

OperaSampo – Opera and Music Theatre Performances in Finland 1830–1960 on the Semantic Web

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Abstract. This paper demonstrates using the OPERASAMPO portal for studying Finnish opera and music theatre performances in 1830–1960.

1 Introduction

*Reprises*⁴ is a database of the Sibelius Academy, Finland, that includes evening-specific information about opera, operetta, vaudeville, and other forms of music theatre performances in Finland during 1830–1960. The database covers the performances of the Esplanade Theater in Helsinki (1827–1857), the Swedish Theatre in Helsinki (1860–1961), the Russian Theatre in Helsinki (1868–1917), the Finnish Opera Company (ca. 1873–1879), and music theatre performances in the Turku Play-house (1839–1897). Reprises is in use for both research and educational purposes at the University of the Arts, Finland, as well as in the music media sector. The data currently includes information about 675 operas, 9075 performances, and 3525 persons involved in different roles (e.g., as singers, conductors, or composers). The main primary sources of the data have been theatre posters, newspaper advertisements⁵, and repertoire books [1,3,7,8,9].

The performances of the database can be searched using a traditional search form that specifies values for the Composer, Opera, Singer, Conductor, Keywords, and Time interval of the event. By clicking on an item in the search result list, metadata about the performance (Season, Conductor, Orchestra, Producer, Tickets, Additional information, and Roles) and other performances of the same opera can be studied using close-reading. The operative languages of Reprises are Finnish and English. The languages of the performances are mainly Finnish, Swedish or Russian⁶, have been indicated in the respective records.

⁴ Available at: <http://reprises.uniarts.fi/en/>

⁵ <http://reprises.uniarts.fi/en/lahteet>

⁶ For Russian transliteration the ALA-LC Romanization Tables have been used, with diacritical marks omitted. Although dating in the Russian theatre posters follows the Julian calendar, dates of performances in the database have been standardized

This paper presents and demonstrates a new Linked Data (LD) approach and implementation, OPERASAMPO, for searching, browsing, and analyzing the Reprises data. OPERASAMPO is based on the Sampo Model [5] and Sampo-UI framework, [6], where the data can be filtered using faceted semantic search in multiple application perspectives, and then be analyzed using seamlessly integrated data analytic visualizations and tools for Digital Humanities research.

2 Ontology and Data

Reprises data was available as a data dump of 16 CSV tables corresponding to class concepts, such as Performances, People, and Roles. The tables were used in a data-driven way for creating an ontology for musical performances: Each table was transformed into a class and a set of its instances with properties corresponding to table columns. This data was then published on the Linked Data Finland Platform⁷ and ingested using the Sampo-UI framework and SPARQL. The first demonstration system was ready to be used in a few weeks. In order to enrich the data from external data sources, such as Wikidata and BiographySampo⁸, the minted local URIs need to be aligned accordingly. However, even without this, the prototype already demonstrates a paradigm shift of using LD and the Sampo model for studying musical performances in Digital Humanities.

3 Using the LOD Service and OperaSampo Portal

OPERASAMPO offers plenty of possibilities of retrieving focused information about the contents of the database and analyzing them. For instance, it can easily visualize singer's roles, their succession and frequency in the career, repertoires of opera houses, or composers' success in opera houses' programs. For example, Fig. 1 shows how Verdi reception in Finland started very slowly and somewhat late. The user has chosen the Performances perspective to the data and can search performances using the seven facets on the left: Composition, Composer, Choir Director, Conductor, Director of Play, Producer, and Opera House. Here Giuseppe Verdi is selected as the Composer. The result set of performances is shown on the right with three tabs available for visualization: Table, Charts, and Timeline. Here the Timeline tab is open. One can see three peaks during three decades (1876, 1886, and 1896), and find out by using the facets and links more about what opera houses frequently (or rarely) performed Verdi, what operas were performed and in what language, the role casts and their possible interconnections, conductors etc.

