



Skosmos



annif

National Ontology, Linked Open Data Infrastructure and Data Services

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Finto.fi – a service of the National Library of Finland

- Technical infrastructure for publishing and use of interoperable ontologies and vocabularies
- Network of linked multilingual indexing ontologies of various domains

YSO - General Finnish ontology

Content language English Search

A-Z Hierarchy Groups New

- events and action
- objects
 - abstract objects
 - physical objects
 - inanimate objects
 - abacuses
 - adhesive tapes
 - admission tickets
 - amigurumi
 - animal bodies
 - armours**
 - articles (inanimate objects)
 - artificial nails
 - artificial organs
 - audience areas
 - balloons
 - banderoles
 - baskets
 - bathtubs
 - bird tables
 - birdhouses
 - bits (bridles)
 - blinds
 - bookmarks
 - booms
 - braids and weaves
 - bridge floors
 - bridles
 - briquets
 - brooms and brushes
 - buckles
 - busses (computing)
 - buttons (clothing)
 - candles
 - candlesticks
 - cardboard
 - cards
 - cart structures
 - celestial bodies
 - ceramics
 - chains (objects)

objects > physical objects > inanimate objects > armours

PREFERRED TERM **armours**

TYPE	General concept				
BROADER CONCEPT	inanimate objects				
RELATED CONCEPTS	military uniforms				
BELONGS TO GROUP	67 Warfare. Military Technology. Defence. Weapons				
IN OTHER LANGUAGES	<table border="0"> <tr> <td>haarniskat</td> <td>Finnish</td> </tr> <tr> <td>harnesk</td> <td>Swedish</td> </tr> </table>	haarniskat	Finnish	harnesk	Swedish
haarniskat	Finnish				
harnesk	Swedish				
URI	http://www.yso.fi/onto/yso/p14728				
Download this concept:	RDF/XML TURTLE JSON-LD Last modified 5/10/17				

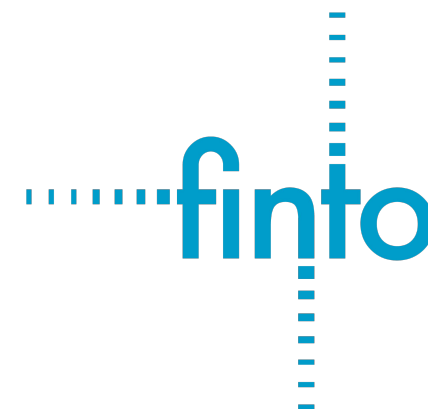
EXACTLY MATCHING CONCEPTS	armours KOKO Ontology haarniskat (fi) YSA - General Finnish thesaurus harnesk (sv) Allårs - General thesaurus in Swedish
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Images indexed with the term in Finna 245



Liivinmaan kenraaliku sotamarsa Da ... Museovira
 valtaneuvos Pontus De la Kustaa Eriksson Vaasa Ruotsin kuningas Kaarle XI Ruotsin kuningas Fredrik I

See all th



Finto.fi

Where we publish thesauri, classifications, ontologies etc. for use by libraries, archives, museums, media, students...

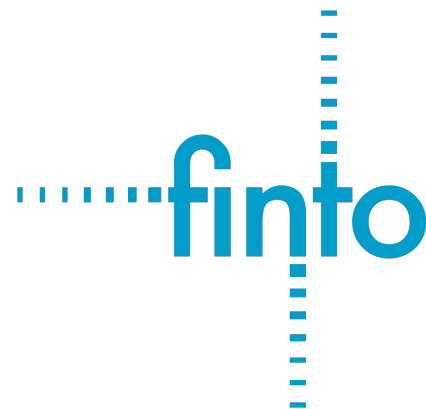
Ontologies in Finto

The Finto family of Ontologies is a group of machine readable semantic conceptualizations, that are used for annotating different materials like publications, websites and datasets

- [General Finnish Ontology YSO](#) forms a basis and structure for the linked ontology system
- Several domain ontologies built to extend the general concepts of YSO
- YSO and the domain ontologies together form the [KOKO](#) ontology cloud
- All ontologies published through [finto.fi](#) as linked open data

