

# **Lab Exercise – Interpret Collection Rate Behavior**

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01/00

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Revision 02 Date 01/27/00**

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

TPS is the evolution of TDC 3000<sup>X</sup>.

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## Lab Exercise

### Introduction

In a GUS display, setting the collection rate of your process network variables to realistic rates and collection groups can help fine tune the performance of your display. This concept lab exercise helps you interpret the Display Authoring Tutorial discussion about fine tuning collection rates and groups.

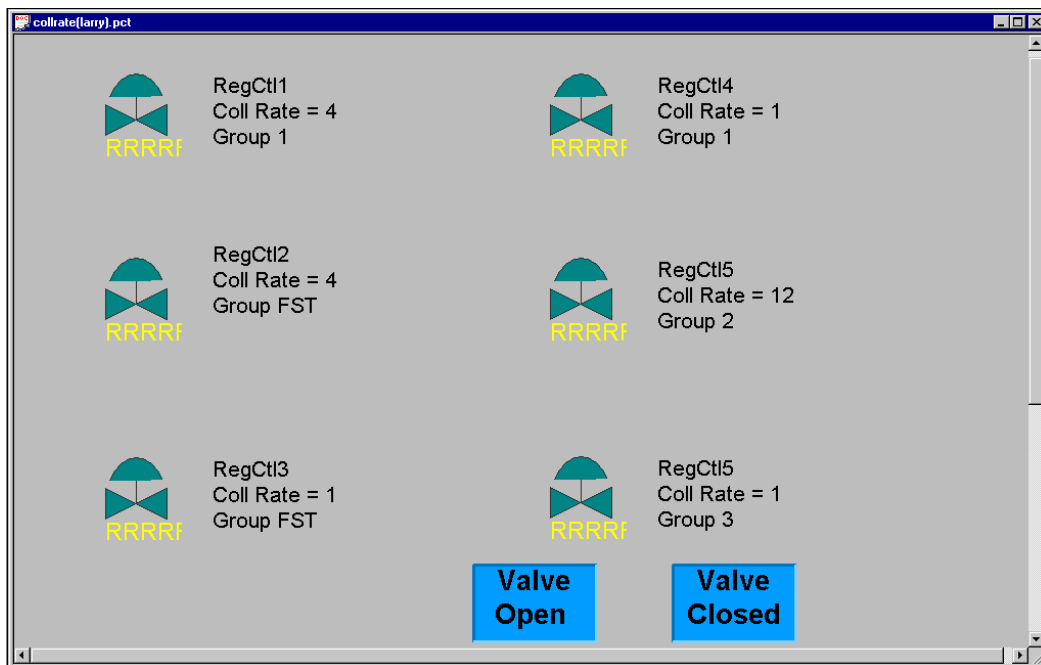
### Objectives

At the end of this lab exercise, you will be able to do the following:

- Fine tune the performance of a GUS display.
- Edit the collection rates and collection groups for your process network variables.

### Design Criteria

The example display that is already built for you is shown in the following figure. Edit your collection rates and groups according to the following GUS display (i.e., they default at build time to 4 seconds and demand group 1). Your lab partition has sufficient regulatory control points so that you can enter your control points as regctl1 through regctl6.



## Example Script

The following figure shows the script that is already coded on the valves. This script is already entered for you so that you can spend most of your lab time interpreting collection rate behavior.

An example script for a regctl# valve is shown next. The tagnames for all of the regctl# valves are defined as inline parameters.

