Reference points

Robot cells & equipment · https://convergent-it.com/de/tutorial/robot-cells-equipment-de/reference-points/

Reference points are little helpers for building robot cells or programming an application. They define the coordinates (location and orientation) of points of interest.

Examples are e.g. candidates for Tool-Center-Points (TCPs). Flange points allow you to attach a tool to the robot's flange automatically. Simulation-points define where a process-simulastion starts from a.s.o.

Reference points also define possible locations where to pick or place a part (pick points and place points). Reference points are also used to align the virtual world with the real one. Measure the position of 3 points of the workpiece with the robot in the real cell. You get 3 points in robot coordiantes. Than mark the same 3 points on the CAD of the workpiece. Later "match" the points in the CAD with the measured ones. As a result you will get the pose of the work-piece in the cell automatically - as will be described in the scene editor.

Reminder: If you want to set a reference point graphically by clicking on a CAD-object, or if you want to modify it by selecting one of it´s coordinate-axes, don´t forget to press "CTRL". As described in the GUI: Without CTRL all mouse actions change the view or move or rotate the object, cell, etc.