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MODEL => UPDATE

DEFINIR LE RO

smimport Assemblage_Robot.xml

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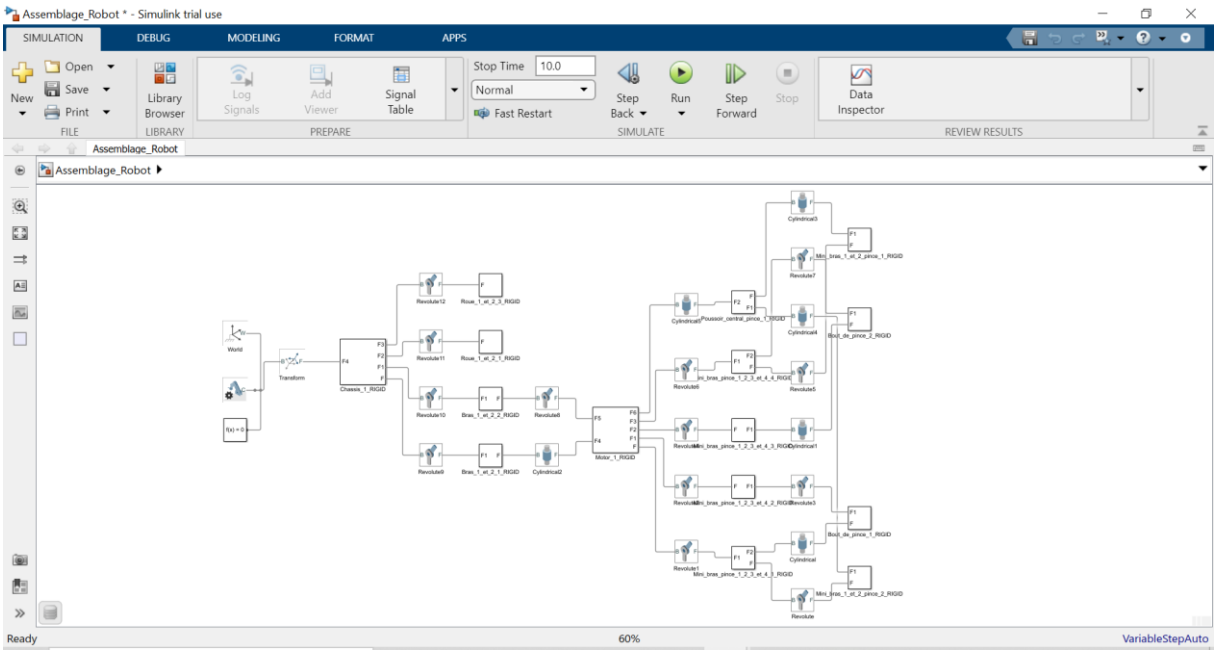

https://fr.mathworks.com/products/robotics.html

https://fr.mathworks.com/help/robotics/ref/loadrobot.html

`robotRBT = loadrobot(Assemblage_Robot)`

---

robot = importrobot(Assemblage_Robot)

https://fr.mathworks.com/help/robotics/ug/control-a-differential-drive-robot-in-simulink-and-gazebo.html

