

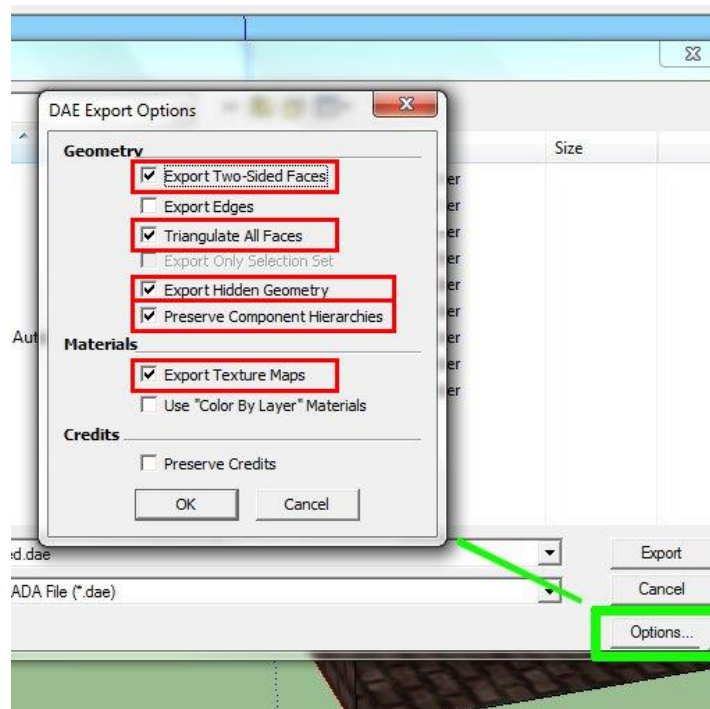
3D Modelling and Displaying Models: Requirements

Basics:

1. Don't exceed **65 536** number of vertices per **model's segment**.
2. Consider **splitting large models** (e.g. >2 M vertices) into few smaller ones (eg. file that contains of palace's façade and roof could be splitted into north & south parts of façade and roof separately).
 - a. Uploading files of size more than 20 MB causes really long loading time and no additional effects like particles.
3. Please export models with **normals** and **texture coordinates**.
4. Export models as **triangulated** mesh or poly. Don't use quads or parametric meshes.
5. Use **squared textures** with dimensions of power of 2 ($n \times n$, where n^2). Please give the **unique names for objects** (according to nomenclature, e.g. in case of Friedrichstein <http://www.patrimonium.net/node/12364>) and their **materials/textures** in appropriate folder: NameOfModel_Date_Version_Textures/NameOfModel_Date_Version_TypeOfMaterial e.g. F_MANH_ROOF_16-04-04_Ver2_Textures/F_MANH_ROOF_16-04-04_Ver2_Tiles.jpg
6. Before uploading your model, please **render it** (to check if normals and textures are prepared well) and **try to import** exported file to your modelling software when switching between formats (e.g. .max to .obj).
7. Consider **flipping Y and Z axis**. Some of modelling softwares have changed Y and Z axes.
8. **Scale** of models is set to **centimeters**; if you are using meters or inches, please convert it to centimeters before exporting. Check the scale after the importing inside patrimonium.net

