PHOTOGRAMMETRY – AGISOFT METASHAPE

Exporting Surface (3D) Models (Professional Edition) (04.12)

William Raynolds

Jared Koller

ABOUT AGISOFT METASHAPE

[Agisoft Metashape](#) is a stand-alone software product that performs photogrammetric processing of digital images and generates 3D spatial data to be used in GIS applications, cultural heritage documentation, and visual effects production as well as for indirect measurements of objects of various scales. This software provides a platform for cultural heritage specialists to create virtual reality scenes, textured 3D meshes, orthographic projections, geo-referenced maps and much more from images and/or laser scans completely automatically.

This **ASOR Tutorial (04.12)** will demonstrate how to export a surface (3D) model in Agisoft Metashape Professional on a Windows desktop.

ASOR's tutorials for Metashape are focused on creating 3D surfaces and orthophotos of objects, monuments, and architecture during cultural heritage surveys through the eastern Mediterranean and northern Africa. ASOR plans to expand the scope of its photogrammetry tutorials, however for any questions that aren't covered in these tutorials, please visit [Agisoft's Community page](#), which includes video and written tutorials, the software's manual, and a community forum comprised of Metashape users.

EXPORTING SURFACE (3D) MODELS

1. After building a surface (3D) model in Metashape (see **ASOR Tutorials 04.06 through 04.11** for steps to create the 3D models), users can export that model into many formats. A **Wavefront OBJ file** is a commonly used file type for cultural heritage work, however Metashape supports the export of various representations: **tie points and dense point clouds**, **camera calibration** and **camera orientation data**, **mesh (surfaces)**, etc.

