

SO
Da

3D & Objektvisualisierung

Kick-Off



Finanziert von der
Europäischen Union
NextGenerationEU



Bundesministerium
für Bildung
und Forschung

SODa

- Gemeinsam ein Datenkompetenzzentrum aufbauen!
- **Vermitteln:** Beratung, elektronische Lernressourcen, Tutorials, Schaufenster, öffentliches Forum
- **Vernetzen:** Workshops, Summer School, Barcamp, NFDI, Zusammenarbeit mit weiteren Datenkompetenzzentren, Gremienarbeit
- **Forschen:** digitale Methoden entwickeln, interdisziplinärer Methodentransfer, Arbeitsgruppen und Forschungskooperationen
- Gemeinsam an und mit Daten arbeiten: SODa-Infrastruktur für das gemeinsame Erzeugen, Bearbeiten, Anreichern, Analysieren und Publizieren von Objekt- und Sammlungsdaten

3D Digitalisierung

3-Step Pipeline

Capturing



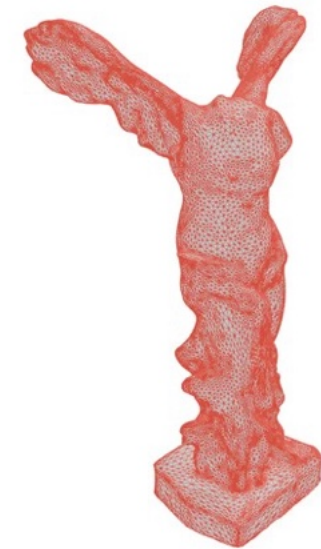
Processing

- 3D Reconstruction
- 3D Postprocessing



Publishing

3D Digitalisierung



3D Digitalisierung

Welche
Möglichkeiten
bietet das
Objekt



Capturing



Processing

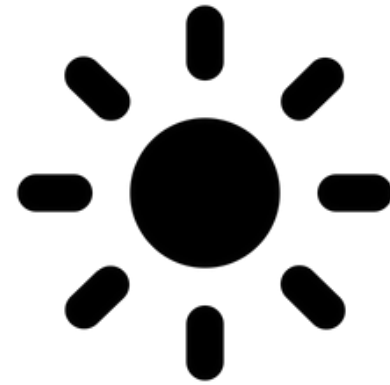
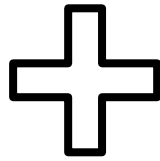
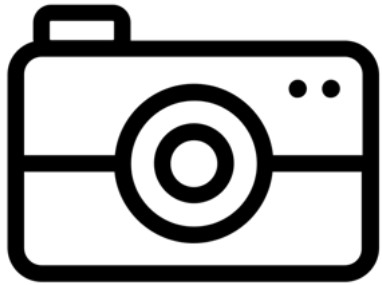


