

---

# **Dhi Qar Knowledge Base Documentation**

*Release*

**Epistemica**

**Aug 22, 2017**



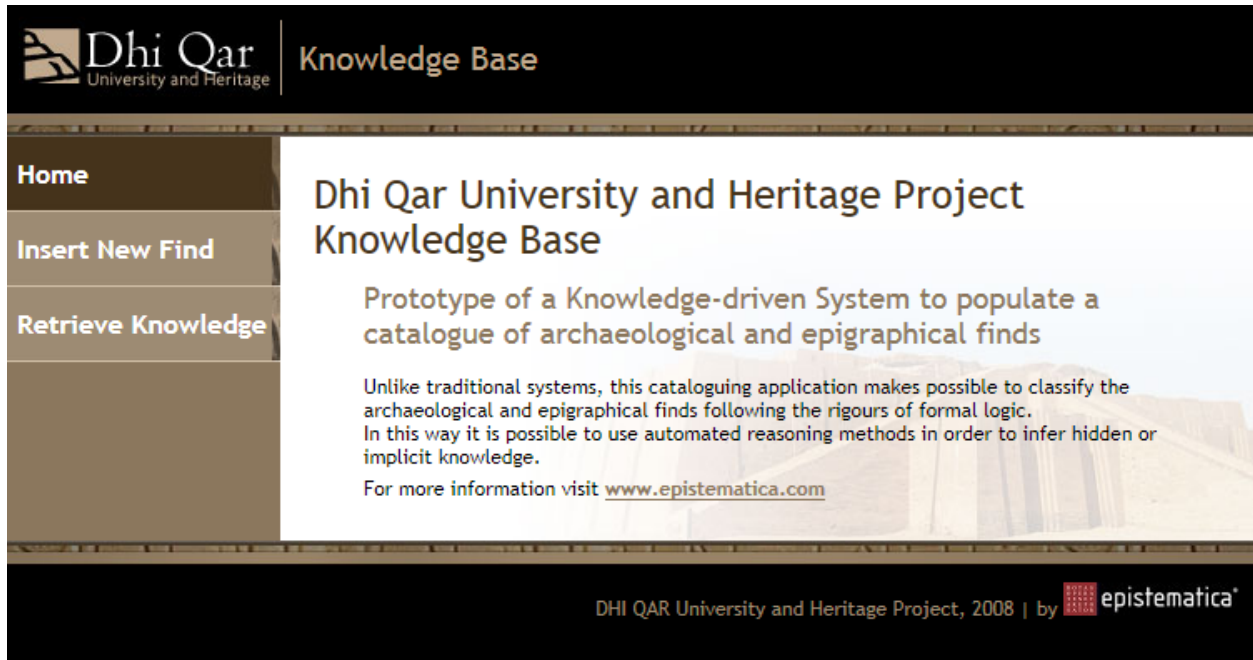
---

## Contents

---

|          |                               |          |
|----------|-------------------------------|----------|
| <b>1</b> | <b>Dhi Qar Knowledge Base</b> | <b>3</b> |
| 1.1      | Overview . . . . .            | 3        |
| 1.2      | Design . . . . .              | 4        |







## Overview

Epistemica has developed a prototype of a Knowledge-driven System for cataloging archaeological and epigraphical finds, that based on Semantic Web Technologies. It was the Knowledge Base of the **Dhi Qar University and Heritage Project**.

