

Workshop “Digital Assyriology in Germany”

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Center for Advanced Studies, LMU Munich

Report

compiled by

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The one day workshop “Digital Assyriology in Germany,” held at LMU Munich’s Center for Advanced Studies (CAS), was organised as part of the Global Philology Project to assess the key requirements for creating a sustainable digital infrastructure to support the study of historical languages, the development of long-term preservation and open-access presentation of text materials, and the creation of analytical tools for languages written in the cuneiform script, most importantly Akkadian, Hittite and Sumerian.

This single-day workshop was well attended (22 participants and guest; see full list of speakers and discussants below), widely representative, and very productive. It brought together stakeholders from seven German universities (FU Berlin, Jena, Heidelberg, Leipzig, LMU Munich, Marburg, Würzburg) and two key non-university research institutions, namely the Max-Planck-Institut für Wissenschaftsgeschichte at Berlin and the Akademie der Wissenschaften und der Literatur at Mainz (Abteilung Hethitologie-Archiv) as well as Prof. Dr. Steve Tinney (University of Pennsylvania, Philadelphia) who is cooperating closely with projects conducted at LMU Munich and Würzburg.

Morning session: Project presentations

To take stock of current and planned digital cuneiform projects, to compare and contrast current practice (including problems), and, most importantly, to stimulate discussion for the afternoon’s roundtable discussions, the morning session was devoted to project presentations discussing (1) digital text corpora, (2) digital dictionaries, and (3) digital applications or web services.

The speakers addressed the following issues:

- Content and / or services provided.
- Intended audience and methods of monitoring use.
- Accessibility and licensing. For example, open-access, CC license or restricted, subscription.
- Creation or use of authority lists for people, places etc.
- Stability is for long-term citation and standards for citation.
- Use and/or development of morphological analyzers, part of speech taggers, tag sets for syntax, and automated syntactic analyzers.
- State of digital infrastructure at project/host institution.

Part A. Digital Text Corpora

1. **Eva Cancik-Kirschbaum** spoke about ArchiMAss, a large digital resource for archival texts of the Middle Assyrian period (second half of the second millennium BC) under construction; the data is based on material hosted in three databases. ArchiMAss uses the ArchiBab platform (www.archibab.fr) developed by Dominique Charpin (Paris), which, unlike the other projects presented at the workshop, uses commercial software (4D).
2. **J. Cale Johnson** gave details about the digital strategy of the BabMed Project (www.geschkult.fu-berlin.de/e/babmed/index.html), whose aim is not only to capture the “compendial context” of Babylonian medical texts, but also to contextualise these texts in their place ancient scientific history. Text editions are under construction and accessible on two separate platforms: CDLI (“Cuneiform Digital Library Initiative”) and Oracc (“Open Richly Annotated Cuneiform Corpus”).
3. **Jamie Novotny & Karen Radner** gave a brief overview of the numerous richly annotated digital humanities projects that they were developing in order to widely disseminate, facilitate, and promote the active use and understanding of official inscriptions and archival texts of the Middle East in antiquity (www.en.ag.geschichte.uni-muenchen.de/research/mocci/index.html). They also talked about the innovative and sustainable ways for users to access the important and varied contents of numerous geo-referenced and linguistically-annotated editions of ancient records, primarily from the first millennium BC.

4. **Daniel Schwemer & Gerfrid Müller** presented their projects CMAwRo (Corpus of Mesopotamian Anti-witchcraft Rituals Online; www.cmawro.altorientalistik.uni-wuerzburg.de) and “Hethitologie-Portal Mainz” (www.hethport.uni-wuerzburg.de) and discussed issues of open-access data and restrictive licensing imposed by certain publishers.
5. **Walther Sommerfeld** spoke about the web resource Digitale Nah- und Mittelost-Studien (www.uni-marburg.de/cnms/forschung/dnms), which aims to collect in one place all cuneiform texts from the 3rd millennium BC and selected texts from the early 2nd millennium, a dataset of 93,000 texts. Sommerfeld also talked about issues of internal and external data consistency, glossing rules, and about his ongoing work on complex lemmatization, which is intended to culminate in the creation of a digital Akkadian dictionary.
6. **Michael Streck** provided information on the web resource SEAL (Sources of Early Akkadian Literature; www.seal.uni-leipzig.de), which not only seeks to create online text editions, but also traditional print editions.

Part B. Digital Dictionaries

1. **Manfred Krebernik** discussed his important, but still mostly unpublished materials for the Etymological Dictionary of Akkadian (altorient.gko.uni-leipzig.de/etymd.html) and raised some key issues such as the often short-term nature of funding, the related lack of manpower and the need and challenges to collaborate with other projects.
2. **Jared Miller & Markus Frank** gave a brief demo of the in-development eDiAna interface, an open-access dictionary of several Anatolian languages (“Digital Philological-Etymological Dictionary of the Minor Ancient Anatolian Corpus Languages”).
3. **Steve Tinney** closed the Digital Dictionaries session with a general overview of Oracc. He also made an appeal to the participants to think about common open-data formats, using authority lists, collaborating with other projects, and creating and using shared tools.

Part C. Digital Applications

1. **Stefan Maul** presented a computer-aided cuneiform text recognition routine under development using high-quality 2D photographs and 3D scans.
2. **Julian Schulz & Gerhard Schön** demonstrated the LeWi-Texteditor developed for the digital edition of a handwritten early modern letters (<http://briefedition.geschichte.lmu.de/>) and commented on this application's potential for annotating and tagging cuneiform texts.
3. **Tobias Englmeier & Christian Riepl** demonstrated and discussed the Ancient Records of Middle Eastern Polities (ARMEP) map interface, which displays georeferenced data from Oracc.