Welche
Anforderungen
stellt die
Forschungs-
frage



Capturing

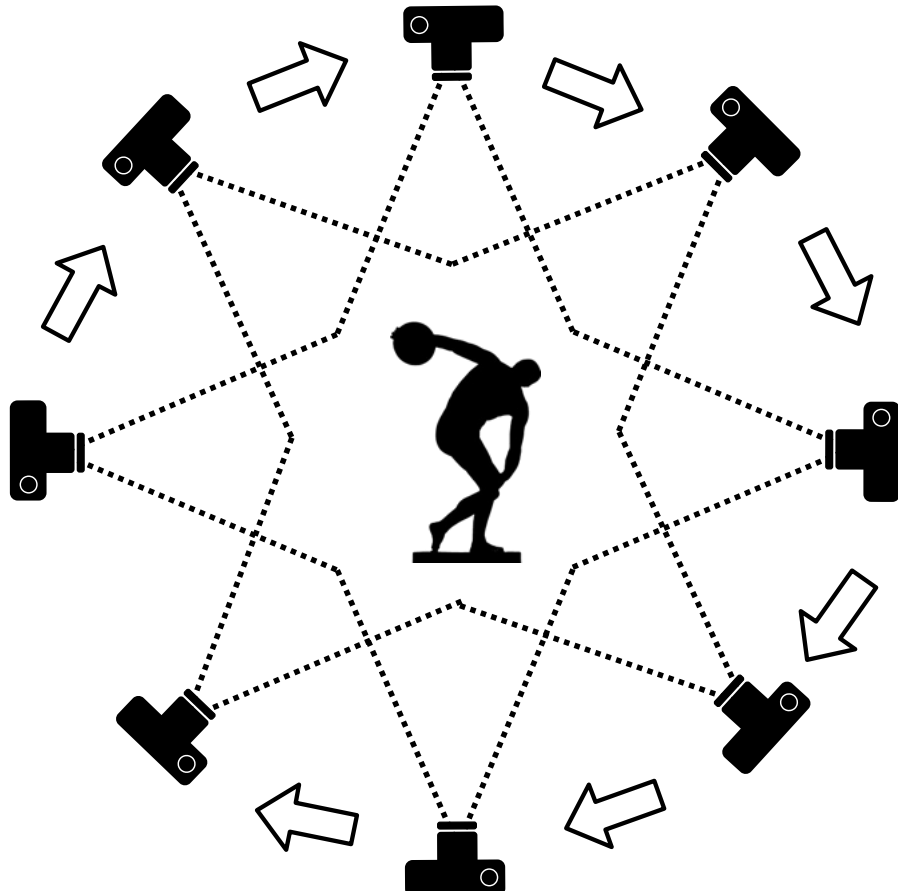
Capturing





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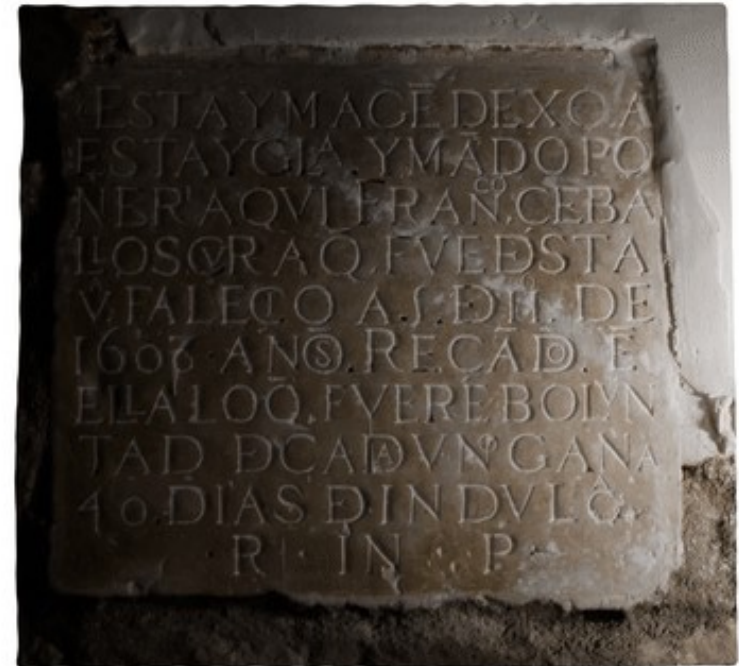
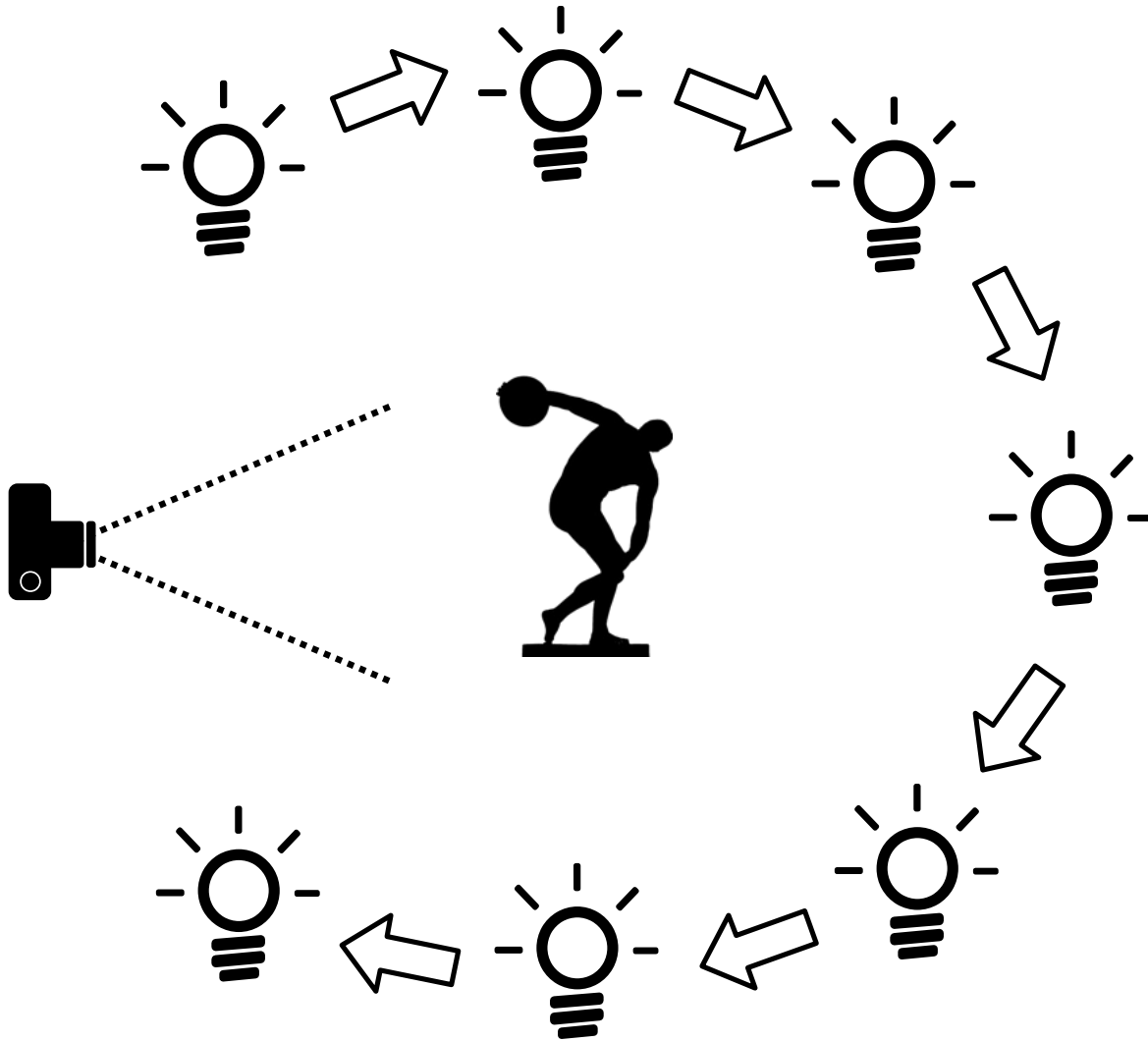
Photogrammetrie





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Reflectance Transformation Imaging - RTI

