Towards an archaeological Information System: Improving the core data model

The third and fourth dimensions in archaeological data modelling

CAA Computer Applications and Quantitative Methods in Archaeology

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ASIA AND EUROPE
IN A GLOBAL CONTEXT

Outlines

- Research Context
  - „Virtual Leodium“
  - Information System
- Archaeological Information System
  - Archaeological data
  - Archaeological data model
- Latest improvements
  - New archaeological core data model
- Case study « The catchement basin of the Weser »
  - An illustrative case
- Conclusion and future developments

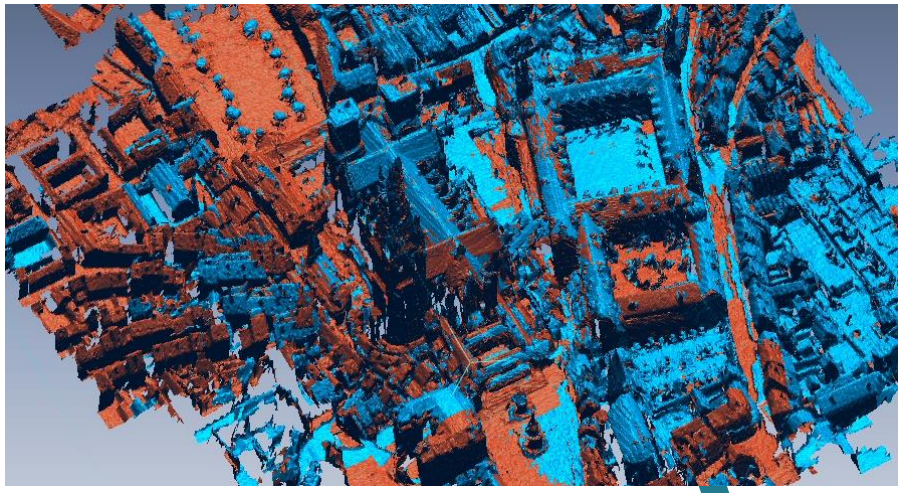
Research Context

Virtual Leodium

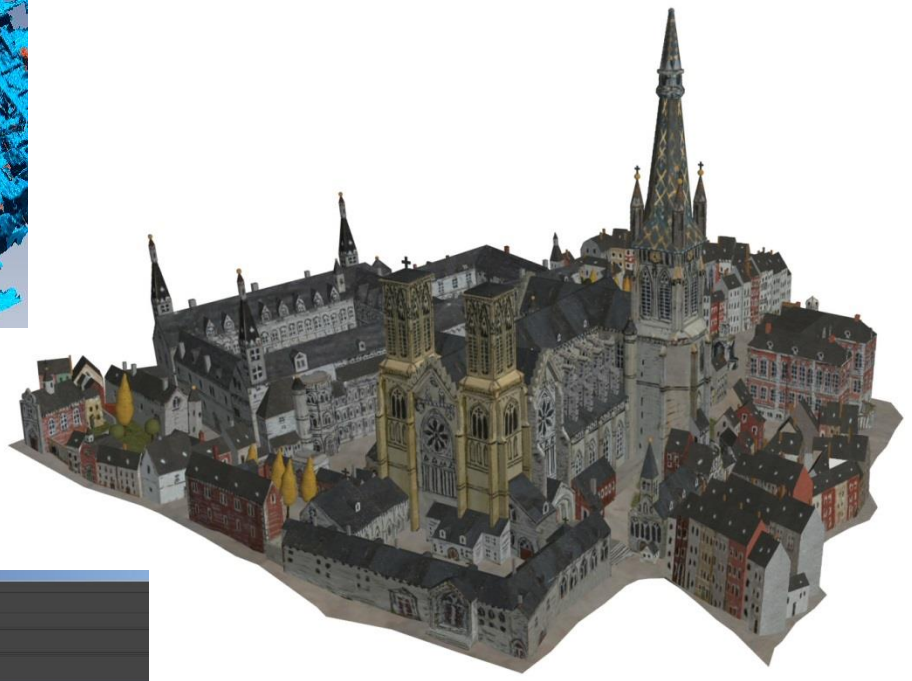
Virtual Leodium

- The scale model

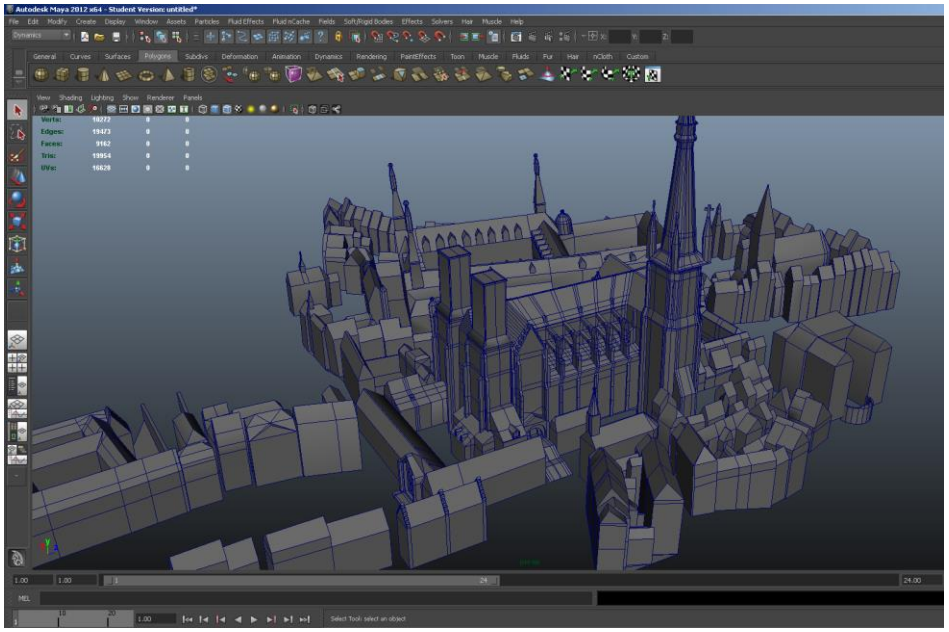
- Building date: 1900 - 1910
- Gustave Ruhl-Hauzeur
- Art Collection of the University of Liege
- Represents the City of Liege around 1730



