

Mobile-based 3D reconstruction and XR visualization



Figures:

- Scanning application in use.
- 3D textured models of captured cultural heritage objects, plus their reprojection into real space using Augmented Reality

RIFERIMENTI E LINK

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DESCRIPTION

Distributed processing architecture enables anyone to turn real-world objects into digital 3D virtual models. No specific hardware required, or skills, just a mobile phone and an Internet connection (offline caching also possible). Users receive a real-time 3D-model on their screen showing reconstruction progress. Cloud-based, so people can collaboratively scan the same object. 3D objects can be visualised in AR or VR.

SPECIFICATIONS

- Mobile app (Android, but iOS is also possible);
- Reconstruction server (PC or Cloud);
- Tested with 10 users simultaneously scanning an object/building
- First results appear in <1min, Final model in ~10min
- Uses standardised 3D formats, e.g. obj

ADVANTAGES & APPLICATIONS

- Product Design: Fast virtual-prototyping, 3D copy&print
- Entertainment: Content generation for Gaming, Social media, Telepresence
- Cultural Heritage: Anyone can preserve our heritage anywhere.
- Education and training: Create new teaching media

STATUS

TRL 4/5 - technology validated in relevant environment (industrially relevant environment in the case of key enabling technologies)