

Lab Exercise – Inserting a Standard Change Zone (Optional)

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11/99

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Revision 01 Date 11/99**

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This module supports **TotalPlant** Solution (TPS) system network.

TPS is the evolution of TDC 3000^X.

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Lab Exercise

Introduction

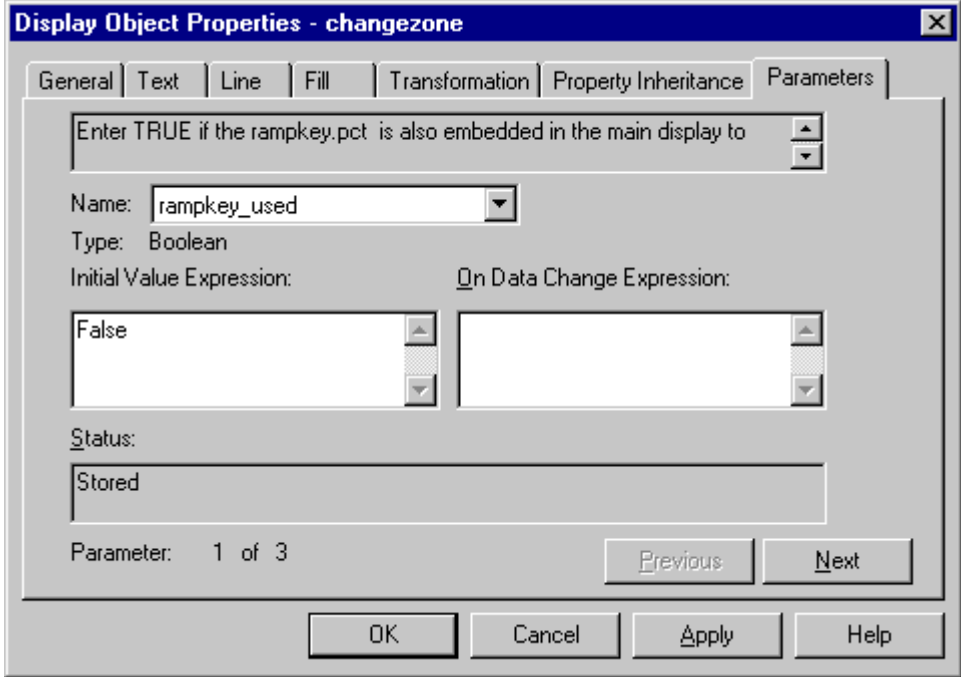
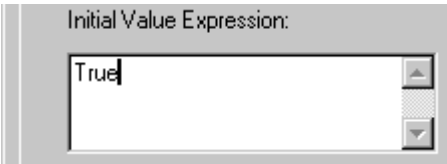
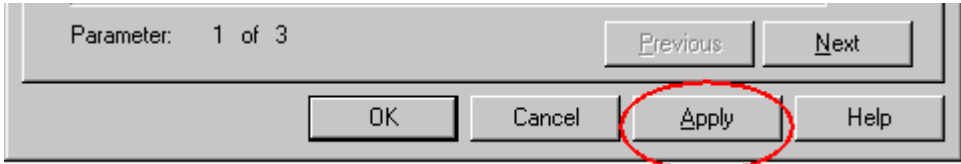
The following optional concept lab exercise provides practice in the basics of inserting a standard change zone. You will also insert a valve embedded display for accessing your change zone.