3D scan

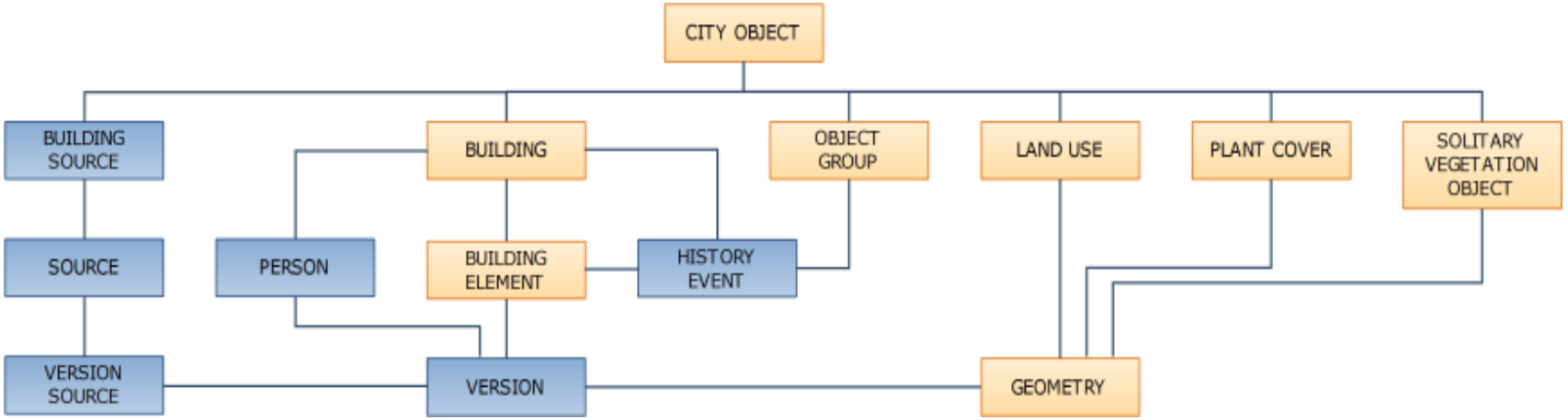


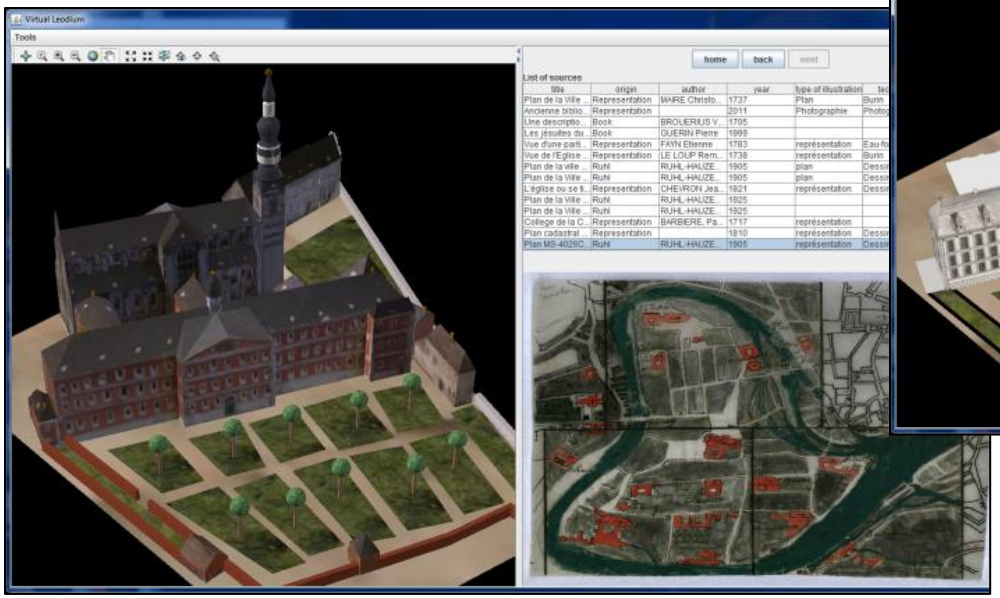
3D reconstruction

