

Canvas Quick Start

This Quick Start will guide you through the development of a simple two-page application intended to show the user how to start a new application, connect to the OPC server, read and write to a tag using a readout template, and change pages. We will start by defining terminology and system concepts.

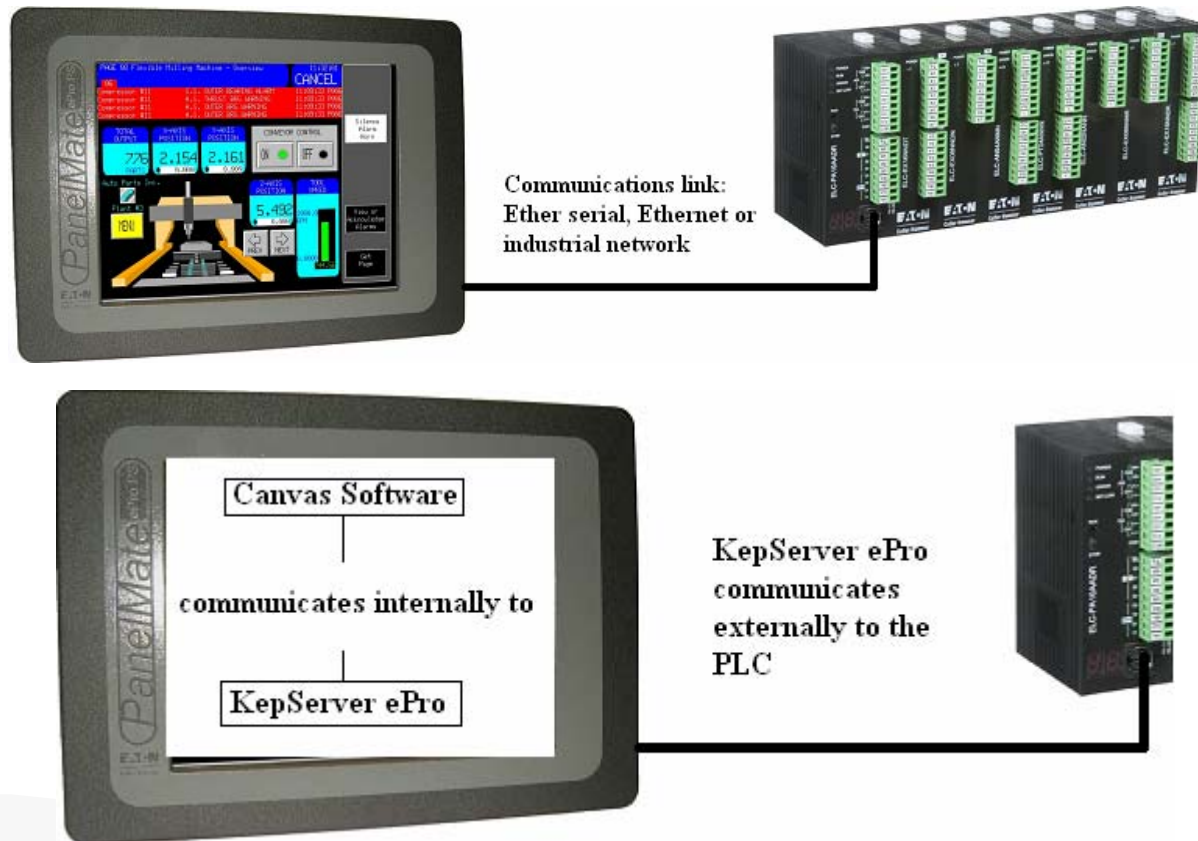
It is important to understand how the Canvas® KepWare ePro™, and the PLC all work together.

All of the completed files reside at C:\Program Files\Cutler-Hammer\Canvas\Getting Started\

System Overview

KepServer ePro: Software used to communicate to the PLC. KepServer ePro will use the Supplied Getting_Started.opf.

Canvas: Software used to develop a screen to make it easier for machine operators to monitor, control and set parameters in the PLC.

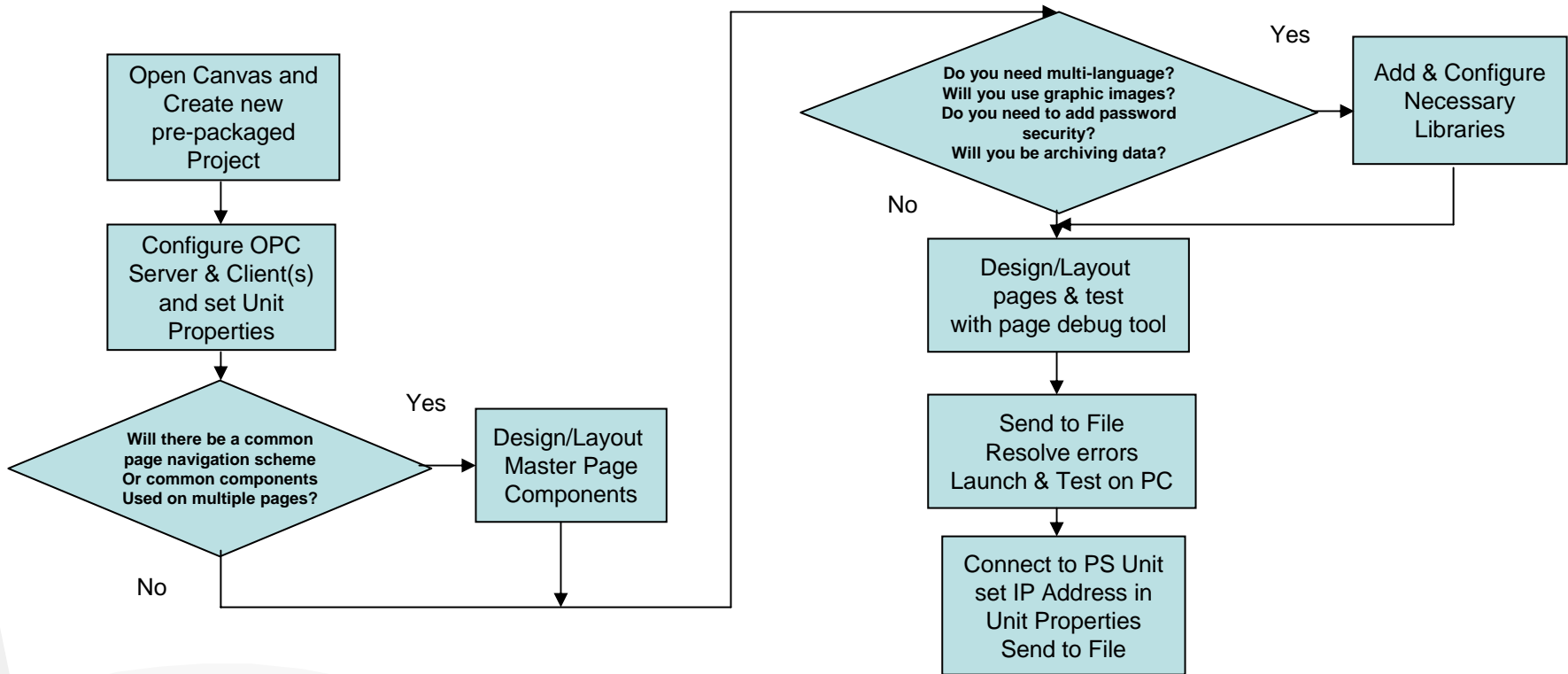


Terminology

- **Tag:** Sometimes referred to as a reference, or PLC address, a tag is used to identify data in the PLC.
- **Server:** Software used to supply data requested by a client. KEPServer_ePro is the OPC server that will supply data to Canvas.
- **Client:** Software that requests data from the server. Canvas is an OPC client and will request data from KEPServer_ePro.

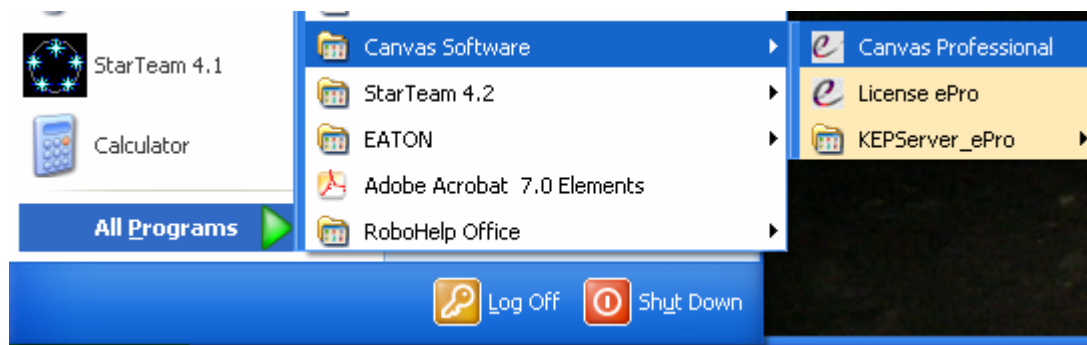
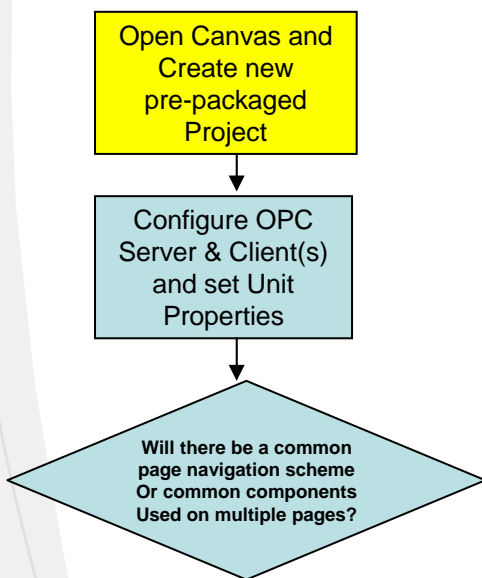
Canvas Development Process

This flow chart highlights the correct order of operations for new projects. A smaller version will always be on the left side of the page for reference while working on the application.



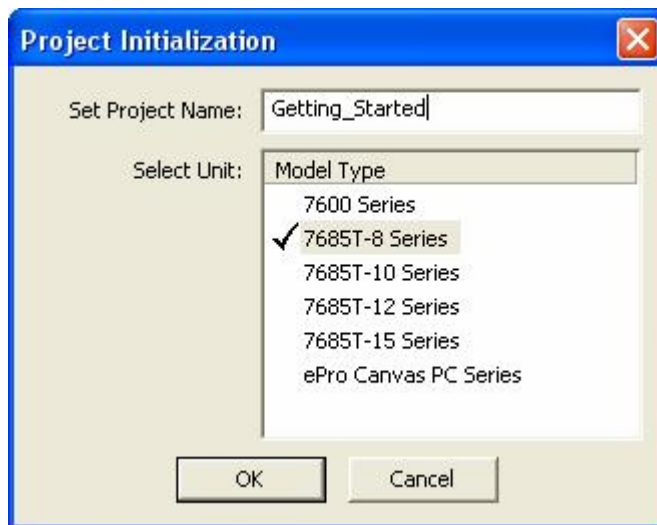
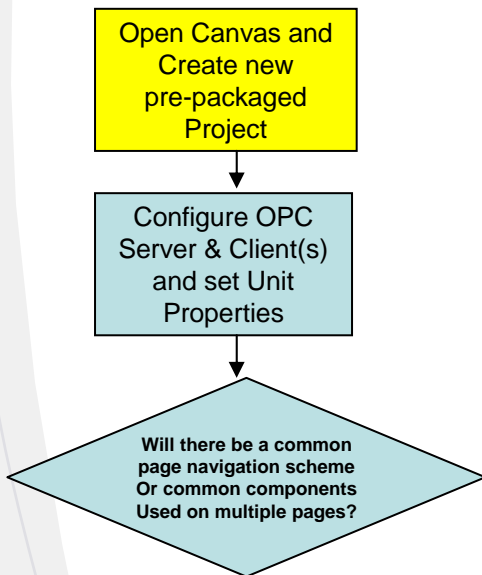
Open Canvas and Create A New Prepackaged Project

1. Open Canvas software: Start/All Programs/Canvas Software /Canvas Professional.



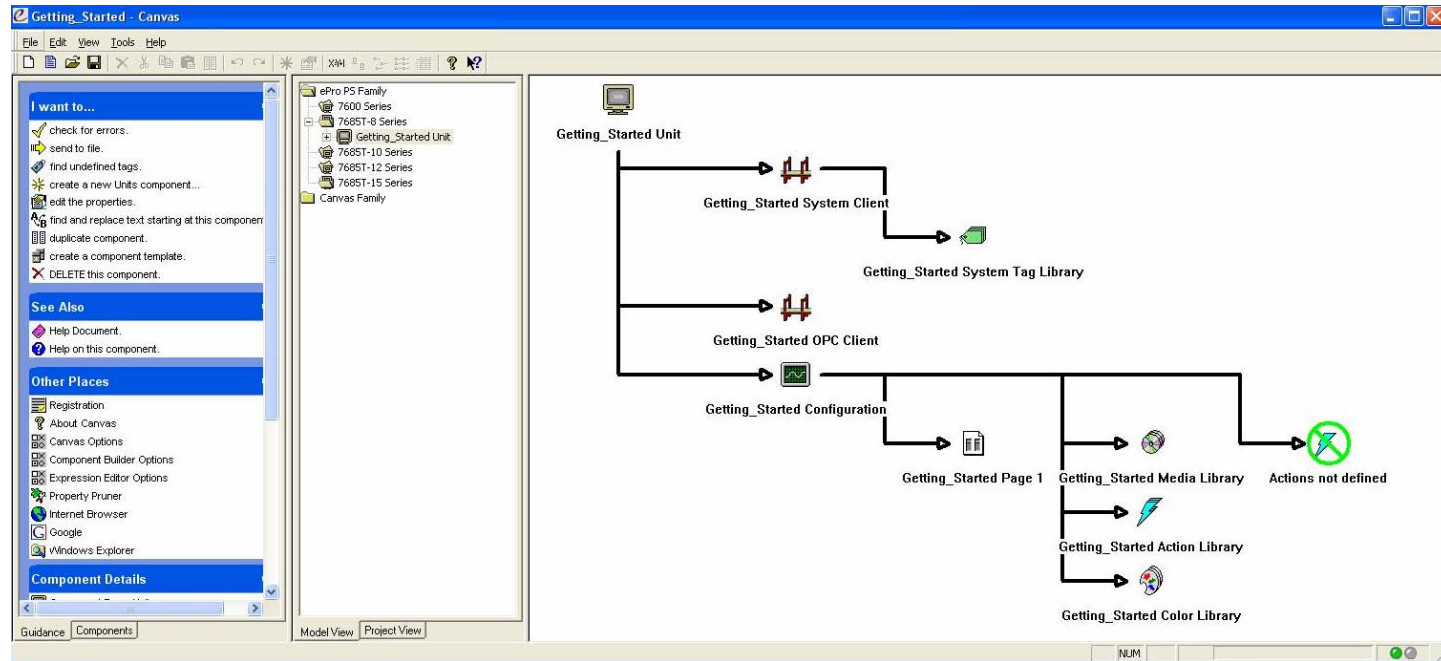
Open Canvas and Create A New Prepackaged Project

2. Set Project Name to Getting_Started
3. Chose 7685T-8 Series (This will set all default page sizes to VGA – 640x480 and all subcomponents necessary to start a new application.)



Open Canvas and Create A New Prepackaged Project

Canvas' Project Editor should look like this. Notice that the name Getting_Started has been passed to many of the objects.

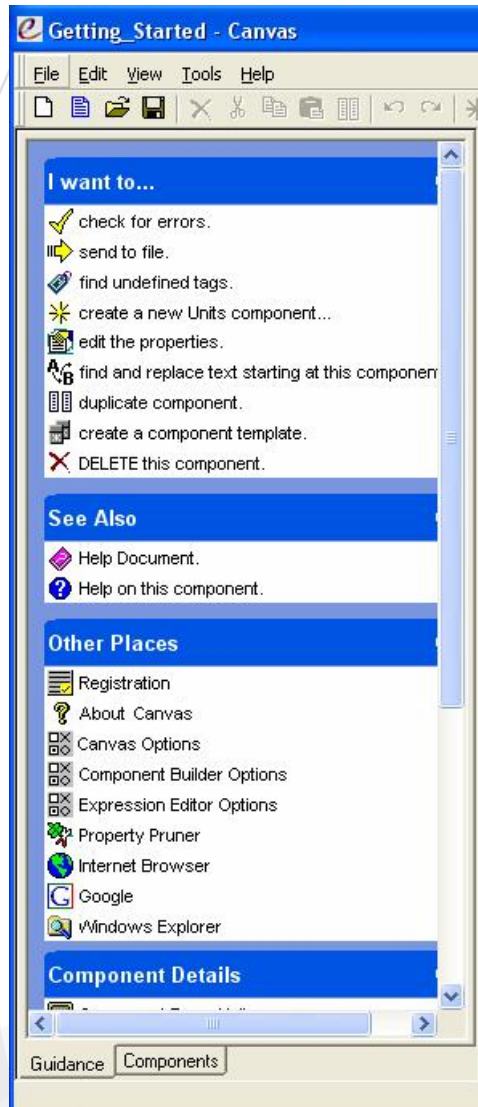


Open Canvas and
Create new
pre-packaged
Project

Configure OPC
Server & Client(s)
and set Unit
Properties

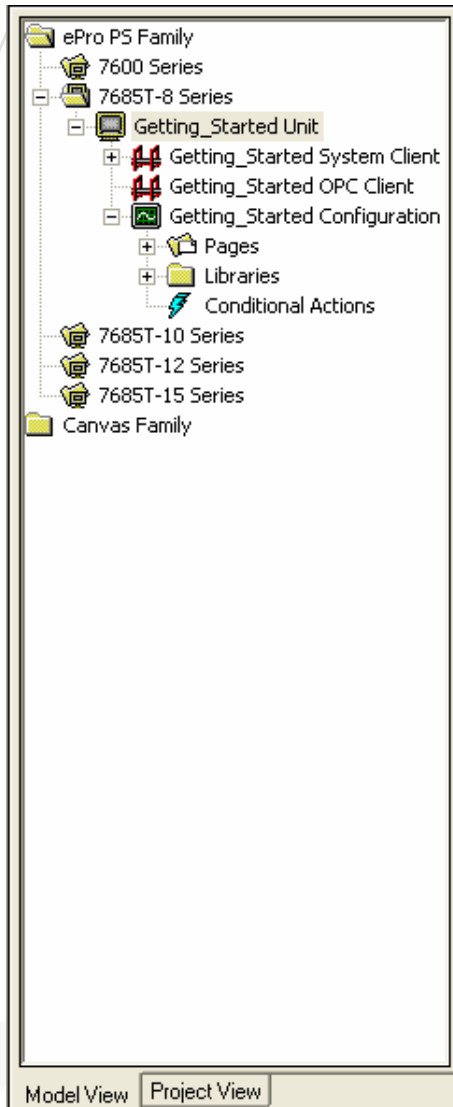
Will there be a common
page navigation scheme
Or common components
Used on multiple pages?

