

# Saving solidworks files to 3ds -format with 3ds max

## 1. Handling a SolidWorks assembly for saving in .3ds format.

- I have a completed assembly made from an excavator drive wheel. The issue is that the assembly's origin is in the wrong place, and the coordinate system is incorrect. Let's make corrections to the assembly file. You can correct the origin in another way if you prefer. However, in these instructions, I will show an example of how to capture essential information from the part's properties. This way, we can address two important aspects at the same time. Please proceed with your example or instructions, and I'll assist accordingly.

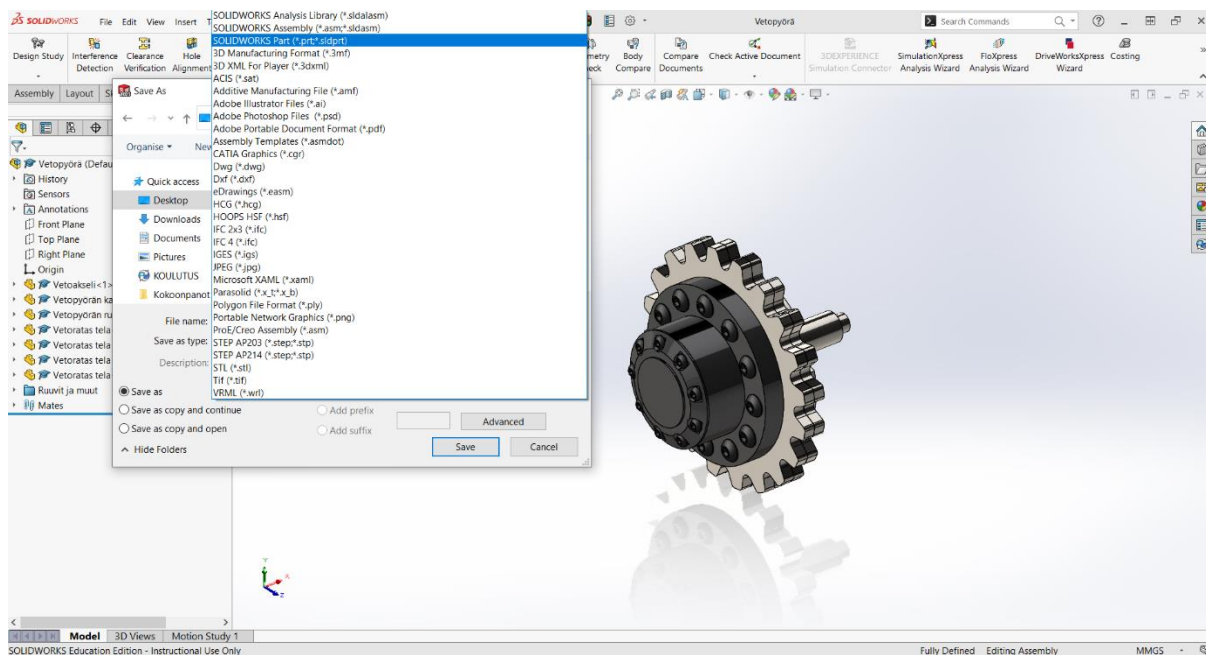


Image 1 Saving the assembly in SolidWorks in (.part) format.

- In practice, you will need one software for transferring files; this method does not cause any issues in handling files between SolidWorks and Mevea. This also allows for importing graphics colors directly from SolidWorks into Mevea.
- If you have an object that needs to be rotated around an axis, you must always choose the Z-axis in Mevea.

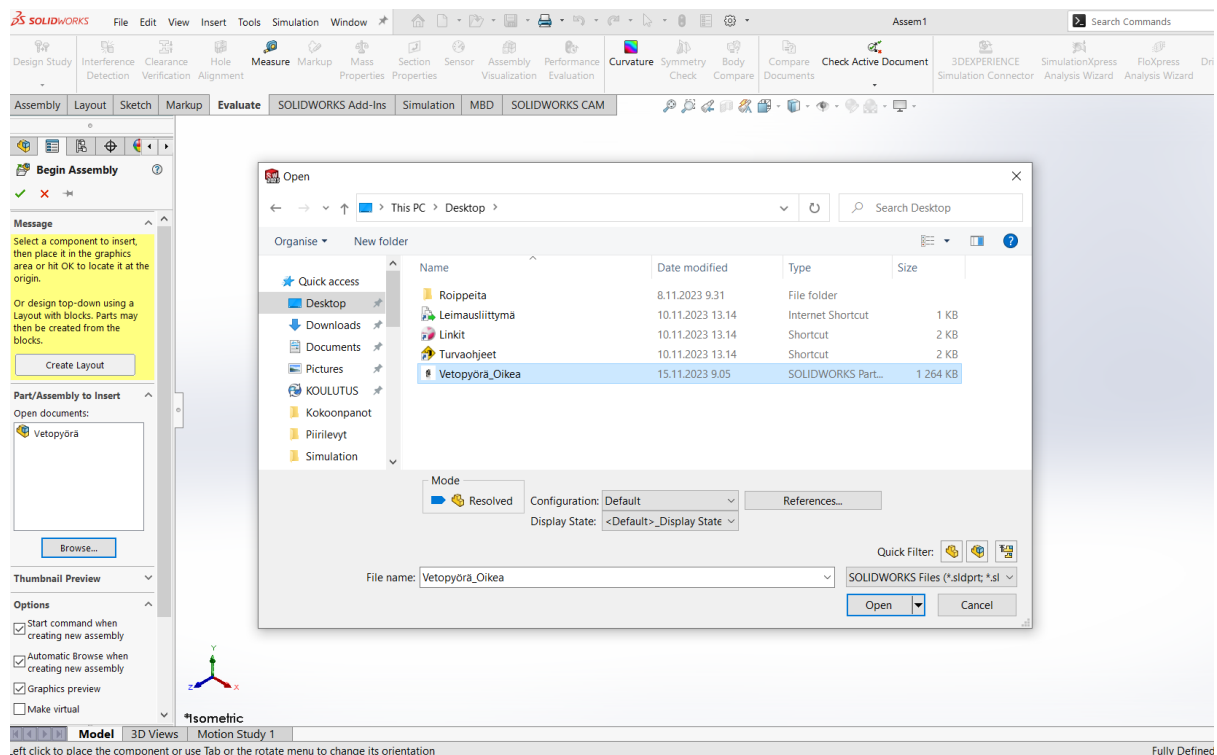


Image 2 Import the saved .part file into the assembly.

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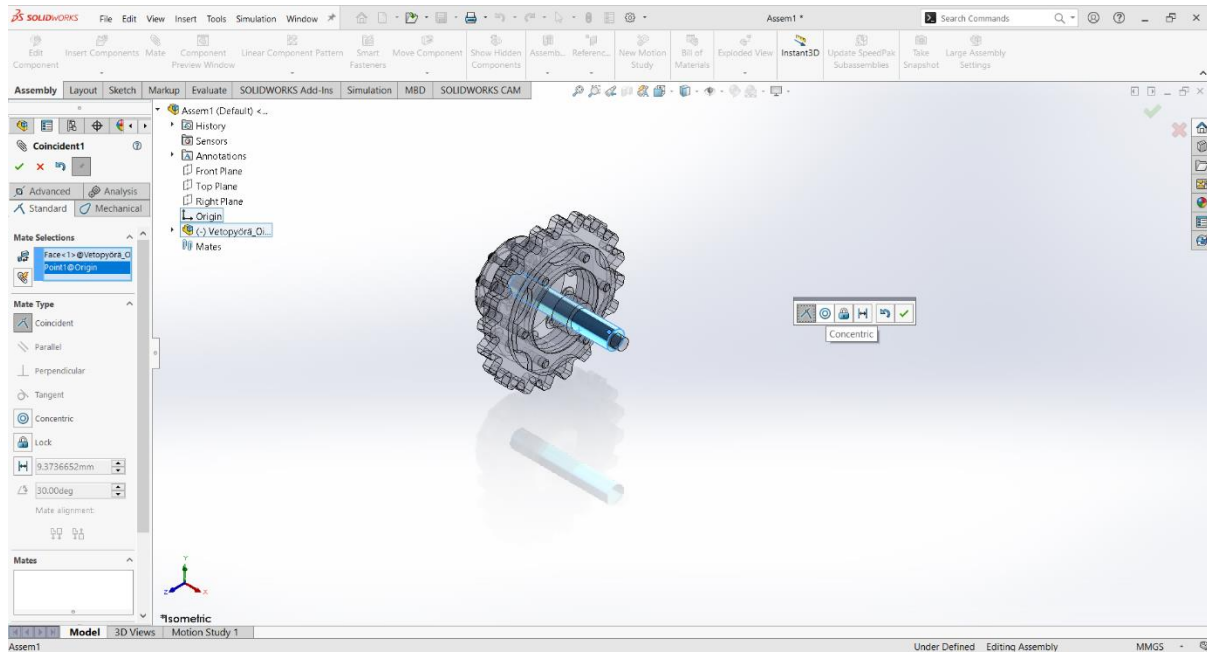


Image 3 Adjust the coordinate system in assembly mode.