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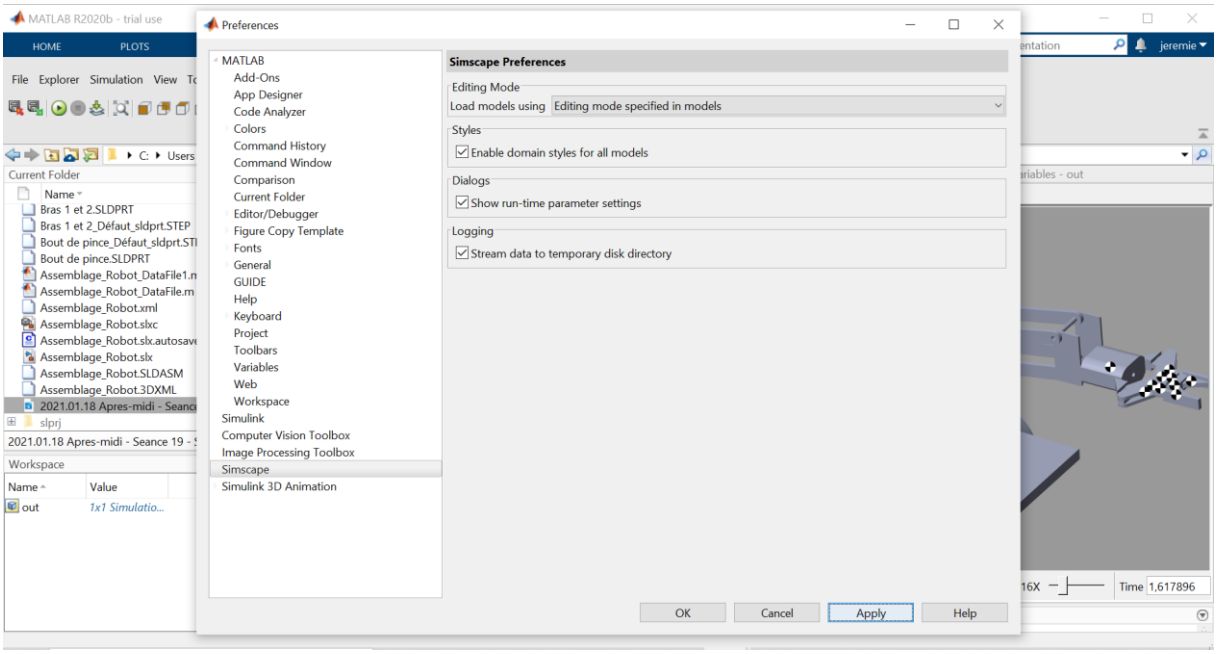
https://fr.mathworks.com/help/robotics/ug/simulate-a-mobile-robot-using-gazebo.html

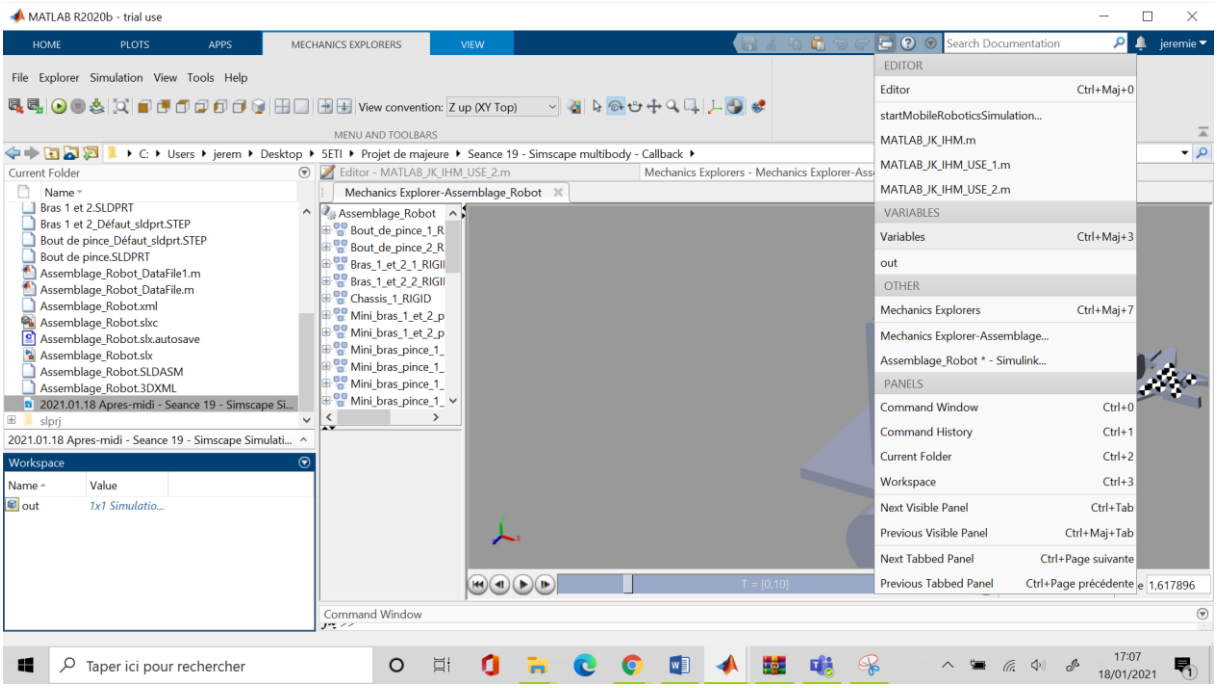
https://www.daslhub.org/unlv/wiki/doku.php?id=example_of_matlab_simscape_multibody

