Linked data, linked libraries: a look into the Kirjasampo data model and the cooperation of the Finnish libraries

11. RERO Meeting 23.11.2017
Kaisa Hypén, Turku City Library
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   • Data analysis, data visualization, linking datasets
   • Sharing (tacit) knowledge and reading experiences

3. The cooperation of the Finnish libraries network
   • The National Repository Library
   • The shared metadata repository Melinda and the working groups

4. The cooperation of the Finnish public libraries

5. Links and the list of the photos
CITY OF TURKU

- Population 188,584
  - Swedish speaking 5.4%
  - Other languages than Swedish or Finnish 10.6%
- 6th biggest city after Helsinki, Espoo, Tampere, Vantaa, Oulu
- Two universities: Turku University, Åbo Akademi

Early history of the City of Turku

- In 1229, the bishopric was moved from Nousiainen to Koroinen (approx. 2 kilometres from the present-day Market Square)
- Turku Castle was founded in the 1280s
- The construction of Turku Cathedral began on the present-day site in the 1280s
- Turku became a city in the end of the 13th century and is the oldest city in Finland
- The first known seal of the city dates from 1309
- The first known Finnish coins (Moneta aboen(sis), abo, Turun raha) were minted in about 1410
TURKU CITY LIBRARY

• Established 1863

• Main library, 12 branches, 2 mobile libraries

• Staff 152 employees

• Budget 10,9 mill. € (2018)

• Loans about 3 mill. per year

• Visits about 2 mill. per year

• Leader of the Vaski-library consortium

• A municipality library of South-West Finland (1961-2016), a regional development responsibility within South-West Finland and Satakunta (2017-)
A LOOK INTO THE KIRJASAMPO DATA MODEL
BACKGROUND OF THE KIRJASAMPO WEB SERVICE
SPECIAL CHARACTERISTICS OF FICTION
CHALLENGE THE DATA SYSTEMS...

- Genre, style
- Subjects, themes, motifs
- History of publication, cultural background, language
- Time, place, characters
- Critics, reception
- Author

Work
... AND SO DO ALSO THE READERS

Subjects
“novels where shoes play a key role”
“novels which describe work in a positive light”
“novels in which hymns are sung”

Recommends
“good books”
“something interesting to read”

Details
“which novel has a description of the Grand Inquisitor”
“what is the poem about a one-rope swing”

Something similar
“a satire like one done by Daniil Kharms”

Combining different aspects
“a novel written by a Finnish American author that has excellent use of American Finnish and kind of old, maybe from the 1960s. The author's name might start with an A.”
Content no longer king - Context is!

Lise Vandborg, Project Manager, Litteratursiden.dk
FACING THE CHALLENGES – RETHINKING THE METADATA

1. Multifaceted description of contents and contexts

2. Ontologies for describing, searching, recommending literary works

3. Data analysis, data visualization, linking datasets

4. Sharing (tacit) knowledge and reading experiences
ABOUT THE KIRJASAMPO PROJECT

- First survey 2007
- Building the system 2008-2011
- Launching in October 2011
- Maintenance and developing 2012-
ABOUT THE FUNCTIONALITIES AND FEATURES OF KIRJASAMPO

Basic information:
- HelMet

New addition tracking:
- BTJ

Description of materials:
- enrichment of description data
- recommendations
- tacit knowledge
- long tail

Librarian society

Kirjasampo-Saha, an annotation tool
- semantic RDF database
- fiction metadata schema
- FRBR application
- ontologies as a tool for content description
- web-based

Check book availability on library collection databases

www.Kirjasampo.o.fi
“literary website”
Reader community
- multifaceted searches
- blogs
- literary discussions
- reading circles
- etc.