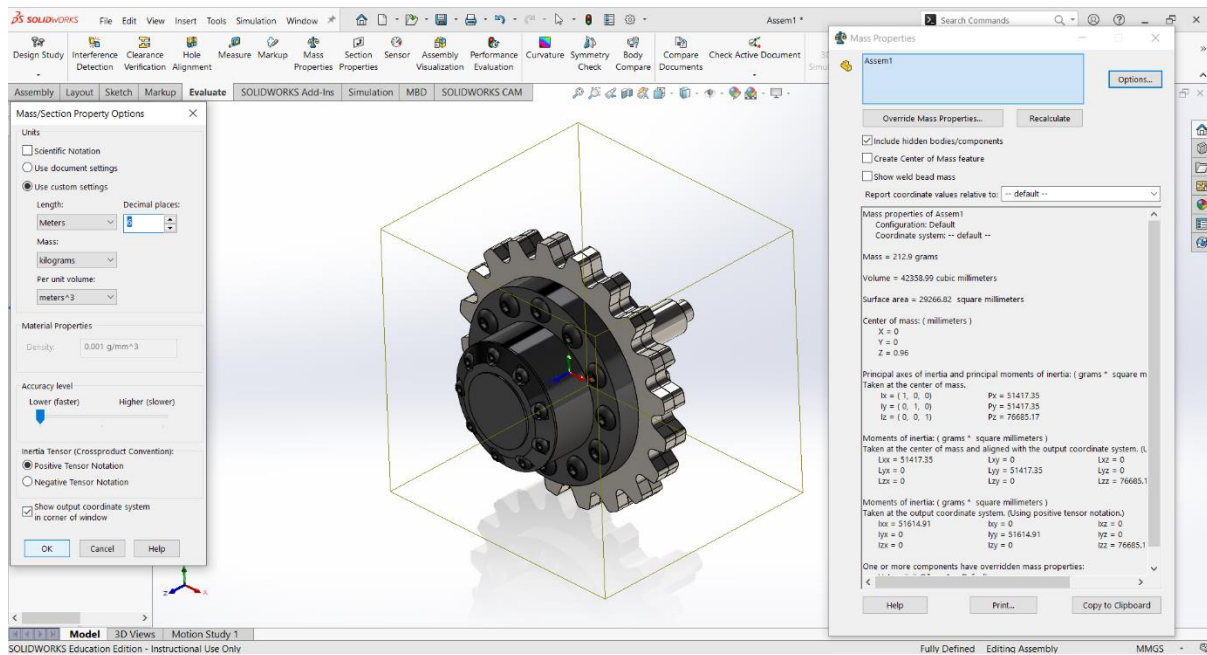


Image 4 After correcting the coordinate system, you can examine the properties of the part using the "mass properties" function.

- The idea is to capture the part's data field for use in Mevea so that the center of mass and moments of inertia would be accurately calculated.

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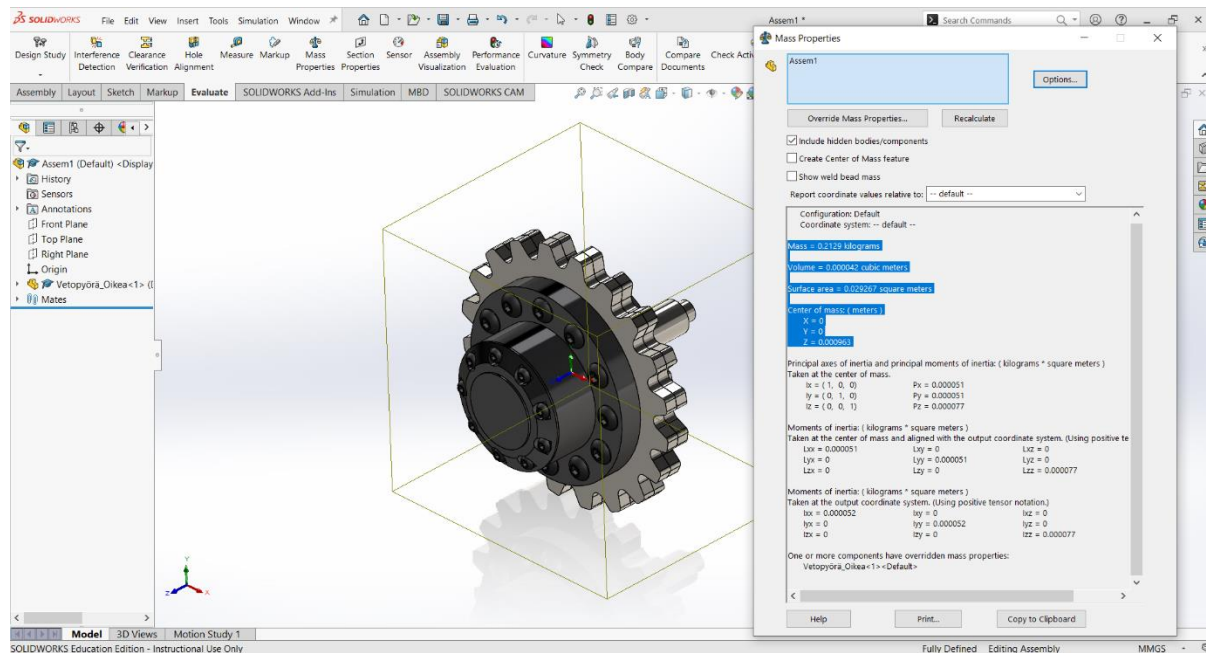


Image 5 Capture the mass, center of mass, and inertia information of the part.