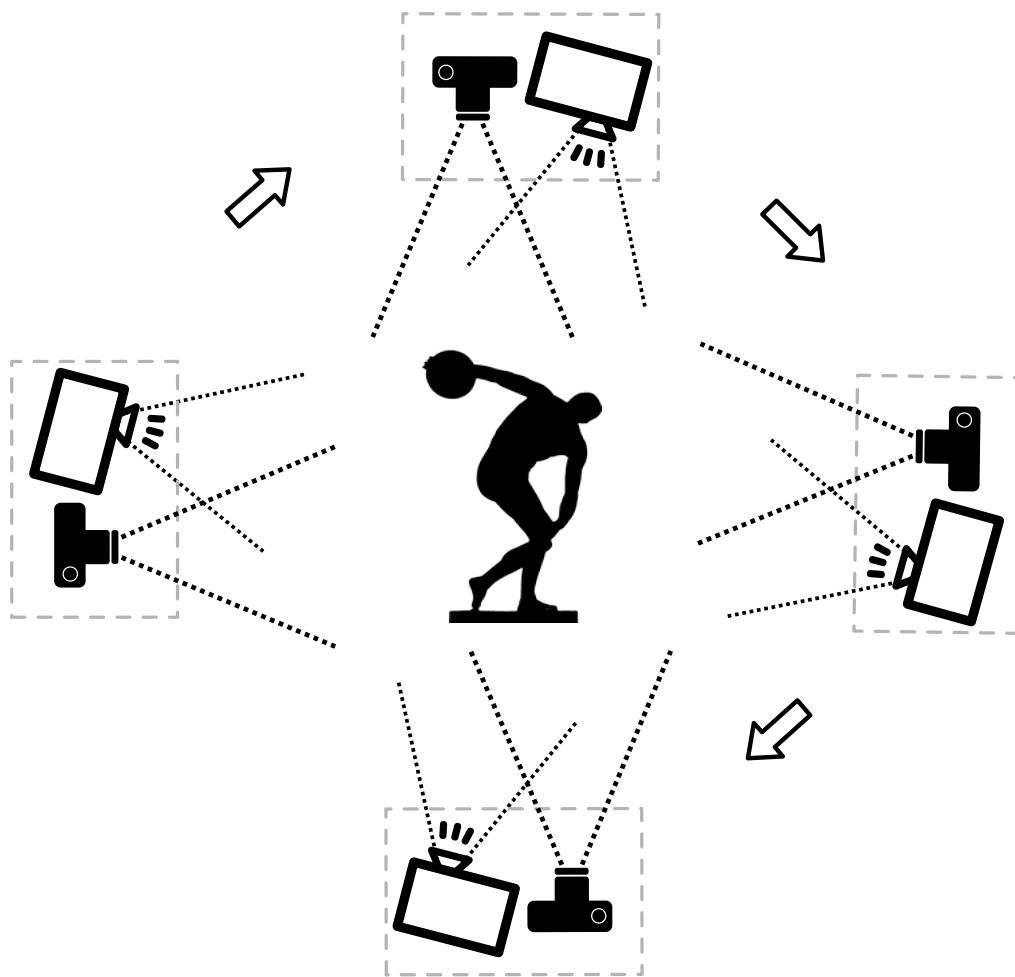


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Structured Light Scanning

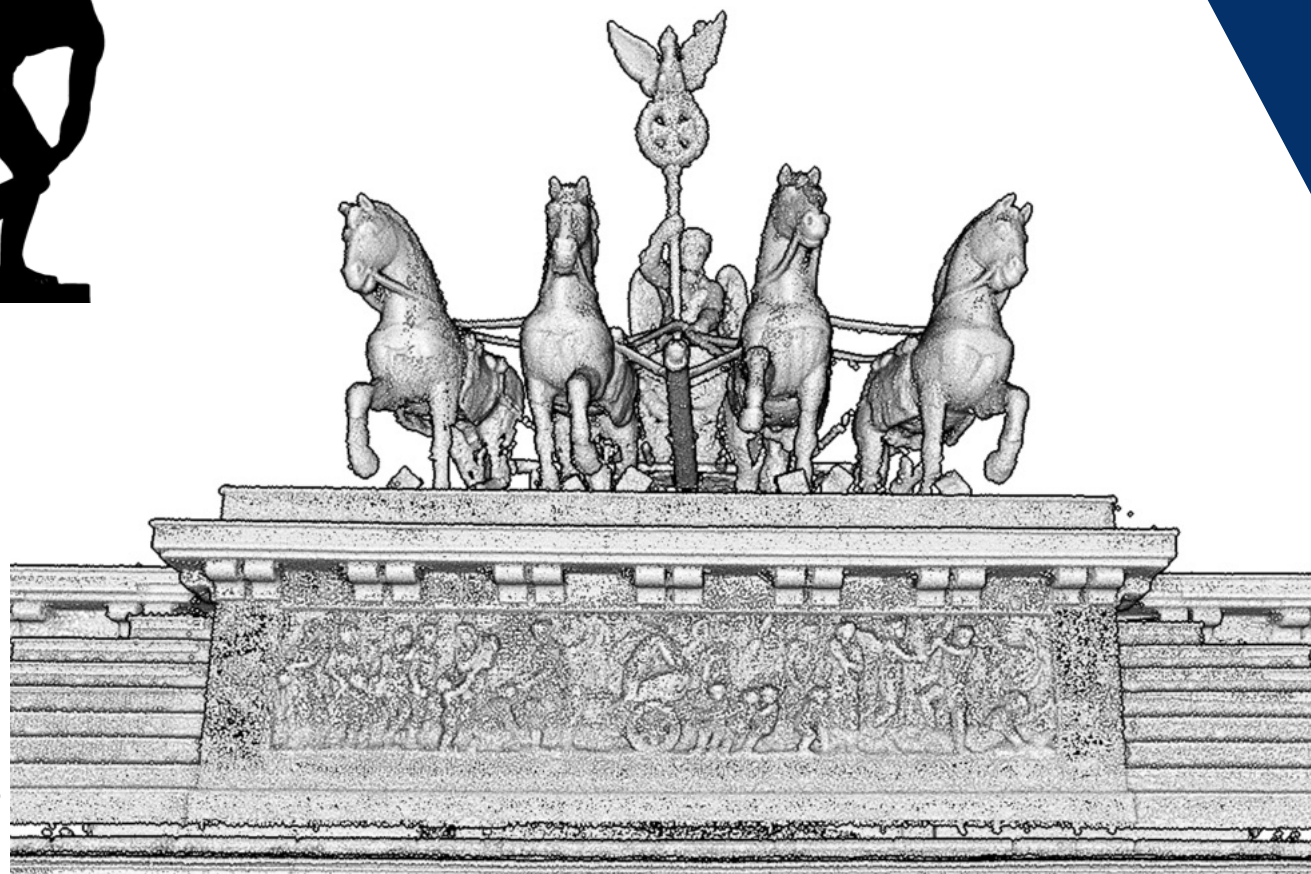
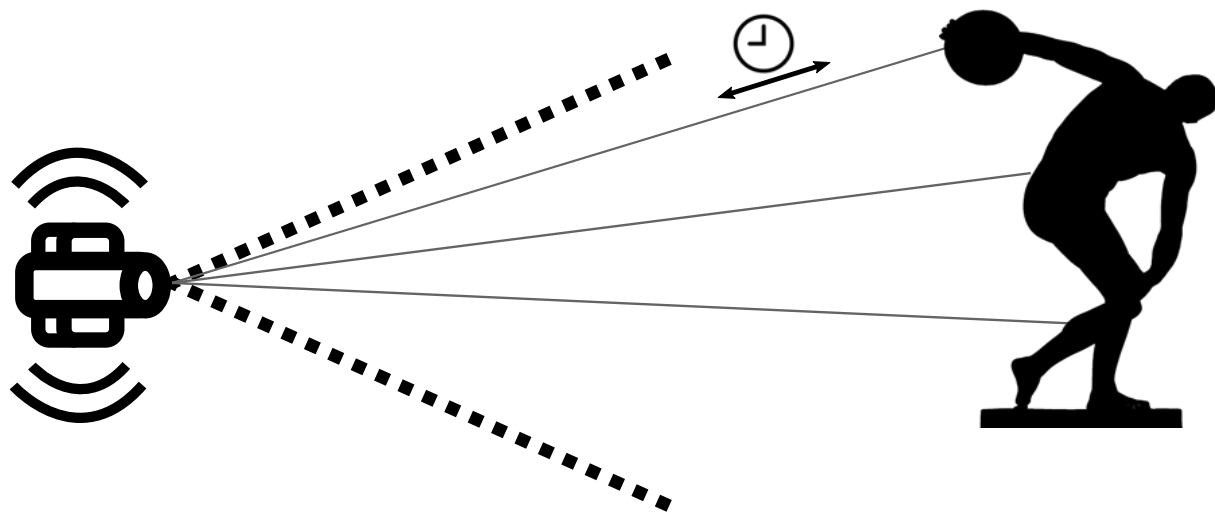


Kurth, Lange, 'Auto-Calibration for Dynamic Multi-Projection Mapping'



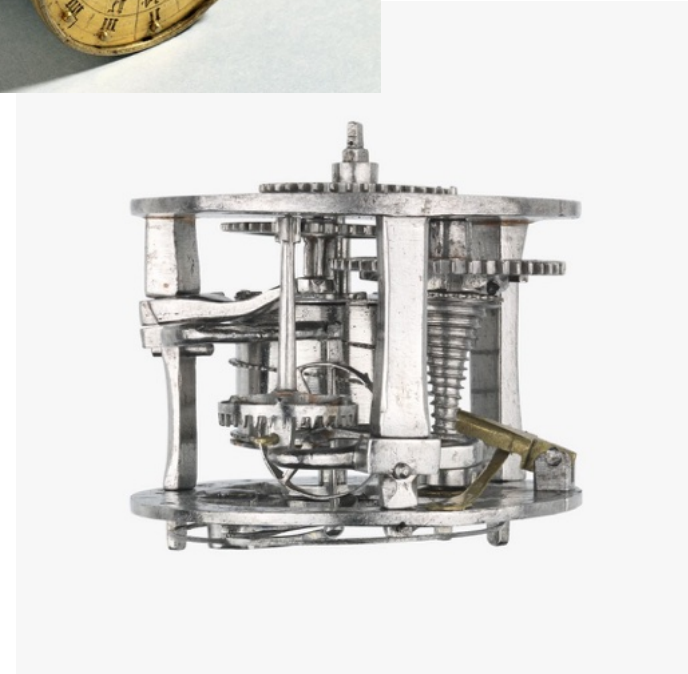
© Thomas Wolf, www.foto-tw.de, CC BY-SA 3.0