In sum, the twelve presentations showed not only the breadth of digital cuneiform studies but also demonstrated a set of basic needs, highlighting possible solutions. That a number of German projects interface with the Open Richly Annotated Cuneiform Corpus Project (Oracc) developed by Tinney was a clear indication that this platform has the potential to serve as a viable solution to the problem of data exchange. There are alternatives, such as the ArchiBab platform developed under the aegis of Professor Dominique Charpin (Collège de France, Paris) whose major drawback is the reliance on commercial software.

Although there was agreement that the standards of existing larger projects should not be enforced on smaller projects, data sharing and conglomeration were perceived by many as important next steps for the discipline. Several projects had already focused on integration of their data with Oracc standards (BabMed, CMAwRo) or saw the need for such integration (ArchiMAss, SEAL). The great advantage of having the capability of an exchange of standardized data format was demonstrated by the ARMEP Project, which had been able to build a functioning GIS display tool that displayed geo-referenced Oracc data after only six weeks of work.

Afternoon session: roundtable discussion

Building upon the morning session's presentations, the roundtable discussion was introduced by **Greg Crane**. The participants reflected on the current state of "Digital Assyriology" and took stock of what machine-actionable collections of textual data are available and under what licenses, what analytical tools exist, how digital content is being citing, and who is using online

cuneiform material. Infrastructure and institutional contexts and prospects and challenges for the short-term and long-term were addressed.

The discussions then focused on the need of the representatives of “Altorientalistik” (roughly translating as Ancient Near Eastern Language Studies; used to include Hittitology along with the larger field of Assyriology) to come together regularly to discuss how to continue and accelerate the inclusion of digital resources, tools, and methods. In response to the overwhelming consensus in the group for such a group, Radner agreed to take the lead in setting up a working group Digitaler Alter Orient (“Digital Ancient Orient”). This group is intended to serve, firstly, as a forum for the discussion and infrastructural development of the digital dimension of cuneiform studies in Germany and, secondly, as an interface for representation and interaction with larger initiatives, like Global Philology, or funding agencies. This group will seek to serve as a consortium for sharing maintenance and development efforts, which often are difficult for smaller projects to achieve on their own. This consortium will also work towards facilitating the sustainable preservation of the digital data created by individuals and groups, whether published or unpublished, a goal that was recognized as especially important for an academic discipline as limited in manpower as cuneiform studies.

The workshop also demonstrated the usefulness and the enthusiasm for an effort such as Global Philology, which hopes to function as a guiding force for future infrastructure developments for historical languages. By bringing together several representatives of related disciplines, the workshop “Digital Assyriology in Germany” was able to facilitate the recognition of shared needs while, at the same time, pointing towards possible solutions. It also served to bring stakeholders into a dialogue and set in motion the establishment of a working group that seeks to serve as an open, comprehensive and representative forum for the purposes of clarifying and representing their goals and needs to the world. As such, the working group Digitaler Alter Orient should play a key role in the recognition and furtherance of this agenda within the larger framework of Global Philology and Digital Humanities in general.

Attendees

- Prof. Dr. Eva Cancik-Kirschbaum (FU Berlin, Institut für Altorientalistik)
- Prof. Dr. Gregory Crane (Universität Leipzig, Institut für Informatik)

- David Englmeier, M.Sc. (LMU München, IT-Gruppe Geisteswissenschaften)
- Tobias Englmeier, M.A. (LMU München, IT-Gruppe Geisteswissenschaften)
- Markus Frank, M.A. (LMU München, IT-Gruppe Geisteswissenschaften)
- Dr. J. Cale Johnson (FU Berlin, Fachbereich Geschichts- und Kulturwissenschaften: Babylonian Medicine Project)
- Prof. Dr. Manfred Krebernik (Universität Jena, Institut für Orientalistik, Indogermanistik, Ur- und Frühgeschichtliche Archäologie)
- Dr. Stephan Lücke (LMU München, IT-Gruppe Geisteswissenschaften)
- Prof. Dr. Stefan Maul (Universität Heidelberg, Sem. für Sprachen und Kulturen des Vorderen Orients)
- Prof. Dr. Jared Miller (LMU München, Institut für Assyriologie)
- Prof. Dr. Gerfrid Müller (Akademie der Wissenschaften und der Literatur Mainz, Hethitische Forschungen)
- Matthew Munson, M.A. (Universität Leipzig, Institut für Informatik)
- Dr. Jamie Novotny (LMU München, Historisches Seminar)
- Prof. Dr. Karen Radner (LMU München, Historisches Seminar)
- Dr. Christian Riepl (LMU München, IT-Gruppe Geisteswissenschaften)
- Prof. Dr. Walther Sallaberger (LMU München, Institut für Assyriologie)
- Dr. Gerhard Schön (LMU München, IT-Gruppe Geisteswissenschaften)
- Julian Schulz, M.A. (LMU München, IT-Gruppe Geisteswissenschaften)
- Prof. Dr. Daniel Schwemer (Universität Würzburg, Institut für Altertumswissenschaften)
- Prof. Dr. Walther Sommerfeld (Universität Marburg, Centrum für Nah- und Mittelost-Studien)
- Prof. Dr. Michael Streck (Universität Leipzig, Altorientalistisches Institut)
- Prof. Dr. Steve Tinney (University of Pennsylvania, Philadelphia; cooperations with LMU München and Würzburg)
- Dipl. Phys. Dirk Wintergrün (Max-Planck-Institut für Wissenschaftsgeschichte, Berlin)