

Multi Robot Action Tutorial

VNBC – MAKARA GROUP

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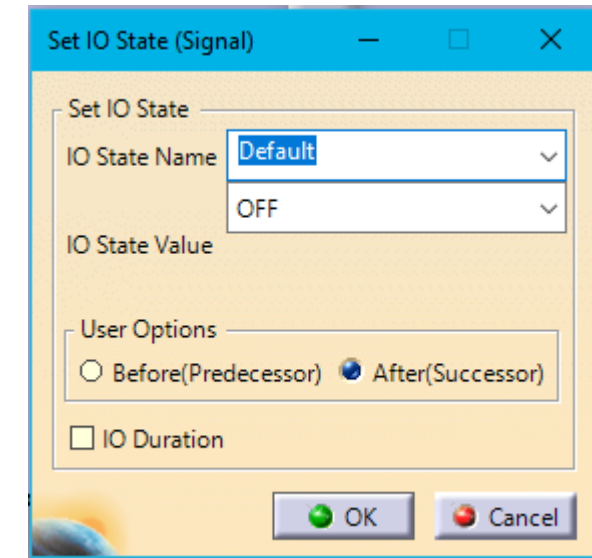
Vasanth Elangovan

How It works


- The Input Output Signal controls the robot tasks of different robots.
- The set of output of the current robot in motion acts as input for the robot awaiting for the signal to proceed with it's robot task.

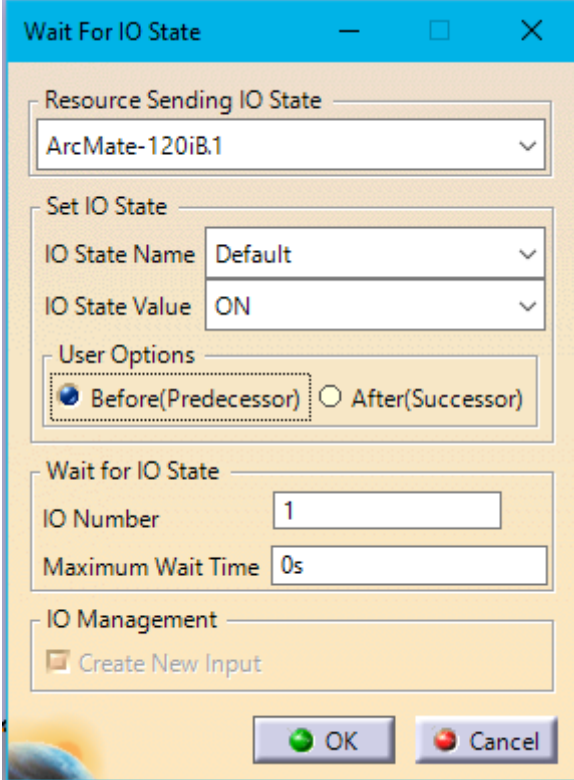
Step 1

- Open "Work Cell Sequencing" in Resource Detailing.
- The input/output icons are used for creating I/O sequences
- Select "Create IO State" Icon.
- Then select the last operation of the robot task in motion.
- An IO State Dialogue box opens up. In this "IO State name" is the calling name and which is called on by the waiting robot task. IO State Value is the switching value to initiate the next robot task. Set it to "ON". And If it's the set IO, user option is "AFTER".



Step 2

- Select "Create Wait IO" icon and select the first operation of the robot task that you want to initiate. 
- "Wait For IO State" Dialogue box holds the following information:
- "Resource Sending IO State" is the name of the robot that has the robot task in which the set IO is been inputed.
- "IO State Name" is the signal name that needs to be picked up by the wait state.
- "IO State Value" is the signal state which trigger the robottask.
- "User Option" is set to "BEFORE" and not "AFTER" in this case since it is required to be at the start of the robot task.




