



## Kirjasampo: An Inspiring, Surprising and Empowering Access to Fiction

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### Session:

117 — *Subject access now: inspiring, surprising, empowering* —  
Classification and Indexing

### Abstract:

*Kirjasampo is a web service for fiction. Enabled with new semantic web technologies, it is a tool for saving information and book descriptions and for finding good readings. Multifaceted content descriptions, and ontologies which are used in content description, make it possible to recommend books and thus find new, inspiring readings. The data of Kirjasampo is open and can be linked with other open data. The aim of the service is to encourage both librarians and readers to share their knowledge and experiences in literature. If you read a good book, tell others about it in Kirjasampo and let the delight spread!*

### Introduction

Fiction has always been an essential part of the collections in public libraries in Finland. According to the latest study pertaining to the use of public libraries in Finland, libraries are still dominant in providing fiction to the people; more than 80 % of the respondents in the study stated that the library is the most important channel for obtaining fiction.

To-date, there have been only a few tools for supporting information services for fiction collections in libraries. Using current content description methods and reference data stored in library systems, only a small percentage of the information service and help desk needs can be met. Help desks are also hindered by the fact that older works of fiction have not been properly indexed. In Finland the systematic content description of adult Finnish novels was begun in 1996 and poetry and graphic novels at the beginning of the 2000s. Any materials published prior to this time can only be occasionally found using a keyword. However, older materials, particularly fiction, are also of great interest.

However, patron confidence in the literary knowledge of library professionals remains unwavering—after

all, librarians have naturally read and know all the materials found in their library's collection! This trusting attitude is apparent in questions asked at libraries concerning fiction. The questions often pertain to a specific detail, like "which novel has a description of the Grand Inquisitor?" Questions may also contain information related to the author and publication history of a work: "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."

In other cases the patron asks about works on a certain subject: "novels where shoes play a key role" or "novels which describe work in a positive light". Or they are looking for something similar to a book they have already read, such as "a satire like one done by Daniil Kharms." Librarians are also often asked to recommend "good books" or "something interesting to read."

These problems and shortcomings have raised the question: Can state-of-the-art IT be used to create a system which would facilitate the work of personnel working with fiction in libraries and assist library patrons in performing their own searches? The system should provide access to a more comprehensive range of library fiction collections and library personnel with expertise in these collections. This is where the story of Kirjasampo begins.

Kirjasampo<sup>1</sup> - [www.kirjasampo.fi](http://www.kirjasampo.fi) – is a new web service specialising in fiction. The Kirjasampo project has built an entirely new kind of user environment for data produced by libraries. The objective has been to create a new model for saving and producing data in which both library professionals and readers can participate. The goal is to save, accumulate and distribute literary knowledge, experiences and tacit knowledge, and to give an inspiring, surprising and empowering tool for everyone who reads a good book, wants to tell about it, and share the experience.

Work on building the service began in the summer of 2008 and its first version was launched for public use in September 2011. The extensive project is funded by the Ministry of Education and Culture and its co-ordination and content development is being overseen by the Turku City Library. Other key players are:

- libraries.fi service<sup>2</sup> editorial staff: user interface, maintaining service;
- Semantic Computing Research Group (SeCo)<sup>3</sup> at the Aalto University School of Science and Technology: semantic tools and methods;
- Vaasa City Library: author data, Kirjasampo Swedish version [www.boksampo.fi](http://www.boksampo.fi); and
- BTJ Finland Oy<sup>4</sup>: news material content description data.

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<sup>1</sup> Kirja = book, Sampo is related to Finnish folk poetry and comes from *the Finnish national epic, Kalevala*. It is a magical object that brings good fortune to its holder.

<sup>2</sup> <http://www.libraries.fi/en-GB/>

<sup>3</sup> <http://www.seco.tkk.fi/>

<sup>4</sup> <http://www.btj.fi/english/>

At the moment there are about 21 000 unique users and about 26 000 visits to Kirjasampo per month. The number of users is increasing.

### Kirjasampo in a Nutshell

Figure 1 shows the various parts of the Kirjasampo service and the whole they comprise. The most important part of the service is the database, in which data on adult Finnish fiction is converted from MARC to RDF data used in the semantic web applications. Metadata related to books was extracted from the library system HelMet<sup>5</sup>.

