

Siemens HMI Take your HMI to the next level with Advanced Faceplates

Kelly Anton | 10-24-2019

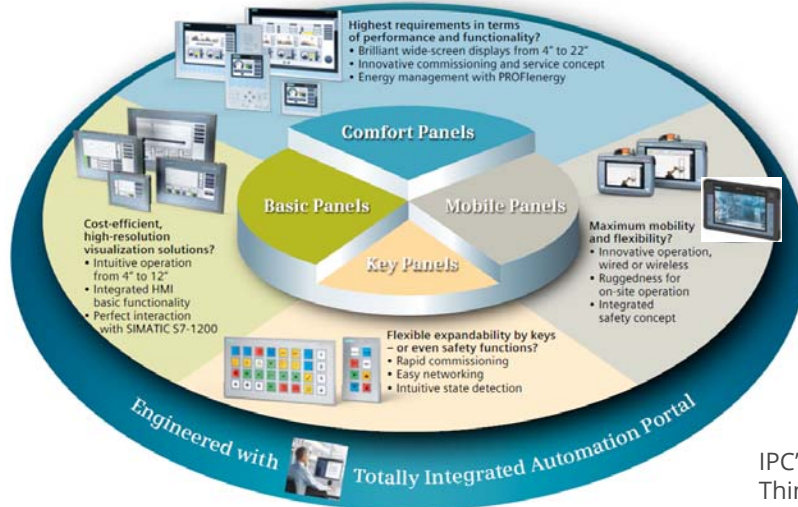
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Agenda

- Brief HMI Family Overview
- Faceplate Intro
- Advanced Features of Faceplates
- Live Demos

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Siemens HMI Family Introduction



IPC's, Monitors and Thin Clients are available as well.

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Siemens HMI Family Introduction

Same look and feel between all Editions of WinCC software in TIA Portal

Engineering Edition	WinCC Professional			
	WinCC Advanced			
	WinCC Comfort			
	WinCC Basic			
Devices	Basic Panels	Comfort Panels, Mobile Panels	Panel PCs	SCADA

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Faceplates

- Create your own objects with Properties and Events

Pump_1 [Faceplate Instance] [Pump V 0.0.2]

Name	Static value	Dynamization
Properties_Faceplate		
Background_color	217, 217, 217	
Border_color	24, 28, 49	

Project library Types Pump V 0.0.2

Name	Type
Properties_Faceplate	
Background_color	Color
Border_color	Color

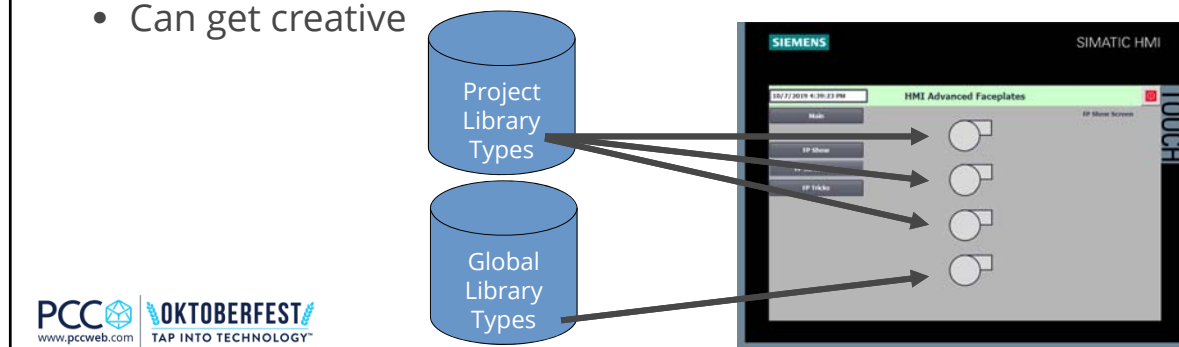
Properties

Name	Type
Circle_1	
Appearance	
Border width	Value
Line style	Value
Background fill pattern	Value
Border color	Value
Background color	Value
Flashing	
Layout	
Styles/Designs	
Rectangle_1	
Appearance	
Line style	Value
Background fill pattern	Value
Border width	Value
Border color	Value
Background color	Value
Flashing	

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Faceplates - Introduction

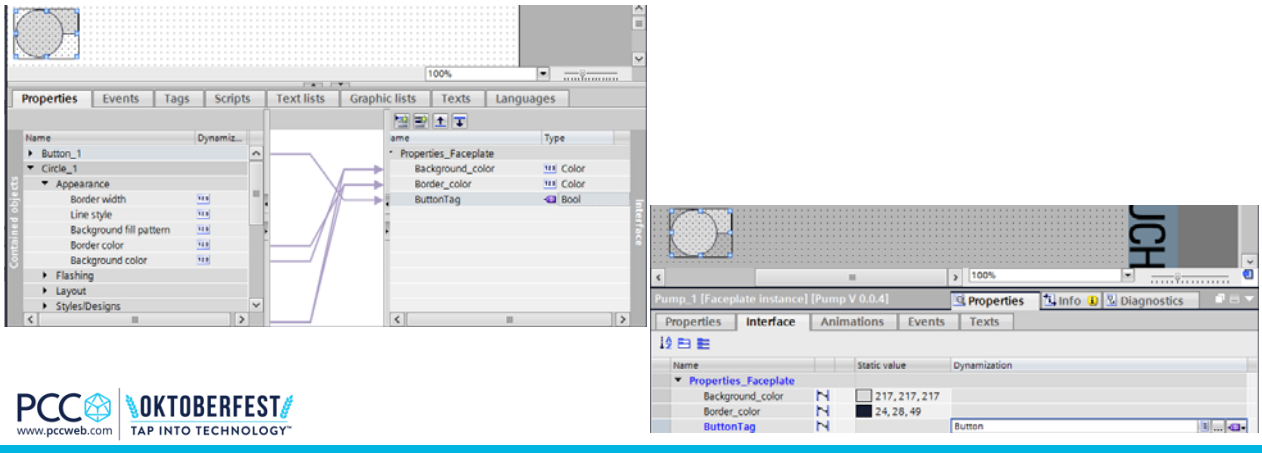
- Faceplates can be re-used in project or different projects
- Centrally managed in project library
- Faceplate type – definition stored in library
- Faceplate instance – instances of type are used in screens
- Can get creative



