



Death in a digital world

The (re)construction of a Bronze Age tomb from Greece using
Virtual Reality

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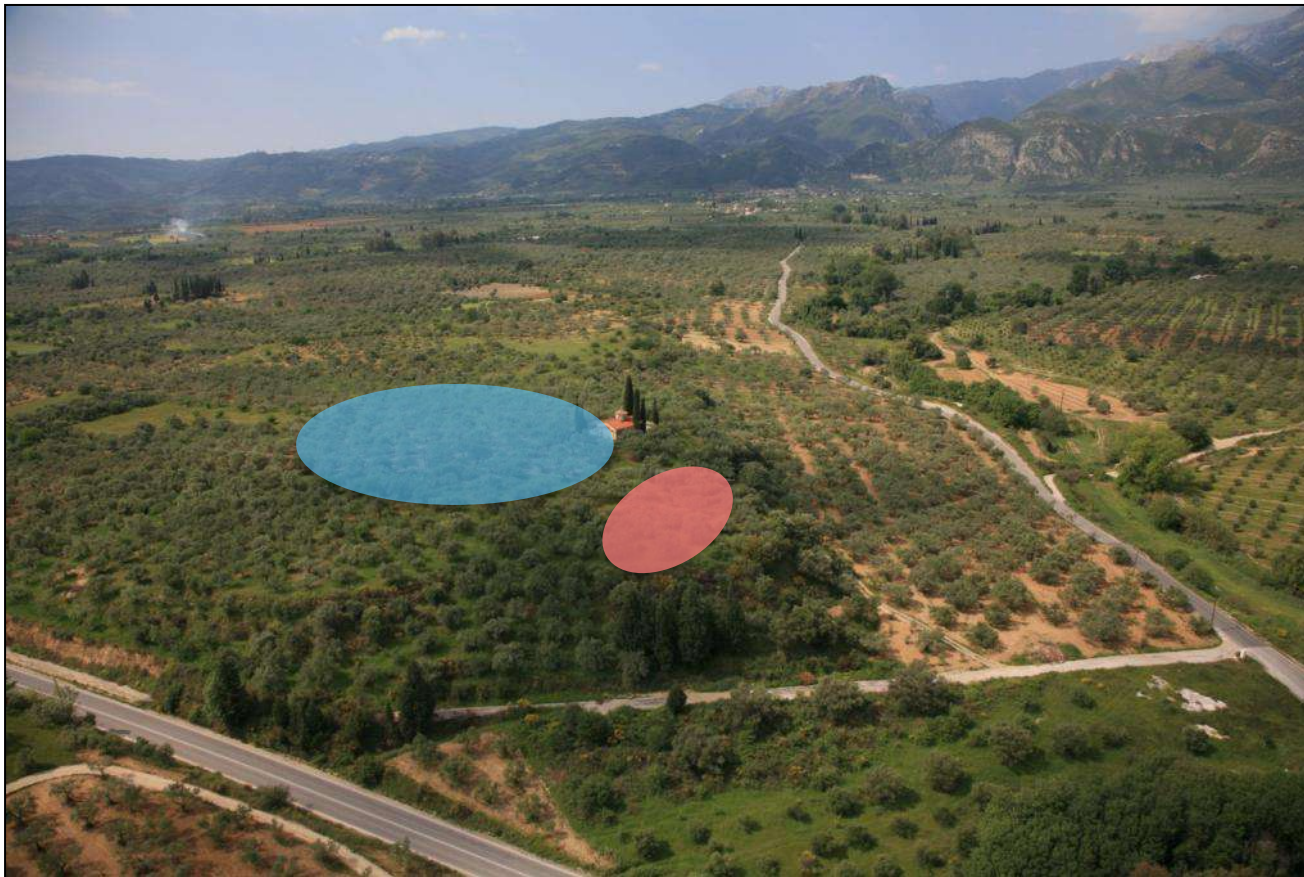


