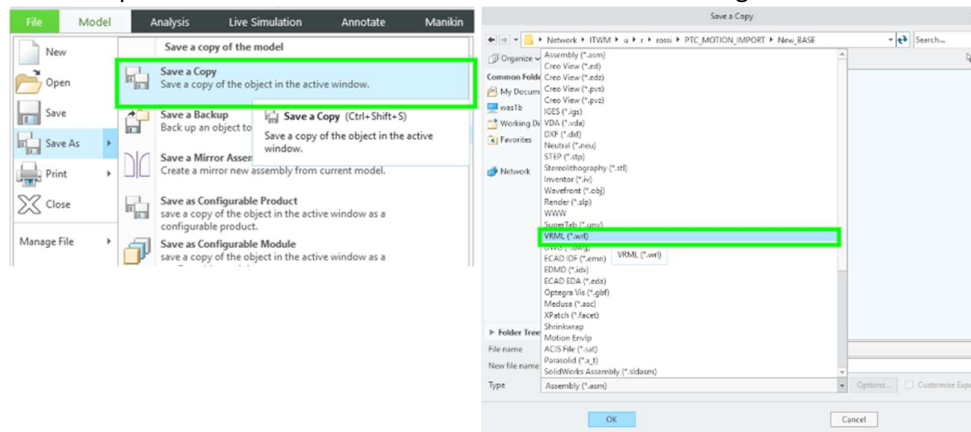


PTC Creo Parametric: Import motion in IPS (.fra file)

PTC Creo export of geometry and motions

1. Export the geometry in the nominal default conditions as VRML files. The import script requires the current state of the mechanism to be the same as the one exported. This step has to be performed once and before the rest of simulation changes these coordinates.



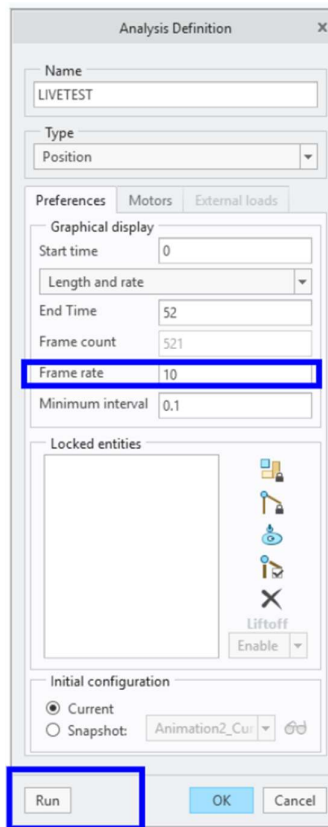
If a motion simulation was already performed then go to step 3.

2. Switch to Applications-Animation or Application-Mechanism

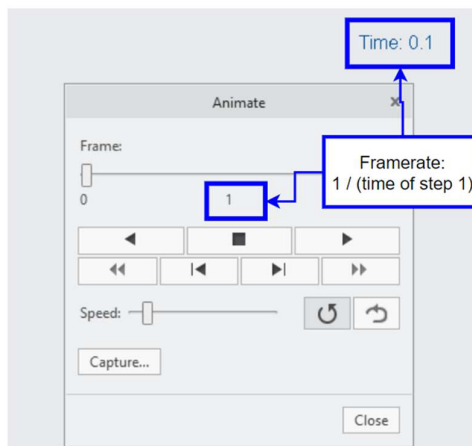


Setup the motion simulation.

And run the analysis, please take note of the framerate used:



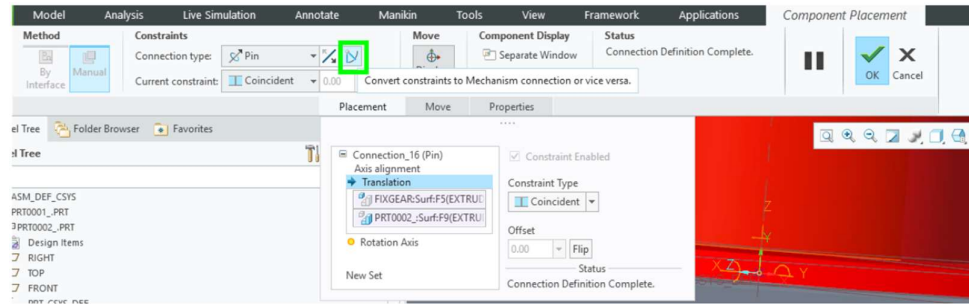
If simulation has been already been performed then please take note of the time between the different steps to determine the timestep:



NOTE:

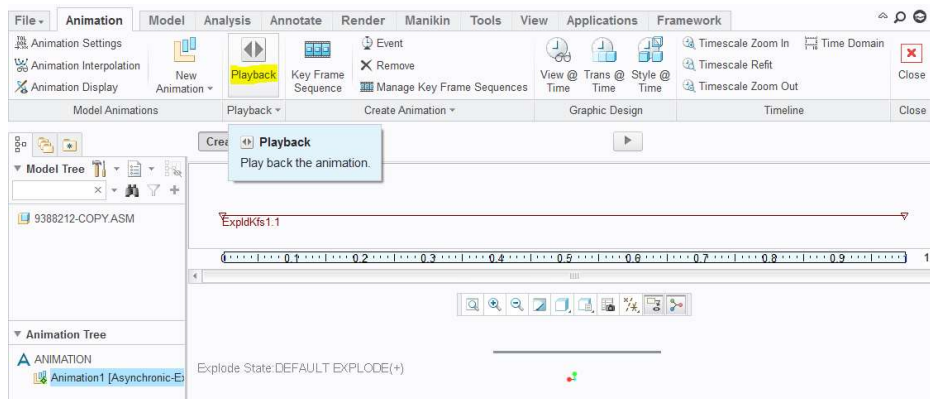
In order to be able to use servomotors for the setup of the mechanism analysis the Placement constraints need to be converted to the Mechanism connections for pins, cylinder

etch. Further options for gears are available in the relative Mechanism tab.

