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Introduction

The 3D Digitization of cultural heritage (CH) objects in its main role – documenting and dissemination, is becoming mature and increasingly used by CH institutions. However, Lab 3D's experience shows that there are still a number of (not necessarily already recognized) problems and applications that can arise when utilizing that technology. Below are examples of chosen use-cases that Lab 3D has faced over the 8 years of dealing with 3D scanning in the CH area.

"Classical" digitization of CH small/middle size objects

Purpose: documenting and dissemination. Digitization place: dedicated lab. station and in-situ at the exhibition. Objects: various objects from museums in Uzbekistan, Kazakhstan and Kyrgyzstan. Result: 3D models for documenting and presenting in the web.



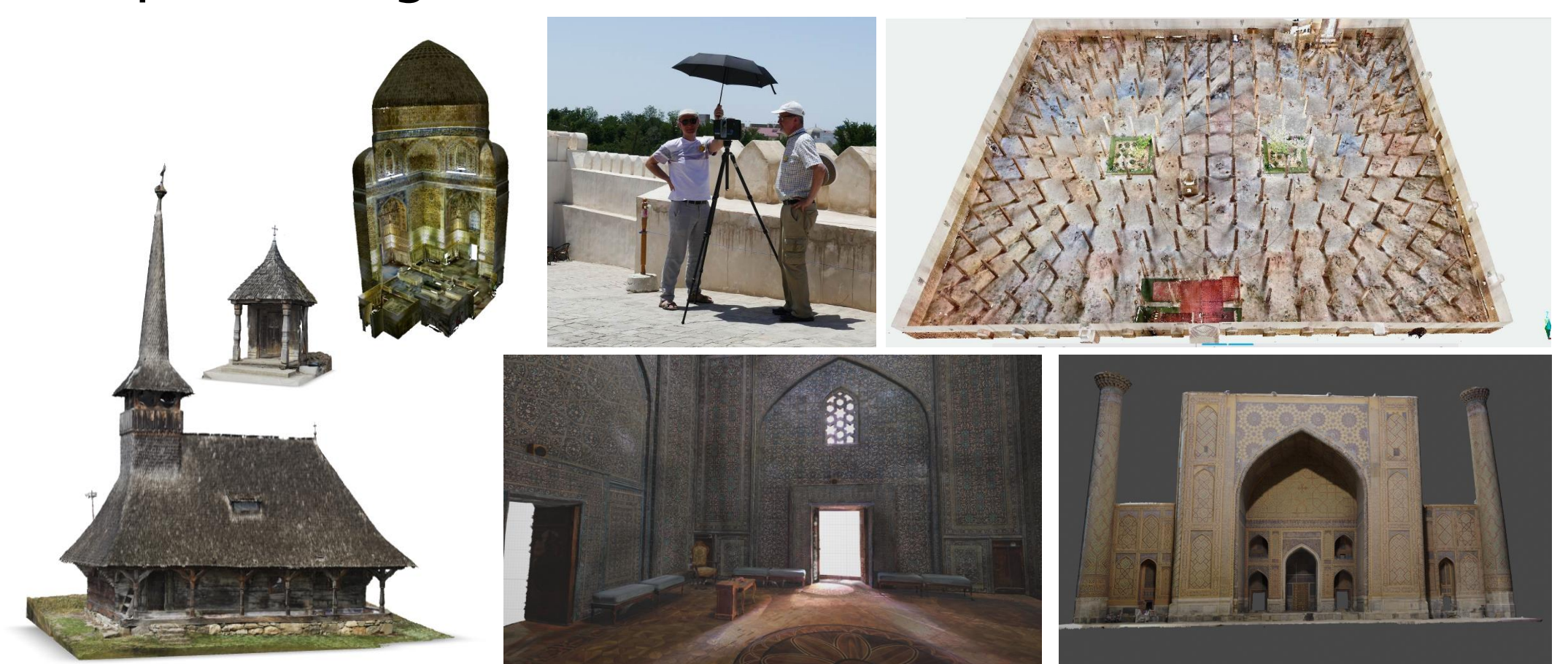
Digitization of the "Tigers" mosaic in the Registan

Purpose: Aid in the reconstruction and renovation of the mosaic. Problem: It is not possible to trace it manually – the mosaic is at a considerable height and covered with a metal mesh to protect tourists against falling fragments. Method: 3D TLS scanning + photo. Result: an 1:1 19m x 10m 55dpi metric image of the "Tigers" mosaic at the Sher-Dor Madrasah in the Registan complex, Samarkand, Uzbekistan.



