tutorials/photogrammetry-with-Regard3D.md

Photogrammetry with Regard3D

About this Tutorial

Created by Caroline T. Schroeder for Intro to DH at OU, Spring 2020. This tutorial lives online at https://github.com/ctschroeder/tutorials/blob/master/photogrammetry-with-Regard3D.md.

For this tutorial you will need to download files and install software on either a Windows or Mac.

About PHotogrammetry

Photogrammetry is one method of building a digital 3D model of an object. It involves stitching together multiple photographs of the same object. There are a number of more sophisticated programs you can use for photogrammetry. We are using Regard3D because it is nimble, puts together all the steps for you, and has existing tutorials online.

In this tutorial, you will use existing photographs of an object. If you have a digital camera (separate from your smart phone, a stand alone camera), then you could take your own pictures and do this tutorial with those. I recommend FIRST using the provided image sets, and then on a second round trying it with your own object.

1. Prepare for the Tutorial

Read up on Photogrammetry in this Open Archaeology Textbook (secions 4-4.1.3).

We will be doing the tutorial in 4.1.3.

Download:

- The Regard3D application. Either go to the homepage, click download in the top menu, and click the link provided, or go directly to this Regard3D Downloads page. (The download should begin automatically from the downloads page.)

- Sceaux Castle images (it should automatically begin downloading a zip file.)
- This annotated pdf of the Regard3D Tutorial I created just for this class. The original Regard3D Tutorial lives online here.

Unzip and Install

Install the Regard#D software -- you should be able to install by double clicking. On a Mac, it may show a window asking you to drag the app icon into your Applications folder

Find the app in your computer and double-click it to start it.

Find your zip file of the Sceaux Castle images. Double-click on it to unzip it.

2. Work through the Tutorial

Open the Annotated pdf of the tutorial. My comments are in BLUE BOXES. I've also put blue arrows pointing to the options I selected when I did the tutorial and blue underlining on important points. Look for the arrows and underlining.

3. Export your Model

Take a screen shot of your model!

Look at the Summary section of the Tutorial. It tells you to select your model in the "project tree" on the left and click on "Export point cloud/Export surface." Do this twice -- export as an OBJ file.

4. Share your Model

There are lots of websites where you can share 3D models. For this course, you'll post it on the student blog.

We cannot upload an OBJ file to the blog. You can upload it to Canvas if you'd like.

On the student blog, please post:

- A screenshot of the scanned ojbect and brief description of the object
- Citation/links to the tutorial and software used
- anything else you want to add about your experience of the process

Enjoy!!!