VieCPro Database

and Management of prosopographical data@ACDH-CH

https://sennierer.github.io/viecpro\_toolgallery\_presentation\_2021/

The Viennese Court. A prosopographical portal (matthias.schloegl@oeaw.ac.at)

#### VieCPro & APIS Team

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### TOC

- ACDH-CH infrastructure and tools
- APIS & apps built on APIS
- Viennese Court@IHB
- VieCPro project requirements
- VieCPro workflow
- VieCPro NLP pipeline
- VieCPro modelling
- Still to come

https://sennierer.github.io/viecpro\_toolgallery\_presentation\_2021/ https://viecpro.oeaw.ac.at/

# Several interoperable tools

- APIS: entity store with several plugins (annotation, references etc.)
  - Plugins for: Atom (TEI editing), GDoc and Word
  - accessible for other tools via API
- ApisHUB: Central hub for network visualization on all APIS instances
- <u>HistoGIS</u>: GIS service that provides Shapefile from 19th and early 20th century (focus on Austrian-Hungarian Empire)
  - API to retrieve shapefiles needed on the fly

# Several interoperable tools II

- Omnipot: Researchspace based knowledgebase that combines data from different sources
- Nerdpool: Service to spawn prodigy instances for training NLP models
- <u>SpacyApp</u>: service to run large chunks of texts (eg TEIs) through spacy NLP models

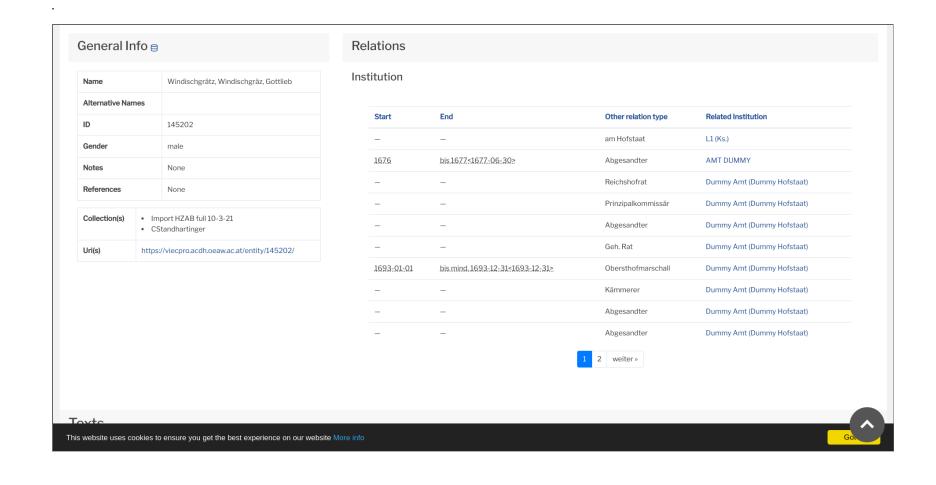
# "Wiener Hof" projects@IHB

- VieCPro: Marion Romberg & Maximilian Kaiser (Innovationsfond)
- Der Wiener Hof: Eliten, Herrschaft und Repräsentation: Katrin Keller (FWF)
- Family Matters. Dynastic Agency in the Correspondence of Empress Eleonora Magdalena of Pfalz-Neuburg: Katrin Keller (FWF)

# VieCPro project requirements

- Prosopographical Database
- extendable for more datasets to come
- frontend to curate the data
- API to automatically ingest the data
- pipeline for data ingestion

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## **APIS**

- Austrian Prosopographical Information System
- funded by the "Nationalstiftung"
- project end March 2020
- Goal was to semantically enrich ÖBL biographies >> prosopographical data
- APIS software one of the outcomes

## Ideas

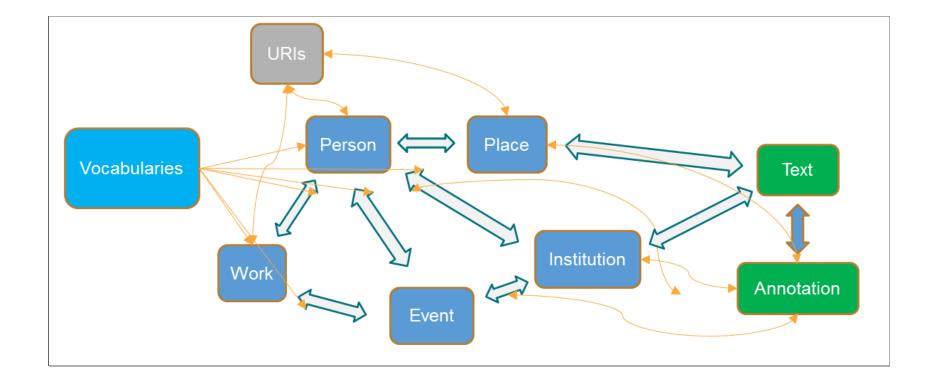
- simple data models >> serialize later in various formats/data models
- rock solid and widely used software stack >> less bugs, better documented, easier to develop
- hybrid approach >> researchers and tools use the same webtool/database