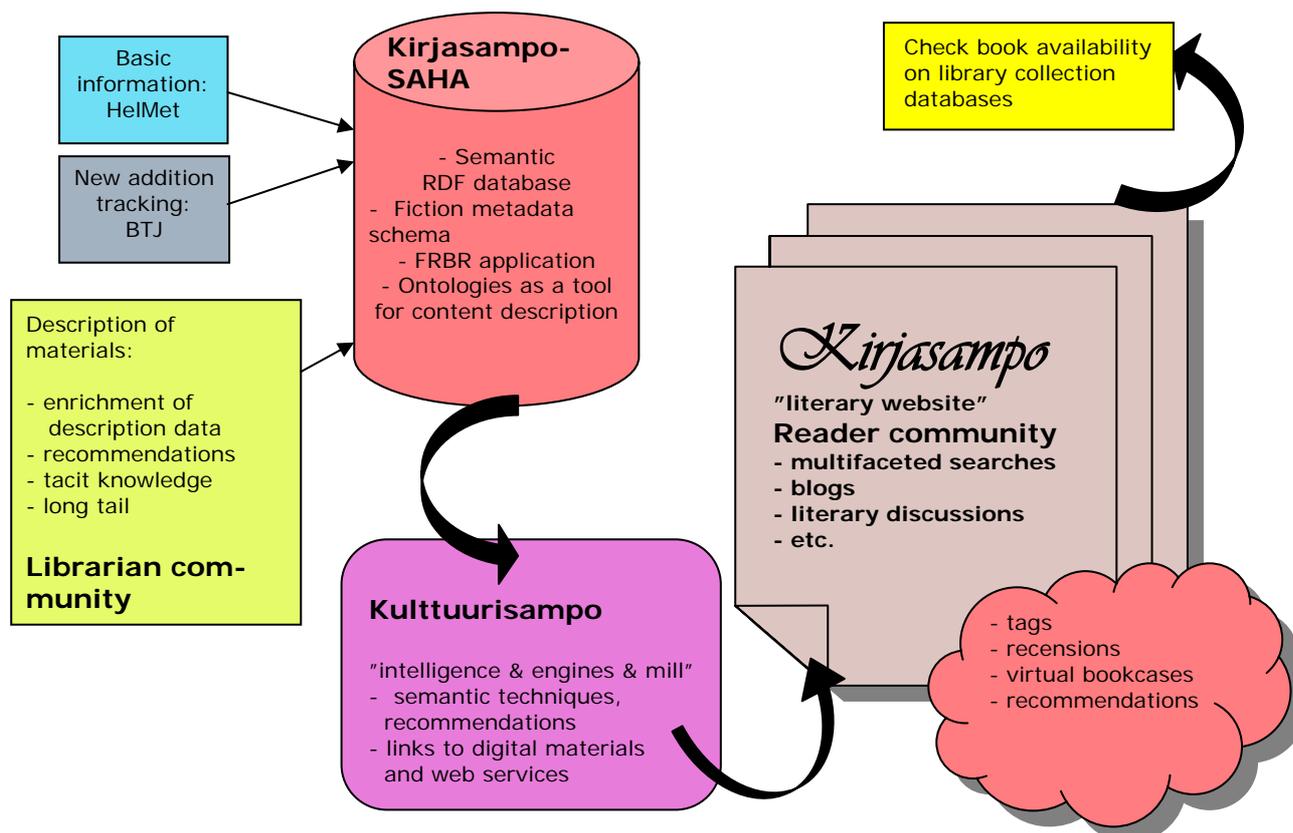


Figure 1. Overview of the Kirjasampo service.

This database forms the foundation of the service, and the metadata in it is revised and enriched in a variety of ways. New web technologies and data formats – ontologies, the FRBR data model, a new annotation editor – have been applied.

### Inspiring: Read, Describe, and Find!

#### *FRBR (Functional Requirements for Bibliographic Records)*

The focus of traditional library cataloguing is on a book as a thing. Because the goal in Kirjasampo is to describe contents, the functional requirements for bibliographic records – or FRBR – cataloguing model

<sup>5</sup> [www.helmet.fi](http://www.helmet.fi). HelMet system is shared jointly by the libraries of the metropolitan area of Helsinki

was applied. FRBR cataloguing identifies the different levels of a work (work, expression, manifestation, item), which are defined separately. In Kirjasampo, three of these levels have been taken into account: work (named in Kirjasampo as “an abstract work”); manifestation (named in Kirjasampo as “a physical work”); and, item, which and whose availability can be checked from the library systems.

Based on this model, the content of each work in Kirjasampo is described only once as an abstract work. This describes the attributes and characteristics which are common to all different versions of the work, such as editions, formats and translations. This abstract is linked with various “physical works,” in which the characteristics of each version are described. This accelerates and enhances the description process and facilitates the linking of different versions to one another.

The data is saved in the system using the browser-based Kirjasampo-SAHA annotation editor.<sup>6</sup> Kirjasampo-SAHA is based on a metadata schema which was specially-made for fiction. We listed all aspects which we thought should be taken into account when building an ideal model for fiction. Then we defined which aspects are part of the abstract work, and which ones belong to the physical work.

The idea is that all fields related to the abstract work should be common to all versions and editions of a certain work. The content can be described with the same indexing terms whether the manifestation or physical work is in English, Swedish, Finnish or another language, or whether the manifestation is a printed book, e-book or audiobook. Of course, there are aspects and fields which can be argued; for example, an award can be given to a certain translation, so it could also be an attribute of the physical work.

### *Abstract work in Kirjasampo*

The following fields are used in the abstract to describe the work:

- work titles in all the languages in which the physical work is stored in the system
- author(s)
- type (novel, novella, poem, etc.)
- genre (fantasy literature, one-day novel, detective novel, etc.)
- subjects and themes addressed in the work
- actors (in general)
- main characters (proper names, e.g., Adam Dalgliesh)
- time of event (in general, or a specific time designation)
- place of event (in general or a real-world place retrieved from Google Maps)
- textual summary or presentation
- language of the original work
- work adaptations (movies, operas, plays, etc.)
- related works (the librarian recommends: “If you liked this, you might also like this...”)