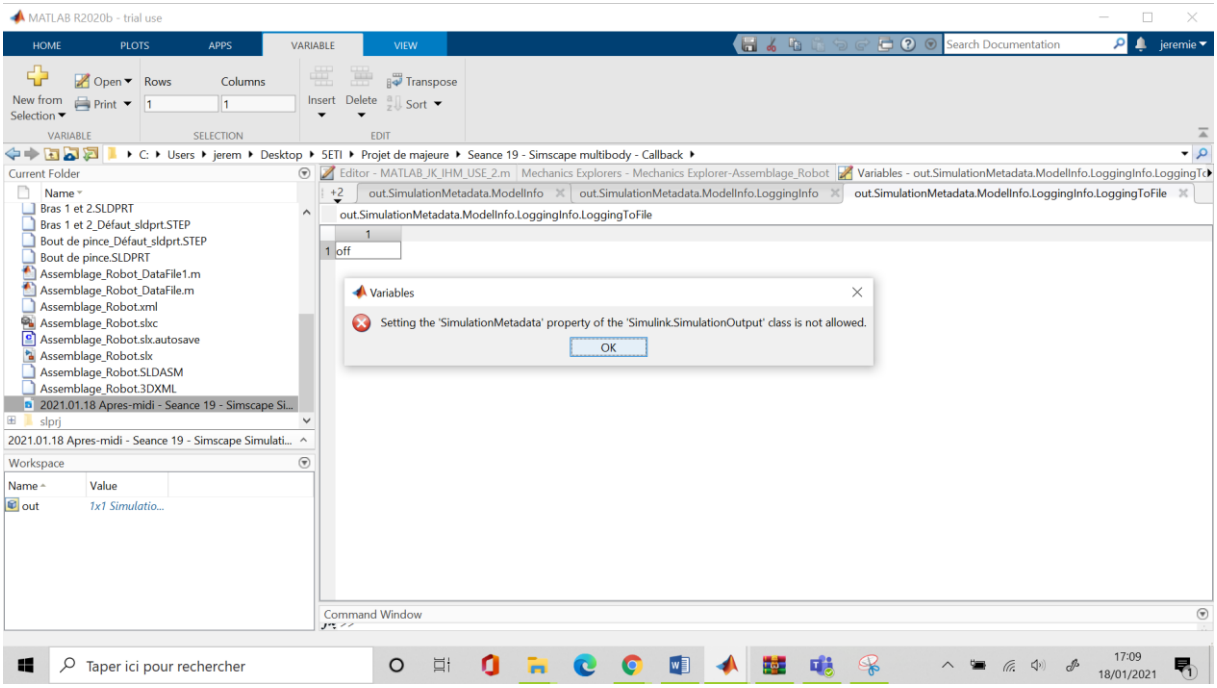
Prise en main :

https://youtu.be/XS-0gZH-6vw



On cherche à envoyer les valeurs à inculquer aux joints pour faire bouger le robot en mode Simulation 3D. On cherche aussi dans un deuxième temps à récupérer les valeurs obtenues pour confirmer si besoin.

