

Bass Connections 2016

Dig@IT: Virtual Reality in Archaeology



BASS CONNECTIONS

The Digital Landscape | Information, Soc. Cult.

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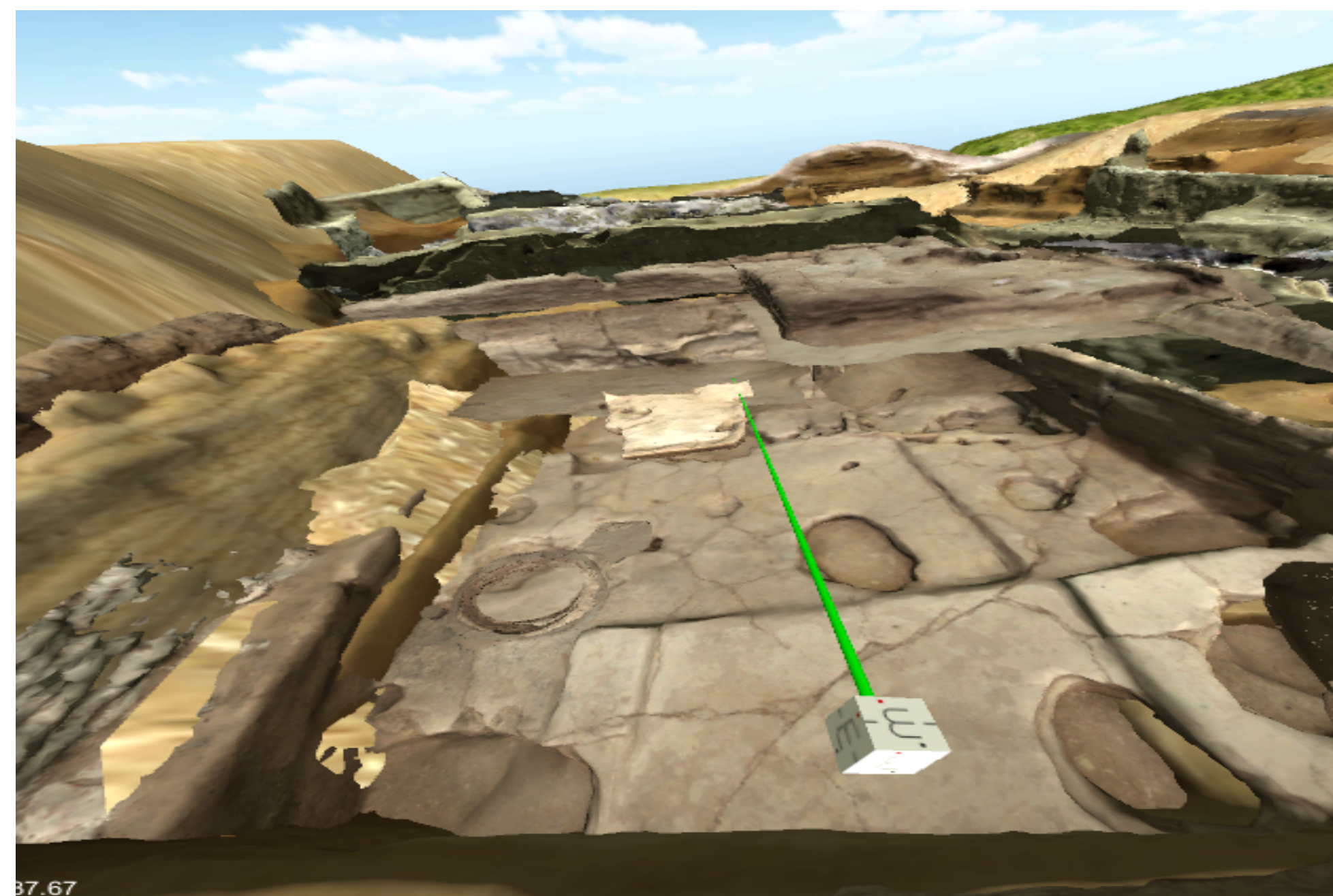
