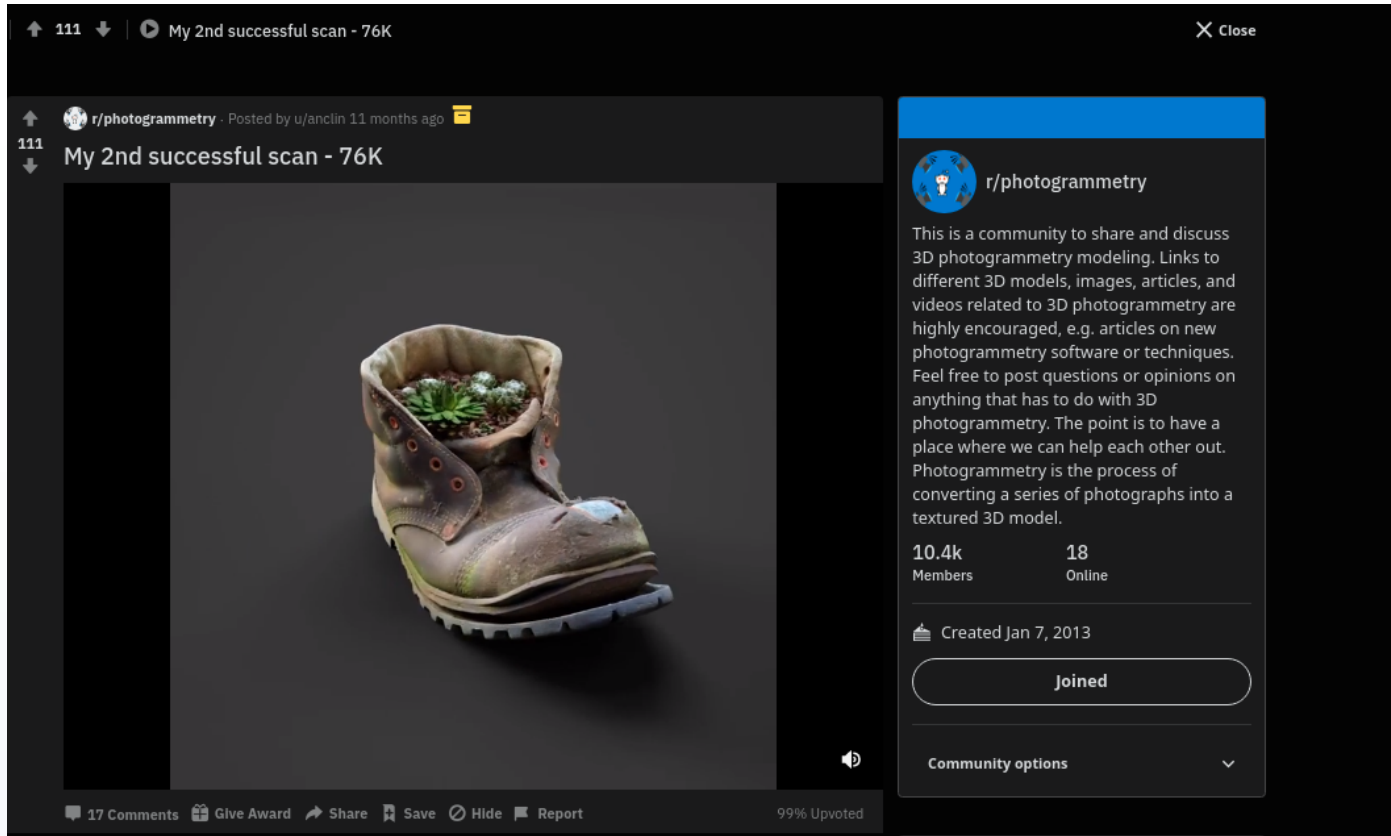


# EGM702 – Photogrammetry and Advanced Image Analysis

Week 1, Part 1: What is Photogrammetry?

1. What is photogrammetry?
2. Scale and parallax
3. Stereophotogrammetry
4. Control points
5. Acquisition planning

# What is photogrammetry?



# What is photogrammetry?

- Photogrammetry: the science/ technique of obtaining **reliable** measurements of objects from photographs\*
- Reliable: accurate, precise measurements
- Photographs\*:
  - Originally, film
  - Now, mostly digital (or scanned)



# How is photogrammetry?

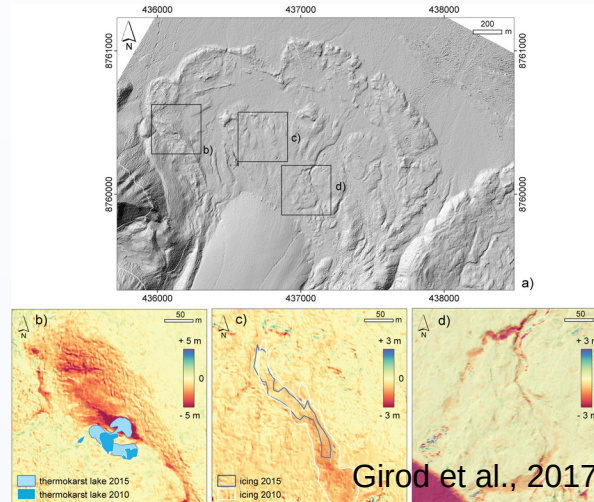
- Equipment:
  - Camera(s)
  - Platform
- Visualization/Processing:
  - Historically: stereoplotter
  - Now: specialized software