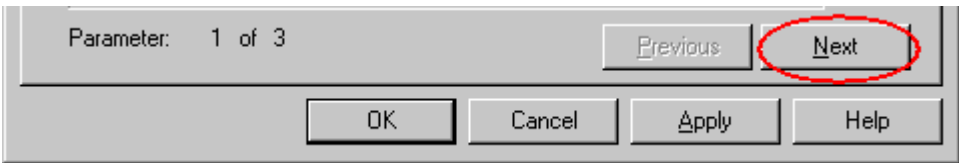
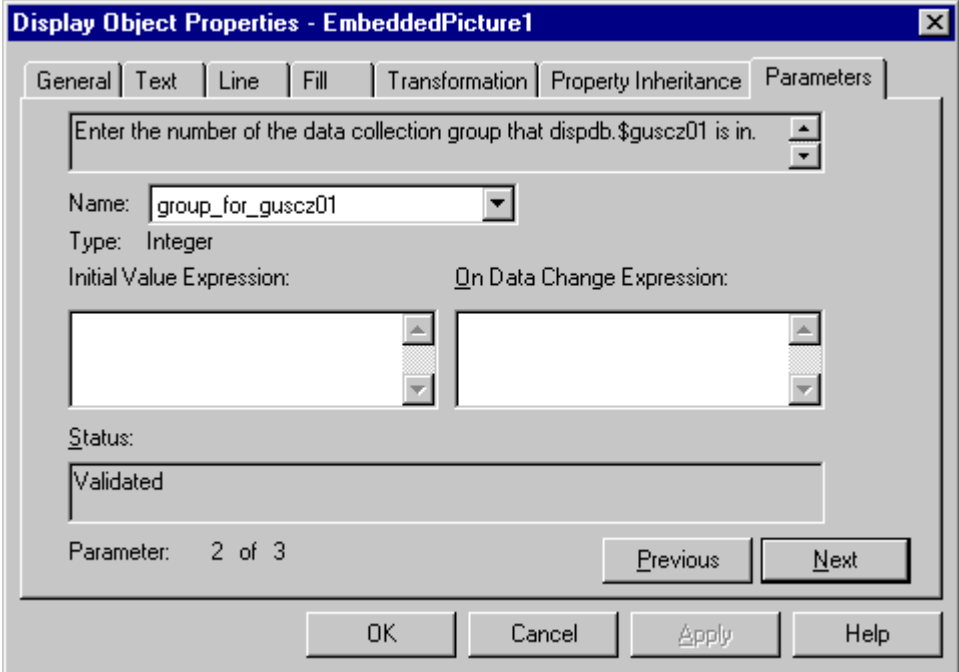
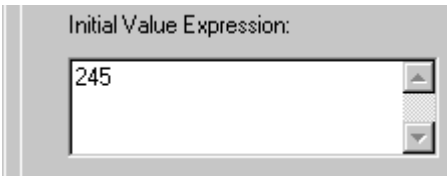
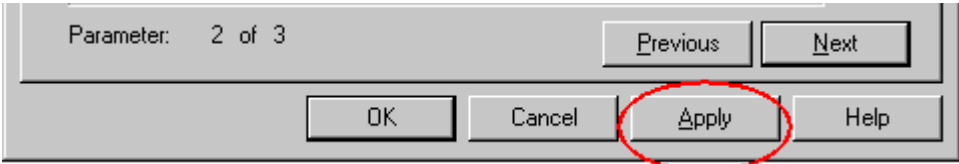
Objectives

