THE ETRUSCANNING PROJECT

Virtual exploration of the Regolini – Galassi tomb using natural interaction interfaces

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Consiglio Nazionale delle Ricerche









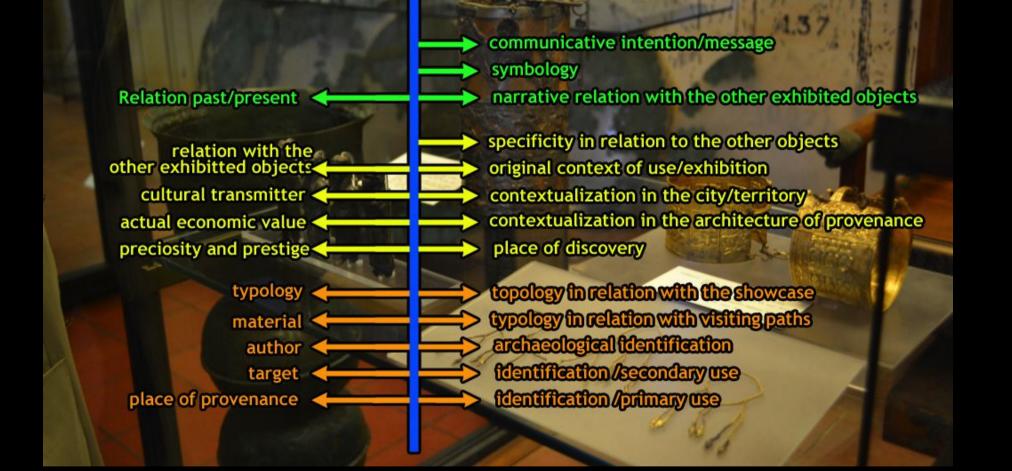


The funerary goods from this tomb are decontexualized in the Vatican Museum: analytic organization of the exhibition that enhances only in their formal aspect, rather then their intrinsic cultural meaning.



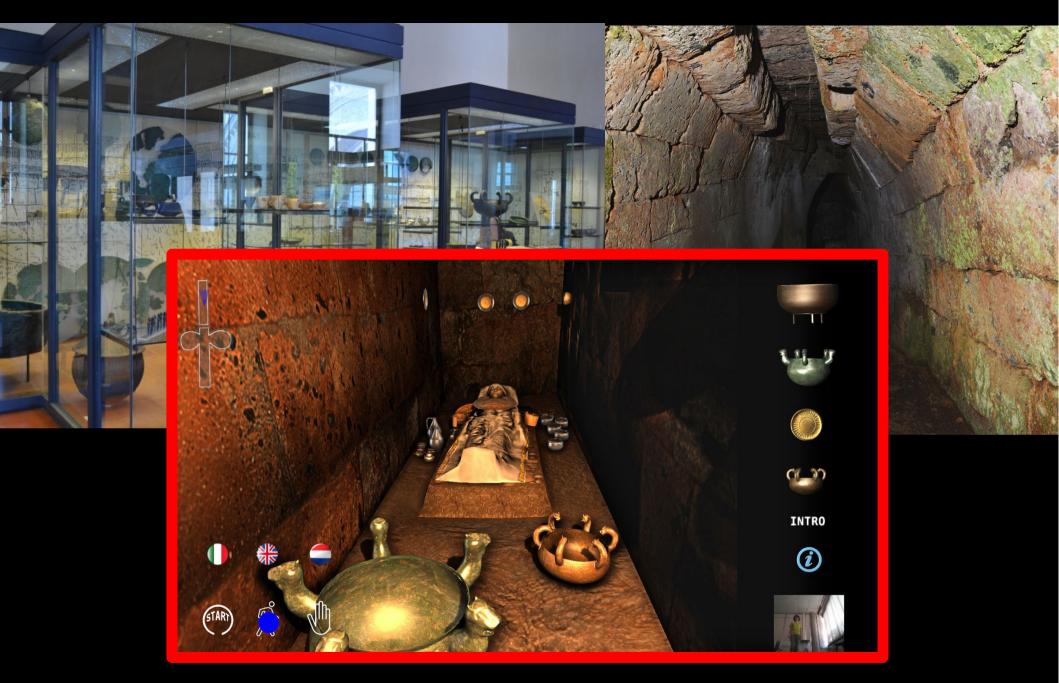
The existing tomb in Cerveteri is empty and not always open to public.