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<sup>6</sup> <http://saha.kirjastot.fi/kirjasampo/index.shtml>

- information related to the work elsewhere on the web (critiques, descriptions, etc.)
- awards

It is also possible for the annotator to enter his or her own keywords if no suitable keywords can be found in the ontology. Keywords and ontology concepts can also be combined with one another (linked), if certain connections are to be emphasised, e.g., “lifestyle: upper class.”

There are about ten annotators working with Kirjasampo-SAHA in different libraries at the moment. It has become clear, that the annotators should have meetings, where they could discuss and come to an agreement on, for example, in which cases an annotator-assigned keyword should be applied and how it should be written (singular, plural...). It would also be useful to consider, when an annotator-assigned keyword should be added to the ontology as an official ontology concept. For example, if it has been used for indexing ten works, should it be found in the Kauno-ontology?

Figure 2 shows how the information for an abstract work appears in the Kirjasampo web service. Book covers are an important part of books; readers often remember them.

The screenshot shows the Kirjasampo web service interface. At the top, there is a navigation bar with links for 'AJANKOHTAISTA', 'TOIMITUKSELTA', 'KIRJAHYLLYT', 'LINKIT', and 'FAQ'. A search bar is located on the right side. The main content area features a book cover for 'Mennyt maailma' by Evelyn Waugh. To the right of the cover is a list of metadata under the heading 'MENNYT MAAILMA'. A text box with arrows points to specific items in this list, providing a detailed analysis of the novel's characteristics.

Field	Value
Nimi	Mennyt maailma
Tekijä	Waugh, Evelyn
Tyyppi	romaanit
Kirjallisuudenlaji	perheromaanit rakkautsromaanit aikakausiromaanit
Aiheet ja teemat	alkoholismi aristokratia kapinointi kriisit rappio onneton rakkaus muistelu
Henkilöt, toimijat	rakastavaiset perheet nousukkaat
Päähenkilöt	Flyte, Julia Flyte, Sebastian Ryder, Charles
Tapahtumapaikat	maaseutu kartanot

**type:** novel  
**genre:** family stories, love stories, period novels  
**themes:** alcoholism, aristocracy, rebelling, crisis, decay, unhappy love, remembering  
**actors:** lovers, families, social climbers  
**main characters:** Julia Flyte, Sebastian Flyte, Charles Ryder  
**milieu:** countryside, manor houses etc.

**Figure 2.** The “abstract” of the novel *Brideshead revisited*. Kirjasampo has user interfaces in two languages which are official languages in Finland, in Finnish and in Swedish, but, unfortunately, not yet in English. Keywords, descriptions, etc. will be shown in Swedish, when the user of Kirjasampo web service switches over to the Swedish interface Boksampo.

Figures 3 and 4 show what the Kirjasampo-SAHA annotating editor looks like, and how the indexing concepts are picked from the Kauno-ontology. As will be mentioned below, the Kauno-ontology is a mixed ontology where the special thesaurus for fiction, Kaunokki, is integrated into the Finnish General Upper Ontology. Those terms which belong to Kaunokki are in Finnish and Swedish; those which are part of Upper Ontology are also in English. That is why some of the concepts are in English but not all. Kirjasampo-SAHA itself is trilingual and can be used in Finnish, Swedish and English.

SAHA3 | kirjasampo - search  [about kirjasam](#)

http://www.yso.fi/onto/kaunokki#ateos\_4725

### novels: Brideshead revisited

[\[view\]](#) | [\[rdf\]](#) | [\[config\]](#) | [\[remove\]](#)

<b>name</b>	add new literal en <input type="text"/> <input type="button" value="add"/> <a href="#">[remove]</a> (en) Brideshead revisited <a href="#">[remove]</a> (sv) En förlorad värld <a href="#">[remove]</a> (fi) Mennyt maailma
<b>alternative title</b> NB. make also physical work	add new literal en <input type="text"/> <input type="button" value="add"/>
<b>creator</b> main creator	select reference <input type="text"/> <a href="#">[remove]</a> Waugh, Evelyn <a href="#">[edit]</a>
<b>type</b>	select reference <input type="text"/> <a href="#">[remove]</a> novels <a href="#">[edit]</a>
<b>genre</b> select reference from Kaunokki-ontology	select reference (ra) <input type="text"/> <a href="#">[remove]</a> romantic <a href="#">[edit]</a> results from kaun romantic comedie romantic comedie romantic novels romantic tales romanticism <a href="#">[remove]</a> uet-ajence <a href="#">[edit]</a> <a href="#">[remove]</a> kapinointi <a href="#">[edit]</a> <a href="#">[remove]</a> onneton rakkaus <a href="#">[edit]</a> <a href="#">[remove]</a> recollection <a href="#">[edit]</a>
<b>theme</b> select reference from Kaunokki-ontology	select reference (range unknown) <input type="text"/> <a href="#">[remove]</a> families <a href="#">[edit]</a> <a href="#">[remove]</a> nousukkaat <a href="#">[edit]</a>
<b>character in the narrative</b> select reference from Kaunokki-ontology	select reference (range unknown) <input type="text"/> <a href="#">[remove]</a> families <a href="#">[edit]</a> <a href="#">[remove]</a> nousukkaat <a href="#">[edit]</a>

<b>Label</b>	kärlsromaner, rakkausromaanit, romantic novels
<b>matching concept</b>	rakkausromaanit
<b>Matching concept</b>	Y10035*
<b>superordinate concept</b>	novels
<b>type</b>	YSO Concept

Figure 3. A view from Kirjasampo-SAHA annotation editor, editing the description of *Brideshead revisited*. “Novels” has been picked up from the Kauno-ontology, and “romantic novels” is to be picked up.

