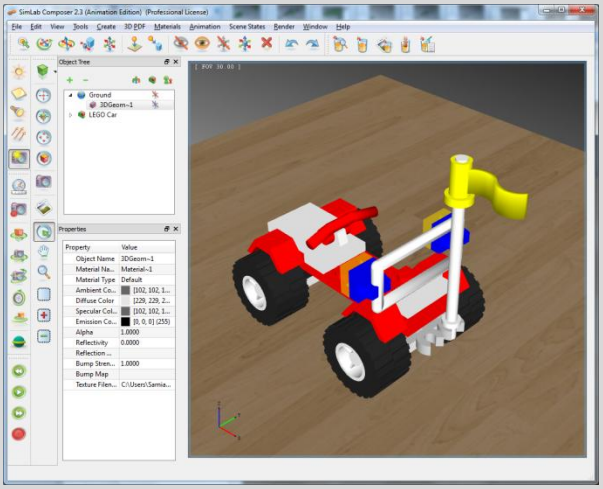
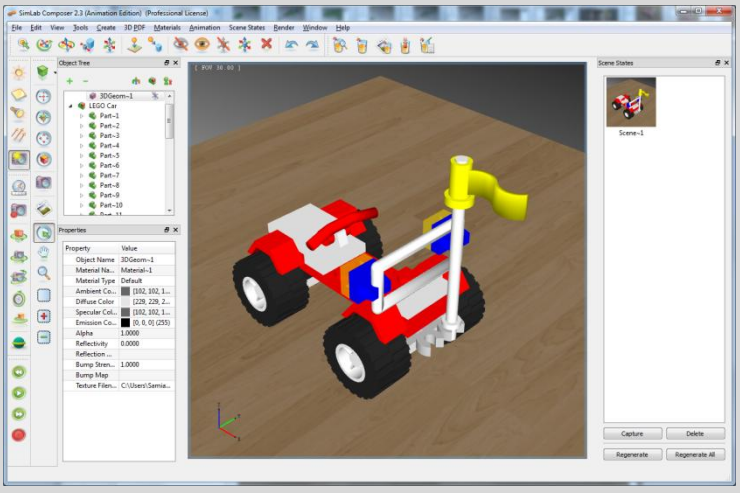
Tutorial: Creating Assembly Manual

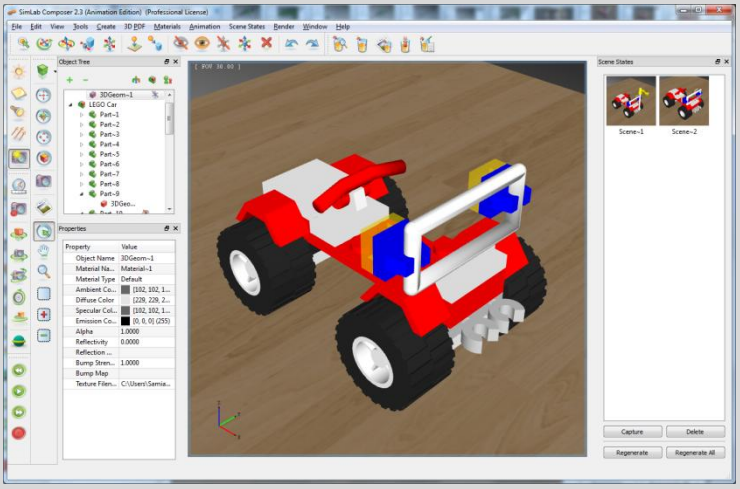
Scene States in SimLab Composer 2.3 can be used to show assembly steps of a product. In this tutorial we are going to use scene states to show the assembly steps of a LEGO car. The easiest way to show assembly steps is to start with a fully assembled model, to hide parts of the model while capturing scene states, then to reverse the order of captured states as shown in this tutorial.



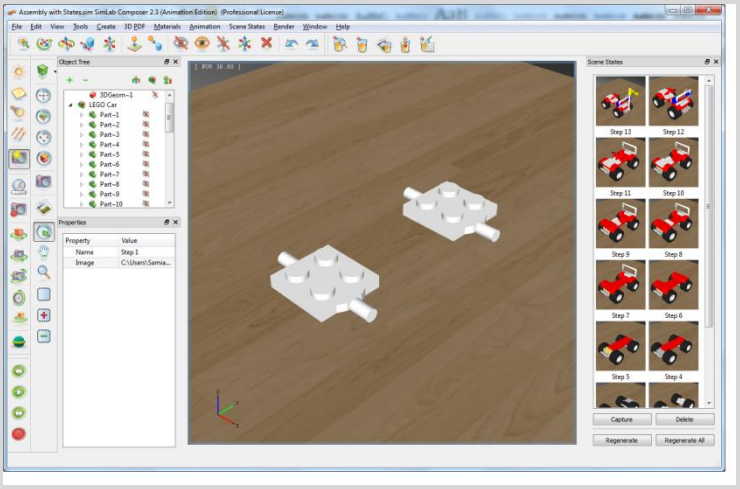
1. Start by creating a scene with a default 2D ground.
2. Click **File** -> **Import** or press (Ctrl + I) to import geometry. The Import **Geometry window** will open where you can browse for a 3D model file. Import the fully assembled model.
3. By default the model will be imported to the center of the scene, and you can zoom in using the mouse or by clicking **Zoom To Object** button, in the Main Toolbar.
4. From the **Scene States** menu select **Manage Scene States**, where its window will open on the right of the application's window. Click the **Capture** button in the **Scene States** window, the state of the model will be captured and stored in the **Scene States** window.