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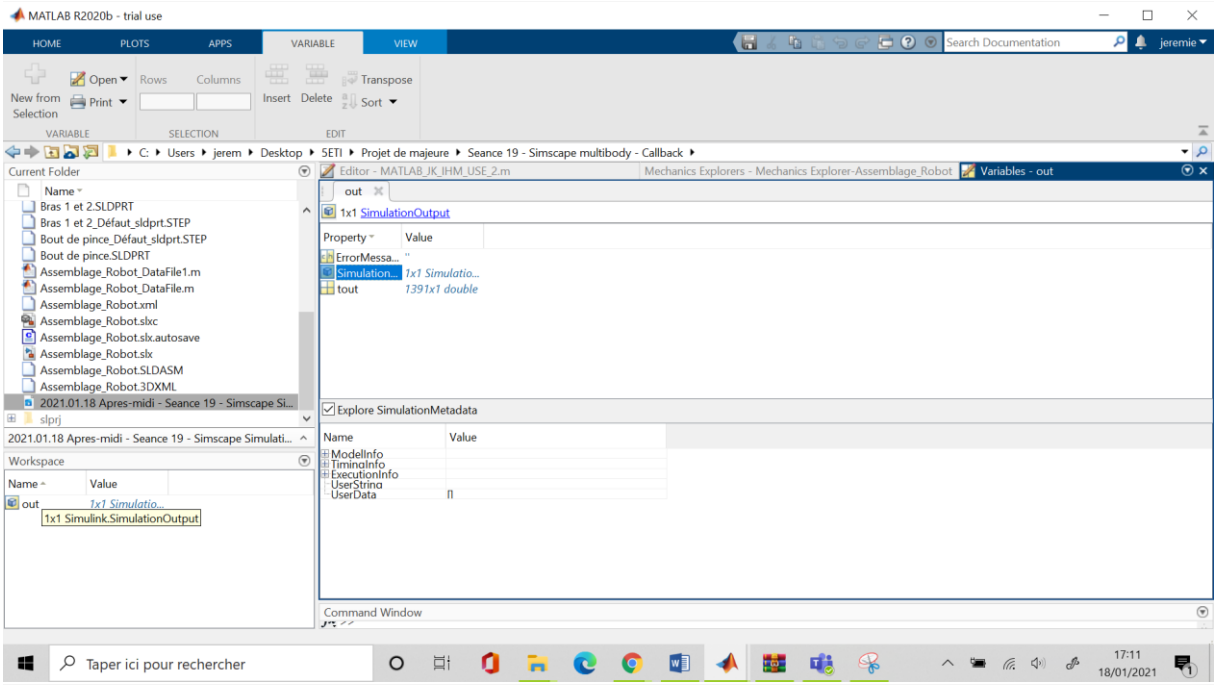
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