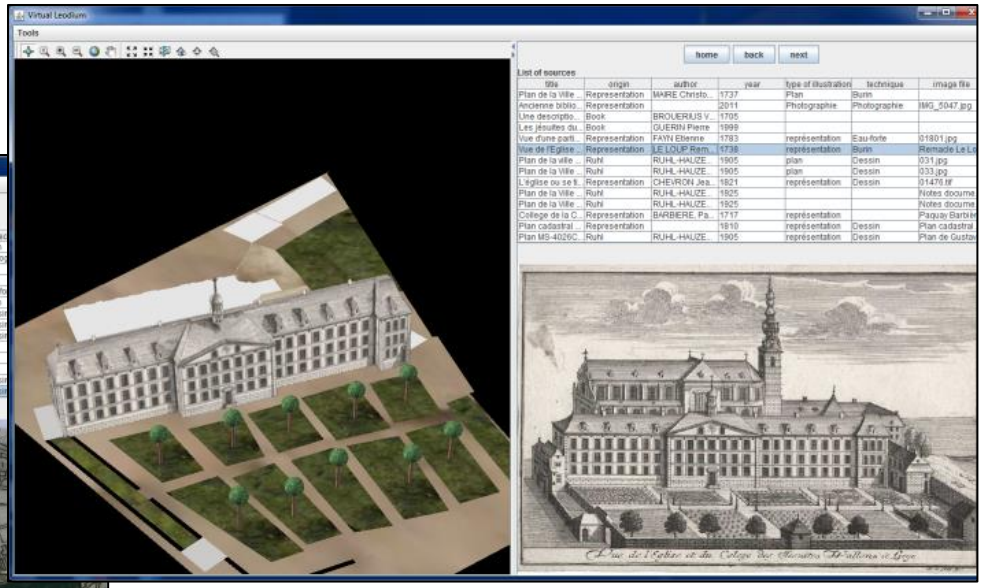


Texturing

Information System prototype



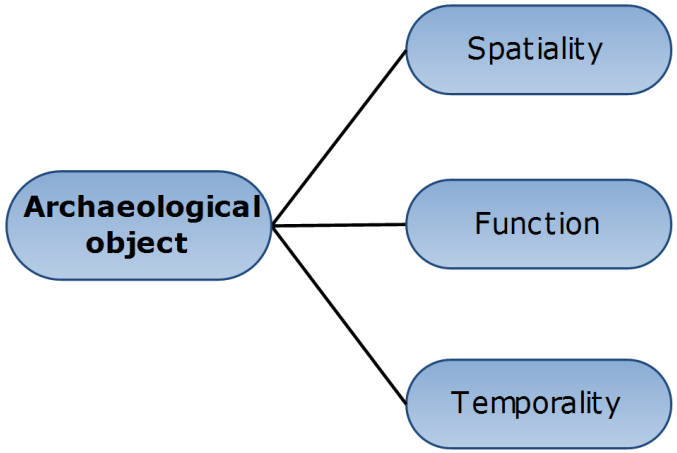




