Geographic Information Systems Applied in Archaeological Sites

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Summary

During the last years we developed a few applications of GIS in archaeological sites. We believe that GIS environments allow to visualize data from excavations and all the related information in a perspective way which is unknown and unusual to archaeologists. Nevertheless they seem to understand now the help that they can achieve from such systems. Today we will present an application in the archaeological site of Messene in Greece.

Why using GIS in Archaeological sites

What do archaeologists need?

- Position determination, coordination
- Topology determination
- Phenomena determination
- Time determination
- What found in a certain place
- Where found a characteristic
- What are the changes in a characteristic

Why using GIS in Archaeological sites

- Serving the special needs of many different users
- Considerable reduction of multiple storing data
- Unified specifications for gathering/storing data
- Continuous observing and updating of phenomena
- Providing safety for managing/storing data
- Easier and better decision making

Position of the site

The ancient city of Messene was founded by Epaminondas in 369 BC. Homers mentions the site as “makar pedion” which means “fruitful valley”. Located at the southwest part of Peloponnesos.

Urban Planning system: Hippodamian

Information for the city:

- Pafsanias (155-160) AD
- 1st Excavation: French Mission 1828
- 2nd Excavation: Archaeological school, Th. Sofoulis, 1859
- 3rd Excavation: From 1909 up to 1925, G. Oikonomou
- Excavations from 1957 up to 1979.
- Excavations during the last years, G. Themelis
The wall with the towers
Build from Epaminondas

The Arcadian gate

Great Doric temple of Asklepios and Messene

The Sevasteion
Monuments

The Stadium and the Gymnasium

Creation of the base map

Map of HGMS
Scale 1:5000
scanning
Digitizing in Autocad Map

Transformations
Hatt
ISTOS 2000
Affine
bilnear
EGSA ’87

The final map

Formation of the data base
Two data bases were used

Linking the data base with the map
Map → Database → Data Sources → Attach
Conclusions

- Welcomed from the archaeologists
- Easy to use and update
- Flexible and supervising for presentations
- Easier conclusions for the findings and the sites
- Now they are learning to use the queries
- And under consideration if it will be available on the internet

Thank you for your attention