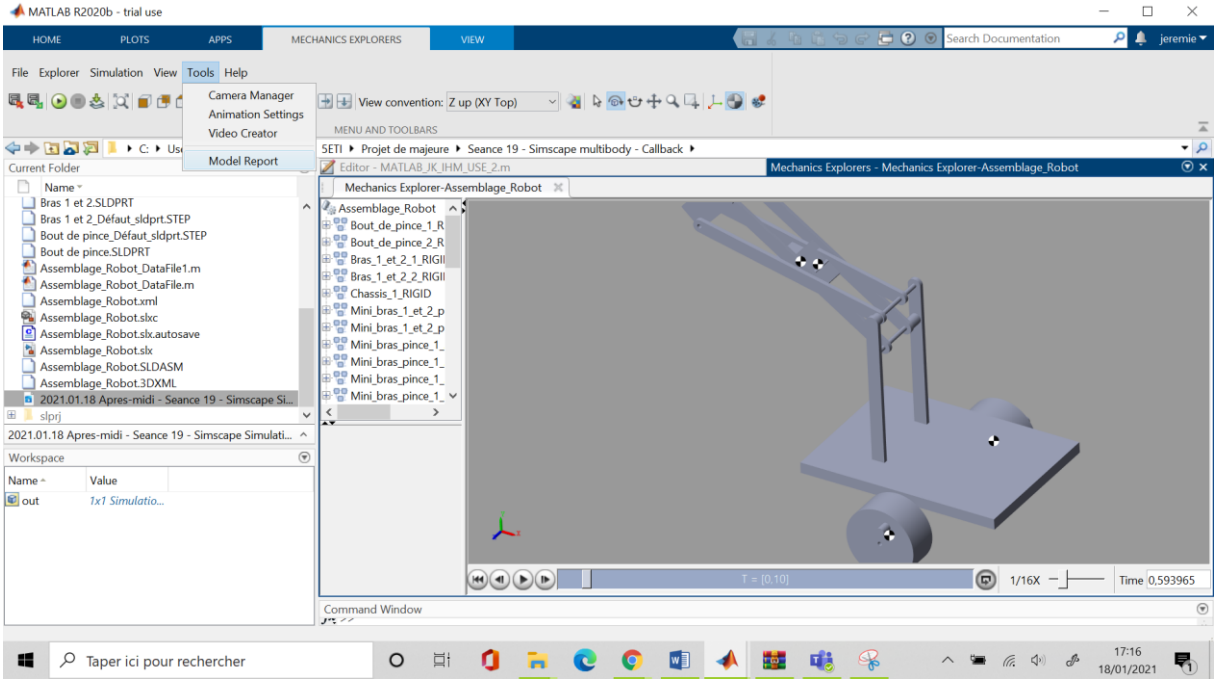
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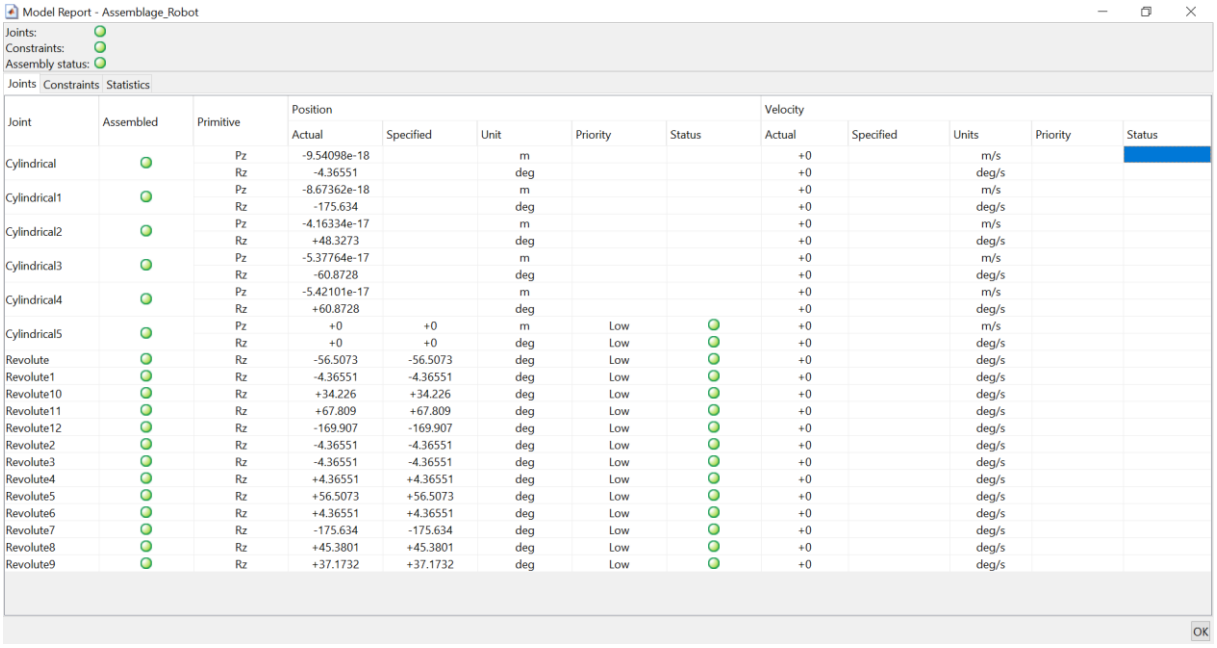


