

# Automatic Exhibition Generation Based on Semantic Cultural Content

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**Abstract.** This paper shortly presents an automatic exhibition generation interface that turns the focus of semantic search from search items to the concepts they are annotated with.

## 1 Introduction

Traditionally, Internet search has been about finding a document that answers the question posed by the searcher. Until now, Semantic Web search systems have mostly repeated this functionality for semantic content, adding only the ability to find connections between entities [1]. In our CultureSampo<sup>1</sup> [2] cultural heritage portal, we have undertaken a new approach, in essence turning the focus from search items to the concepts they are annotated with, and looking at them through automatically generated theme exhibits of items. Our idea combines an exhibition specification interface based on view-based query constraining with a two-dimensional virtual exhibition visualization grouping the items according to domain facets the user is interested in.

## 2 Specifying the Desired Exhibition

For specifying a desired exhibition, we use a novel variation of the view-based query construction paradigm termed domain-centric view-based search [3]. Here, views correspond to different domain ontologies associated with a set of roles. In CultureSampo, we ended up with the views object types, places, times, actors, events, styles, materials, techniques and museum collections, with roles such as place of manufacture, depicted place and place of birth. In our interface, depicted in figure 1, the exhibition creation functionality is on the left and top, forming a kind of narrative. Exhibitions that can be generated are for example “Tell me about (anything related to) 19th century Finnish agriculture organized by item type and purpose“ and “Tell me about toys manufactured in China organized by time of manufacture and place of use”.

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<sup>1</sup> <http://www.kulttuurisampo.fi/>

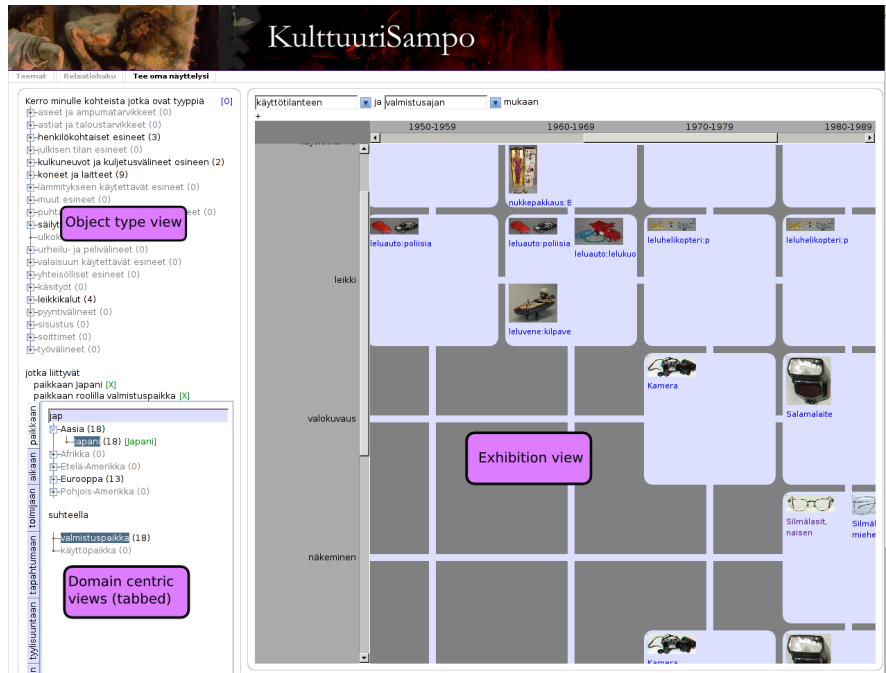


Fig. 1. Domain-centric view-based search and exhibition generation in CultureSampo

### 3 Visualizing the Exhibition

The same views used for selection are used to actually show the exhibition, based on a two dimensional matrix showing the items in the result set grouped according to selected domain concepts. Here, the association strived for is of a typical museum, with themed floors and rooms of exhibits. However, here one is also able to see more large-scale structural changes. In figure 1, for example, one can see showing how in 1950-1970 most Japanese-made items that made their way into Finland were toys, but beginning in the 70's there is an increase in the import of high-tech products.

### References

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## **Domain-centric view-based search and presentation generation in CultureSampo**

The demo will show the interface and functionality depicted in the preceding paper in action.