

Ontologies and Ontology Services

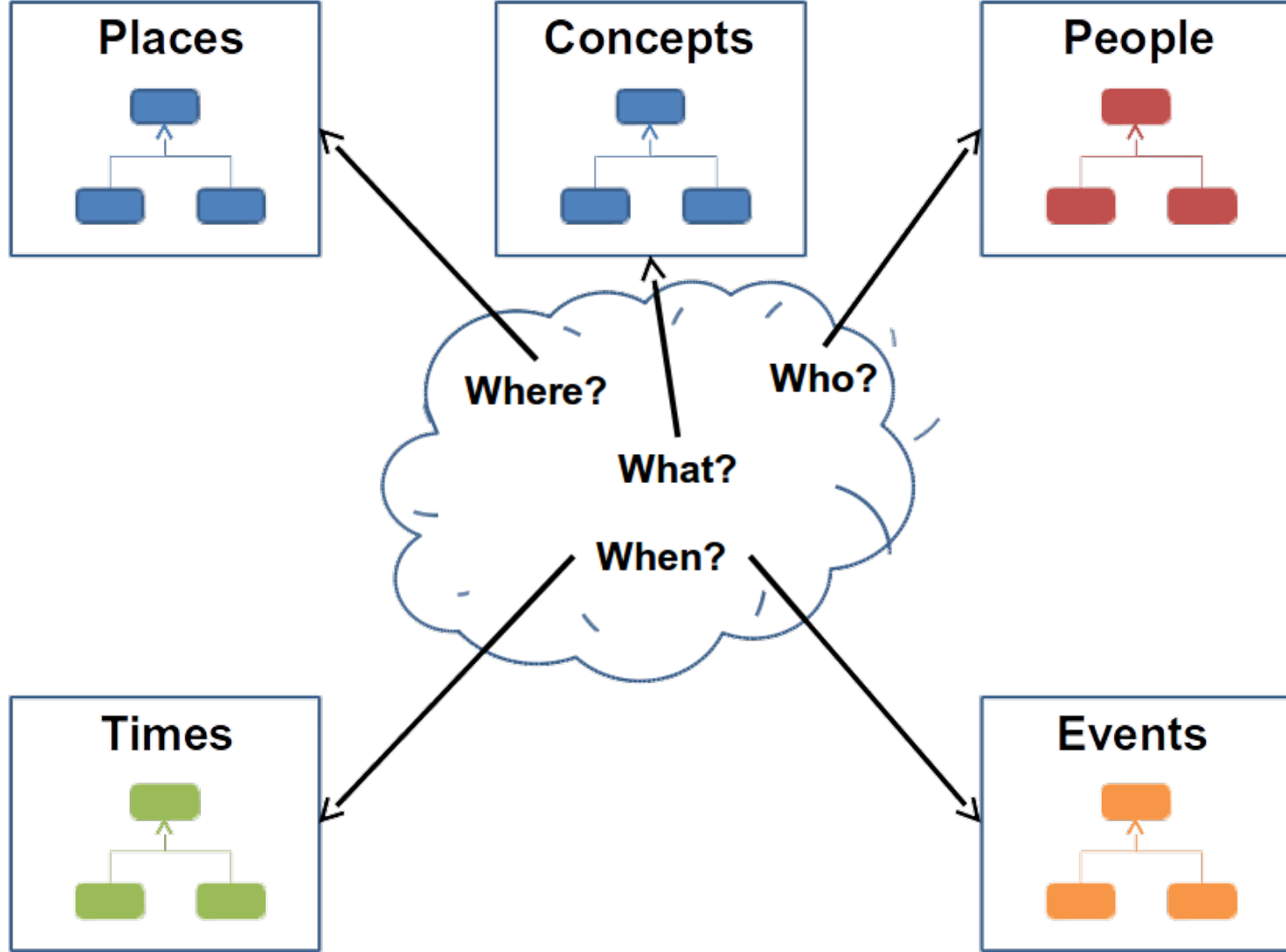
DARIAH Aalto Day 2022, November 30th

Content

- **ONKI ontology services**
- **Ontologies for class concepts**
- **Ontologies for individuals: actors, places, times, and events**
- **Finto.fi vocabulary and ontology services (National Library)**

ONKI ontology services

Jouni Tuominen





Starting in January 2014, national ontology services are provided via the Finto service operated by the National Library of Finland. ONKI APIs also migrate to Finto. [Read more](#) about the upcoming changes. X



Ontologies and vocabularies

Schema library

Data library

Administration

suomeksi

på svenska

in English

Username:

Password:



Welcome to the Finnish Ontology Library Service ONKI!

