

Infrastructures of digital humanities

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Abstract

This panel will convene participants from a range of roles and institutions to build on previous work in infrastructures of digital humanities: the organizational and structural aspects of the field responsible for collaboration, partnership, training and support, access, preservation, sustainability, and more. Information professionals play a key role in these infrastructures, from technical expertise to project management to training and support for methods and tools. Panelists from faculty, centers and institutes, and academic and digital libraries will address issues of capacity building, disciplinarity, and labor across various settings.

KEYWORDS

centers, digital humanities, information studies, infrastructure, libraries, scholarship

1 | DESCRIPTION

More than 15 years ago, *A Companion to Digital Humanities* described digital humanities (DH) “as a discipline in its own right” (Schreibman, Siemens, & Unsworth, 2004, p. xxiii) with a central focus on *projects*—later called the “basic unit” of DH (Burdick, Drucker, Lunenfeld, Presner, & Schnapp, 2012)—which organize ideas, people, and resources. DH projects, in particular, depend on technologies and may be experimental, modular, or incremental (Price, 2009), as well as collaborative (Edmond, 2016). As such, each project requires “an infrastructure that will

support its production and publishing” (Pitti, 2004), in addition to data curation: “capturing and preserving not only the data itself, but information about the methods by which it was produced” (Flanders & Muñoz, 2012) and making data available for reuse.

Early work in DH infrastructures examined centers (Zorich, 2008), libraries (Rockenbach, 2013), archives (Viiri, 2014), and cultural heritage (Ruthven & Chowdhury, 2015), with particular emphasis on financing, organizational structure, products, services, and sustainability, as well as partnerships that engage the public, increase access, and address disabilities. Information

professionals have been discussed as key contributors to these infrastructures (Clement & Carter, 2017; Poole, 2017), not only for their technical skills but also for project management (Tabak, 2017) and for teaching and training others (Rasmussen, Croxall, & Otis, 2017), often across disciplines (Senchyne, 2016; Terras, 2012).

As DH continues to mature, it is worth revisiting questions of infrastructure, broadly conceived, and how information professionals contribute to the development of the field and its future.

This panel will convene participants from a range of roles and institutions to address capacity building, disciplinary boundaries, project management, and skilled labor. While attending to best practices and useful models, this session will remain mindful of local differences in how DH manifests (Knight, 2011).

2 | PRESENTATIONS

2.1 | Scaffolding DH growth through teaching and research pipelines – Michelle Dalmau and Kalani Craig

DH centers come in all shapes and sizes, from one-person operations with minimal resources (Posner, 2018) to larger teams with dedicated staff. Many centers continue to wrestle with questions of relevance and sustainability, two aspirations that are often at odds (Maron & Pickle, 2014). Centers that register in the middle range—enough resources to make ripples but not enough to scale—are well-positioned to explore a pipeline model that offers scaffolded pathways that build sustainable, permeable competencies in DH research and pedagogy. These pipelines also support cross-institutional partnerships, which strengthen a shared knowledge base and extend communities of practice beyond campus boundaries. Drawing on a service model for digital projects (Vinopal & McCormick, 2013), the Institute for Digital Arts & Humanities at Indiana University Bloomington attempts to balance the “one of a kind” approach with “first of a kind” capacity-building by emphasizing curriculum, skill acquisition, and increased support for graduate students.

2.2 | Launching to the deep: a scoping study of DH infrastructure in Africa – Humphrey Keah and Joseph Kiplang’at

DH research and education in Africa is in the initial stages, with only two centers from the continent featured on CenterNet’s global map (2020). This scenario

invites questions about the pre-existing organizational, physical, technical, and social infrastructures that influence DH programs in Africa, as well as strategies, collaborations, consortia, and partnerships found in existing programs. Leveraging the concept of “great scientific domains” (Rosenbloom, 2012), this scoping study examines relationships between humanities research units and information science schools in African universities, with the aim of establishing potential areas of collaboration. The output will be an evidence-based model of the status of DH research and education in African universities.

2.3 | The Interdisciplinary center for Data-Intensive research as infrastructure for DH – Thea Lindquist

The organizational, structural, and relational aspects of an interdisciplinary center for data-intensive research can help provide foundational social and technical infrastructures for DH. The Center for Research Data and Digital Scholarship at the University of Colorado Boulder, a partnership between the University Libraries and campus Research Computing, provides one such model. This talk will discuss the role of the academic library in the center, transcending disciplinary and professional jargon to uncover common understandings, evolving a shared ethos and community of practice among staff from diverse disciplinary backgrounds, and how an interdisciplinary center can provide infrastructure/support for DH (and vice versa).

2.4 | Accelerating interpretive knowledge turns – Nic Weber

This presentation will describe and provide examples from the Qualitative Data Repository (QDR)—a socio-technical infrastructure that attempts to accelerate the knowledge turns of qualitative social scientists and humanists. A knowledge turn is broadly defined as “the learning generated by experience, deriving more good and leading to advance” (Goble, De Roure, & Bechhofer, 2011). To accelerate a knowledge turn means that the processes and procedures of learning have an increased velocity towards deeper understanding, more meaningful engagement, and quicker access to materials that corroborate or cast doubt on an evidential claim. QDR facilitates access to archival images, videos, and documents through a set of data previewers, and an innovative model of annotation that links data to scholarly publications.