Project Editor Terminology: Guidance Tab



The Guidance Tab is used for quick access to some of the most commonly used actions in the Canvas software. This includes such things as Send to File, Find and Replace as well as other helpful shortcuts to the Internet and Windows Explorer

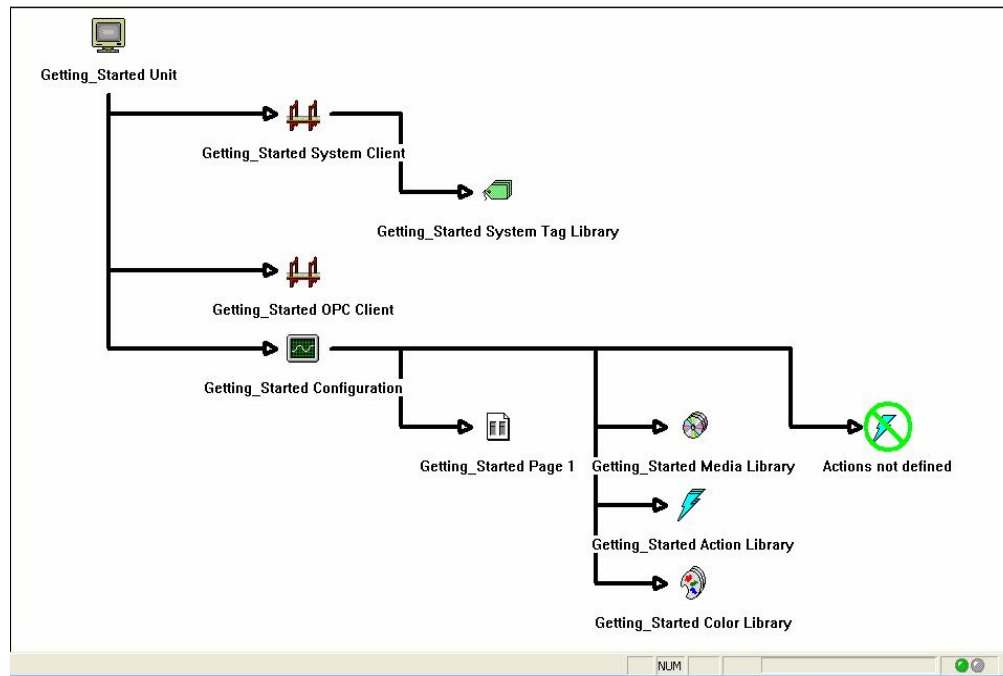
Project Editor Terminology: Model View



The Model View gives a quick look at the project as it corresponds to the model. In this application we are looking at the 7685T-8 and its associated components.

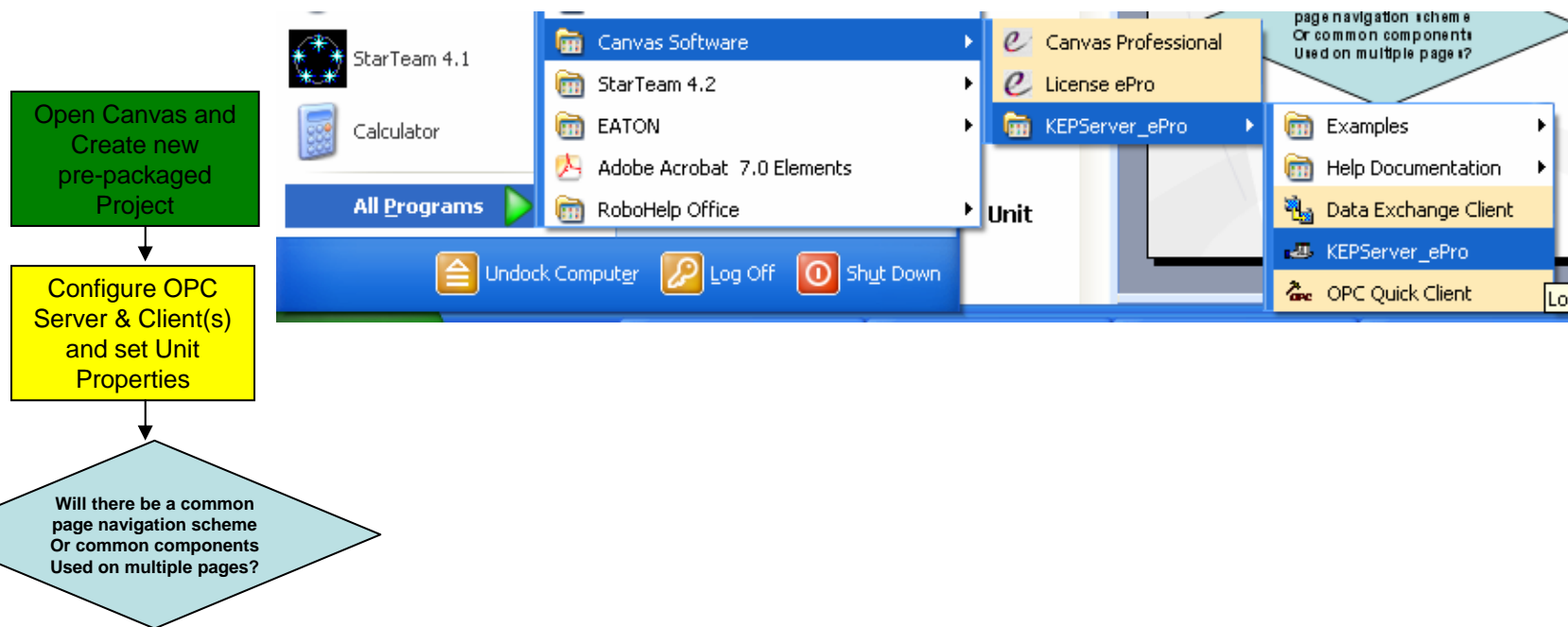
Project Editor Terminology: Tree View

The Tree View gives an overall look at how different components are associated with each other. The information shown in the Tree View is determined by the highlighted component on the Model View.



Configure OPC Server & Clients and Set Unit Properties

1. Open KEPServer_ePro Start/All Programs/Canvas Software/KEPServer_ePro



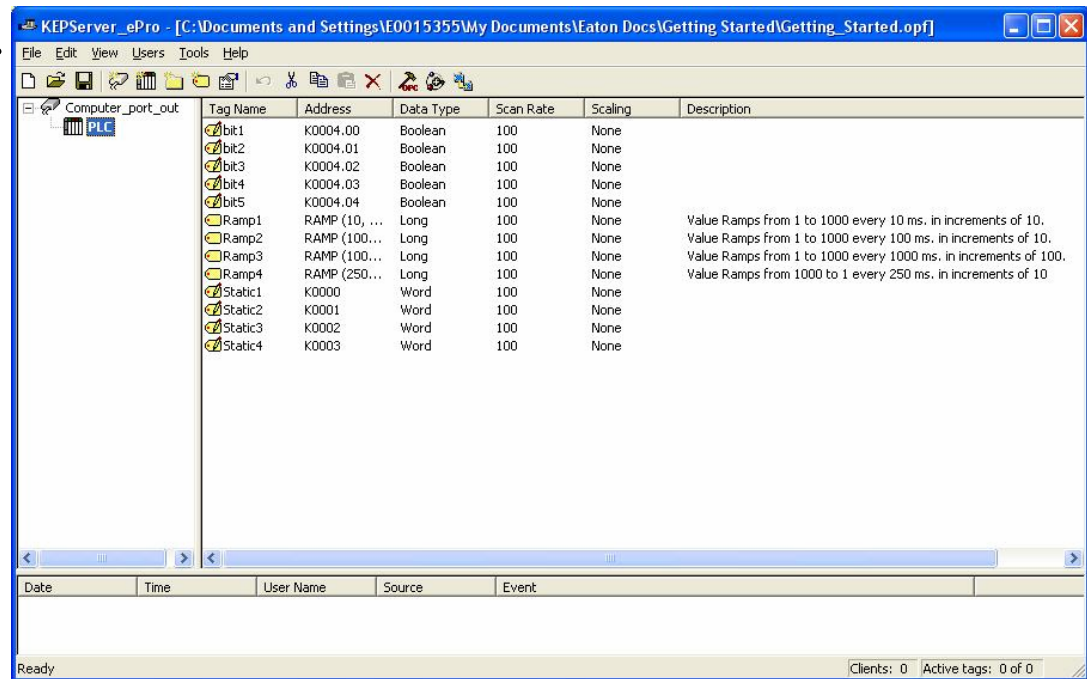
Configure OPC Server & Clients and Set Unit Properties

2. From KEPServer_ePro go to File/Open, and open C:\Program Files\Cutler-Hammer\Canvas\Getting Started\Getting_started.opf.
3. Once open, click on the PLC. The following should be visible.

Open Canvas and Create new pre-packaged Project

Configure OPC Server & Client(s) and set Unit Properties

Will there be a common page navigation scheme Or common components Used on multiple pages?

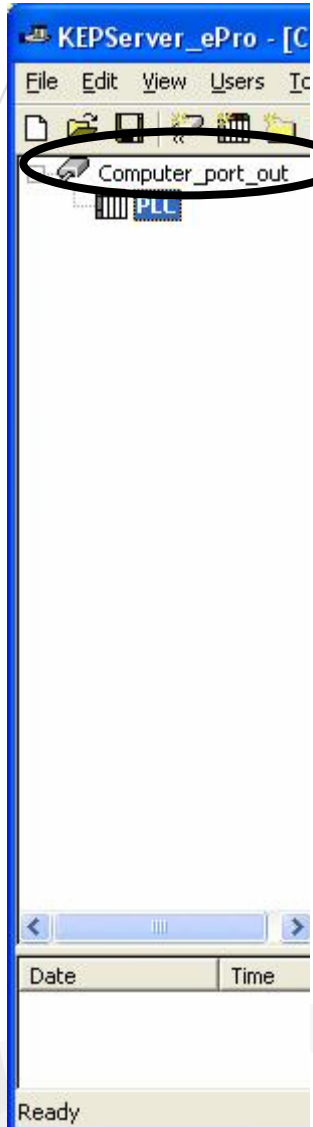


The screenshot shows the KEPServer_ePro application window with the title bar indicating the file path: [C:\Documents and Settings\E0015355\My Documents\Eaton Docs\Getting Started\Getting_Started.opf]. The interface includes a menu bar (File, Edit, View, Users, Tools, Help) and a toolbar. On the left, a tree view shows 'Computer_port_out' and 'PLC'. The main area displays a table of PLC tags.

Tag Name	Address	Data Type	Scan Rate	Scaling	Description
bit1	K0004.00	Boolean	100	None	
bit2	K0004.01	Boolean	100	None	
bit3	K0004.02	Boolean	100	None	
bit4	K0004.03	Boolean	100	None	
bit5	K0004.04	Boolean	100	None	
Ramp1	RAMP (10, ...	Long	100	None	Value Ramps from 1 to 1000 every 10 ms. in increments of 10.
Ramp2	RAMP (100...	Long	100	None	Value Ramps from 1 to 1000 every 100 ms. in increments of 10.
Ramp3	RAMP (100...	Long	100	None	Value Ramps from 1 to 1000 every 1000 ms. in increments of 10.
Ramp4	RAMP (250...	Long	100	None	Value Ramps from 1000 to 1 every 250 ms. in increments of 10.
Static1	K0000	Word	100	None	
Static2	K0001	Word	100	None	
Static3	K0002	Word	100	None	
Static4	K0003	Word	100	None	

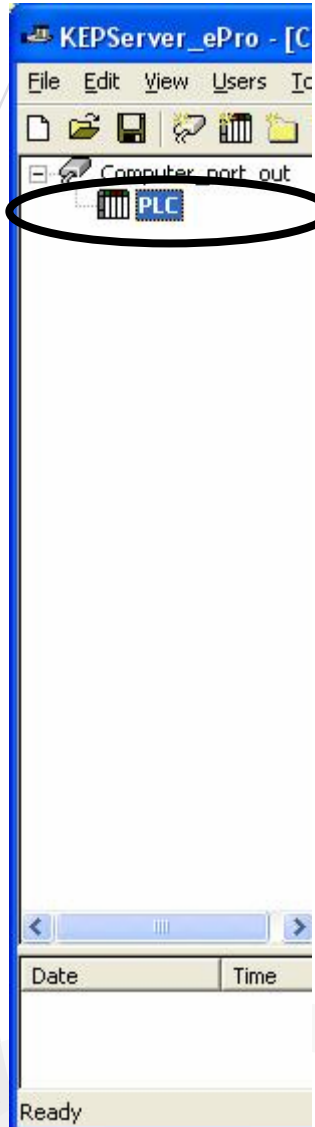
At the bottom of the window, there is a status bar with the text 'Ready' on the left and 'Clients: 0 Active tags: 0 of 0' on the right.

OPC Server Terminology:Channel




The Channel represents how KEPServer is going to physically communicate out of the PC. This could be through a serial port, Ethernet port or high speed industrial network. For this application we are just simulating communications out of a port. The channel was named `Computer_port_out` to specify what a channel represents.

OPC Server Terminology: Device



The Device is the product where the data resides. In most cases, this will be a PLC. Once a channel has been configured, the device is where parameters such as type of processor and PLC address are assigned. For this application, we are just simulating communications to a PLC. The device was named PLC to specify what a device represents.

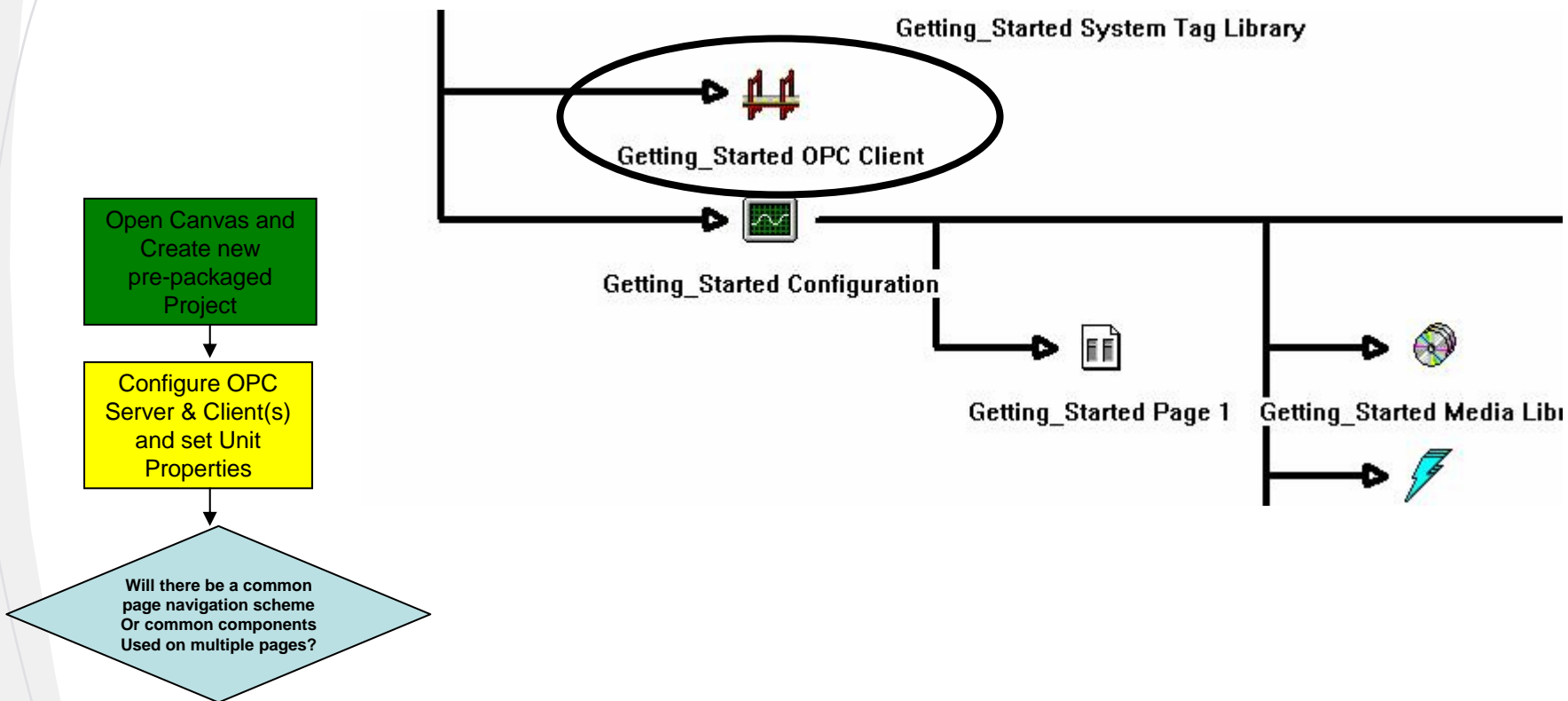
OPC Server Terminology: Tag

Tag Name	Address	Data Type	Scan Rate	Scaling	Description
 bit1	K0004.00	Boolean	100	None	

The Tag, sometimes referred to as a reference or PLC address, is used to identify data in the PLC. In this case we have a tag named bit1 that is reading from address K0004.00. In Canvas, we will just use the tag name bit1.

