



# OpenAtlas

## How to Reference Historical Points in Space and Time

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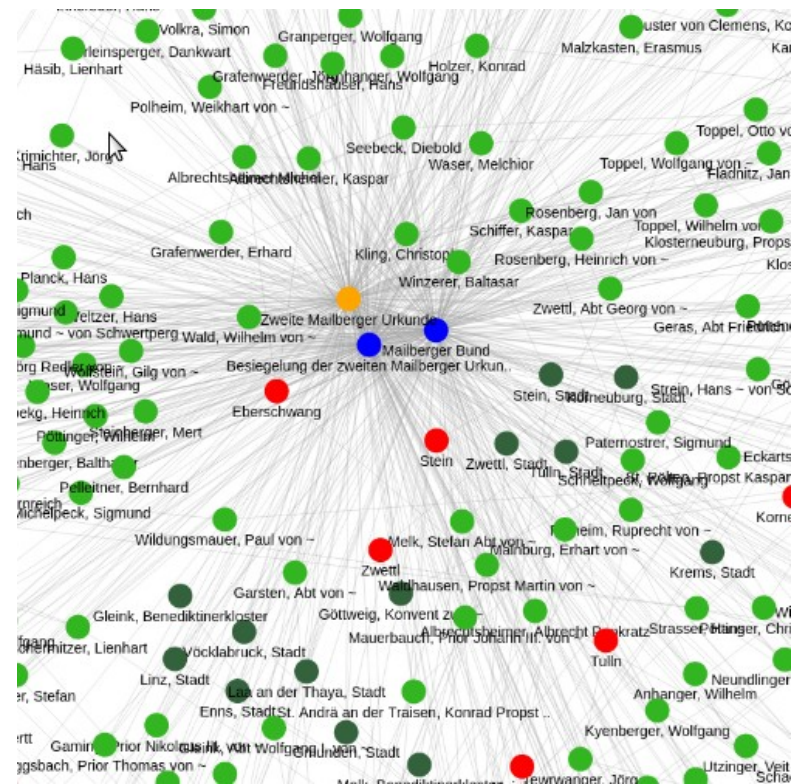
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# OpenAtlas

<https://openatlas.eu>

- Open source, browser based database software
- Acquire, edit and manage research data
- Historical, archeological and prosopographic projects
- Developed by a small core team

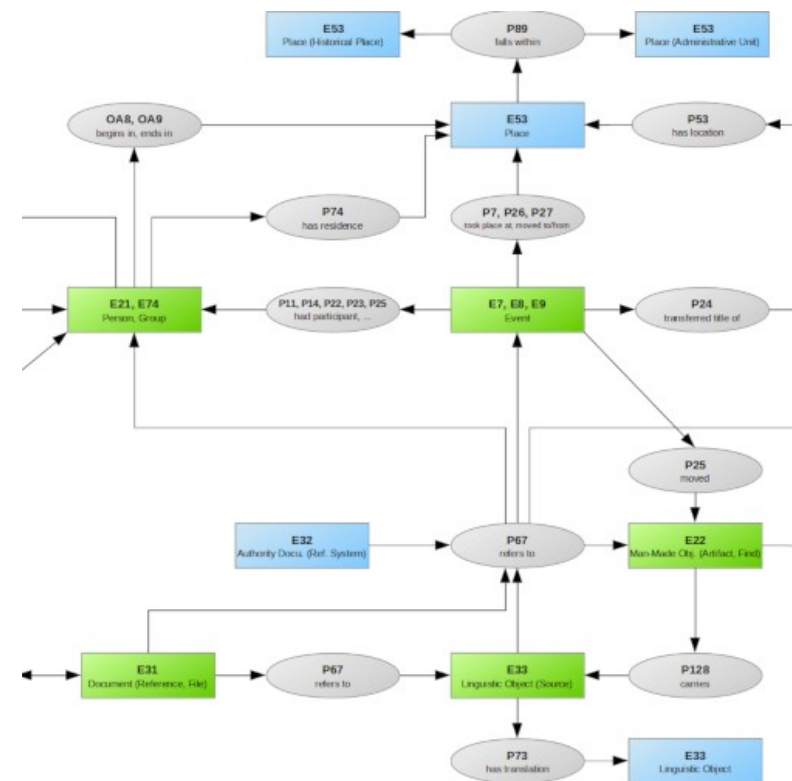


<https://demo.openatlas.eu/overview/network/>

# Model

## CIDOC Conceptual Reference Model

- International standard (ISO)
- Developed by CIDOC CRM Special Interest Group
- Specifies classes for entities like actor, source, event, place and rules how to link them
- Stored in an object oriented network



