**STAR - STELLAR Project tools**

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The STAR Project demonstrated semantic search across diverse archaeological datasets and associated grey literature documents employing the CIDOC CRM as a unifying framework. The STELLAR Project generalised and extended the data extraction techniques developed for STAR. STELLAR outcomes include tools for non-specialist users to map and extract archaeological datasets into RDF/XML conforming to the CIDOC CRM (and its CRM-EH archaeological extension).

The benefits for semantic interoperability in mapping and extracting datasets to an integrating conceptual framework, such as the CIDOC CRM, are widely recognized. However, extracting CRM based representations of datasets has required specialist knowledge of the ontology and has been resource intensive. Given the complexity of the CIDOC CRM, it is also possible to generate multiple expressions of the data, dependent on the intended purpose and emphasis. This makes the practical interoperability of CRM based implementations more difficult.

From experience in the STAR project, we identified a set of commonly occurring patterns in the datasets and the CRM for STAR use cases. The STELLAR internal templates express these patterns. The current internal templates correspond to the general use case of cross searching excavation datasets for inter-site analysis and comparison. Different templates that drew on other areas of the ontology could be designed for purposes, such as project management or detailed intra-site analysis. Output from the templates can also be combined with CRM RDF produced by other mechanisms. The RDF output is produced in a form that allows subsequent expression as Linked Data. A range of archived archaeological excavation datasets (academic and commercial sectors) have been converted to RDF using STELLAR tools and published as Linked Data by the Archaeology Data Service.

The STELLAR tools convert archaeological data to RDF conforming to the CRM in a consistent manner, without requiring detailed knowledge of the underlying ontology or mapping languages. To generate RDF, the user chooses a template for a particular data pattern and supplies the corresponding input from their database. A variety of templates are available, together with the capability of creating user-defined templates. Documentation and tutorials are available on the STELLAR website.

<http://hypermedia.research.glam.ac.uk/kos/STAR/>

[http://intarch.ac.uk/journal/issue30/tudhope\_index.html](http://andronikos.kyklos.co.uk/aboutus.php) (open access STAR paper)

<http://hypermedia.research.glam.ac.uk/kos/STELLAR/>

[http://data.archaeologydataservice.ac.uk](http://data.archaeologydataservice.ac.uk/) ADS Linked Data