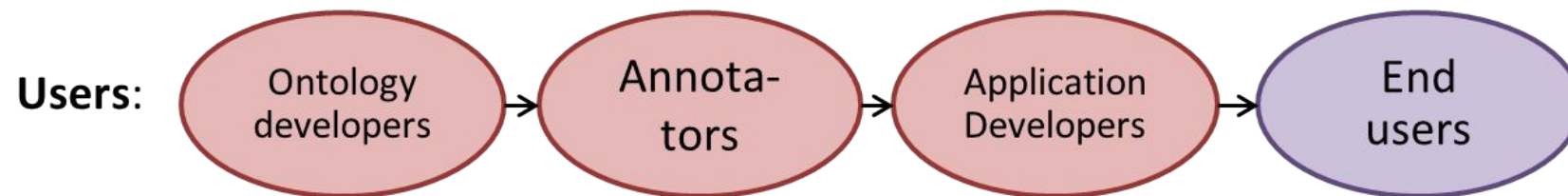
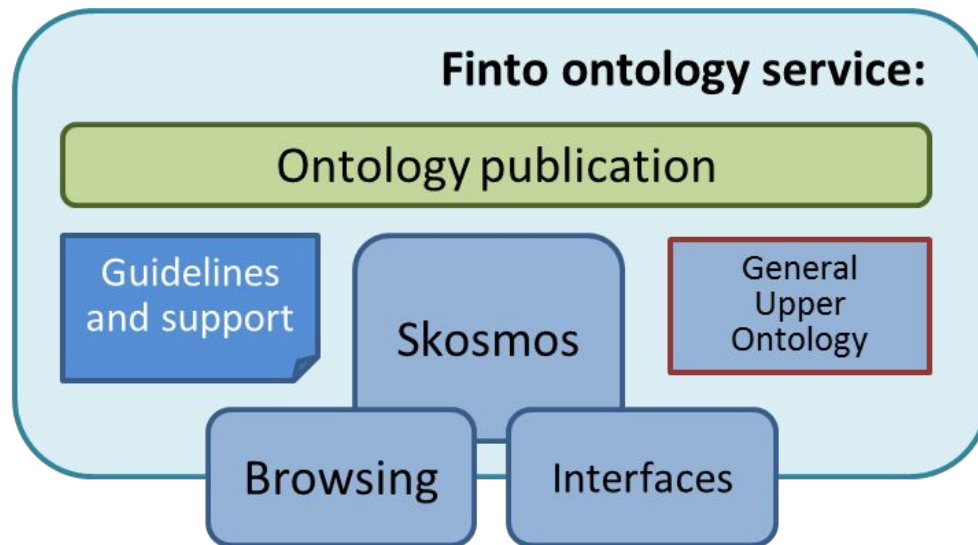
Finto service of the National Library of Finland

- Finto started as a project in 2013, financed by Finnish Ministry of Finance and the Ministry of Education and Culture
- Launched to the public in 2014
- Permanent service at the National Library of Finland since 2019
- Service and infrastructure of linked data vocabularies for the *whole Finnish Public Sector* (not just libraries, museums and archives)



Major users of Finto

- All Finnish libraries
 - Many Finnish museums
 - Finnish Broadcasting Company Yle archives, Svenska Yle (Swedish language news)
 - National Institute for Health and Welfare
 - Prime Minister's Office
 - many government web portals
 - Ministry of Employment and Economy
 - EnterpriseFinland portal
 - National Land Survey
 - City of Helsinki
 - Parliament of Finland
- etc.



History of ONKI, Skosmos and Finto

- 2011 Development of ONKI Light started @ Semantic Computing Research Group (SeCo) at Aalto University & Univ of Helsinki (predecessors ONKI 1, ONKI 2 and ONKI 3 were developed earlier)
- 2012 First publication "ONKI Light on SPARQL" (EKAW 2012)
- 2013 Maintenance handed over to the National Library of Finland.
- 2014 Finto.fi launched. Renamed to Skosmos. Code moved to GitHub.
- 2015 Skosmos 1.0 released. Skosmos-users group started.
- 2018 Skosmos 2.0 released: new configuration format and Docker support.
- 2022 Planning for Skosmos 3 started. New visual design created.
- 2023 First Skosmos 3 development sprints
- 2025 Skosmos 3.0 released
- 2026 *New [Finto.fi](https://finto.fi) to be launched using Skosmos 3*

Automated subject indexing: Annif and Finto AI

How can I annotate my documents or data with concepts from Finto?

annif

developed since 2017

General purpose open source **tool** for automated subject indexing and classification

Multilingual, supports many vocabularies

Code on GitHub, website with test form and API

Global development and user community; user forum **annif-users** on Google Groups

annif.org

fintoai

launched in 2020

Automated subject indexing **service** for production use, based on Annif

Supports indexing with the General Finnish Ontology YSO in Finnish, Swedish and English language

Web user interface and API service

Intended to support subject cataloguers in Finland regardless of institution (GLAMs, public administration); sister project to the Finto vocabulary service

ai.finto.fi

Data Services

How can I access cultural heritage data?

Data Catalog of the National Library of Finland

Our data catalog showcases the open data sets and APIs of the National Library.



Data sets

Open data sets available for reuse.



APIs

Interfaces that provide access to our data.

Open data sets and APIs

Fulltext/digitized materials e.g.

- Copyright free books
- Classics Library (19th & 20th century fiction)
- Copyright-free Finnish newspapers and periodicals
- Manuscript Collection
- Nordenskiöld Map Collection

Metadata collections e.g.

- Fennica national bibliography
- Viola national discography
- [Finna.fi](https://finna.fi) discovery system

Reference data e.g.

- All vocabularies in [Finto.fi](https://finto.fi)
- KANTO: name authority for persons and corporate bodies (approx. 200k entities)

REST APIs e.g.

- Finna API – search over millions of cultural heritage resources
- Finto API – access vocabulary data
- Finto AI API – perform automated subject indexing and classification

Bibliographic APIs e.g.

- Melinda OAI-PMH – harvest millions of bibliographic records
- Z39.50/SRU – search bibliographic databases

Thank you!

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