	<a href="#">[remove]</a> at <a href="#">[remove]</a> cr <a href="#">[remove]</a> de <a href="#">[remove]</a> ka <a href="#">[remove]</a> or <a href="#">[remove]</a> re	<b>Alternative label</b> ydinperheet <b>description</b> perheet esim. erilaisiin perhetyyppisiin viitattaessa <b>Label</b> families, familjer, perheet <b>matching concept</b> perheet <b>Matching concept</b> Y3962* <b>Related concept</b> family <b>superordinate concept</b> groups <b>type</b> YSO Concept
<b>character in the narrative</b> select reference from Kaunokki-ontology	select refer famili .results fro families families w	
<b>main character</b> names of the most important characters, select reference or create new	<a href="#">[remove]</a> Flyte, Julia <a href="#">[edit]</a> <a href="#">[remove]</a> Flyte, Sebastian <a href="#">[edit]</a> <a href="#">[remove]</a> Ryder, Charles <a href="#">[edit]</a>	
<b>place of events</b> setting, location, places; select reference from Kaunokki-ontology	select reference (range unknown) <input type="text"/> <a href="#">[remove]</a> countryside <a href="#">[edit]</a> <a href="#">[remove]</a> manors <a href="#">[edit]</a>	
<b>concrete place</b> concrete places from the real world; select reference from Geo-ontology	select reference <input type="text"/> <a href="#">[remove]</a> Brideshead <a href="#">[edit]</a> <a href="#">[remove]</a> Oxford <a href="#">[edit]</a>	
<b>time of events</b> general expressions of time; select reference from Kaunokki-ontology	select reference (range unknown) <input type="text"/> <a href="#">[remove]</a> second world war <a href="#">[edit]</a> <a href="#">[remove]</a> sotienvälinen aika <a href="#">[edit]</a>	
<b>time of story</b> exact expressions of time (day, year.); select reference or create new	select reference <input type="text"/> <a href="#">[remove]</a> 1920-luku <a href="#">[edit]</a> <a href="#">[remove]</a> 1930-luku <a href="#">[edit]</a>	
<b>keyword</b> other keywords which describe the book; select reference from Kaunokki-ontology or	select reference <input type="text"/>	

Figure 4. Picking up an ontology concept “families” from Kauno-ontology to the field “character in the narrative” in Kirjasampo-SAHA annotation editor.

### Physical work in Kirjasampo

The following fields are related to the description of a physical work:

- title, subtitle
- original title
- language of the work
- publisher
- date published
- number of pages
- translator
- illustrator
- editor or other contributor
- additional information on publication history (edition, illustrations, etc.)
- serial information

We have uploaded over 27 000 book covers to Kirjasampo and a book cover image can be included with the work profile, and it is also possible to describe the cover in words (colours, cover layout elements), provide a brief description of it and list the cover designer. So it is possible to search book covers, for example, “a yellow cover with flowers on it”.

Figure 5 shows how the physical works of *Brideshead revisited* can be seen in Kirjasampo web service.

Romaani varakkaan aatelisperheen elämästä vuosisadan alun Englannissa huokuu hillittyä charmia ja dekadenssia.

**Tekstinäyte**

Ehdittyäni kukkulan laella olevalle C-komppanian majoitusalueelle käännyin katsomaan taakseni leirikentälle, joka juuri ilmestyi näkyviin aikaisen aamun harmaasta sumusta.

**Julkaisut**

Nimi	Mennyt maailma
Alanimeke	kapteeni Charles Ryderin hengelliset ja maalliset muistelmät
Ilmestymisaika	1949
Sivumäärä	388
Kustantaja	Otava
Kieli	suomen kieli
Kääntäjä	Lehtinen, Pentti
Sarjamerkintä	Seven Suosikkiromaanit Otavan 10-sarja: 6
Nimi	En förlorad värld
Ilmestymisaika	1946
Sivumäärä	414
Kustantaja	Ljus
Kieli	ruotsin kieli
Kääntäjä	Odelberg, Margaretha
Nimi	Brideshead revisited
Ensimmäinen julkaisu	kyllä
Ilmestymisaika	1945
Kieli	englannin kieli

**Kirjasampo**  
Facebookissa  
Tykkää 610

The first Finnish translation of *Brideshead revisited* (*Mennyt maailma*) came out in 1949, the translator was Pentti Lehtinen. Not all the different editions etc. are listed here. A new physical work would be added, if a new translation would come out.

The first translation in Swedish (*En förlorad värld*) came out in 1946, translated by Margaretha Odelberg.

In Kirjasampo there is also mentioned the original version.

Figure 5. The “physical works” of *Brideshead revisited* in Kirjasampo.

In figure 6 one can see how the abstract work and physical works are linked with each other in Kirjasampo-SAHA. There is the content description with fields for various aspects of contents; they are describing the abstract work. In the field “physical works” there are links to the original work in English, and to translations in Finnish and in Swedish. The fields of the Finnish translation can be also seen in the pop-up.