KEY CONCEPT



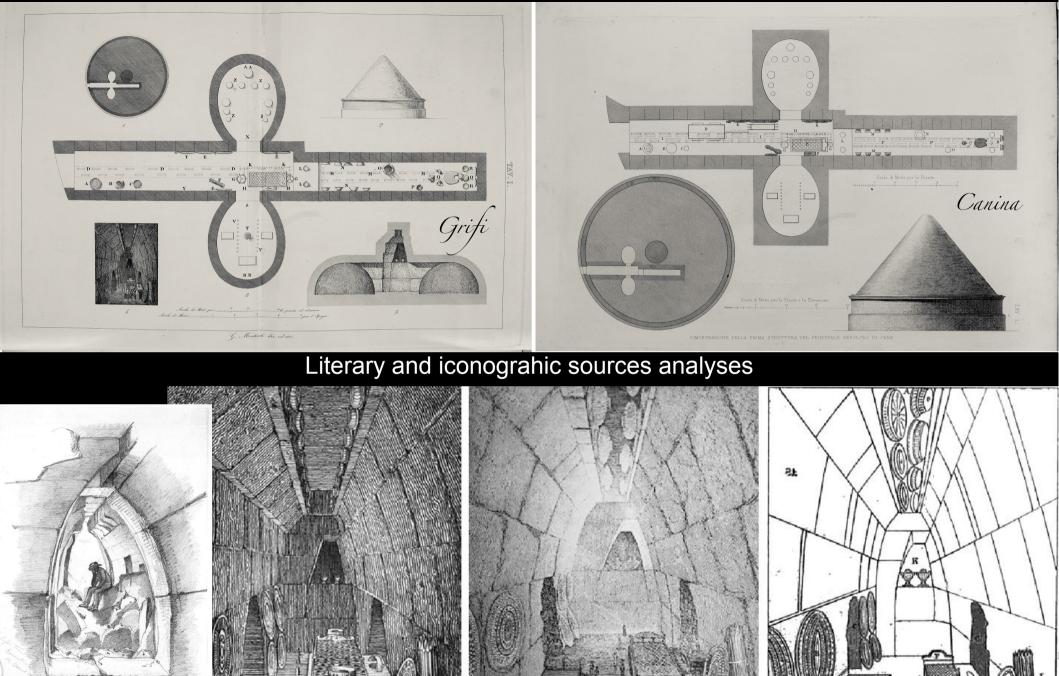
By making a virtual reconstructions we can re-create the original context of the cultural heritage, multiplying its communicative potentialities and reactivating its relations in the space-time

BETTER INTERCHANGE BETWEEN THE PUBLIC AND THE CH



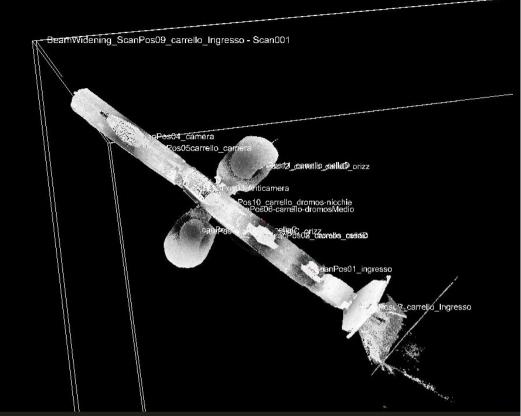
Re-creation of the Regolini Galassi tomb at the moment it was closed, half of the VII century BC

3D models: a tool for interpretation and final communication



The Antechamber: Grifi (1841), Canina (1838), Hamilton (1841)





3D documentation of the tomb through TOF laser scanner (Riegl z390i)

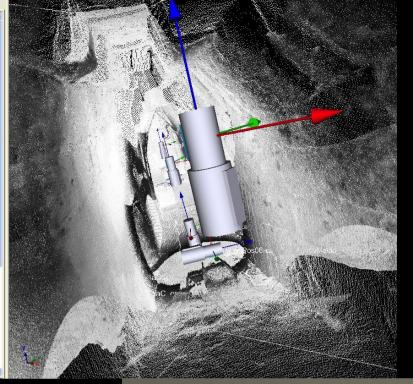
Resolution: 6 mm Accuracy: 2-3 mm

Mesh model: 8 million polygons

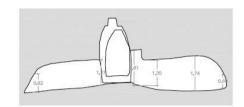
Decimated model: about 1000 polygons + normal maps



