

### **ARCH: Ancient Coinage as Related Cultural Heritage**

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The ARCH project uses Linked Open Data technology to establish, for the first time, an overarching platform for the study, curation, archiving and preservation of the monetary heritage of the ancient world. As such, it squarely addresses the concerns expressed in Topic 3 of the JPICH call: Safeguarding Digital Heritage. Using the newly developed nomisma.org knowledge organization system it will create a framework consisting at the highest level of a single, unified portal across multiple online typological resources currently under development. These resources will in turn be linked to a body of data drawn from two major European collections, as well as a large corpus of material drawn from commercial contexts (auction catalogues). The overarching portal will serve as a central point of access to this data for multiple audiences, as well as a demonstration of the extensibility of this approach to other geographic areas. Associate Partner-projects based in Germany and the United States will contribute typologies for this purpose. As a proof of concept of the research applicability of this framework, ARCH will develop one geographical focus – Pre-Roman Spain and southern Gaul – in the form of a specific online reference tool that will draw upon both categories of data (public collections and objects in commerce), as well as a program of research designed to exploit the opportunities offered by such a systematic and Linked Open Data infrastructure. This will examine questions of monetary and cultural connectivity and interaction across the borders of Spain and France in antiquity, in collaboration with leading scholars in the field of this geographical area, and monetary and cultural history, working as Associate Partners based in Paris, Orléans, and Valencia.

### **CADEAH: European History Reloaded: Curation and Appropriation of Digital Audiovisual Heritage**

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During the past decade, a massive body of audiovisual heritage has become digitally accessible, on websites of archives, through initiatives such as Europeana.eu and EUscreen.eu, and on platforms such as YouTube and Vimeo. The proposed project is the first to research the online circulation and appropriation of audiovisual heritage using an integrated and interdisciplinary approach. It combines state of the art tracing and tracking technologies, critical cultural analysis and ethnographic fieldwork to answer the questions: How do strategies of curation shape the appropriation of digitized heritage? What new perspectives on European history and identity do digital curations and appropriations of audiovisual heritage create? How can audiovisual archives better foster the re-use of Europe's audiovisual heritage? The project's case studies highlight European History from the Cold War to the Fall of the Berlin Wall and Migration in Europe—both urgent topics within debates about Europe's past, identity and future. The project brings together interdisciplinary expertise in the curation of digital audiovisual heritage (Utrecht University, The Netherlands), contemporary European history (Institute of Contemporary History, Czech Republic) and Digital Humanities (Umeå University, Sweden). It collaborates with leading stakeholders in the field, as Europeana.eu—and its main audiovisual aggregator EUscreen.eu—as well as the attached 35 audiovisual archives across Europe. To reach out to users of audiovisual heritage, the project will also co-operate with the European

Association of History Educators and Historiana.eu. The project's outcomes will contribute to a better understanding of popular interpretations of European history circulating online. It will foster critical engagement with audiovisual heritage in a participatory media landscape, including the consequences of digital historiography. Based on outcomes, the project will advise heritage institutions about best practices of user-engaging curation. Outcomes will also provide history educators with accessible material to engage students working online with Europe's audiovisual heritage.

### **DigiCONFLICT: Digital Heritage in Cultural Conflicts**

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DigiCONFLICT will explore the impact of digital heritage on contemporary engagements with the past in specific national frameworks in Poland, Sweden and Israel. Focusing on oral history, photography and multimedia museums as some of the most common media used to digitalize cultural heritage, the project responds to the Call's 'Critical Engagements with Digital Heritage' trajectory, endeavoring to challenge widespread claims about the universality and democratizing abilities of digital heritage. Even though digital heritage maintains the potential to increase cohesion across nations and social groups, it is equally used to cement elite power structures, define what counts as cultural heritage, and determine whose cultural heritage is worthy of preservation. While acknowledging the role digital heritage plays in shaping and distributing cultural heritage, the project's point of departure is that digital heritage cannot be considered in separation from historical, cultural and national contexts. The project has three main aims: 1) to explore how national politics affect digital definitions of cultural heritage, 2) to investigate who creates and engages with digital heritage, and how, and 3) to study how the scope and value of cultural heritage are being negotiated and reformulated in a digital context. The consortium will elaborate innovative research approaches to digital heritage through analysis of policy documents related to the case studies, to understand how specific institutions, governments and communities define, mark, and share cultural heritage. To achieve its aims, the consortium will employ interviews with professionals and members of communities who participate in the digitalization of cultural heritage. It will study what parameters affect the creation of digital heritage products, inquire what is gained and lost when cultural heritage becomes digital, and explore who the main beneficiaries are. Findings will mainly be disseminated via scholarly and mainstream publications, workshops, and a dedicated interactive website.

