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Scientific Content

Proposal title
An interoperable supranational infrastructure for digital editions (*Interedition*)

Abstract
Scholarly digital editing and analysis of literary material has been foremost an institutional practice. International cooperation consists mainly of exchanging research results and advancing methodology through conferences and journals. But a shared technical infrastructure for the preparation, editing, publishing, analysis and visualization of literary material does not exist – and there's little international endeavor to develop such an infrastructure. This Action aims to form an international Management Committee of researchers that have a thorough experience in electronic editing and digital text analysis for scholarly purposes in national context. A series of meetings will be called for researchers in the field of literary research and IT to meet on the topic of a shared supranational networked infrastructure for digital scholarly editing and analysis. The Action will deliver a roadmap for the implementation of such an infrastructure.

Keywords
digital editing, digital publishing, interoperability, scholarly digital infrastructure, scholarly cooperation, scholarly collaboration, tools development, literary research, literary analyses

Preferred COST Domain
Individuals, Societies, Cultures and Health

Text of Proposal

Backgound, problems

Literary research is the scholarly study of the form and function of literature and texts in their cultural context - as opposed to the discipline of linguistics that takes (spoken) language as its subject matter. Literary phenomena are studied in a perspective of international reception and context as a long standing tradition. Comparative literary studies research literary developments as supranational phenomena. A plethora of international bodies exists bound by a common well defined literary research subject.

With the advent of the internet the possibilities of putting literary research materials on the web became apparent and the added value of digitized and digitally shared material for literary research and researchers was quickly acknowledged. Early explorers of the new possibilities for scholarly editing and research in the digital era, like Peter Robinson and Jerome McGann, delivered groundbreaking work by theorizing and showing how digital tools could be used to transform literary research sources and research output into scholarly reliable digital representations for publication and analysis.

However, the preparation and production of digital editions of literary material in a scholarly adequate fashion as well as the development of technical infrastructure and software to support scholarly digital editing has been foremost a concern on an institutional or at most a national level. The tools and practices developed, like Collate, Anastasia, TUSTEP, Juxta, ARCHway's EPT etc., were often conceived to function on an international scale, but are actually primarily operated within an institutional context - contrary to the international setting of literary research in general. Arguably interoperability (which is the possibility to have analysis tools using each others functions and/or output as automated services) and portability of tools (which is the possibility to put a tool to use for automation within another technical context) has not been a focal point within the development of tools.

This situation does not apply solely to the European region. Scholars and research groups from other regions are also confronted with a lack of an interoperable networked infrastructure for digital literary research. Canada's TAPOR-project, for example, is addressing similar interoperability and infrastructural issues.

As literary research and scholarly editing become ever more international and collaborative undertakings, the need arises for digital editing and publishing tools that are maintainable, interoperable and usable on a supranational level. The tools in existence lack in support for interoperability, grid readiness, usability and maintainability needed to use them as the international 'hard research infrastructure' for digital literary research.

Benefits

The primary benefit of this Action for the field of literary research is on a methodological level. The Action allows literary researchers and IT-researchers to interact and debate on the recommendations for form and function of interoperable tools on a shared infrastructure for literary research. Deriving recommendations and suggesting standards for form and functionality of digital scholarly editions and publications by themselves are

methodological merits, but by providing an IT infrastructure to support these standards, possibilities will be created to network research data and tools from very different sources and locations. These new methods for data networking will create significant opportunities to advance research by cross checking, comparing and amending research data and results. Such networked data will generate new research perspectives.

Tools developed to adhere to the interoperability standards of this technical infrastructure will be reusable by any researcher having access to the infrastructure (i.e. having access to the internet). Literary research results may therefore easily be reproduced, thus enforcing / promoting good scholarly practices in literary research. This is a secondary methodological benefit of this Action.

Another benefit is that by providing the said technical infrastructure, researchers will be able to share literary research and research materials in an interoperable way. Researchers will thus be able to collaboratively prepare, edit, publish and analyze digital literary editions on a institutional, national or international level, without having to worry about technicalities of the tools and infrastructure itself.

