Interdisciplinary Dictionary of Classic Mayan (IDIOM)

In 2014, the North Rhine-Westphalian Academy of Sciences, Humanities and the Arts (Nordrhein-Westfälische Akademie der Wissenschaften und Künste) in Düsseldorf will establish the Interdisciplinary Dictionary of Classic Mayan (IDIOM) research center for the study of hieroglyphic writing and language of the ancient Maya at the University of Bonn’s Philosophy Faculty. The project is directed by Prof. Dr. Nikolai Grube of the Department of Anthropology of the Americas. The goal of this long term, 5.4 million Euro project, is the analysis of all known hieroglyphic Mayan texts which will serve as the basis for the compilation and editing of a Classic Mayan language dictionary. Positioned in the Digital Humanities by its cooperation with the eHumanities research network TextGrid (www.textgrid.de) at the Göttingen State and University Library (Niedersächsische Staats- und Universitätsbibliothek Göttingen) and the Bonn University Library (Universitäts- und Landesbibliothek Bonn), IDIOM provides an innovative link between the humanities and information technology.

Employees and partners

Directed by Prof. Dr. Nikolai Grube, the project’s core team in Bonn consists of Dr. Christian Prager (Epigraphy & Project-Coordination), Elisabeth Wagner M.A. (Epigraphy & Iconology) and Dr. Ulrich Wölfel (Epigraphy & Information Technology). The project team will also cooperate with other researchers within Germany and internationally. Development, implementation and maintenance of the computer based infrastructure, as well as presentation, are based on cooperation between IDIOM and the Bonn University Library (ULB), and the State and University Library of Göttingen (SUB). In Göttingen, two additional positions for computer scientists will be created within the collaborative project TextGrid.

Objectives and Project Architecture

The focus of the long term project is pre-Hispanic Mayan writing and language, which were used between the 3rd century B.C. and 1500 A.D. in an area that is now part of modern Mexico, Guatemala, Belize and Honduras, and which are preserved on thousands of inscribed objects. The goals of IDIOM are to provide a digital corpus of the texts and to compile a corpus-based dictionary of Classic Mayan, which will be published in both digital and printed format. This dictionary will provide a comprehensive vocabulary of Classic Mayan and its use in writing.

In cooperation with linguists, computer scientists and by using the virtual research platform TextGrid, the project team in both Bonn and Göttingen will prepare, analyse and interpret the hieroglyphic texts using information technology tools. Through the compilation of the digital text corpus and the dictionary, a foundation for the systematic understanding of the Classic Mayan writing system and underlying language structure will be laid.

The machine readable text corpus constitutes the project foundation, and allows for complex searches and computer assisted text analyses, resulting in a dynamically organized lexical database. The digital text corpus will be installed in such a way that it can be extended and updated at any time. This allows for new developments in the research of writing systems to be followed, revisions, and the integration of updated descriptions and interpretations. The corpus based method allows for consideration of all written and language data, including undeciphered passages, the representation of the respective passages in their original hieroglyphic spelling, inclusion of temporal and regional information, epigraphic and linguistic analysis, and integration of historico-cultural comments and secondary literature references. By entering the texts into a database, concordance and collocation analyses can be performed, and textual patterns recognized. For the first time a complete inventory of Mayan writing and its underlying language will be created, which enables the following of writing and language developments from a historical perspective.

IDIOM as a basic research project intends, however, not only to present the Classic Mayan cultural vocabulary and the sum of research on Mayan writing and language, but also to fundamentally contribute to the comparative research of writing systems. Through corpus based lexicography all inscribed objects known from Classic Mayan culture will be entered both in their original spelling and transcribed into a database. The latter is part of the virtual research platform TextGrid that allows for consistent updates and modifications.

The inscription archive of IDIOM will be presented and made accessible via Open Access as part of the Bonn University Library Digital Collections (Digitale Sammlungen), an infrastructure that guarantees long term storage. The XML text database hosted in Göttingen will
be accessible to researchers and provide the base for epigraphic and linguistic analyses, the results of which will serve the compilation, editing and publication of the dictionary. The latter will be published both on the Internet as well as in a printed version. Throughout the course of the project both the text database and preliminary versions of the dictionary will be freely available for research.

Presentation and Storage of Research Data

In the long term, the virtual inscription archive containing the images, transcriptions and translations will be integrated into the ULB’s digital collection and therefore be available to the public for free research (see illustration below). The virtual research platform TextGrid will be used for the compilation, administration and storage of the text and graphic corpus data. TextGrid allows researchers to collaborate and network, and offers an ideal working platform for linguistic, and especially corpus linguistic information technologies.

Example page of the planned inscription database showing a drawing, epigraphic analysis and translation of Uxul Stela 1 (Concept: C. Prager / Drawing: N. Grube)

The lexical database will be integrated into the virtual research platform TextGrid to assure long term storage beyond completion of the project. The print version of the dictionary will be published towards the conclusion of the project period. Preliminary versions of the dictionary, however, will be consistently updated and published during the entire project, to allow these research results to be available to the public via Open Access.

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