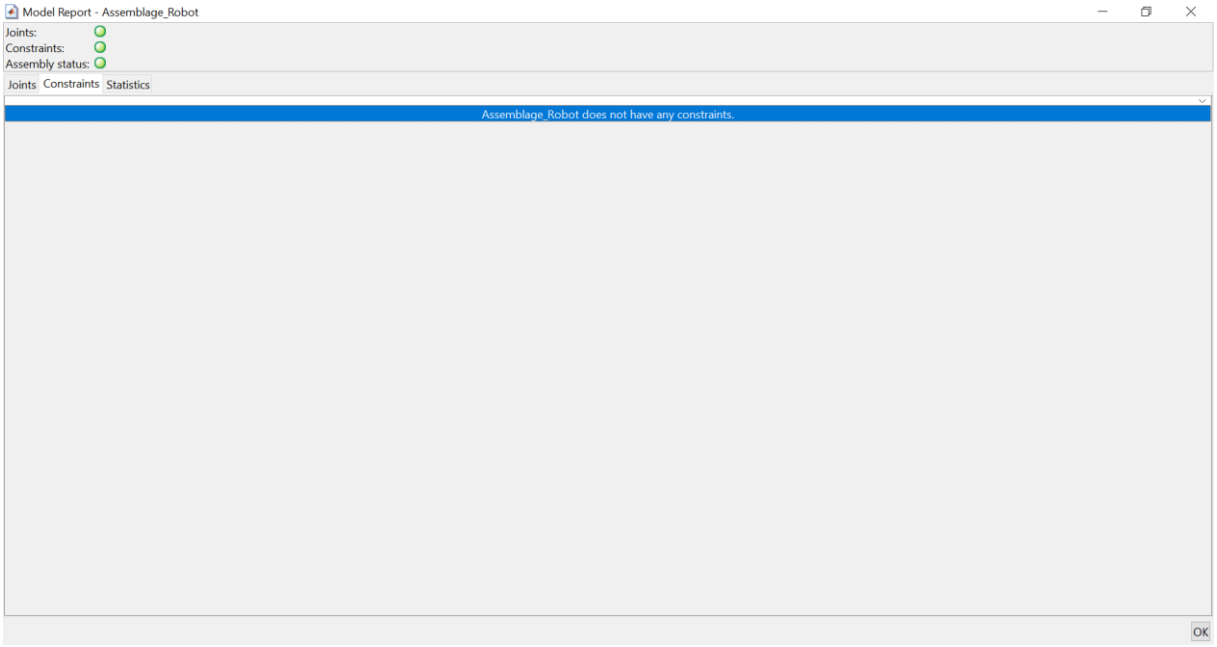
Model Report - Assemblage_Robot