Using the OPERASAMPO portal is demonstrated in more detail in this video⁹.

according to the Gregorian calendar; in the 19th century the Julian date was twelve days later than the Gregorian.

⁷ Linked Data Finland platform: <https://ldf.fi>

⁸ <https://seco.cs.aalto.fi/projects/biografiasampo/>

⁹ Video showing how OperaSampo is used: <https://vimeo.com/805493196>

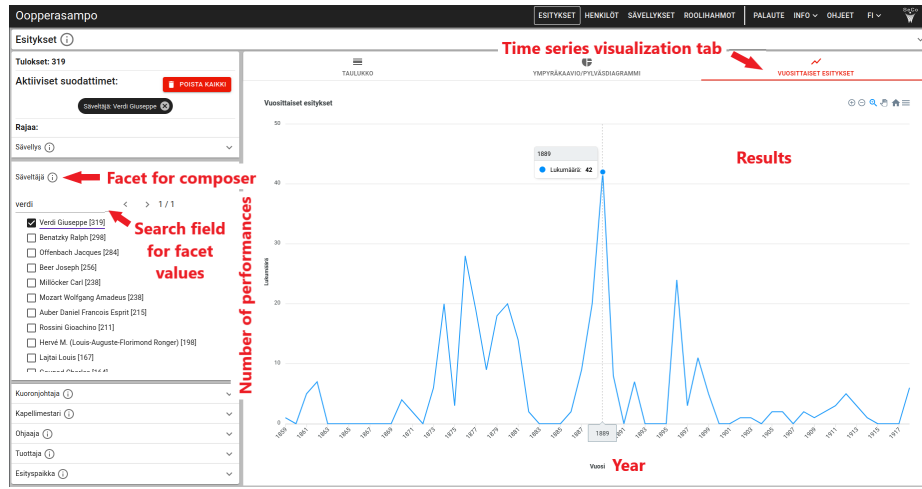


Fig. 1. Number of performances per year for the compositions of Giuseppe Verdi

4 Discussion

There are several databases of musical performances available on the Web, including Svenska operans repertoararkiv¹⁰, Dansk Forfatterleksikon¹¹, The London Stage Database, 1660–1800¹², Archives de l’Opéra Comique¹³, Les Archives du Spectacle¹⁴, Staatsoper Dresden database¹⁵, Operatic Productions in the Netherlands 1886–1995¹⁶, Music in the Second Empire Theatre¹⁷. However, none of them is based on Linked Data to the best of our knowledge.

Linked data has been used for representing and studying musical data before, e.g., in the Linked Jazz¹⁸ system [10], and there are lots of data available for enriching musical data, such as the open music encyclopedia MusicBrainz¹⁹, Wikidata, and online record archives, such as the Live Music Archive²⁰. Using LD in representing the relation between performances and scores is discussed in [4], while in [2] LD is used for finding performance recordings in an archive. In contrast, the focus in OPERASAMPO is on historical data about the performances

¹⁰ <https://arkivet.operan.se/repertoar/>

¹¹ <http://danskforfatterleksikon.dk/1850t/t1850t.htm>

¹² <https://www.eighteenthcenturydrama.amdigital.co.uk/LondonStage/Database>

¹³ <https://dezede.org/dossiers/archives-opera-comique/data>

¹⁴ <https://www.lesarchivesduspectacle.net>

¹⁵ <http://test.performance.slob-dresden.de/projects/staatsoper-dresden>

¹⁶ https://brill.com/downloadpdf/journals/rdj/5/2/article-p79_79.pdf

¹⁷ <http://www.fmc.ac.uk/mitset/index.html#/>

¹⁸ <https://linkedjazz.org/>

¹⁹ <https://musicbrainz.org/>

²⁰ <https://archive.org/details/etree>

and persons involved in different roles. The data will be opened using the CC BY 4.0 license on the Linked Data Finland platform including a SPARQL endpoint, content negotiation of URIs, linked data browsing, and other services.

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