### **DigiDogon: Digitizing Dogon heritage. The legacy of Abirè, the Dogon prophet**

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The project aims at digitally recording and safeguarding part of the immaterial cultural heritage of the Dogon in Mali, the *baja ni*, a major song cycle that forms an integral part of the funeral complex. The Dutch principal investigator, who has been studying *baja ni* performances since 1980, has collected many hours of recordings, and has recently prepared a manuscript text which, together with the recordings, will serve as the starting point for this project. Due to Islamization and

Christianisation, traditional funerals are becoming rarer, and the transmission of the *baja ni* is in peril. The current jihadist troubles present an immediate and even violent threat to this heritage. The songs are attributed to a blind Dogon poet/prophet, Abirè, probably from the 19th century, who also delivered a string of prophecies on the area. The aim of the project is first to widen the empirical knowledge on the prophetic song cycle, and to further analyse and contextualise the performances. Second, the recordings will be digitalized in such a way that they become accessible to the Dogon themselves, set in a digital framework which contextualizes the songs inside their material setting. Third, the goal is to initiate processes and institutions that may keep the heritage alive, independent of traditional funerals. Research activities on the ground will be done by Dogon researchers, guided by the consortium which is based in Leiden, London and Paris. Project partners in Mali are the National Museum in Bamako, the UNESCO office in Mali and Ginna Dogon, the association that represents the Dogon in cultural matters.

### **DReaM: The Dictionary/Grammar Reading Machine: Computational Tools for Accessing the World's Linguistic Heritage**

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The diversity of the world's 6,500 languages embodies a wealth of information on human cognition and the history of populations. As languages go extinct, the linguistic heritage of human kind increasingly resides in grammars and dictionaries, which are rapidly accumulating. Accessing this heritage entails that the descriptions are available and that they are read by someone. Availability is a problem because publications are often difficult to access. In this project we aim to enhance access to the world's linguistic heritage by making an existing collection of more than 9,000 PDF documents no longer protected by to copy-right available in a stable archive enriched by added metadata and computational tools developed to search information within the texts. Moreover, a number of dictionaries will be converted to apps for mobile devices that can be distributed to speakers of minority languages, handing back to these speakers some of their linguistic heritage. The next step, that of reading language descriptions, sounds trivial, but when all relevant publications are taken into account a researcher who would like to access information on all the world's languages is literally faced with hundreds of thousands of publications. Therefore, another aim of the project is to develop information-extraction tools specifically tailored to the task of dealing with language descriptions. Using cutting-edge methods from Machine Learning and Natural Language Processing we intend to build a system that can extract millions of snippets of information and link them in ways such that it is possible to construct individual language profiles from a variety of sources and to output comparative databases for the purpose of typological and historical linguistics. The applicant team combines proficiency in Natural Language Processing with expertise in linguistic diversity and is supported by an institution with decades of experience in developing and storing archives of linguistic information.