Is it possible to add more physical works to the same abstract; examples include different translations, and formats, such as audio books and e-books.

## novels: Brideshead revisited

[\[edit\]](#)

<b>name</b>	(en) Brideshead revisited, (sv) En förlorad värld, (fi) Mennyt maailma
<b>creator</b>	<a href="#">Waugh, Evelyn</a>
<b>type</b>	<a href="#">novels</a>
<b>genre</b>	<a href="#">aikakausiromaanit</a> , <a href="#">perheromaanit</a> , <a href="#">romantic novels</a>
<b>theme</b>	<a href="#">alcoholism</a> , <a href="#">aristocracy</a> , <a href="#">crises</a> , <a href="#">decadence</a> , <a href="#">kapinointi</a> , <a href="#">on</a>
<b>character in the narrative</b>	<a href="#">families</a> , <a href="#">nousukkaat</a> , <a href="#">rakastavaiset</a>
<b>main character</b>	<a href="#">Flyte, Julia</a> , <a href="#">Flyte, Sebastian</a> , <a href="#">Ryder, Charles</a>
<b>place of events</b>	<a href="#">countryside</a> , <a href="#">manors</a>
<b>concrete place</b>	<a href="#">Brideshead</a> , <a href="#">Oxford</a>
<b>time of events</b>	<a href="#">second world war</a> , <a href="#">sotienvälinen aika</a>
<b>time of story</b>	<a href="#">1920-luku</a> , <a href="#">1930-luku</a>
<b>textual description</b>	(fi) Romaani varakkaan aatelisperheen elämästä vuosisadan dekadenssia.
<b>text sample</b>	(fi) Ehdittyäni kukkulan laella olevalle C-komppanian majon leirikentälle, joka juuri ilmestyi näkyviin aikaisen aamun hä
<b>physical work</b>	<a href="#">Brideshead revisited</a> , <a href="#">En förlorad värld</a> , <a href="#">Mennyt maailma</a>
<b>original language</b>	<a href="#">English language</a>
<b>films and other adaptations</b>	<a href="#">Brideshead visited</a>
<b>has review in Resonerande bokkatalog</b>	<a href="#">En förlorad värld</a>
<b>cataloger</b>	<a href="#">Hypén, Kaisa</a>

<b>name</b>	(fi) Mennyt maailma
<b>subtitle</b>	(fi) kapteeni Charles Ryderin hengelliset ja maalliset muistelmät , (fi) romaani
<b>original work</b>	<a href="#">Brideshead revisited</a>
<b>language</b>	<a href="#">Finnish language</a>
<b>publisher</b>	<a href="#">Otava</a>
<b>year of publication</b>	<a href="#">1949</a>
<b>number of pages</b>	368
<b>cover</b>	<a href="#">Mennyt maailma</a> , <a href="#">Mennyt maailma - pokkari</a>
<b>translator</b>	<a href="#">Lehtinen, Pentti</a>
<b>part of series</b>	<a href="#">Otavan 10-sarja 6</a> , <a href="#">Seven</a> , <a href="#">Suosikkiromaanit</a>
<b>type</b>	<a href="#">physical work</a>

Figure 6. The abstract work and the physical works of *Brideshead revisited* in Kirjasampo-SAHA. On the upper corner on the right there is SAHA-chat, where annotators can communicate with each other, ask for help or discuss different topics.

## Ontologies

The idea behind the semantic web is to create a metadata layer on top of the existing web to show what kind of content is available on any given website and how these various contents are interrelated. Ontologies, i.e., precisely defined vocabularies, in particular play a key role in this. Ontologies allow for the more effective computer linking, association and recommendation of content found in various web services.

This is the progression from content to context. Individual data elements and contents are given a new power of expression in a semantic web, linked to other data contents. This is exceptionally interesting where fiction is concerned — indeed, fiction works are linked to real-life places, people and phenomena, not to mention the content of other works, in a variety of ways.

Human content description and computer “intelligence” link works in a way that was previously impossible and for which no single reader's experience or memory could possibly suffice. The more works described and the more descriptive terms used for them, the richer and more multifaceted the automatic recommendations will be. Individual works will be given additional dimensions as part of the semantic web, both in various internal literary contexts and in connection with other web content.

The most important ontology used in Kirjasampo is the fiction material ontology Kauno, which is based on the Kaunokki thesaurus. Its ontologisation and integration into the General Finnish Ontology and its maintenance are part of the Kirjasampo project. Other ontologies utilized in Kirjasampo are

- language ontology Lingvoj,
- nationality ontologies
- geography ontologies linked to Google maps and
- KOKO, collection of Finnish core ontologies.

Another advantage of ontologies is their language independence. Thus, descriptions made using Finnish ontology concepts are also available in Swedish and vice versa. Some of the concepts are in English, so the descriptions are also partially available in English.

Ontologies make it possible to recommend books that have something in common. The idea is, the more works are assigned the same keywords, the more they will resemble each other based on their subject matter. Where authors are concerned, "resemblance" is based on the keywords that were used to describe their production. Building a network of works begins with Kirjasampo-SAHA. Content is enriched by creating semantic connections between works. Data is enmeshed in the network formed by ontological concepts and annotations at the same time they define it.