- tags
- recensions
- presentations
- personal shelves
- recommendations

Turku Library
MULTIFACETED DESCRIPTION OF CONTENTS AND CONTEXTS
• **Resource Description Framework RDF**
  - All data as triples subject – predicate – object
  - Compare with RDA: entity – element – value of element
  - Enriching properties with information
  - Metadata as linked data, which can be used by other applications and combined with other datasets
  - Identification with URIs – language independence

<table>
<thead>
<tr>
<th>Subject</th>
<th>Predicate</th>
<th>Object</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sinuhe egyptiläinen</td>
<td>author</td>
<td>Mika Waltari</td>
</tr>
<tr>
<td>Mika Waltari</td>
<td>member</td>
<td>Tulenkantajat</td>
</tr>
<tr>
<td>Tulenkantajat</td>
<td>description</td>
<td>”Finnish society of writers “</td>
</tr>
</tbody>
</table>

• **SAHA annotation editor**
  - An intuitive tool for saving information
<table>
<thead>
<tr>
<th>nimi</th>
<th>(fi) Kiitos kirjasta -mitali, (sv) Tack för boken-medaljen</th>
</tr>
</thead>
<tbody>
<tr>
<td>asiasana tai oma avainsana</td>
<td>kirjakauppiaat, kirjastoala, kotimaiset kirjallisuuspalkinnot</td>
</tr>
<tr>
<td>tyyppi</td>
<td>palkintosarja</td>
</tr>
<tr>
<td>lisätietoa muualla verkossa</td>
<td>EloNet, IMDb</td>
</tr>
</tbody>
</table>
| tyyppi       | elokuvat                                                   

**more information about the tv-serie based on ”Solveigin laulu”**

<table>
<thead>
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</thead>
<tbody>
<tr>
<td>arvio</td>
<td>Arvostelevassa kirjaluettelossa Solveigin laulu</td>
</tr>
</tbody>
</table>
A special feature of Kirjasampo: retrieval of the cover pictures of books.
ONTLOGIES FOR DESCRIBING, SEARCHING, RECOMMENDING LITERARY WORKS
## ONTOLOGIES

- Based on thesauri
- Hierarchical and associative relations between concepts
- Contexts and precise definitions of the concepts
- Identification with URIs – machine readable
- Language independence
Search with the ontology concepts

Search term: “illnessis”

Also works, that haven’t been described with the word ”illness”, but with special terms like ”heart disease”, ”pancreatic cancer”, ”depression” were found. This is possible thanks to the hierarchical structure of ontologies.
LANGUAGE INDEPENDENCE

KANGASTUS 38

Kjell Westö

Tilai

Romaani

Aikalaisuus

Historiallisen romaani

Psykologisena romaani

Suomenruotsalainen kirjallisuus

Taparomaani

Anti-semitismi

Avio

Eraaviöösus

Kansainvälinen politiikka

Kansalaissota

Kosto

Minäkövän

Morali

Mistot

Traumati

Vastauksisuus

Viha

läskärit

Suomenruotsalaiset

Taittijat

Niteet kirjastoissa

HÄGRING 38

Kjell Westö

Upptävman

Romaner

Finlandssvensk skönlitteratur

Historiska romaner

Psykologiska romaner

Sederromaner

Tidskildringar

Antisemitism

Hat

Hamnd

Inbördeskriget

Internationell politik

Jagföreställning

Männens

Moral

Ojämlikhet

Skismässan

Trauman

Vastuullisuus

Finlandssvenskar

Konstnärer

Lakare

Exempiar på biblioteket
DATA ANALYSIS, DATA VISUALIZATION, LINKING DATASETS
THE TYPICAL FINNISH FICTIONAL WORK ACCORDING TO KIRJASAMPO DATA

Is a novel which

• tells about everyday life, relationships and love
• is located to countryside
• most common “real life place” is Helsinki
• people are probable women, writers, soldiers or mothers
• period is the war time and 1940’s
• which name is A man is and not
SHARING (TACIT) KNOWLEDGE AND READING EXPERIENCES
**Kommentoidut teokset**

