Our Mission and Vision

Our vision is to ignite wonder, curiosity and a shared understanding of our past.

We are a 501(c)3 non-profit with the mission to capture, archive, and share the world's cultural heritage.
CyArk was founded in 2003 in response to the increasing global threat to cultural heritage sites from human destruction, looting and encroachment, as well as natural forces such as earthquakes, fire, and floods.
Our Progress

200 Projects // 40 Countries // 7 Continents
What we do

Conservation

Recovery

Discovery
How we do it

Using the latest in 3D capture technologies & rigorous methods

- Laser Scanning (LiDAR)
- Photogrammetry
- Drone / Aerial
Our Partners

IRON MOUNTAIN

SEAGATE

AUTODESK

IBM

Lenovo

Google

UNESCO

ICOMOS

NATIONAL PARK SERVICE

HISTORIC SCOTLAND

DOMUS

DGAM

THE AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS

Carleton UNIVERSITY

Yale Institute for the Preservation of Cultural Heritage

CyArk
Mesa Verde, CO

- National Park, UNESCO World Heritage Site
- Ancestral Pueblo people inhabited from 600 - 1300
- 5,000 archaeological sites with 600 cliff dwellings
Balcony House

- Named for the extensive use of balconies on the exterior walls
- Accessible only by climbing ladders, then crawling through a small portal
- Only 2 days to map over 10,000 sq. feet, and 40 rooms including 2 kivas
CyArk Field Kit

- GPS + Targets
- Drone
- LiDAR
- Photogrammetry
CyArk Methodology

Georeferenced 3D Model
- Place and record GPS Targets
- Capture oblique aerial imagery of site
- LiDAR for all features
- Photogrammetry for everything

Captured for Preservation + VR Experience
- All features captured
- Additional data for VR Experience
CyArk “Retina” Detail Levels

- Capture at a spatial resolution that matches the human eye
- Detail levels assigned to site features for appropriate data size
- Headsets not capable of resolving most detail yet...

### Eye Spatial Resolution vs. Distance

<table>
<thead>
<tr>
<th>Detail Level</th>
<th>Viewing Dist.</th>
<th>Spatial Res.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max</td>
<td>20 cm</td>
<td>0.045 mm</td>
</tr>
<tr>
<td>High</td>
<td>40 cm</td>
<td>0.089 mm</td>
</tr>
<tr>
<td>Medium</td>
<td>90 cm</td>
<td>0.201 mm</td>
</tr>
<tr>
<td>Standard</td>
<td>158 cm</td>
<td>0.352 mm</td>
</tr>
<tr>
<td>Basic</td>
<td>305 cm</td>
<td>0.681 mm</td>
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</tbody>
</table>
VR Demo Video