In figure 7 one can see how the user of the Kirjasampo web service gets the ontology-based recommendations.

The screenshot shows the Kirjasampo web service interface. At the top, there is a navigation bar with the logo 'Kirjasampo' and links for 'AJANKOHTAISTA', 'TOIMITUKSELTA', 'KIRJAHYLLYT', 'LINKIT', and 'FAQ'. There are also links for 'Kirjaudu', 'Rekisteröidy', 'Info', and 'Palaute'. A search bar is located on the right side of the header.

The main content area is titled 'MENNYT MAAILMA'. It features a book cover for 'Mennyt maailma' by Evelyn Waugh. To the right of the cover, there is a list of metadata:

- Nimi: Mennyt maailma
- Tekijä: Waugh, Evelyn
- Tyyppi: romaanit
- Kirjallisuudenlaji: perheromaanit, rakkausromaanit, aikakausiromaanit
- Aiheet ja teemat: alkoholismi, aristokratia, kapinointi, kriisit

On the right side of the page, there is a section titled 'Katso myös' (See also). It lists several recommended books with their titles and authors, such as 'Sinun jälkeesi, Max', 'Vartiotorni', 'Keskipäivän haltija', 'perheromaanit', 'maailmansota', '1930-luku', 'sotienvälinen aika', 'toinen maailmansota', '1920-luku', 'Damaskoksen rakastavaiset', 'Jasmiinin tuoksu', 'Krigsvinter', 'Larsäter', 'sotienvälinen aika', 'toinen maailmansota', 'Johtaja Raskin muutokuva', and 'Vihreä hattu'. A blue circle highlights the 'Katso myös' section, and a blue arrow points from a text box to the 'toinen maailmansota' entry.

A text box with a white background and a black border is overlaid on the page, containing the following text:

This is how Kirjasampo recommends books, which have something in common with *Brideshead revisited*. Recommendations are based on ontology concepts and the user can see the concepts two books have in common. In this example the recommended book is Julia Franck's *Die Mittagsfrau*, and the same concepts are family stories, 2<sup>nd</sup> world war, 1920's and 1930's, time between the two world wars.

Figure 7. Recommendations based on ontology concepts.

### Empowering: Let's Enjoy Each Other's Tacit Knowledge!

Because Kirjasampo-SAHA is browser-based, it is easy to implement in libraries. It does not require any installation on the user's computer, or software updates. This makes it possible to realise the idea that library personnel can work together as a network in describing older fiction, thus putting literature that is currently difficult to find within reach of searches. Consequently, Kirjasampo would be able to locate materials that are even out of Google's reach. This user-friendly tool would reveal and make available the tacit knowledge on literary content currently held by librarians as well as expertise in recommending and presenting literature.

The linking of works with one another and their recommendation is a new way to save and present this tacit knowledge. Every day at libraries, recommendations are made on literature, which are in some way related to the patron's previous reading experiences. When these recommendations can be stored in a data system, they will facilitate the work of colleagues and please readers even at a later point in time.

In Kirjasampo-SAHA it is possible to provide additional information related to various descriptive aspects. For example, different fictional characters and places can be described using keywords or textual references. Additional information on authors relevant to searches is also saved, such as the author language, nationality, date of birth, and date of death.

In figure 8 one can see how this tacit knowledge of library staff can be made invisible and reachable to other librarians and to the users of the Kirjasampo web service.

**Lisätietoa verkossa**

Arvio Kiiltomadossa  
Savonlinnan kirjaston LehtoNet-sivusto

**Niteet kirjastoissa**

[Valitse kirjasto]

Tapahtumapaikat  
Konkreettiset tapahtumapaikat  
Tapahtuma-aika  
Tarkka aika  
Asiasanayhdistelmät  
Alkukieli  
Kirjastonhoitaja suosittelee  
Elokuvat ja muut

Muttinen, Aapeli  
maaseutu  
Etelä-Savo  
kesä  
1917  
ristiriidat : yhteiskuntaluokat  
suomen kieli  
Alastalon salissa  
Arkielämää  
He  
Ihmiset suviyössä  
Ryysyrannan Jooseppi  
Putkinotko

**us**

Putkinotko is a Finnish classic novel, and librarians recommend these titles if a reader would like to read something like it (*Putkinotko* is unfortunately not available in English.)

Kysy kirjallisuudesta  
KYSY kirjastonhoitajalta  
Sivupiiri.fi  
Kirjoja ja kavereita.  
Kirjasampo Facebookissa  
Tykkää 610

Figure 8. "Librarian recommends" in Kirjasampo.

### Surprising: Open It!

The data of Kirjasampo was opened for linking, processing and visualisation in a workshop arranged by the Finnish newspaper *Helsingin Sanomat* in May 2011. One of the most interesting results from the workshop can be seen in figure 9, that is, how different themes have appeared in books during certain years according to Kirjasampo.