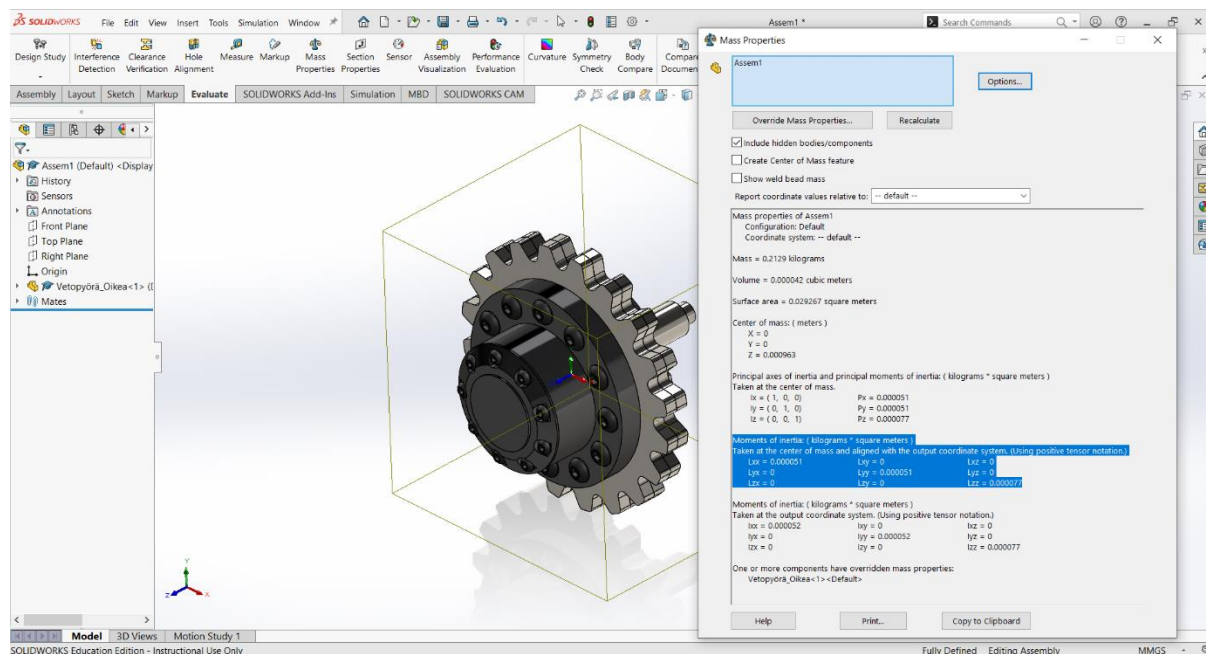
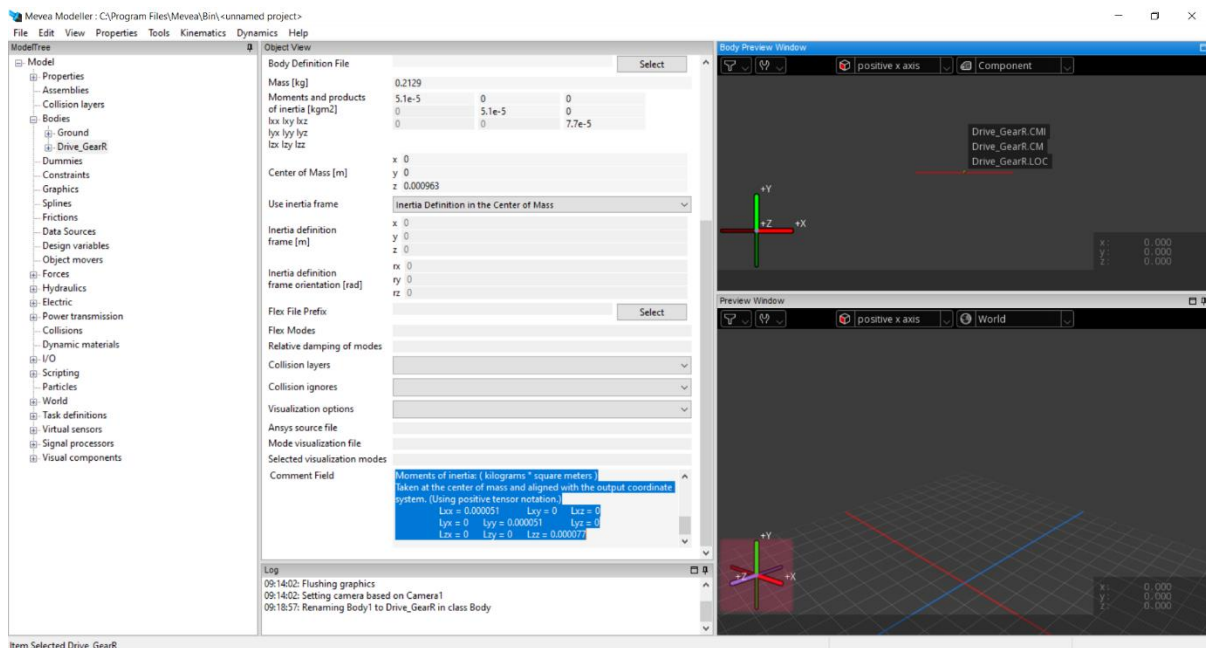


Image 6 Capture the mass, center of mass, and inertia information of the part.

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Kuva 7 Paste the copied data fields into the bodies' comment field for easy reference later on.

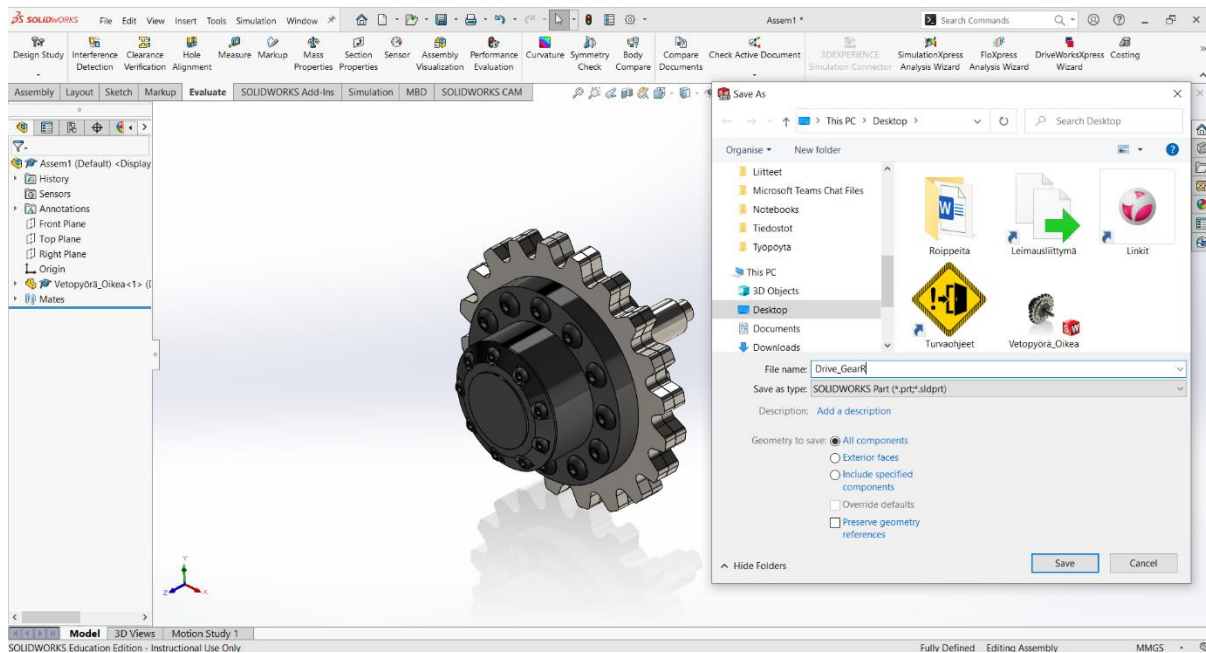


Image 8 Save the corrected coordinate system as a part within the assembly.