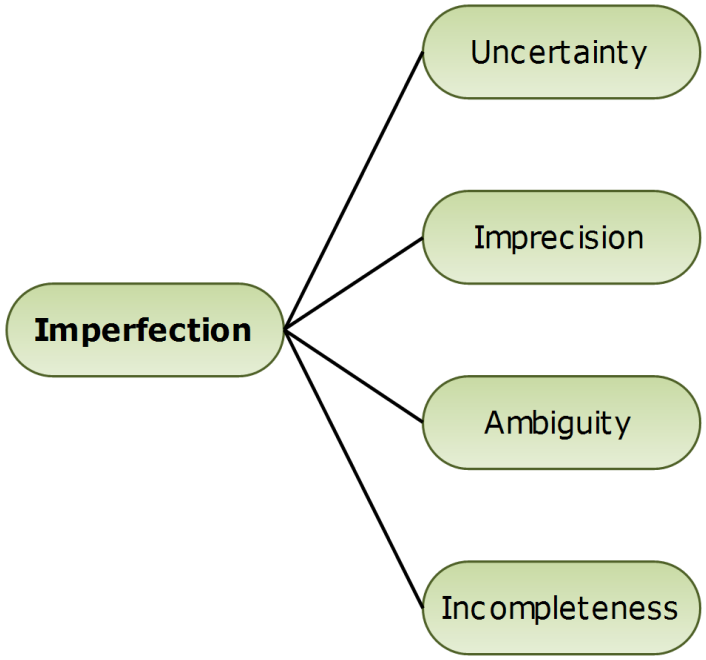
Archaeological Information System

Archaeological Data

Peculiarities of archaeological Data