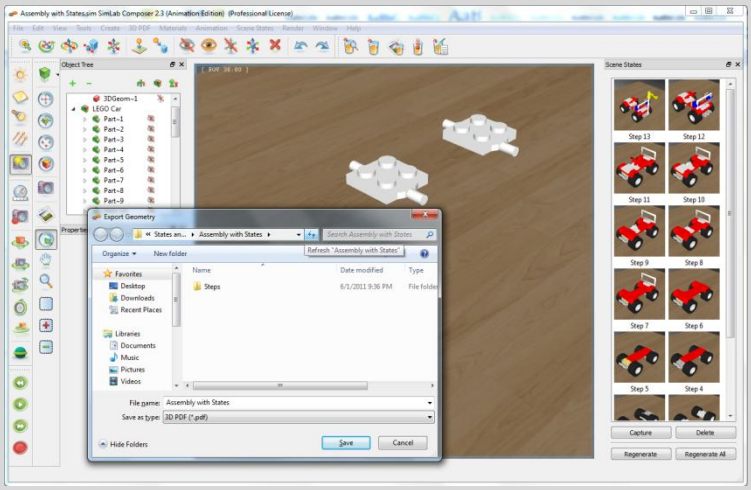
5. Select both the yellow flag and its pole and click the **Hide** button in the **Main Toolbar**, or just press the **H** keyboard button, and then click the **Capture** button.



6. Turn the car around and continue hiding the pieces one by one, and continue capturing the different states until the last two pieces.
7. Rename the states backwards form Step 1 until Step 13.

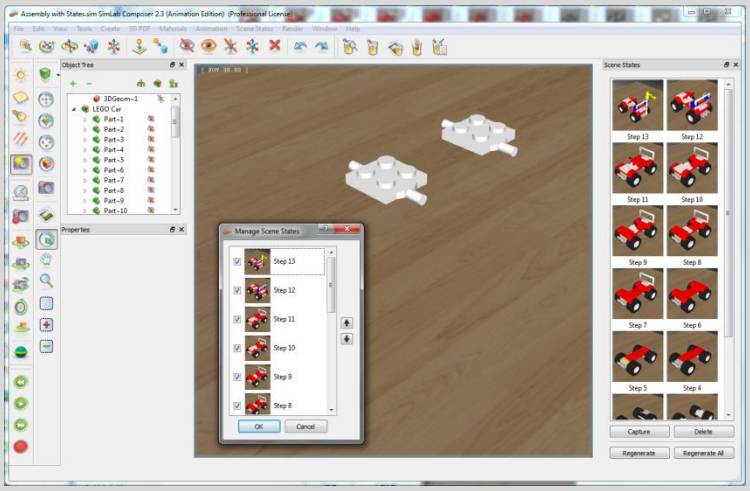


8. Now we are going to output the assembly as a PDF file. Go to File -> Export , and select PDF from the Save as type.

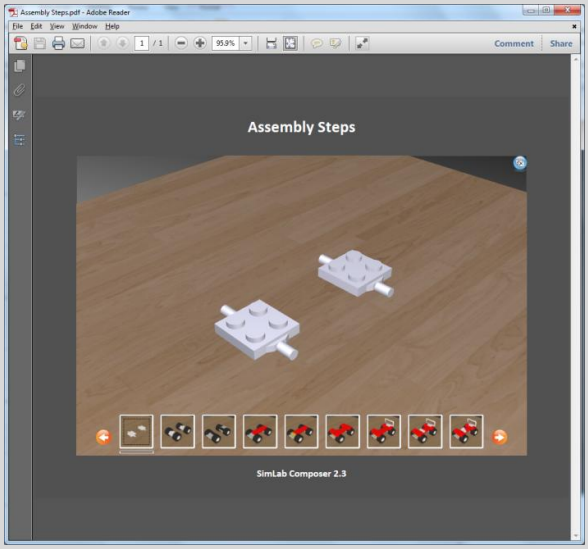


9. After choosing the output file name, the **Manage Scene States** window will appear to select the order of the states before exporting them to the PDF file. Select the states one by one, using the up and down arrows

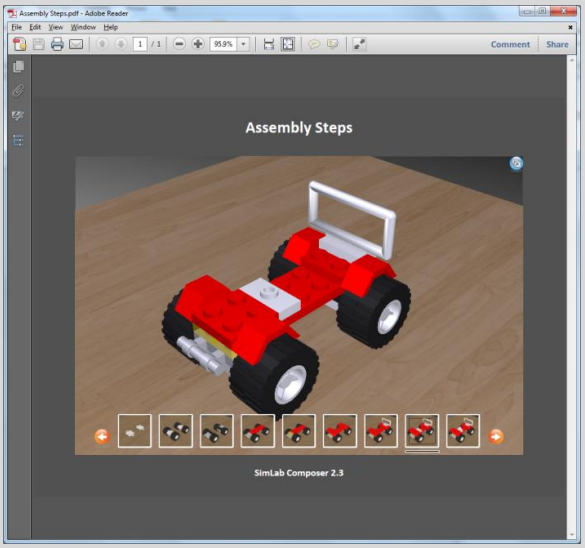
reorder them then click Ok. The Exporting Geometry progress bar will appear for a short period depending on the size of the file. The PDF file is ready for sharing.



10. The assembly manual is ready for distribution.



11. Using the 3D PDF file is simple, just click on any of the states at the bottom of the PDF document and it will appear in the 3D area.



12. Another useful way of sharing the model is by exporting it to iPad. This can be done by clicking **File** -> **Export to iPad**, and the **iPad export** window will appear. The file extension for the iPad files is *.zim, input a name for the file, click save.

13. The generated zim file can be opened with SimLab CAD Viewer