DISPLAY PROJECT

ONTOLOGY AND DATABASE FOR EXHIBITION DOCUMENTATION

AUTHORS

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INTRODUCTION

CULTURAL INSTITUTIONS HAVE DEVELOPED SEVERAL DOCUMENTARY MODELS TO DESCRIBE MUSEUM INFORMATION. BUT UNTIL NOW THERE IS NO SPECIALIZED MODEL FOR DOCUMENTING EXHIBITION OR COLLECTION DISPLAYS. WE ARE DEVELOPING AN ONTOLOGY WHICH IS BASED ON A SPATIAL APPROACH INTENDED TO PROVIDE INFORMATION FROM DISPARATE, SOMETIMES INCOMPLETE SOURCES.

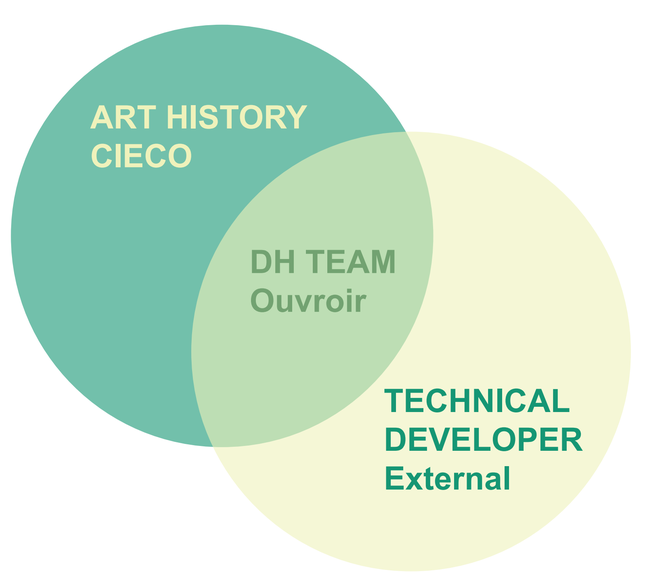
OBJECTIVE

Bringing together a team of researchers in art history, information sciences, and museology, the laboratory is working on a digital tool to assist research on collection displays. Its goal is to assist researchers working on archives, using the domain-specific ontology to document the displays and to generate spatial visualizations (schematic or 3D).