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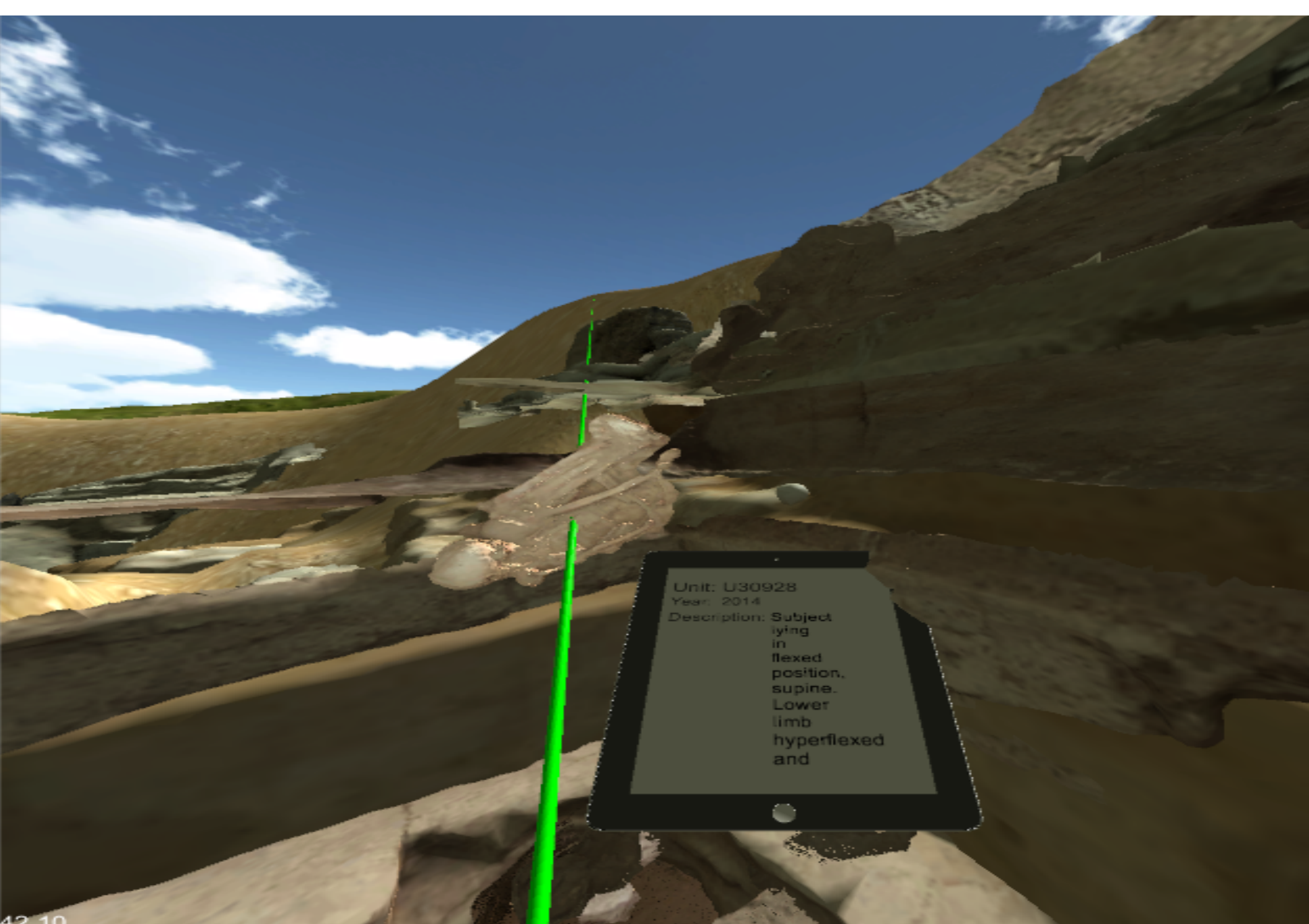
PROJECT SUMMARY: A virtual reality system to recreate the archaeological experience using data and 3D models from the neolithic site of Çatalhöyük, in Anatolia, Turkey.

