

Lab Exercise - Interpret Reads from Cache Versus Immediate

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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 concept lab demonstrates two options that can be used to read data from either cache or the network itself. These options are used on an exception basis to bypass the typical way reads are performed in a GUS display.

Objectives

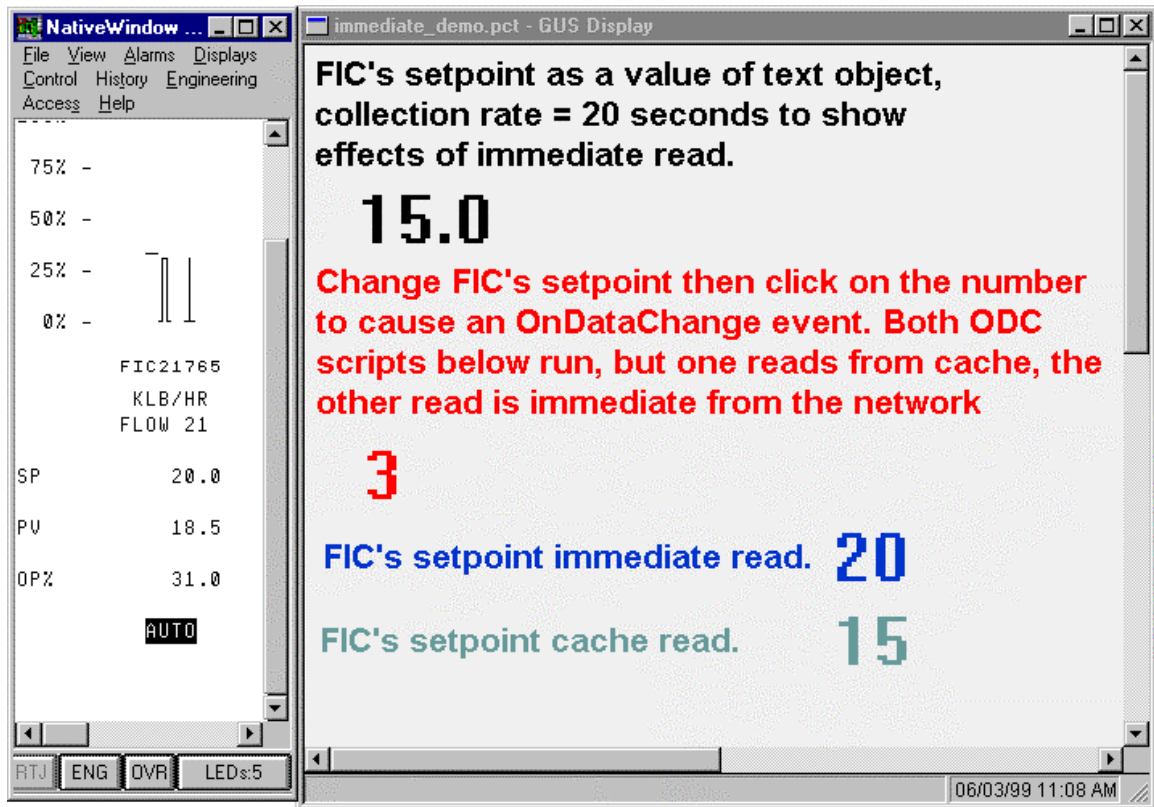
At the end of this lab exercise, you will be able to code script that does the following:

- Code script that forces an immediate read in an onDataChange script.
- Code script that reads from cache instead of the network in an OnLButtonClick script.
- Determine the tradeoffs of using an immediate read in an onDataChange script.