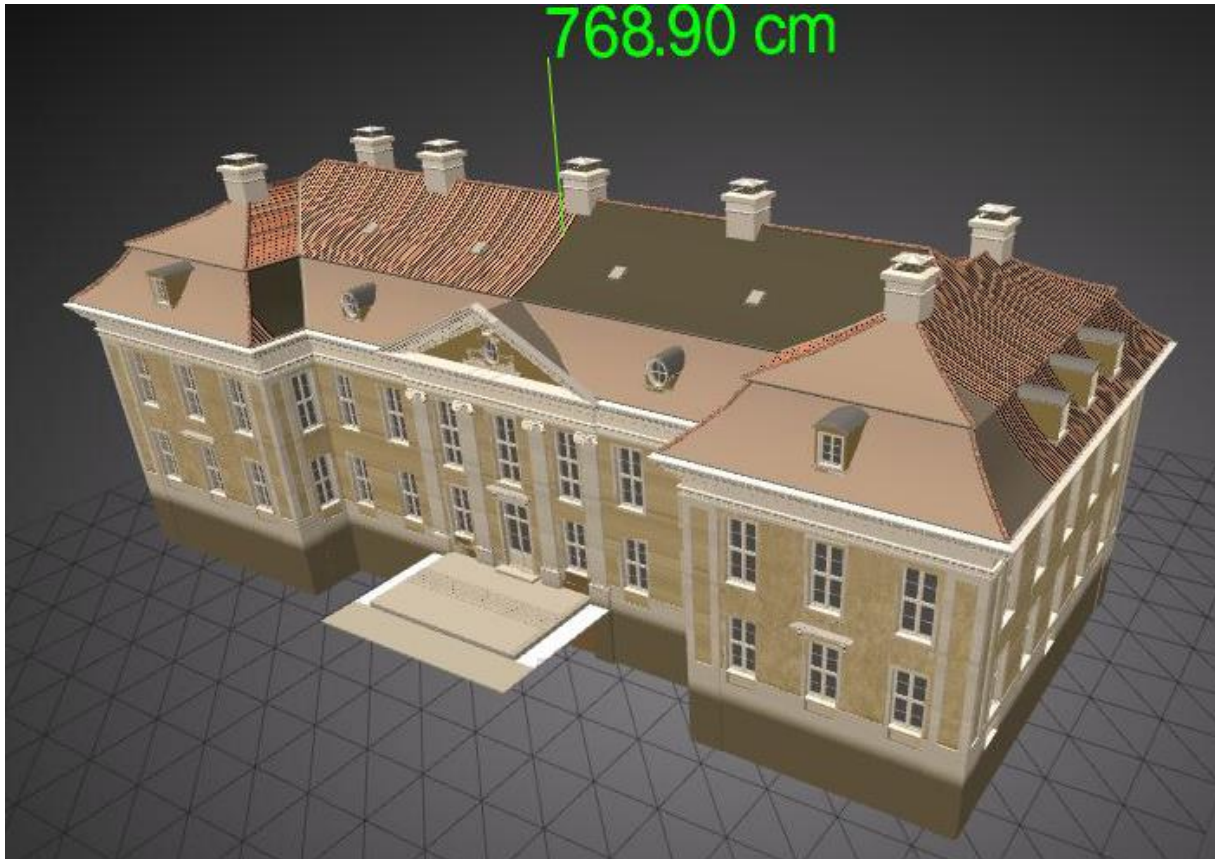
Proposal way of exporting from SketchUp to .DAE (temporarily, preferred OBJ):