Figure 7.15 Wild A-10 stereoplotter. (Courtesy: Wild Heerbrug)

# Why is photogrammetry?

- Mostly: “quickly”, accurately measure hard-to-measure things
- Examples:
  - Mapping
  - Military Reconnaissance
  - Coastal erosion
  - Glacier change
  - Archaeology



Girod et al., 2017

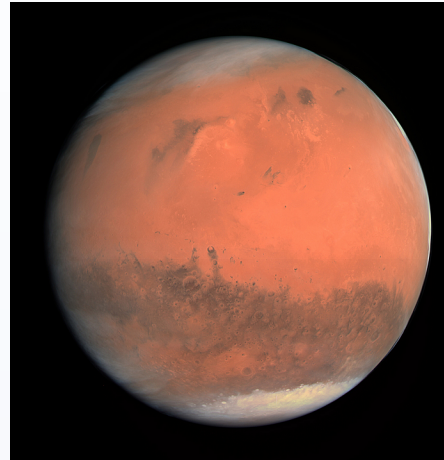
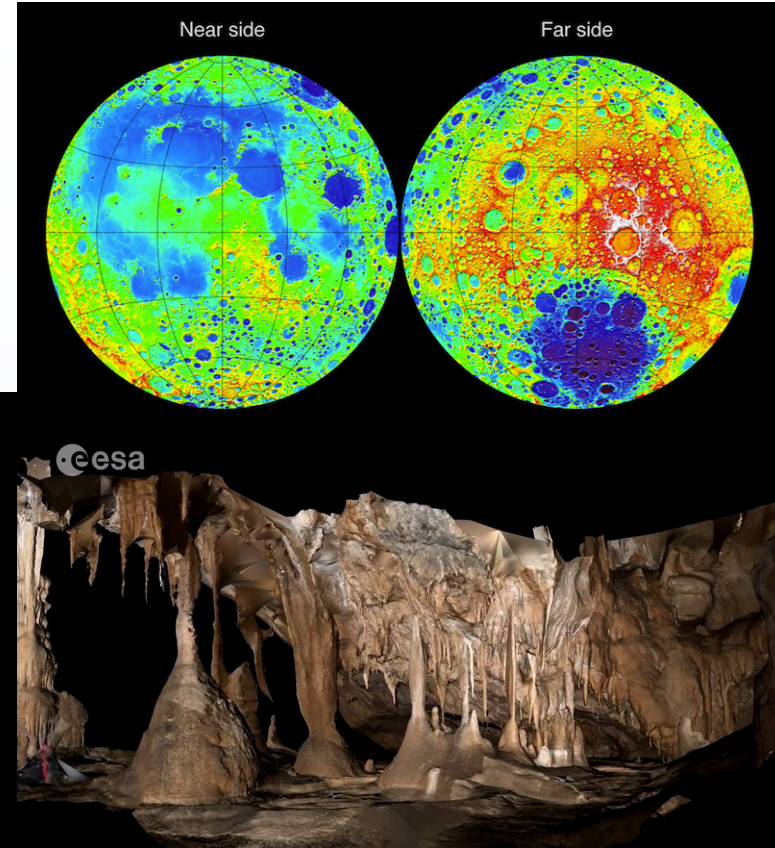
**CLASSIFIED**



Wessex Archaeology

# Where is photogrammetry?

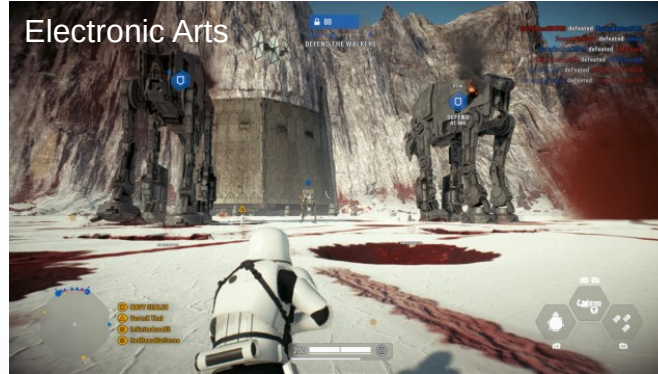
- Wherever you can get a camera!
- Earth:
  - Remote field sites
  - Busy city centres
- The Moon
- Mars





# Who is photogrammetry?

- Archaeologists
- Architects
- Engineers
- Geoscientists
- Movie makers
- Video game designers
- You!
- ...and many more



- Photogrammetry is the science of making reliable measurements using photographs\*
- Many applications across a wide range of disciplines
- Can be done relatively inexpensively

- Tempfli et al. – Chapter 9
- Lillesand, Kiefer & Chipman – Chapter 3
- What is photogrammetry? [[ClimaByte](#)]
- r/photogrammetry [[reddit](#)]
- More examples of 3D models: [sketchfab.com](#)