The ONKI service contains Finnish and international ontologies, vocabularies and thesauri needed for publishing your content cost-efficiently on the Semantic Web. Ontologies are conceptual models identifying the concepts of a domain. They contain machine "understandable" descriptions of the relations between the concepts.

ONKI is published and maintained by [Semantic Computing Research Group SeCo](#). It is part of the on-going project to build a national semantic web infrastructure to Finland (FinnONTO).



Ontologies and vocabularies

Browse and search all available ontologies and vocabularies with this online user interface. The ontologies and vocabularies are listed on the front page of this service.

[Browse ontologies and vocabularies](#) ➔

You can also access any of the available ontologies or vocabularies with the developer APIs listed [below](#).

Why not give it a go?

See if any of the available ontologies or vocabularies match your annotation needs by searching with the quick search below. Please observe the selected search language.



Search language: en ▼

Finnish Ontology Library Service ONKI

Please begin by selecting an ontology or a vocabulary for browsing. You can also search from all or specific ontologies and vocabularies by using the search at the right.


Search information faster

Vleinen suom

allä

Allmän tesauri

Select your search
targets beforehand.



Search for concept...



Language: en



Clear











Select ontologies and vocabularies ▾





Search for ontology or vocabulary:

81 hits





Subject

10 Upper	
19 Domain	
6 Business	
12 Cultural	
6 Geography	
10 Health	
14 Nature	
4 Public administration	





Structure





35 Class ontology	
18 Instance ontology	
23 Advanced vocabulary	
5 Simple vocabulary	

Publishing status




47 Public ONKI-ontology	
17 Development	
5 Own ONKI	
12 Project ontology/vocabulary	

Publisher


3 The National Library of Finland	
30 FinnONTO Consortium	
1 Aalto-yliopiston taideteollinen	
1 BirdLife	

▶ AFO Ontology ▶ Allmän tesaurus på svenska - Allärs ▶ Check-list of Finnish Hemiptera ▶ Checklist of Finnish Thysanoptera ▶ Checklists of Finnish ichneumonid wasps ▶ Checklists of Finnish long-horn beetles 

▶ Coordinate fetching

▶ Creative Commons Licenses ▶ DCMI Type Vocabulary ▶ Disaster ontology 

▶ Erityisryhmä-ontologia

▶ Finnish General Upper Ontology - YSO/ALLSO ▶ Finnish Music Thesaurus - MUSA/CILLA ▶ Finnish Names of the Birds of the World ▶ Finnish Ontology of Health and Welfare - TERO 

▶ Iconclass

▶ Integrated Public Sector Vocabulary - IPSV ▶ IPTC Genre ▶ IPTC Media Topic 

New features

Hide all the concept details you don't want to view.



Piilota tieto

Shortcuts

Bookmark those concepts you need to access again.

Kirjanmerkit

vaahtera

Search for concept...



Language: en

Clear



Select ontologies and vocabularies

Browser

Directory based on root concepts

Alphabetical directory

Concept type:

All types

Search language:

en

Show relations:

☒ separately ☐ in hierarchy

Search for concept:

cat

cat

cat (with NAME of kind)

cat and mouse

catacombs

catafalque, 'castrum doloris' (~ public funeral)

cataract

catasterism, honouring a person by including him among the stars

catch (~ running game)

catching animals

catechism

Catholicity ~ characteristic of the True Church

cattle

cat ★

Broader terms:

iconclass*

└ Human Being, Man in General

└ man and animal

└ domestic animals, kept in and outside the house

└ domestic animals, kept in the house

└ 34 B 12

Narrower terms:

cat (with NAME of kind)

cat and mouse

Type:

NotationConcept*

Coordinate terms:

dog

domestic birds (inside the house)

URI:

http://seco.tkk.fi/onto/iconclass/iconclass#not_34B12

Labels and equivalent concepts:

kissa (fi)

cat (en)

Share:



Share |



1. ONKI Concept Search Widget with a search result

Diagram illustrating the ONKI Concept Search Widget interface with search results:

- ontology selector**: Points to the dropdown menu showing "yso".
- search field**: Points to the input field containing "ship".
- language selector**: Points to the dropdown menu showing "en".
- open ONKI Browser**: Points to the button labeled "Open ONKI Ontology Browser".
- search results**: Points to the list of results under the heading "General Upper Finnish Ontology".

Search results list:

- ship finds
- ship traffic
- ship travel
- shipbuilding
- shipbuilding industry
- shipmasters
- shipping administration
- shipping business
- shipping companies

2. Concept collector for selected concepts

Diagram illustrating the Concept collector interface:

- concept collector**: Points to the text input field containing "yso:ship travel [change] [X]".

Below the input field is a form identical to the one in the first diagram, with "yso" in the ontology selector, "ship" in the search field, "en" in the language selector, and the "Open ONKI Ontology Browser" button.

ONKI APIs

The following API versions are available.

Version	Date	Description
v1	15.04.2011	soap
v2	15.04.2011	http

[Return to ONKI front page](#)



Query 1 x Query 1 x +

<http://rdf.fi/warsa/sparql>

```
8 # Events, photographs and articles that are situated in Vyborg
9 SELECT DISTINCT ?type ?resource ?prefLabel
10 WHERE {
11   {
12     # Events
13     BIND (<http://rdf.fi/warsa/places/municipalities/m_place_614> as ?vyborg)
14     ?resource crm:P7_took_place_at ?vyborg ;
15             a ?typeURI ;
16             crm:P4_has_time-span ?timespan .
17     FILTER(?typeURI != wet:Photography)
18     ?typeURI rdfs:subClassOf* crm:E5_Event .
19   }
20   UNION
21   {
```

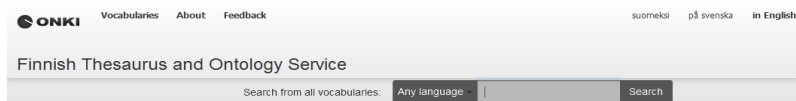
Table Response Pivot Table Google Chart Geo

Showing 1 to 50 of 11,147 entries (in 3.195 seconds)

type	resource	prefLabel
"Battle"Ⓜ n	http://rdf.fi/warsa/events/event_1078	"Defensive battles of Viipuri"Ⓜ en
"Battle"Ⓜ n	http://rdf.fi/warsa/events/event_1080	"Viipuri"Ⓜ en
"Battle"Ⓜ n	http://rdf.fi/warsa/events/event_1092	"Battle of Vyborg, Pappianniemi and Kärenmäki sub-blocks"Ⓜ en
"Battle"Ⓜ n	http://rdf.fi/warsa/events/event_1094	"Battle of Vyborg, Pappianniemi and Huhtiala sub-blocks"Ⓜ en

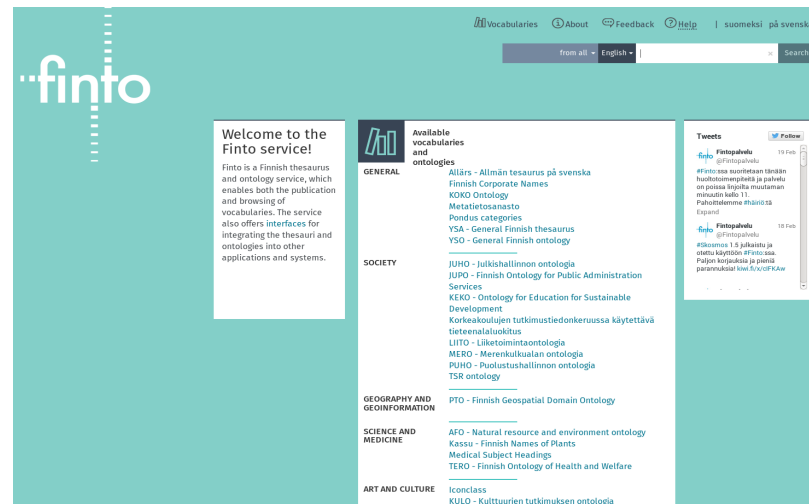
ONKI concept was deployed in January 2014 by the National Library as Finto.fi