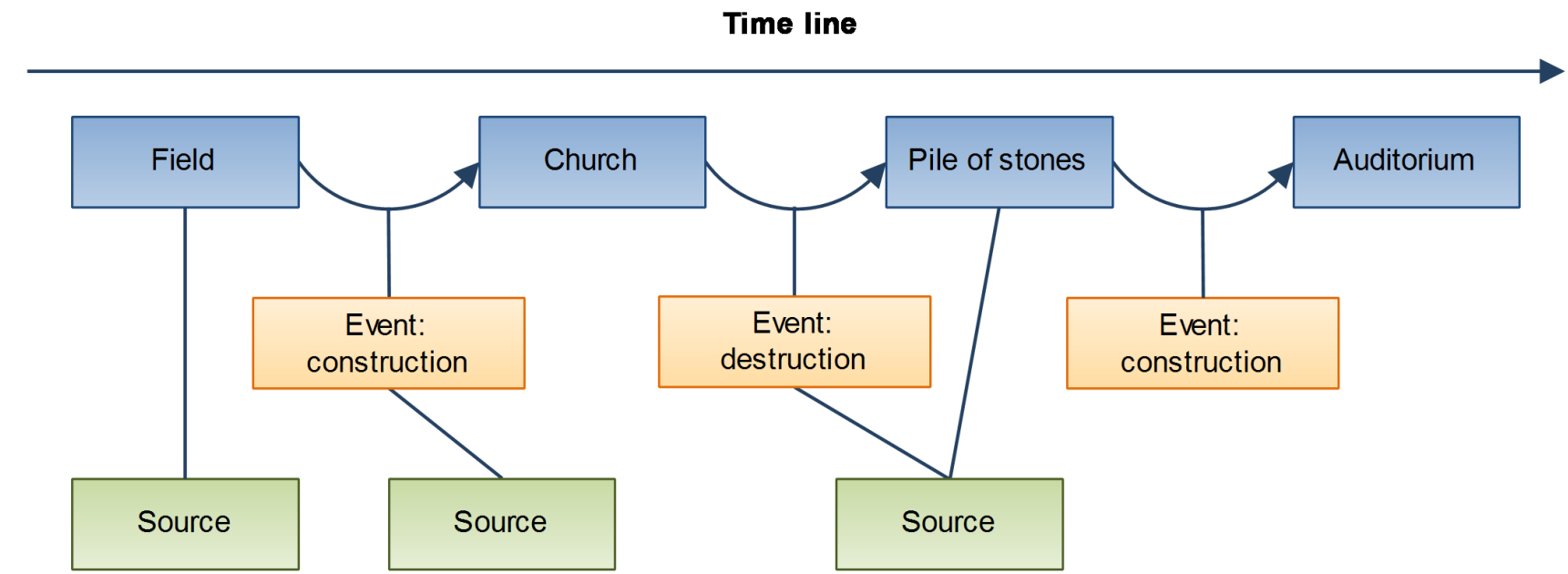


Source : Rodier

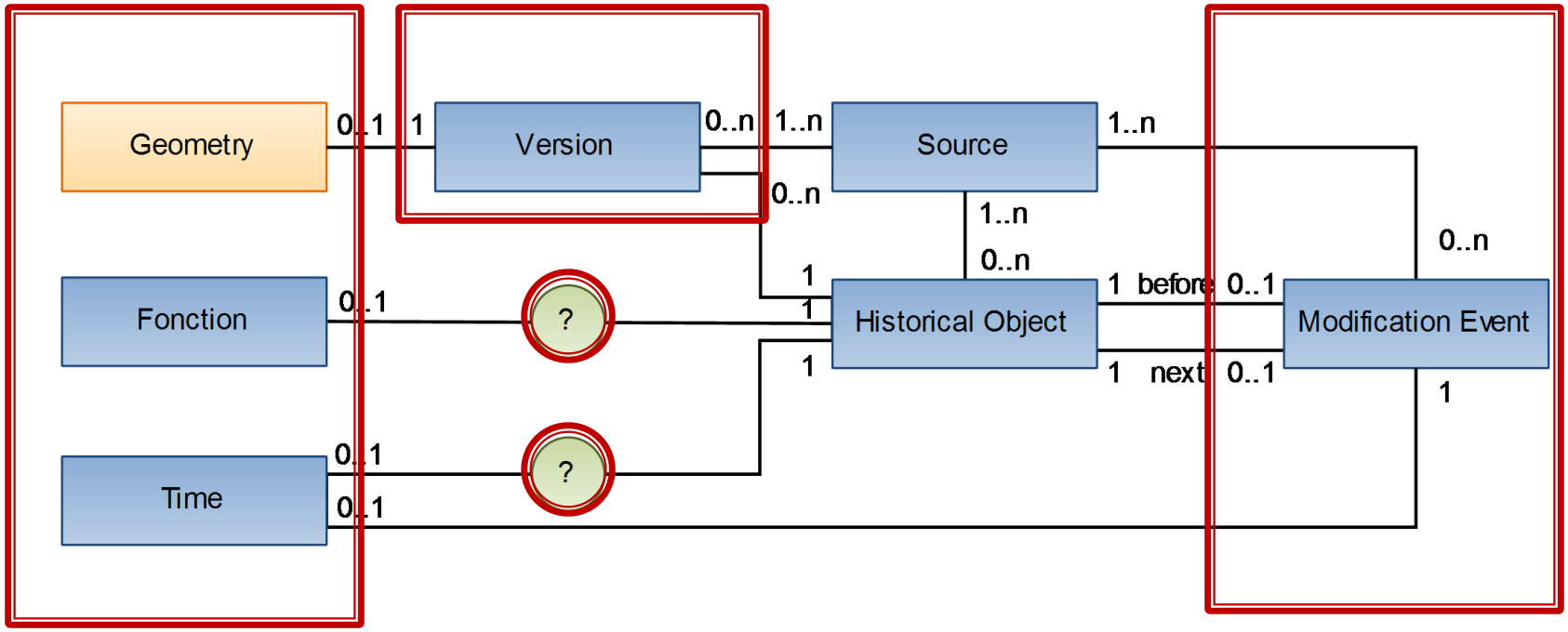


Source : De Runz

Event management