Laser Scanning - LiDaR



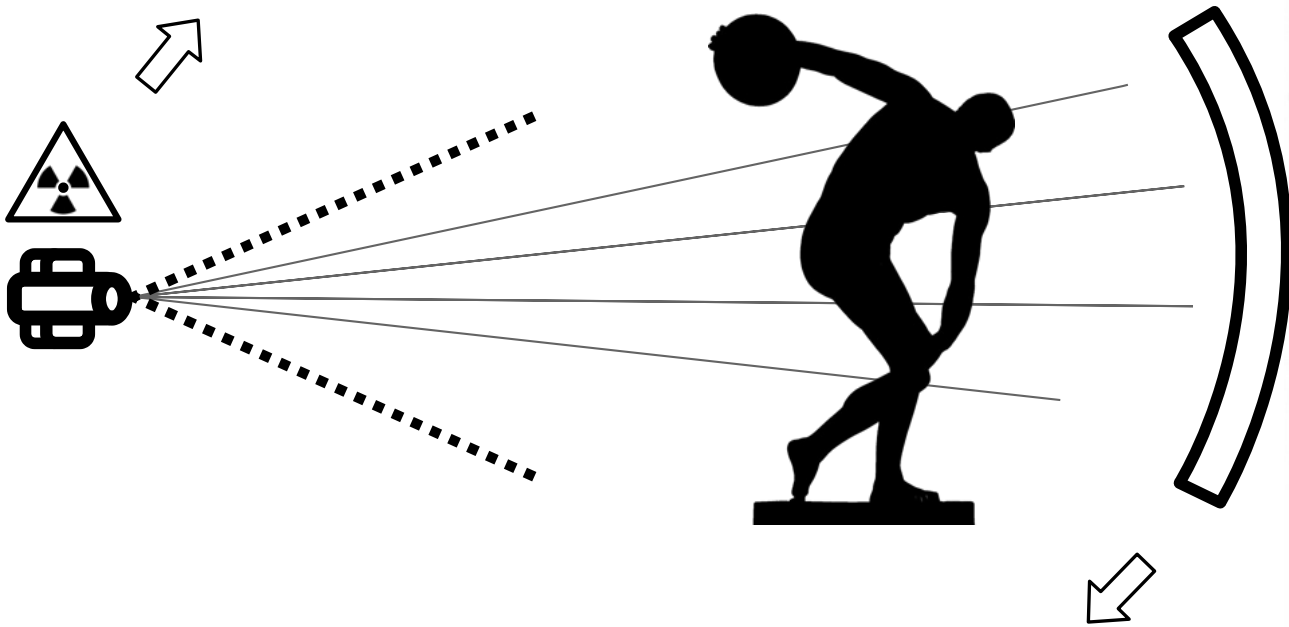


Photograph by Rama, Wikimedia Commons, CC BY-SA 2.0 FR



WI 1265 © Germanisches Nationalmuseum, Foto: Georg Janßen

X-ray Computed Tomography (CT)





3D

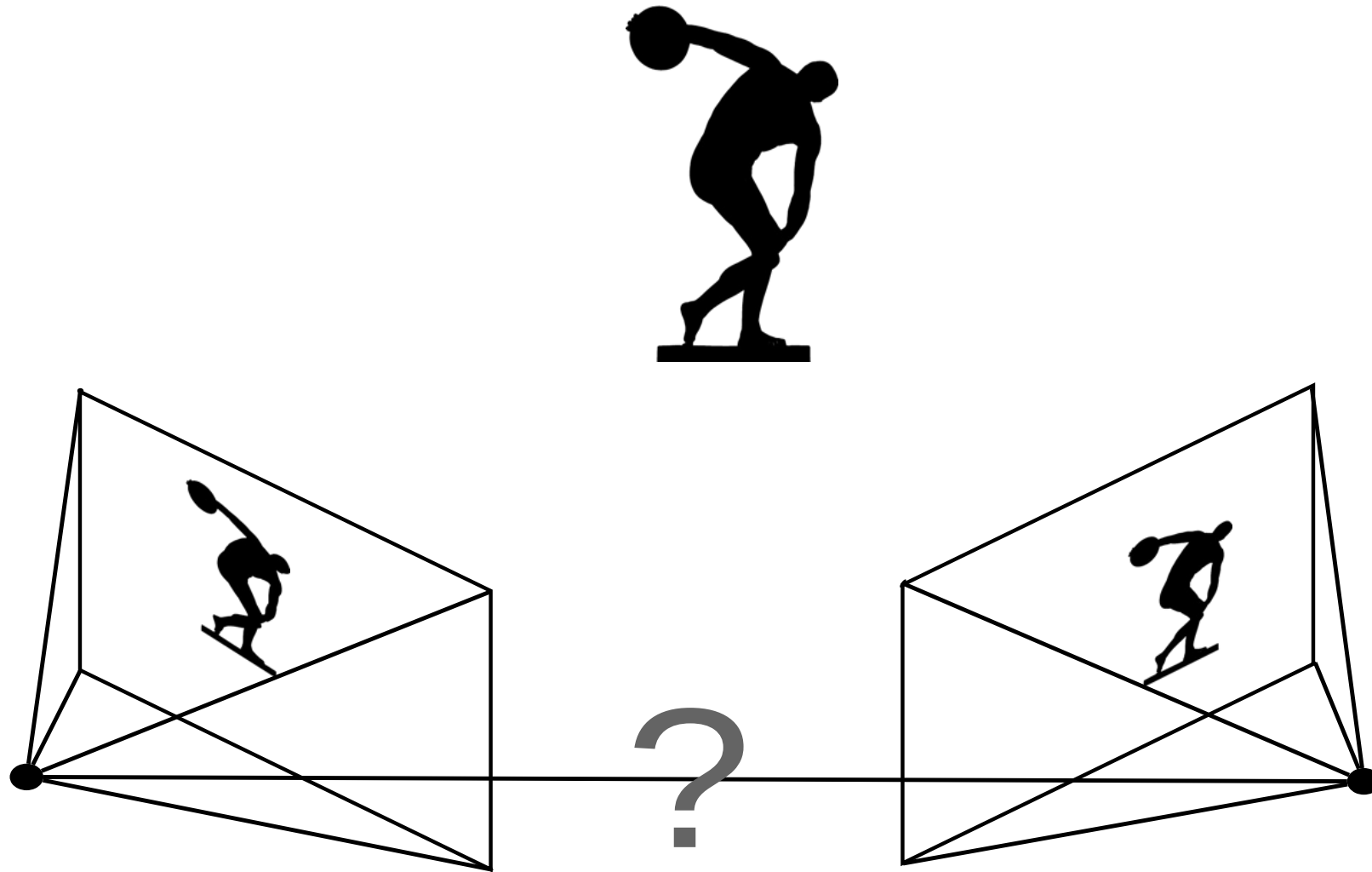
3D Daten

2D Bilddaten



?

