OpenAtlas - A database system for object oriented modelling of historical relationships
1. Heterogeneous Data Sources
2. Data Model and Data Structure
3. Technical Implementation
4. Practical Application
Eastern Alps revisited

Interdisciplinary approach by archaeologists and historians
Funded by the Austrian Science Fund (FWF)

The fate of the Roman province Noricum
Destruction and Formation of elites
Appropriation of Space by new elites
Identities and ethnic labels
Economy, technology and trade
1165 Sites
4033 Finds
435 Events mentioned in Charters (550-1000 AD)
850 Actors mentioned in Charters (550-1000 AD)
Physical Things
- Churches
- Cemeteries
- Settlements
- Places
- Regions
- Finds

Sources
- archaeological
- historical

Events
- Donations
- Trades
- Battles

Actors
- Single Person
- Groups
- Institutions
„Alpuinus de Carantania“ donates his „curtis“ to the Bishop of Freising (870-875)  
Trad. Fris. I, 907 (Ed. Bitterauf)
“Alpuinus de Carantania“ donates his „curtis“ to the Bishop of Freising (870-875)
Trad. Fris. I, 907 (Ed. Bitterauf)
Settlement Albersdorf

- Archaeological feature Building
- Archaeological feature Well
- Archaeological feature Burial
Settlement
Albersdorf

Archaeological feature
Building

Archaeological feature
Well

Archaeological feature
Burial

Stratigraphical Unit
Skeleton

Stratigraphical Unit
Backfilling

Finds
Grave Good: Sword

Finds
Grave Good: Belt

Finds
Grave Good: Pottery
Standard definitions and formal structure for describing the implicit and explicit concepts and relationships used in cultural heritage documentation

http://www.cidoc-crm.org/

OpenAtlas uses classes and properties from the CIDOC Conceptual Reference Model (CRM)
<table>
<thead>
<tr>
<th>Name</th>
<th>Winterfell</th>
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<tbody>
<tr>
<td>Site</td>
<td>Settlemont</td>
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</table>

**Date**

<table>
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<th>600</th>
<th>12</th>
<th>24</th>
<th>comment</th>
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<th>700</th>
<th>12</th>
<th>31</th>
<th>comment</th>
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</thead>
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</table>

**Easting** -83.79409790039062

**Northing** 80.89480279363455

**Situated within**

**Administrative**

**Historical**

**Description**

`Insert`  `Insert and continue`
<table>
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</tr>
</tbody>
</table>
Known Spot
Known Shape
Known Area

+ Known Administrative Unit

+ Known Historical Region
In any Combination
Challenges creating the OpenAtlas webinterface

- Creation of a database for the CIDOC-CRM
- Maintaining flexibility
- Dealing with data uncertainty
- Reconciling research specific requirements
- Simplifying the UI
Overview Source Event Actor Place Reference Hierarchy FAQ

Actor > King Arthur

Info Events (1) Relations (3) Sources (2) Member of (1) References (1) Places

Edit Delete Bookmark

King Arthur
Required open-source software

- PHP 5.6
- Apache 2.4
- PostgreSQL 9.5
- PostGIS 2.1
- Zend Framework 1.12
Included JavaScript Libraries

- jQuery 2.1.4
  Cross-platform JavaScript library

- Leaflet 0.7.7
  Library for interactive maps

- TinyMCE 4.3.2
  Browser-based WYSIWYG editor

- vis.js 4.9.0
  A dynamic visualization library
Project Infrastructure

**OpenAtlas**

Project Website
http://openatlas.eu

**GitHub**

Hosting of the open-source software
https://github.com/craws/OpenAtlas

**Redmine**

Wiki and issue tracker
http://redmine.craws.net/projects/uni/wiki

**Demo**

http://openatlas.craws.net/