Creating a Rule Based Walk

Rule Based Walk is a mix of Walkforward (or backward or Sidestep) and Autowalk. The main difference between Rule BasedWalk and regular Walk command is that you don't have to specify the type (forward, backward, Sidestep) you want to create. The type is automatically determined with regards to the Initial and Final posture of the manikin. Like the AutoWalk, the Rule Based Walk is selecting the walk type based on the Walk specifications specified in the options. This procedure describes how to create a Rule Based walk for a specific worker loaded in the PPR tree.
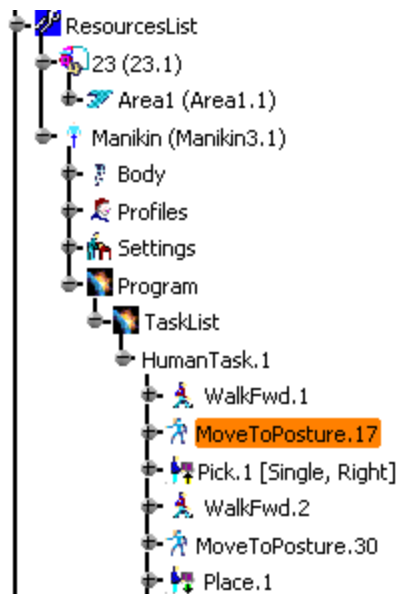
Spline points cannot be specified for Rule based walk (this option will be grayed out for rule based walk).
Collision free computation can be specified for rule based walk. The collision free algorithm will try to honor the rules (specified in
Tools > Options > HumanTaskSimulation) at the time of generating the collision free walk. If a collision free walk cannot be generated with the specified rules, the algorithm will ignore the rules and generate the path.
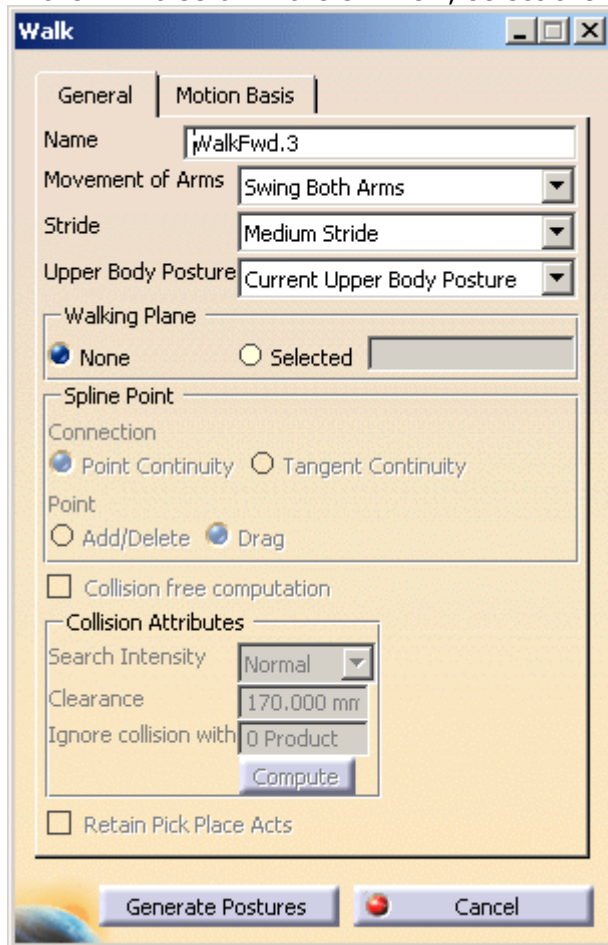
1. Save the initial state.

2. Select the **RuleBasedWalk** from the **Human Activities** toolbar.

3. Select a **manikin** or a preceding **activity/task** from a specific worker's TaskList in the PPR tree.
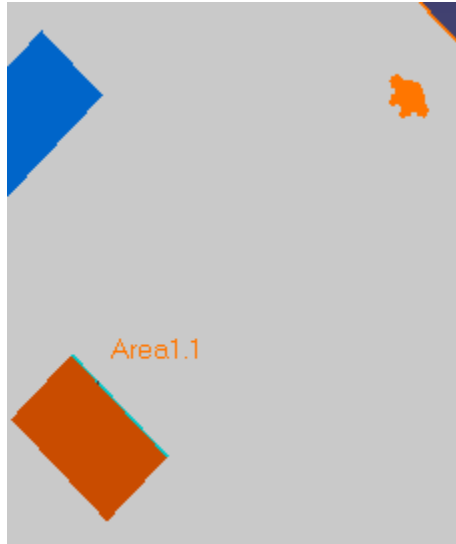

- If you select a worker after selecting this command, a new task will automatically be created for the worker and the new walk activity will be the first one under that new task.

- If you select an activity of an existing task, the new walk activity will be

a successor to that selected activity.