PROJECT OBJECTIVES

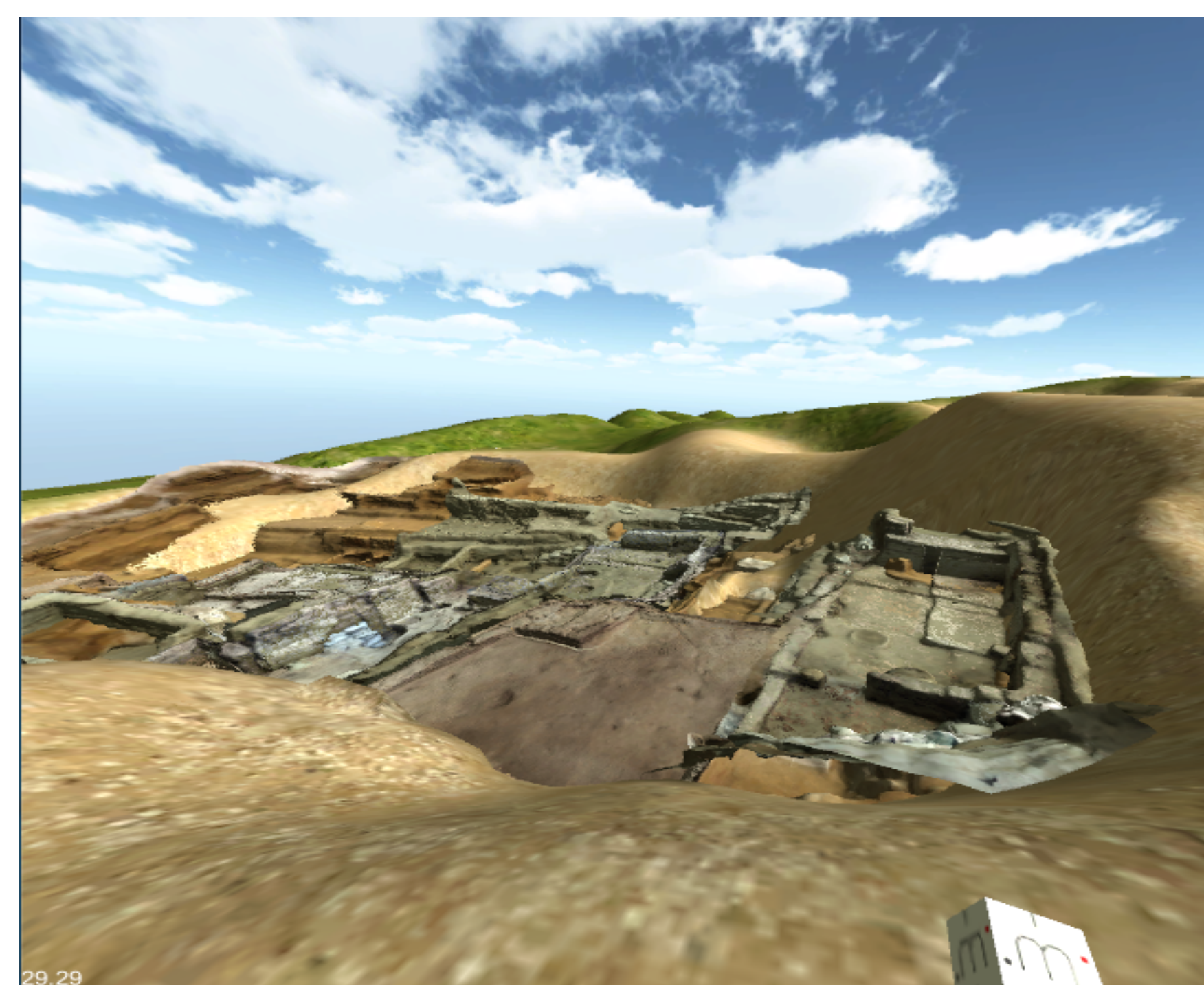
- Develop archaeological VR app containing models of real site.
- Allow manipulation of artifacts/"digging" within system.



