The MEKETREpository

A Collaborative Web Database for Middle Kingdom Scene Descriptions
Content

• Motivation
• Aims
• Methodology
• Innovation
• Implementation
• Challenges and Outlook
Motivation

- MK tombs offer a wide variety of complex and multi-layered information
- Comprehensive publications dealing with MK scene representations, iconography and scene development are still missing
- Jacques Vandier grouped the various scenes according to their contents, the last volume appeared 1978
- A large quantity of publications dealing with the art of the MK has appeared during the last 40 years, publication continues
Aims

• Make accessible the exhaustive corpus of literature to the users
• Online Repository
• Accessible using a web browser
• Collaborative
• Store digital versions of MK two-dimensional art items
Stored Items

- Scenes
Stored Items

- Tombs
Stored Items

- Persons

Sesostris I.
Aims

• Users of the MEKETREpository might be
  • Researchers: provide and describe material in the repository
  • Scholars: browse and study the supplied data
  • Other systems: We provide Linked Open Data which is a standardized approach for publishing machine-readable data

• Easy retrieval of stored data
• Persist data using a long-term archiving service
Methodology

• Classify and describe various aspects of scenes/tombs/persons by **Annotations**

• Classification (whole): “Manufacture of nets”

• Classification (part): “Preparation of threads”

• Pictured items
  “spindle”
  “standing”
  “sitting”
Innovation

• Annotations can refer to other items and one another

• Using Linked Data as the fundamental concept

• Annotations contain elements from **controlled vocabularies**

• Support collaborative vocabulary development
Controlled Vocabularies, practical examples

• Classification schemes like Klebs 1922 ("Die Reliefs und Malereien des mittleren Reiches"), Jacques Vandier 1964 ("Manuel d'archéologie égyptienne")

• Thesaurus containing the names of frequently pictured items throughout the scenes (vessels, clothing,...)

• Custom vocabularies developed by researchers (e.g. postures)
Controlled Vocabularies

• To represent controlled vocabularies we use SKOS: model hierarchies, synonyms, terms
• Items are described using metadata standards
  • Dublin Core (DC)
  • Friend of a Friend (FOAF)
• Reusing existing standards to describe metadata is crucial to build (and contribute to) a Web of Data
• Users might need to extend an existing vocabulary. The MEKETREpository will provide support for collaborative vocabulary building and evolution
Adding an Image

New theme

classification

Netting the net

images +

tomb

Beni Hasan (BH) 2

position

...
Adding an Annotation, Step 1

New theme

Netting the net

classification

Tomb

position

keywords

images

details

references
Adding an Annotation, Step 2

**New theme**

Netting the net

classification

tomb

Beni Hasan (BH) 2:

position

...

keywords

images


details

references

**Edit detail entry**

**Preparation of the net by means of spinning**
Adding an Annotation, Step 3
Benefits

- EASY search

```
search  categorization  thesaurus  new

Meket repository

beni hd

scenes
- Amenemhet (BH 2, Newberry, Beni Hasan I, p.31, pl. XI)
- Bakench (BH 15, Newberry, Beni Hasan II, p.47, pl. IV)

Tombs
- BH 2, Amenemhet (Sesostris I.)

Thesaurus
- (some results)

Persons
- (some results)
```
Benefits

• Content of the items now is represented in machine-readable form (self-explaining data)
• Data (or parts of it) can be easily exported as RDF graph
• Sophisticated queries are possible, e.g.
  • All scenes that show a person netting a net and wearing a kilt
  • All scenes that contain persons in a sitting posture, preparing food
  • All depictions of spindles
• Will provide an overview on recent literature and media about art-items enriched with additional information
Long-Term Archiving

- University of Vienna hosts a digital asset management system with long-term archiving functions called PHAIDRA.
- Can hold any kind of digital object, available worldwide around the clock with continual citability.
- Also uses metadata to describe the content (fixed standards).
- We use it as additional storage solution, performing time-triggered backups.
- PHAIDRA is a solution for general archiving purposes whereas the MEKETREpository is custom-tailored to be used by Egyptologists.
Implementation

Human users

Web service

HTTP

HTTP (SOAP)

Presentation

Core

Persistence

Application Server

Literature DB

HTTP

JDBC

SQL Server

Mediaobject Server

PHAIDRA

Faculty of Computer Science

universität wien

Department of Distributed and Multimedia Systems
Multimedia Information Systems Group
Challenges and Outlook

• Encourage the use of existing controlled vocabularies and ontologies
  • How to find and evaluate them?
  • Existing ontologies may not cover all aspects, need to be extended by the user (collaboratively)
  • Reflect and track changes (wiki style)
• Find a user-friendly way to let the user formulate sophisticated queries on the collected Linked Data
• New ways of visualizing data based on the relations between items and annotations
Thank you!

• Contact Information
  • Project website: http://www.meketre.org
  • Egyptology domain: staff-meketre-egyptology@cs.univie.ac.at
  • Technical domain: staff-meketre-technical@cs.univie.ac.at
  • christian.mader@univie.ac.at

• Questions
• Discussion