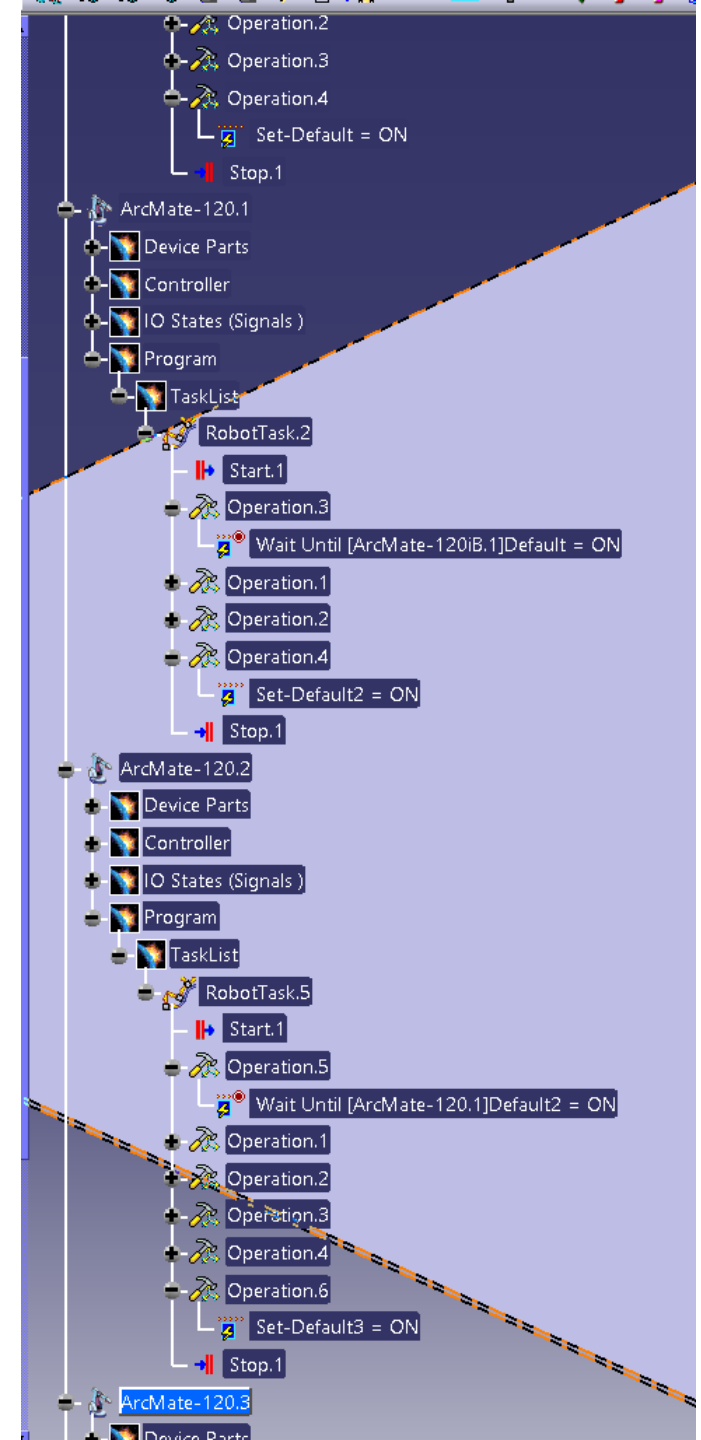
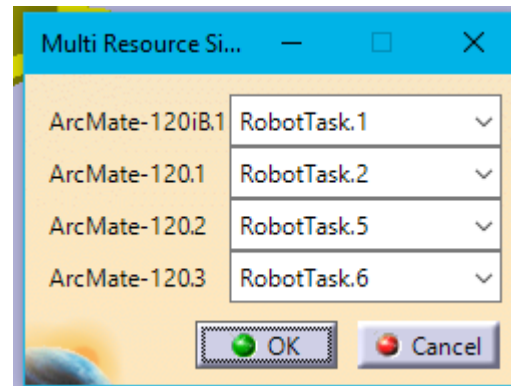
The image shows a software dialog box titled "Wait For IO State". It contains several sections for configuring a wait state:

- Resource Sending IO State:** A dropdown menu showing "ArcMate-120iB.1".
- Set IO State:**
 - IO State Name:** A dropdown menu showing "Default".
 - IO State Value:** A dropdown menu showing "ON".
- User Options:** Two radio buttons: "Before(Predecessor)" (which is selected) and "After(Successor)".
- Wait for IO State:**
 - IO Number:** A text input field containing the number "1".
 - Maximum Wait Time:** A text input field containing "0s".
- IO Management:** A section with a button labeled "Create New Input".

At the bottom right of the dialog are "OK" and "Cancel" buttons.

Step 3

- You should have the tree with IO States such like these.
- You should start the simulation using "Multi-resource Simulation" icon. 
- You will have a list of robot names and task from which it'll start the simulation. Choose the first tasks of all the robots that is to be initiated.



Happy Modelling