

## (Prototyping a Browser for a Listed Buildings Network with SMW)

Anca Dumitrache<sup>1</sup>, Christoph Lange<sup>1</sup>, Michael Kohlhase<sup>1</sup>, Nils Aschenbeck<sup>2</sup>


<sup>1</sup> {a.dumitrache, ch.lange, m.kohlhase}@jacobs-university.de, <sup>2</sup> info@aschenbeck.net

### What BauDenkMalNetz is about

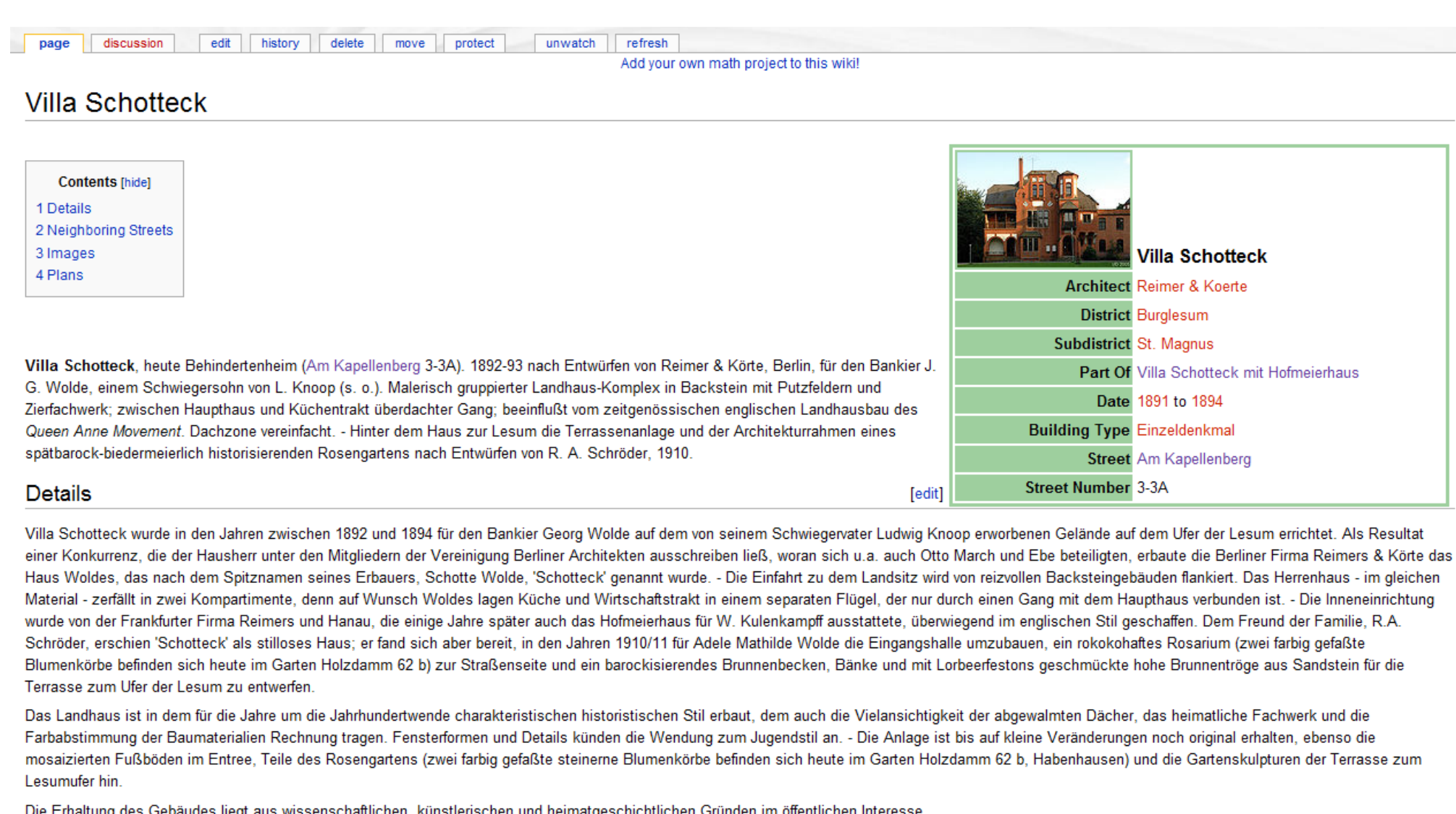
- In Bremen, the database of listed historical buildings is searchable and browsable online, but its rigid structure prevents from implementing more complex queries on it.
- Model the semantic structure of these data, and expose them via a semantic web interface with enhanced querying and presentation capabilities.
- Prototype was built using Semantic MediaWiki (SMW).
- The ontology was inspired by the model provided by Archiplanet. Also, we plan to reuse and possibly enhance the CIDOC CRM and Geonames ontologies.
- Further enhancement will provide on-demand presentation on mobile devices (e.g. customized travel itineraries, based on queries like “Bauhaus buildings in my area”).

