

TIME CAPSULE: making digital cultural heritage data accessible and applicable for humanities research

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The arsenal of digital cultural heritage data is growing fast, but the distributed storage and presentation impedes its use for humanities research. To overcome this problem, *TIME CAPSULE* will facilitate the retrieval of aggregate information from multiple online sources by building a semantic interoperable knowledge structure, or ontology. This form of cross-database queries and information retrieval will enable scholars in the field of digital humanities to examine and contextualize heritage data in innovative ways.

TIME CAPSULE employs the concept of 'time capsule' as envisaged by Andy Warhol to provide integrated exploration of cultural heritage data. This will enable us to aggregate different but contextually related digital heritage items in an easily accessible way, in order to facilitate innovative forms of data extraction and manipulation. The resulting bird's-eye view of all kinds of structured and related heritage data will provide new insights and raise new interdisciplinary research questions. Therefore, semantic interoperability has a great potential to have major impact in the field of cultural heritage data and humanities research. To realise interoperability and visualisation of the data, a scientific programmer and a postdoctoral researcher in computer sciences work closely together with GridLine and Spinque, our two partners from the creative industry.

As proof of concept for semantic interoperability *TIME CAPSULE* combines data derived from the domain of the history of therapeutic drugs. This concerns cultural heritage data sets relating to the history of medicinal plants in the Low Countries, roughly from the moment natural drug components from the New World started penetrating Europe until the introduction of chemical and synthetic drugs in the nineteenth century (i.e. 1550-1850). This enables the researcher to investigate the trajectories of exotic drug components into the Low Countries, and the mechanisms of correspondence, trade and exchange that lie underneath it. A PhD researcher, stationed at both Utrecht University and the Huygens/ING Institute in The Hague, will study these historical problems. It is expected that by using huge amounts of data from the ontology he can bring new layers of meaning to the surface, which an individual researcher is unable of producing by means of traditional historical methodology alone.

Since our project launch at October 1st, 2013, we have converted the thesaurus of the Museum for the History of Pharmacy (Gouda) to OpenSKOS to evaluate the usefulness of this framework for our purposes. Currently, the integration of databases provided by Naturalis Biodiversity Centre (Leiden) is examined. Subsequently data provided by Meertens Institute (Amsterdam), and amongst others the Cultural Heritage Agency (RCE) will be integrated. We've also started early prototyping of the interface and the concept of a 'time capsule'. In short, the first tangible results are promising.



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