2.5 | Building a national level linked open data infrastructure for digital humanities – Eero Hyvönen

This talk concerns Linked Open Data Infrastructure for Digital Humanities in Finland (LODI4DH), a joint initiative of Aalto University, Department of Computer Science, and University of Helsinki (UH), Helsinki Centre for Digital Humanities (HELDIG), for creating a national data infrastructure and Linked Data services for open science. The data and services enable publication and utilization of datasets for data-intensive DH research in structured, standardized formats via open interfaces. LODI4DH is based on a large national collaboration network and software created during a long line of national projects in DH between UH and Aalto since 2003. This work has created several in-use infrastructure prototypes, which have had millions of online end-users and suggest a high potential of utilizing linked data infrastructures in DH.

2.6 | Creating infrastructure for teaching text mining – Alex Humphreys

JSTOR Labs is developing a new text mining platform for JSTOR, its sister organization Portico, and other corpora. While text mining has the potential to revolutionize research across disciplines, it requires coding skills and statistical knowledge that may take years to learn. JSTOR Labs has tried to mitigate this problem through a new platform for creating, visualizing, and linking datasets within a hosted JupyterHub environment, which incorporates popular code packages for topic modeling, sentiment analysis, and more. The platform allows users to start text mining without the hassle of configuring an environment. It also provides an opportunity for common infrastructure for teaching text mining: the platform will feature a library of open education resources—Jupyter notebooks with accompanying lesson plans—which will make it easier to teach and learn text mining, without hiding complexity or nuance.

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Chris Alen Sula (moderator) is Associate Professor at Pratt Institute's School of Information, where he coordinates the Advanced Certificate in Digital Humanities. His research analyzes DH as a field, exploring topics such as curricula and the early history of DH. He has also published on citation studies in the humanities, the politics of technology, and ethical uses of data and visualization.

Kalani Craig is Assistant Clinical Professor in History at Indiana University Bloomington and Co-Director of the Institute for Digital Arts & Humanities, a research center of the Office of the Vice Provost for Research, Indiana University Bloomington. Her research on digital-history methods in pedagogy integrates text mining, spatial history, and network analysis. She is PI on Net.Create, an NSF-funded exploration of network analysis in history reading comprehension.

Michelle Dalmau is Associate Librarian and Head of Digital Collections Services (DCS) at the Indiana University Libraries and Co-Director of the Institute for Digital Arts & Humanities (IDAH). As head of DCS, Michelle manages and coordinates digital library services for the Libraries and affiliated cultural heritage organizations across all IU campuses. As co-director for IDAH, Michelle fosters the development of digital arts and humanities infrastructure projects and initiatives through outreach, collaborative research and creative pursuits, consultation, professional development, and credit-bearing programs.

Alex Humphreys is Associate Vice-President of JSTOR and Director of JSTOR Labs at ITHAKA. JSTOR Labs works with partners to shape the future of research and teaching by creating tools for researchers, teachers, and students that are immediately useful—and a little bit magical. Before starting the Labs team, Alex spearheaded the effort to replace JSTOR's platform with a cloud-hosted, services-oriented, open-source-based architecture.

Eero Hyvönen is director of Helsinki Centre for Digital Humanities (HELDIG) at the University of Helsinki and professor of semantic media technology at the Aalto University, Department of Computer Science, where he directs the Semantic Computing Research Group (SeCo) (<https://seco.cs.aalto.fi/>). A major theme in his research has been development of anational level Semantic Web infrastructure and its application in different areas, especially in Digital Humanities. He has published over 400 research articles and books and received several international and national awards.

Humphrey Keah is an information and knowledge management consultant whose research support experience cuts across the natural sciences (agriculture and the environment) and the humanities and social sciences. He is currently taking the lead in information and knowledge management initiatives at the Centre for Health Literacy and Quality, a non-governmental organization focusing on health literacy in Kenya, while undertaking DH research for doctoral studies. Part-time engagements include prior teaching experience as an Assistant Lecturer at the Technical University of Kenya.

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Thea Lindquist is Professor and Executive Director of the Center for Research Data and Digital Scholarship at the University of Colorado (CU) Boulder. She is interested in helping others integrate data-intensive methods and open and collaborative approaches into their scholarly practice and has actively promoted DH in various contexts, currently as director of CU Boulder's DH graduate certificate. Her digital history research is often experimental, collaborative, and multidisciplinary.

Nic Weber is Assistant Professor at the University of Washington and technical director of the Qualitative Data Repository. He holds a PhD and MLIS in Information Science from the University of Illinois. His research addresses the development and long-term maintenance of data infrastructures that facilitate transparent and accountable public institutions. His current work focuses in particular on the development of public interest technologies for local governments, and data privacy in the context of open science.

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