ATLIS WADILIOS 2015
02 SEP 2015
0 1m "WOODS" INHAB
LAYER 6-7
4 N





Ayios Vasileios



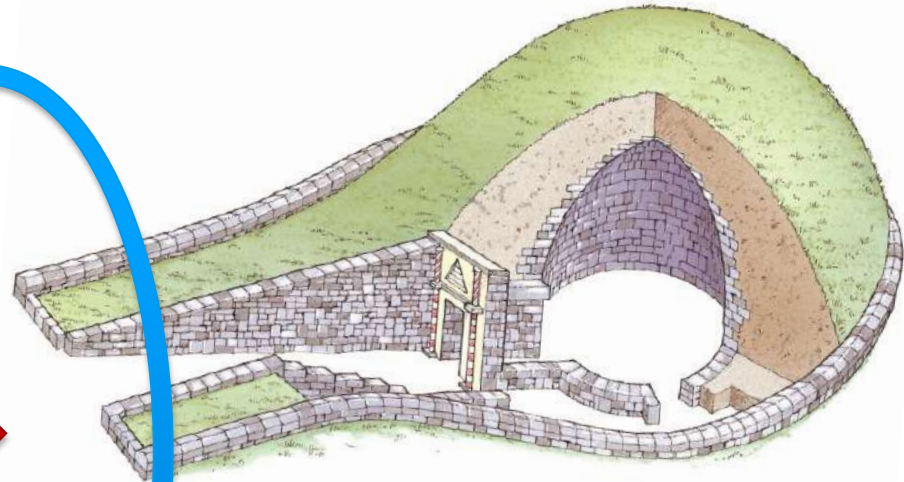


The palatial complex





Age of experimentation





The Ayios Vasileios BT: Characteristics

- > Partially preserved – roof uncertain
- > Tomb opened 25+ times





The questions and the aim

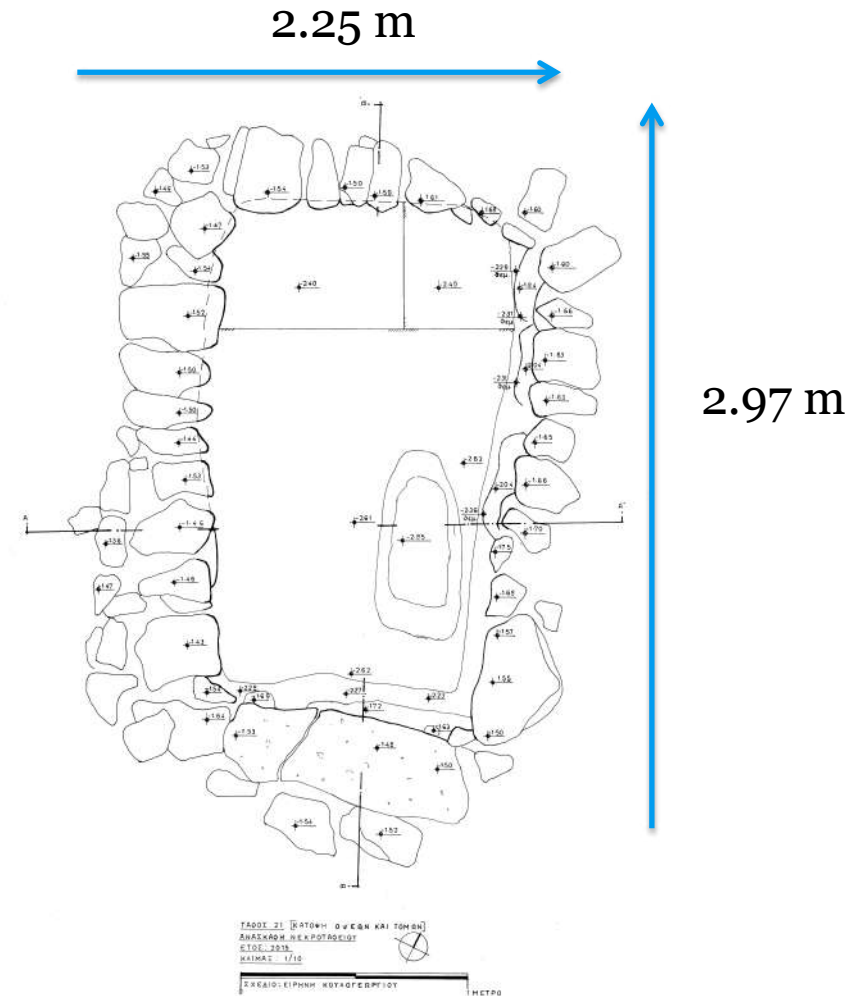
- > How was the roof constructed?
- > How did it collapse?
- > How was the tomb repeatedly opened for additional burials? (25+)

- > Gain insights into...
 - ... changing burial customs
 - ... experiments with tomb architecture

Method: Virtual Reality

Why?