### **HOME: History of Medieval Europe**

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Manuscripts are among the most important witnesses to our European shared cultural heritage and, while being increasingly digitized and published in large digital archives and libraries, they represent a valuable part of the European Digital Heritage. Its exploration, understanding, and dissemination of need new tools for promoting the community engagement with, and use of, heritage. Indeed, the wealth of information conveyed by the text captured in these images remains largely inaccessible, whereas general users and researchers more and more expect to query handwritten resources in plain text like printed books and, furthermore, to get the answers in a meaningful environment which accompanies the user experience with semantically structured information and visualisations. Capitalizing on the success of the JPI-CH Heritage Plus funded HIMANIS project, HOME will associate Computer Science (UPVLC, A2iA, Teklia), Humanities (IRHT) and Cultural Heritage (NACR) institutions, plus a network of Research and cultural heritage institutions (ICARUS as Associate Partner) in order to not only produce technology to generate new, research-based knowledge from historical manuscripts, but also implement a user and researcher friendly environment for fostering a meaningful experience for scholarly research and discovery. HOME aims at (1) further developing searching approaches specifically designed for querying large sets of text images digitized from historical handwritten documents; (2) linking Digital Cultural Heritage and associated metadata (abstract, indexes and text editions) and authority data (indexes, gazeteers), which are disconnected from the digitized primary sources and stored in separate silos; (3) establishing a knowledge framework and a semantic information retrieval system, to understand the multilingual medieval sources; (4) presenting, visualizing and interpreting the sources on the History of Medieval Europe; (5) leveraging meaningful discovery and research experience in an user-centered and ergonomic environment

#### **READ IT: READING EUROPE ADVANCED DATA INVESTIGATION TOOL**

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READ IT is a transnational, interdisciplinary R&D project that will build a unique large-scale, user-friendly, open access, semantically-enriched investigation tool to identify and share groundbreaking evidence about 18th-21st C Cultural heritage of reading Europe. This Cultural heritage is a rich 'human archive' in multiple media and languages depicting a transaction between reading subjects and reading material. Yet it is currently scattered and insufficiently tagged. Without gathering, describing and structuring, it remains unknown. Innovative tools are also needed to leverage community and critical engagement with this crucial common heritage, thereby preserving and enriching it. State-of-the art technology in Semantic Web and information systems will provide a versatile, end-users oriented environment enabling scholars and ordinary readers to retrieve information from a vast amount of community generated digital data leading to new understanding about the Why? and How? people read in Europe. The interdisciplinary collaboration between established digital humanists, human & social sciences scholars and computer researchers will

investigate innovative ways of gathering new resources through crowdsourcing and webcrawling as well as linking and reusing preexisting datasets. Extracting descriptors from a sample of multilingual textual sources will contribute to a robust ontology as well as to multiple thesauri of invariants accounting for the lowest common denominator of reading experiences in Europe across times and space. READ IT will maximize research outputs on the digital heritage of reading Europe and foster further active engagement with it through 'beyond the state-of-the-art' smart APIs and user interfaces designed for the co-curation of customized collections and personal narratives and memories of reading. Thus it raise awareness about the well-being associated with the cultural heritage of European print culture and shed light on the societal impact of digitally mediated knowledge.

### **SCHEDAR: Safeguarding the Cultural HERitage of Dance through Augmented Reality**

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Dance is an integral part of any culture. Through its choreography and costumes dance imparts richness and uniqueness to that culture. Over the last decade, technological developments have been exploited to record, curate, remediate, provide access, preserve and protect tangible CH. However, intangible assets, such as dance, has largely been excluded from this previous work. UNESCO states in its 2003 Convention for the Safeguarding of the Intangible Cultural Heritage (ICH) that ICH is a mainspring of humanity's cultural diversity and its maintenance is a guarantee for continuing creativity. However, modern factors such as globalization and the massive movement of people have diminished the unique culture of many communities, and indeed there is a now a very real risk that many types of ICH may disappear forever. Recent computing advances have enabled the accurate 3D digitization of human motion. Such systems provide a new means for capturing, preserving and subsequently re-creating ICH which goes far beyond traditional written or imaging approaches. However, 3D motion data is expensive to create and maintain, encompassed semantic information is difficult to extract and formulate, and current software tools to search and visualize this data are too complex for most end-users. SCHEDAR will provide novel solutions to the three key challenges of archiving, re-using and re-purposing, and ultimately disseminating ICH motion data. In addition, we will devise a comprehensive set of new guidelines, a framework and software tools for leveraging existing ICH motion databases. Data acquisition will be undertaken holistically; encompassing data related to the performance, the performer, the kind of the dance, the hidden/untold story, etc. Innovative use of state-of-the-art multisensory Augmented Reality technology will enable direct interaction with the dance, providing new experiences and training in traditional dance which is key to ensure this rich culture asset is preserved for future generations.