## Stack

- Django (Python Web Development Framework)
- MySQL (Database)
- Stanbol (Reference resources)
- spaCy and Gate for NLP

### Datamodel

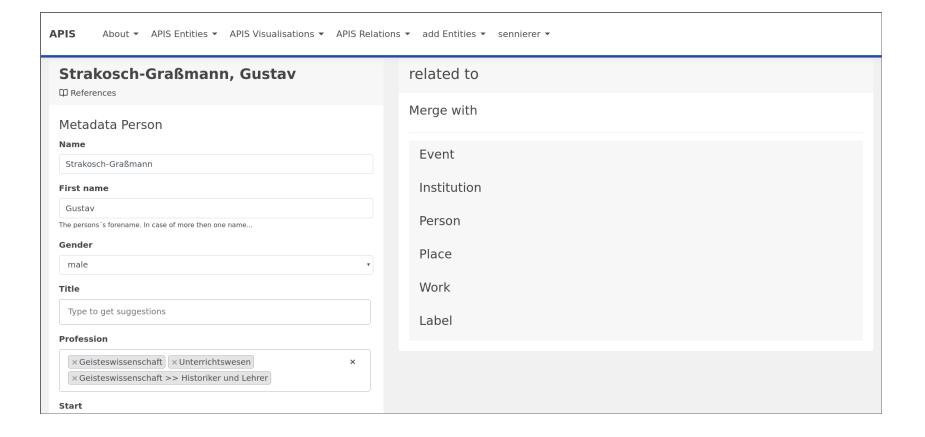
- 5 core entities: Person, Place, Institution, Work, Event
- all entities can be interrelated
- fixed set of relation attributes (mini-event)
- unlimited full texts can be attached to entities
- annotations related to entities and relations
- annotations organized in projects
- entities organized in collections



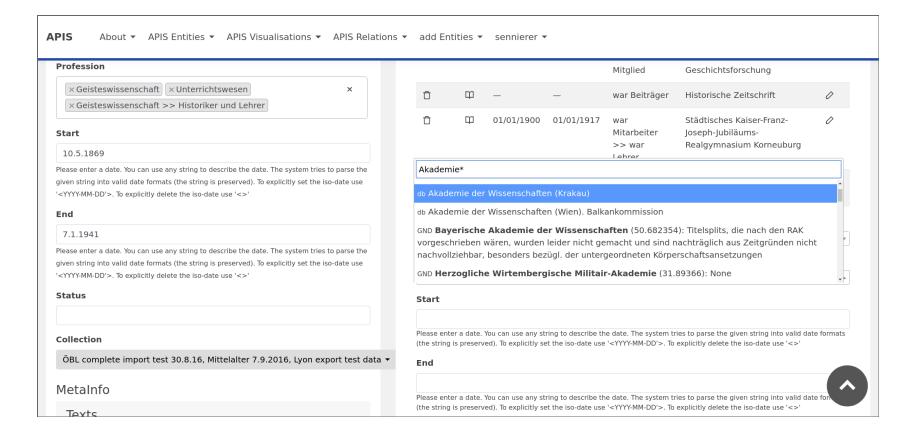
#### Tool

- list views for entities and relations
- detail and create views for entities
- autocompletes for entities:
  - query internal and external resources in one autocomplete
  - fetch metadata on save and create new objects
  - GND, Geonames as example reference resources/authority files
- annotation of full texts:
  - offset annotations
  - stored in projects >> multiple annotations possible

