

METEOR

(MIDDLE EGYPTIAN TEXT EDITIONS FOR ON-LINE RESEARCH)

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METEOR (Middle Egyptian Text Editions for On-line Research), funded as part of a Mellon Foundation grant for Less Commonly Taught Languages, is preparing an annotated, interactive, electronic Readingbook for Middle Egyptian, the classic stage of the ancient Egyptian language. This Readingbook includes a corpus of texts representing the numerous genres represented in Middle Egyptian and appropriate for students beginning their study of that language and the hieroglyphic script. Students may access any section of each text in hieroglyphs, sentence by sentence, and practice reading, transliterating, and translating the text. A click of a button brings help with reading signs, understanding grammar, or finding vocabulary. In addition, there are extensive linked informational side-bars and graphics. The side-bars include brief explanations or descriptions of topics mentioned in the texts and supplementary chronological, geographical, historical, and cultural information. The graphics include digital maps and images illustrating Egypt, the areas where individual texts were discovered, items mentioned in the texts, and the actual individuals mentioned in the texts (where possible), thereby helping the student to place the individual texts in their social, cultural, religious, political, historical, and geographical contexts.

A dozen texts have been entered into the database, including full hieroglyphic copies, transliterations, translations, grammatical analysis, and explanatory maps, images, and side-bars with background cultural information. A group of students (Afri Atiba, Brian Eichhorn, Kevin Johnson, and Beth Morrissey) who had just finished their first year of study of ancient Egyptian, and who had used METEOR to help in their class preparation during that year of study, was hired to proofread all text, grammar, and cultural data for all text entries. The program includes a sign list explaining all the hieroglyphs used in METEOR and showing how to draw the signs. Two undergraduate students (Amelia Karraker and Jenée Laackman) proofread the sign-list entries and checked the animations showing how to draw the signs. Graduate student Harold Hays, who has worked on the project for several years, entered their corrections into the database. Linguistics graduate student Rod Edwards, who has worked on the project for a couple of years, prepared a database recording all copyrighted materials used in METEOR, in order to send permission letters to copyright holders. Graduate student David Wheatcroft completed the bibliography files for each of the texts included in METEOR.

Sandy Schloen, our computer program designer, finished the conversion of the data into a (Tamino) XML database and developed a sophisticated query and analysis feature. METEOR is now fully integrated within the XSTAR (XML System for Textual and Archaeological Research; see *Research Support*) environment; that is, the Middle Egyptian texts and their corresponding grammatical analyses, plus all the supplementary cultural content (both images and descriptive notes), as well as pedagogically useful details of the hieroglyphic script are all organized and stored within a single XML database, supported by the Digital Library Development Center (DLDC) at Regenstein Library. Access to this database is provided by cross-platform Java software with tools for both managing the detailed data and viewing the texts and their associated information in a variety of ways. One of the major emphases of this past year was to organize more effectively the supplementary information which enhances the core texts. Built into XSTAR is a mechanism for organizing images, external documents, bibliographic data, and

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glossary details within flexible, hierarchical structures. These items can then be linked directly to relevant portions of the primary text data.

Another major enhancement to METEOR involved exposing the detailed grammatical structures which are used to describe the elements of the core texts. XSTAR provides the ability for the METEOR project manager to enter and define the properties which describe a word, phrase, or sentence. For example, a word might be described as: “part of speech = noun,” “number = plural,” etc. Whereas this was possible in the earlier Shockwave version of METEOR it is now completely under the control of the project manager. New properties which describe, for example, grammatical types or functions can be added to the master “taxonomy” that defines and outlines the allowable relationships. These grammatical properties then become available to the new query facility within XSTAR based on the W3C (World Wide Web Consortium) XML Query (XQuery) specification. For example, a student can look for “all plural nouns” within a specified context and retrieve query results that link back to their original source texts. This is a rich and powerful query mechanism that we have only just begun to explore.

Michael Berger, who has been in charge of identifying and incorporating cultural information since the beginning of this project, successfully incorporated notes for the “autobiography” of Khnumhotep (a Middle Kingdom nomarch, i.e., leader of a geographical district called a nome) directly into the new (Tamino) XML database. Berger also continued working on maps (one base map plus one map associated with each text highlighting all the places mentioned in that text as well as the findspot of the text), transferring them from bitmaps to SVG files. The use of the SVG format will allow end-users to re-scale the maps without loss of resolution. He also prepared, with the assistance of Amelia Karraker, a list of categories for cultural data, facilitating searches by students, researchers, and content developers. Berger and Schloen have also been in contact with the Unicode Consortium concerning the inclusion of Egyptian hieroglyphs and all signs needed for transliteration of Egyptian in Unicode.

Goals for 2005/2006 include creating a user interface for the XML version of METEOR, adding bibliographic data, checking all links, and proofreading and editing all data entries. Once these tasks are accomplished the outside review group will be invited to return and evaluate the new version of METEOR.