Configure OPC Server & Clients and Set Unit Properties

4. Back in Canvas, double click on Getting_Started OPC Client from the Tree View.

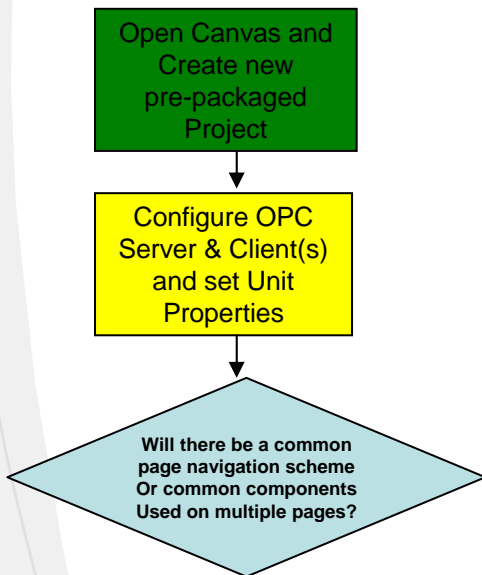
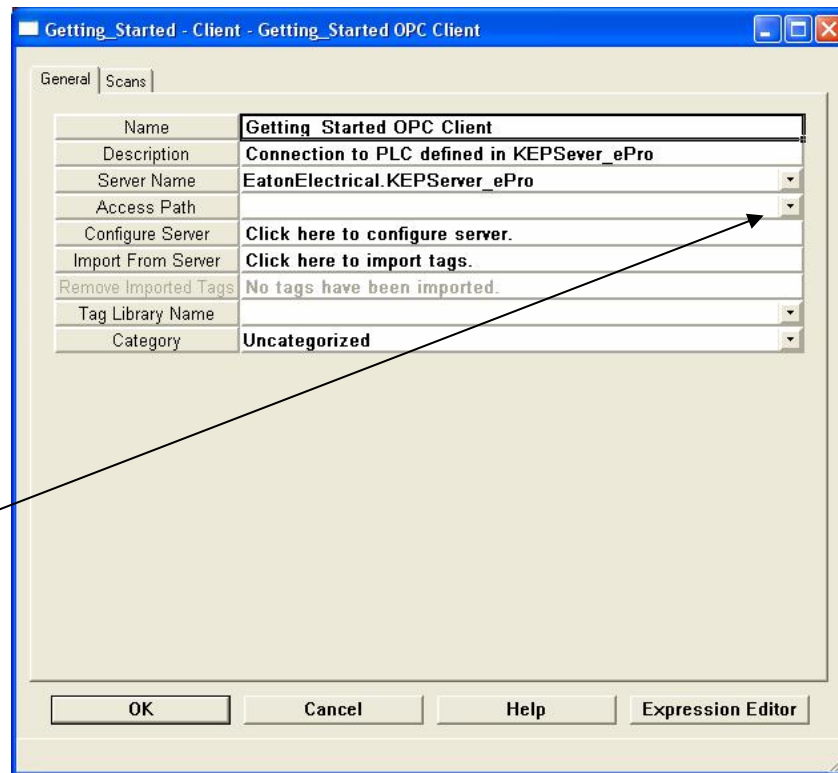


Configure OPC Server & Clients and Set Unit Properties

4. The Getting_Started – Properties will appear.

5. The server name is already correct.

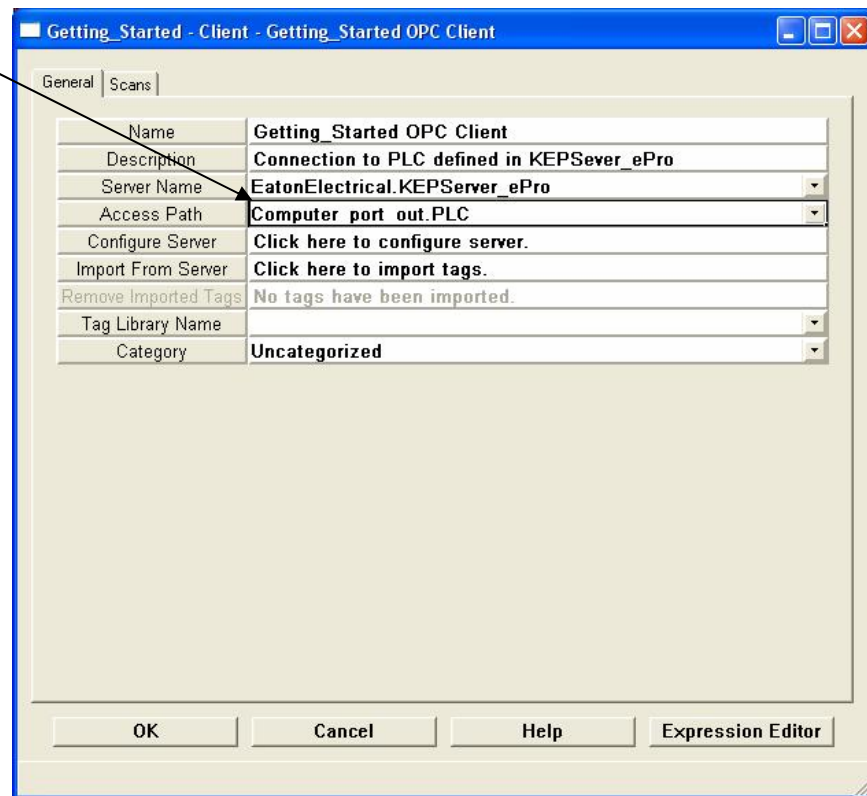
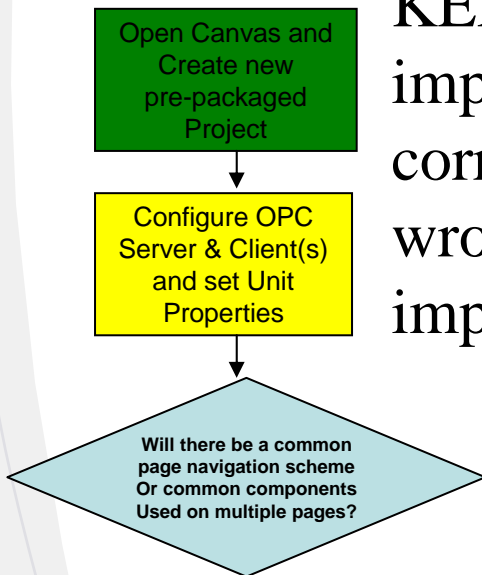
The next thing to do is setup the access path. Select the drop down arrow from the access path field.



Configure OPC Server & Clients and Set Unit Properties

6. Select Computer_port_out.PLC from the list.

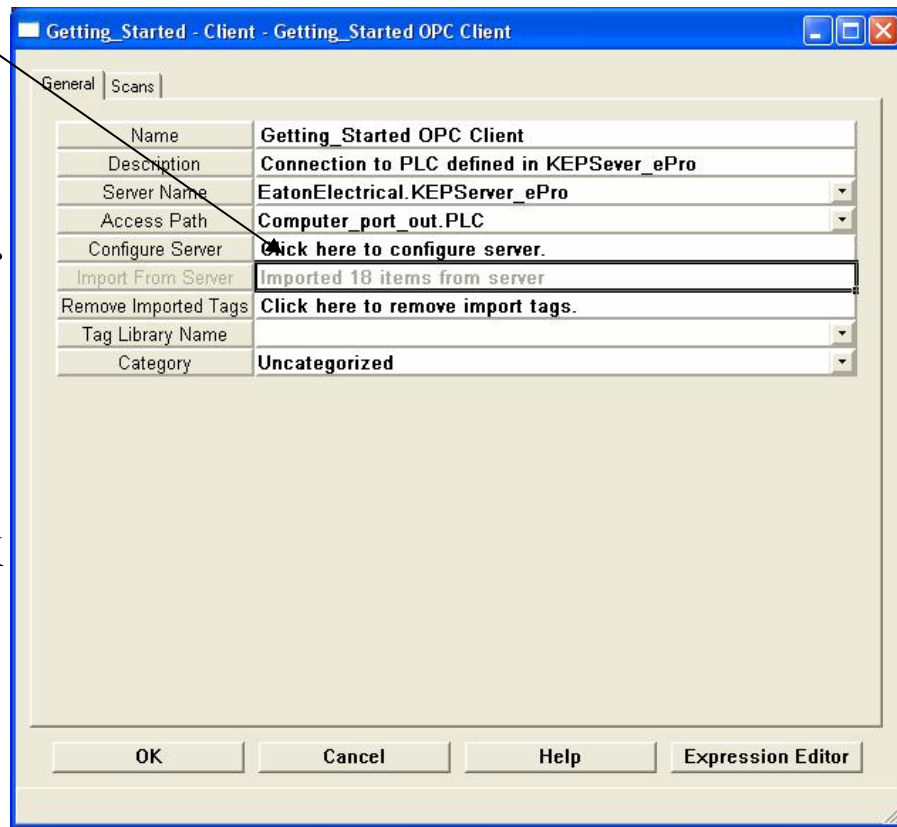
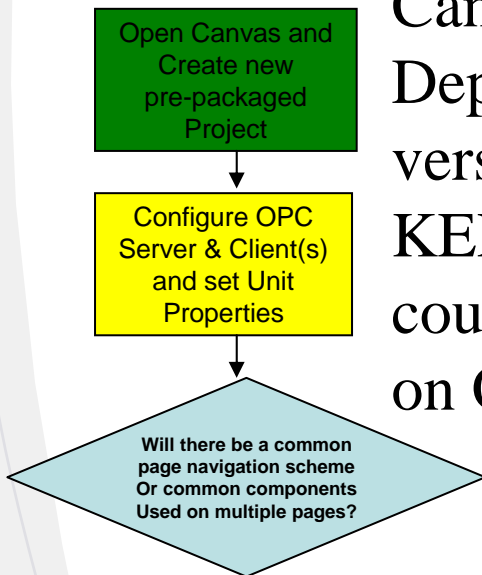
This will direct Canvas to the location of the tags in KEPServer. It is very important to select the correct path or the wrong tags could be imported.



Configure OPC Server & Clients and Set Unit Properties

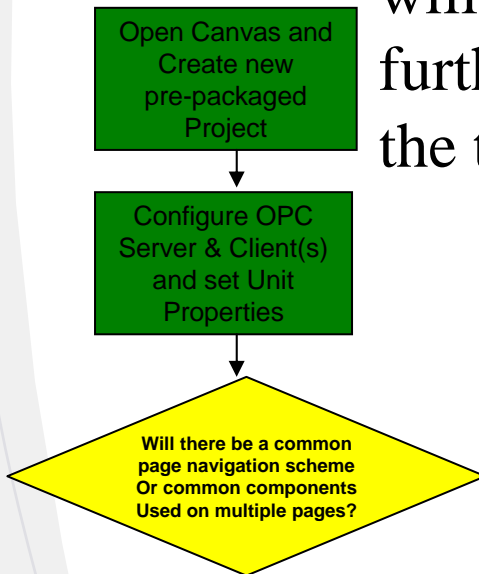
7. Click on “Click here to import tags.”

This will bring all of the tags configured in KEPServer into the Canvas Tag data base. Depending on the version of KEPServer, the tag count may vary. Click on OK to continue.



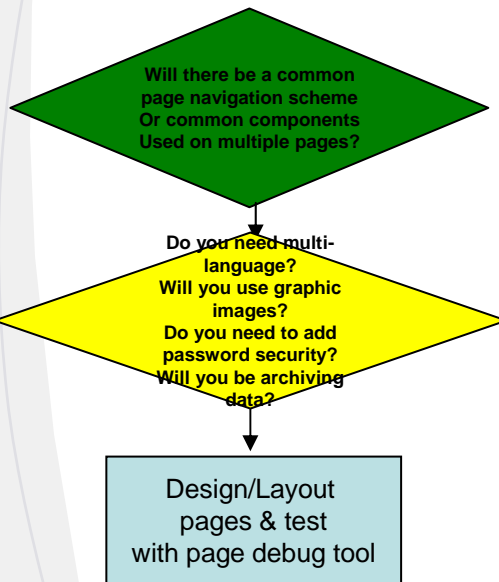
Common Page Navigation Or Components Used On Multiple Pages?

If common page navigation or common components are used in an application, then master pages can help to significantly reduce development time. Since this is a Quick Start guide with just two pages, the master page will not be used. Please refer to the Canvas Help for further details and examples of the master page, under the topic of master page.



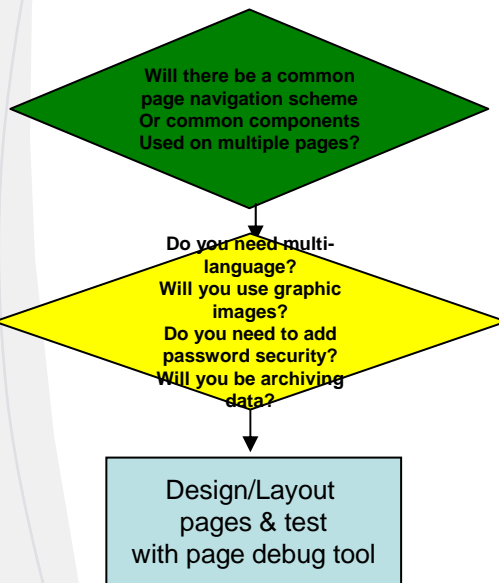
Multi-Language?

Canvas has the ability to create an application that can function in a multi-language environment. This feature is out of the scope of the Quick Start. Further information can be found on multi-language in the Canvas Help, under the topic multi-language.



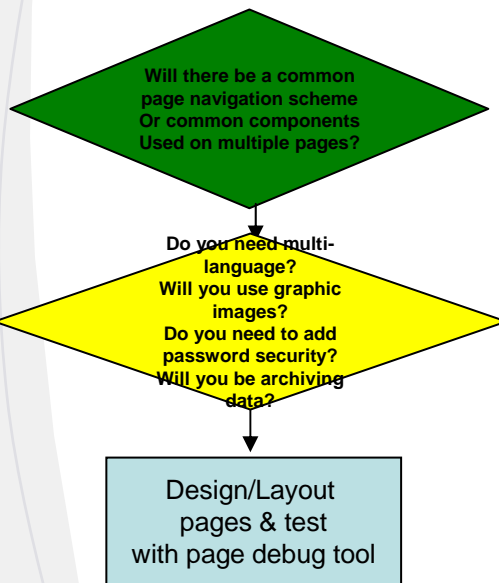
Images?

Canvas has the ability to bring images such as JPEGs and WMA into the application. This will not be covered in this Quick Start. More information can be found in the Help file under the topic of media libraries, and subtopic image tab.



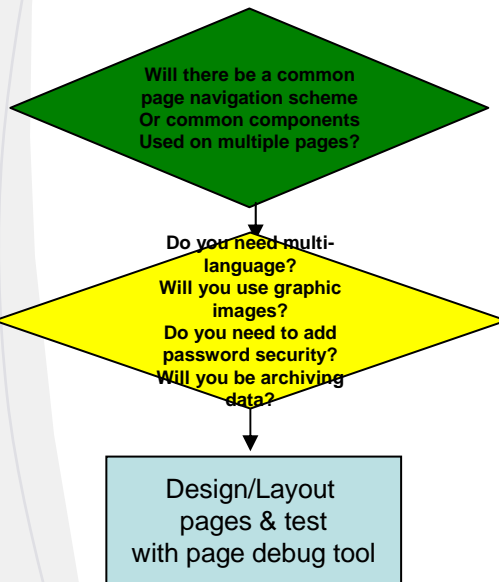
Password Security?

Canvas has the ability to secure both pages and/or operator entry on a page based on user names and passwords. This will not be covered in this Quick Start. More information can be found in the Help file under the topic of security.



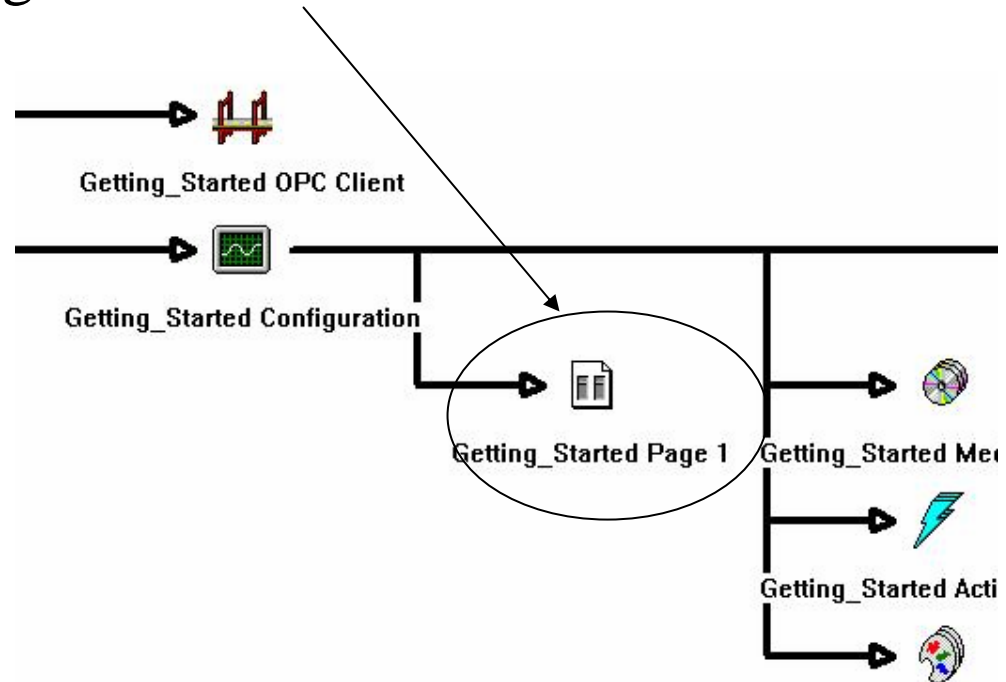
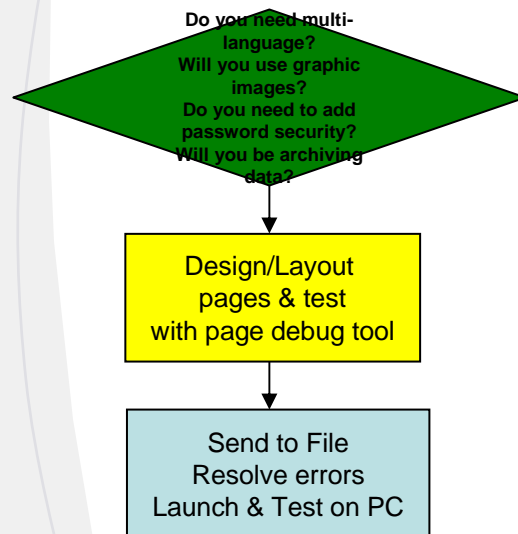
Archiving Data?