**Mustat paperit**
Munonen, Maja
Kommentteja 1 kpl, josta viimeisin kirjoitettu To 2.10.2014 20:03.

**Hiekkaan pirrellty hirviö**
Mäkinen, Jarno
Kommentteja 1 kpl, josta viimeisin kirjoitettu Ma 16.9.2014 12:02.

**Pjongsang**
Detale, Guy

**Rakkauden saari**
Vayron, Tarja

**Iso tytö**
Steel, Daniela

**Elävällä kamarilla**
Karamellii, Veli
Kommentteja 1 kpl, josta viimeisin kirjoitettu Su 3.8.2014 1:44.

**Taivaslaulus**
Rauhala, Pauliina

**Käännöksen kuvakatsaus**
Aiuppa
To 3.10.2014 14:51

**Eläimellistä menoa**
Eläinten housua, Suomen lasten eläinsadut, Kaiken maailman eläinsadut, Eläinsankareita, Tepi saa uuden kodin, Koko saaren Kingi, Kissaatka, Kissa jolle ei arki ota, Kissan koti, Valkoinen kiraihu...

**Vaikuttavaa kirjallisuutta**
Leikku Joonatan, Karpatien herra, Leppäkukka, Uljas uusi maailma, Peppi Pitkätossu, Koukussa, Ei eläkkeeksi käytätkää mopoja, Ihan pihalla, Alot poellolle, Maaankavanara...

**Kirjavinkkausta: Venäläistä kirjallisuutta**
Krimin saari, Markaleppä, tähtiin, Vinkaveijet, Sattuma, Ensikesän ja toisesta, Penipohjanen tutkimus, Markaleppä, Meikäläiset, Arsenjevin elama. Valtut kertomukset...
Traditional methods, new operational environment, new tools.
THE COOPERATION OF THE FINNISH LIBRARIES
THE FINNISH LIBRARY NETWORK

Libraries of research institutes

Special libraries, e.g. The Library of Parliament

The National Repository Library

The National Library

Libraries in polytechnics, educational institutions and schools

Libraries of universities

The Finnish library of visually impaired Celia

Public libraries

Libraries in polytechnics, educational institutions and schools

Libraries of research institutes

Special libraries, e.g. The Library of Parliament

The National Repository Library

The National Library

Libraries of universities

The Finnish library of visually impaired Celia

Public libraries
SOME STATISTICS...

- Polytechnic libraries: 26
- Libraries in educational institutions and schools: 18
- Special libraries: 55
- Libraries in universities: 19
- Public libraries
  - At least one library in every municipality, all together 311 main libraries
  - Branches 436, mobile libraries 137, 10,414 mobile library stops
COOPERATION OF ALL LIBRARY SECTORS
THE NATIONAL REPOSITORY LIBRARY
Business idea:

“The National Repository Library (NRL) is a resource shared by all Finnish libraries and information service centres.

The NRL is the most economic way of storing library material. Because of the NRL, the need for extra shelf space in libraries throughout the country is decreased and can be controlled.

The basic function of the NRL is to receive, store and offer material for the use of other libraries. The NRL serves university and special libraries as well as public libraries, and acts as a connecting link in the library network.”

Direction to the NRL, Kuopio!
• Libraries remove from collections materials (books, journals, and, since August 2017, also music-cds) which are no longer valid for their patrons and send them to the National Repository Library

• Necessary changes are made in the library systems: complementary cataloguing and the information of availability of the materials (not anymore in the sending library but in the NRL)

• The NRL sends books and copies of articles to libraries in Finland and abroad on request as interlibrary loans

• The NRL in numbers:
  • Materials for use approx. 95 700 meters (30.06.17)
  • Monography titles approx. 1 720 000
  • Journal titles approx. 112 050
  • Given loans and article copies 102 191 in 2016
THE SHARED METADATA REPOSITORY
MELINDA AND THE WORKING GROUPS
THE MELINDA COOPERATION NETWORK

Libraries of research institutes

The National Repository Library

Special libraries, e.g. The Library of Parliament

The National Library

Libraries in polytechnics, educational institutions and schools

Libraries of universities

The Finnish library of visually impaired Celia

Public libraries
MELINDA: THE SHARED METADATA REPOSITORY AND A CATALOGUING TOOL

- Shared description rules and guidelines (RDA)
- Utilizing authorized metadata and shared tools, like thesauri and agent metadata service
- Utilizing description work already done, avoiding overlapping of work
- Melinda contains the Finnish National bibliography and metadata about the materials in university libraries, polytechnic libraries, some special and public libraries
WORKING GROUPS

• To ensure, that all librarians, who produce metadata in Melinda, follow the rules in order to confirm that the metadata produced would be of uniform quality.

