World Zones Add-in

World Zone Add-in is used to visualize the world zones as temporary graphics or station part into the station from the RAPID code and addition to that view the current position of virtual and real controllers. This add-in has following two options under Utilities tab.

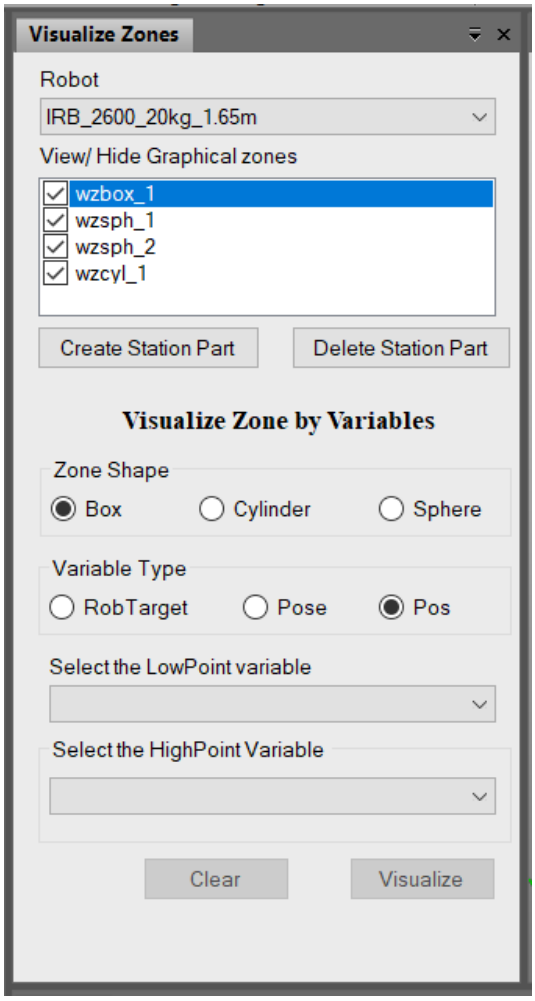
- Visualize Zones
- Robot Position Viewer

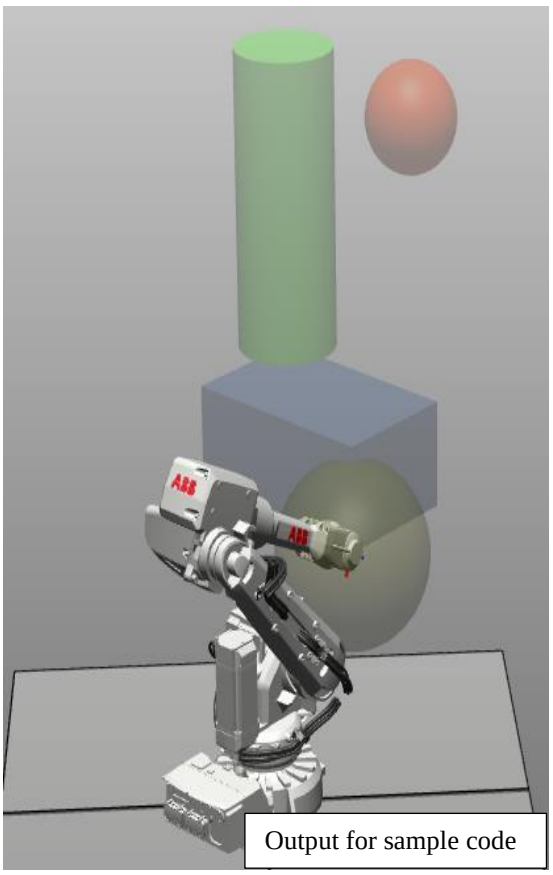
Installation:

Start Robot Studio >> Go to Add-ins Tab >> press Install Packages >> Select the downloaded package file (**WorldZones-1.0.rspak**) >> Restart the Robot studio

Visualize Zones

This option is used to visualize world zones which is defined in Rapid using instructions as follows WzBoxDef, WzCylDef and WzSphDef.





