

# HMI/SCADA – CIMPLICITY Fundamentals

## Course Description

The HMI/SCADA CIMPLICITY Fundamentals course is an entry-level course focusing on the multiple aspects of project configuration. Valuable hands-on lab exercises are provided which guide students through the building and modification of the HMI application

### Who should attend?

This course is designed for Operators, Application Designers, and System Managers.

### Are there any prerequisites?

Participants should have a working knowledge of Windows operating systems. Previous controls and HMI/SCADA experience is an asset.

### Course Length

4 days

### Suggested Class Size

8 students

### Class Hours

9:00 am - 5:00 pm, daily

### What topics will be covered in this course?

Upon completion of this course, the student will be able to:

- Create and configure a new Project including the Point Database of the project.
- Configure graphic screens.
- Create Events and Actions using the Script Engine, including simple scripts using a VB compliant language.
- Create Database Logging tables.
- Create and modify Trend Charts and Alarm Viewers.
- Work with Linked Objects.
- Work with Smart Objects.
- Work with the various Animation capabilities of CIMPLICITY HMI.
- Use native and 3<sup>rd</sup> party ActiveX controls in CIMPLICITY HMI screens.
- Work with Screen Variables to build displays quickly and efficiently.
- Build an elegant navigation scheme using the Navigation Configuration tools.



#### Day 1 - Morning

Introduction to CIMPLICITY HMI  
Project Configuration

#### Day 1 Afternoon

Point Configuration  
Point Control Panel

#### Day 2 – Morning

Graphics

#### Day 2 – Afternoon

Alarm Configuration  
Alarm Viewing

#### Day 3 – Morning

Linked Objects  
Script Engine

#### Day 3 – Afternoon

CimEdit Scripts  
Animation Techniques

#### Day 4 – Morning

Database Logger  
Trending  
Smart Objects

#### Day 4 – Afternoon

ActiveX Controls  
Using Screen Variables  
Navigation Configuration

## Day 1 – Morning

### Introduction to CIMPLICITY HMI

Study the basic features and design of CIMPLICITY software.

### Project Configuration

Create a new CIMPLICITY project and configure ports, devices, resources, users and roles.

## Day 1 – Afternoon

### Point Configuration

Create and configure the point database for the classroom project.

### Point Control Panel

Use the Point Control Panel to verify the project's points

## Day 2 - Morning

### Graphics

Create the main project screen. More screens are created throughout the duration of the course.

## Day 2 - Afternoon

### Alarm Configuration

Configure project points for alarming. Configure Alarm Classes, Alarm Strings and Alarm Help files. Use the Alarm Sound Manager.

### Alarm Viewing

Configure and use the various Alarm Viewers. Create an alarm print file..

## Day 3 – Morning

### Linked Objects

Create linked objects for use on project screens.

### Script Engine

Create simple scripts using the Script Editor. Create and configure Events and Actions using the Event Editor. Use the BCEUI to trigger and test events.

## Day 3 - Afternoon

### CimEdit Scripts

Create scripts within CimEdit and configure procedures to invoke the scripts.

### Animation Techniques

Use various animation techniques to modify the main project screen to provide better functionality and operator feedback.

## Day 4 – Morning

### Database Logger

Create logging tables to log project point data. Query the database from Excel. Link SQL logging tables to Access. Use the Historical Alarm Viewer to access logged data.

### Trending

Access and use Quick Trends. Create and configure screens with embedded Trend charts.

### Smart Objects

Create a screen using Smart Objects. Modify Smart Objects and add them to a graphics library.

## Day 4 – Afternoon

### ActiveX Controls

Access ActiveX methods associated with Trend charts. Embed 3rd party ActiveX controls in a CIMPLICITY screen.

### Using Screen Variables

Use variables to build your screens quickly and efficiently.

### Navigation Configuration

Use the Navigation Configuration tools in CIMPLICITY to rapidly develop a scheme for viewing sets of displays.

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