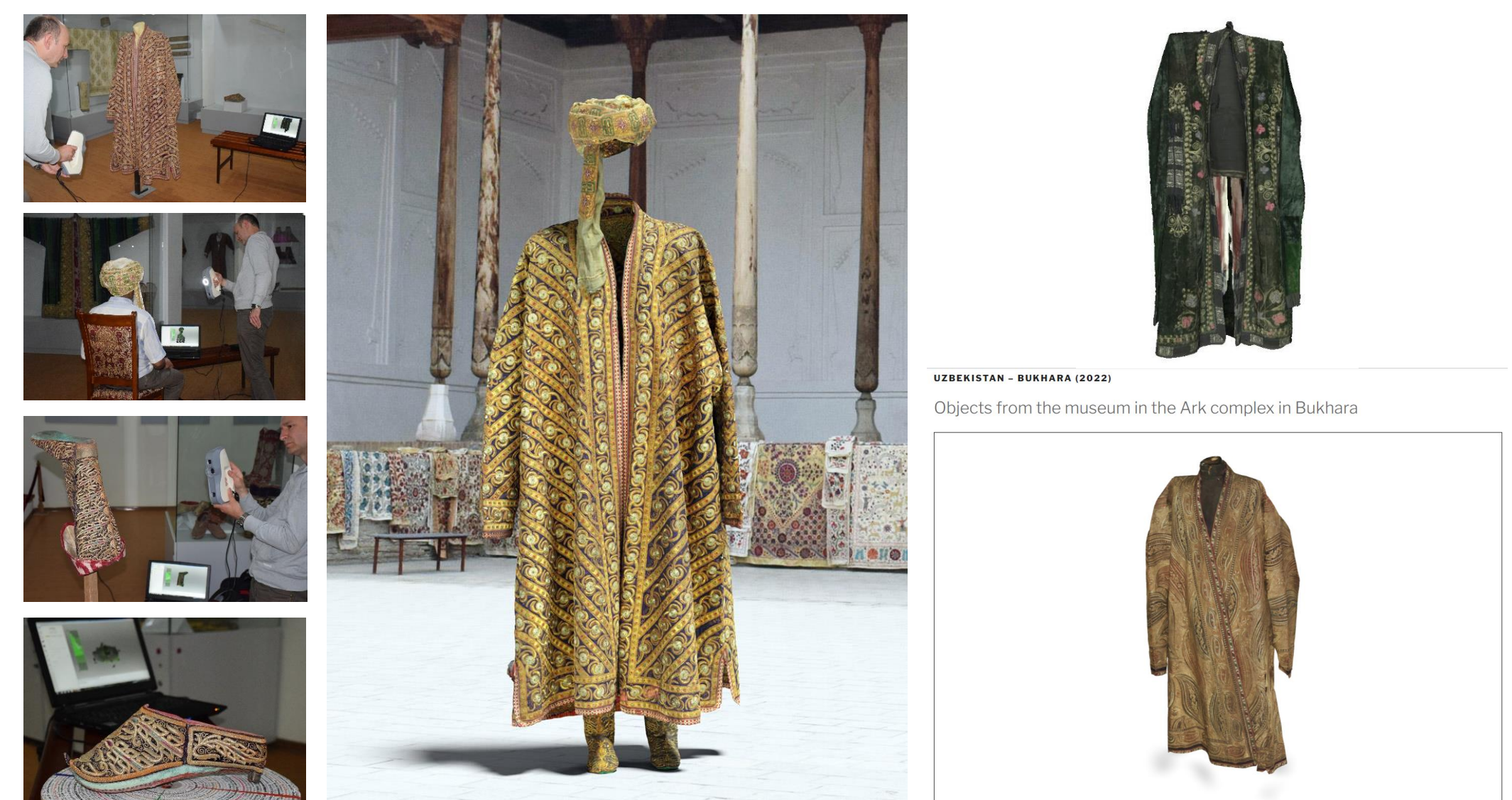
Digitization of architectural CH objects