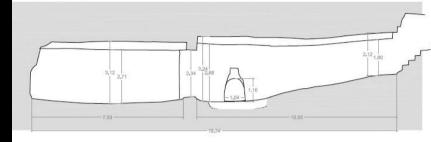
Project manager Readout (PRCS) Regolini_Galassi_15-6-2011_registered02 CALIBRATIONS CANS ScanPos01_ingresso
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 ScanPos08_carrello_cellaD 🖶 🎘 ScanPos09_carrello_ingresso 🎕 🗉 🎘 ScanPos14_carrello_cellaC_orizz 🎕 🗄 🚴 ScanPos15_carrello_cellaC 🍓 🗄 🌺 ScanPos10_carrello_dromos-nicchie 🚳 ScanPos11_carrello_cellaD
 ScanPos12_carrello_cellaD
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BeamWidening_ScanPos01_ingresso - Scan001 (2) 👼 ScanPos01_ingresso - Scan001 👼 ScanPos03-Anticamera - Scan001 👼 BeamWidening_ScanPos04_camera - Scan001 ScanPos04 camera - Scan001 BeamWidening_ScanPos05carrello_camera - Scan001 ScanPosUbcarrello_camera - ScanUUI
 BeamWidening_ScanPosO6-carrello-dromosMedio - Scan001
 ScanPos06-carrello-dromosMedio - Scan001
 BeamWidening_ScanPos07_carrello_cellaC - Scan001 ScanPos07_carrello_cellaC - Scan001 BeamWidening ScanPos08 carrello cellaD - Scan001 ScanPos08 carrello cellaD - Scan001 ScamPosU carrello_cella - ScanUU
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Tomba Regolini Galassi scala 1:100







Sezione_B



Data postprocessing



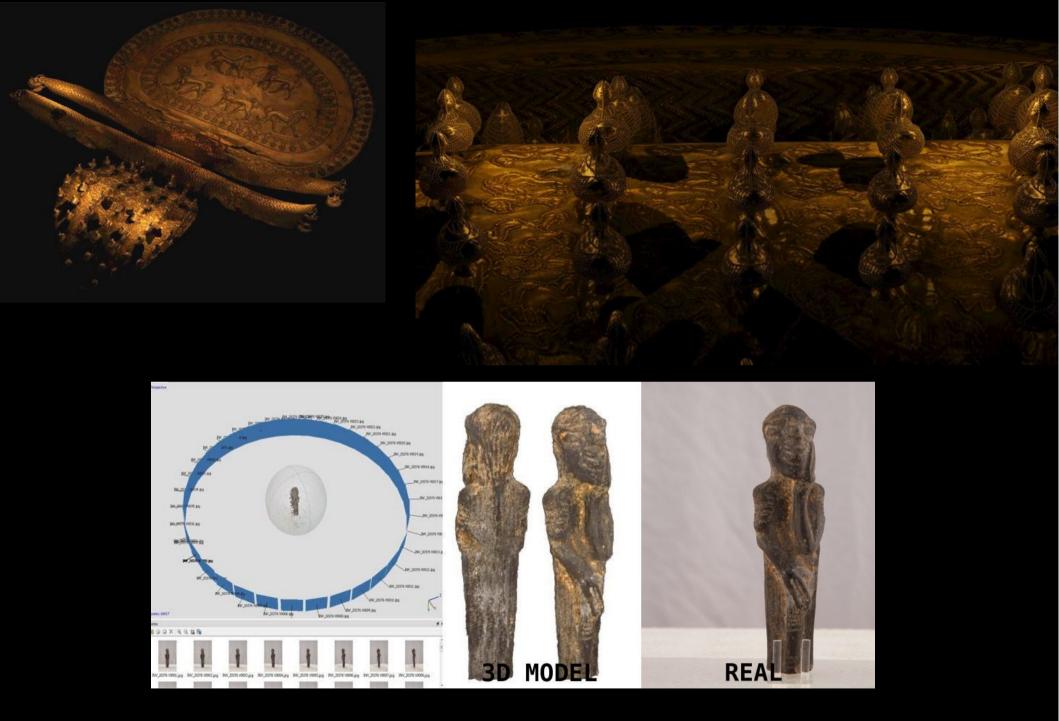
Outside of the tomb: tumulus suggested by Canina and actual entrance



Evocative virtual reconstruction of the original tumulus

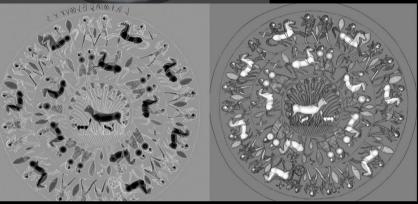


Digital documentation of the objects in Vatican Museums



3D models obtained through photogrammetry techniques and manual modeling





Digital restoration

on the base of interpretation of fragments and typological similarities



EA.