|   |  |  |
|---|--|--|
| <a href="#">Home</a><br><a href="#">Insert New Find</a><br><a href="#">Retrieve Knowledge</a> | <b>General Information</b>                     |  |
|   | Type   | Inscribed_Artifact   |
|   | Join   | <input type="text"/> <a href="#">Add Others</a>  |
|   | Shape  | Truncated_Cone ▼   |
|   | Material                                       | Clay   |
|   | State of Preservation                          | Damaged  |
|   | Size   | Height (mm)<br>Breadth (mm)<br>Length (mm)   |
|   | Archaeological Date                            | No   |
|   | Archaeological Origin                          |  |
|   | <b>Museum Information</b>                      |  |
|   | Museum Inventory Nr.                           |  |
|   | Find Inventory Nr.                             |  |
|   | Collection Nr.                                 |  |
|   | <b>Epigraphic Information</b>                  |  |
|   | Language                                       | Sumerian ▼   |
|   |  | <input type="checkbox"/> Administrative<br><input type="checkbox"/> Historical<br><input type="checkbox"/> Literary<br><input type="checkbox"/> Mantic<br><input type="checkbox"/> Lexical<br><input type="checkbox"/> Legal |
|   | Textual Typology                               |  |
|   | Epigraphic Date                                | Present ▼  |
|   | Epigraphic origin                              | <input type="text"/>   |
|   | Presence of rulings in the text                | <input type="checkbox"/>   |
|   | Number of columns                              | <input type="text"/>   |
|   | Quoted dates in text                           | <input type="checkbox"/>   |
|   | <b>Archaeological Data For Inscribed Finds</b> |  |
|   | Surface  | Not_Scraped ▼  |
|   | Sealed   | <input type="checkbox"/>   |
|   | <a href="#">Continue</a> <a href="#">Reset</a> |  |

Unlike traditional systems, this cataloguing application makes possible to classify the archaeological and epigraphic finds according to the rigour of formal logic. In this way it is possible to use automated reasoning methods in order to infer hidden or implicit knowledge.

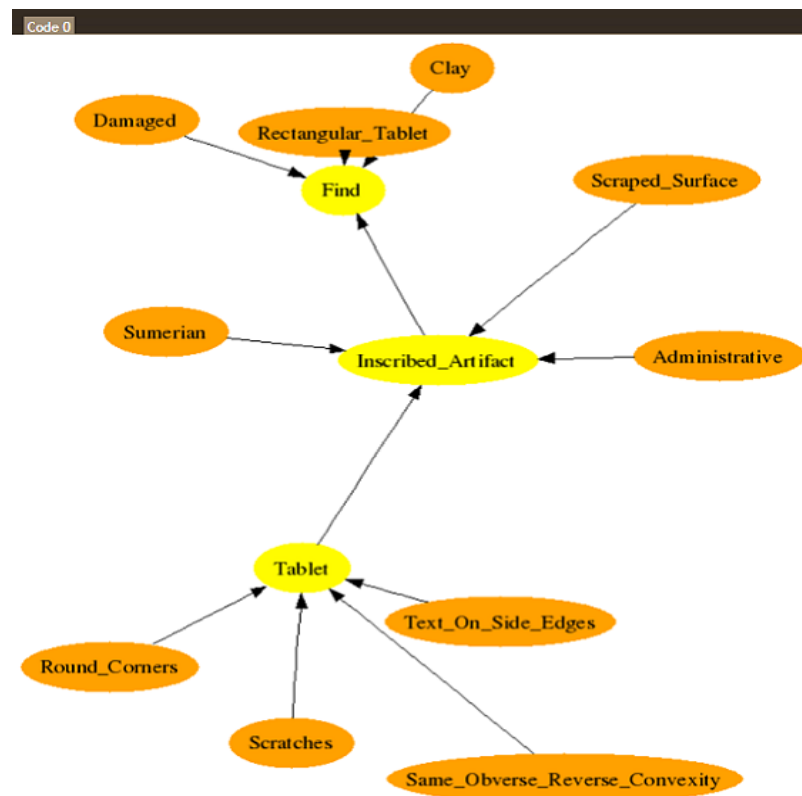
The system is based on OWL language for instancing data and metadata. The knowledge about the finds is described using Description Logics.

Thanks to this approach, Archaeological finds are catalogued according to a model that satisfies the requirements of different disciplines (history of art, epigraphy, anthropology...).

This approach also allows designing of a search system where any user can exploit the knowledge of all kinds of archaeologists and thus potentially can discover items whose existence s/he was not even aware of. As sample of a *Simplified Querying Method* is showed in [ESA Project OTEG for the GMES Space Component Data Access](#).

## Design

The data structure reflects, and automatically shows, the different ways in which the different scientists look at and analyze an archaeological find.



The data model matches the requirements of different disciplines so that every scientist can enter the form from her/his point of view with all data s/he can read on the find with no need to respect a mediated form.

- [Download the documentation](#)



- [Project's repository on GitHub](#)