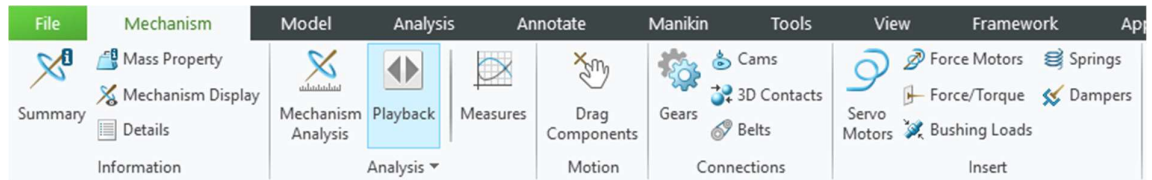


3. Select Playback

The command is available for both “Application->Mechanism”

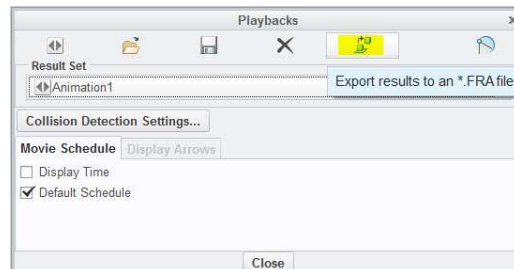


and “Application->Animation”:



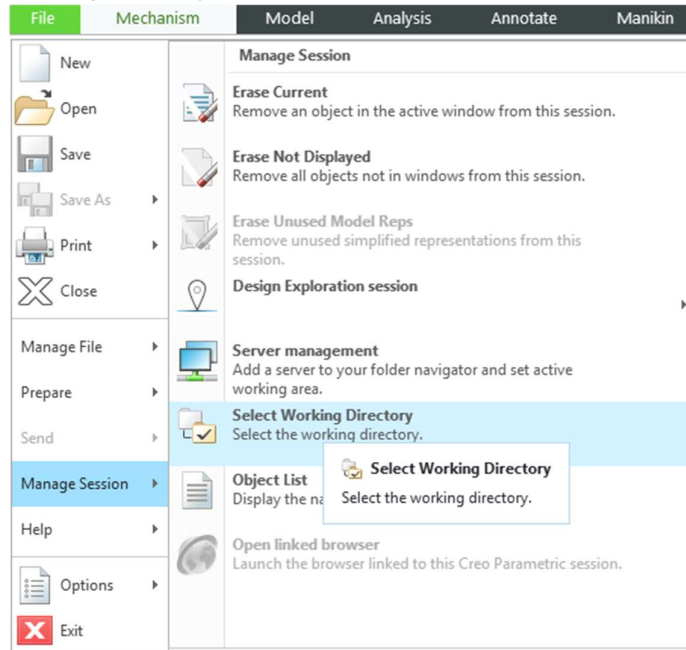
4. Export animation to .fra file:

Select the correct animation or analysis from the drop down menu and save it as a *.fra file with the same name as the motion simulation.



NOTE:

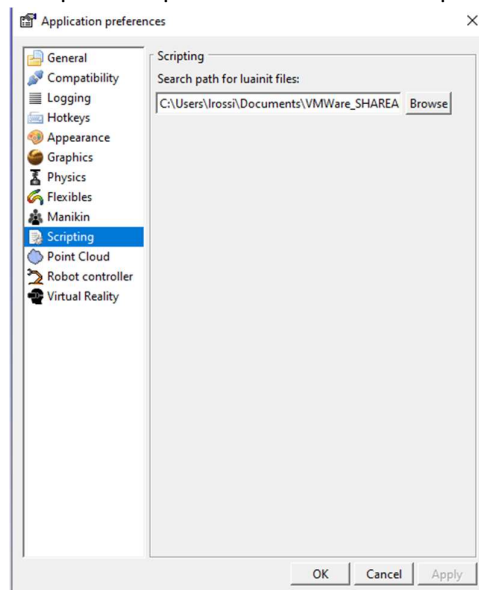
The *.fra file will be generated inside the working directory. You can setup or locate the working directory from the file menu:



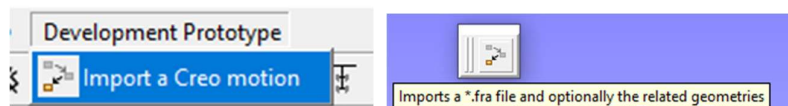
IPS import of geometry and motions from PTC Creo

Now it is possible to import both the geometry and motion:

1. Take note of the path of the PTC Creo import plugin.
2. Setup the script Menu for PTC Creo import (previous path):



3. Execute the import import from toolbar or icon:



4. Select the *.fra file exported by PTC Creo

5. The plugin will ask for the units used in the creation of the model.
6. The plugin will also ask the framerate that was used during the creation of the motion (see point before)
7. Select whether to import also the geometry wrl exported at step 1. Select **only the assembly** file.

Multiple motions may be imported after the first motion and geometries have been imported. In this case the geometry will not be imported but only the motions. The new motions will need to be matched manually. Please note that this approach is valid only if no change (or very minor) to the geometry is present if the number or type of components is changed the motions id may change and the process may need to be repeated from step 1 of PTC creo.