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Faceplates - Properties

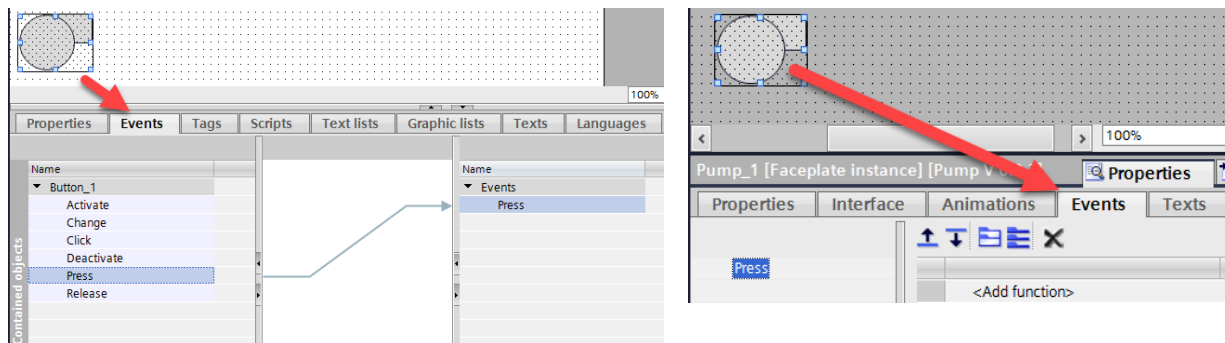
- Properties
 - Dynamic or static
 - Use a property to pass a tag into a faceplate property



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Faceplates - Events

- Events
 - Select events to expose from contained objects



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faceplates with structures and Indirect Addressing

- Pass in a PLC data type as single structure into faceplate
- Create elements of PLC data type or arrays

The screenshot displays two faceplate instances, 'MotorControl P. 1' and 'MotorControl P. 4', each with 'Start' and 'Stop' buttons and a '0000' display. Red arrows point to the 'Motor' property in the 'Properties_Faceplate' window of each instance. The 'Motor' property is set to 'MyDB_Motor_1' for the first instance and 'MyDB_MotorArray[0]' for the second.

MyDB

Name	Data type
Static	
Motor_1	"MyDataType"
Start	Bool
Speed	Int
Motor_2	"MyDataType"
Start	Bool
Speed	Int
MotorArray	Array[0..1] of "MyDataType"
MotorArray[0]	"MyDataType"
Start	Bool
Speed	Int
MotorArray[1]	"MyDataType"
Start	Bool
Speed	Int

MyDataType

Name	Data type
Start	Bool
Speed	Int

Default tag table

Name	Data type	Connection	PLC name	PLC tag	Address
MyDB_Motor_1	MyDataType	HMI_Connection_1	PLC_1	MyDB.Motor_1	
MyDB_Motor_2	MyDataType	HMI_Connection_1	PLC_1	MyDB.Motor_2	
MyDB_MotorArray[0]	MyDataType	HMI_Connection_1	PLC_1	MyDB.MotorArray[0]	
MyDB_MotorArray[1]	MyDataType	HMI_Connection_1	PLC_1	MyDB.MotorArray[1]	
MyDB_MotorArrayIndirectVal	MyDataType	HMI_Connection_1	PLC_1	<Multiplex tag>	MyDB.MotorArray[MyIndex]
MyIndex	Int			<Internal tag>	<Undefined>

PCC www.pccweb.com

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Faceplates – Property ChangeValue Event Tips

- For proper updating of Property Changes with external tags
 - Set External tags to Read Continuously
 - Or assign real world tag to non-faceplate object (can be invisible)
- For proper updating/testing with internal tags
 - Button events will not trigger property change
 - I/O fields will trigger change

The screenshot shows a faceplate instance with a 'ChangeValue' event tip. A red arrow points to the 'ChangeValue' event in the 'Events' window, which is linked to the 'VB_Calculation_Script'.

Project library > Types > Disp_Calculated_Value_FP > V 0.0.4

Properties Events Tags Scripts Text lists Graphic lists Texts Languages

Name: IO field_2

PLC_Tag (interface property)

ChangeValue

VB_Calculation_Script

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Live Demos

- Create and show Faceplates

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PCC YouTube Videos

- Creating a Faceplate video
– <https://youtu.be/Kss0ZxrTzOY>

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