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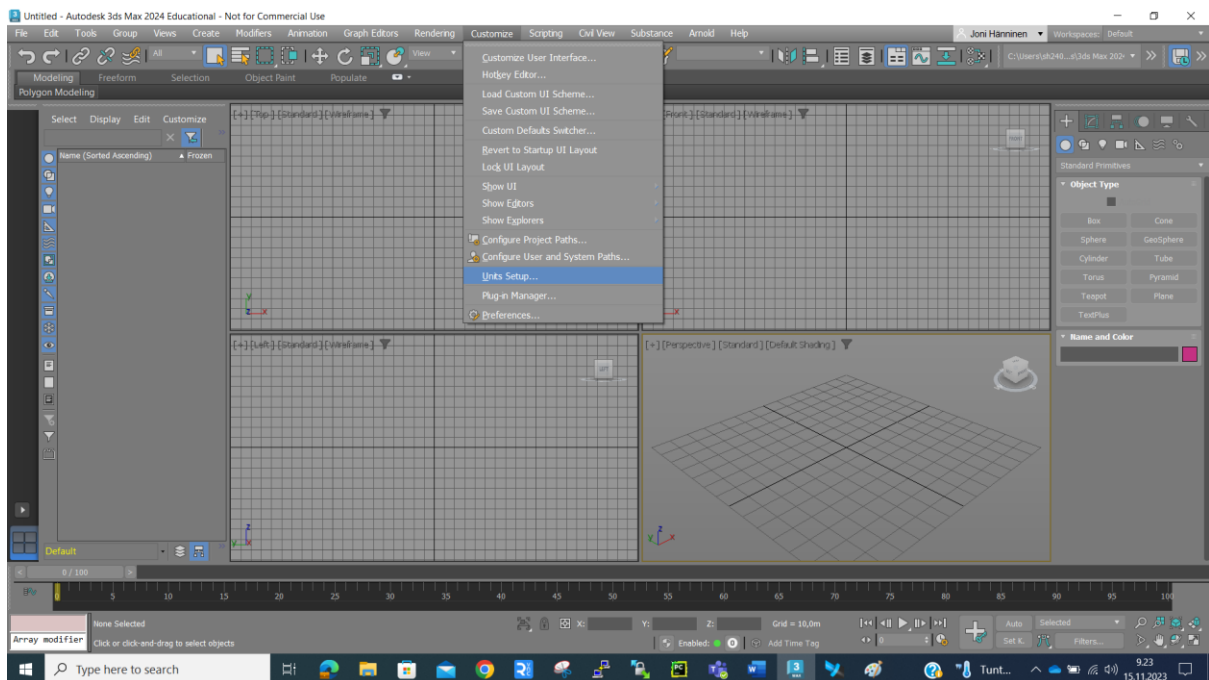


Image 9 Select "customize" and "unit setup" from the 3DS Max tab.

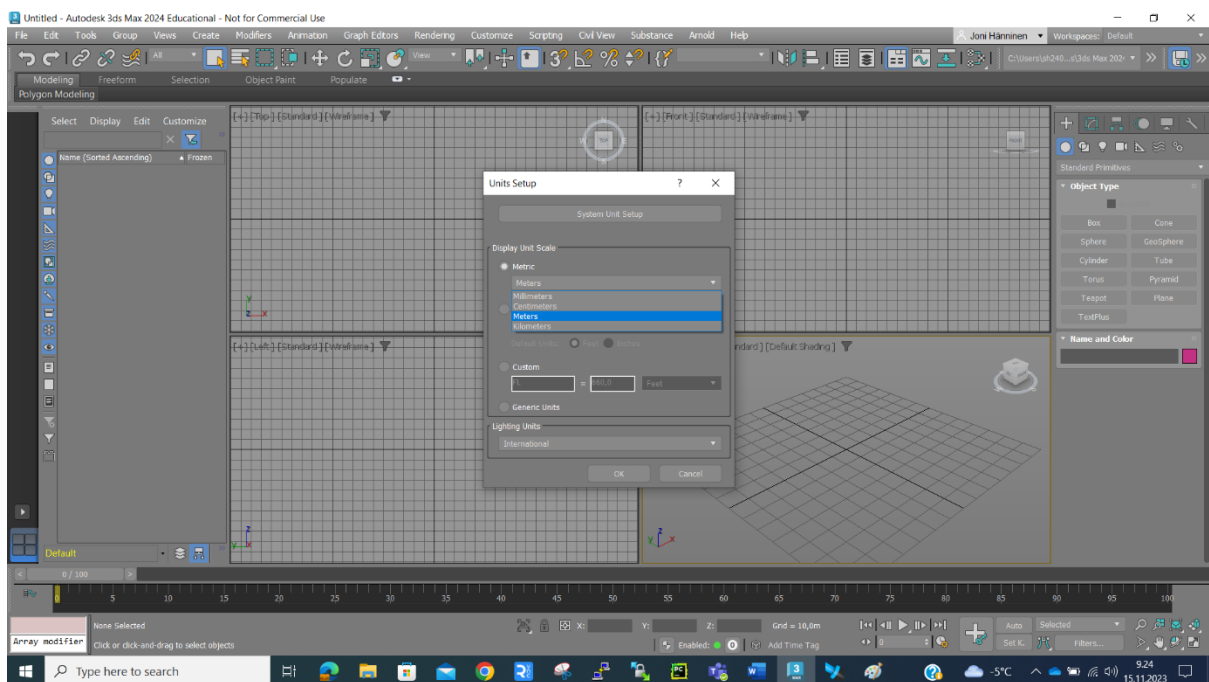


Image 10 Change the units to meters.

- Mevea handles units in meters, so the file format must also be processed in the same units to avoid scaling errors.

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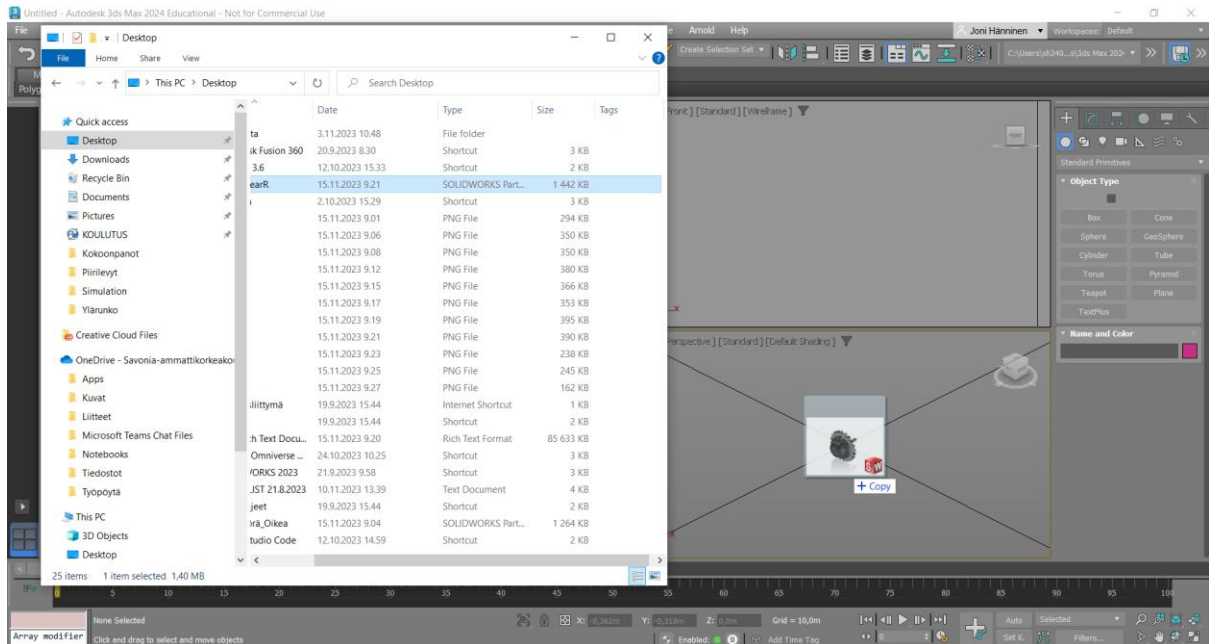


Image 11 Drag the .part file into the 3ds Max perspective view.