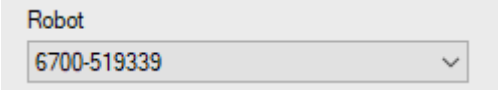
Output for sample code

Rapid code Sample:

1. WZBoxDef \Inside, wzbox_1, Lowpoint, Highpoint;
2. WZSphDef \Inside, wzsph_1, Centerpoint,300;
3. WZsphDef \Inside, wzsph_2, myRobtarget.trans, radius; !! Using RobTarget
4. WZCylDef \Inside, wzcyl_1, Centerpoint, 200, 1000;

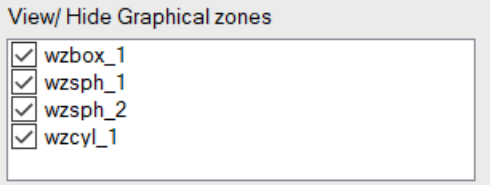
1. Robot

In this drop down menu you can select the robot, which is available in the station.



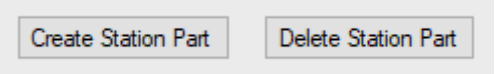
2. View / Hide Zones

The Zone checkboxes will be available based on the selection of robot and number of world zones created in the robot selected. This will Show / hide the graphical representation of respective zones.



3. Create / Delete Station Part

- The Graphical visualization of world zones can also be converted into station part using "Create Station part".
- The created station part can be deleted using "Delete Station Part".

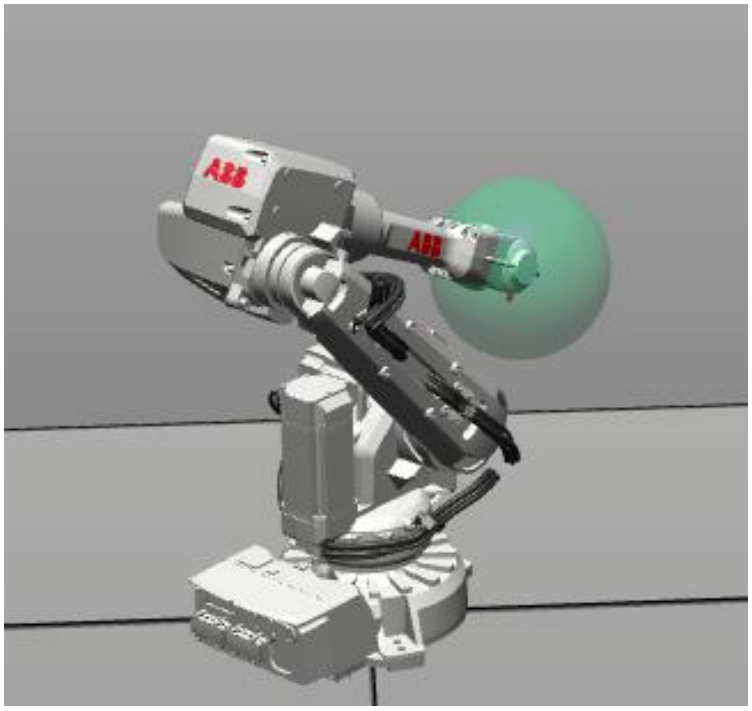


Known Limitations

- This option is not supported if the world zones created by using argument passed to another functions. For overcome this issue, developed **Visualize zone by variables.** Please use the option if you are created the zones by passing argument to the function.

Visualize Zone by Variables

This option is used to visualize a zone with the feasible variables in Rapid program under the station. The following datatypes Robtarget, Pose & pos can be used as variables in this option.

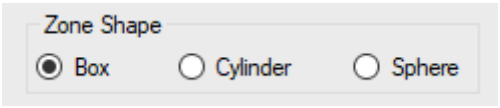


Output for Sphere visualization

1. Zone Shape

Select the desired zone type by using the options

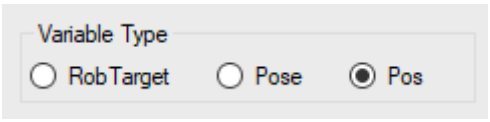
- Box
- Cylinder
- Sphere



2. Variable Type

Select the desired variable type by using the options. The selected type has variables in the Rapid that will be added into the position selection drop-down menu.