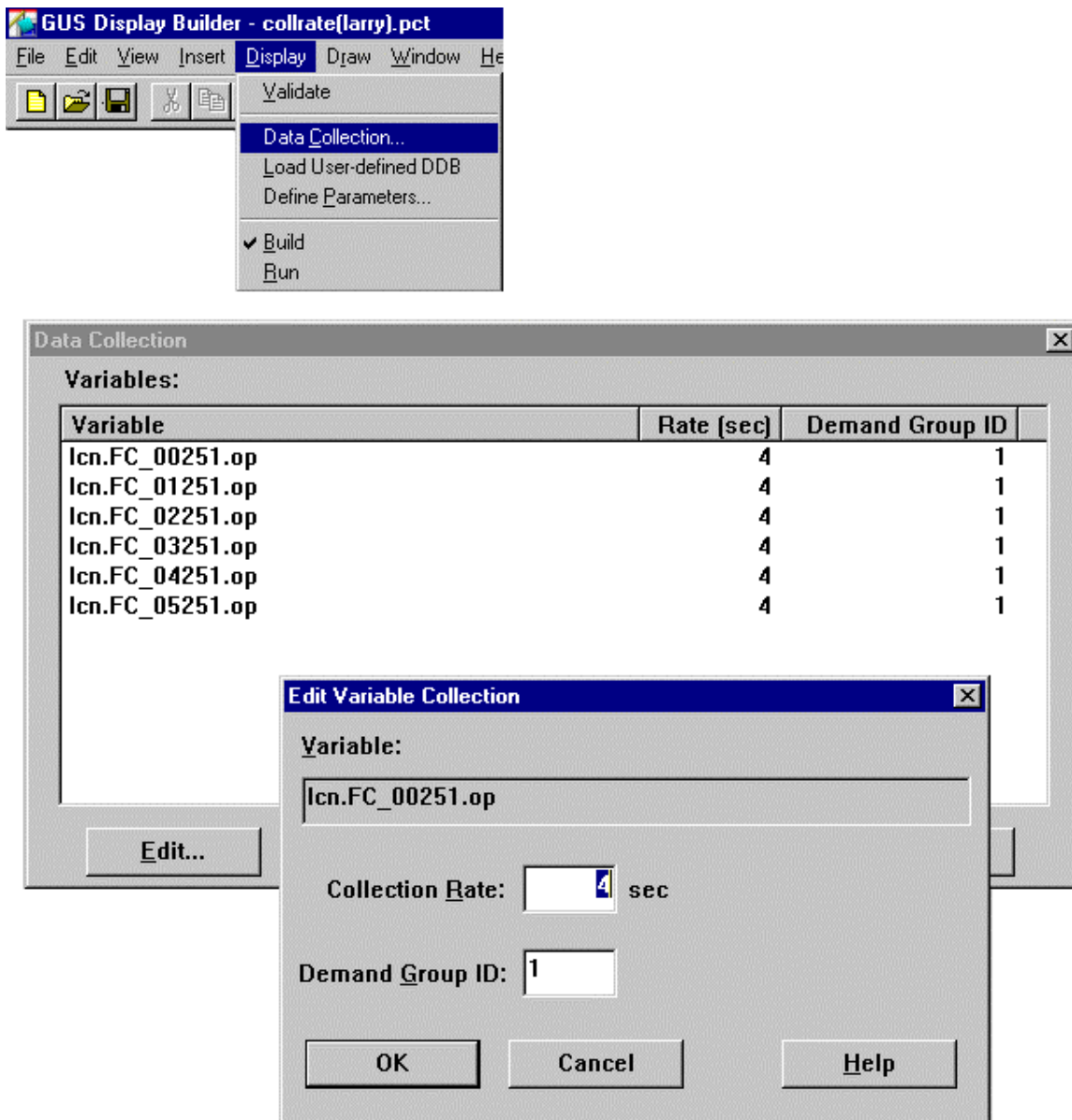
```
Sub OnDataChange()  
  
    IF regctl1.op > 0 then  
        me.fillcolor = tdc_green  
    ELSE  
        me.fillcolor = tdc_red  
    END IF  
  
End Sub
```

An example script for closing the valve is shown below. Both the open and closed target send commands to all 6 of your control points.

```
Sub OnLButtonClick()  
  
    regctl1.op = 0  
    regctl2.op = 0  
    regctl3.op = 0  
    regctl4.op = 0  
    regctl5.op = 0  
    regctl6.op = 0  
  
End Sub
```

## How to Edit Collection Rates and Groups

The following figure shows you how to edit your collection rate and group decisions. Refer to Display Authoring Tutorial for rate and grouping guidelines. The simple rule of thumb is to set realistic collection rates. For static variables, such as a point descriptor, set the collection rate to zero.



## Lab Prerequisites

Lab prerequisites are the following:

- GUS Display Builder
- Native Window is loaded
- Six off process LCN control points
- Pre-built GUS display collrate120.pct

## Lab Procedure

Step	Action
1.	Open a new display from the GUS Display Builder.
2.	From your student folder, insert the display collrate(200).pct as an embedded display into your new display.
3.	Define 6 regulatory control points from your database partition. They have been previously defined as inline parameters for you so all you need to enter is their LCN.tagnames.
4.	Edit the collection rates and groups according to the display example.
5.	Syntax check the display.
6.	Validate the display.
7.	Save the display as coll_test.pct
8.	Run your coll_test display
9.	Be sure that all your control points are in manual mode because the collection rate picture changes all 6 of the control points' outputs.
10.	Click on the valve closed rectangle target. Expected result: All valves close, but because the collection is set to different rates and groups, the display updates vary.

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