EXPLORE YEARS OF EXCAVATION



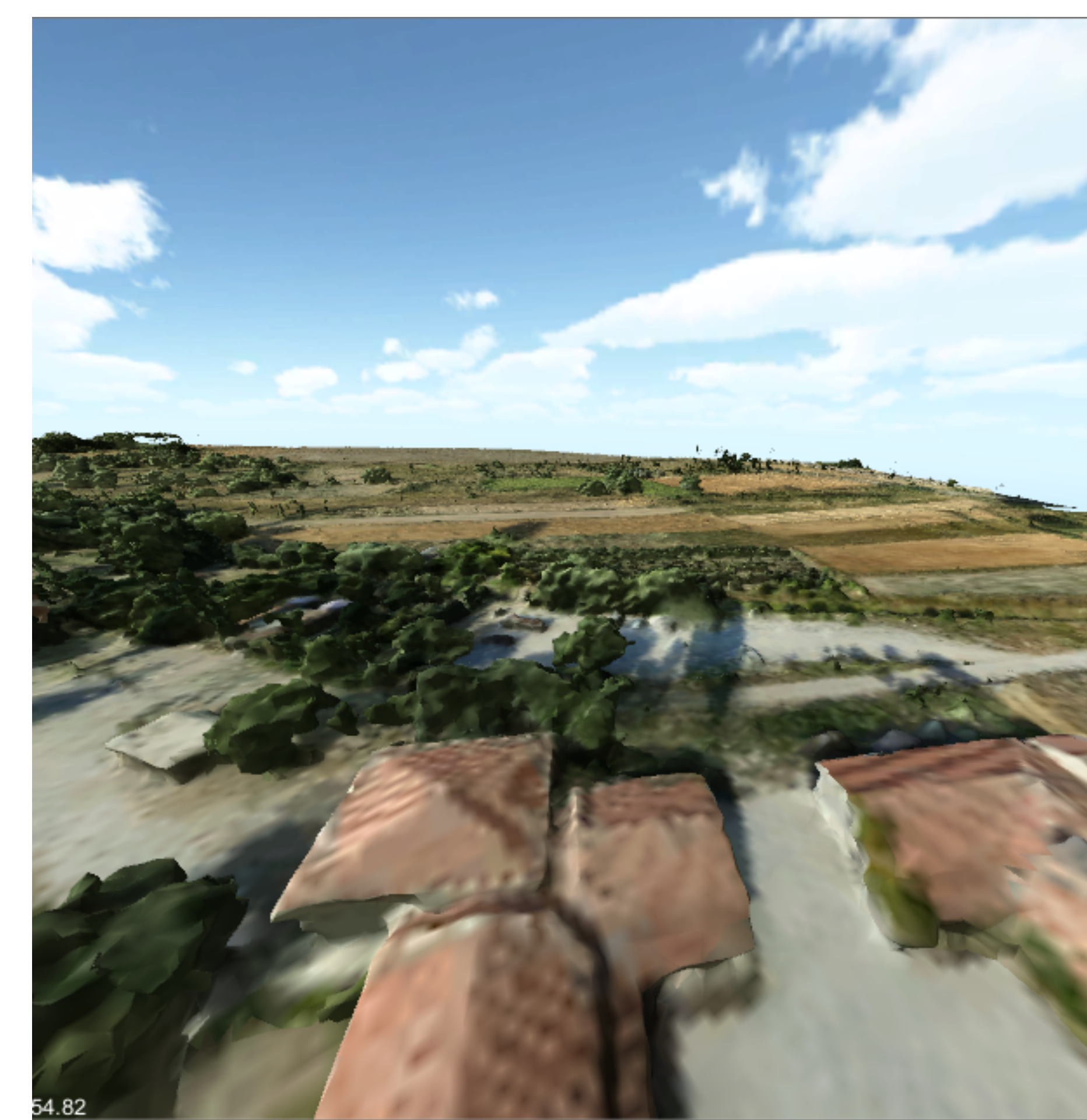
ARTIFACT MANIPULATION/DATA VIEW



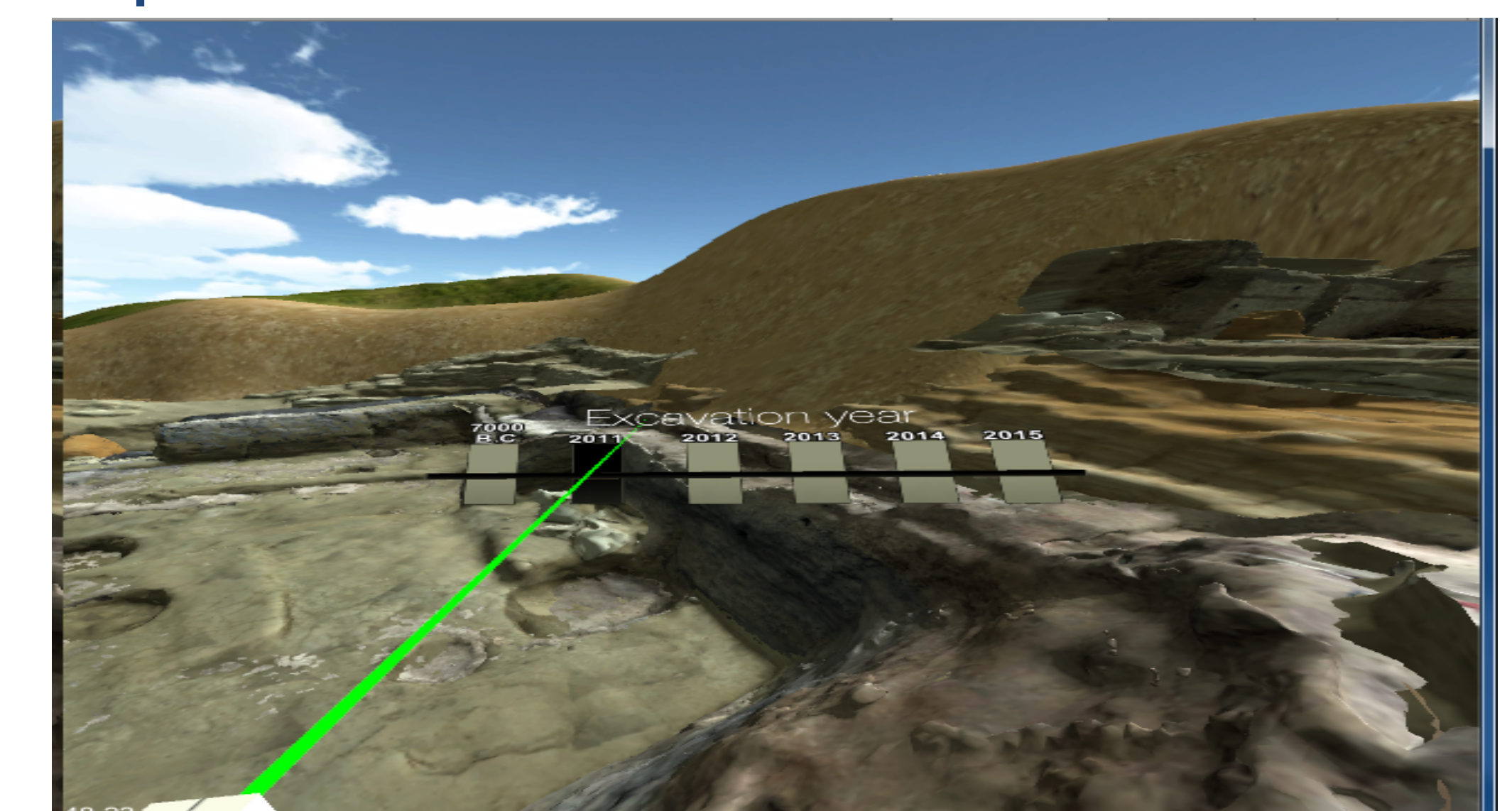
VIEW OF SITE AND LANDSCAPE WITHIN APP

DESCRIPTION

- Can view information from existing archaeological database contextually, in 3D space, for objects documented by field archaeologists.
- Allows for measurement, analysis of artifacts and land on-site.
- Built for Oculus and DiVE.
- For DiVE, companion apps built for Google Glass and iPad, which dynamically display information from Catalhoyuk site database relating to feature being examined.



SURROUNDING LANDSCAPE



INTERPRET AND INTERACT WITH EXCAVATION

WORKFLOW

- Digital Archaeologists capture 3D models of dig site and landscape through image-based modeling (photogrammetry), laser scanning, LIDAR, etc.
- 3D models of site, artifacts, are imported into Unity3D game engine, where:
- Interactions and display are built to allow analysis and discovery within the application.
- Application is built with Oculus Rift as head-mounted-display, and Razer Hydra tracked wands as input devices.