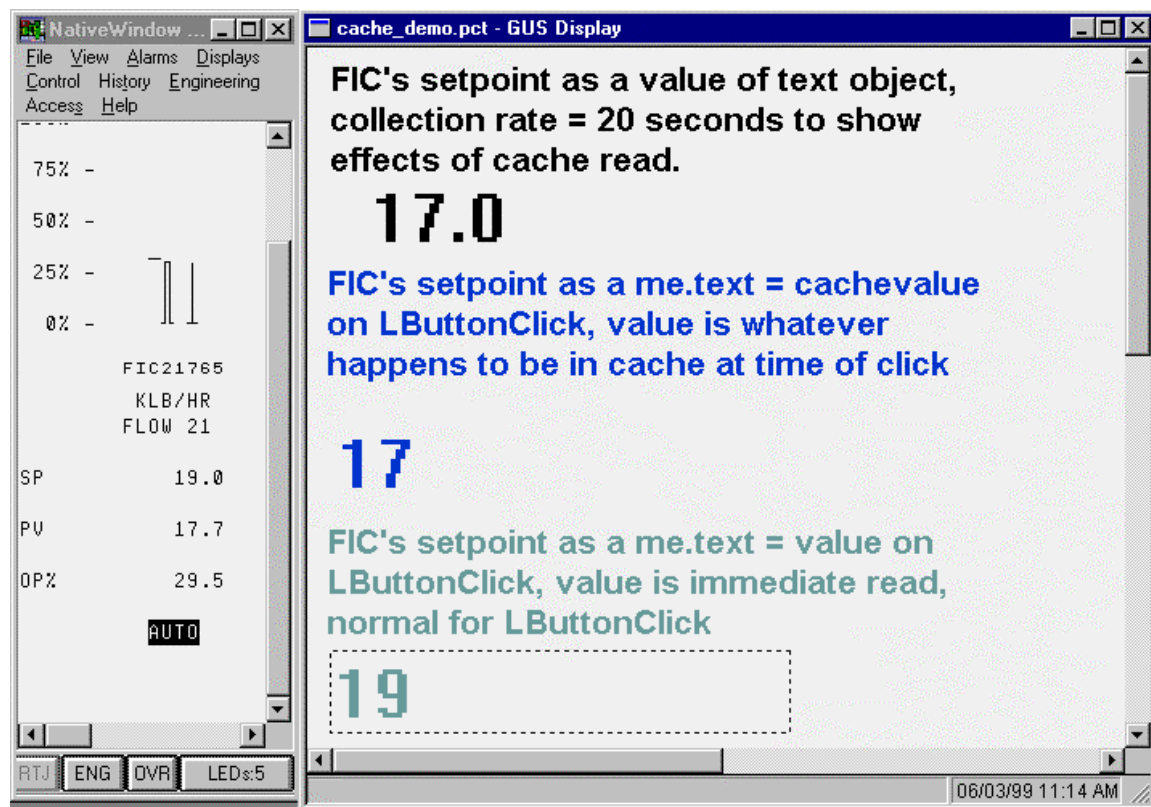
Design Criteria

Two displays are already provided for you in your student folder. All you have to do is reference a control point from your partition in the script. After you reference a control point, you run the display and make changes to the control point's setpoint from the Native Window and observe the behavior of the script that executes the read.

Two displays are provided for you. Immediate_demo.pct has a script that forces an immediate read in an onDataChange script. For comparison, it also has script that executes a read from cache (the normal behavior in an onDataChange script). The collection rate of the value is set to 20 seconds so that you can observe the script's behavior.



Cache_demoshell.pct has a script that forces a read from cache in an OnLButtonClick script. For comparison, it also has script that executes a read from the network(the normal behavior in an OnLButtonClick script). The collection rate of the value is again set to 20 seconds so that you can observe the script's behavior.



Lab Prerequisites

Lab prerequisites are the following:

- GUS Display Builder R200 or later.
- Access from Native Window to one off process LCN control point.
- Two pre-built displays (cache_demoshell.pct and immediate_demoshell.pct)

Lab Procedure

Step	Action
1.	From the Display Builder, open the immediate_demoshell.pct that is in your student folder.
2.	Modify script and text object references to FIC### to use a control point from your partition.
3.	Validate the display.
4.	Save the display.
5.	Run the display.
6.	<p>Change FIC's setpoint then click on the number 0 to cause an onDataChange event. Both ODC scripts run, but one reads from cache (its normal behavior), the other read is immediate from the network.</p> <p>Result: The script that uses an immediate read updates to the current setpoint. The script and text object that read from cache update on the next scan cycle. (Note: Depending on when you make the setpoint change and when the scan cycle occurs can take up to 20 seconds for the other values to update from cache to the current setpoint.)</p>
7.	Make several setpoint changes and observe the results until you are satisfied that you understand the script's behavior.
8.	From the Display Builder, open the cache_demoshell.pct that is in your student folder.
9.	Modify script and text object references to FIC### to use a control point from your partition.
10.	Validate the display.
11.	Save the display.
12.	Run the display.
13.	<p>Change FIC's setpoint then click on <u>each</u> FIC####. Because both FIC#### use Left Button Click scripts, you need to make each one run. One script forces a read from cache, the other script read is immediate from the network (its normal behavior).</p> <p>Result: The script that uses an immediate read updates to the current setpoint. The text object that read from cache update on the next scan cycle. The script that reads from cache is only updated on a left Button Click</p>
14.	Make several setpoint changes and observe the results until you are satisfied that you understand the script's behavior.

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