- > No access to tomb
- > Regular documentation not sufficient





Virtual Reality: benefits

1. Analyse *after* excavation





Virtual Reality: benefits

1. Analyse *after* excavation
2. Analyse collapse in detail





Virtual Reality: benefits

1. Analyse *after* excavation
2. Analyse collapse in detail
3. Restack stones to create various roofs

Test constructions

Research tool rather than
documentation

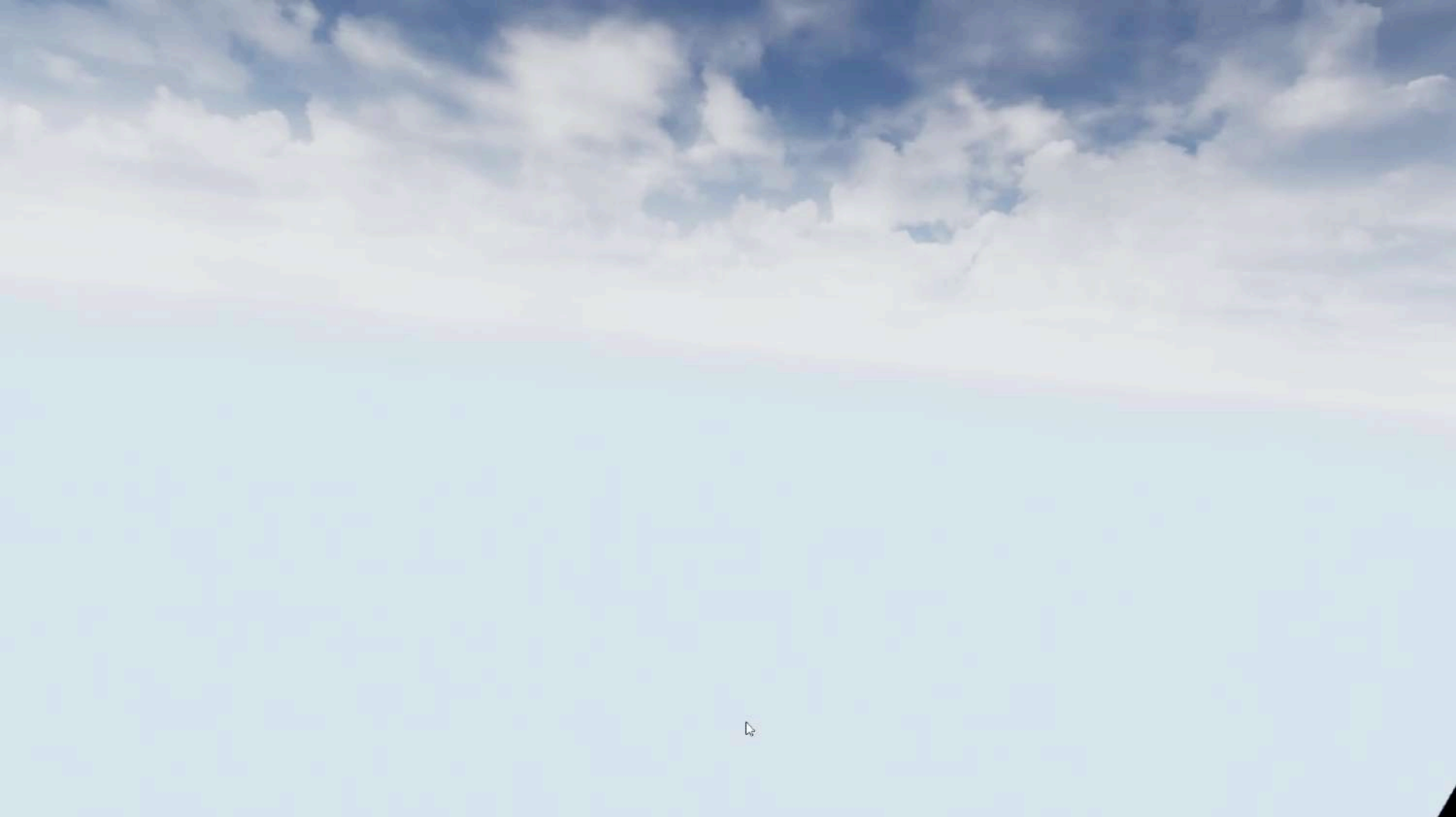




3D Modelling

- › Excavation photos/video/reports
- › SfM / photogrammetric model of tomb
- › SfM / photogrammetric models of fallen stones
- › Unreal Engine – HTC Vive









Scenarios/constructions

1. Dome
2. Inclining walls
3. Pitched roof
4. *Timber beams, slabs and cairn*







Objections

- > *No traces of wood*

Conditions?

- > *Parallels: use of wooden beams in other tombs*
- > *Yes, explains positioning/orientation large stones*
- > *Yes, easily opened*



Archaeological conclusions

- > *What did the roof look like?*
- > *How was the tomb continuously reopened for additional burials? (25+)*
- > *How did the roof collapse?*
- > Timber support
- > Wholesale dismantling of roof
- > Snapping of beams

Architecturally, Tomb 21 is an **idiosyncrasy** – an **experiment**



Virtual Reality: what did it add?

- > Allowed us to confidently refute several hypothesized roof types
- > Better understand collapse and use of the tomb
- > Rather than hypothesize only, **test!**
- > Teaching tool; exhibition in University Museum Groningen, Archaeological Museum Sparta (?)

Death in a digital world: the virtual tomb as a digital **laboratory**



Thanks for your attention!



And a thank you too:

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