Canvas has the ability to save or “archive” data to an XML file either locally on some type of removable media such as a external compact flash or use drive, or remotely to another PC such as an engineering server. This will not be covered in this Quick Start. More information can be found in the Help file under the topic of data archive.



Design/Layout Pages & Test With Page Debug Tool

1. In the Project Editor, double click on Getting_Started Page 1. This will bring up the Page Editor.



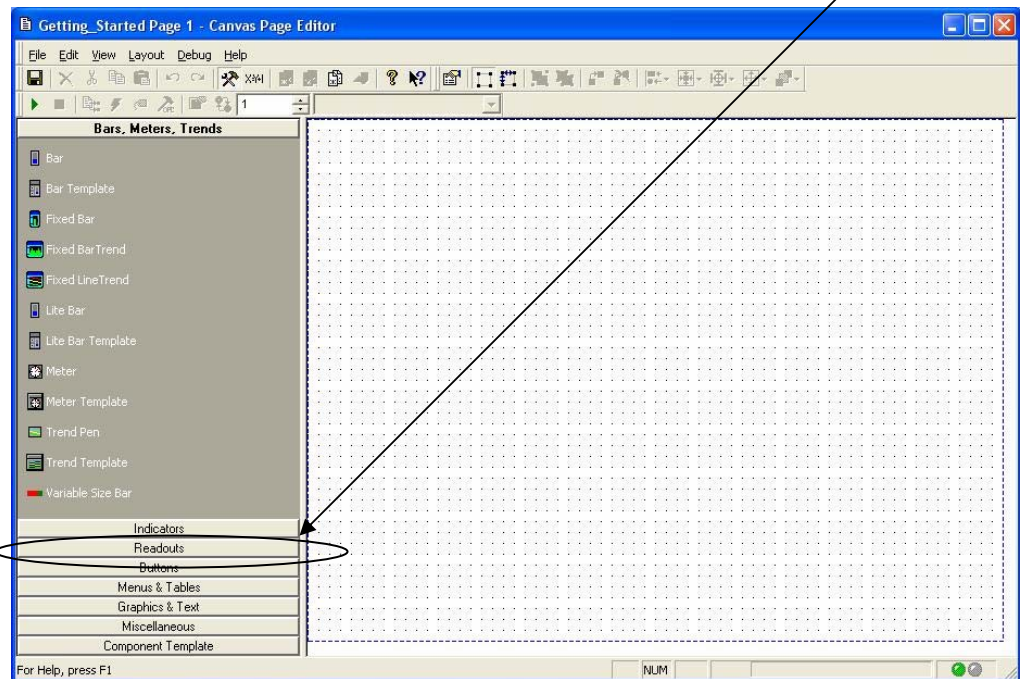
Design/Layout Pages & Test With Page Debug Tool

2. The left pane contains the selection of controls available to use on the page to the right. For simplicity, “lite” controls will be used, due to their ease of use over the non-lite controls. Click on the Readout menu tab to continue.

Do you need multi-language?
Will you use graphic images?
Do you need to add password security?
Will you be archiving data?

Design/Layout pages & test with page debug tool

Send to File
Resolve errors
Launch & Test on PC



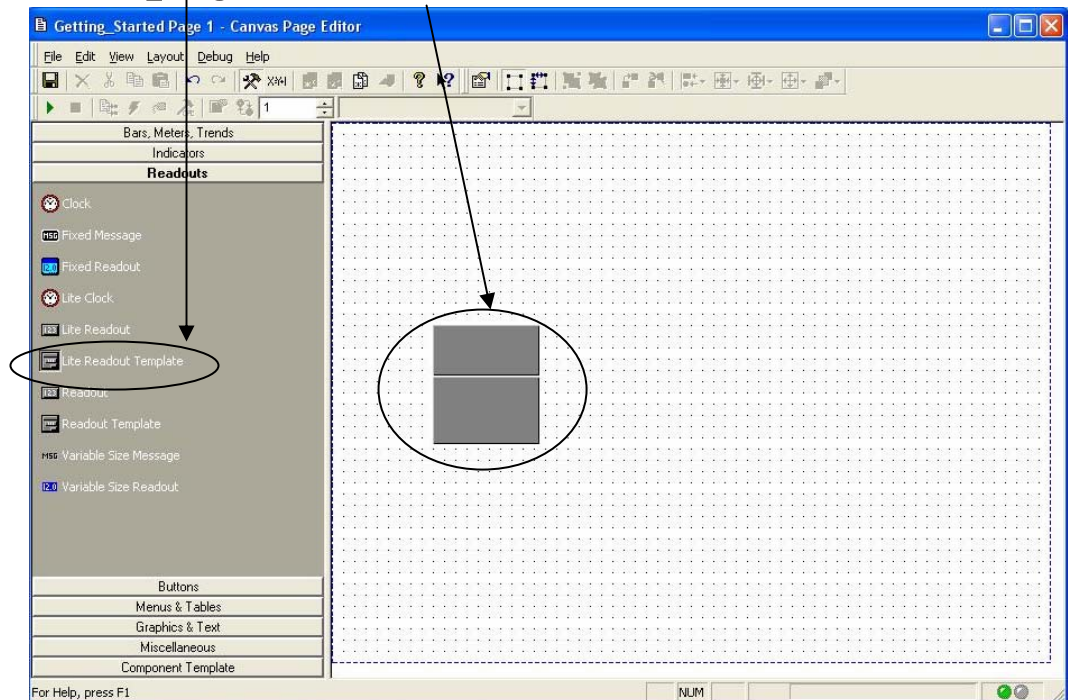
Design/Layout Pages & Test With Page Debug Tool

3. Double click on Lite Readout Template and the template will appear in the top left hand corner of the screen. Drag the template toward the middle of the screen. Then double click the template on the page.

Do you need multi-language?
Will you use graphic images?
Do you need to add password security?
Will you be archiving data?

Design/Layout pages & test with page debug tool

Send to File
Resolve errors
Launch & Test on PC



Design/Layout Pages & Test With Page Debug Tool

4. The Template properties page will appear. Single click on the value box, then single click on the Expression Editor box to bring up the Expression Editor.

Do you need multi-language?
Will you use graphic images?
Do you need to add password security?
Will you be archiving data?

Design/Layout pages & test
with page debug tool

Send to File
Resolve errors
Launch & Test on PC

Getting Started - Lite Readout Template - Lite Readout Template

General | Position/Size |

Template	Name	Lite Readout Template
	Title	
	Value	
	Decimal Places	0
	Units	
	Visibility Expression	1
	Operator Input Type	None
	Cancel On Entry	No
	Operator Input Indicator	Top Left
	Display Operator Input Device	No
Legend	Font	Arial
	Foreground Color	
	Background Color	
Readout	Font	Arial
	Foreground Color	
	Background Color	
Units	Font	Arial
	Foreground Color	

OK Cancel Help Expression Editor

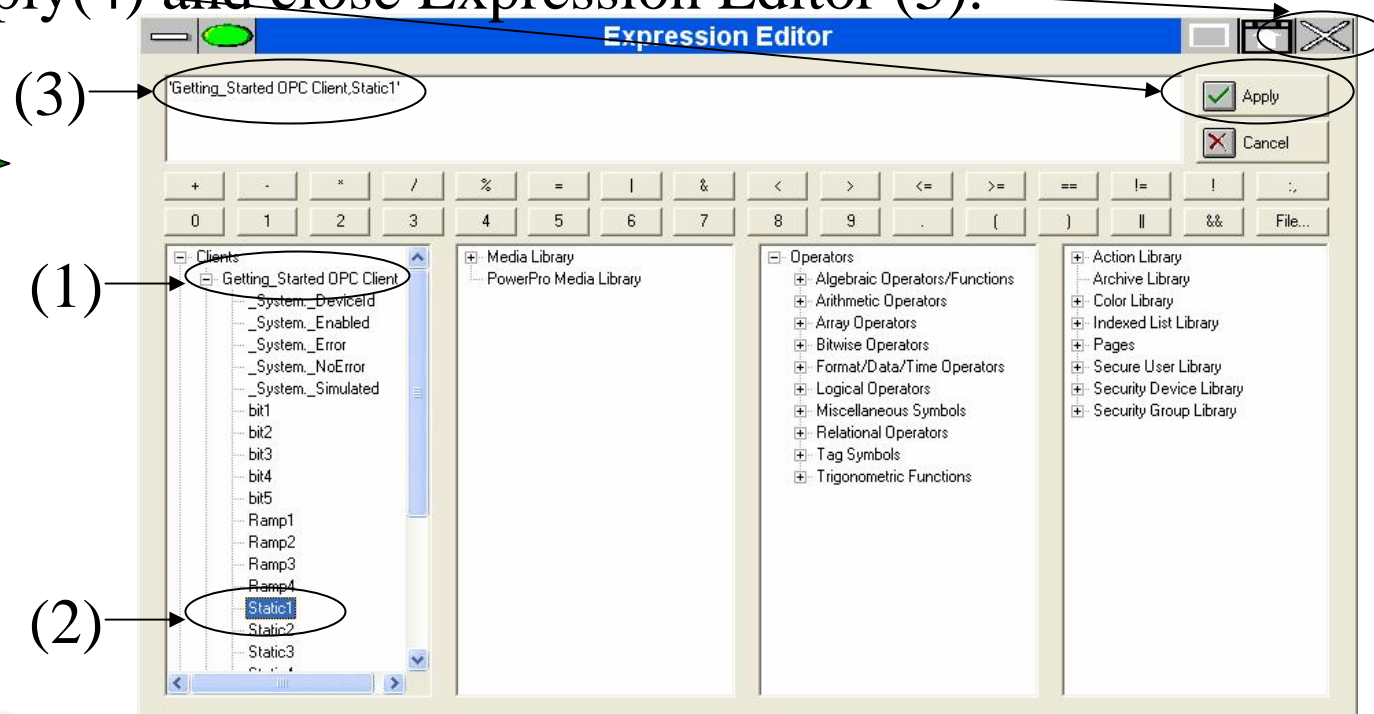
Design/Layout Pages & Test With Page Debug Tool

5. From the Expression Editor click on the + sign next to Getting Started OPC Client(1), then click on Static1(2). This will show the expression at the top of the box(3). Then click apply(4) and close Expression Editor (5).

Do you need multi-language?
Will you use graphic images?
Do you need to add password security?
Will you be archiving data?

Design/Layout pages & test with page debug tool

Send to File
Resolve errors
Launch & Test on PC



Design/Layout Pages & Test With Page Debug Tool

6. The following should be shown in the value (1). Then type in Static readout 1 into the Title and press OK.(2)

Do you need multi-language?
Will you use graphic images?
Do you need to add password security?
Will you be archiving data?

Design/Layout pages & test with page debug tool

Send to File
Resolve errors
Launch & Test on PC

(1)

Getting Started - Lite Readout Template - Lite Readout Template

General | Position/Size

Template	Name	Title	Value	Decimal Places	Units	Visibility Expression	Operator Input Type	Cancel On Entry	Operator Input Indicator	Display Operator Input Device
	Lite Readout Template	Static readout 1	Getting_Started OPC Client,Static1	0		1	None	No	Top - Left	No

Legend	Font	Foreground Color	Background Color
	Arial		

Readout	Font	Foreground Color	Background Color
	Arial		

Units	Font	Foreground Color
	Arial	

OK Cancel Help Expression Editor

(2)

Design/Layout Pages & Test With Page Debug Tool

7. Press the Play button to start debug mode (1). This will bring up a screen warning that this will enable live data and will write to the PLC if connected. Click yes.

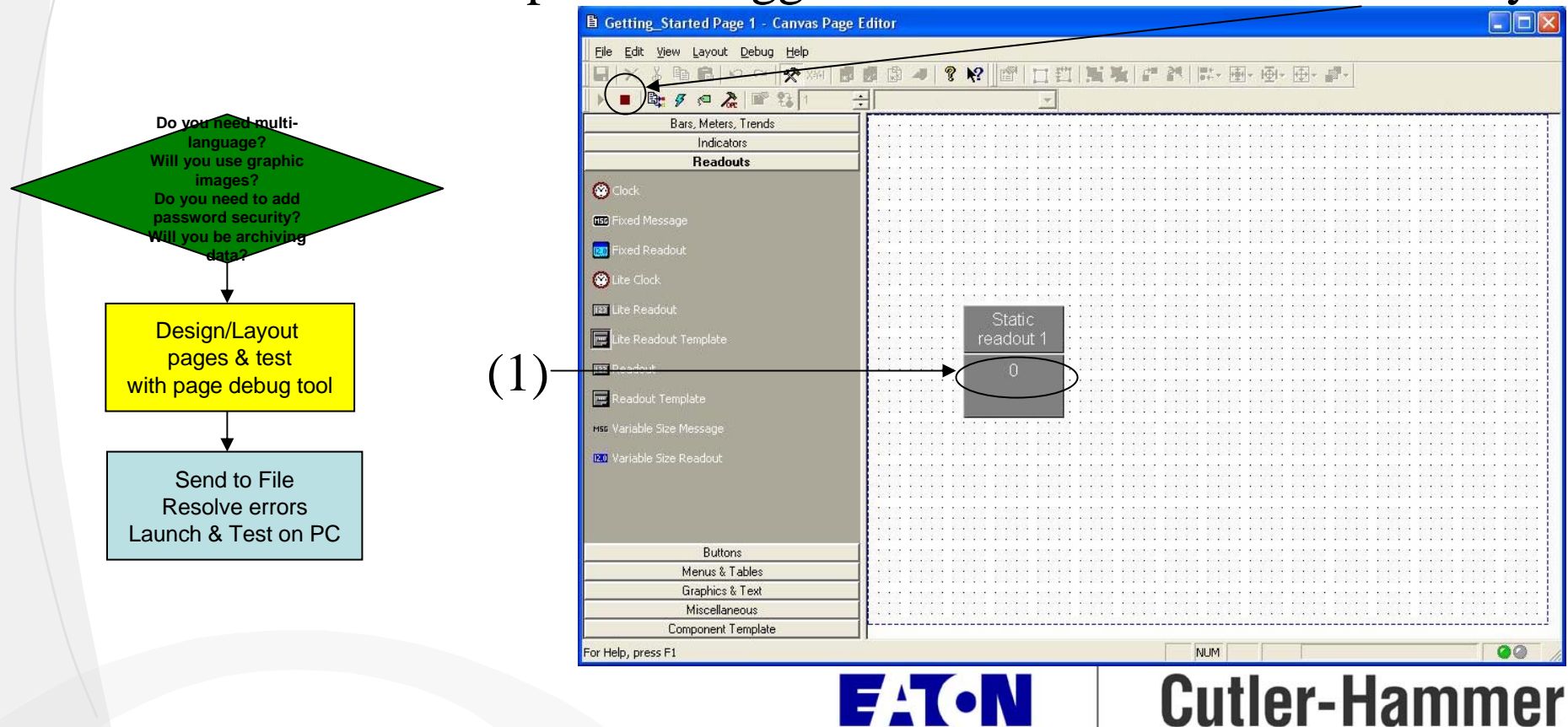
The flowchart on the left outlines the process: a green diamond decision box asks 'Do you need multi-language? Will you use graphic images? Do you need to add password security? Will you be archiving data?'. An arrow points down to a yellow rectangular box labeled 'Design/Layout pages & test with page debug tool'. Another arrow points down to a light blue rectangular box labeled 'Send to File', 'Resolve errors', and 'Launch & Test on PC'.

The software interface on the right is titled 'Getting Started Page 1 - Canvas Page Editor'. It features a menu bar (File, Edit, View, Layout, Debug, Help), a toolbar, and a left sidebar with categories: 'Bars, Meters, Trends', 'Indicators', 'Readouts', 'Buttons', 'Menus & Tables', 'Graphics & Text', 'Miscellaneous', and 'Component Template'. The 'Readouts' category is expanded, showing items like 'Clock', 'MSG Fixed Message', 'Fixed Readout', 'Lite Clock', 'Lite Readout', 'Lite Readout Template', 'Readout', 'Readout Template', 'MSG Variable Size Message', and 'Variable Size Readout'. The main workspace is a grid. A 'Canvas' dialog box is open, displaying a warning: 'WARNING: The Canvas Debugger is NOT a simulator. It will enable live data. Use caution if connected beyond the development environment. Do you wish to continue?'. The 'Yes' button is circled. An arrow labeled '(1)' points to the Play button in the toolbar. The bottom status bar shows 'For Help, press F1' and 'NUM'.

EAT•N | **Cutler-Hammer**

Design/Layout Pages & Test With Page Debug Tool

8. A value of 0 should appear (1). The program is now communicating live with the KEPServer. Press the stop button to stop the debugger and continue to add Data Entry.



Design/Layout Pages & Test With Page Debug Tool

9. Click the drop down menu for Operator Input Type and select Data Entry (1). Then select Data Entry Tab (2)

Do you need multi-language?
Will you use graphic images?
Do you need to add password security?
Will you be archiving data?