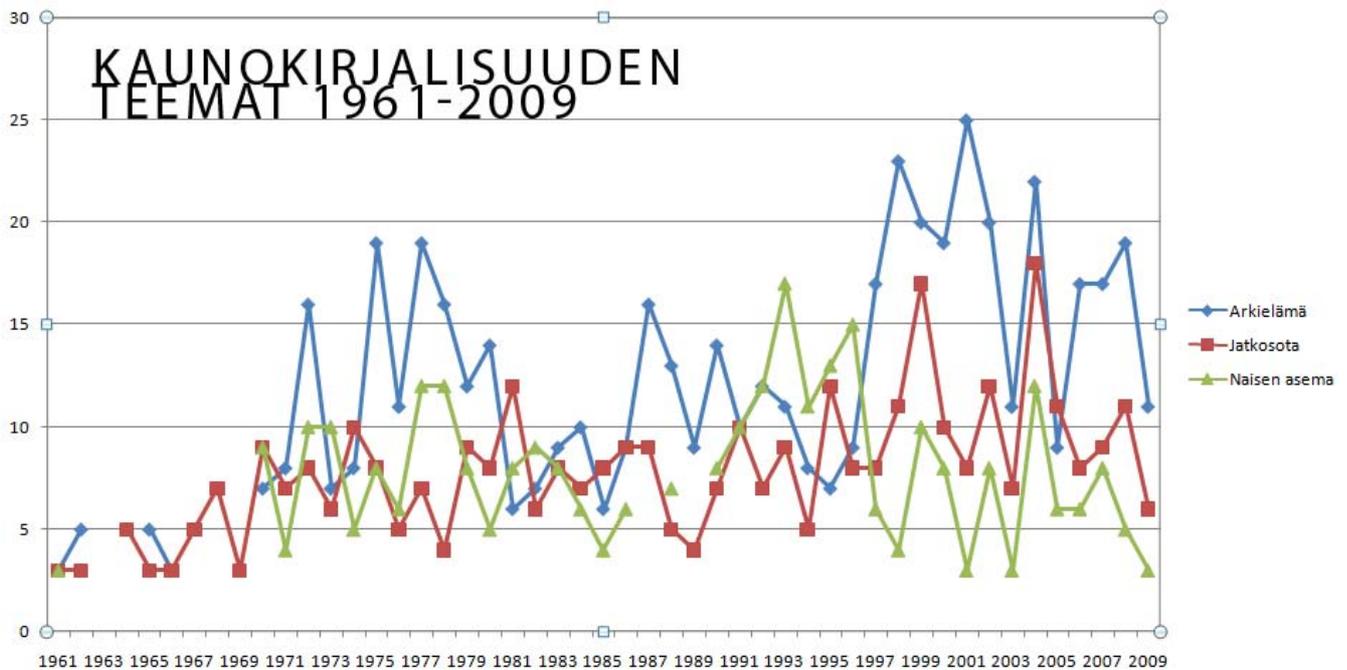


Figure 9. How themes “routine” = arkielämä ( blue line), “continuation war” = jatkosota (red line) and “women’s position” = naisen asema (green line) have appeared in literature during the years 1961-2009 according to Kirjasampo.

This of course provokes some questions. For example, is the description data provided by libraries so reliable that conclusions like this can be made? In Kirjasampo there are descriptions for about 39 000 novels at the moment. No one can read so many books and make such a summary; so could library data help literary research in creating a “big picture” of, for example, themes which have been dealt with in literature?

The workshop also studied which literary themes have been the most award-winning. This was made by mixing the data of Kirjasampo with the data from the national art council. Books with the following themes have received grants more than others: relationships; routine; men; Helsinki; women; love; death; city; Finland; changes in life.

**... And Delighting: Share!**

In the future Kirjasampo will be more interactive and will encourage users to share their experiences in reading literature. There will be possibilities to describe, recommend and review books. One of these web 2.0 functions is already available: virtual bookcases. Users who have a user name in Kirjasampo can pick up books they think are worth reading and share them with other users.