5. The Walk dialog box appears. In this example, for the walking plane, highlight **Selected** in the dialog box.

6. In the PPR tree or in the 3D view, select the area where the worker will walk.
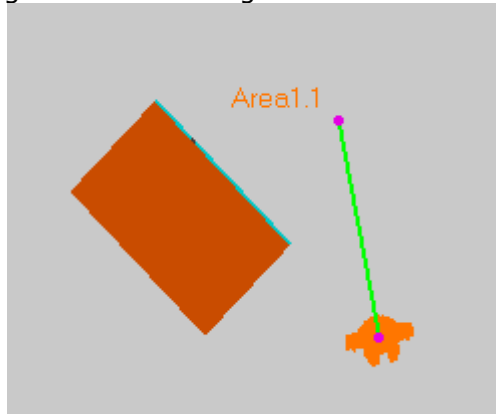
Walk

General | Motion Basis

Name: WalkFwd.3

Movement of Arms: Swing Both Arms

Stride: Medium Stride

Upper Body Posture: Current Upper Body Posture

Walking Plane
● None   ○ Selected

Spline Point
Connection
● Point Continuity ○ Tangent Continuity
Point
○ Add/Delete ● Drag

☐ Collision free computation

Collision Attributes
Search Intensity: Normal
Clearance: 170.000 mm
Ignore collision with: 0 Product

Compute

☐ Retain Pick Place Acts

Generate Postures   Cancel

7. The 3D view is reframed to show a top view of the area or plane on which the worker will walk.
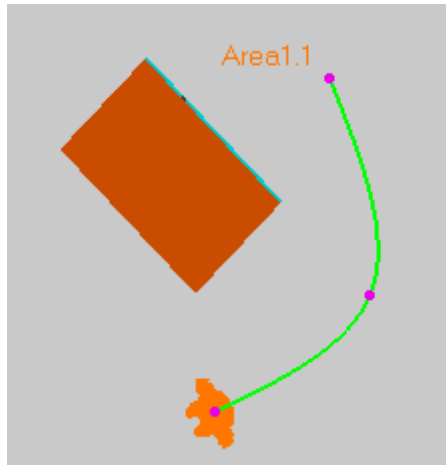
Creating the walk

- Single-click to add a target point
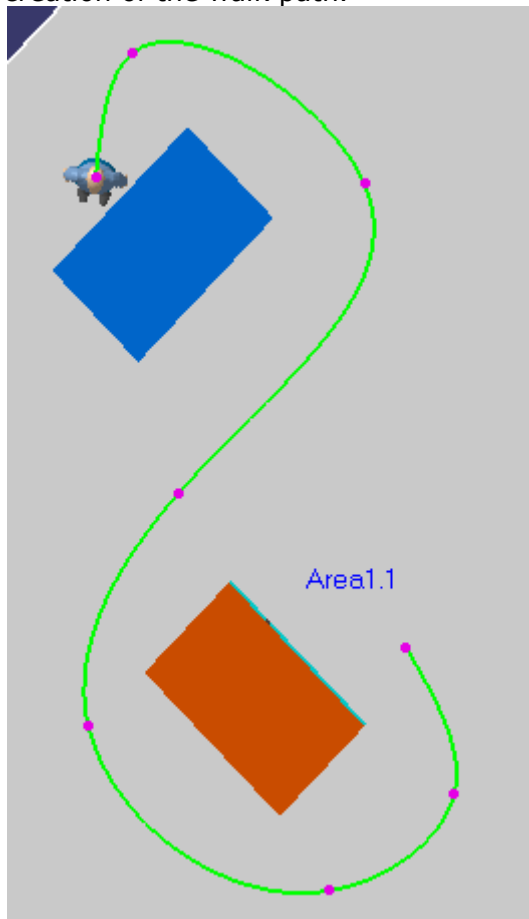
- Right-click to end creation of the walk path

8. Select the **first target** point for the walk.

9. When the point is selected, the end position of the walk is shown as well as a green line showing the route that the worker will take.
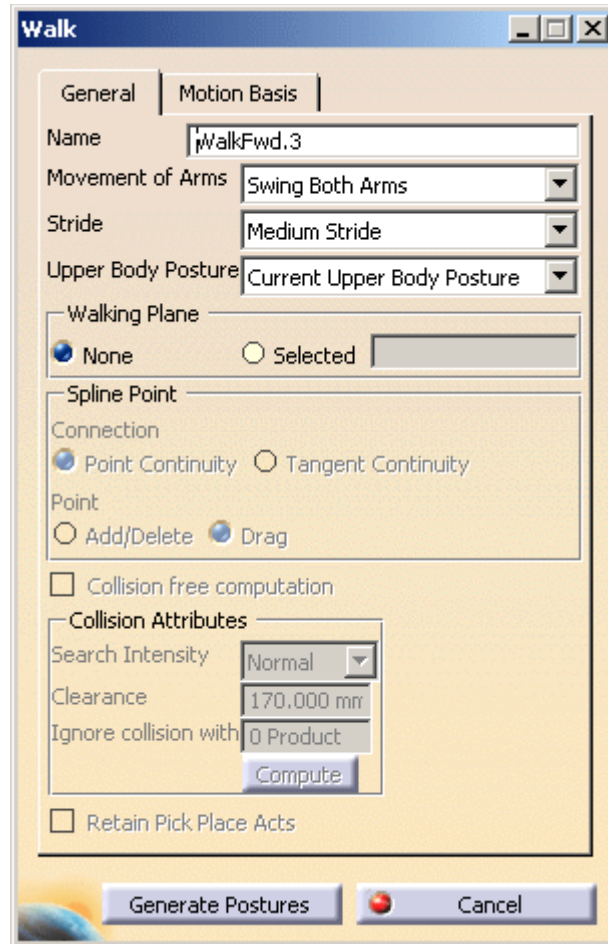

10. Select a second target point on the area. A curve (spline) is created between the starting point of the worker, through the first and second points.

11. Select a third target point on the area.

12. Select additional target points on the area as desired. Right-click to end creation of the walk path.

13. In the **Walk Options** dialog box, accept the defaults in the General tab and the Motion Basis tab or update as desired. See Creating a Collision Free Walk.

14. Select **Generate Postures** in the **Walk Options** dialog box to generate the forward walk.

15. The resulting walk forward activity can be expanded in the PPR tree to show the sub-activities.

16. Restore the initial state.