Design/Layout pages & test with page debug tool

Send to File
Resolve errors
Launch & Test on PC

(2)

(1)

The screenshot shows a dialog box titled "Getting Started - Lite Readout Template - Lite Readout Template". It has three tabs: "General", "Data Entry", and "Position/Size". The "Data Entry" tab is selected. The "Operator Input Type" dropdown is set to "Data Entry". The "Data Entry" tab contains the following fields:

Template	Name	Value
Static	Static	Static
Title	"Static readout 1"	
Value	"Getting_Started OPC Client,Static1"	
Decimal Places	0	
Units		
Visibility Expression	1	
Operator Input Type	Data Entry	
Cancel On Entry	No	
Operator Input Indicator	Top - Left	
Display Operator Input Device	No	

The "Legend" section contains:

Legend	Font	Color
Static	Arial	
Static		
Static		

The "Readout" section contains:

Readout	Font	Color
Static	Arial	
Static		
Static		

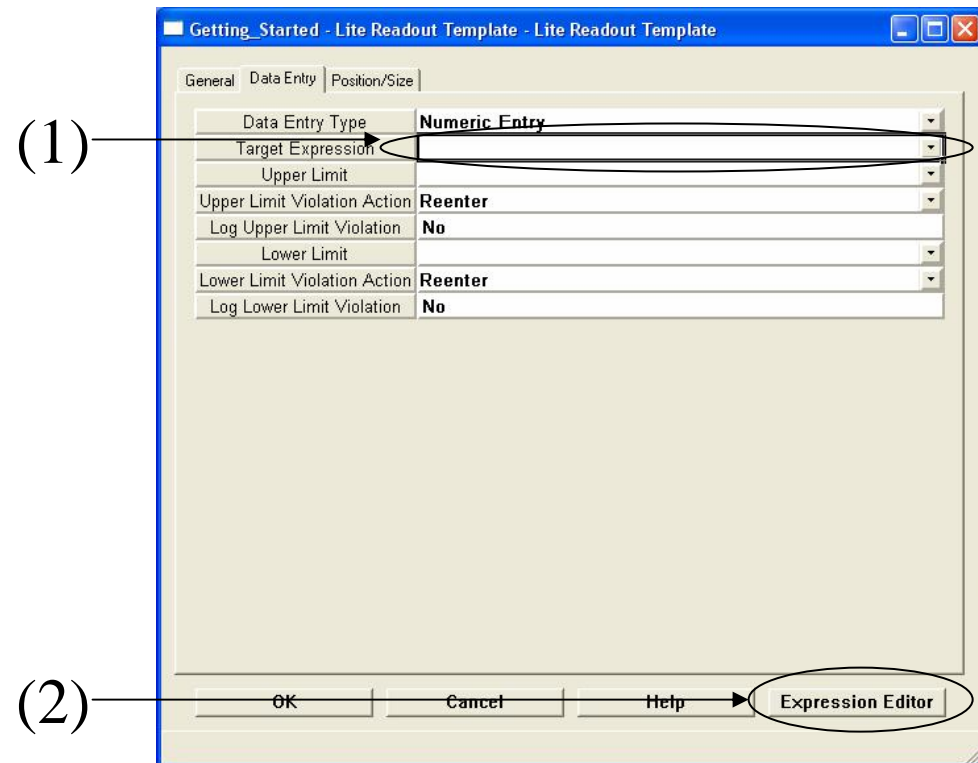
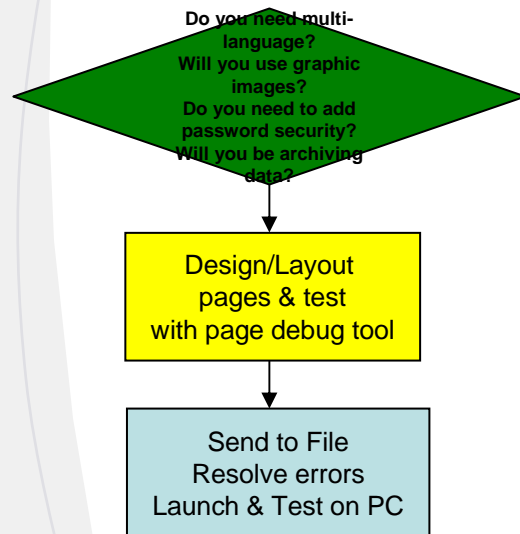
The "Units" section contains:

Units	Font	Color
Static	Arial	
Static		
Static		

At the bottom, there are buttons for "OK", "Cancel", "Help", and "Expression Editor".

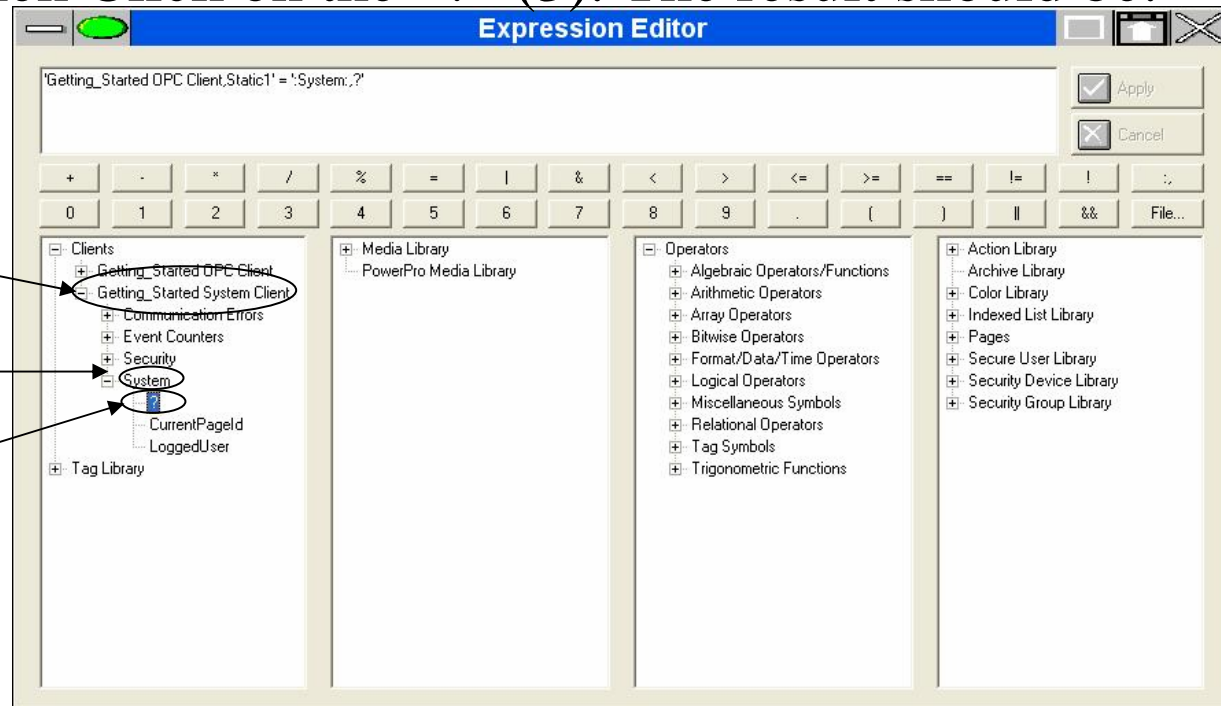
Design/Layout Pages & Test With Page Debug Tool

10. Click on Target Expression box(1), then Expression Editor.(2)



Design/Layout Pages & Test With Page Debug Tool

11. As in Step 5, choose Static1 as your tag from the Client Getting_Started OPC Client. Then Click on the + for Getting _Started System client (1), Click on the + for System (2), then Click on the “?” (3). The result should be:



Design/Layout Pages & Test With Page Debug Tool

12. Close Expression Editor. Data Entry should look like this
(1). Then click OK on the Readout properties Data Entry
(2).

Do you need multi-language?
Will you use graphic images?
Do you need to add password security?
Will you be archiving data?

Design/Layout pages & test with page debug tool

Send to File
Resolve errors
Launch & Test on PC

'The System:;?' is the temporary place for the a value to be stored from the keypad before the enter key is pressed. Once pressed it makes the tag, in this case static 1 equal to the value entered on the keypad. It is also important to note that a single equal "=" is used to make one value equal to the other, while a double equal "==" is used to compare two values to determine if they are equal.

(1)

Getting_Started - Lite Readout Template - Lite Readout Template

General Data Entry Position/Size

Data Entry Type	Numeric Entry
Target Expression	'Getting_Started OPC Client,Static1' = ':System:;?'
Upper Limit	
Upper Limit Violation Action	Reenter
Log Upper Limit Violation	No
Lower Limit	
Lower Limit Violation Action	Reenter
Log Lower Limit Violation	No

OK Cancel Help Expression Editor

(2)

Design/Layout Pages & Test With Page Debug Tool

13. Press the Play button on the debugger (1), and click on static readout 1. Type in a value and press enter. The value should appear in the readout. (2) Then click the Stop button.

The flowchart on the left shows a decision diamond with the following questions: "Do you need multi-language?", "Will you use graphic images?", "Do you need to add password security?", and "Will you be archiving data?". An arrow points from the diamond to a yellow box labeled "Design/Layout pages & test with page debug tool". Another arrow points from this box to a light blue box labeled "Send to File", "Resolve errors", and "Launch & Test on PC".

The screenshot on the right shows the "Getting Started Page 1 - Canvas Page Editor" window. The toolbar at the top contains various icons. A red circle labeled (1) highlights the Play button in the toolbar. The left sidebar lists various components: Bars, Meters, Trends; Indicators; Readouts (including Clock, Fixed Message, Fixed Readout, Lite Clock, Lite Readout, Lite Readout Template, Readout, Readout Template, MSG Variable Size Message, and Variable Size Readout); Buttons; Menus & Tables; Graphics & Text; Miscellaneous; and Component Template. The main canvas area shows a "Static readout 1" component with a numeric keypad overlay. A red circle labeled (2) highlights the numeric keypad, which has buttons for digits 1-9, 0, a decimal point, a minus sign, and C, BkSp, and Enter keys. The readout display shows the value "10".

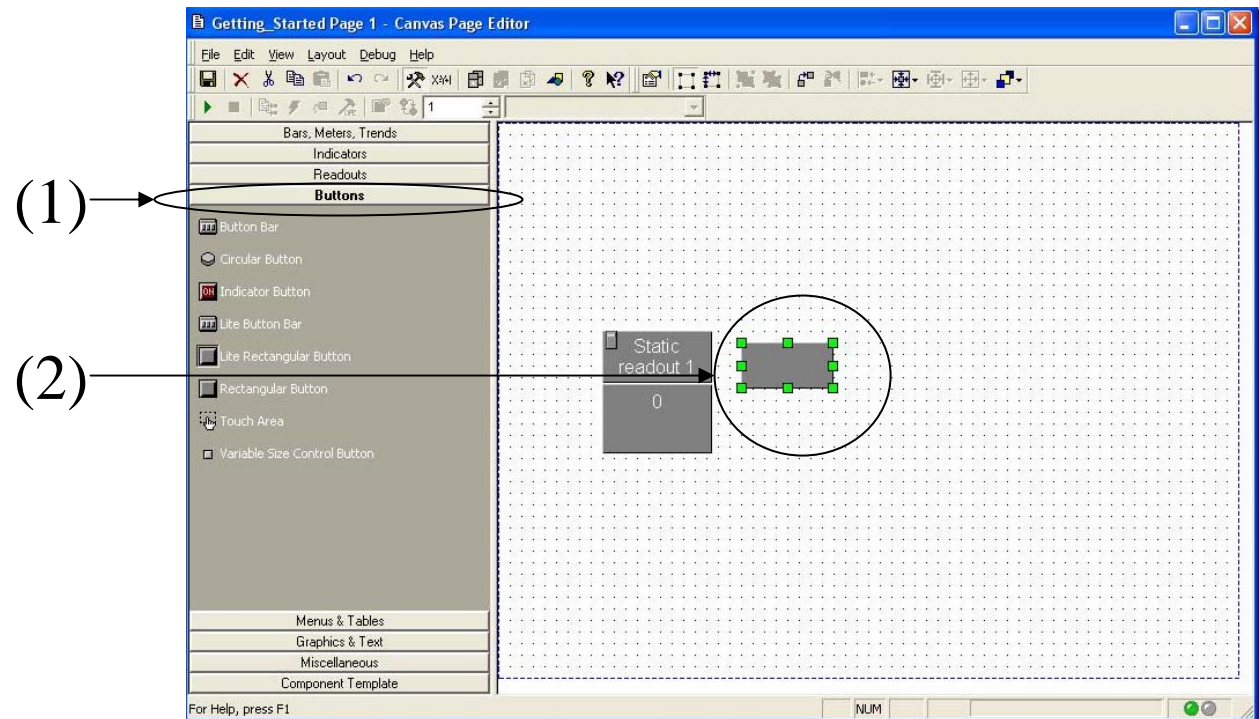
Design/Layout Pages & Test With Page Debug Tool

14. Click the Button Menu (1), double click the Lite Rectangular button (2) and drag it to the center, and double click the button to bring up the Lite Rectangular button properties.

Do you need multi-language?
Will you use graphic images?
Do you need to add password security?
Will you be archiving data?

Design/Layout pages & test with page debug tool

Send to File
Resolve errors
Launch & Test on PC



Design/Layout Pages & Test With Page Debug Tool

15. Using the drop down menu from the Type file, select Toggle (1), Click on the Target address field ,then click Expression Editor and Select Getting_Started OPC Client, bit1(2). Refer to Step 5 for review. Type Toggle bit on into the make or break label.(3) Click ok.

Do you need multi-language?
Will you use graphic images?
Do you need to add password security?
Will you be archiving data?

Design/Layout pages & test with page debug tool

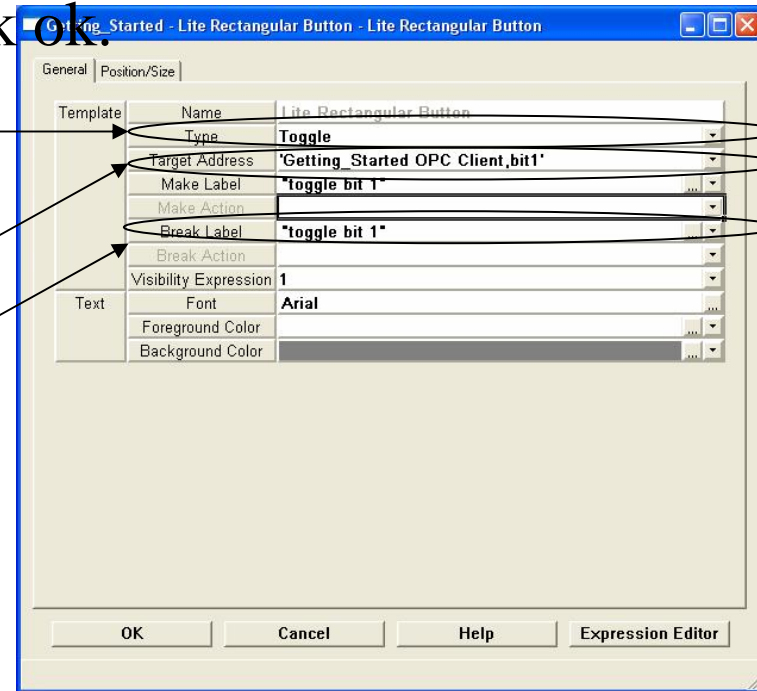
Send to File
Resolve errors
Launch & Test on PC

Notice the different “Types” of buttons available, such as normally open and normally closed.. Using these standard types of buttons will make it easier to configure a button because Make and Break actions will not need to be used.

(1)

(2)

(3)



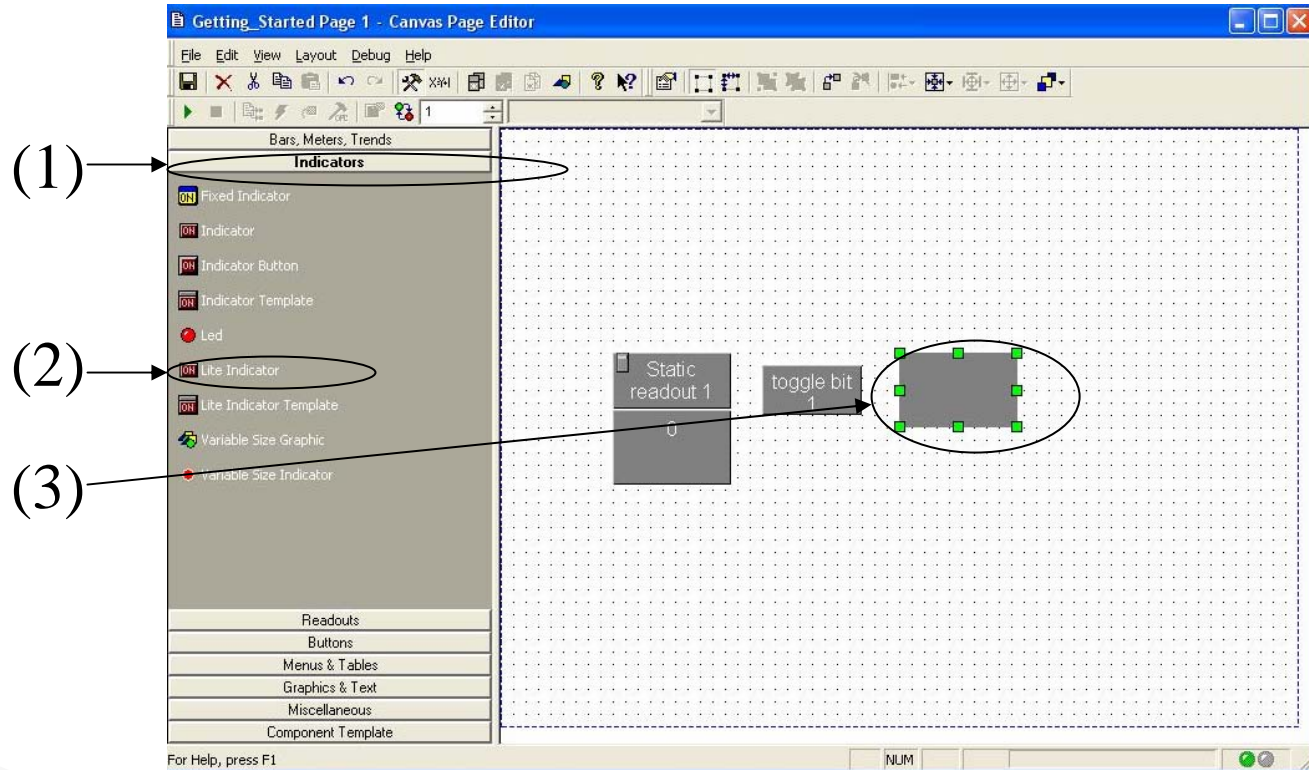
Design/Layout Pages & Test With Page Debug Tool

16. Click on Indicators from the menu and double click on Lite Indicator. Drag Lite Indicator into center of the screen and double click for properties.

Do you need multi-language?
Will you use graphic images?
Do you need to add password security?
Will you be archiving data?