1. File → Export → 3D Model, then pick COLLADA (.dae)
2. After clicking "Options", make sure you checked as follows:

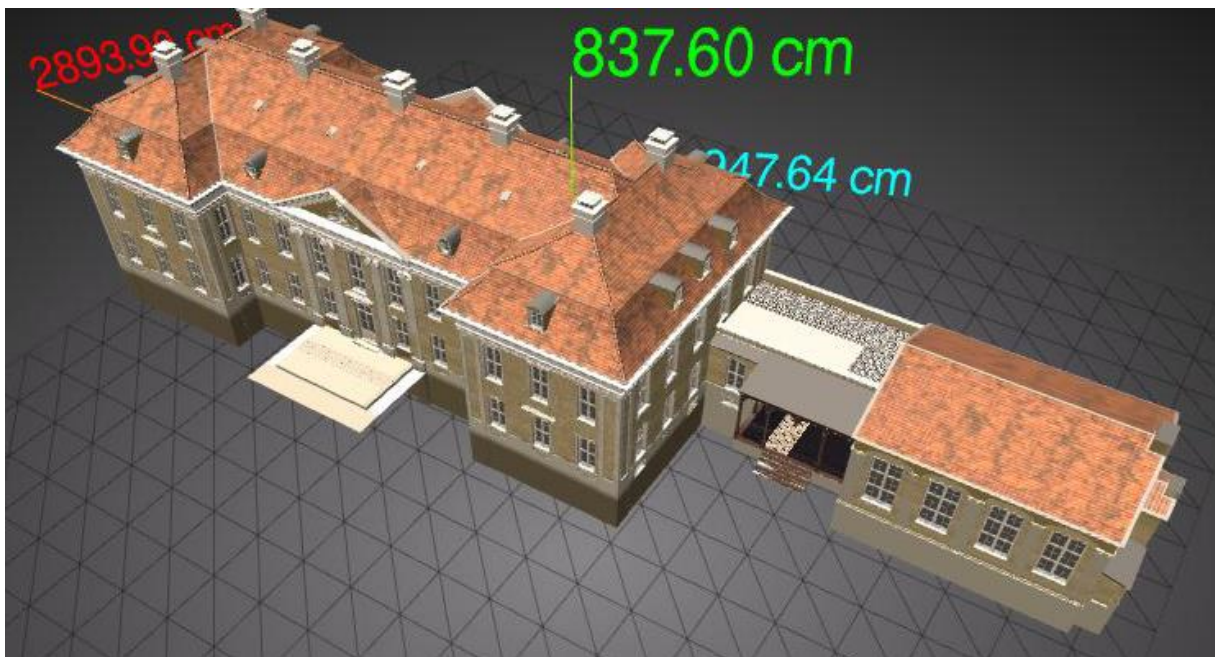


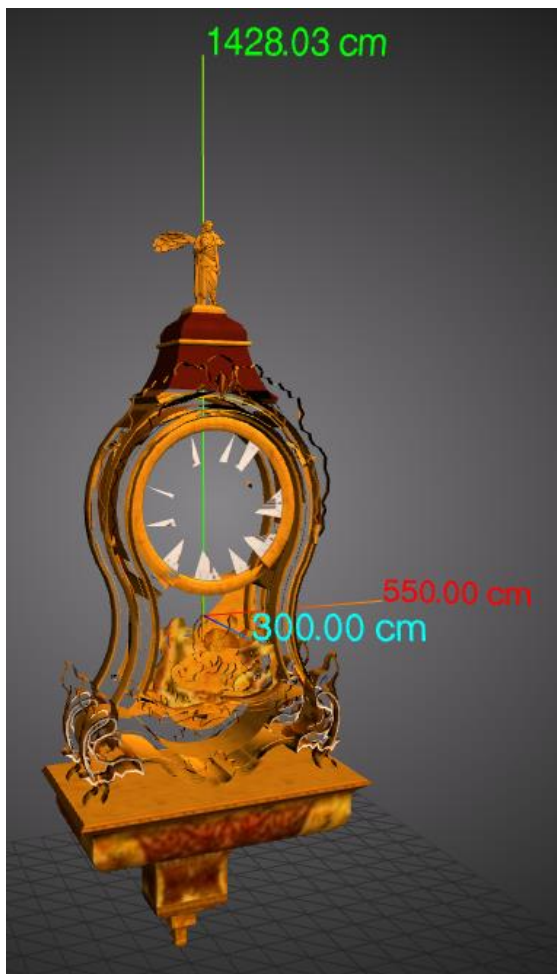
Tip 1. Non squared (see Basics point 5.) textures causes wrong textured areas:

Wrong textured roof – not squared textures cause wrong textures' coordinates (roof)



Roof textured in proper way – squared textures (roof)





Clock exported **without hidden geometry** and **not squared textures**. It causes holes in geometry and wrong textures' coordinates.



Clock exported **with hidden geometry**,
all textures are squared.