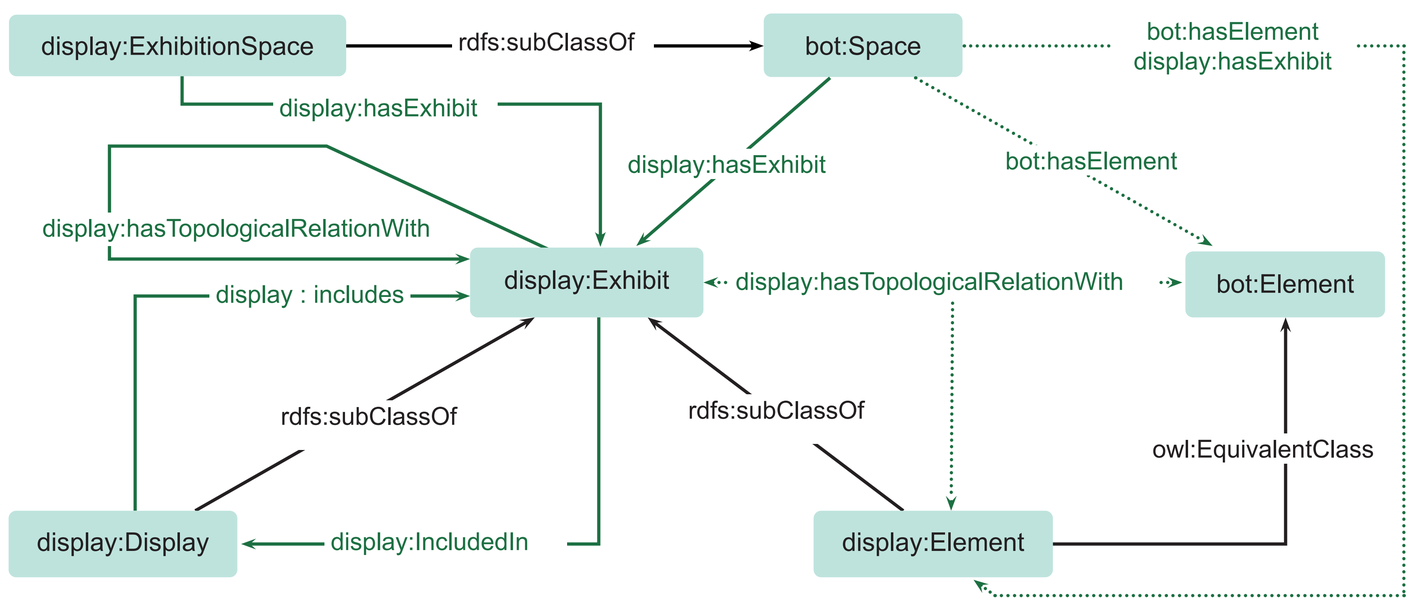
METHODOLOGY

The mobilization and utilization of numerous archival sources to document collection's exhibitions and enable their reconstruction is at heart of the CIÉCO project. Ouvroir is conceiving this tool to support all research operations, from collecting historical information to formulating hypotheses and recording results. The members involved in producing the project have diverse backgrounds and roles. The project is being developed in three main steps:

1. Determine what exists//what is needed: discussions, interviews and workshops between Users Team and DH Team (2021-22)
2. Conceive the ontology and the interface: experiments on exhibitions and comparison studies : DH Team (2023-2024)
3. Produce the tool: external developer and DH Team (2024)



REPRESENTATION OF THE ONTOLOGY



PREFIXES

display: https://ouvroir.umontreal.ca/onto/display#
bot: https://w3id.org/bot#
owl: http://www.w3.org/2002/07/owl#
rdfs: http://www.w3.org/2000/01/rdf-schema#

We are currently looking for compatibilites with CIDOC-CRM and LinkedArt.

THE TOOL

We want a free and open-source software that allows us to provide topographic references to exhibits in exhibition spaces to export this data and easily archive it. The interface should be user-friendly for the input and analysis of spatial information on collection hangings using the data model developed as part of the project. It will assist users to :

- Produce and manage a list of exhibits,
- Position these exhibits relative to each other in a space,
- Generate reports and plans following the input of topographic data.

This specification raises two main objectives:

- Assist in the input of information (feeding a semantic model: multiple objects, multiple interfaces, spatial relation description) by creating an easy-to-use, intuitive form.
- Work with fuzzy or incomplete data to produce data visualizations.

USERS

One of the advantages of the software is that it allows collective work to be organized on the documentation of exhibitions. This is to provide a tool for research assistants and researchers both to work on exhibitions. The application is intended to record the information collected in particular in the archives on exhibitions.

Research Assistant: Handling abundant information, this persona discerns correct information and translates it spatially. They input information sequentially, using the application to identify source-related issues for the researcher. Visualisation clarifies exhibition understanding and helps identify conflicting information.

Principal Investigator: Researchers use the application to formulate restitution hypotheses based on incomplete information or hypotheses from assistants. They test and confront solutions, employing a heuristic approach to reason about available information and seek feedback. Visualisation aids in proposing restitution hypotheses, allowing researchers to isolate spaces for focused modelling, such as around a room or a specific artwork across multiple projects.

Curator: Visualisation assists scenario proposals, and curators rely on visual documentation to discuss projects and reference other works easily. They aim to produce preliminary documents for exhibition setup or for scenographer work, grouping works by subject or room without requiring strict arrangement precision.

RESULTS/FINDINGS

Working on an ontology allowed us to choose and discuss vocabulary and their definition, making our proposition stronger, using existing definitions of thesaurus (AAT for exemple). We decided to produce our ontology in English and French.

For the software, we would like to find a solution for:
- Ensuring that our semanticization is as close as possible to the interface.
- Utilizing our RDF data model but storing the information so that it is available in JavaScript.
- Conducting efficient inferences.

The use of the data model brings additional functionalities compared to simple input. We have identified three uses of inferences: Completion, Validation: returns an error message stating that there is an inconsistency but accepts it, Constraint: application of rules to assist input.

We are currently studying possible technical solutions to enable the best dialogue between the front-end (web software) and back-end (RDF triplestore) and for the right technical developer that could help.

UI/UX design seems really important as we will use a lot of complex data alternating text and visualization. We need to find a smart way to easily enter triples.

CONCLUSION

THE DISPLAY PROJECT AND ITS COLLABORATIVE EFFORTS SHOW HOW WE WORK BETWEEN DIFFERENT DOMAINS AND DIFFERENT INTERESTS. THE DH LAB IN THIS CASE IS THE MEDIATOR BETWEEN THE HUMANITIES AND THE TECHNICAL REALMS.

The work on the ontology helped us design what exactly we wanted for our tool. And having to produce a tool helped us finalize our ontology.

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