3D Scanning at OU Libraries Cheat Sheet

Purpose: The 3D lab is meant to be used for research purposes. The goal is to provide a space where faculty, students, and staff who already use or want to use 3D scanning in their research can do so. The lab provides researchers with equipment, software, and consultation throughout the entire 3D modeling process, from project development through data capture, publication, and archiving. Our mission is to ease the financial and intellectual load for researchers that 3D modeling requires, while fostering innovative, replicable research of the highest quality.

Website: https://libraries.ou.edu/content/3d-scanning-lab
Book an appointment: https://libcal.ou.edu/spaces?lid=7593&gid=13720
Contacts: Kristi Wyatt - kwyatt@ou.edu
Zenobie Garrett – Zenobie.S.Garrett@ou.edu

Who: all OU students, faculty, staff
Where: 149C, alternatively ETL office
When: Hours are 9-11, 1-5 M-F by appt only
What: any size object can be scanned including rooms, buildings, landscapes
Cost: free to use

Services:

Equipment: camera, lights, scale bars, space, backdrops
Software: Agisoft software (used to create models), high power computer processing station
Consultations: one-on-one, workshops, classroom visits/integration

Users can either use the scanning equipment/software themselves or scan with a trained library specialist present to help. If they want to use the equipment/software themselves, they will need to do a one-time training course (30 min – 1hour total in the lab booked during lab hours)

Process:

Currently the only data capture we have in the lab is a process called photogrammetry.

Submit project to 3D Scanning Lab for approval (1-2 weeks)
Scanning of object depends on size, location, number of objects (several hours to multiple days, smallest projects usually require at least 2-4 hours)
Creation of model also dependent on size, number, and availability of equipment (can take 1-3 days to process)

We recommend budgeting 5 weeks for each model requested

Quick Guide and Policies:
https://intranet.libraries.ou.edu/docs/documents/3D%20Scanning%20as%20a%20Service%20General%20Information%20and%20Policy.3111.pdf (link can be found on website)

3D Scanning in the Disciplines

Main applications identified:

- used for illustration/reconstruction of objects, environments, and/or situations
- used to create prototypes or simulations

Other aspects of photogrammetry that we are considering/interested in grappling with

- History of development
- Accessibility
- Ethics

Education
- Photogrammetry for educational outreach

Journalism
- VR/AR journalism
- Ethics of subject confidentiality in 3D
- Creating bias in staging
- Copyright
- Photo capture with incidental people

Social Work
- Social work training
- Construction of experience for education and outreach
- Social biases programmed into algorithms

History
- Illustration/Use of historical artifacts/places
- History of technological development

LIS
- Metadata for 3D objects
- Librarians as Knowledge Producers
- Curating 3D objects

Psychology
- Exposure therapy
- Controlled Environments in Research

International Studies
- Access to international sites

Architecture
- Heritage recording
- Capturing architectural elements to manipulate in virtual models
- Create models for prototype printing

Fine Arts
- Use of photogrammetry to capture 3D dimensions of paintings—conservation and analysis
- 3D scanning as an artistic medium
- Is it a "slavish reproduction" or artistically distinct?
- Issues of color capture in photogrammetry

Women's Studies
- Military Mapping Maidens or Millie the Mapper
- Tyner 1999 Millie the Mapper and Beyond

Archaeology
- Scanning of artifacts not on display
- Reconstruction of broken artifacts
- Aids to Repatriation
- Access to hard to get to sites

Classics
- Recreating artifacts/architecture
- Increased access to artifacts for research and enjoyment
- Create immersive language learning