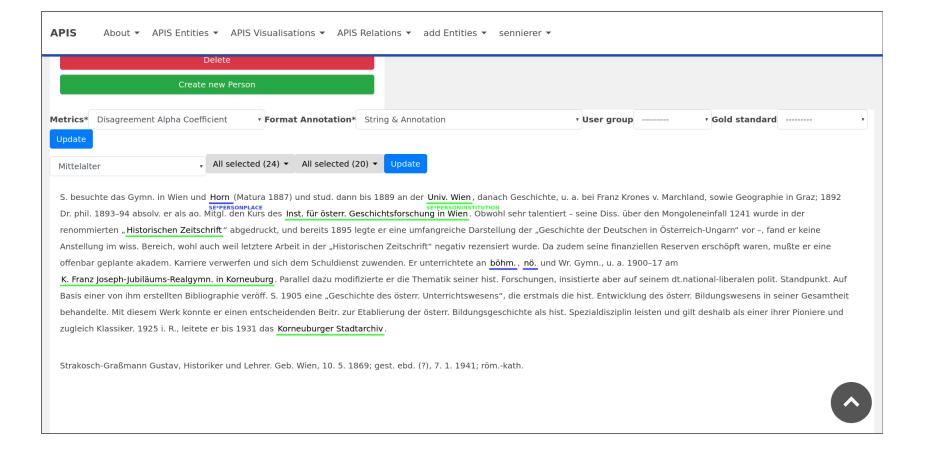
## ENTITY EDIT VIEW



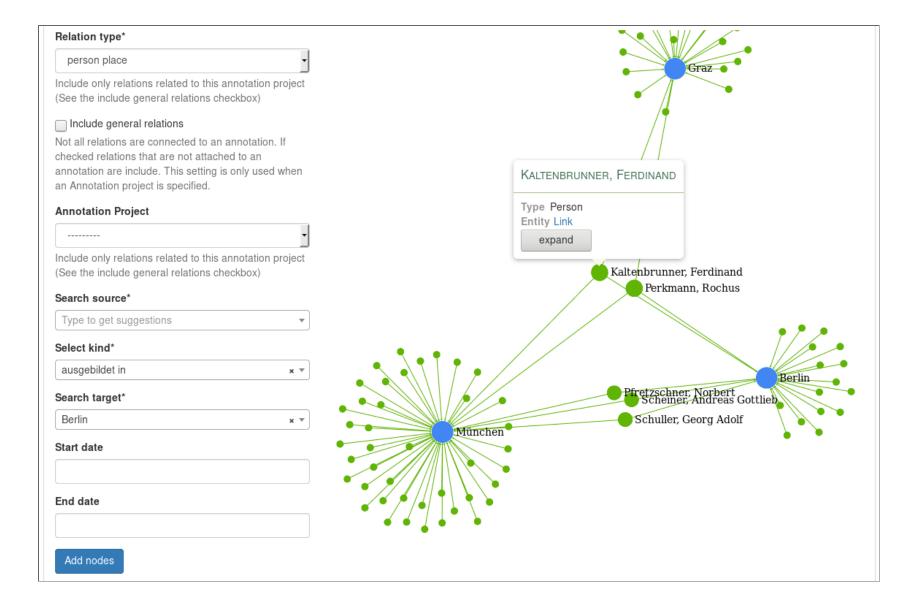
# AUTOCOMPLETES TO REFERENCE RESOURCES (E.G. GND)



#### ANNOTATION



#### **NETWORK VISUALIZATION**



## more projects

- PMB Personen der Moderne Basis collects entities from Schnitzler [Briefe | Tagebuch |...], Kraus and other ~1900 ~Vienna projects
- PAAS Prosopography of the Members of the Austrian Academy of Sciences 1847–2022
- MPR Entities mentioned in the Minutes of the Council of the Ministers of Austria and of the Austro-Hungarian Monarchy (1848–1918)
- and more <a href="https://apis-hub.acdh-dev.oeaw.ac.at/">https://apis-hub.acdh-dev.oeaw.ac.at/</a>

IMPORT WORKFLOW

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NLP TRAINING WORKFLOW

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NLP PIPELINE

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#### CIDOC CRM

- Conceptual Reference Model of the International Committee for Documentation
- ISO standard for the controlled exchange of cultural heritage information
- The CRM is a document defining classes in scope notes rather than an implementation (in eg RDF)
- two main implementations:
  - the RDFS implementation created by Forth in Crete and published on the CIDOC CRM website
  - Erlangen CRM: Implementation in OWL, used in WissKI
- event centered high level ontology

# Shortcomings of CIDOC CRM

- No versioning for the "official versions" published on the CIDOC CRM website >> every class resolves to version 5.0.4
- Not all extensions compatible with Erlangen CRM
- no native possibility to add simple attributes >> BioCRM unary role
- fairly complex RDFs (eg 5 nodes + edges for modelling a birth event)

## Still to come

- Import of the rest of the data
- (Semi)automatic scripts for deduplication
- Modelling of provenance
- custom template including visualizations (e.g tree of the offices at the court)
- publication of the data in various formats: Json, TEI, RDF (CIDOC CRM)

Thank You!

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