Photogrammetrie



Photogrammetrie



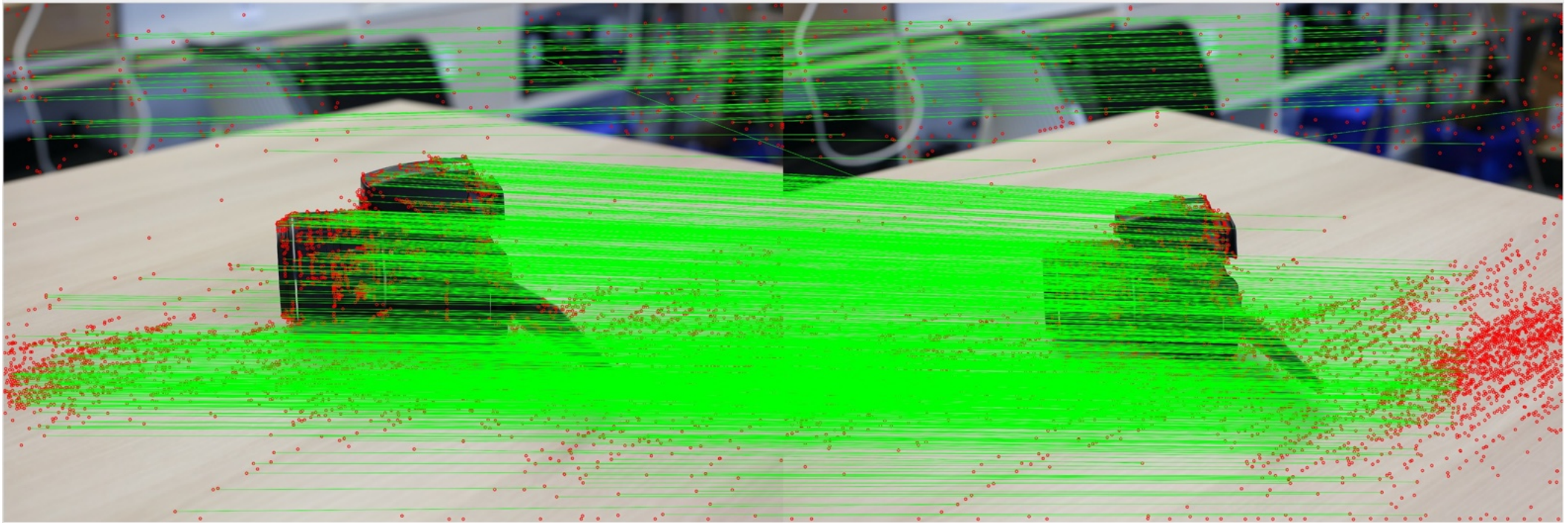
Photogrammetrie



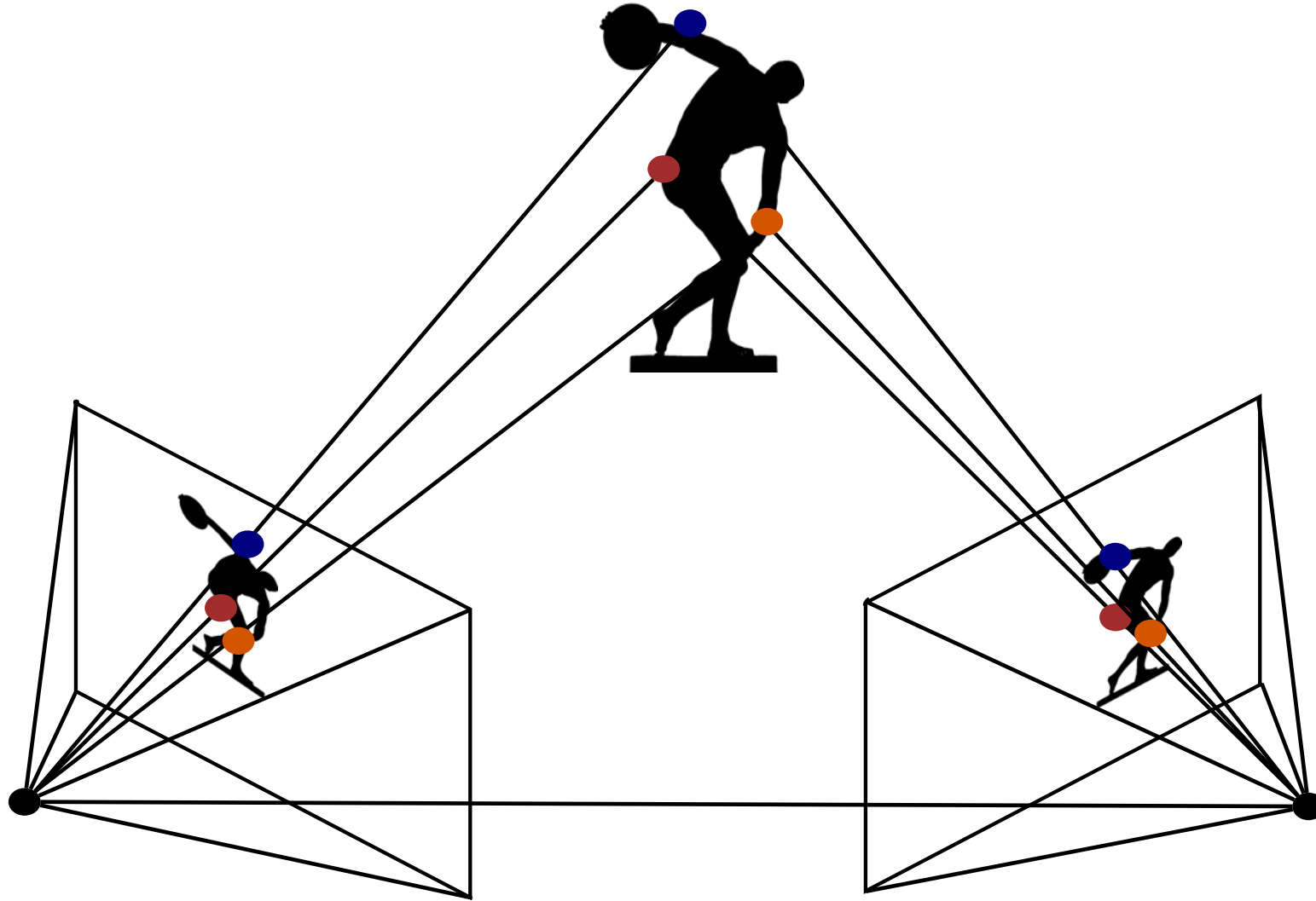
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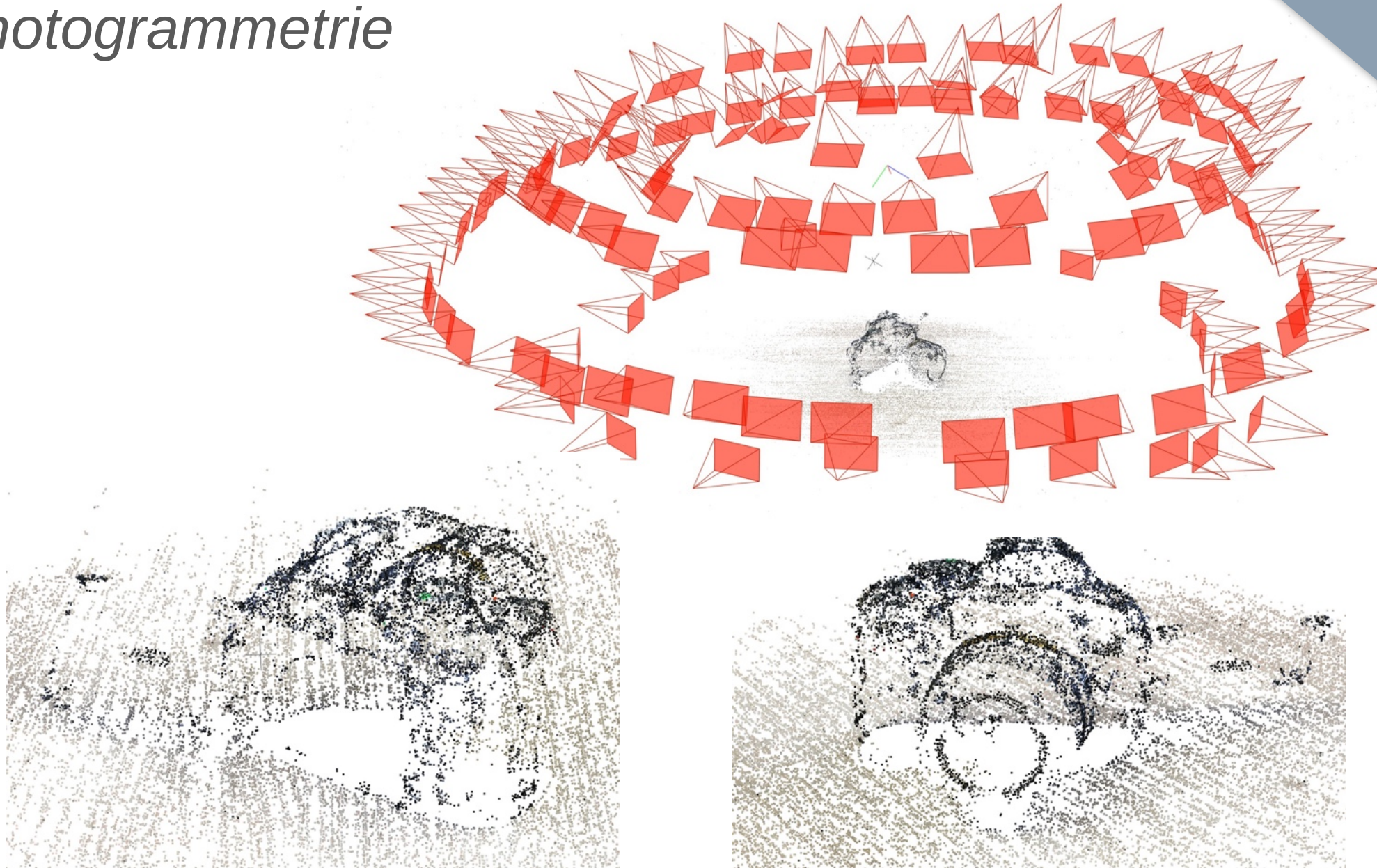
Photogrammetrie