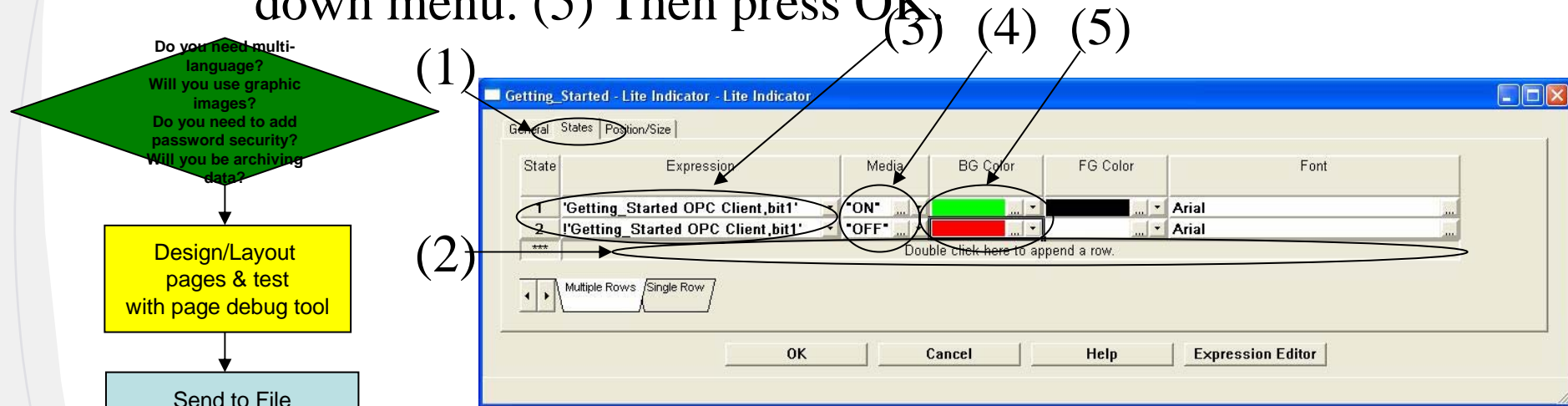
Design/Layout pages & test with page debug tool

Send to File
Resolve errors
Launch & Test on PC



Design/Layout Pages & Test With Page Debug Tool

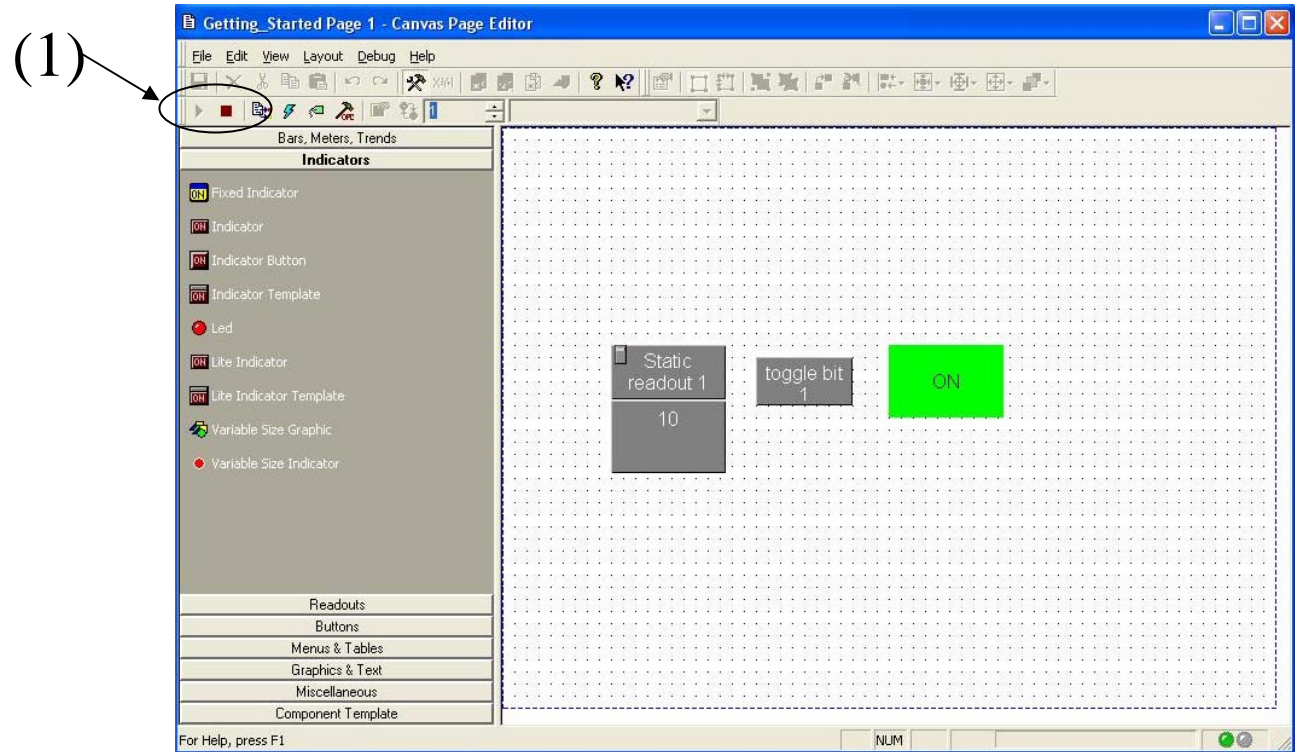
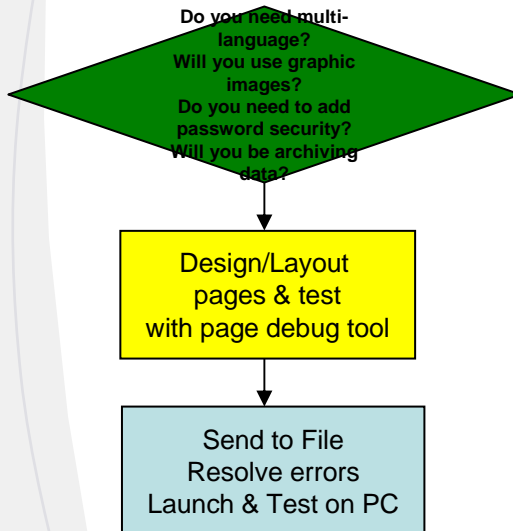
17. Click on the States tab (1), double click to add row (2) and enter the Expressions (3) using the Expression Editor. In Media type “On” in state 1 and “Off” in State 2. (4) Then set FG and BG Color using the ellipse button not the drop down menu. (5) Then press OK



The Expressions are evaluated by looking for a true statement scanning from top to bottom, If bit1 is true (Value of 1) expression 1 will contain a value of 1 and the “ON” state will show on the indicator.. If bit one is zero the state, 1 will not be true, and state 2 or expression 2 will be evaluated for a true state. In this case, state 2 is looking for !bit1. The exclamation point means “NOT” so if the value of bit 1 is zero, then !bit1 (NOT bit1) is true and the indicator will display “OFF.”

Design/Layout Pages & Test With Page Debug Tool

18. Click the Play button on the debugger and verify the operation of the toggle bit and indicator. Then click Stop.



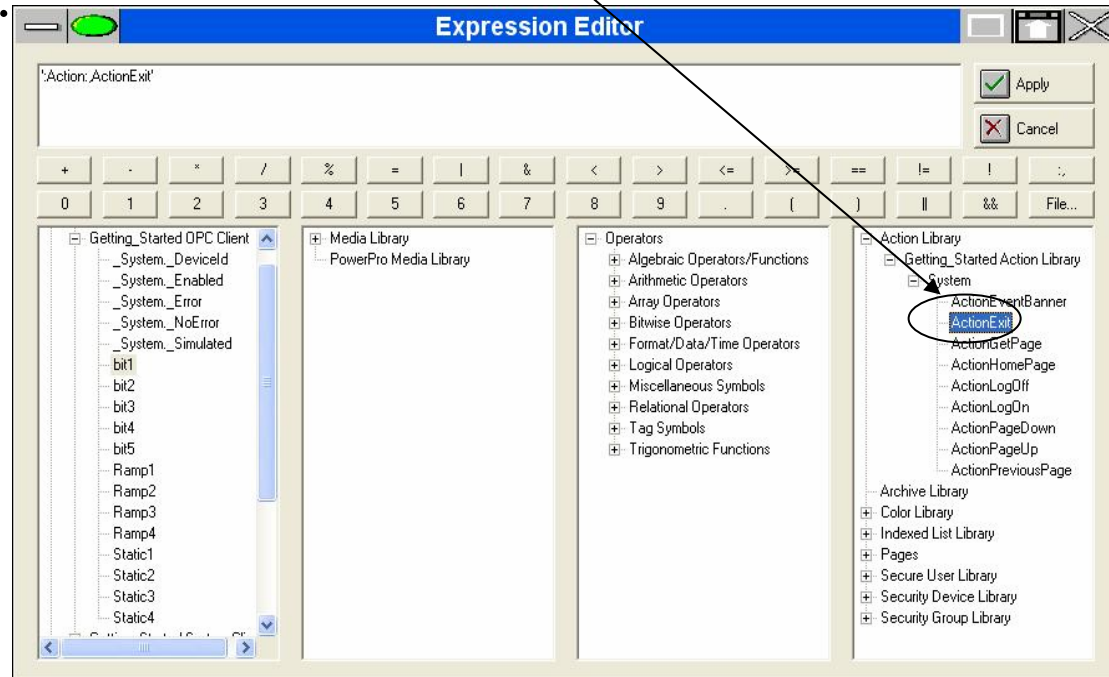
Design/Layout Pages & Test With Page Debug Tool

19. Add another Lite Rectangular button to the page open to the properties. Select Trigger Action for type, click on the Break Action field, and select Expression Editor. From Expression Editor, choose Action Exit. Then close Expression Editor.

Do you need multi-language?
Will you use graphic images?
Do you need to add password security?
Will you be archiving data?

Design/Layout pages & test
with page debug tool

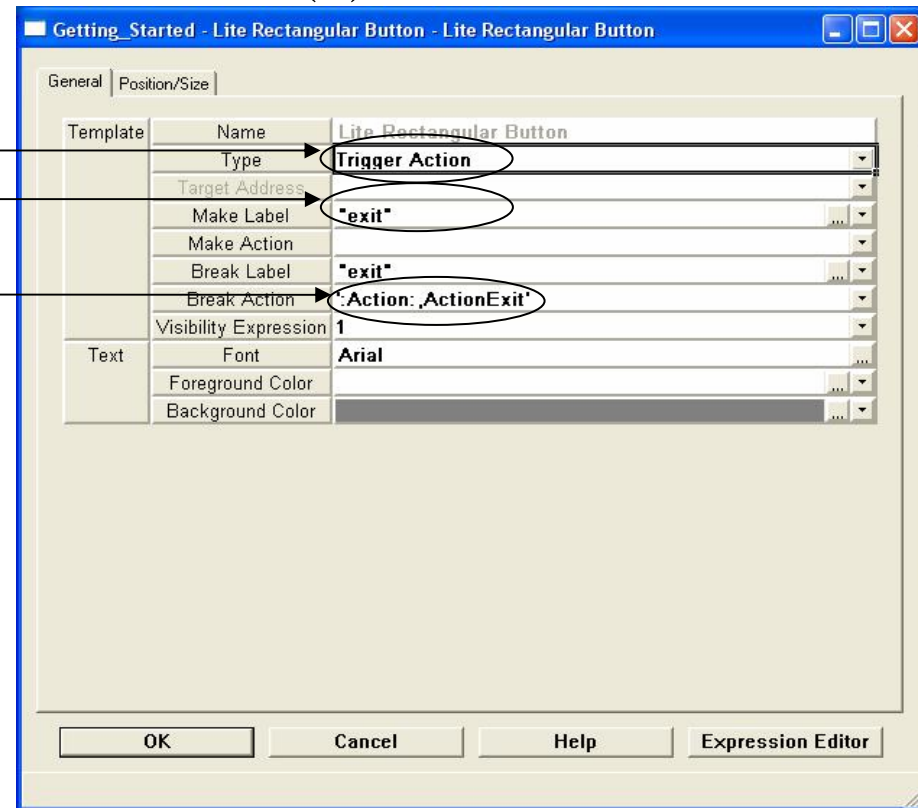
Send to File
Resolve errors
Launch & Test on PC



Design/Layout Pages & Test With Page Debug Tool

19. Verify that the button has the following properties. Type is set to Trigger Action (1) Labels are set to “exit” (2) Break action is set to ‘:Action:,Action Exit’(3)

(1)
(2)
(3)



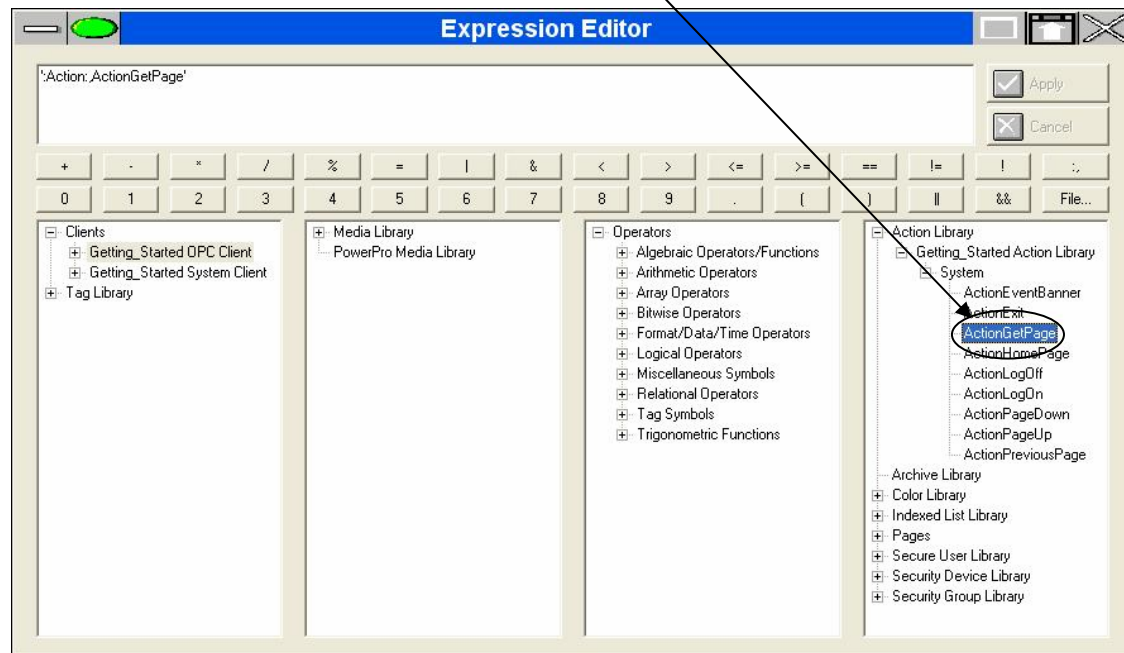
Design/Layout Pages & Test With Page Debug Tool

19. Add another Lite Rectangular button to the page open to the properties. Select Trigger Action for type, click on the Break Action field and select Expression Editor. From Expression Editor, choose ActionGetPage. Then close Expression Editor.

Do you need multi-language?
Will you use graphic images?
Do you need to add password security?
Will you be archiving data?

Design/Layout pages & test with page debug tool

Send to File
Resolve errors
Launch & Test on PC



Design/Layout Pages & Test With Page Debug Tool

20. Verify the button has the following properties. Type is set to Trigger Action (1) Labels are set to “Get Page” (2) Brake action is set to ‘:Action:,ActionGetPage’(3)

Do you need multi-language?
Will you use graphic images?
Do you need to add password security?
Will you be archiving data?

Design/Layout pages & test with page debug tool

Send to File
Resolve errors
Launch & Test on PC

(1)
(2)
(3)

Getting_Started - Lite Rectangular Button - Lite Rectangular Button	
General Position/Size	
Template	Name: Lite Rectangular Button
Type	Trigger Action (1)
Target Address	
Make Label	Get Page (2)
Make Action	
Break Label	Get Page
Break Action	:Action:,ActionGetPage (3)
Visibility Expression	1
Text	Font: Arial
	Foreground Color: [Color Picker]
	Background Color: [Color Picker]

OK Cancel Help Expression Editor

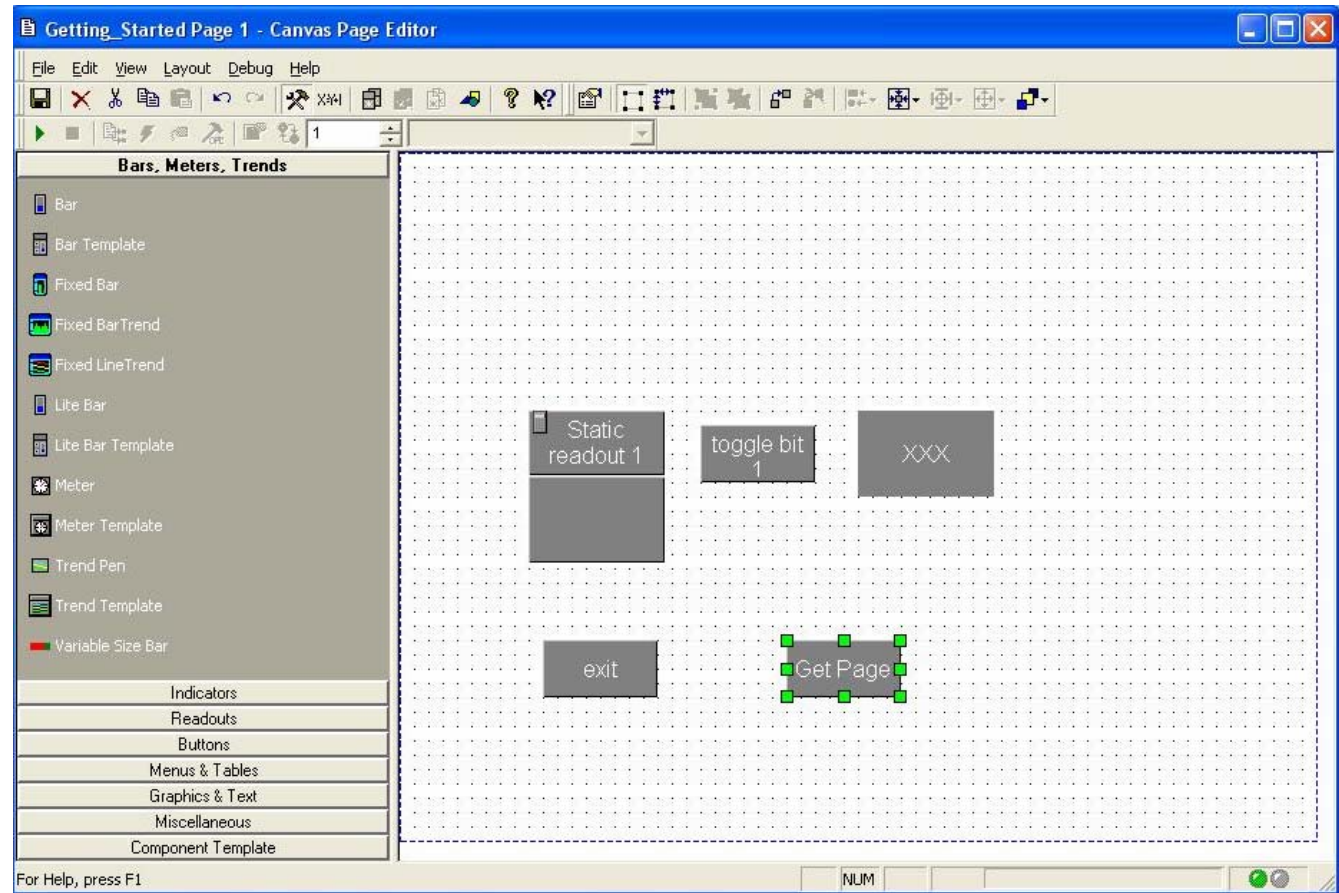
Design/Layout Pages & Test With Page Debug Tool

The completed page should look like this.