Permanent free national service funded by Ministry of Education and Culture and Ministry of Finance from the state budget



Available vocabularies and ontologies

- General concepts**
 - General Finnish thesaurus
 - General Finnish upper ontology
 - KOKO Ontology
 - Allmän tesaurs på svenska - Allars
 - AFO Ontology
 - Ontology of Applied Arts - TAO
 - Ontology for Museum Domain
 - Library of Congress Subject Headings - LCSH
- Health**
 - Finnish Ontology of Health and Welfare
- Culture**
 - Kaunokki Ontology
 - The Finnish Ontology of Photography VALO
 - Kulttuurien tutkimuksen ontologia - KULO
 - Finnish Music Thesaurus - MUSA/CILLA
 - Kielitieteen ontologia - KTO
 - Kirjallisuudentutkimuksen ontologia - KITO
- Public Administration**
 - Puolustushallinnon ontologia - PUHO
 - Julkishallinnon ontologia - JUHO
 - Kunnat 2011
 - Julkisten palveluiden ontologia JUPO
 - Schools Online Thesaurus (ScOT)
- Business**
 - Merenkulkualan ontologia - MERO
- Science**
 - Kassu - Kasvien suomenkieliset nimet



Ontologies for class concepts

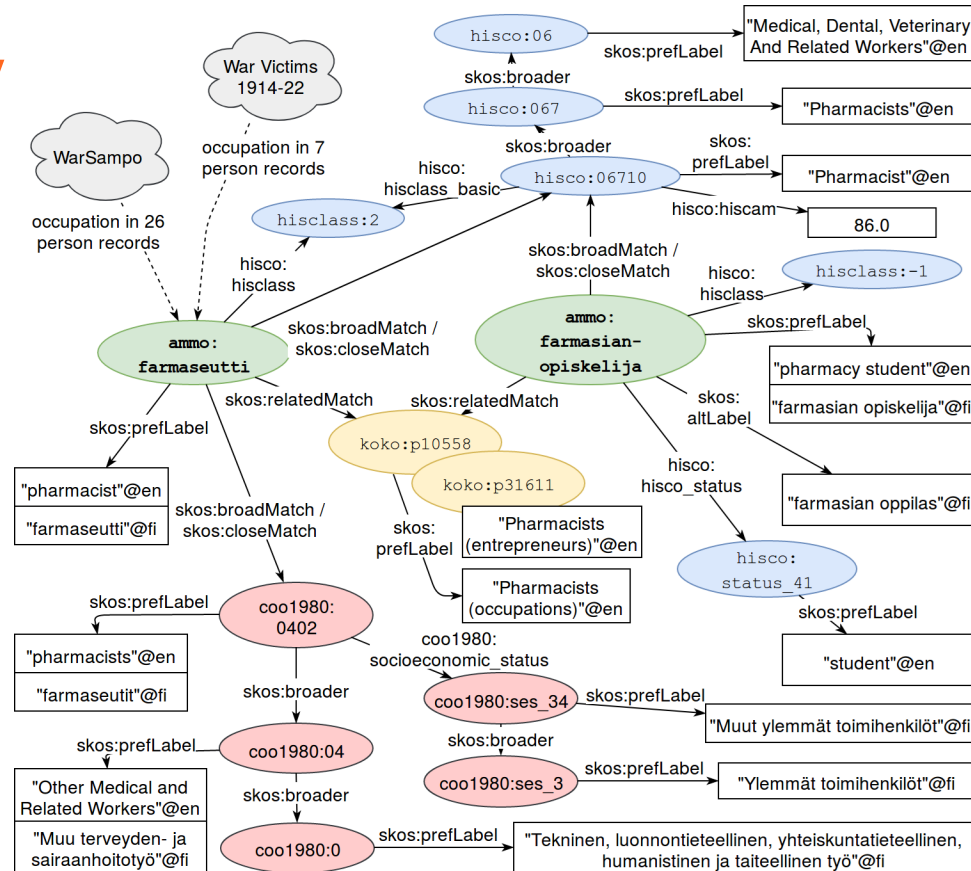
Mikko Koho, Rafael Leal, Minna Tamper

AMMO ontology

Occupations in example are **pharmacist** and **pharmacy student**

The overall process of creating the AMMO ontology:

1. Combining occupational labels from three early 20th-century datasets, and automatic grouping of obvious synonyms,
2. Manual harmonization of the occupational labels and linking to external vocabularies,
3. Transforming data into a SKOS ontology,
4. Validating and refining the ontology,
5. Integrating HISCO and COO1980 classifications as linked SKOS vocabularies.



EKS subject headings

- **Eduskunnan kirjaston asiasanasto (EKS)**
- **Used in the Finnish Library of Parliament**
 - In Finnish, Swedish and English
 - Parliament, jurisprudence, political and social information
- **Intended for describing the contents of publications and for information retrieval**
- **Hierarchical:**
 - 39 broad categories (Criminal law, Administration, Industries, etc)
 - 4285 keywords (equality, electronic commerce, beekeeping, etc)
 - In-between possible 2nd and 3rd level categories
- **Used in an unsupervised hierarchical text categorization tool**

