OpenAtlas

A Database System for Archaeological Data and Beyond

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Introduction

- Open source database software
- Acquire, edit, and manage research data
- First developed for use in archaeology
- Related scientific data:
  - Anthropological results
  - Radiocarbon dating
  - Isotopic analyses
  - aDNA
- History, prosopography
Introduction

- Mainly developed at the Austrian Centre for Digital Humanities and Cultural Heritage (ACDH-CH) of the Austrian Academy of Sciences
Introduction

- Small interdisciplinary team
  - IT specialists
  - Digital Humanities
  - Historians
  - (Osteo)Archaeologists
Introduction

- Developed through cooperations with multiple projects from all fields of the humanities
Being Open

- Completely developed as open source
- Code available on GitHub
- Cooperating projects are required to provide their data open access
- FAIR Data
  - Findable
  - Accessible
  - Interoperable
  - Reusable
Model

- CIDOC CRM:
  - Widely used ontology in digital humanities
  - Recombination with other data
  - Interoperability and reusability
- Version 7.1.1, May 2021
- 99 Entities and 198 Properties
Archaeological sub units

E18 Physical Thing (Place)

P46 is composed of

E18 Physical Thing (Feature)

P46 is composed of

E18 Phy. Thing (Graphic Unit)

P46 is composed of

E22 Human-made Object (Artifact)

E20 Bldg. Object (human remains)
User Interface

- No need to be proficient with the model
- Interface:
  - Accessible from any common web browser
  - Easy to use
  - Customizable via types
  - Vocabulary
User Interface

Place: Budapest

Type: City

Description:
### User Interface

**Source** | **Event** | **Actor** | **Place** | **Artifact** | **Reference** | **Types**
---|---|---|---|---|---|---

**Place > Place**

**Name** | Budapest  
**Alias** | Budapest, Budapesta

**Type** | City  
**Administrative unit** | Change

**Historical place** | Change

**GeoNames** | 3054643, precision, exact match  
**Wikipedia** | Q1781, precision, exact match

**Date** | Hick

**Begin** | YYYY MM DD
**End** | YYYY MM DD

**Description** | Venue of the Annual Meeting of the EAA 2022, Capital of Hungary.
External References

- Wikidata and GeoNames
- Freely choose additional ones
  - Digital/analogue
  - Vocabularies
  - Gazetteers
  - Inventory numbers
  - Card catalogues
Customizable Types

- New types can be added to existing type trees
- New type trees can be added
- Making the user interface highly customizable
- Possible to use in different projects
Customizable Types
Customizable Types

- Value types
  - Material composition
  - Results of isotopic analyses
  - Dimensions
Fuzzy Data

- 100% confidence
- Make range big enough
- Dates
  - Add exact dates or time spans
  - Ranges for beginning and end
- Location
  - Precise location or area
What else?

- Add images and photos
- Add citation and related sources
- Add scientific data to features, subunits and finds
- Manual and technical documentation
- Download options and API
- Transparent workflow
- Roadmap and tickets on redmine
What to do with the data?

- Network visualizations

- Data can serve as base for frontend
  - THANADOS
THANADOS Frontend

THANADOS

The Anthropological and Archaeological Database of Sepultures

- 2019-2021: Present all published data on early medieval burial grounds from nowadays Austria online
- https://thanados.net
- Catalogues and tables
- Catalogues and tables
THANADOS Frontend

- Interactive maps and queries
THANADOS Frontend

- Interactive maps and queries
THANADIOS Frontend

- Dashboards
THANADOS Frontend

- Dashboards
Upcoming

- Tool for anthropological analyses
- More convenient way to track 14C dates
- Track kinship (aDNA)
- General frontend for all projects
- New release monthly
Thank You for Your Kind Attention

https://openatlas.eu