   Export by choosing the **File** menu option, then **Export**.
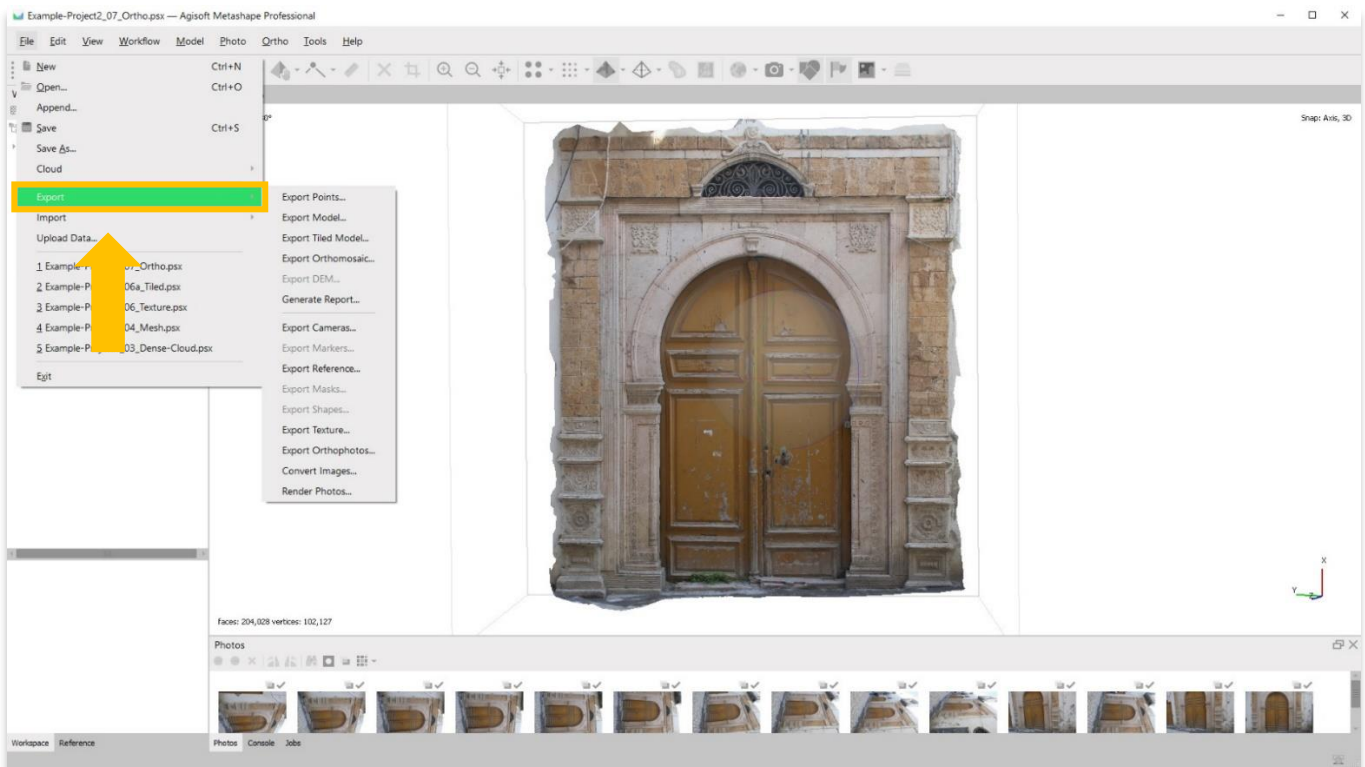
2. Choose your preferred file type when saving the 3D model. In the below example, **.obj** has been selected. Keep the default settings in the pop-up, then press **OK**.
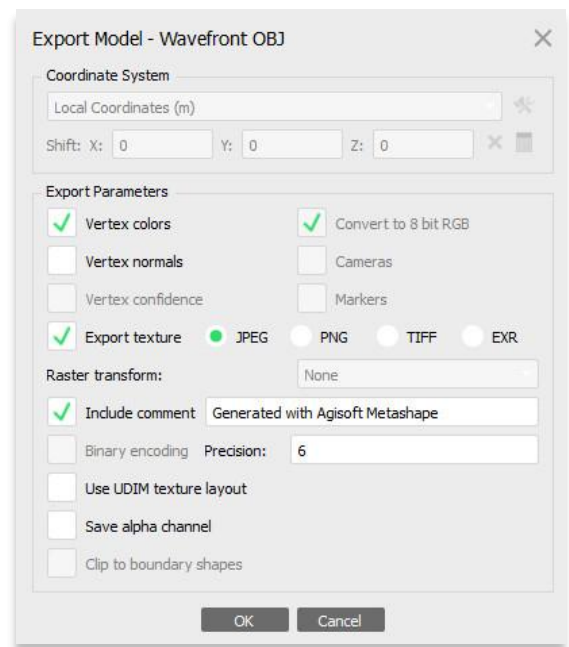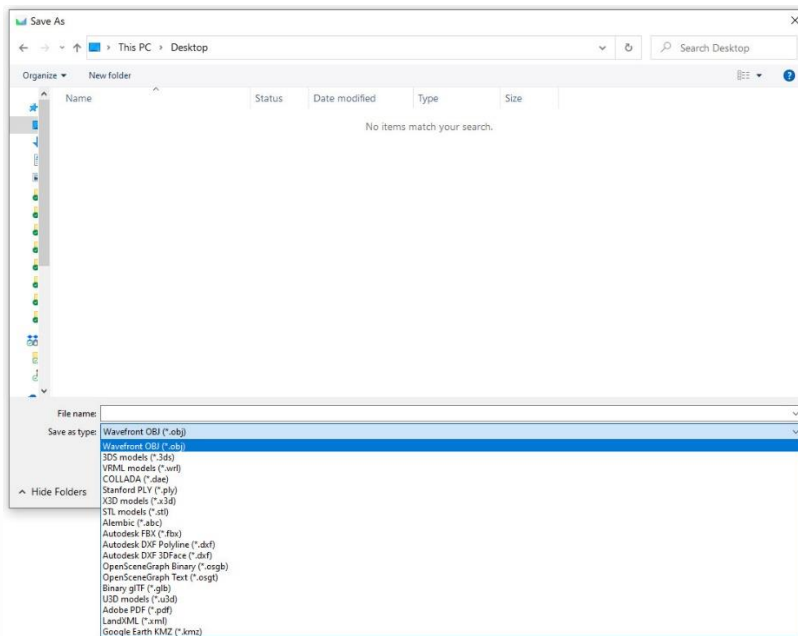

3. Locate your saved 3D model on your computer. You will notice that there are three files associated with your exported model: (a) an **.obj** file, (b) an **.mtl** file (surface model without texture), and (c) a **.jpg** file (texture-only file). The OBJ file alone will render your model on many 3D visualization programs. The .mtl and .jpg files are backups in case you need to manually assign them to your model.