Archaeological data model



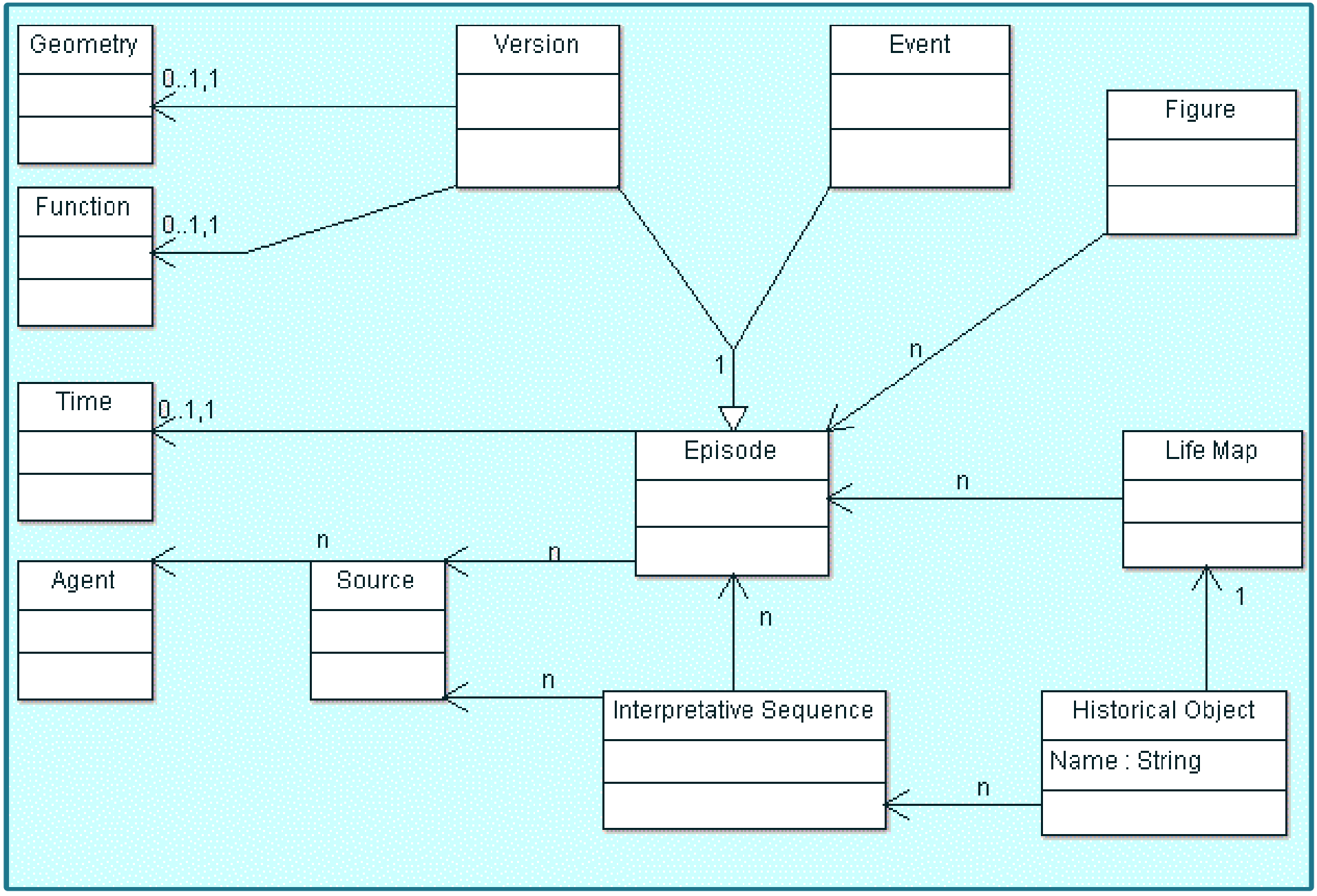
Virtual Leodium : the remaining modelling chalenges