Photogrammetrie



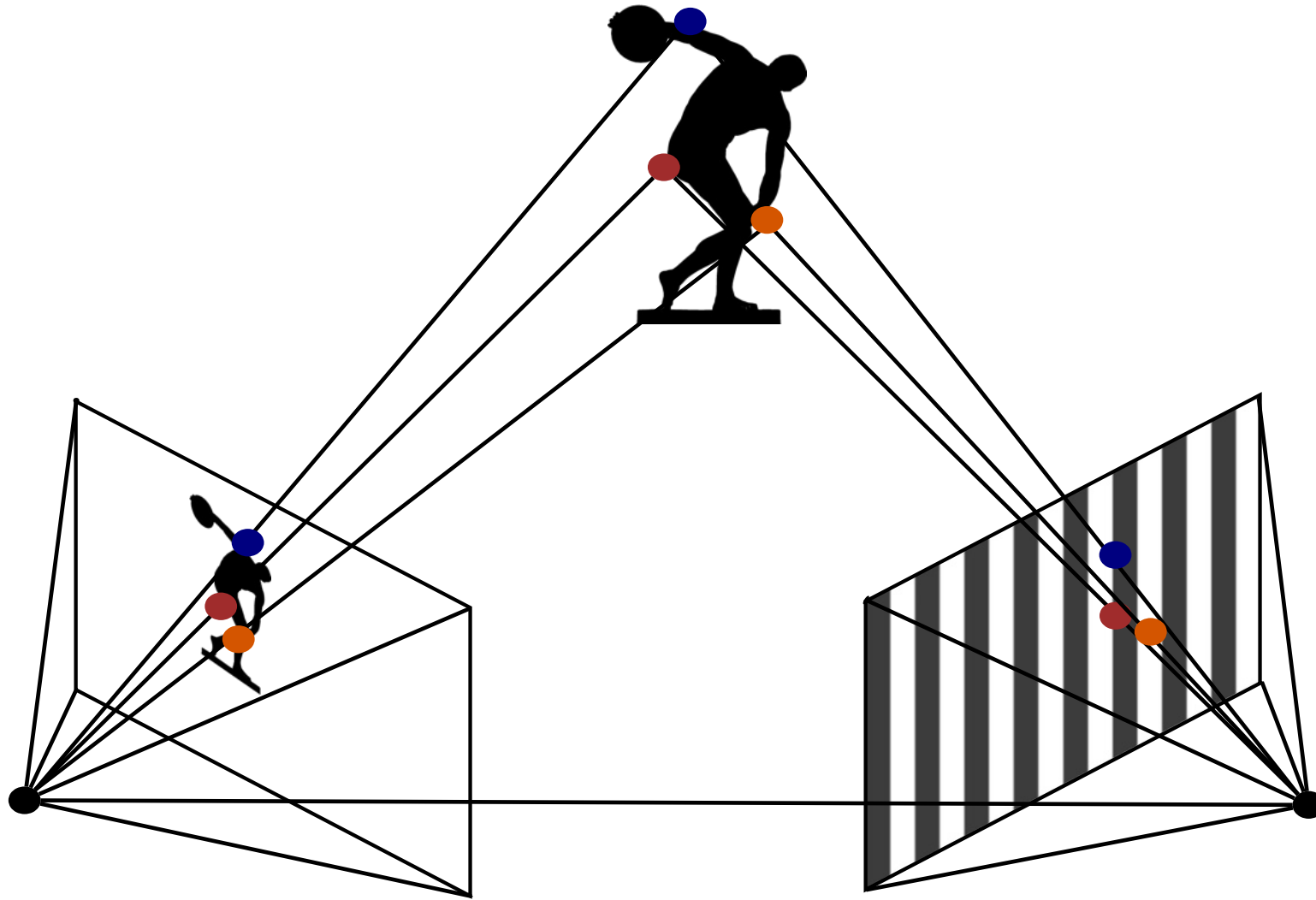
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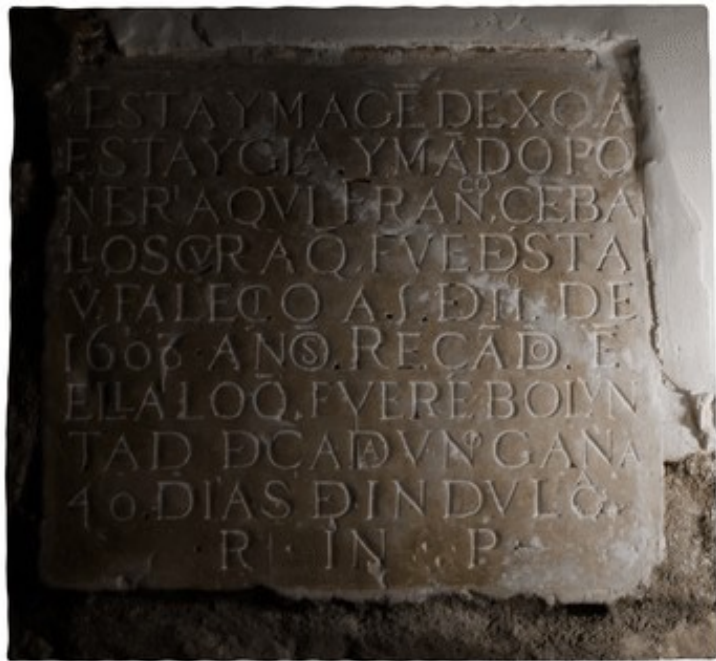