One useful program for viewing your 3D model outside of Agisoft Metascan is **Microsoft's 3D Viewer**. This comes standard on any PC that includes Windows 10 or higher. To open an OBJ file in 3D Viewer, right click on your file, then choose **Open with** > **3D Viewer**.
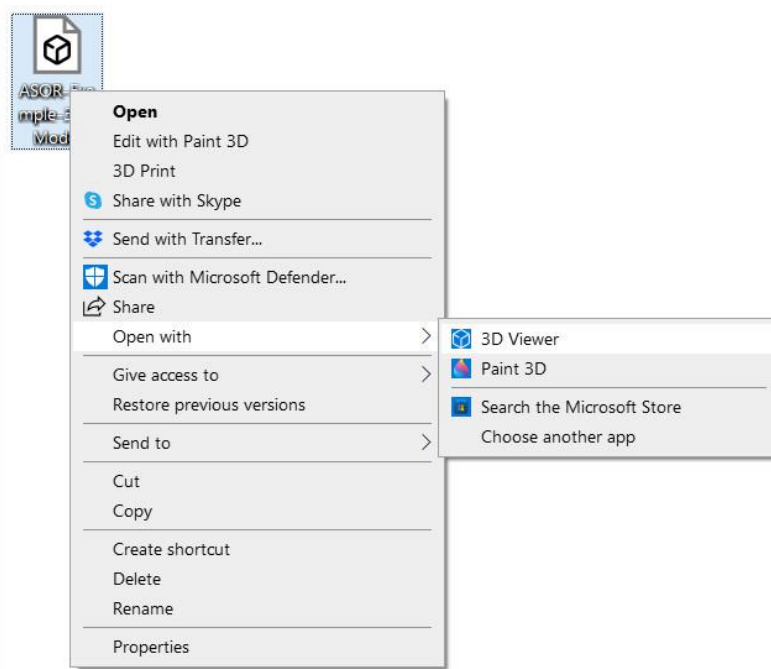
4. The 3D model will appear in 3D Viewer with associated image-based textures. If you notice that the orientation or rotation in 3D Viewer is difficult to maneuver, you can adjust that orientation in Agisoft Metascan and export it once more with a new orientation.
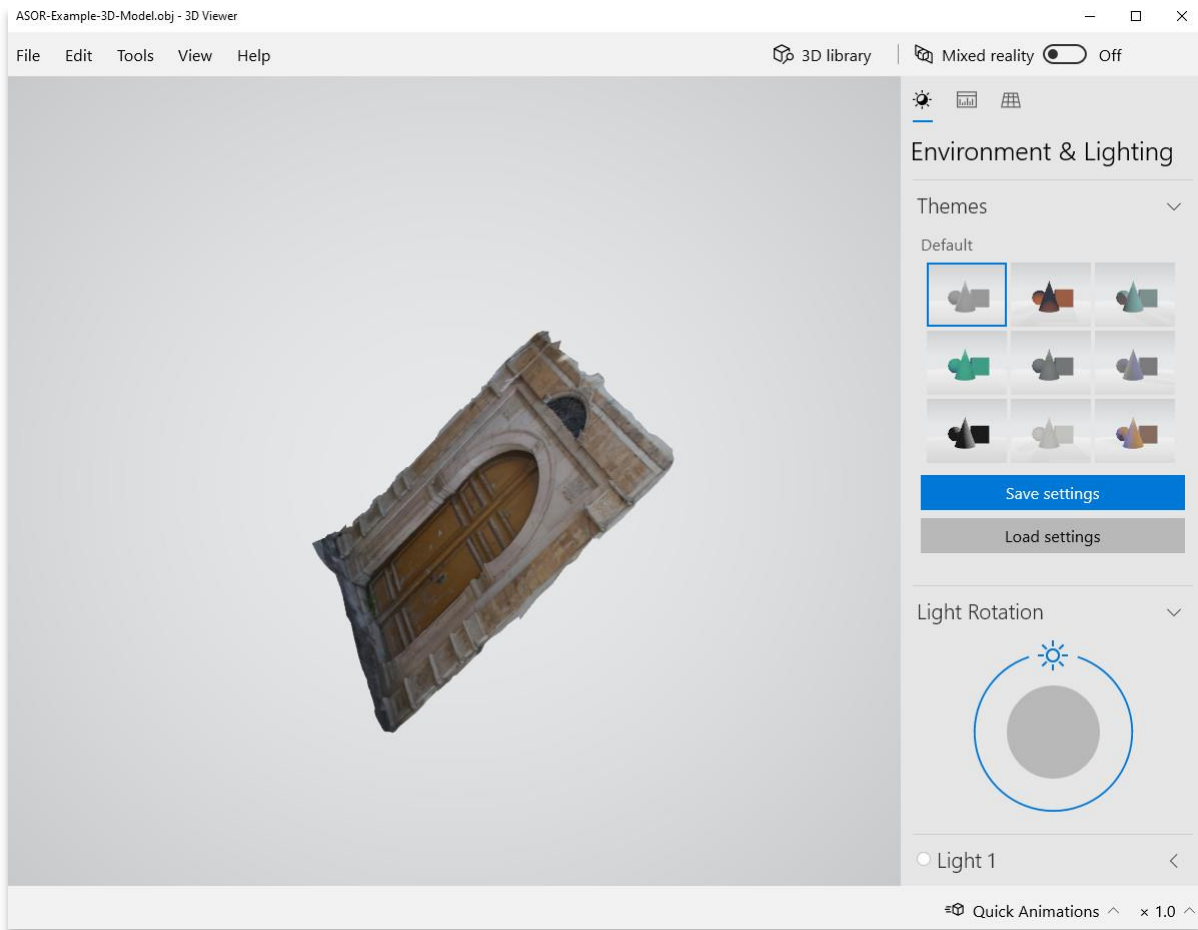
5. OBJ files can also be opened on Meshlab, Adobe Acrobat, Reader, and numerous other visualization platforms.

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