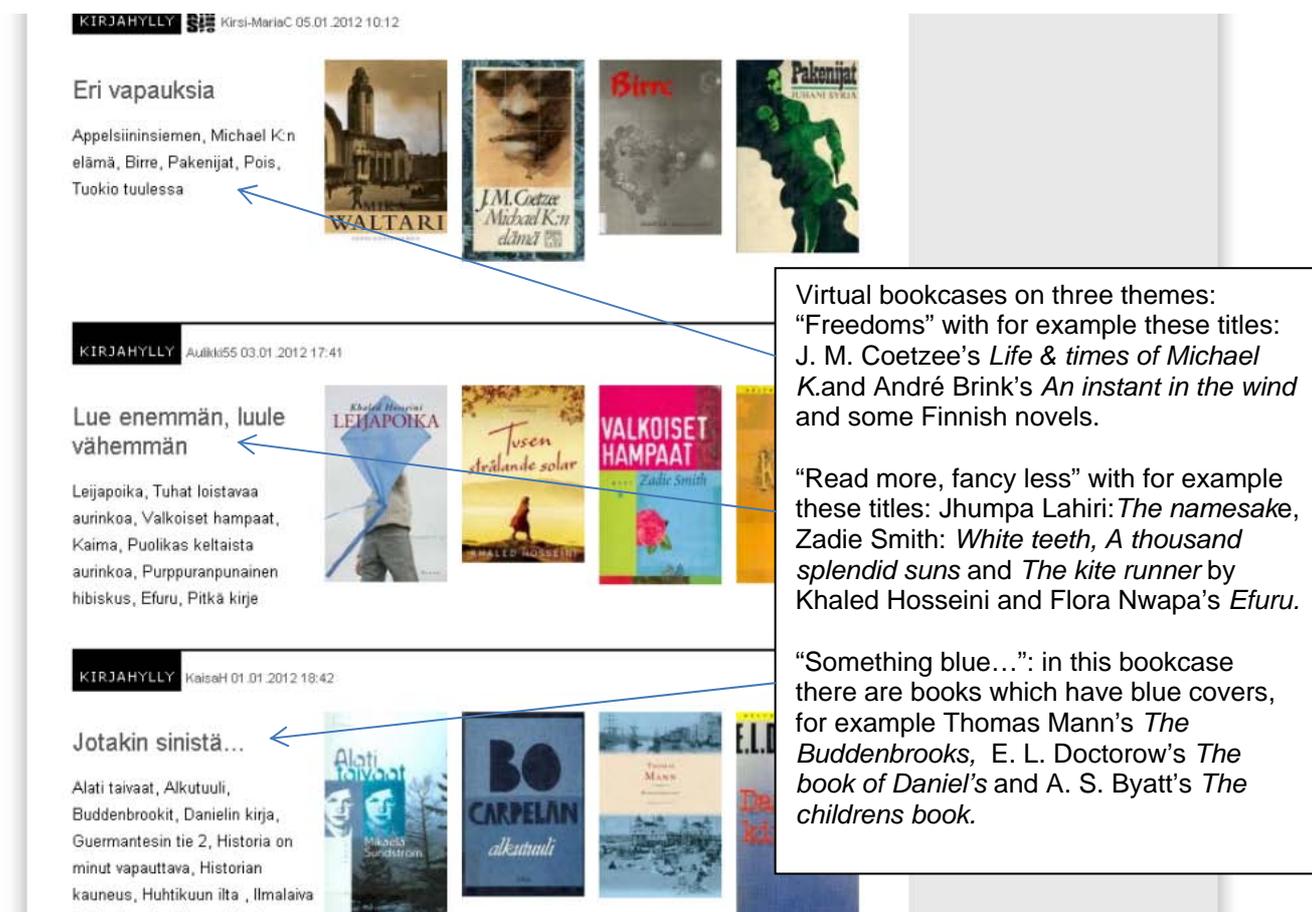


Figure 10. Virtual bookcases in Kirjasampo.

As of May 2012, there are about 125 virtual bookcases created by the users of the Kirjasampo web service.

### The Story of Kirjasampo Goes On

Although the service is already available in the web, it is still under construction and we are developing its contents and functionalities. I mentioned earlier how patrons search for fiction, and I listed some questions they have asked. At the moment we have enough material and information in Kirjasampo so that those questions could be answered. We have saved information in a multifaceted way – about the authors, fictional characters, awards, titles, older and newer fiction...

But the search tools of the Kirjasampo web service are not yet advanced enough to be able to find and combine all the information. So, one of the most important development targets is to make the retrieval functionalities more effective, and, on the other hand, more intuitive and user-friendly. The search should also be much faster. The auto completion of search is the first thing to develop; multifaceted search is the next one.

As mentioned before, there are about 21 000 unique users and about 26 000 visits to Kirjasampo per month. Only about 25 % are returning visitors. This indicates that we should, for example, have more 2.0 features which would draw visitors to return to Kirjasampo more often. The next feature added (in June 2012) will be the possibility to engage in discussions about the books. Later there will be the possibility for users to describe titles with ontology concepts or tags.

We are also planning to add metadata of children's and young adults' books to Kirjasampo. We are going to evaluate the Kirjasampo-SAHA and consider how to develop it as well. So, the project is going on, and, at the same time, we are establishing the service and its maintenance. The editor-in-chief and the editorial staff of Kirjasampo will be chosen later this year.

Users of the Kirjasampo web service have not given much feedback yet. Fortunately researcher Anna Mikkonen in the Tampere research center for information and media<sup>7</sup> has started an evaluation process for Kirjasampo. In the autumn of 2012, she is going to study with questionnaires, system logs, interviews, and video tapes how 100 testers use Kirjasampo and how satisfied they are with the information they get in it. This research will be her doctoral thesis and the results will be very valuable for us when developing the service.

So, much has been done but still there is much to be done. Kirjasampo is the first web service provided by libraries which is based on FRBR and the RDF-data model and where ontologies are used for content description, at least here in Finland. We also have created a virtual environment, Kirjasampo-SAHA, where librarians can save and share their knowledge relative to fiction. Building something absolutely new hasn't always been easy, and not all the ideas we had in the beginning of the project have been realized, at least not yet. But, regardless, work is going on, the Kirjasampo web service is getting better, and we ourselves are learning more and more all the time – about new information technologies, about developing web services, and about fiction.

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<sup>7</sup> <http://www.uta.fi/laitokset/infim/tutkimuskeskus/english/index.html>

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*About the author*



Kaisa Hypén (M.A.) is a librarian and has worked at the Turku City Library in various capacities since 1988. She served as, among others, head information specialist for fiction and led several development projects (e.g., Southwest Finland author database, establishment of the Main Library department of fiction, implementation of a shelving classification for novels). Hypén has written articles on the relationships between libraries and fiction and the semantic web from a library standpoint. She is currently serving as service manager, supervising collections, databases and the Kirjasampo project.

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