Do you need multi-language?
Will you use graphic images?
Do you need to add password security?
Will you be archiving data?

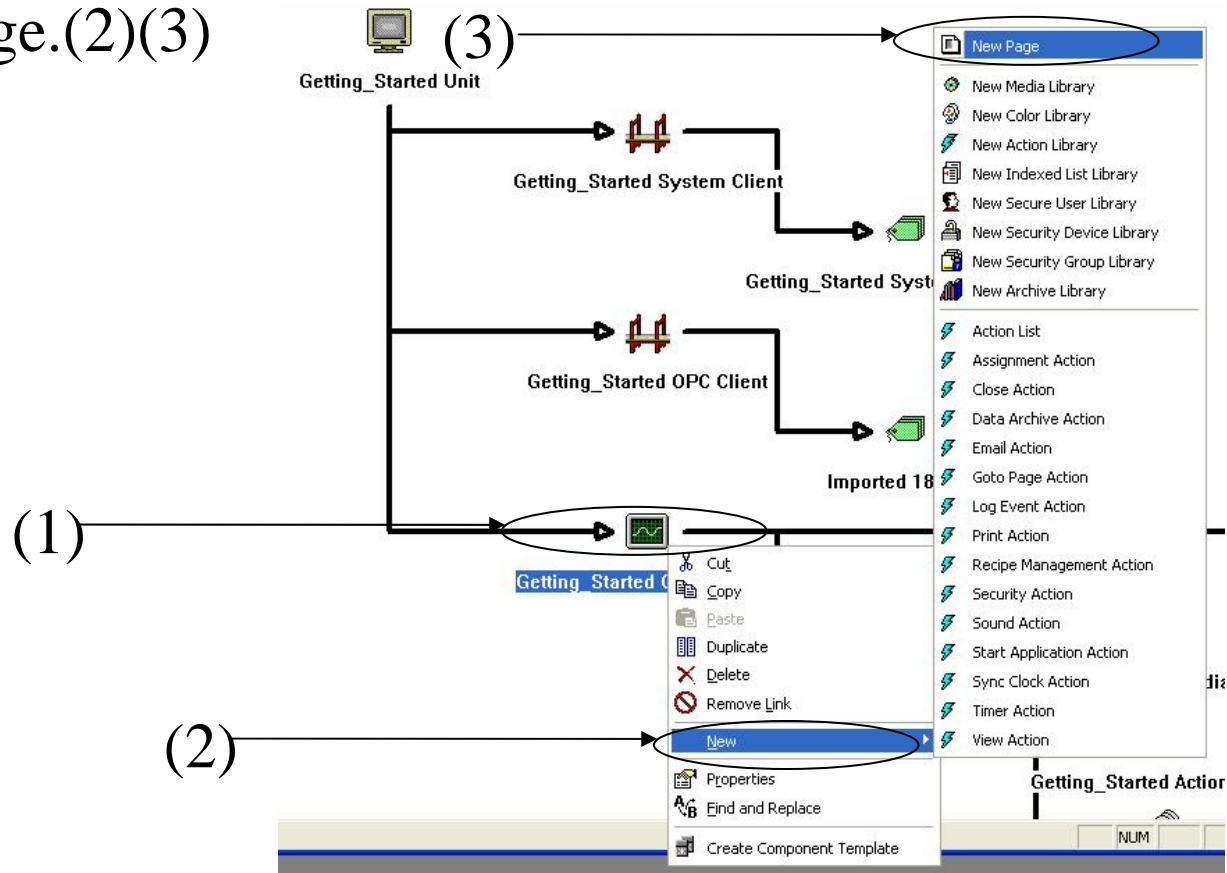
Design/Layout pages & test
with page debug tool

Send to File
Resolve errors
Launch & Test on PC



Design/Layout Pages & Test With Page Debug Tool

21. Save and close the Getting_Started Page 1. Right click on Getting_Started Configuration from the Tree View(1) and select new page.(2)(3)



Do you need multi-language?
Will you use graphic images?
Do you need to add password security?
Will you be archiving data?

Design/Layout pages & test with page debug tool

Send to File
Resolve errors
Launch & Test on PC

Design/Layout Pages & Test With Page Debug Tool

22. Change the page name to Page 2 and click OK.

Do you need multi-language?
Will you use graphic images?
Do you need to add password security?
Will you be archiving data?

Design/Layout pages & test
with page debug tool

Send to File
Resolve errors
Launch & Test on PC

Getting Started - Page - Page 2	
General Page Preferences Master Pages Page Editor Reference Clients Page Editor Reference Libraries	
Name	Page 2
Description	
Id Number	1
Standard Navigation	Bottom Location
User Entry Position	Automatic
Page Enabled Expression	1
Category	Uncategorized

OK Cancel Help Expression Editor

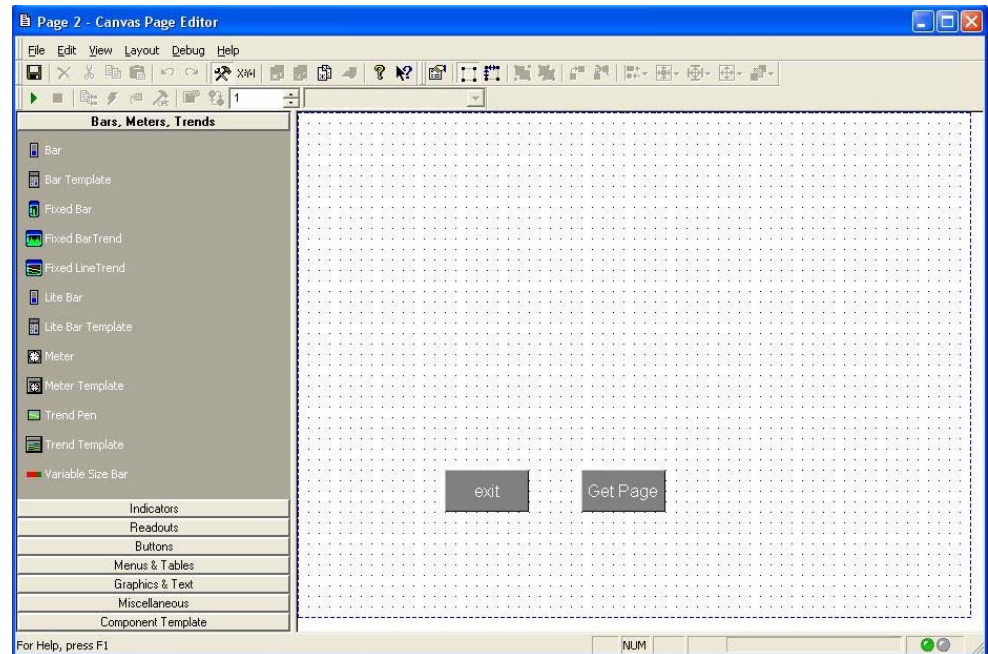
Design/Layout Pages & Test With Page Debug Tool

23. Open Getting_Started page 1 and page 2 by double clicking on them from the Tree View. With both pages open, copy the Exit button, and the Get Page button from page 1 and paste it on page 2. Page 2 should look like the picture below. Save and close both pages.

Do you need multi-language?
Will you use graphic images?
Do you need to add password security?
Will you be archiving data?

Design/Layout pages & test with page debug tool

Send to File
Resolve errors
Launch & Test on PC



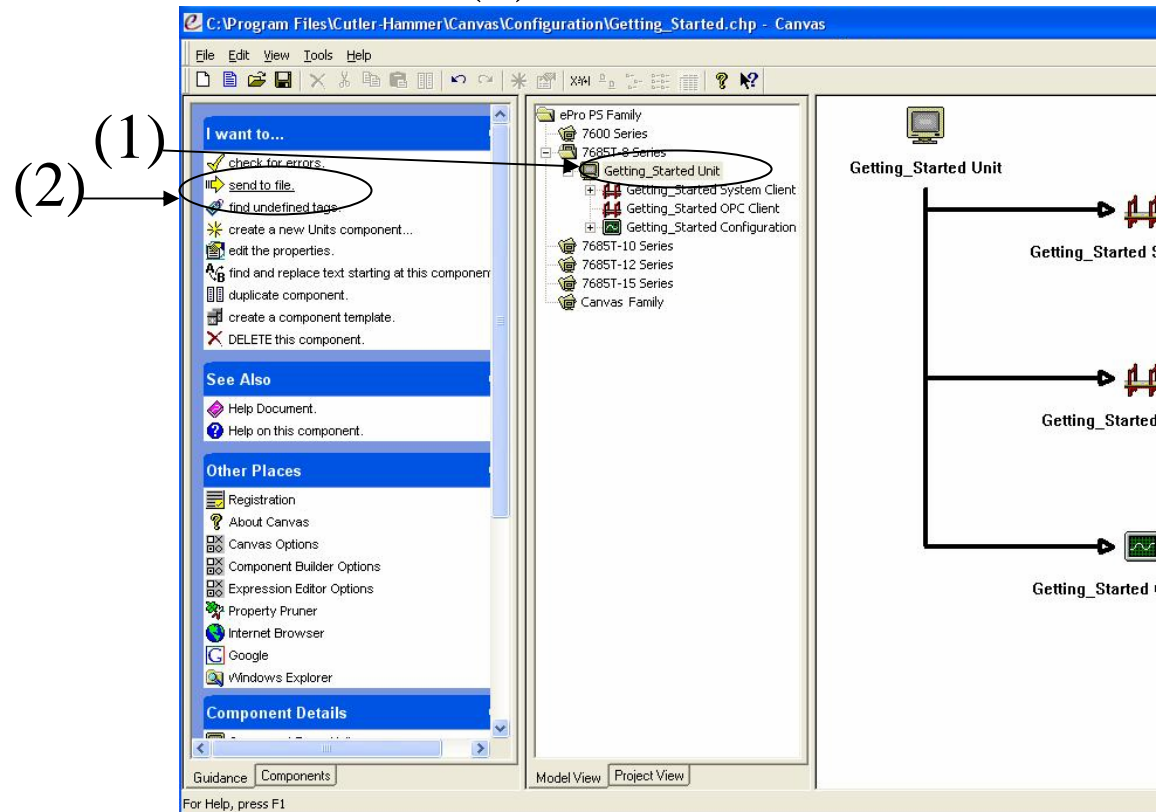
Send to File, Resolve Errors, Launch & Test on PC

1. Verify that all pages have been saved and closed. Click on Getting_Started unit in the Model View.(1) From the Guidance Tab, select send to file.(2)

Design/Layout
pages & test
with page debug tool

Send to File
Resolve errors
Launch & Test on PC

Connect to PS Unit
set IP Address in
Unit Properties
Send to File



Send to File, Resolve Errors, Launch & Test on PC

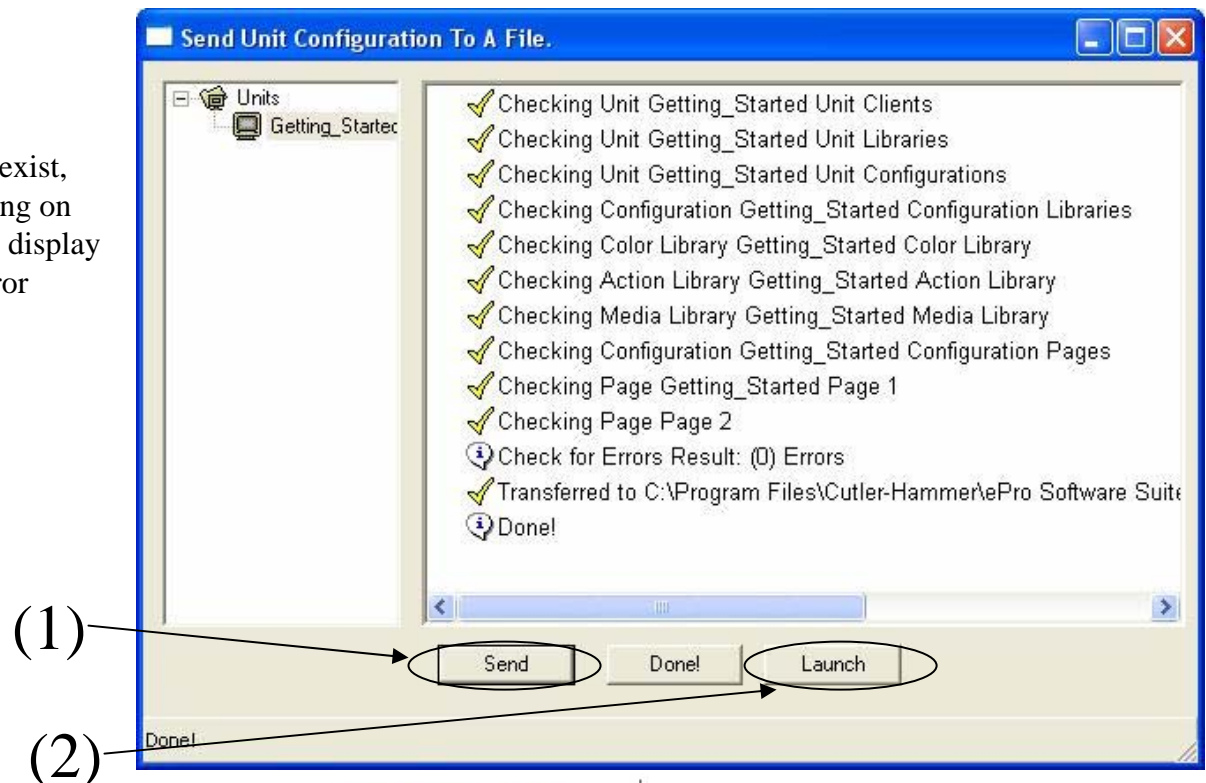
2. Press the Send button, after the configuration is created with an extension .ucf, then the Launch button can be pressed, and the .ucf file will be run on the PC. Press the Exit button after testing.

Design/Layout
pages & test
with page debug tool

Send to File
Resolve errors
Launch & Test on PC

Connect to PS Unit
set IP Address in
Unit Properties
Send to File

If any errors exist,
double clicking on
the error will display
where the error
occurred.



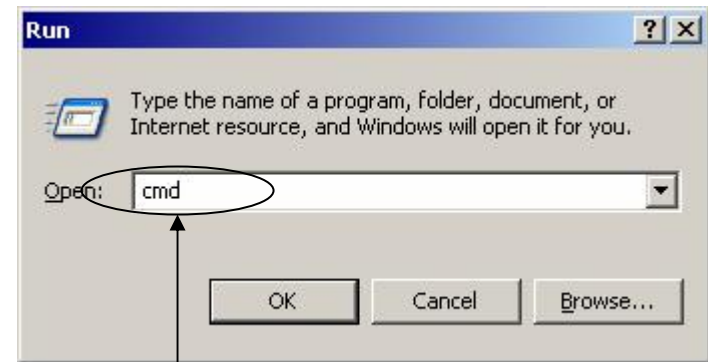
Connect to PS Unit Set IP Address in Unit Properties Send to File.

1. On the PS Unit go to Start/Run(1) Type in CMD(2) then press OK.

Design/Layout
pages & test
with page debug tool

Send to File
Resolve errors
Launch & Test on PC

Connect to PS Unit
set IP Address in
Unit Properties
Send to File



Connect to PS Unit Set IP Address in Unit Properties Send to File

2. Type ipconfig into the command prompt(1), and make note of the IP address(2). If an IP address is not present, contact the facility's IT department for help setting up the networking.

Design/Layout
pages & test
with page debug tool

Send to File
Resolve errors
Launch & Test on PC

Connect to PS Unit
set IP Address in
Unit Properties
Send to File

```
C:\WINDOWS\System32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\Administrator>ipconfig

Windows IP Configuration

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . : nasa.ad.etn.com
    IP Address. . . . .               : 151.110.68.125
    Subnet Mask . . . . .             : 255.255.255.0
    Default Gateway . . . . .         : 151.110.68.6

C:\Documents and Settings\Administrator>
```

(1) (2)

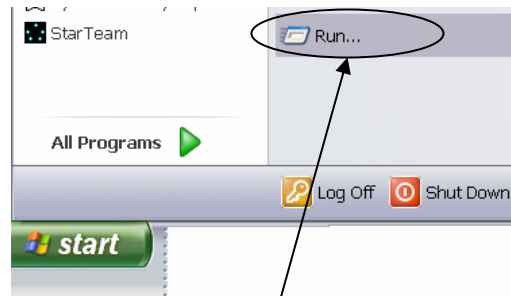
Connect to PS Unit Set IP Address in Unit Properties Send to File

1. On the development PC go to Start/Run(1) Type in CMD(2), then press OK.

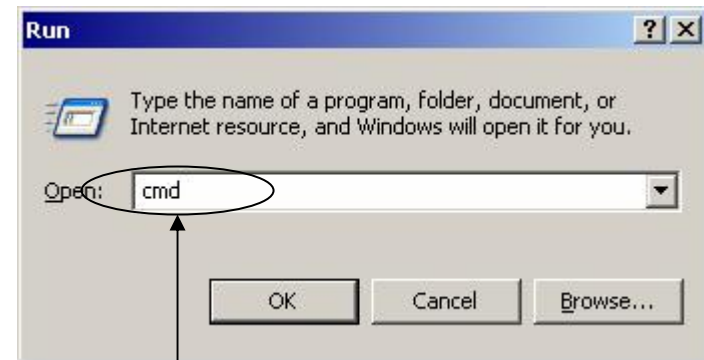
Design/Layout
pages & test
with page debug tool

Send to File
Resolve errors
Launch & Test on PC

Connect to PS Unit
set IP Address in
Unit Properties
Send to File



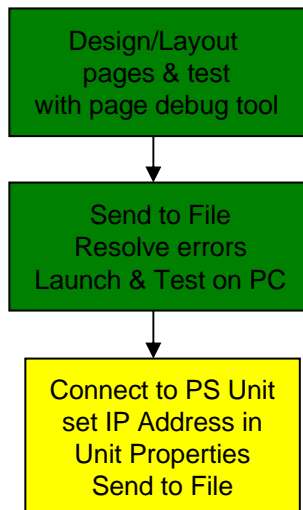
(1)



(2)

Connect to PS Unit Set IP Address in Unit Properties Send to File

2. Type ping [IP address] into the command prompt (1) and verify that the ePro PS replies (2). If a reply is not present, contact the facility's IT department for help setting up the networking.