Photogrammetrie



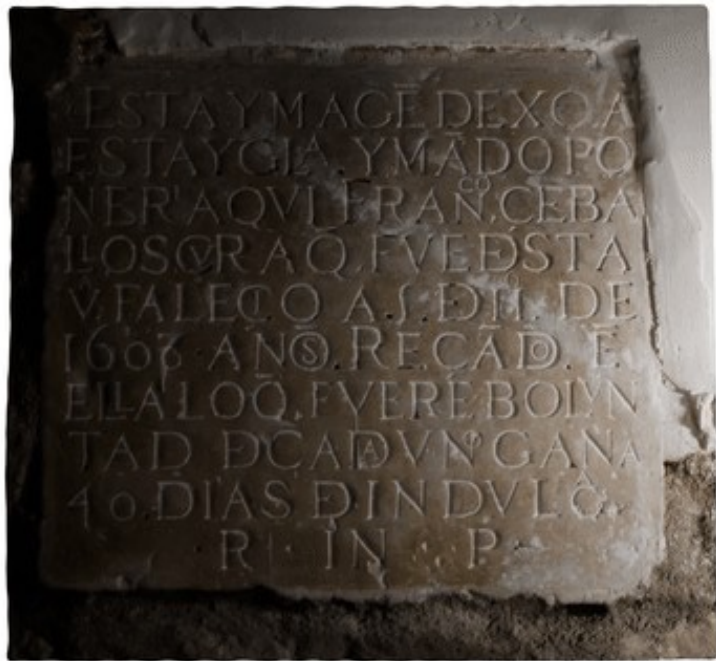
Structured Light Scanning



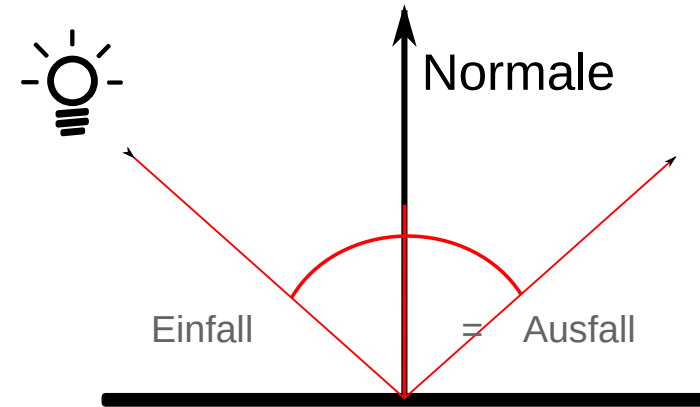


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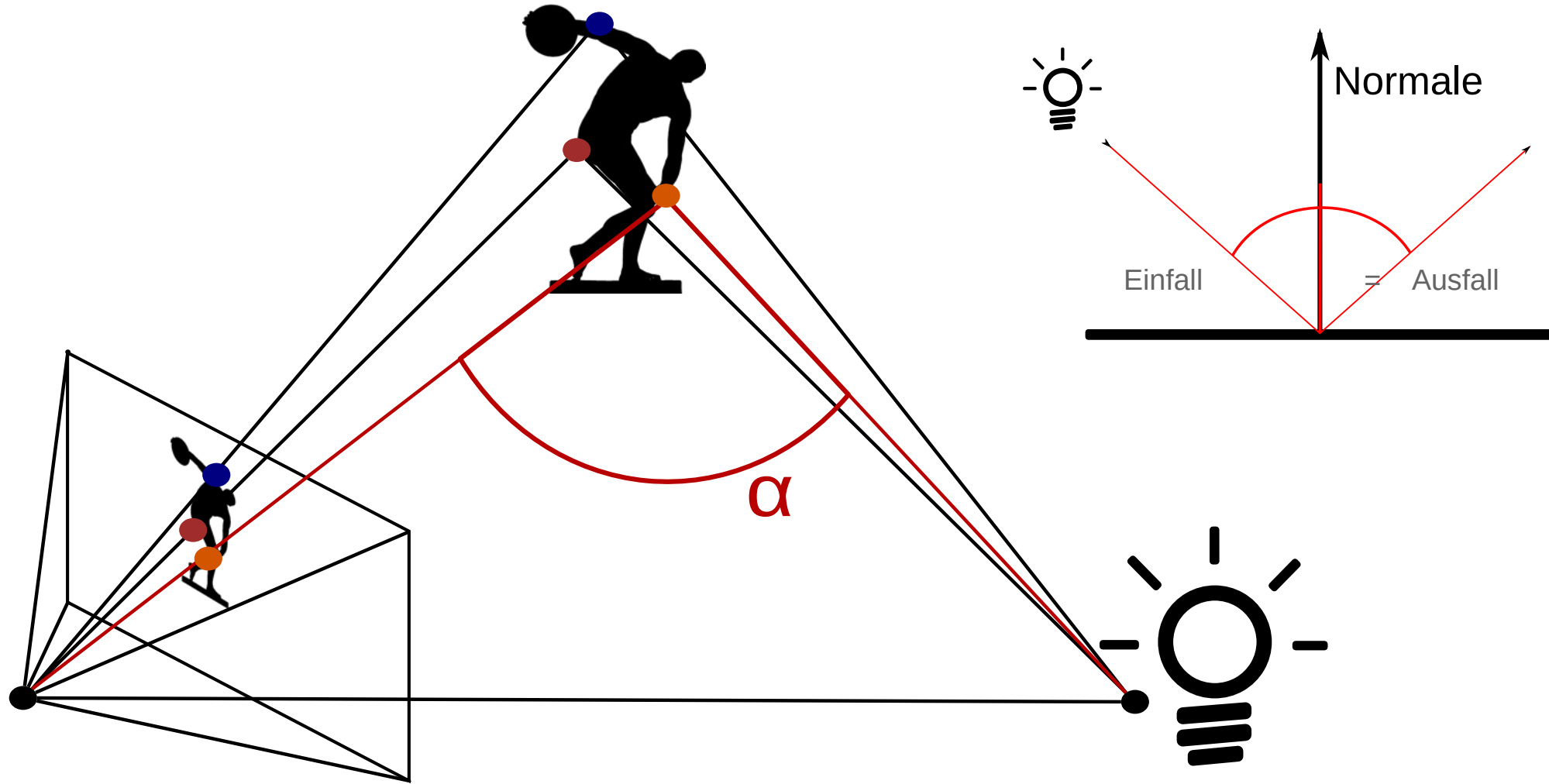
RTI

