

## NeDiMAH Ontology Workshop: What's Your Method? Understanding Digital Scholarship Through Ontologies

Digital Humanities Conference, 2014, Lausanne, Switzerland.

Date: Tuesday, July 8, 2014 – 09:00 to 12:00

### Facilitator(s):

Prof. Panos Constantopoulos, Athens University of Economics and Business & Digital Curation Unit-Athena RC

Prof. Costis Dallas, University of Toronto & Digital Curation Unit-Athena RC

Prof. Lorna Hughes, University of Wales

Prof. Manfred Thaller, University of Cologne

The workshop was led by an international team with expert knowledge in the field of digital humanities methods and cultural ontologies, currently involved in a major joint research project of building a digital methods ontology for the arts and humanities under the auspices of NeDiMAH – Network for Digital Methods in the Arts and Humanities, and DARIAH-EU – Digital Research Infrastructure for the Arts and Humanities in Europe.

### Background

Digital research methods in the arts and humanities have been the focus of important systematic work for more than a decade, taking the form of a digital (computational) methods taxonomy developed by AHDS in the UK, and then expanded and reused in several digital humanities initiatives internationally. The taxonomy was adopted as the conceptual structure for a series of ICT Guides for digital arts and humanities in the UK, the arts-humanities.net portal of digital humanities projects, tools, methods, expert centres, researchers, and papers, and the Database of Research and Projects in Ireland (DRAPler, Digital Humanities Observatory). It was recently refined by DARIAH-DE in collaboration with the Bamboo DiRT project. It is now the focus of a joint project by the Network for Digital Methods in the Arts and Humanities (NEDIMAH) and DARIAH-EU, which aims to develop an *ontology* of digital research methods in the arts and humanities: a formal conceptualization of digital research methods and their context of scholarly use, which can be used to adequately represent the domain of arts and humanities scholarly practice in the digital age. These include equally methods of information seeking, use and modification of digital *resources* used in scholarly work, and computational methods used by humanities scholars in all phases of the scholarly research lifecycle, from the generation of a research question or topic, to the representation, visualisation and analysis of research data and sources, and to scholarly publication and communication.

### Workshop structure

This workshop engaged participants in the theory and practice of developing an ontology for digital research methods in the arts and humanities, through an interactive modeling activity, led by a team of experts in humanities digital research methods and ontology building. Participants were introduced to the background and state-of-the-art regarding the domain of digital computational methods in the arts and humanities, as well as to the scholarly processes and “research primitives” associated with digital methods, tools and services. They were provided with a graduated introduction to ontologies, to the main concepts and techniques involved in developing an ontology, and to a conceptual model of research scholarly activity suitable for representing the application of digital methods for arts and humanities research. They were invited to share and discuss short informal accounts of their own scholarly work, focusing on the use of digital sources, tools, and services, which will provide the basis for a conceptual analysis and ontology building hands-on exercise, based on identifying conceptual



relationships and integrating the insights derived by individual digital research experiences into a shared conceptualisation under the guidance of workshop leaders.

The workshop and its outputs will provide a major contribution to the middle layer of the NeDiMAH Methods Ontology (NeMO).

## Programme

9:00 – 9:30 Facilitators: “What is an ontology? A three layer model for understanding methods.”

9:30 – 10:30 All: “Modelling Exercise” Groups of four to six people extract from their project experience input for the abstract model described before. Each of these groups will be chaired by a facilitator, a rapporteur taking notes.

10:30-11:15 Rapporteurs writing up the results of the sessions. Group members provide input. An exercise in parallel processing: We expect coffee to be drunk alongside ...

11:15-12:00 Presentation, discussion and coordination of the outcomes of the modelling exercise.

## Questions for participants

Ahead of the workshop, participants were asked to send the facilitators an outline of digital methods that they have used in their research, and information about any related projects that show the context of these methods. This assisted with conceptualizing digital methods in advance of the modelling exercise at the workshop. Questions discussed at the workshop included:

- Where is the method you used/selected to talk about documented? Is there a handbook? Is there an exemplary prior research work that you used as a model?
- Which disciplines, or approaches / "schools of thought", is this method associated with?
- Is the method making use of a digital tool, or service? Is there a name for the kind of tool used? And, which particular tool did they use/do they consider of using?
- Are there steps to the method? Can you give a simple description of these steps?
- What kind of data / resources are needed to start with? Are these resources / data already digital, and are they pre-prepared in some particular way? What kinds of documents / outputs does the method produce?
- What skills / knowledge / competencies are required for an effective application of this method? Are there specialists needed in the team, and of what kind of profile?
- What is the purpose of the method? What kinds of questions, or research problems, is it meant to be useful for?

After the initial introduction, each of the group members picked up one of the five methods that had previously documented and analyzed it according to the presented “method-view” model. The analysis of the chosen method was conducted through answering a specific set of questions regarding the method’s name and purpose, it’s documentation in the existing bibliography, field of appliance, any particular tools that are used, steps (if any) that may be involved, as well as any inputs or outputs that may be prescribed. Following that, each group member proceeded in a short presentation of his/ her findings, engaging a round table discussion which can be summarized into the following concluding points:



- Within methods based research there are hierarchies which are flexible with the researcher at the center. These hierarchies can be interlinked with other entities through certain relationships that describe their semantic context.
- Interdisciplinarity of methods means using vocabularies and approaches from other disciplines with potentially different outcomes. Depending on the context of use of a certain method the potential outcome might differ from that initially prescribed.
- The definition of a method depends on the discipline, school of Thought or Topic of research (e.g. NLP might be considered as a Discipline or a Method depending on the research topic etc.)
- Engagement of the community regarding the linking between existing published literature and the ontology, should be encouraged. More specifically researchers should be encouraged to annotate and tag their texts according to the model and thus provide the substantial content for the ontology by linking pieces of the existing bibliography with the actual entities that they describe.

## Workshop participants

The workshop was open to both advanced digital humanities scholars and to digitally-enabled humanities researchers, or those not currently using digital tools and methods but interested to do so in the foreseeable future. It was open to those occupied with the study of textual and visual resources, material and intangible cultural heritage, quantitative and qualitative modes of analysis, and a variety of epistemological stances within digital humanities. In addition, the workshop was attractive to STS scholars interested in understanding scholarly practice, as well as to computer scientists, information scientists and others interested in the relationship between digital humanities and digital infrastructures. Participants were not required to have prior knowledge in the field of ontology engineering, but we asked that they should be familiar with particular research methods in the arts and humanities, interested in reflexive analysis of humanities research practices, and prepared to engage, under the guidance of workshop leaders, with formal methodologies of ontology modelling.

Benefits for participants included the opportunity to share experiences, reflect critically on, and discuss the methods employed in digitally-based humanities research; to conceptualise specific digital research methods in the context of particular kinds of research, types of resources, and digital tools and services; and, to enhance their understanding of and get acquainted with basic ontology building techniques useful in the domain of digital humanities.

## Participants

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