- Object identity
- Event management
- Handling of ambiguity

Latest improvements

New archaeological core data model

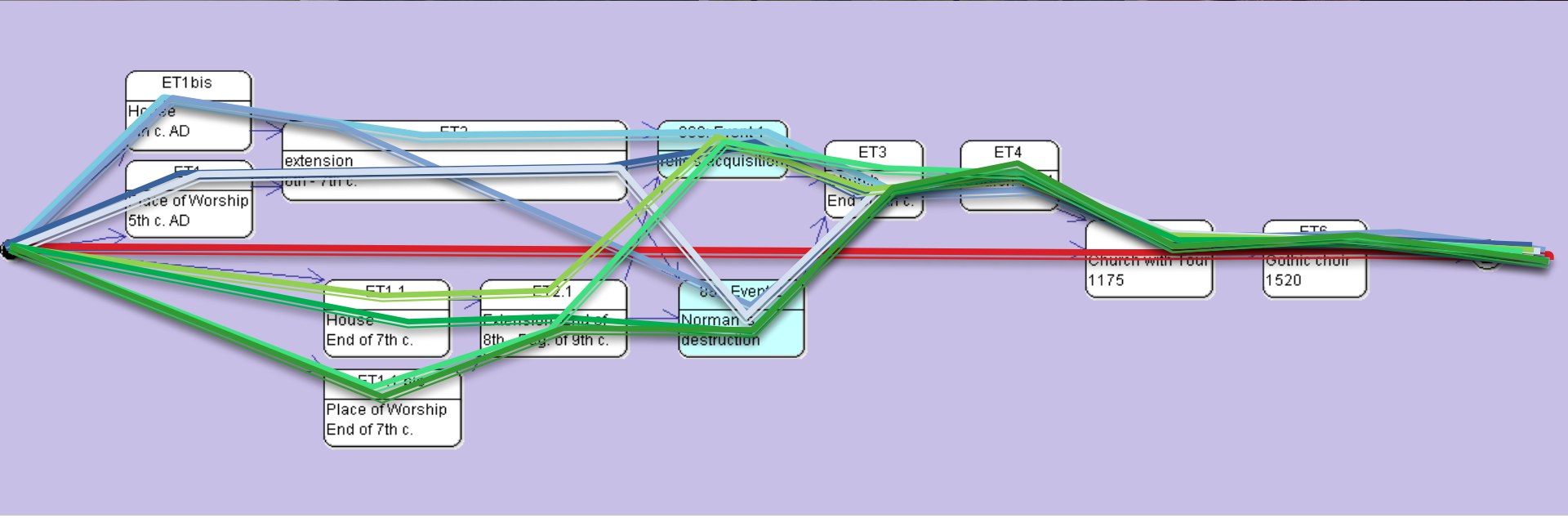
- Class diagram
- History oriented
- New classes