Person Name Ontology (HENKO)

- **Ontology describing Finnish person names**
 - Family names, given names, their usage statistics
 - Matronyms, patronyms (Matinpoika, Liisantytär,...)
 - Nobiliary particles (af, von, ...)
- **Data: contemporary and historical name registries**
 - Finnish Digital Agency (2018–20), AcademySampo, BiographySampo, Norssi High School Alumni
- **Links: Wikidata, DBpedia, AMMO, YSO places**



MAO/TAO + AAT



Getty Vocabularies: LOD

SPARQL

Queries

Any

Search...

swords

Source: <http://vocab.getty.edu/aat/300037048>

Subject (131)

Predicate

Object

All

Statements in which the resource exists

Predicate	Object
rdf:type	gvp:Concept
rdfs:seeAlso	http://www.getty.edu/vow/AATFullDisplay?find=&logic=AND&note=&subjectid=300037048
dcterms:created	1988-01-01T00:00:00
dcterms:modified	2001-07-26T22:03:32, 2008-01-22T14:51:13, 2010-04-23T01:38:44, 2010-06-07T16:28:37, 2011-01-07T11:35:57, 2011-01-07T11:35:58, 2012-07-20T16:15:59, 2014-12-05T08:39:25, 2015-01-16T09:28:20, 2019-09-02T13:12:41, 2019-09-02T13:12:42, 2020-06-10T09:31:53, 2020-06-10T09:33:11, 2020-06-10T09:34:24, 2020-06-10T09:34:27, 2020-06-10T09:34:28, 2020-09-11T10:01:26, 2021-10-19T11:34:47, 2021-10-19T11:34:48
skos:changeNote	aat_rev:5000056402 , aat_rev:5001143124 , aat_rev:5001143125 , aat_rev:5001705931 , aat_rev:5001705932 , aat_rev:5002302409 , aat_rev:5002302414 , aat_rev:5002546318 , aat_rev:5002546320 , aat_rev:5002614042 , aat_rev:5002614043 , aat_rev:5002614052 , aat_rev:5003246368 , aat_rev:5003762725 , aat_rev:5003762726 , aat_rev:5003824183 , aat_rev:5003824184 , aat_rev:5003824185 , aat_rev:5003824186 , aat_rev:5003824203 , aat_rev:5004814594 , aat_rev:5004814595 , aat_rev:5004814614 , aat_rev:5004998892 , aat_rev:5004998893 , aat_rev:5004998910 , aat_rev:5004998911 , aat_rev:5004998912 , aat_rev:5004998913 , aat_rev:5004998924 , aat_rev:5004998928 , aat_rev:5005077783 , aat_rev:5005077784 , aat_rev:5005077805 , aat_rev:5005303533 , aat_rev:5005303534 , aat_rev:5005303535 , aat_rev:5005303536 , aat_rev:5005303537 , aat_rev:5005303538 , aat_rev:5005303539 , aat_rev:5005303540 , aat_rev:5005303541 , aat_rev:5005303542 , aat_rev:5005303543 , aat_rev:5005303544 , aat_rev:5005303587