<https://demo.openatlas.eu/overview/model>

# Historical Points in Time and Space

## Uncertainty in Historical Projects

- Temporal and geographical information about persons, places, events, ... provided by historical sources can often be imprecise or only partially available
- Nevertheless we like to use acquired data for
  - Answering research questions
  - Data analysis, e.g. social network analysis
  - Visualizations

# Uncertainty in Time

## Challenges

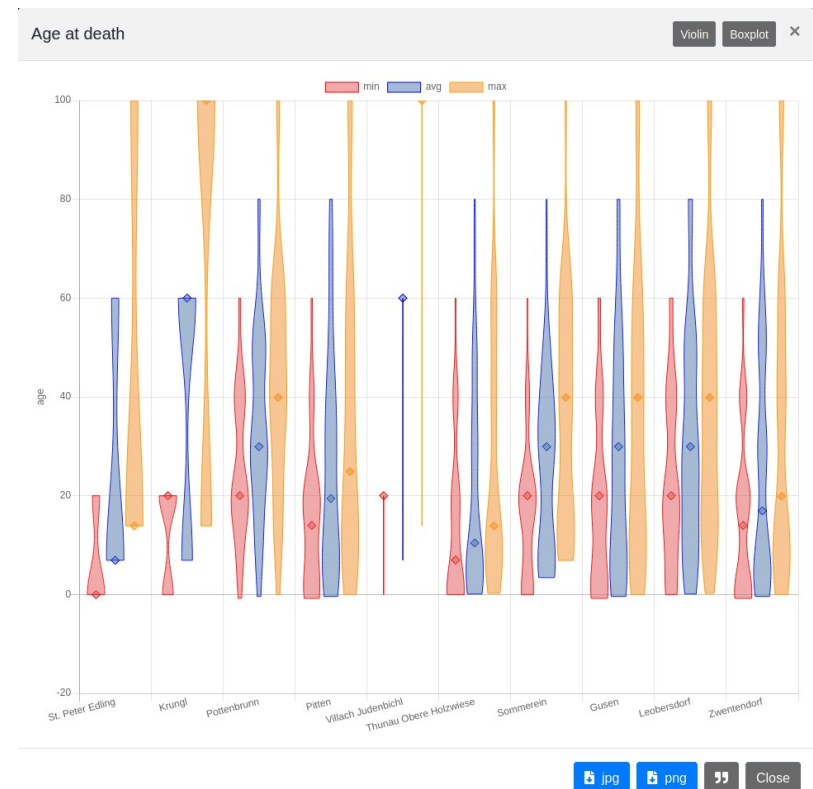
See below a fictional but very typical list of persons in a historical project.

Name	Date	Description
Alex the Ascetic	1473 – Nov. 1563	Disciple of the Hello World order
Berni the Brutal	First half of 15 <sup>th</sup> cent	Proud council member of LARP
Christoph the Cruel	Not before May 1482	Scholar of the Wonderbar
Jan the Jester	1666, circa	Artist at the House of Rising Paint
Nina the Necromancer	ca. 15 <sup>th</sup> cent.	Gravedigger at the Full Moon College
Stefan the Seer	Estimated birth in 1412	Visionary at mount Chefan

# Uncertainty in Time

## Possible Approaches and their Disadvantages

- Dates as free text (like in example)
  - No search, calculations or statistics
  - No visual representation
- Formatted dates with uncertainty categories
  - Differences of interpretation at data entry and data analysis
  - Only limited scientific usability
- Dates with defined time spans or eras
  - E.g. decades, the Middle Ages, ...
  - Differences in era definitions
  - Analysis and statistics possible but imprecise



<https://thanados.net/charts>

# Uncertainty in Time

## Solutions and Implementation in OpenAtlas

- Begin and end date
- Both can be a time span
- If uncertain, chose a wide enough time span
- Possibility to also
  - Add comments
  - Add era types
  - Connect via event (dates)

