Honeywell

Use Multiple Overlays

L5215

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

TPS is the evolution of TDC 3000^{X}.

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References

Publication Title	Publication Number	Binder Title	Binder Number
Actors Manual	SW09-555	Implementation/Engineering Operations-2	TPS 3032-2

Introduction

Module Overview

About this module

This course module discusses the application of overlays in a custom display and the types of overlay actors:

- MULT_OV - Multiple Overlay
- BACK_OV - Background Overlay
- OVERLAY (obsolete)

Objectives

Use the MULT_OV target actor to call in additional information to a Custom Display.

Sample test item

This course module's Criterion Test includes the following item:

1. Modify display CONDIF in directory SYNE so that it uses overlays to bring in additional information, instead of a Variant and subpictures.

2. Explain your modifications to your course manager.

Overlays

Improving Custom Display Change Zone Performance[1]

Description

Creating **TotalPlant** Solution (TPS) system displays with quick-responding targets and change zones can often be a challenge. If not properly designed, user-created change zones can sometimes be slow to respond when used in large pictures. The following discussion describes a method for creating pictures with fast target updates. It applies specifically to displays that do not require overlays for the main portion of the picture.

Construct change zone as overlay

To create quick responding change zones, a useful technique is to construct the change zones as overlays, called up by using the Multiple Overlay (MULT_OV) actor. Additionally, use of the system display database variable $CZ_ENTY, provides a faster update than the ENTxx or ENTxxG database variables.

Target to call change zone

The following target action for a digital point illustrates how to call up a change zone as an overlay:

```
MULT_OV("change zone overlay name",0,0,79,2);
S_INT(INT02G,0);
USER_CZ(tagname,3)
```

In the above example:

- the MULT_OV actor calls up the appropriate change zone overlay for the point type, and
- the USER_CZ actor stores the tagname of the point into the $CZ_ENTY variable (the 3 represents the overlay region of the picture where the variable will be used).

NOTE—The target action for calling up an analog point type change zone is the same, but the S_INT is not necessary.

Continued on next page

[1] Rahm, Mike (1992). Improving Custom Display Change Zone Performance. Pulp & Paper Issues, Volume III, No. 3, pg. 8.

Improving Custom Display Change Zone Performance,

Continued

Change zone targets

In this example, the S_INT actor uses INT02G as the integer variable in the digital point-type change zone. Two targets exist in the change zone for changing the state of the digital point:

- one target sets INT02G equal to 1,
- the other target sets INT02G equal to 2.

After selecting the desired target, an ENTER target appears with the following action:

```
IF(CMP_I(G_INT(INT02G),EQ,1));
  SS_ENM($CZ_ENTY.OP,GS_STR($CZ_ENTY.STATETXT(0)));
  SS_INT(INT02G,0);
  UPDATE(1,O);
ENDIF;
IF(CMP_I(G_INT(INT02G),EQ,2));
  SS_ENM($CZ_ENTY.OP,GS_STR($CZ_ENTY.STATETXT(1)));
  S_INT(INT02G,0);
     UPDATE(1,0);
ENDIF
```

In the above example:

- The ENTER target appears when INT02G no longer equals zero,
- Based on the value of INT02G, the OP of the digital point will be set.
- The change zone overlay Collection Set should be configured as follows:
  - INT02G should be placed in Collection Group 1, and it should be the only variable in the Collection Group (The UPDATE actor is configured to demand an update of variables in Collection Group 1.).
  - All other variables used in the change zone should be placed in another Collection Group (for example, Group CZ).

NOTE—The indices on the STATETXT parameters used in this example are for UCN-based digital point types.

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Clear target

Typically, a change zone should contain a CLEAR target. This target must reside in the main custom display, because you cannot invoke an overlay from an overlay (see note).

In our example, the target action would be:

```
MULT_OV("change zone menu",0,0,79,2);
S_INT(INT02G,0);
USER_CZ(CZCLEAR,3)
```

The "change zone menu" is a general change zone that would initially appear when the display is called up. CZCLEAR is a dummy numeric point that clears all the point tag parameters from $CZ_ENTY. With a little practice, you should soon find this to be a great way to implement quick-responding change zones in your TPS displays.

NOTE—`Invalid Overlay Request` appears if MULT_OV overlay contains a target that calls in another MULT_OV overlay.

Guidelines for Using Overlays

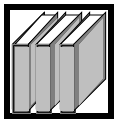
Multiple overlays

Any parameter in a variant (every limb) is collected continuously as determined by its collection group and rate, regardless of whether the variant (or limb) is used. This is not true for overlays.

Overlay parameters are only collected when the overlay is on the screen; therefore, rather than use a variant with multiple limbs, use multiple overlays to produce the same effect.

Background overlays

This overlay is drawn and its variables collected at a lower priority that the main display or the other overlays. It was designed to be used primarily for internetwork access of parameters through a Network Gateway.



REFERENCE—The *Actor's Manual* describes the overlay actors:

	Section
• Background Overlay	2.4
• Multiple Overlay	2.21
• Overlay	2.25

Lab Exercise

Overlays

Objective

In this lab exercise you will modify a custom display so that it uses overlays to bring in additional information, instead of a Variant and subpictures.

Instructions

About Overlays:

1. Call up MOOSE, then select TARGET AND BUTTON ACTORS.
2. Select OVERLAYS and investigate the examples.

Implement Overlays:

Read the display $Fn>SYNE>CONDIF into the Picture Editor
(n = left drive).

1. Select the Variant (the Variant is the bottom 2/3 of the display).
2. Enter the MOD command to view the variant body. You must modify the display so that the 4 subpictures, S_BOOLAR, S_BOOLEX, S_BOOLEN, and S_BOOLST, are brought in as overlays.
3. Delete the Variant.
4. Modify the VALUE TYPES targets by adding the MULT_OV actor to call in each overlay. Use the overlay names in Table 1. Compile your display to the WORK directory. While making your modifications, *don't delete the Store Booleans*.

Table 1

Target Name	Overlay Name
BOOLEAN	BOOLEAN
ARITHMETIC	ARITH
STRING	STRING
ENUMERATION	ENUM

HINT—Look at the MIXED target; it is correct.

Continued on next page

Instructions, continued

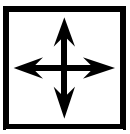
5. To create the overlays read in each subpicture, then compile it to the WORK directory by using the overlay names shown in Table 2.

Table 2

Read Sub Name	Compile as Overlay Name
S_BOOLEX	BOOLEAN
S_BOOLAR	ARITH
S_BOOLST	STRING
S_BOOLEN	ENUM

6. Copy MIXED.DO to the WORK directory.
7. Test the display CONDIF to determine if the overlays are working properly.

Directions



DIRECTIONS—This is the end of the study material for this module. Discuss questions concerning the study material or the lab activities with a colleague or a course manager

If you are satisfied that you have achieved the objectives of this module, continue with the next section, the Student Proficiency Evaluation.

Student Proficiency Evaluation

Criterion Test

Instructions

Successful completion of the lab exercise satisfies the test requirements.

To demonstrate that you successfully completed the lab, show the displays to your course manager and describe the corrections you made.

Self-Evaluation

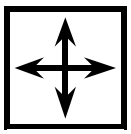
Solutions

MULT_OV(“overlay name” ,0,0,79,18)

For example:

MULT_OV(“ARITH” ,0,0,79,18)

Directions



DIRECTIONS—This is the end of this module.

Use your course map to

- Get your course manager to sign off this module.
- Choose your next eligible module.

If you have a question

- Ask your course manager.

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