[oliot](#) > [fyysiset objektit](#) > [elottomat objektit](#) > [tekniset objektit \(fyysiset objektit\)](#) > [aseet](#) > [teräaseet](#) > [miekat](#)

KÄYTETTÄVÄ TERMI

miekat

TYYPPI

MAO-käsite

YLÄKÄSITE

[teräaseet](#)

[teräaseet](#)

ALAKÄSITTEET

[floretit](#)

[kaksiteräiset miekat](#)

[kalvat](#)

[yksiteräiset miekat](#)

ASSOSIIATIIVISET KÄSITTEET

[huotrat](#)

[tupet](#)

URI

<http://www.yso.fi/onto/mao/p1941>

LATAA TÄMÄ KÄSITE:

[RDF/XML](#) [TURTLE](#) [JSON-LD](#)

VASTAAVA KÄSITE

<http://vocab.getty.edu>

[/aat/300037048](#)

[miekat](#)

[vocab.getty.edu](#)

Yleinen suomalainen ontologia - YSO

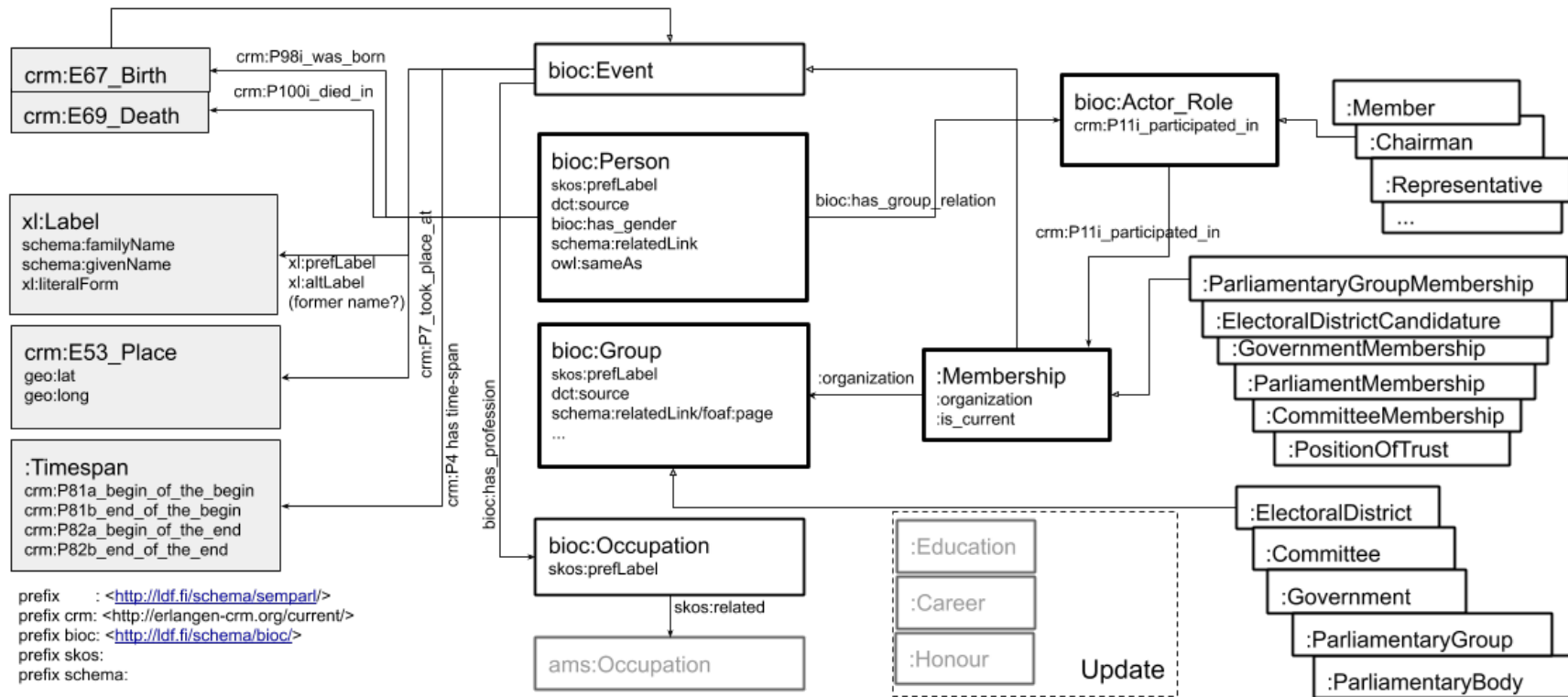
Ontologies for individuals: actors, places, times, and events