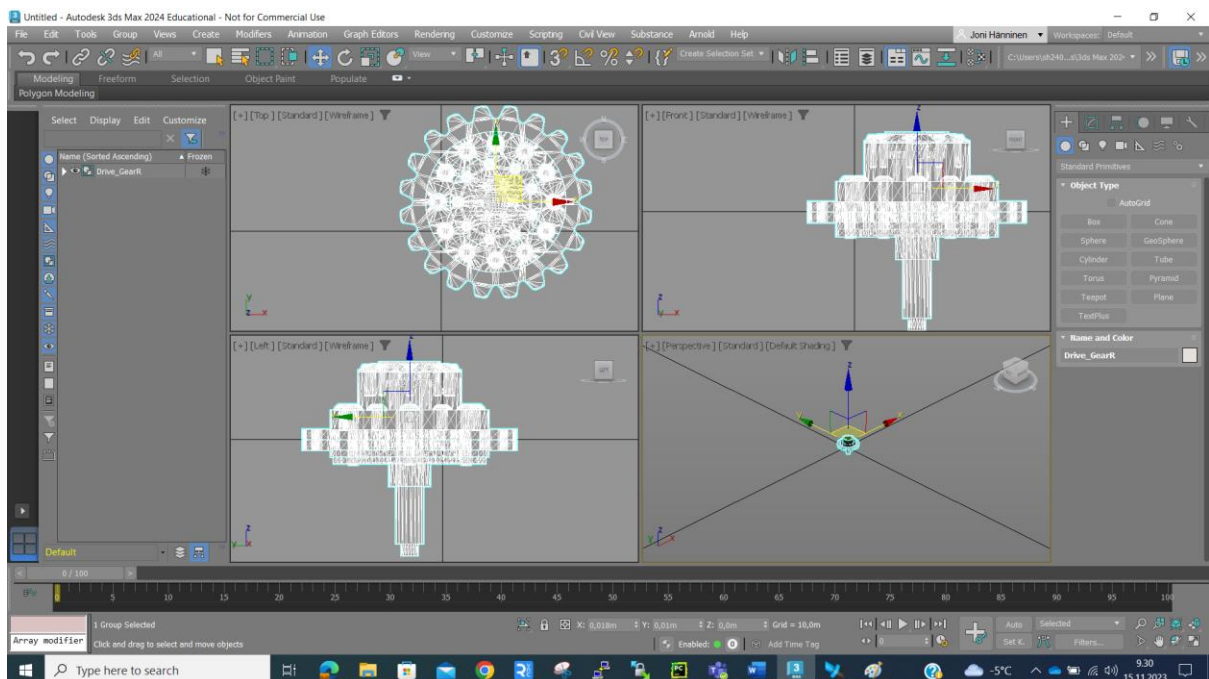


Image 12 It should look like this.

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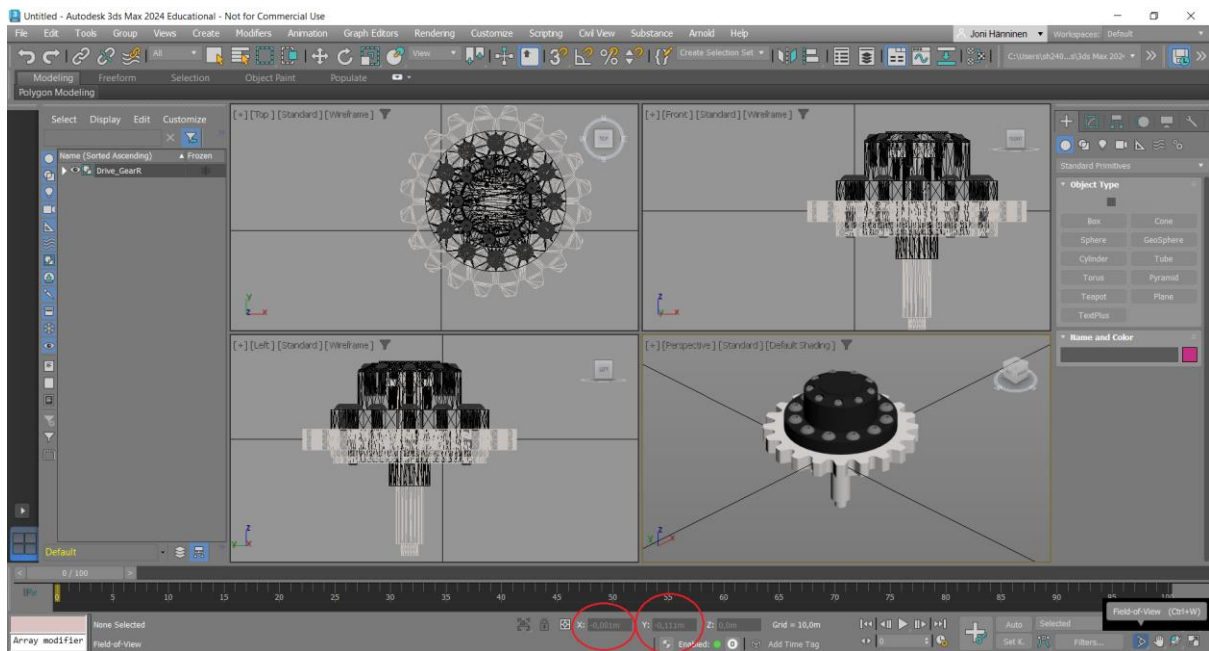


Image 13 By using the "Field of View" button, you can zoom in on small objects as needed.

- The X and Y axes don't seem to be at the origin; the part goes to where you click it with the mouse in relation to the origin.

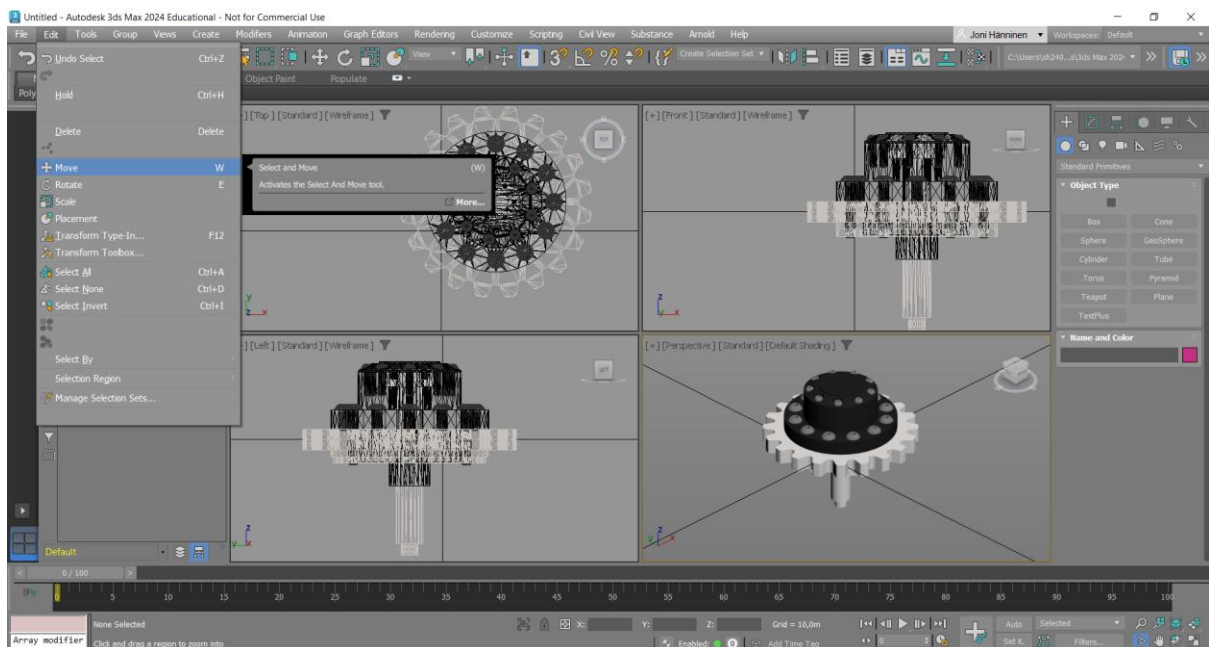


Image 14 From the "Edit" tab or by pressing the W key, you can activate the move function.