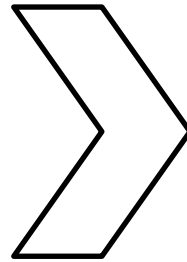
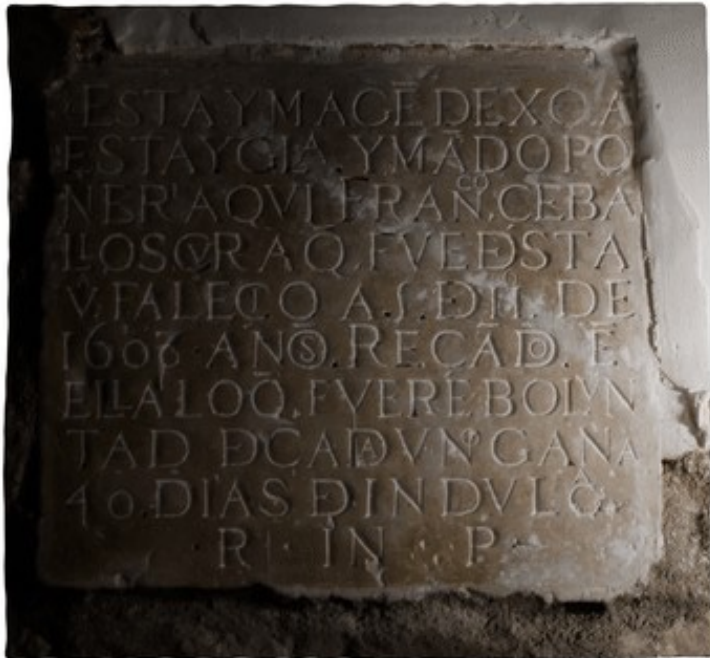


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RTI

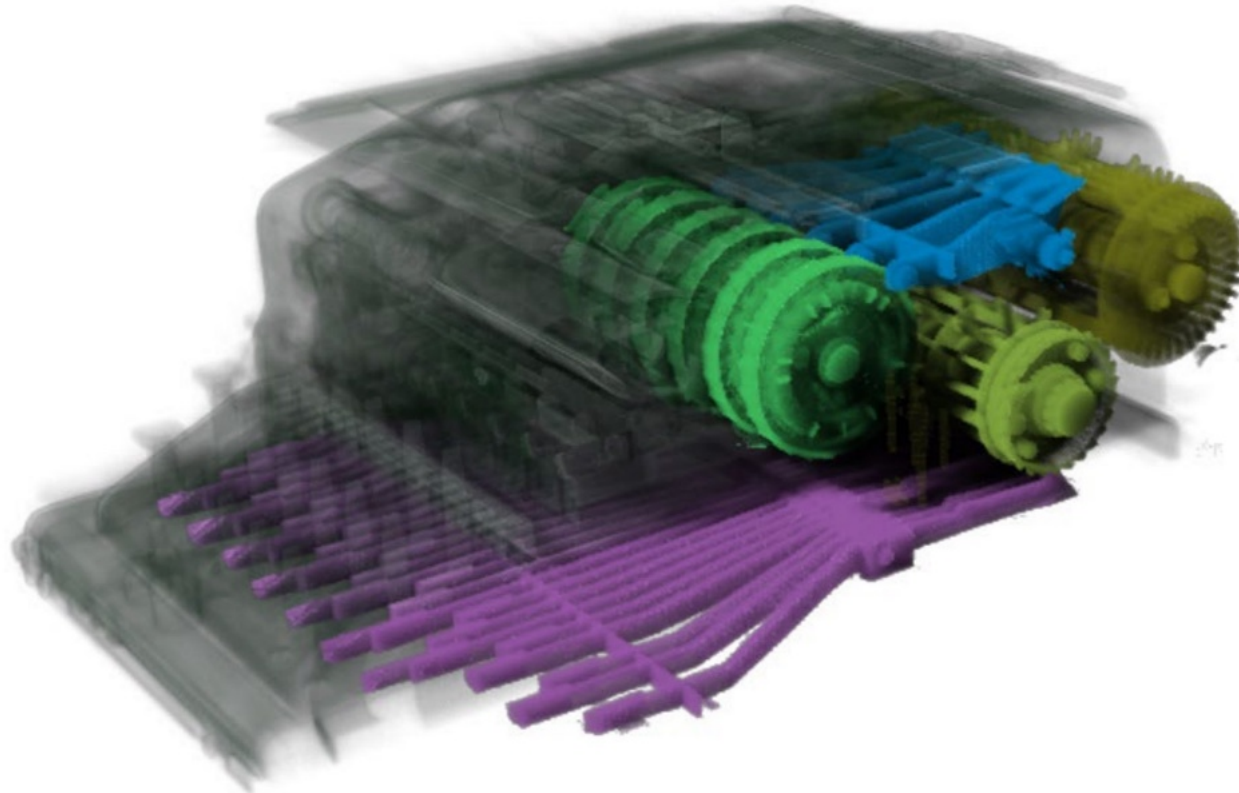






CyArk 2018: Brandenburg Gate - LiDAR - Terrestrial, Photogrammetry. Collected by CyArk, Institute for Photogrammetry. Distributed by Open Heritage 3D. <https://doi.org/10.26301/d51v-fq77>

CT



Göggerle, M. (2023). 3D-Cipher – 3D-CT digitalisation of historical cipher machines (Version 1). Zenodo. <https://doi.org/10.5281/zenodo.8113300>

	<i>Einstiegs- Aufwand</i>	<i>Vor-/Nachteile</i>	<i>'klassischer' Output</i>
<i>Photogrammetrie</i>	<i>niedrig</i>	<i>+ gute Texturen, mobil - Reflektionen</i>	<i>Mesh+Textur</i>
<i>RTI</i>	<i>niedrig</i>	<i>+ hohes Detail, insb Materialeig. - nur für flache '2D' Objekte</i>	<i>Normalen+Textur</i>
<i>Structured Light Scan</i>	<i>mittel</i>	<i>+ gute Geometrie, mobil - keine/schlechte Texturen</i>	<i>Mesh</i>
<i>LiDaR / Laser Scan</i>	<i>hoch</i>	<i>+ gute Geometrie für sehr große Objekte - keine Texturen, teuer</i>	<i>Punktwolke</i>
<i>Röntgen CT</i>	<i>sehr hoch</i>	<i>+ 'Innenansicht' - sehr teuer</i>	<i>Voxel-Gitter</i>

Expertenbeiträge

SODa Kick-Offs

Vergangene Termine: <https://sammlungen.io/de/archive>

01.07. 10:00 Uhr: **Restaurierungs- und Konservierungsdokumentation**

04.07. 10:00 Uhr: **Ethik & Recht**

08.07. 10:00 Uhr: **Analyse strukturierter Daten**

18.07. 10:00 Uhr: **Digitale Provenienzforschung**

14. - 16. Oktober: **SODa Barcamp** in Berlin



Wir freuen uns über

Feedback

Zum SODa-Projekt und den Kick-Offs

Bis zum nächsten Mal!

Danke für's Kommen!