Create a Control Composite (Tridium Niagara AX)
Goal: Create a Pump Lead-Lag Control Composite.

1. Create Control Points
   1. Create a folder called 'PumpControl' (R.C. > New)
   2. In the 'PumpControl' wire sheets add the Boolean Writable points (R.C. > New).
   3. Create a folder called 'LeadLag'.

2. Create Logic
   1. Copy all the (8) points and paste them in the 'LeadLag' folder.
   2. From the 'KitControl' palette add all the Lead-Lag logic to the wiresheet. Set the BooleanDelay time.
   3. Connect all the logic with wire links.
   Note: having internal writable points is not required, just makes for convenient logic checkout.
Creating a Control Composite Cont.)

3. Composite Editor
1. Return to the 'Pump Control' folder.
2. Right click the 'LeadLag' folder and select 'Composite'.
3. Open the main folder node in Composite Editor.
4. Open the appropriate point or control object.
5. Select the appropriate slot.
6. Click "+ Add".
7. Rename the Slot (use suffix "_in" for inputs and "_out" for outputs).

8. Reorder the slot positions in the final composite object (outputs on top). (R.C. the folder > 'Reorder').
9. Connect the links from the points to the new LeadLag composite.
   Note: composite input slots will have link hubs on the right and output slots will have hubs on the left (don't delete the hubs).

4. Testing
1) Preset the inputs: Enable = 'Disable', Toggle = 'OUT1_Lead, Status1 = OFF, Status2 = ON.
2) Set the Enable = 'Enable'.
3) Set the Status1 = 'Running'.
4) Verify the Outputs: OUT1=ON, OUT2=OFF, Fail1=Normal, Fail2=Normal.
5) Set Status1 = 'OFF'. Verify after 10 sec: OUT1=ON, OUT2=ON, Fail1=Alarm, Fail2=Normal
6) Set Status1 = 'Running'. Should be back to normal operation.
7) Switch the Toggle to OUT2_Lead. Modify Status1 = 'OFF' & Status2 = 'Running'.
8) Verify the Outputs: OUT1=OFF, OUT2=ON, Fail1=Normal, Fail2=Normal.
9) Test Fail2.

Extra Credit
There is a 'bug' in the Lead-Lag operation (hint: 'double-trouble').

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