library.

Section 2 – Element Styles

This section explores how to use Graphic Overrides, Quality and Status, and Element Styles.

Section 3 – Window Construction Using Symbol Editor

This section explains the capabilities of the ArchestrA Symbol Editor for designing entire window graphic assemblies and custom graphics.

Section 4 – Custom Symbol Construction Using Custom Properties and Animations

This section explains how to build custom graphics by leveraging custom properties and animations.

Module 5 – InTouch Alarms

Section 1 – InTouch Tagname Alarm Configuration

This section demonstrates how to configure a discrete alarm and analog limit alarm. An explanation of how to configure Alarm .DotFields, Priority, Groups, and Severity is also provided. Additionally, this section discusses the configuration of Advanced Alarm features.

Section 2 – Live Alarms Management

This section describes Alarm management, defines Alarm Ack Models, and discusses Alarm Query syntax. An explanation of the .NET Alarm Client features, a demonstration of the Alarm Inhibit, and a contrast of Inhibit with Suppression is also provided.

Section 3 – Historical Alarms Management

This section explains Events and Event Configuration. It also describes the Alarm DB Logger. A demonstration of the configuration of the Alarm DB Logger Manager and .NET Alarm Client is also provided.

Module 6 – Data Logging and Trending

Section 1 – InTouch History

This section demonstrates InTouch Historical Logging. It also describes the features and configuration of binary file circular storage LGH and IDX files of InTouch Historical Logging. An explanation of HistData for exporting Historical Logs to CSV files is also provided.

Section 2 – Real-Time Data Trends

This section provides a demonstration of the .NET Trend Client. An introduction to Trend Pens is also provided.

Module 7 – Introduction to QuickScript

Section 1 – Introduction to InTouch QuickScript

This section explains and defines the various InTouch QuickScript types, and features and functions that are unique to a particular QuickScript type. It also describes the features and functions of the QuickScript Editor.

Section 2 – Historical Trend Window Enhancement with QuickScript

This section describes history tracking enhancements using scripts, and includes Live HistTrend functionality. This section also describes historical pen functionality used to track components of historical pens, Historical Pen Runtime selection and unassignment, and configuration of multiple scripts using Action Script animation.

Section 3 – Scalable Window Navigation

This section demonstrate a scalable method to navigate an InTouch Application.

Section 4 – Introduction to ArchestrA Symbol QuickScript.NET

This section provides an understanding of the ArchestrA scripting environment, explains execution types and triggers, and demonstrates how to create Named Scripts in an ArchestrA symbol.

Section 5 – Angle Properties and Point Animation

This section explains the StartAngle and SweepAngle properties for curves, chords, and arcs.

Section 6 – ShowGraphic Script Function

This section demonstrates features of the ShowGraphic function, HideGraphic function, and the dimension of a local tag with DIM … AS. An address of touch-link behavior in z-order is also provided.

Module 8 – Security

Section 1 – OS Security Implementation

This section discusses how to prepare your environment for using OS security. An introduction to scripting for OS Security is also provided.

Section 2 – Locking Down Your Application

This section describes the Animation Links dialog box and Action Script methods you can use to secure your application. It also describes the function used to enable and disable the Alt, Escape, and Windows keys.

Module 9 – Application Maintenance and Distribution

Section 1 – Application Backup and Restore

This section demonstrates how to export a Modern Application to an .aaPKG file and import a Modern Application from an .aaPKG file.

Section 2 – Application Publishing

This section discusses how to publish your InTouch application for your production environment.

Section 3 – Network Application Distribution

This section explains how to configure Network Application Development (NAD). A demonstration of how NAD delivers changes to the production machine is also included.