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\e0015355.NASA>ping 151.110.68.125

Pinging 151.110.68.125 with 32 bytes of data:

Reply from 151.110.68.125: bytes=32 time=8ms TTL=127
Reply from 151.110.68.125: bytes=32 time<1ms TTL=127
Reply from 151.110.68.125: bytes=32 time<1ms TTL=127
Reply from 151.110.68.125: bytes=32 time<1ms TTL=127

Ping statistics for 151.110.68.125:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 8ms, Average = 2ms

C:\Documents and Settings\e0015355.NASA>
```

(2)

(1)

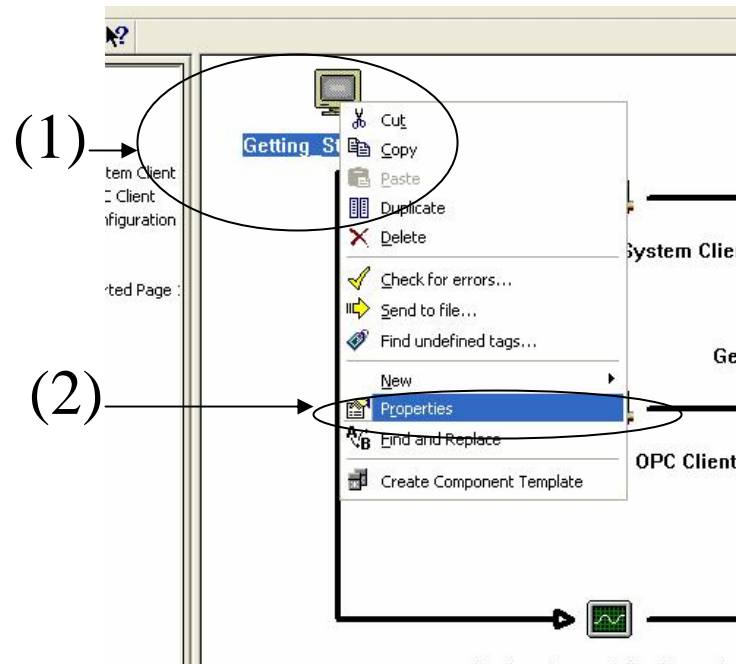
Connect to PS Unit Set IP Address in Unit Properties Send to File

3. Right click on Getting_Started Unit(1), click on properties(2).

Design/Layout
pages & test
with page debug tool

Send to File
Resolve errors
Launch & Test on PC

Connect to PS Unit
set IP Address in
Unit Properties
Send to File



Connect to PS Unit Set IP Address in Unit Properties Send to File

4. The application will be saved automatically as the name of the unit.ucf. In this case, it is Getting_Started Unit.ucf. This can be changed with the ellipse button(1). The IP address should match the ePro PS IP address(2).

Design/Layout pages & test with page debug tool

Send to File
Resolve errors
Launch & Test on PC

Connect to PS Unit
set IP Address in
Unit Properties
Send to File

(1) (2)

Getting_Started - Unit - Getting_Started Unit

General Clients Destinations

Click For Previous Row
Click For Next Row

Destination

.ucf Name (Local) C:\Program Files\Cutler-Hammer\Pro Software Suite\Configuration\Getting_Started Unit.ucf

IP Address (Remote) 151.110.68.125

Auto Start .ucf (Remote) ☐ No ☒ Yes

Transfer .ucf ☐ No ☒ Yes

Transfer Runtime ☐ No ☒ Yes

Runtime ePro PS for X86

Transfer Driver(s) ☐ No ☒ Yes

Driver KEPServer_ePro for X86

.opf Name C:\Program Files\Cutler-Hammer\Pro Software Suite\Configuration\Getting_Started.opf

Multiple Rows Single Row

OK Cancel Help Expression Editor

Connect to PS Unit Set IP Address in Unit Properties Send to File

5. Auto Start should be set to Yes (1). Transfer.ucf should be set to Yes (2). Transfer Runtime should be set to Yes (3). Transfer Driver should be set to YES (4). The Path to the KEPServer OPF file should C:\Program Files\Cutler-Hammer\ePro Software Suite\Getting Started\Getting_started.opf(5).

Destination	1
.ucf Name (Local)	C:\Program Files\Cutler-Hammer\ePro Software Suite\Configuration\Getting_Started Unit.ucf
IP Address (Remote)	151.110.68.125
Auto Start .ucf (Remote)	<input checked="" type="radio"/> No <input checked="" type="radio"/> Yes
Transfer .ucf	<input type="radio"/> No <input checked="" type="radio"/> Yes
Transfer Runtime	<input type="radio"/> No <input checked="" type="radio"/> Yes
Runtime	ePro PS for X86
Transfer Driver(s)	<input type="radio"/> No <input checked="" type="radio"/> Yes
Driver	KEPServer ePro for X86
opf Name	C:\Program Files\Cutler-Hammer\ePro Software Suite\Configuration\Getting_Started.opf

Multiple Rows Single Row

OK Cancel Help Expression Editor

Connect to PS Unit Set IP Address in Unit Properties Send to File

6. Click on Getting_Started unit in the Model View (1). From the Guidance Tab, select send to file (2).

The screenshot shows the Cutler-Hammer software interface. The title bar indicates the file path: C:\Program Files\Cutler-Hammer\Canvas\Configuration\Getting_Started.chp - Canvas. The interface is divided into several panes. On the left, the 'I want to...' menu is open, showing options like 'check for errors', 'send to file', 'find undefined tags', 'create a new Units component...', 'edit the properties', 'find and replace text starting at this component', 'duplicate component', 'create a component template', and 'DELETE this component'. The 'send to file' option is highlighted with a red circle and an arrow labeled (2). In the center, the 'Model View' pane shows a tree structure of components. The 'Getting_Started Unit' is highlighted with a red circle and an arrow labeled (1). On the right, the 'Project View' pane shows the 'Getting_Started Unit' with three sub-components: 'Getting_Started System Client', 'Getting_Started OPC Client', and 'Getting_Started Configuration'. Below the 'Getting_Started Unit' is a diagram showing three instances of the 'Getting_Started' unit connected to a central 'Getting_Started Unit'.

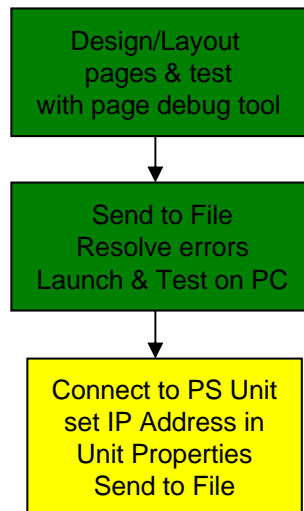
Design/Layout pages & test with page debug tool

Send to File
Resolve errors
Launch & Test on PC

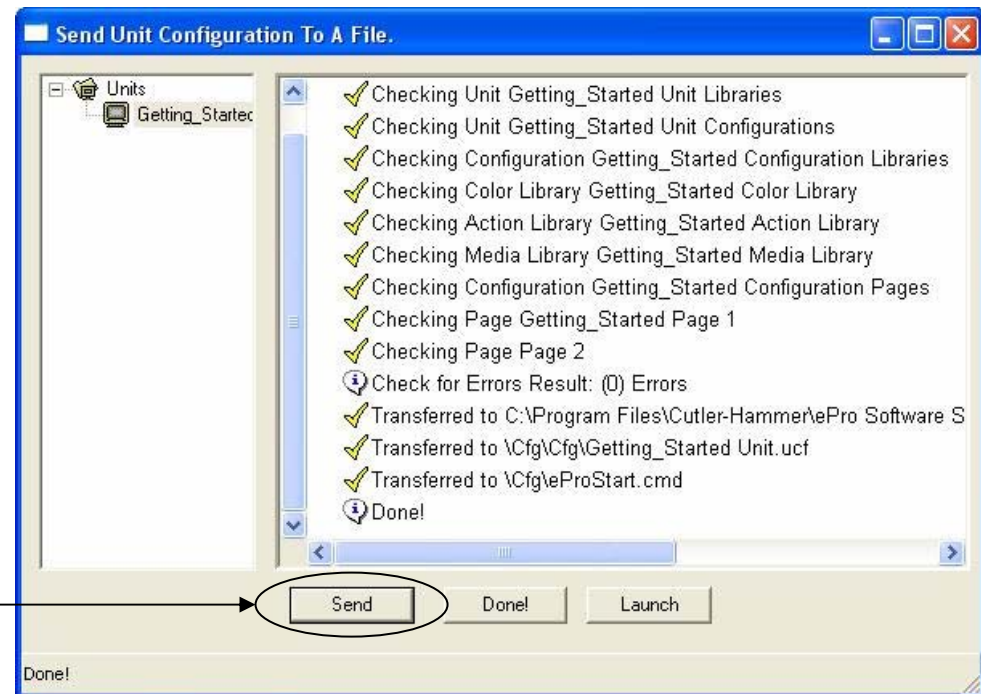
Connect to PS Unit
set IP Address in
Unit Properties
Send to File

Connect to PS Unit Set IP Address in Unit Properties Send to File

6. Pressing Send(1) will download the Runtime [needed so the ePro PS can run the .ucf], the drive [KEPSePro, and the .opf file so the ePro can communicate with the PLC], and the .ucf [the configuration file that contains all the pages].

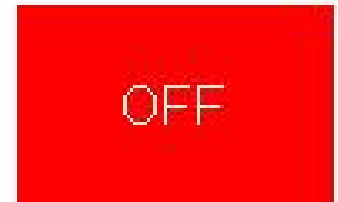
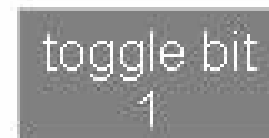
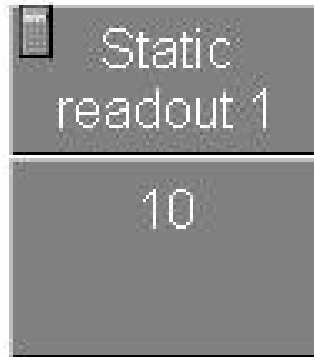
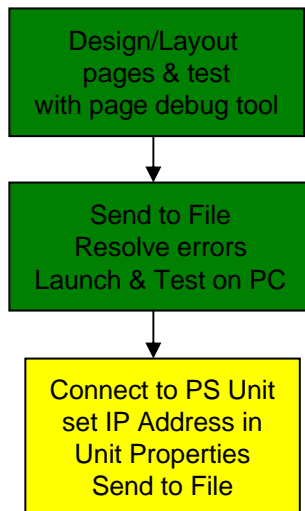


(1)



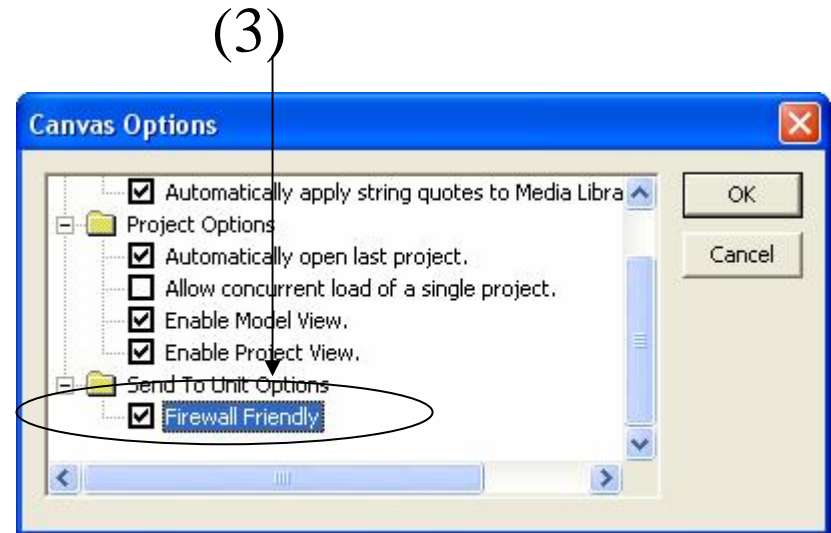
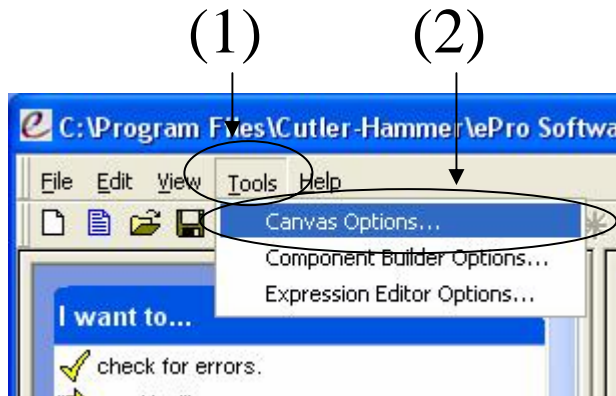
Complete!

If the following screen appears on the ePro, this Quick Start is complete. There are some troubleshooting suggestions, if this application did not download, or launch. There are also helpful resources to follow.



Failure to Download

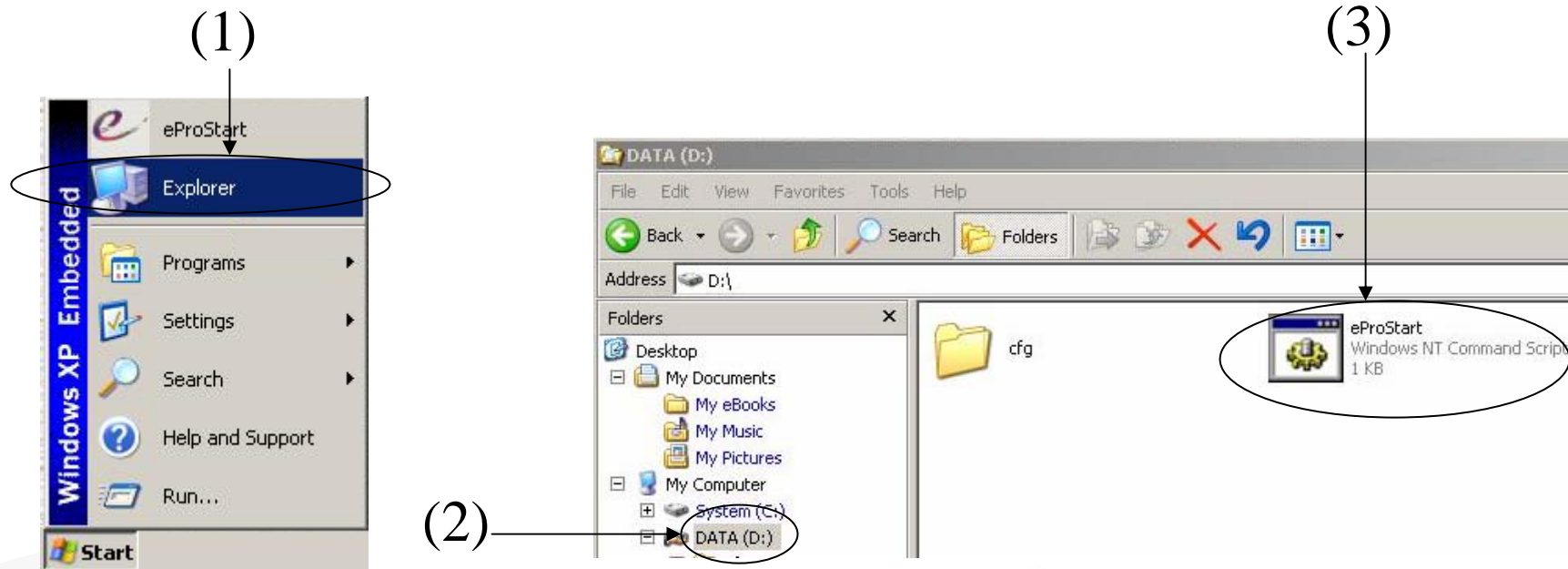
A failure to download can be caused by several different problems. The first remedy is to click Tools (1) Canvas Options (2), then the check the Firewall Friendly check box (3).



Further help can be found in the Canvas Help under the topic of Transfer Issues.

Failure to Start on ePro

A failure of the .ucf file to run on the ePro is most likely due to an older version of the eProStart.cmd file pre-existing on the ePro. Go to Start/Explorer (1), click on the D drive (2) and delete the eProStart file(3). Send to file again.



Other Resources

For help on Canvas, there is a tutorial available in the beginning of the Help file as well as context sensitive help throughout the Canvas software. This should be the first resource used for application help.

Release notes are available on the Canvas CD giving the user valuable information on any issues with this software.

KEPServer has a very extensive Help file as well.

Online tutorials for KEPServer are available at
<http://www.kepware.com/>

Other Resources

If assistance is still needed after reviewing the self-help resources, e-mail, and phone support can be reached at the following.

Technical Support

EATON Electrical

Ph: 1-800-809-2772

Fax: (828) 651-0549

Email: trc@eaton.com



Cutler-Hammer