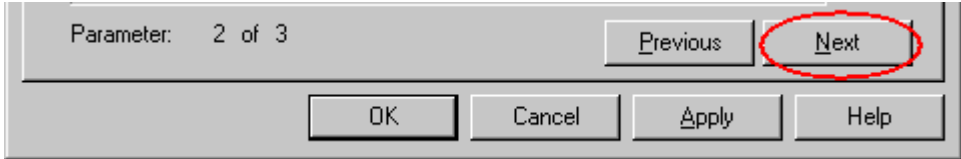
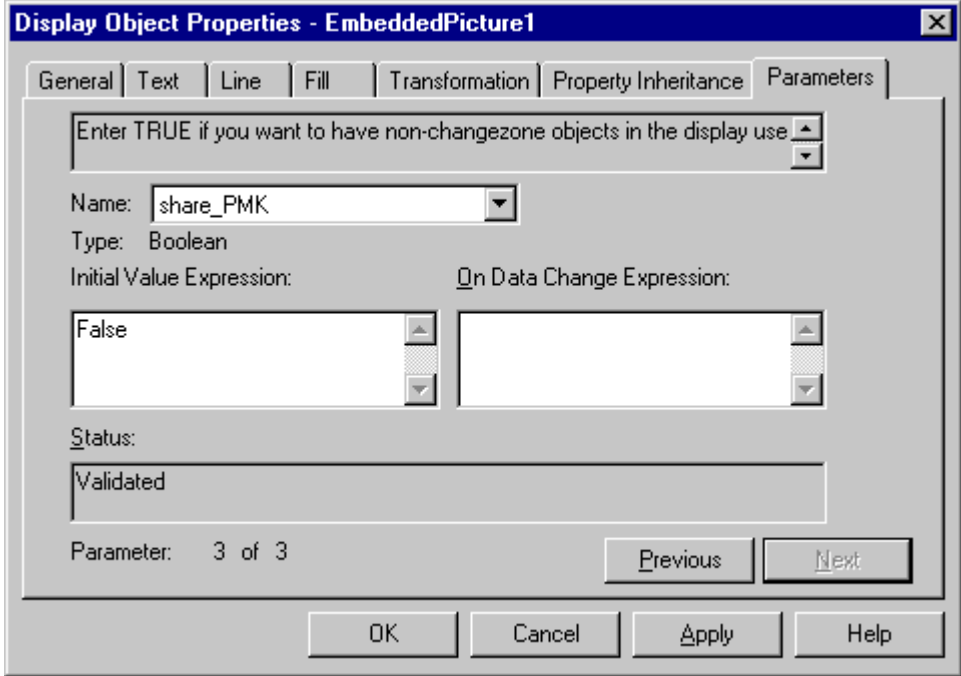
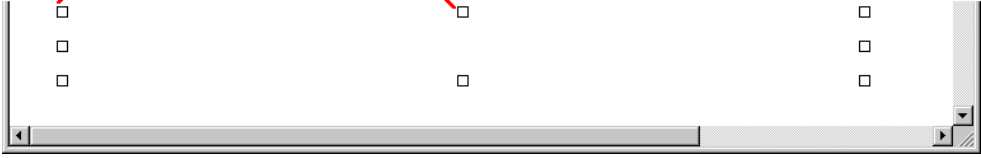
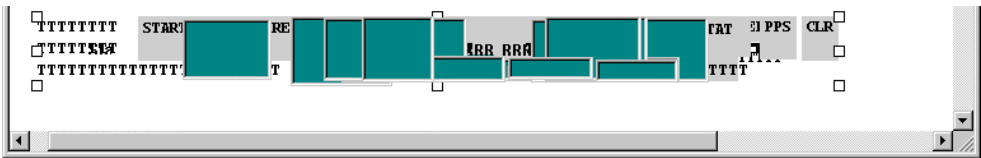
After completing this lab exercise, you will be able to

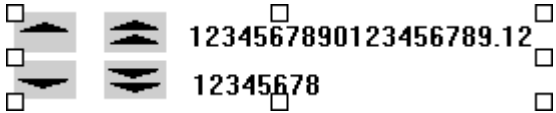
- Insert a standard change zone and optional ramp key function.
- Insert an embedded valve display and code script that assigns a point to the change zone.

Insert a Standard Change Zone Exercise

Step	Action
1.	Open your most recently modified class project display.
2.	Save the class project display as another .pct file. Use a file name of “lab_zone.pct.”
3.	<p>Insert the change zone picture (changezone.pct) into your display (lab_zone.pct).</p> <p>Path to the Change Zone picture: ProgramFiles>Honeywell>TPS>Rac>chg_zone>changezone_xxxx.pct NOTE: “xxxx” represents your current release number (e.g. “g120.”)</p> <p>Result: A dialog box appears requesting parameters for the change zone display.</p> 
4.	<p>In this practice exercise, we will use the ramp key function; type “True” in the Initial Value Expression field.</p> 
5.	<p>Click the Apply button to accept your Initial Value Expression of “True” for the ramp key option.</p> 