A methodological benefit is also to be found in creating the possibility for analytical tools to evolve on the shared infrastructure. Researchers can apply ‘proven’ tools to their materials, thus proliferating adequate tools. But because any researcher may extend and contribute tools, tools can eventually be evolved into even more excellent tools. Thus an internationally shared high quality scholarly research ‘workbench’ can develop.

A non-methodological secondary benefit of the proposed Action may be a reduce of costs for maintenance of tools. As digital literary research tools for the first time may be developed as an international collaborative undertaking, partners can share resources, tools and code bases. The necessity of reinventing and re-implementing tools on institutional level will diminish. Different key partners may focus on development of tools matching to their core-expertise and -capabilities, leaving necessary but cumbersome coding of peripheral components to the core business of other partners.

Objectives, deliverables, and expected scientific impact

The primary objective of the proposed Action is to produce a ‘roadmap’ or ‘manual’, conceived and endorsed by an international expert group of IT-researchers and researchers in the field of (digital) scholarly editing, visualizing and analyzing literary material. The ‘roadmap’ conceptualizes the development of a technical infrastructure for collaborative digital preparing, editing, publishing, analyzing and visualizing literary research materials. A secondary goal is to accompany the roadmap with a set of proof of concept web services functioning as an example implementation of the technical infrastructure model.

The paramount condition for producing a manual that will be endorsed by a larger community of scholarly researchers in the field of (digital) literary research is the possibility for a sufficiently large number of experts from that field to meet and discuss the concepts and requirements of the proposed infrastructure. Therefore one objective of

the Action should be to create enough occasions for such researchers to meet on this subject. These meetings should also include a number of IT-researchers, well-informed on the particular needs of the literary research community, to guide and support the literary domain experts in inferring viable technical recommendations.

The manual that will be delivered should describe an interoperability protocol for on line services that support collaborative scholarly editing and publishing. The manual will also describe a proposed development and maintenance strategy for tools delivered to the infrastructure and will include research results addressing the usability issues specific to a digital literary research environment.

The expected scientific impact is a considerable advancement of international collaborative literary research. It will be possible to revive a number of research endeavors that are dormant by lack of technical infrastructure. The use of delivered tools within the research community will have a significant methodological impact, resulting in promoting reproducibility of measurements and research results, also resulting in a more algorithmic modeling approach to literary research.

Scientific program and innovation

The work plan for the Action will contain the following items: (i) the identification of shared and reusable functionality, as part of a larger plugin and web service architecture; (ii) the selection of an adequate stack of web services and grid protocols, together with (iii) the creation of guidelines for the use of these protocols; (iv) the definition of interfaces for the reusable functions; (v) the selection of existing software components suitable to be ported or 're-wrapped' for delivery in a web services based architecture; (vi) identification of promising services for proof-of-concept implementation.
To some extent the problems to be tackled are technical. The main potential problem is formed by the rapid changes in grid and web services infrastructure. Architectural choices should therefore strike a right balance between experiment and stability. Non-technical problems include different national and institutional traditions and methods in literary studies. The editing environment to be created should not enforce a single editorial method but rather inspire exchange and cooperation of different methods.
In successfully dealing with these problems, a platform for edition and literary studies will be created that is innovative in being open to extension, by partner institutions and non-partners alike. This program will thus create the foundation for a component-based, flexible platform that will facilitate the use of electronic resources in literary studies. It will truly be a shared architecture for a shared heritage.

Organization

This Action advances international scholarly literary research by initiating the development of a shared infrastructure supporting interoperable tools for collaborative digital editing, visualizing and analyzing literary material. It seeks to further the cooperation between researchers of different (EU) countries. The new research possibilities and results this Action creates are of a public interest by the very nature of

their subject matter (i.e. literature). The aim is to network nationally funded research in the field of scholarly editing, publishing and analyzing digital literary material to further that research and to further technical infrastructure into an shared international research infrastructure. The Management Committee initiating this Action calls for open Working Groups and wants to welcome any humanities researchers or research groups that have an interest in exploring the possibilities to develop the proposed research infrastructure. An area of particular interest within the Action will be the proportional representation of male/female researchers as well as the inclusion of talented young researchers. As such the proposed Action is closely related to the nature of COST-fundable collaboration initiatives.

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