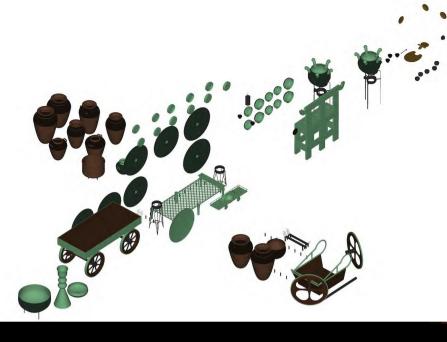
🖈 🖑 3D RESTORED

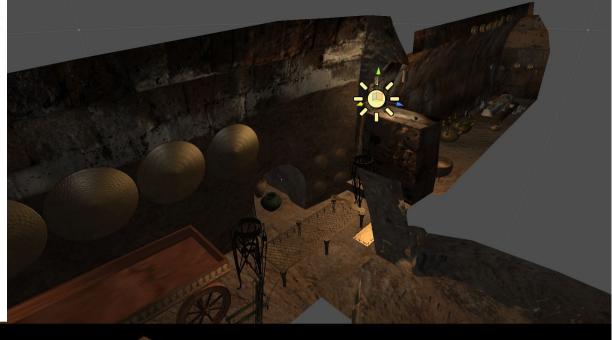


START



3D RESTORED perference





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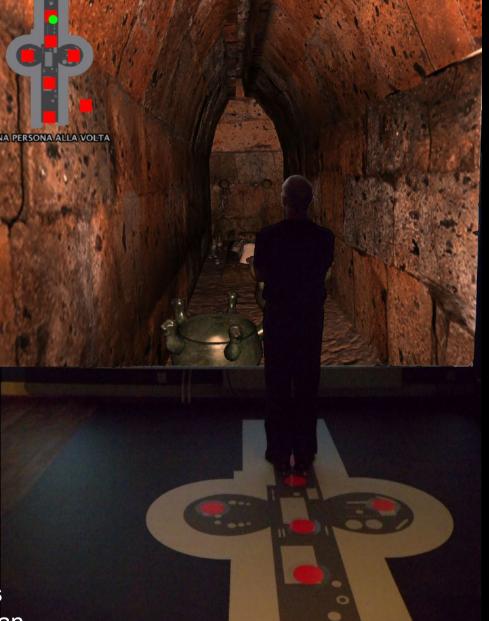
The virtual reconstruction of the tomb based on digital acquisition and historical sources



VR APPLICATION - 1° VERSION 2011

Interactive exploration of the story thorugh Natural interaction

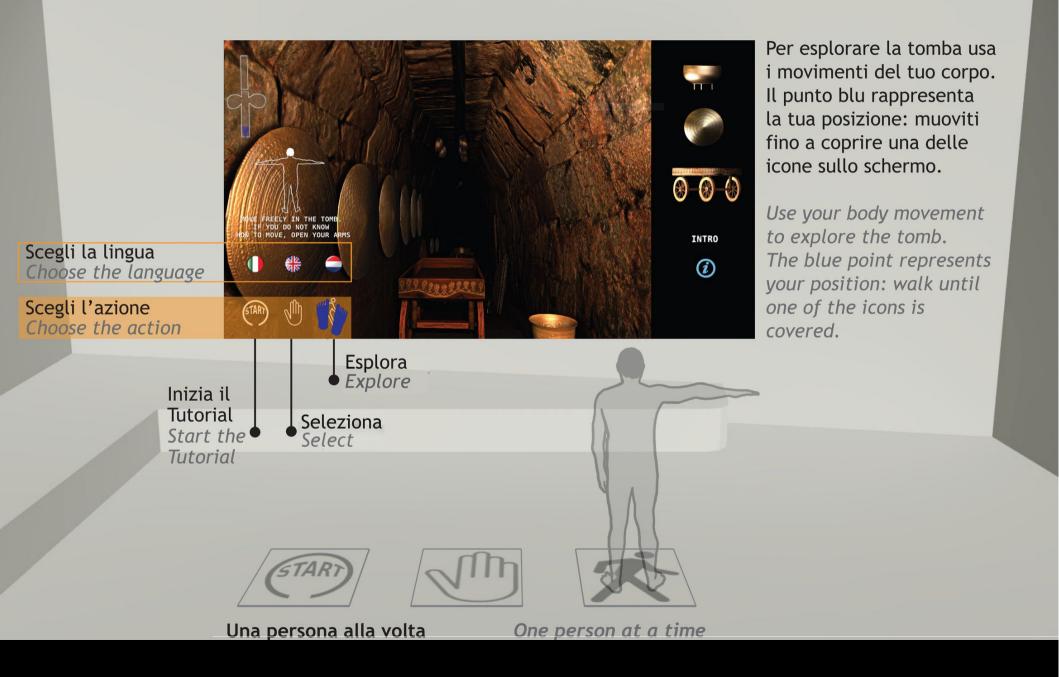
The public explore the virtual tomb, get near the artifacts, listen to narrative contents directly from the voices of the prestigious etruscan personages buried inside, the princess and the warrior, to which such precious objects were dedicated.



Allard Pierson Museum, Amsterdam, (October 2011-March 2012)

ETRUSCANNING 3D

VR APPLICATION – 2° final VERSION





Research oriented to the definition of a proper grammar of gestures

Tests on public to improve the system

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Science + Art + Technology = Communication

Evocative and sensorial immersion

Storytelling Illumination Camera behaviors Soundscape....

CNR ITABC

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