Geometry
Version
Event
Figure
Function
Time
Episode
Life Map
Agent
Source
Interpretative Sequence
Historical Object
Name : String
0..1,1
0..1,1
0..1,1
1
n
n
n
n
n
n
n
n
1

Case study « The catchement basin of the Weser »

An illustrative case

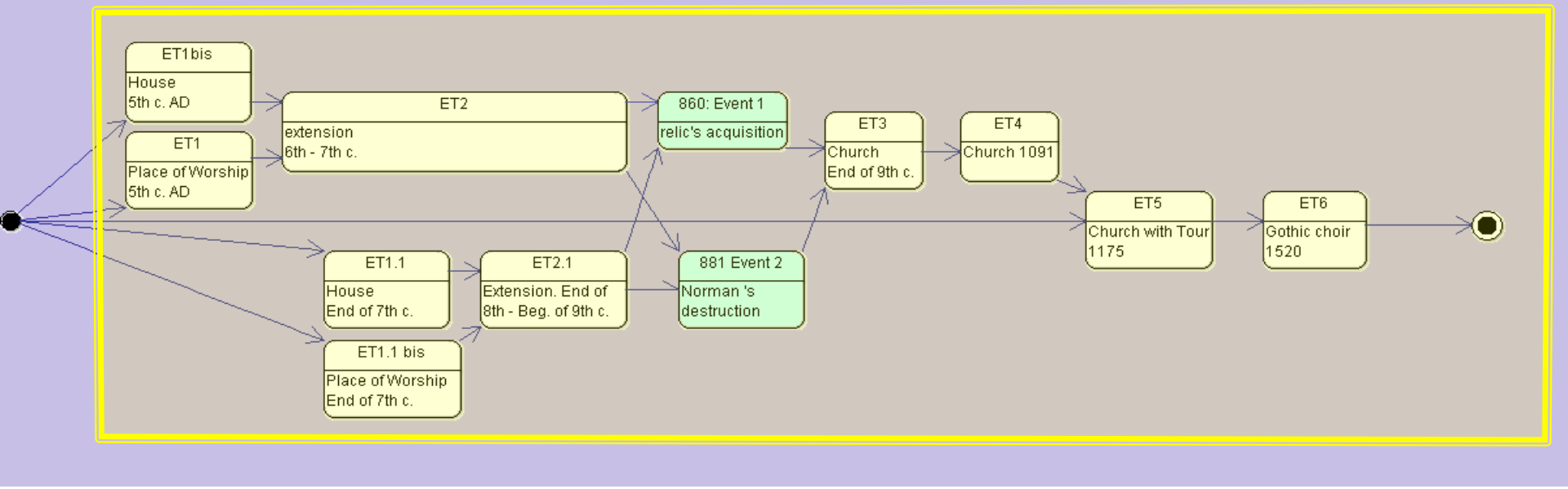
- New case study
- New requirements
- An opportunity to improve the model



Author 1: 1 Interpretative Sequence

Author 2: 4 Interpretative Sequences

Author 3: 4 Interpretative Sequences



1 Historical Object = 1 Life Map

Conclusions and future developments

Improvements

Next steps

Conclusions and future developments

- Improvements:
  - Version: concept widened
  - Creation of new classes: EPISODE, LIFE MAP, AGENT, FIGURE
  - History oriented model
- Next steps:
  - implementation
  - Leave proprietary softwares
  - Focus on international standards

Thank you for your attention!