Purpose: documenting and dissemination. Problems: limited access, challenging shape, tourists, huge data size, etc. Objects: Various Timurid-era buildings in Central Asia, wooden religious buildings from the Carpathian region. Result: 3D models for documenting and presenting in the web.



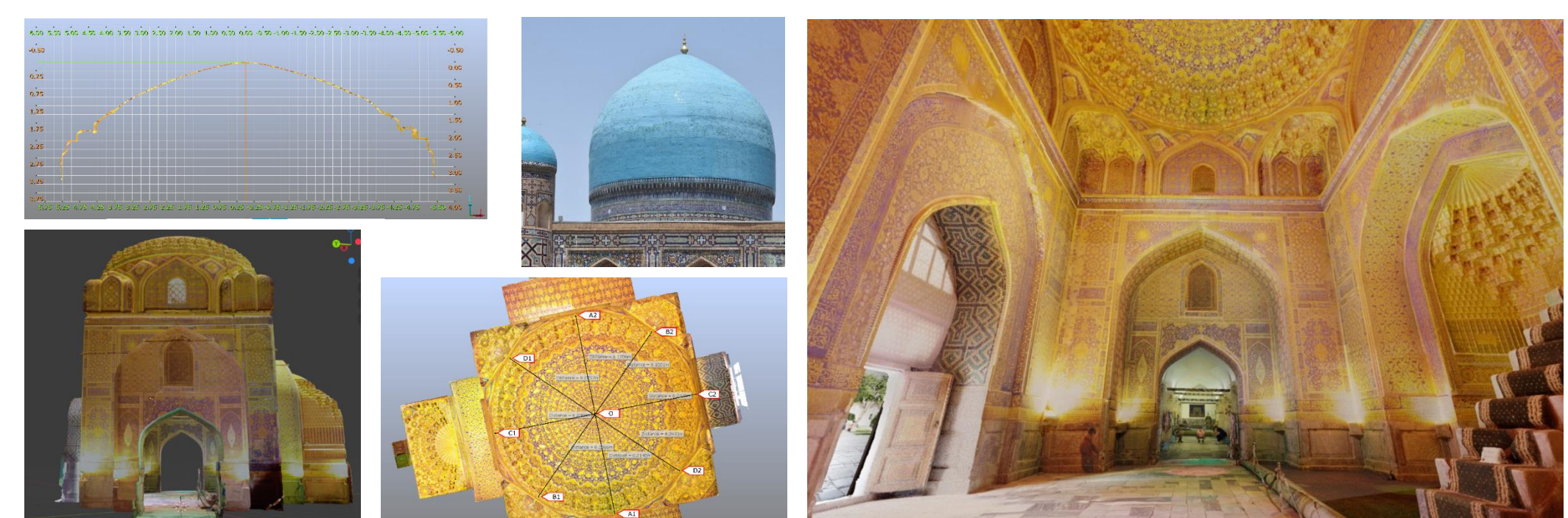
Digitization of clothes

Purpose: documenting and dissemination. Problem: changing shape, need to look natural. Objects: various clothes of noble's from middle ages Asia. Result: 3D models for documenting and presenting in the web.



Leaning Dome of the Golden Mosque

Purpose: Confirm and measure the scale of dome tilt of the Golden Mosque of the Tillya-Kori Madrasah in Samarkand. Problem: The dome is located at a considerable height in a building permanently open to tourists. Method: repeatable TLS scanning in 2018–2023. Result: confirmed tilting of the dome and slowing down of the process after protective works were undertaken.



For the websites of Lab 3D and
it's projects please scan QR codes