Step	Action
6.	<p>Click the Next button to call up the second item in the change zone parameter dialog.</p>  <p>Result: The second parameter request appears.</p> 
7.	<p>Type 245 in the Initial Value Expression field. This entry of 245 identifies the change zone as having a collection group number of 245. Its default update rate is 4 seconds.</p>  <p>Note: To bind the change zone to this identified group, you also need to set the collection group number from Display>DataCollection after you insert the change zone.</p>
8.	<p>Click the Apply button to accept the Initial Value Expression of “245” as your data collection group.</p> 

Step	Action
9.	<p>Click the Next button to call up the last item in the change zone parameter dialog.</p>  <p>Result: The third parameter request appears.</p> 
10.	<p>“False” appears in the Initial Value Expression field; accept the default and click on OK.</p> <p>Result: The cursor now appears as a cross in your display for change zone insertion.</p>
11.	<p>Click on an area in your display where you want the change zone to appear.</p> <p>Result: The change zone now appears selected in the display, but it is invisible.</p> <p>Changezone appears invisible when first inserted</p> 
12.	<p>Select View>Invisible Objects.</p> <p>Result: The change zone is now visible.</p> 

Step	Action
13.	<p>Insert the ramp key picture (rampkey.pct) into your display.</p> <p>Path: ProgramFiles>Honeywell>TPS>Rac>rampkey>rampkey_ xxxx.pct</p> <p>NOTE: “xxxx” indicates the current release number (e.g. “g120.”)</p> <p>You will receive a message informing you that “This embedded picture has no parameters”. Click OK.</p>
14.	<p>Click on an area in your display where the ramp keys should appear. (The ramp key is usually placed just above the change zone.)</p> <p>Result: The ramping keys appear selected in the display.</p> 
15.	<p>In your Library folder are valve displays that can be inserted into your class project to represent flow loops. Blk_Vlv.pct is a standard block valve; Blk_Vlv_V.pct is a vertical block valve. Ctl_Vlv_OP.pct is a regulatory control valve with an OP indication bar and Ctl_Vlv_OP_V.pct is the same control valve but with a vertical orientation. The last control valve in your Library folder, Ctl_Vlv_V.pct, is a vertical control valve without the OP indication bar.</p> <p>For each of these valves an inline parameter called TAG has been defined; therefore, when you insert any of these valves into your display, you will be prompted to enter one of <u>your</u> LCN.tagnames. This LCN.tagname is then written to a global DDB, “Dispdb.Ent01G”.</p> <p>You may want to take a moment and review the script on the valves.</p> <p>Using the LCN schematic “React####” as a guide for valve location, insert a control valve into your Reactor graphic.</p>
16.	<p>Add script for the inserted valve that responds to an Operator left button click event and assigns a point name to be used by the change zone. Because the embedded display has script that writes the LCN.tagname into a global DDB, there are two different ways that you can assign a point to the change zone.</p> <p>Example # 1 -- code to be added to the inserted valve:</p> <p>DISPDB.[\$CZ_ENTY] = “fc_00###”</p> <p>Where:</p> <p>DISPDB represents the Display Database object,</p> <p>\$CZ_ENTY represents the change zone variable of the Display Database object,</p> <p>fc_00### represents a control point from your lab database partition.</p> <p>Example # 2 DISPDB.[\$CZ_ENTY] = Dispdb.Ent01G</p>
17.	<p>Run the display to verify correct operation (Display>Run). Be sure to check if you can call up a Native Window detail display, make mode changes, and ramp the setpoint and output from the change zone, from the ramp key display and from your Integrated Keyboard point manipulation keys.</p> <p>(Note: If you should encounter a unit assignment error when attempting to make a change, call up the Native Window Console Status display and make sure that your assigned area is loaded into the GUS).</p>
18.	<p>Make any necessary corrections or adjustments and save your display “with validation” to allow running the display from the Run selection outside the Display Builder.</p>

End of Practice

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