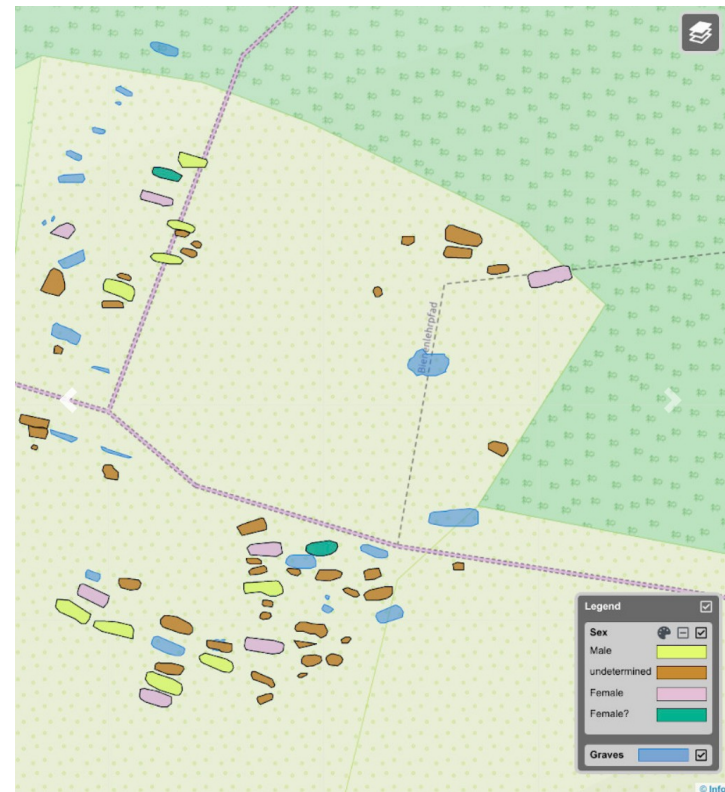
Begin	1464	01	01	It was a sunny day
	1464	12	31	
End	1524	04	07	Mortally wounded at a chess game
	YYYY	MM	DD	

<https://demo.openatlas.eu/insert/person>

# Uncertainty in Space

## Challenges

- Spatial data for places is often imprecise or only partially available
- There may be multiple possibilities
- Even if places still exists today they can differ in location and expansion

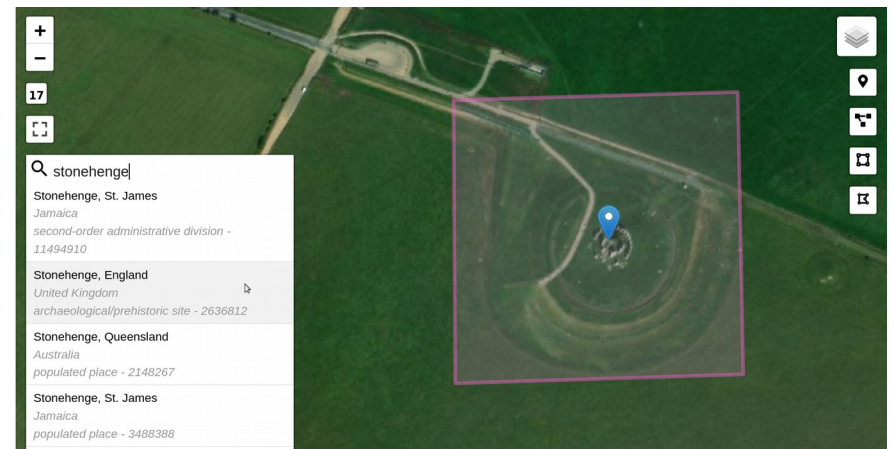




# Uncertainty in Space

## Solutions and Implementation in OpenAtlas

- Available geometries
  - Point, line
  - Polygon (exact)
  - Polygon which is big enough to be certain that the location is inside
- A combination can be provided
- Additional information can be added
- Links to external reference systems, e.g. GeoNames



<https://demo.openatlas.eu/insert/place>

# Conclusion

## Uncertainty in Space and Time in OpenAtlas

- Data can be entered very precise (exact day, GIS)
- Uncertain data can be entered by choosing a big enough frame where one is sure it is inside it
- Removes burden at data entry to specify a grade of uncertainty and worries about suggesting “incorrect” data
- Although this approach solves many issues it still can provide challenges using this data for presentation or analysis