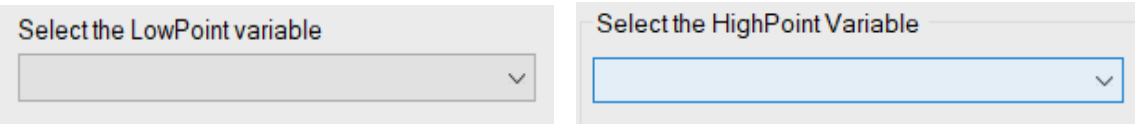
- RobTarget
- Pose
- Pos)



3. Selection of Variables for the Zone dimensions

Box visualization

To visualize the box select the Low and High point of the Box in the respective drop-down menu.



Cylinder visualization

To visualize the cylinder select the center position of cylinder and enter the Radius and height in the numeric entry boxes.

Sphere visualization

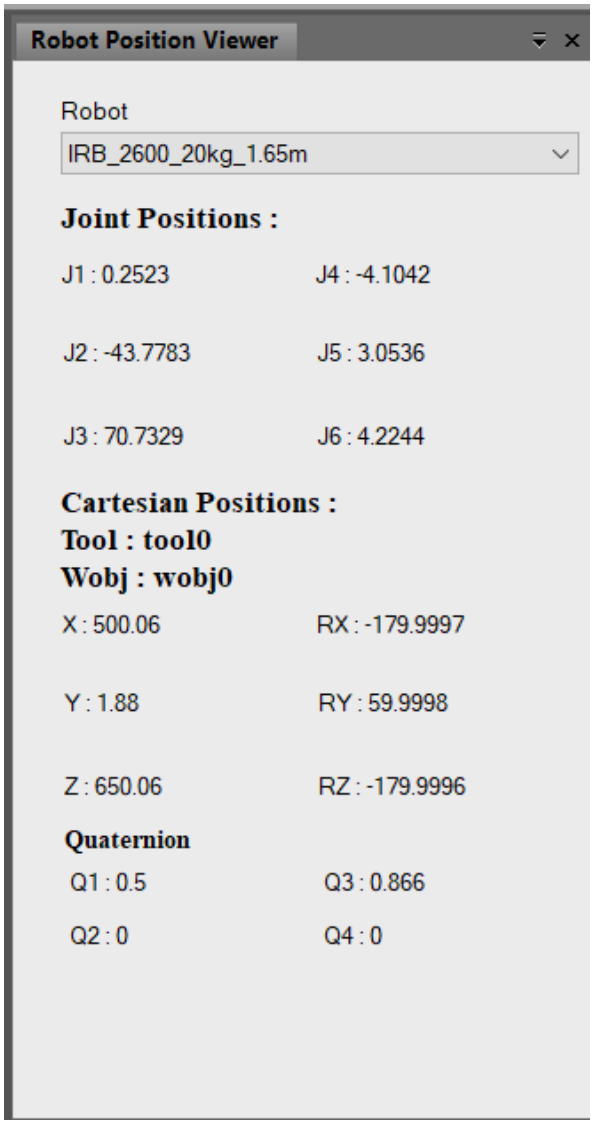
To visualize the sphere select the center position of sphere and enter the Radius in the numeric entry box.

4. Visualize / Clear

- Using the Visualize option, it may visible the zone for the selected variables and the zone type. The button is enabled after the selection of variables.
- Using the clear option, it clears the temporary graphics created previously.

Robot Position Viewer

Using this option, view the current position of robot in Joint and Cartesian Co-ordinates with respect to the Current tool and Current work object. This viewer supports for both virtual and real controllers.



Support Credits

I would like to thank Mr. Ravinder A from Vindraa robotics Pvt. Ltd. and thanks to my dear friends for the great supports.

Bug report

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