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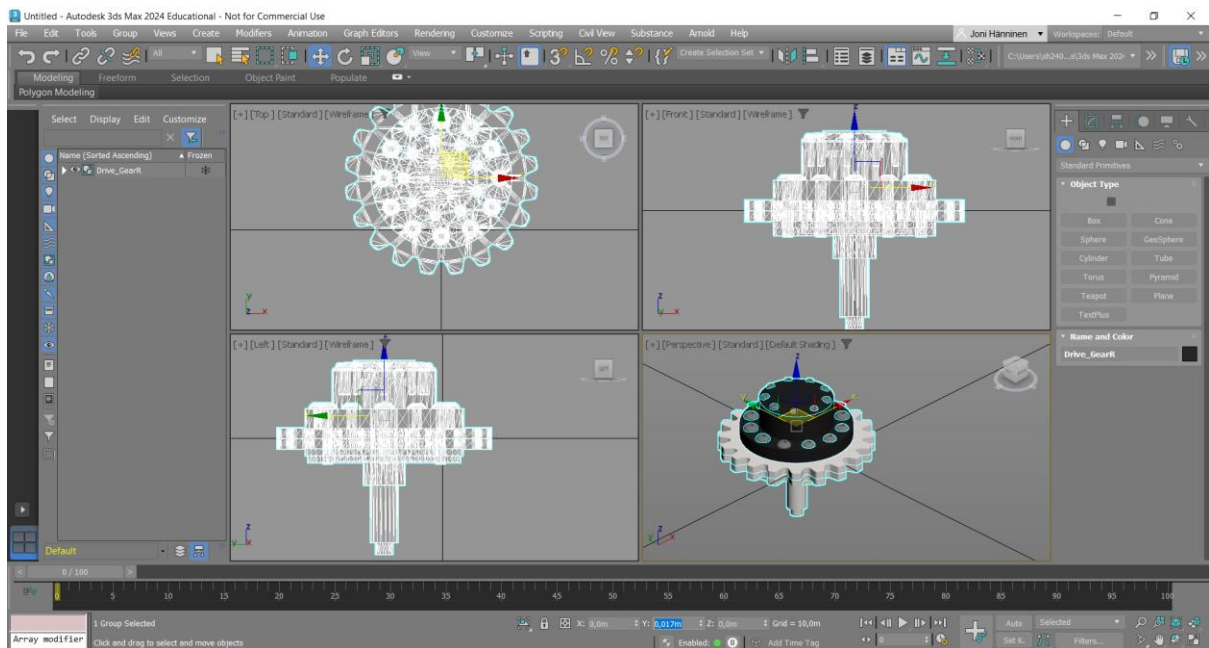


Image 15 Correct the part's coordinate fields for X, Y, and Z to "zero."

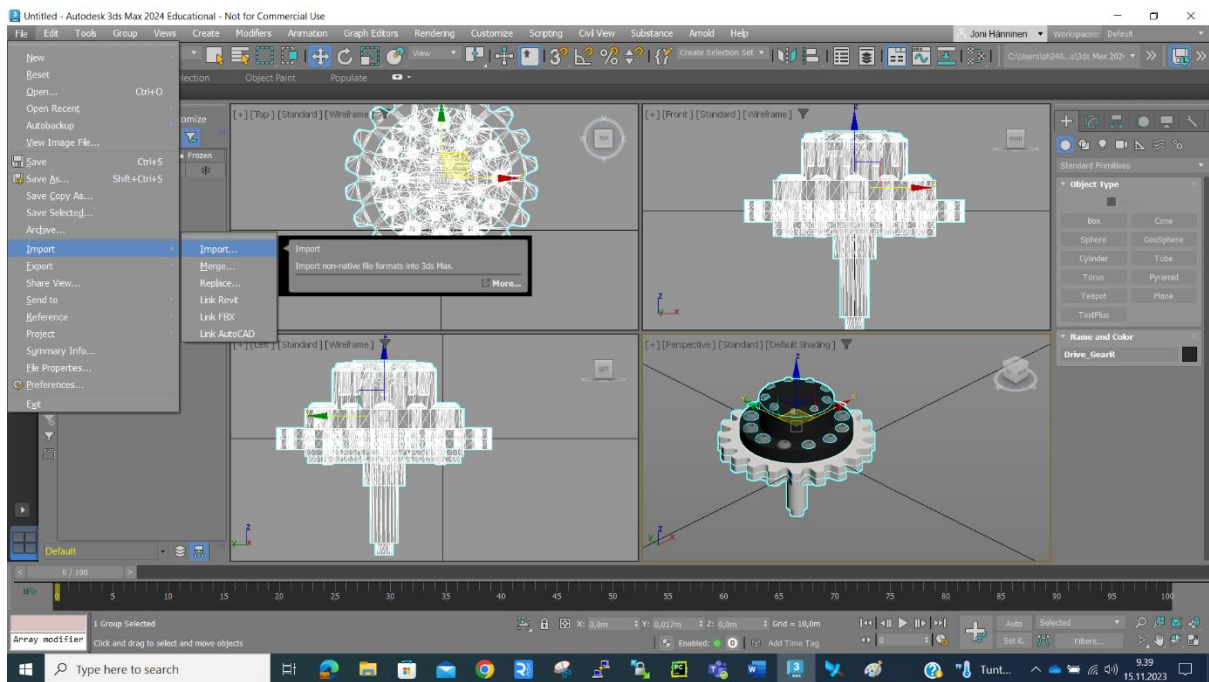


Image 16 Save the object in the correct file format using the Import function.

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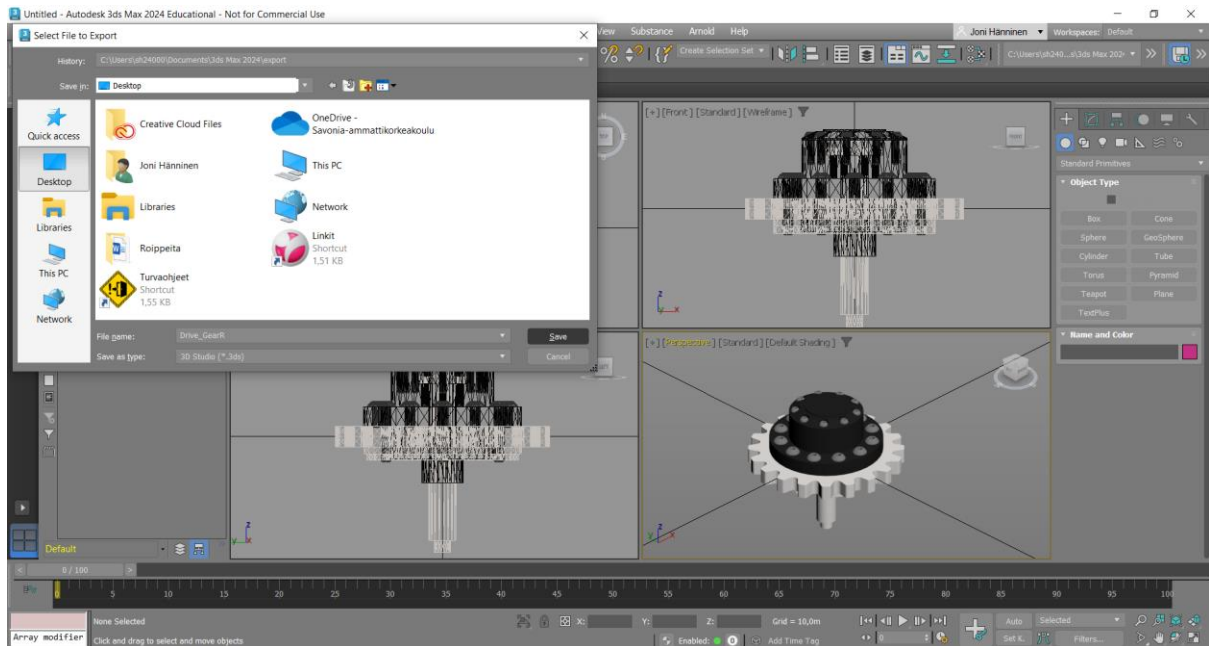


Image 17 Name the file and save it in the (.3ds) file format.