Petri Leskinen

Actor Ontologies

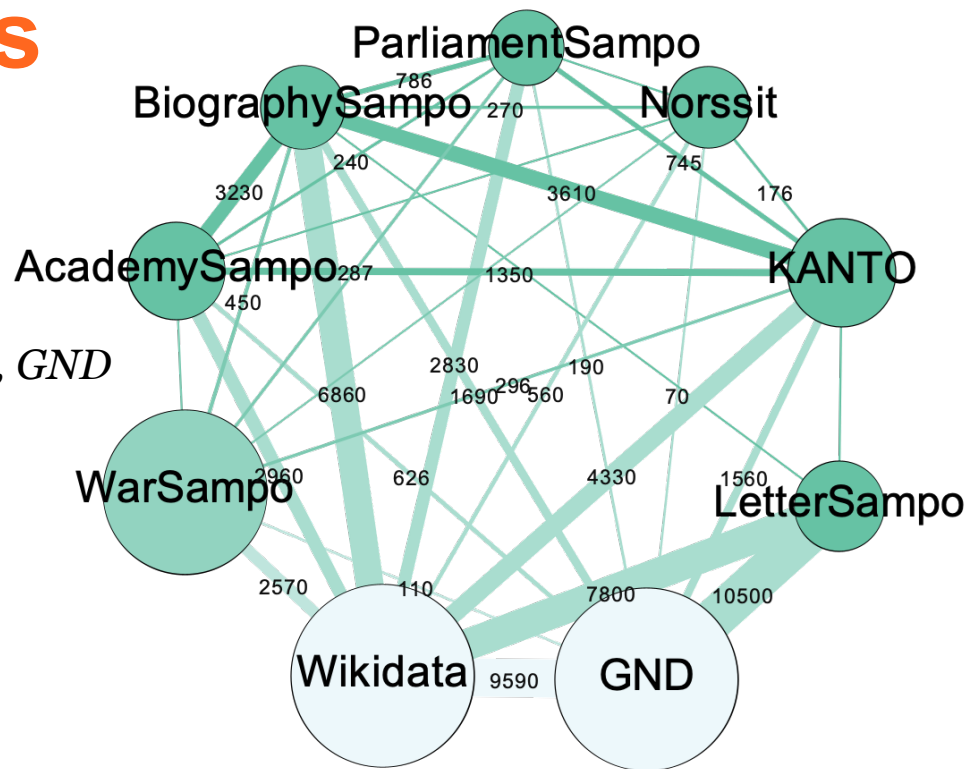
- **Plenty of published ontologies providing biographical data:**
 - WarSampo
 - BiographySampo
 - AcademySampo
 - ParliamentSampo
 - etc ...

Actor–Event based Schema



Actor Ontologies

- **Interlinked to:**
 - One another
 - External databases e.g.
 - *Wikidata, KANTO, ULAN, GND*



Thank you!