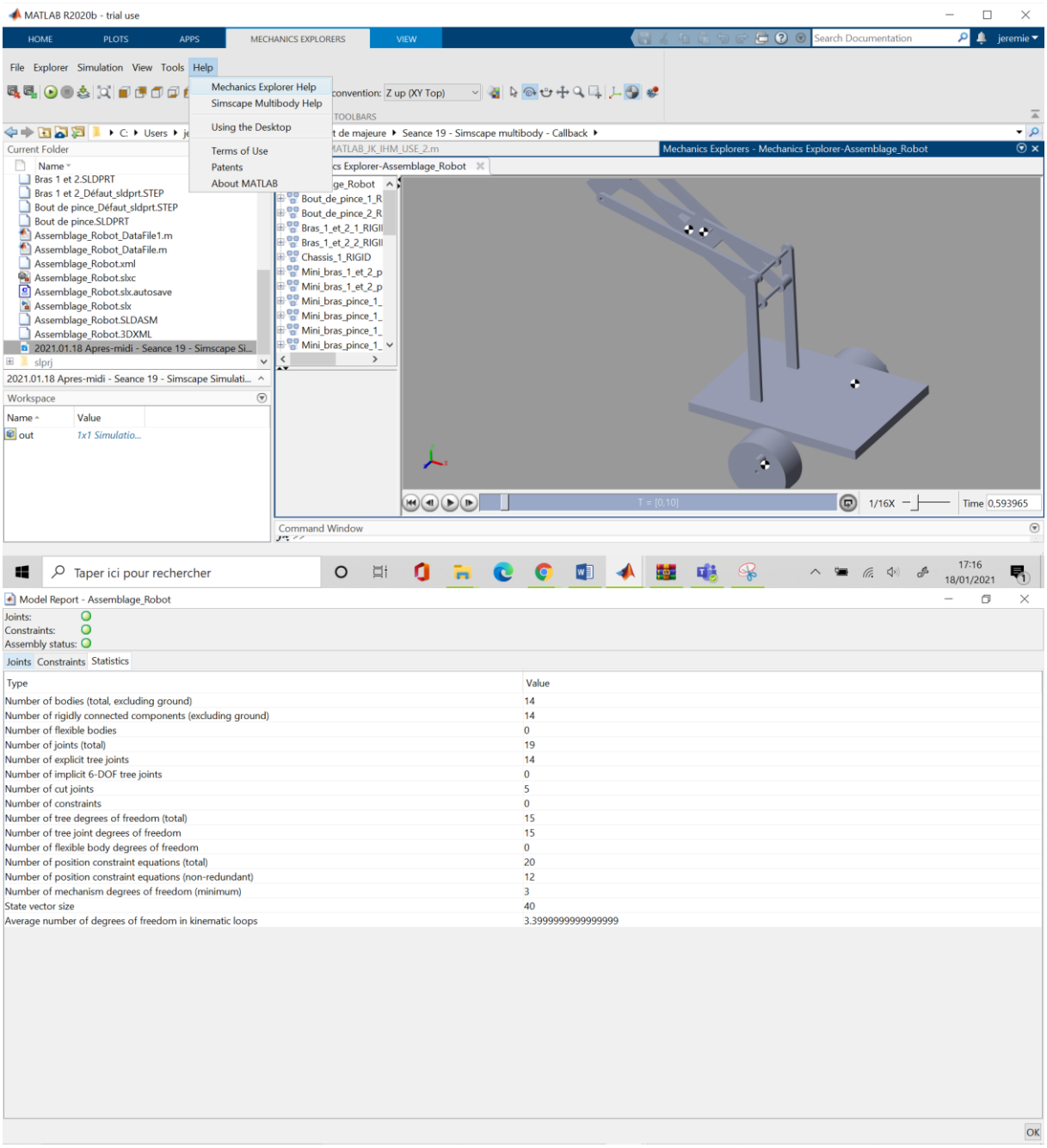
Joints:
Constraints:
Assembly status:

Joints | Constraints | Statistics

Joint	Assembled	Primitive	Position					Velocity				
			Actual	Specified	Unit	Priority	Status	Actual	Specified	Units	Priority	Status
Cylindrical	●	Pz	-9.54098e-18		m			+0		m/s		
		Rz	-4.36551		deg			+0		deg/s		
Cylindrical1	●	Pz	-8.67362e-18		m			+0		m/s		
		Rz	-175.634		deg			+0		deg/s		
Cylindrical2	●	Pz	-4.16334e-17		m			+0		m/s		
		Rz	+48.3273		deg			+0		deg/s		
Cylindrical3	●	Pz	-5.37764e-17		m			+0		m/s		
		Rz	-60.8728		deg			+0		deg/s		
Cylindrical4	●	Pz	-5.42101e-17		m			+0		m/s		
		Rz	+60.8728		deg			+0		deg/s		
Cylindrical5	●	Pz	+0	+0	m	Low	●	+0		m/s		
		Rz	+0	+0	deg	Low	●	+0		deg/s		
Revolute	●	Rz	-56.5073	-56.5073	deg	Low	●	+0		deg/s		
Revolute1	●	Rz	-4.36551	-4.36551	deg	Low	●	+0		deg/s		
Revolute10	●	Rz	+34.226	+34.226	deg	Low	●	+0		deg/s		
Revolute11	●	Rz	+67.809	+67.809	deg	Low	●	+0		deg/s		
Revolute12	●	Rz	-169.907	-169.907	deg	Low	●	+0		deg/s		
Revolute2	●	Rz	-4.36551	-4.36551	deg	Low	●	+0		deg/s		
Revolute3	●	Rz	-4.36551	-4.36551	deg	Low	●	+0		deg/s		
Revolute4	●	Rz	+4.36551	+4.36551	deg	Low	●	+0		deg/s		
Revolute5	●	Rz	+56.5073	+56.5073	deg	Low	●	+0		deg/s		
Revolute6	●	Rz	+4.36551	+4.36551	deg	Low	●	+0		deg/s		
Revolute7	●	Rz	-175.634	-175.634	deg	Low	●	+0		deg/s		
Revolute8	●	Rz	+45.3801	+45.3801	deg	Low	●	+0		deg/s		
Revolute9	●	Rz	+37.1732	+37.1732	deg	Low	●	+0		deg/s		

OK





Model Report - Assemblage_Robot

Joints:
Constraints:
Assembly status:

Joints Constraints Statistics

Type	Value
Number of bodies (total, excluding ground)	14
Number of rigidly connected components (excluding ground)	14
Number of flexible bodies	0
Number of joints (total)	19
Number of explicit tree joints	14
Number of implicit 6-DOF tree joints	0
Number of cut joints	5
Number of constraints	0
Number of tree degrees of freedom (total)	15
Number of tree joint degrees of freedom	15
Number of flexible body degrees of freedom	0
Number of position constraint equations (total)	20
Number of position constraint equations (non-redundant)	12
Number of mechanism degrees of freedom (minimum)	3
State vector size	40
Average number of degrees of freedom in kinematic loops	3.3999999999999999

OK

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Mechanics Explorer

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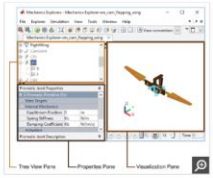
Mechanics Explorer

Visualize and explore multibody models

Description



Mechanics Explorer is a Simscape™ Multibody™ tool based on the Silicon Graphics OpenGL® API that lets you visualize and explore your multibody models. The tool comprises a visualization pane to view the model, a tree view pane to explore the model hierarchy, and a properties pane to examine the individual component parameters.

The visualization pane is interactive and allows you to manipulate the model viewpoint. You can rotate, roll, pan, and zoom the model to more clearly view its components. You can also select from a list of preset viewpoints that includes isometric, front, side, and top views. To access the view manipulation tools, use the Mechanics Explorer **View** menu.

For more information on view manipulation, see Manipulate the Visualization Viewpoint.

A **Camera Manager** tool allows you to create, edit, and delete dynamic cameras with moving viewpoints. You can interactively set the camera views at discrete playback times (`Keyframes` mode) or constrain the camera to coordinate frames in your model (`Tracking` mode). To open Camera Manager, in the Mechanics Explorer menu bar, select **Tools** > **Camera Manager**.

For more information on dynamic cameras, see Create a Dynamic Camera.

A **Video Creator** tool allows you to configure and create videos from your multibody animations. You can set the video frame rate, frame size, playback speed ratio, and file format. Video Creator captures the model animation as shown in the active visualization tile the moment you click the **Create** button. To open Video Creator, in the Mechanics Explorer menu bar, select **Tools** > **Video Creator**.

For more information on video creation, see Create a Model Animation Video.

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