

Concept: Experiment with Event Structures

Goal

Experiment with the operation of the Event structure in a VI.

Description

The files that you need to complete this exercise are here:

<NI eLearning>\LV Core 2\Event_Driven Program\Exercise.

Use and modify a VI that contains an Event structure.

1. Open the NI Example Finder.
 - ☐ Select **Help»Find Examples**.
2. Open the New Event Handler VI example.
 - ☐ Navigate to **Building User Interfaces»Acquiring User Input»General** and double-click **New Event Handler.vi**.
3. Close the NI Example Finder.
4. Enable execution highlighting on the block diagram.
5. Run the VI.
6. Observe the operation of the VI when you click the buttons on the front panel.
7. Stop the VI.
8. Disable execution highlighting.
9. Modify the VI to respond to a Value Change event with a new control on the front panel.
 - ☐ Switch to the front panel of the VI.
 - ☐ Create a copy of the Boolean button on the front panel.
 - ☐ Change the button text and label of the button to **New Button**.
 - ☐ Right-click the new button and verify that the **Mechanical Action** is set to **Latch When Released**.

- ☐ Switch to the block diagram of the VI.
- ☐ Right-click the border of the Event structure and select **Add Event Case** from the shortcut menu to open the Edit Events dialog box.
- ☐ Select **New Button** in the Event Sources section and select **Value Change** in the **Events** section as shown in Figure 1.

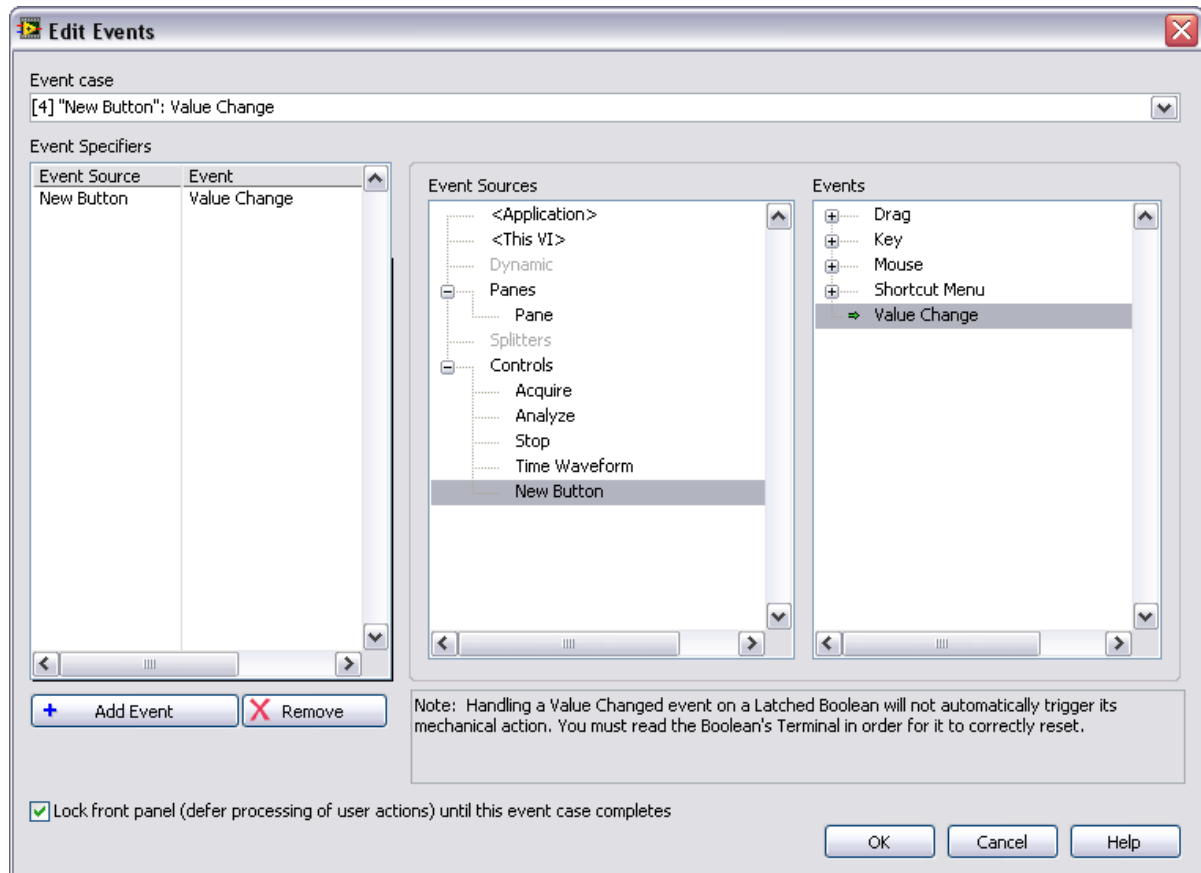


Figure 1. New Button Value Change Event

- ☐ Click **OK** to create the new Event case structure.
- ☐ Place the New Button control in the New Button event case.
- ☐ Add a **One Button Dialog** function in the New Button event case and wire a string constant to the **message** input. Set the string constant to New Event Case.
- ☐ Wire the **Time Waveform** data through the case.
- ☐ Wire a **False** constant to the Boolean tunnel.

- ☐ Run the VI and click **New Button**. A dialog box should open and display the **New Event Case** message.
 - ☐ Stop the VI.
10. Modify the Event structure to add a Filter Event to discard the Panel Close event.
 - ☐ Right-click the **Event structure** and select **Add Event Case** from the shortcut menu to open the Edit Events dialog box.
 - ☐ Select **<This VI>** in the Event Sources section.
 - ☐ Select **Panel Close?** from the **Events** section and click the **OK** button.
 - ☐ Wire a **True** constant to the **Discard?** Event Filter Node in the Panel Close? case.
 - ☐ Wire the **Time Waveform** data through the case.
 - ☐ Wire a **False** constant to the Boolean tunnel.
 11. Run the VI.
 12. Attempt to close the VI by closing the front panel.
 13. Click the **STOP** button to stop the VI.
 14. Open the NI Example Finder.
 15. Open the **Old Event Handler VI** example.
 - ☐ Navigate to **Building User Interfaces»Acquiring User Input»General** and double-click **Old Event Handler.vi**.
 16. Enable execution highlighting on the block diagram.
 17. Run the VI.
 18. Observe the operation of the Old Event Handler VI and compare and contrast the operation with the New Event Handler VI.
 19. Close all VIs without saving changes.

End of Exercise

Notes
