

Overview of the development methodology

At <http://test113.ait.co.at/tematres/unesco/index.php> a test installation with a multilingual thesaurus was set up for the LoCloud staged testing phase in spring 2014. Furthermore the test vocabularies shown in Table 1 have been established with TemaTres. These vocabularies are used by the enrichment services developed in task T3.3 of LoCloud.

Table 1 Test vocabularies created with TemaTres

Author	Name of vocabulary	URL	Subject	Language
University of California, Santa Barbara	Alexandria Digital Library Feature Type Thesaurus	http://test113.ait.co.at/tematres/adl/index.php	Science & Technology: places, geographica	English
Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS)	Archeological Objects Thesaurus Scotland	http://test113.ait.co.at/tematres/Archeological Objects	Objects made by human activity	English
English Heritage	Archeological Sciences Thesaurus	http://test113.ait.co.at/tematres/arch_sc	Techniques, recovery methods and materials associated with archaeological sciences	English
English Heritage	Building Materials Thesaurus	http://test113.ait.co.at/tematres/building_materials	Main constructional material types (eg. the walls) for indexing of monuments	English
English Heritage	Components Thesaurus	http://test113.ait.co.at/tematres/components	Terminology covering divisions and structural elements of a building or monument	English
American Folklore Society	Ethnographic Thesaurus	http://test113.ait.co.at/tematres/ethnographic	Social sciences: ethnographic, folklore, united states, etnomusicology	English
English Heritage	Event Type Thesaurus	http://test113.ait.co.at/tematres/event_type	Terminology used for recording archaeological and architectural investigative, data collection exercises;	English

Author	Name of vocabulary	URL	Subject	Language
			from intrusive interventions to non damaging surveys	
English Heritage	Evidence Thesaurus	http://test113.ait.co.at/tematres/evidence	Terminology covering the existing physical remains of a monument, or the means by which a monument has been identified where no physical remains exist	English
English Heritage	FISH Archeological Objects Thesaurus	http://test113.ait.co.at/tematres/FISH_arcobjects	Recording of archaeological objects in Britain and Ireland covering all historical periods	English
Eionet European Environment Information and Observation Network	General Multilingual Environmental Thesaurus GEMET	http://test113.ait.co.at/tematres/Gemet/index.php	environment, policies	Dutch, English, French, German, Italian, Portuguese, Spanish
Federation Internationale des Archives du Film (FIAF)	General Subject headings for Film Archives	http://test113.ait.co.at/tematres/fiaf/index.php	Arts & Humanities: films, films archives, cinema	English
The Discovery Programme	Irish Monuments	http://test113.ait.co.at/tematres/Irish_Monuments	Irish monuments	English
The Discovery Programme	Irish Periods	http://test113.ait.co.at/tematres/Irish_Periods	Irish periods	English
Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS)	Maritime Craft Thesaurus Scotland	http://test113.ait.co.at/tematres/Maritime_Craft	Types of craft that survive as wrecks, or are documented as losses, in Scottish maritime waters	English
English Heritage	Maritime Craft Type Thesaurus	http://test113.ait.co.at/tematres/maritime_craft_type	Craft types which survive as wrecks in	English

Author	Name of vocabulary	URL	Subject	Language
			English Heritage's maritime record	
English Heritage and Royal Commission on the Historical Monuments of England	MDA Archaeological Objects Thesaurus	http://test113.ait.co.at/tematres/archaeological_objects/index.php	Social sciences: archaeological objects; museums; vocabulary	English
Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW)	Monument Thesaurus Wales	http://test113.ait.co.at/tematres/Monument_Thesaurus_Wales	Classification of monument types in Wales by function	English
Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS)	Monument Type Thesaurus	http://test113.ait.co.at/tematres/monument_type	Monument types relating to the archaeological and built heritage of Scotland	English, Scottish Gaelic for some terms
English Heritage	Period Thesaurus	http://test113.ait.co.at/tematres/period	English Heritage Periods List	English
Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW)	Period Thesaurus Wales	http://test113.ait.co.at/tematres/Period_Wales	A list of periods for use in Wales	English
Bibliographic Standards Committee of the Rare Books and Manuscripts Section (ACRL/ALA)	Relator Terms for Use in Rare Book and Special Collections Cataloguing	http://test113.ait.co.at/tematres/rbms/index.php	Arts & Humanities: Rare Book; Special Collection	English
Universidad de León	Tesauro de Ciencias de la Documentación	http://test113.ait.co.at/tematres/documentes/index.php	Social sciences: library sciences, information sciences, documentation, librarianship	Spanish
Library of Congress. Prints and Photographs Division	Thesaurus for Graphic Materials 1: Subject Terms	http://test113.ait.co.at/tematres/tgm1/index.php	Arts & Humanities: graphic materials, subject terms	English

Author	Name of vocabulary	URL	Subject	Language
Library of Congress. Prints and Photographs Division	Thesaurus for Graphic Materials 2: Genre and Physical Characteristic Terms	http://test113.ait.co.at/tematres/tgm2/index.php	Arts & Humanities: graphic materials	English
Ministero per i Beni e le Attività Culturali	Thesaurus PICO 4.1	http://test113.ait.co.at/tematres/pico/index.php	Arts & Humanities: italian culture, heritage	English, Italian
UKAT	UK Archival Thesaurus (UKAT)	http://test113.ait.co.at/tematres/ukat/index.php	General reference: archives, ukat, united kingdom	English
UNESCO	UNESCO thesaurus	http://test113.ait.co.at/tematres/unesco/index.php	General reference: education, culture, social and human sciences, information and communication, politics, law, economic science	English, Spanish

For LoCloud purposes an extension to the core SKOS format is required that allows the storage of geo-coordinates and time periods. AIT developed an extension for TemaTres that allows metadata that exceeds SKOS-core to be stored in the vocabulary. This made it possible to implement the web services needed for the data enrichment. Another LoCloud extension to the tool was the development of an importer for multilingual vocabularies in skos and plain text format. For simplifying the import process of multilingual vocabularies a new identifier for concepts was introduced.

The vocabulary web services of the tool can be used for the integration of the vocabularies into remote local systems. And vice versa it is possible to integrate existing concepts from remote vocabularies via the web services into the cloud based vocabulary tool. Therefore the webservice calls *"import"* and *"linkTerm"* were added to TemaTres.

Two scenarios have been developed for testing purposes:

1. The tool was put on a virtual machine in the LoCloud testlab and is being tested there.
2. The collaborative vocabularies available via the tool are made available to the metadata enrichment process and the integration of the vocabularies via Web services can be tested this way.