• Several working groups which discuss the actual topics of description standards, regulations and recommendations.

• There are representatives from different library sectors in these working groups, and the National Library is coordinating their work.

• The members of these groups express the viewpoints which are important to the library sector she or he is representing and also convey the decisions made in these groups to his or her colleagues.
FOUR WORKING GROUPS

• Working group specialized on metadata standards
• Melinda cooperation group Kumea – guides the practical cataloguing work
• Indexing working group
• Working group specialized on music cataloguing
THE COOPERATION OF THE FINNISH PUBLIC LIBRARIES
THE GOALS OF THE COOPERATION / PUBLIC LIBRARIES

- To ensure equal public libraries services for all citizens and to make sure that even the smallest libraries can keep up with the development

- Public Libraries Acts
  - 1928: public library as a part of national educational project
  - 1961: speeding up the idea of modern library with the state support (especially libraries in the countryside)
  - 1986: library as a part of the affluent society, harmonization the library activities
  - 1998: library as a part of information society
  - 2017: new tasks for libraries: promotion of active citizenship, democracy and freedom of expression
THE WAYS OF COOPERATION: THE PROVINCIAL LIBRARIES + THE CENTRAL LIBRARY FOR PUBLIC LIBRARIES

• The provincial libraries (18)
  • Based on Library Acts 1961-2016
  • To support the information and interlibrary lending services of the public libraries within its region
  • To develop information services relating to its own area of operation
  • To provide training in new forms and development projects of library work for personnel in its operating area

• The central library for public libraries – Helsinki City Library
  • To complement the services of public libraries (inter-library lending, cooperation with other sectors’ libraries, develop common methods and instruments for libraries)
THE WAYS OF COOPERATION: REGIONAL COOPERATION

• Library consortiums (29)
  • Is based on voluntary cooperation agreements between libraries in a certain region
• Consortium share
  • Library management systems
  • Acquisition of library materials
  • Logistics
  • Mobile libraries
  • Rules of use
THE WAYS OF COOPERATION: DEVELOPMENT RESPONSIBILITIES 2017

- Library Act 2017: development responsibilities instead of municipal libraries
  - The national development responsibility: Helsinki City Library
    - provide equal support to all public libraries in their endeavours to improve their operations
  - The regional development responsibilities: Turku, Oulu, Porvoo, Kuopio, Lahti, Rovaniemi, Vaasa, Joensuu, Tampere
    - strengthening the operations of the public libraries situated in their region
AND A LOT OF INFORMAL COOPERATION...

- Sharing ideas, experiences, knowledge in informal library staff networks
FUTURE?
Thank you!
QUESTIONS, COMMENTS?

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LINKS

http://www.turku.fi/en
http://www.kirjasampo.fi
https://litteratursiden.dk/
http://www.libraries.fi/
https://seco.cs.aalto.fi/
https://www.vaasa.fi/en/services/library-services
http://www.btj.fi/english/
http://217.78.0.106/saha/project/index.shtml?model=kirjasampo
http://finto.fi/en/
https://semanticcomputing.github.io/norssit/#!/ruudukko
http://hakemisto.kirjastot.fi/en/#f=["branch_type":["polytechnic_library"]]
http://hakemisto.kirjastot.fi/en/#f=["branch_type":["special_library"]]
http://hakemisto.kirjastot.fi/en/#f=["branch_type":["university_library"]]
http://hakemisto.kirjastot.fi/en/search
http://www.libraries.fi/libraries
http://www.varastokirjasto.fi/en/
http://slideplayer.fi/slide/11217362/
http://melinda.kansalliskirjasto.fi/f/?func=find-b-0&CON_LNG=eng&local_base=fin01_opac
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