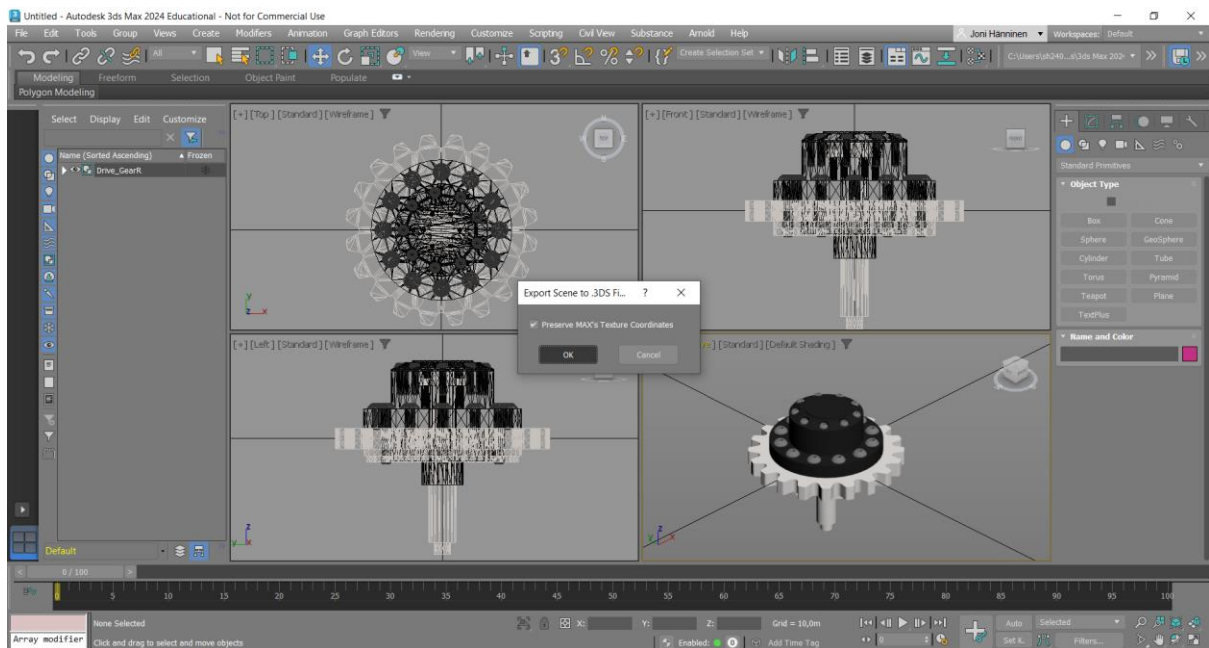


Image 18 Press "OK."

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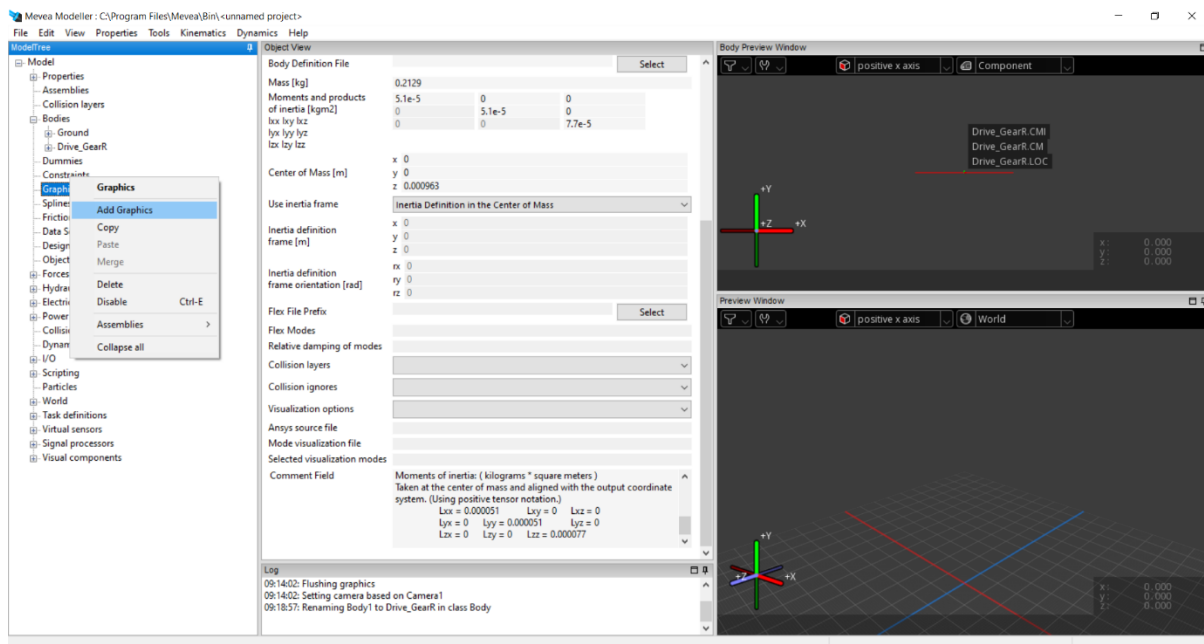


Image 19 Create a new graphic in Mevea.

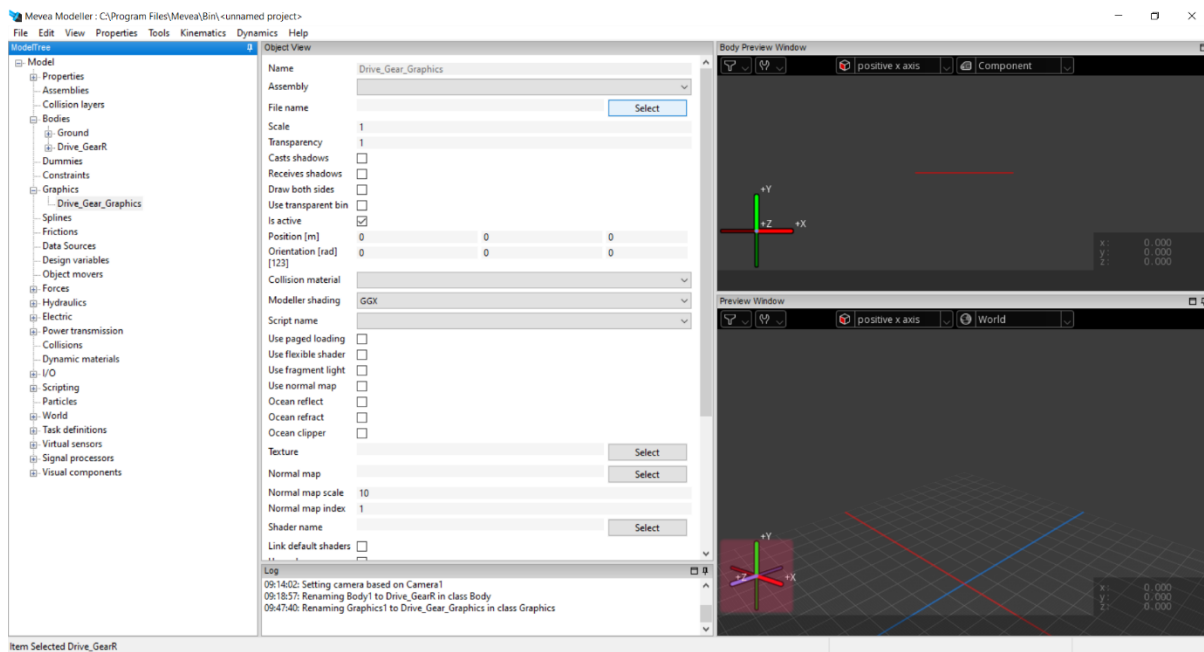


Image 20 Select the file for the graphic using the "Select" button and locate the saved file (.3ds).