# Thank you for listening

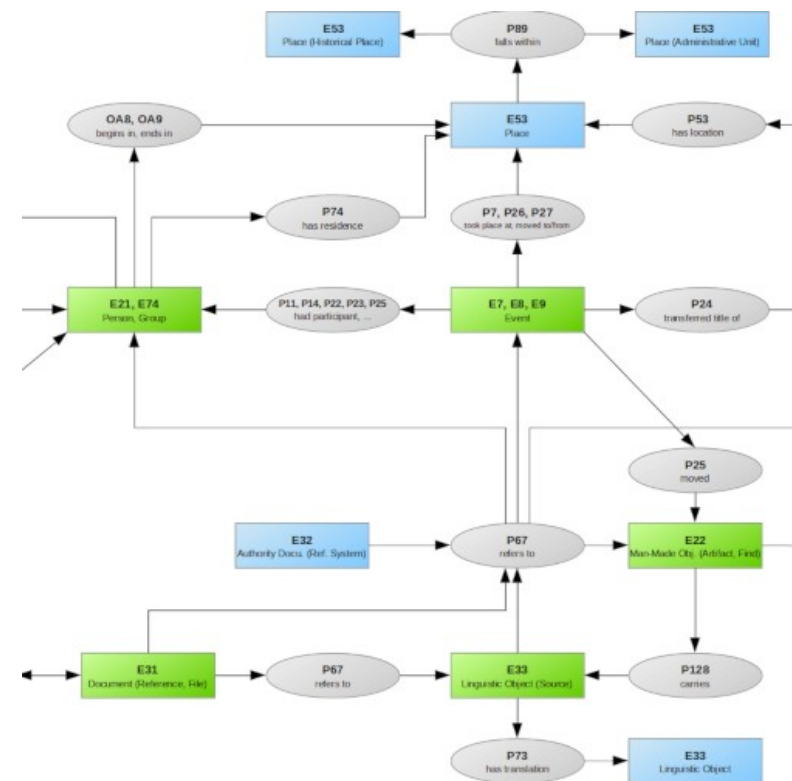


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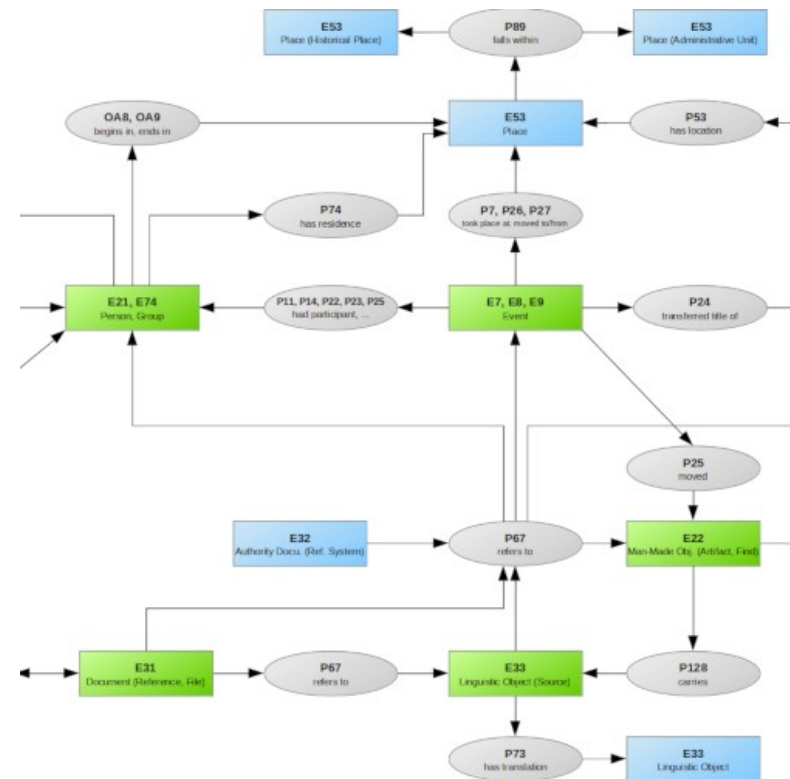


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