

The King's Chamber, a reflection on multimodal data reuse and publication

Alexis Pantos | Norway

From archaeological survey and excavation to object recording and museum management there are few areas of heritage documentation that remain unchanged by the developments in imaging and remote sensing technologies over the past decades. In parallel to the boom in born-digital data there have been concerted efforts to digitize existing analogue archives and develop repositories for the storage and distribution of this research material. Despite significant energy invested into the development of community standards, and major advances in web-based technologies for the distribution of large, complex datasets, the sharing of data in structured and meaningful ways remains challenging; it is not a trivial endeavor. Not only are there still many practical and technological challenges, there are significant cultural barriers as well as issues of scholarly continuity that must be addressed if these data are to make an active contribution to their chosen specific research domain. This contribution seeks to outline some of the continuing challenges identified during the development of a pilot digital publication project that drew on multimodal digital data and archival data of a temple complex in Egypt.

The King's Chamber Prototype is a micro-site that combines 3D data, high resolution 2D imagery including illustration, digital and archival photography, as well as detailed epigraphic analysis and commentary. It grew out of discussions and experiments with material from the The Epigraphic Survey in Luxor (an organization based at the Institute for the Study of Ancient Cultures at the University of Chicago), the most well-established epigraphic project in Egypt that now regularly employs 3D data from photogrammetry in its digital epigraphy and documentation process. As a result of this workflow the project has acquired large stores of high resolution photogrammetry, but with limited possibility to share this data through traditional publication channels, so much of the 3D data remains an unseen bi-product of the epigraphic documentation. How to make more direct and comprehensive use of this data was one challenge the project wished to explore. The first full iteration of the project began as a collaboration between the Epigraphic Survey, the Digital Epigraphy website, The Giza Project at the University of Harvard and KU Leuven University. Intended as a data reuse project, it drew on the large collection of linked, but largely unstructured archival data available through the Giza project data systems (Giza Project, nd) in order to explore how new and abundant 3D data and growing stores of open archival data can be best utilized to augment and enrich established publication practices. Building on this initial experiment, the project was then redeveloped and extended to incorporate data from the Epigraphic Survey and a room within the Small Amun Temple at Medinet Habu, known as the King's Chamber.

Figure 1: Screenshot of the basic interface showing the IIF image viewer and 3D navigation menu.

As a prototype, the current project is less a solution, and more a practice-led exploration of the current possibilities and challenges in the sector. Crucially, the project formed a case-study to better delineate and define the needs of the community rather than be led by the promise of technology alone. The site is built around standard web technologies and free-to-use web services already in use by the Epigraphic Survey and relies heavily on open-source code developed within the heritage sector. IIF compliant image servers are a core technology for achieving the project goals, and the application of community standards based protocols a key guiding approach for future development aims and FAIR compliance. Sustainability has also been a key area of concern throughout the

project. Not only has it informed the selection of technologies, it also encouraged a 'degrade gracefully' ethos to the project as a whole. However, despite moves within industry circles toward standardization of file formats, including 3D, the technological landscape remains inherently tumultuous, and the idea of publication longevity should be framed against the background of the target audience and an established scholarly tradition that spans several centuries.

The long-view of heritage data production is important, yet it remains a complex problem. Despite mechanisms in conventional archiving to rationalize data for long term storage, and innovations in long term digital storage media to preserve a lucky few pieces of our data, the persistence of these systems themselves still rely on a continuity of culture and a willingness to fund, maintain and contribute to them in the future. As such, any store of cultural data is unlikely to succeed without meaningful development in the presentation and dissemination systems. One takeaway from analogue predecessors of the current project, is the importance of all parts of the package - content, structure and presentation. Value is not inherent to the technology and does not lie within the data itself, but only takes form through contextualisation with other information. However, the way in which we understand and interact with information is undoubtedly changing as a result of developments within the techno-scape. Work on this prototype began several years ago, prior to the release of the AI powered tools that have dominated recent news. What constituted a considerable time investment at the start of the project - restructuring and narrative description disparate ideas and sources, development of presentation interfaces and consolidation of data types into a single format - are already looking like increasingly trivial challenges in the years to come.

What remains, however, is the ongoing tension between what we need and want versus what it allows us to do. By reflecting on the design process of the King's Chamber prototype and the authors experience with other data publication initiatives including the recent BitFROST infrastructure project (MCH, 2021) at the Museum of Cultural History in Oslo, this presentation hopes to contribute to the wider discussion of who we are producing data for, and where it may take us next.

Funding

Development of content used in the presented project has received support from the The Epigraphic Survey in Luxor, at the Institute for the Study of Ancient Cultures at the University of Chicago.

Conflict of Interests Disclosure

There are no conflicts of interest known to authors with the presented work.

References

Giza Project (no date) link: <http://giza.fas.harvard.edu/about/>

MCH (2021) link: <https://www.khm.uio.no/english/research/projects/bitfrost/index.html>

ISAC (no date) link: <https://isac.uchicago.edu/research/projects/epigraphic-survey>