Creating Custom Books as 3D Objects for Oculus Home

This template can be used to create your own custom books that can be placed in your Oculus Home.

I have created several custom books using this template, and they're available for download (along with other various objects I've converted and resized) at: http://cscottdavis.com/Oculus3D.

Disclaimer

I actually know very little about how to create and manipulate 3D objects. I have basically had to figure out and reverse-engineer how to do various things, often through trial-and-error, and there are almost certainly better ways to do some of these things than the way I'm doing them here.

I have also built on information and existing files from other people, and I have tried where possible, to give credit and provide links.

Please also note that these objects will be *static*, because I don't know how to enable dynamic physics (or if it's even possible for imported objects). I've searched in vain, but haven't been able to find very much information on how physics works in Oculus Home objects. As a result, the books that you create will *not* behave like the built-in book objects (such as the Oculus and Farlands books). They are not affected by gravity and can not be dropped or thrown.

If anyone knows (or discovers) how to make an object *dynamic*, please let me know and I'll update this information, along with credit and links.

Files and Tools

In order to create a custom book, you will need the template files (included here), image files for the front, back, and spine of the book you want to create, some kind of image editing software (Photoshop, Paint.NET, GIMP, etc), and unless you have software installed for packing GLTF files into GLB files, you will also need Internet access (for the web-based software, *see below*)..

Getting Started

The first thing you need are image files for the cover of the book you want to create. You can use individual front, back, and spine images or a single wraparound cover image.

For best results, the image should be at least 962x672 (wraparound) or 437x672 (front and back) and 88x672 (spine). Because of the way the textures will be displayed, the exact dimensions of the source images aren't important, but your book cover may turn out blurry if the source images are too small.

You will also need to make a copy of the "Custom Book (source files)" folder and all of its contents, and name it appropriately (probably the name of the book you're creating). This will be where you will modify the template files to create your custom version.

Preparing the Files

Next, the cover images will need to be resized to match the dimensions required by the template.

Load each image into your image editing software and resize it to the *exact* size specified above. For wraparound covers, resize to 962x672. For individual parts, resize the front and back to 437x672 and the spine to 88x672. Make sure that the aspect ratio of the height and width are not locked, because the proportions will most likely have to change in order to match the dimensions precisely. In Photoshop, you can do this by unchecking the Constrain Proportions check box. In Paint.NET, you can do it by unchecking the Maintain Aspect Ratio check box.

Once the files are the correct size, you should save a copy of them. *Note: It is strongly recommended that you save them under a different name, so that you can get back to the originals, if you need to.*

Next, you will need to adjust the orientation of the images. Due to the way they're mapped onto the 3D frame, they will need to be a reverse (mirror) image of the actual cover, and because of the placement of the composite file, they will also need to be turned upside-down.

To reverse the image, you will need to **flip** it horizontally (or left-to-right, depending on how it's worded in your software). *Note: It is very important that the image be flipped, rather than rotated, in order for the image to be mapped correctly. If the result looks like a mirror image, then you've done it correctly.*

To turn the image upside-down, you will need to **rotate** the image 180 degrees. *Note: For this step, it is very important that the image be rotated, rather than flipped, because flipping the image would also undo the mirror imaging from the earlier step.*

Once this is done, you are ready to place your cover images into the template. Go to the copy of the source files folder you created earlier and open the textures folder. Load the "Cover_baseColor.jpeg" file into your image editing software. Then position your cover images so that they completely cover the appropriate panels of the template. Once your images are in place, no part of the grey panels or the border lines should be showing.

Once this is done, flatten the image and save it under the same name (replacing the file you loaded), making sure that your quality settings are as high as possible. Then repeat the same process for the other file ("Pages_baseColor.jpeg"). *Note: I'm not actually sure what the second file is for. It appears to be identical to the other one, but since there might be differences that aren't visible, I always handle them separately, just to be safe.*

Congratulations! You just created your custom book!

Converting for Oculus Home

Oculus Home requires files to be in the GLB format, so it will need to be converted. If you have glTF-Shell-Extensions installed, you can simply right-click and choose "Pack to Binary glTF…". If not, then you can use this GLTF to GLB Packer web site: https://glb-packer.glitch.me/, as follows:

Launch the web site and then drag the contents of your custom book folder (the "Book.gltf" file, the "Book.bin" file, and the "textures" folder) and drop them onto the page. This should immediately initiate a download of an "out.glb" file. Save this file as the name of your custom book.

Once the model has been converted (using either method), you now have a 3D object that can be imported into Oculus Home. Since I created the template from an object that had already been resized for Oculus Home, there is no need to resize it, but if, for some reason, you want to change the size, I recommend this online resizing tool: https://glitch.com/~glb-scale-o-matic.

Importing into Oculus Home

Open your "Documents" folder, then open the "Oculus Home" folder that is inside it. Inside that folder should be an "_Import" folder (if there isn't one there, create one). Any GLB files located within this folder will show up as imported items in your item Inventory. You can also create subfolders, if you'd like to organise your imported items (by type, source, or some other method).

To import your custom book, simply drag a copy of the final GLB file into the "_Import" folder (or a subfolder).

Credits

IS301

Other than what I worked out for myself, the vast majority of info came from this video about importing and resizing existing 3D objects: https://youtu.be/EN31ATtbwe8.

I have since discovered this companion blog entry, that goes into a bit more detail: https://is301.com/2018/10/importing-3d-models-into-oculus-home-from-sketchfab/.

I am quite sure that I would never have been able to create custom books or these templates without the information that IS301 posted.

voyager (on **Sketchfab**)

My template was created from this book that I downloaded from Sketchfab: https://sketchfab.com/models/cf793d98e4714828bdcfd60a5a9b3326.

Since I know pretty much nothing about editing actual 3D objects, I just found an existing object that had the shape and page look that I wanted, with the idea of being able to just replace the cover textures with my own, which is basically what I ended up doing, and I'm very happy with the results.

r/OculusHomeObjects

Another source of valuable info was the r/OculusHomeObjects group on reddit: https://www.reddit.com/r/OculusHomeObjects. They also have links to several repositories of Oculus Home objects.

Contacting Me

If you have any questions or can offer any additional information about dynamic physics or 3D objects in general, please feel free to email me at: oculus@cscottdavis.com

Please also feel free to email me links to any custom books you create with this template. I would love to see them!

I also have several public Homes on the Oculus Rift, that are decorated with objects I've created and adapted. Please feel free to visit them (Oculus User **cScottD**) and let me know what you think!