### SMW extensions

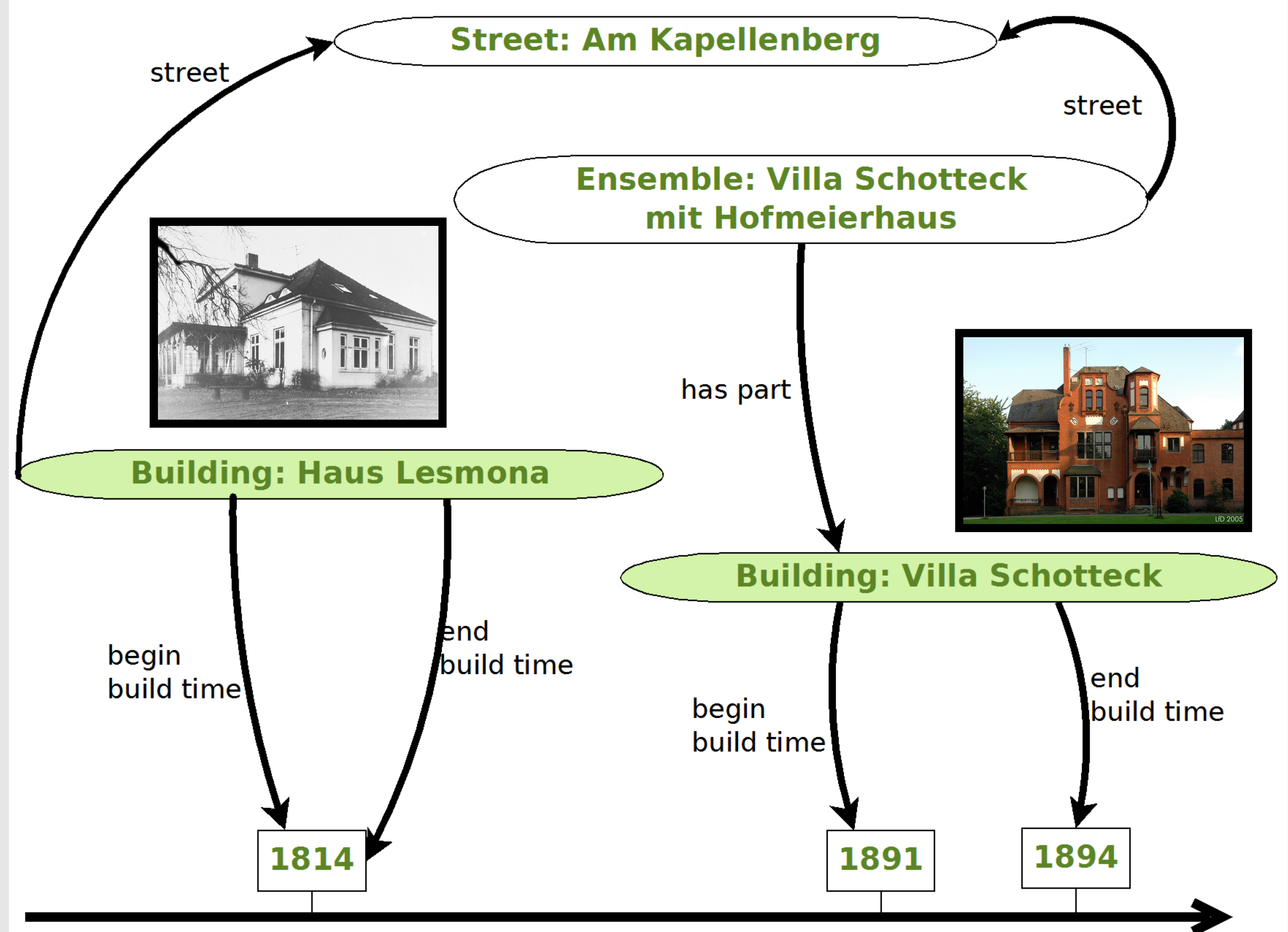
- **Semantic Forms:** represent fine-granular entities that have their own properties of interest as [editable] fragments; also useful for bots importing bulk data from an existing database;
- **Semantic Drilldown:** filter by property values – e.g. address of building, categories – e.g. type of building (house, church etc.), date range;
- **Maps and Semantic Maps:** display query results on a map;
- **Semantic Graph:** illustrate relations, e.g. “building – part-of – ensemble” or time (chronological alignment)



Current web interface of the Listed Buildings in Bremen database



BauDenkMalNetz prototype



RDF graph of possible semantic relations between the data objects

<http://mathweb.org/wiki/BauDenkMalNetz>