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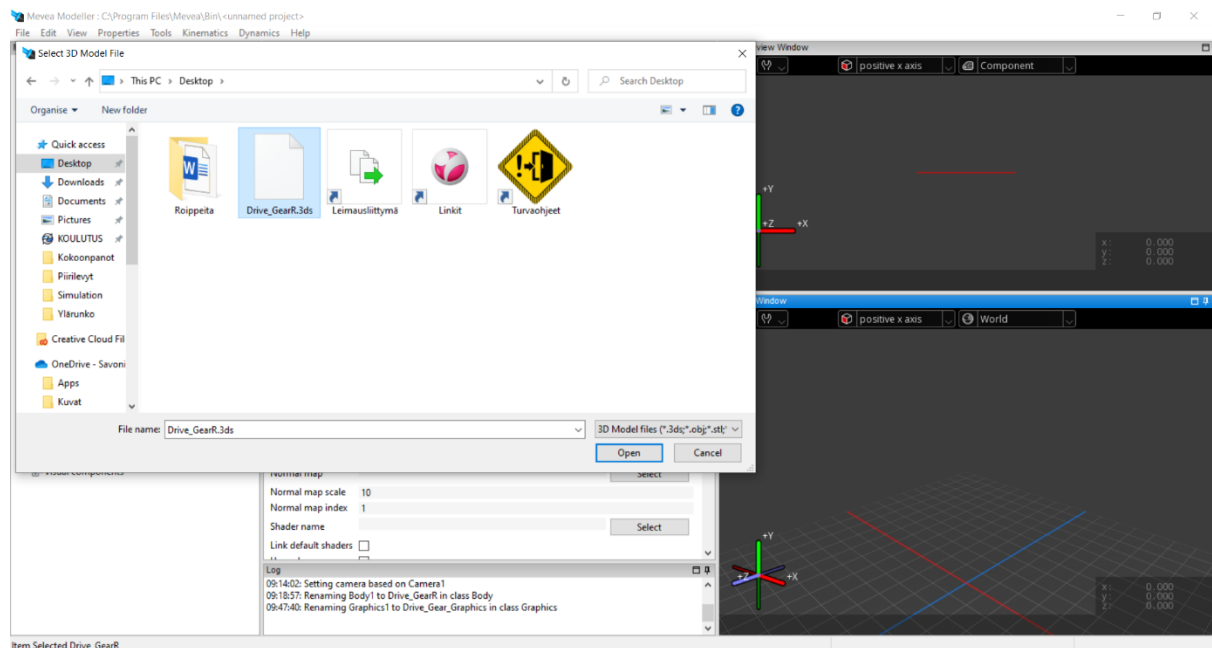


Image 21 Choose the .3ds format.

- NOTE! Do not include any ä, ö, å, or special characters in the file name, as Mevea may not be able to load the object, and it won't work.
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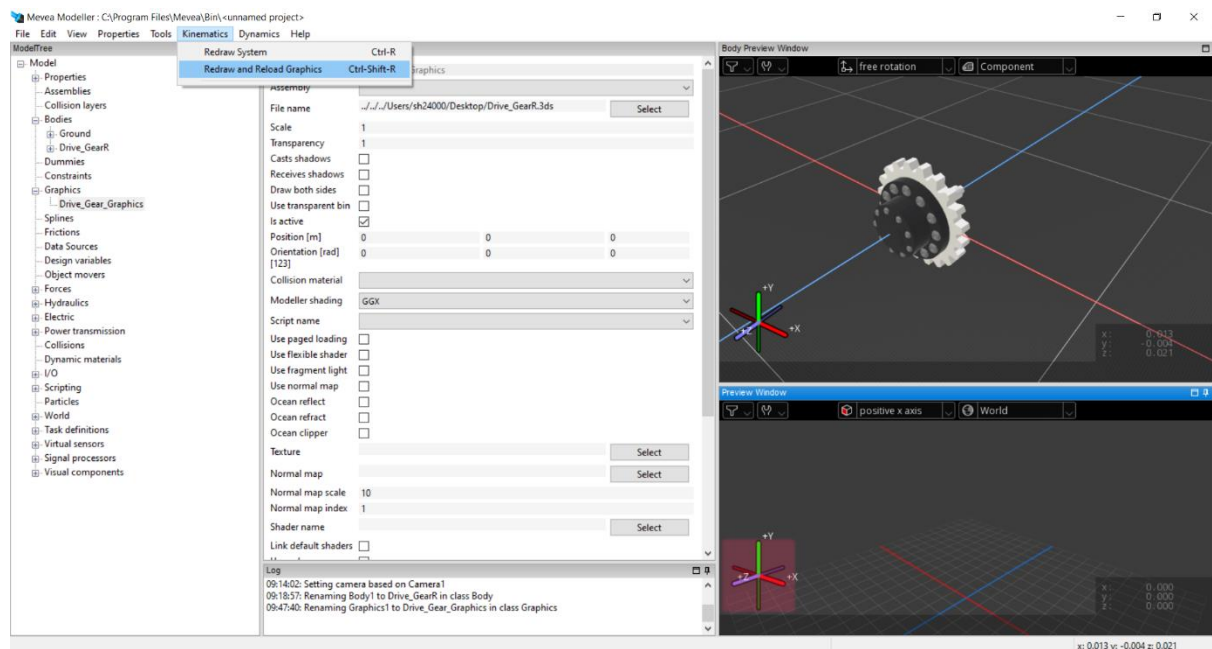


Image 22 "Ctrl+Shift+R" refreshes the screen, after which the graphic should be visible. The coordinate system and origin should appear correctly.

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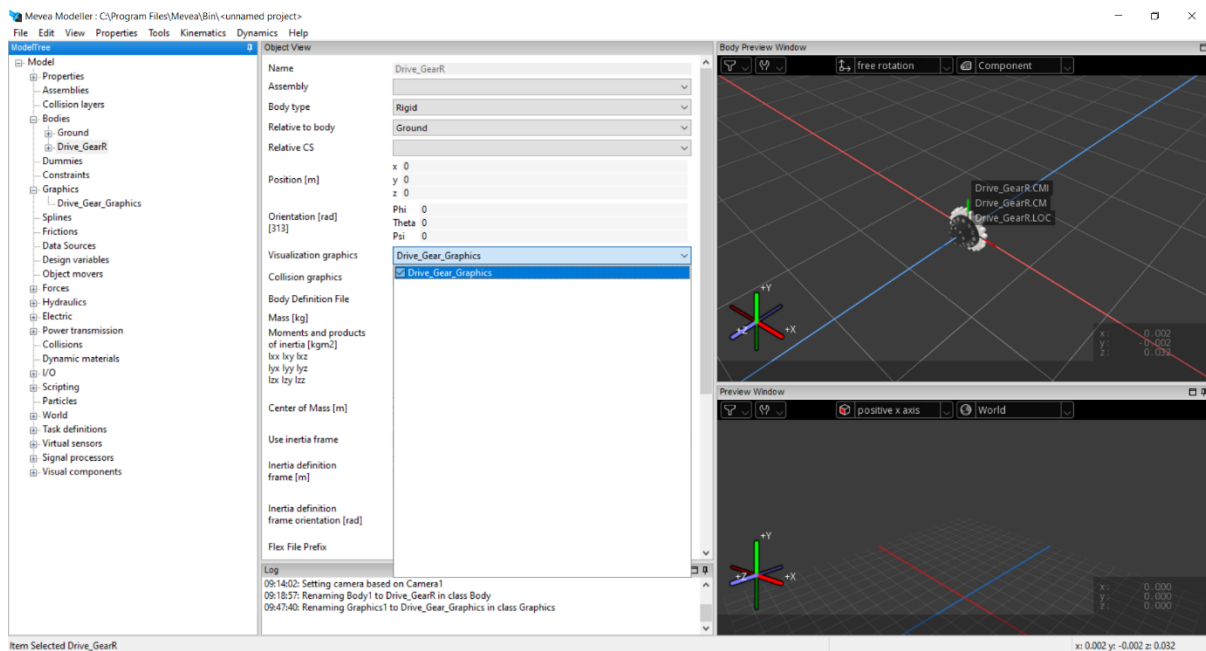


Image 23 Select the graphic created for the desired part.

- Important note! If you create a rotating object in Mevea, the Z-axis is the only one that allows rotation around the axis. Make sure you have designed your part correctly, or else you may encounter issues in the simulation.
- You can also rotate the part within Mevea, but you need to consider the changes in the part's center of mass and moments of inertia as well.