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Cuneiform Scholars Take High-Tech Road to Translation

Cuneiform on a Gilgamesh tablet.

Hopkins witnessed an interesting marriage of the old and the new this month when leading experts in Sumero-Akkadian cuneiform, the world's oldest attested writing system, met with leading experts in one of the world's newest writing systems, Unicode.

"This is one of the first steps that needs to be taken in order to bring the study of Sumero-Akkadian cuneiform into the 21st century," says Jerrold Cooper, professor of Assyriology and Sumerian in the Department of Near Eastern Studies, Krieger School of Arts & Sciences.

The Initiative for Cuneiform Encoding, an international group of cuneiformists, Unicode experts, software engineers, linguists and font architects, convened for the first time Nov. 2 and 3 on the Homewood campus. Their purpose was to begin

the proposal process for a standard computer encoding for Sumero-Akkadian cuneiform, the ancient Near Eastern writing system used for a number of languages from the end of the fourth millennium B.C. until the first century B.C.

Cuneiform scholars came to the conference from as far away as Helsinki, Finland, and Birmingham, England, in order to sit down with software engineers from Silicon Valley and Salt Lake City and figure out a methodology for creating a standard Unicode entry number to attach to each of the nearly thousand graphemes and characters of the ancient writing system.

"Unicode is like ASCII on steroids," explains software engineer Dean Snyder, Hopkins' senior information technology specialist for the humanities, who also happens to be a Semitic and classics philologist. Snyder, along with Cooper, was a driving force in organizing the initiative. "There has been a big international push to have Unicode be the computer text standard," he says. "It is supported by the latest browsers and has been adopted by Apple, Microsoft, Sybase, Sun, Oracle and many, many others, including XML and the Java programming language."

Jerrold Cooper and Simo Parpola at The Initiative for Cuneiform Encoding conference.

According to its Web site, Unicode "provides a unique number for every character, no matter what the platform, no matter what the program, no matter what the language."

Having a Unicode standard for cuneiform will not necessarily change the way scholars translate cuneiform, Cooper says. It is a highly complex and interpretive writing system, and the scholar will still need to see the way the characters are inscribed in the tablet in order to read what is written.

"But there has never been any type of standard of electronic

entries for the cuneiform signs, and there very much needs to be one if people are going to create databases and use other computer tools helpful with research," Cooper says. "So, though it won't necessarily facilitate the actual translating of each text, it will almost certainly facilitate the exchange of research among cuneiform scholars around the world."

Facilitating communication among cuneiform scholars is a key issue, since there are fewer than 200 people in the world who can pick up a cuneiform tablet and just read it and there exist hundreds of thousands of yet-to-be-translated ancient texts.

By the end of the conference, participants reached a consensus on key points relating to the computer character encoding of Sumero-Akkadian cuneiform. It is expected that the entire process, culminating in the formal acceptance and adoption into Unicode of a cuneiform proposal, will take approximately four years.

A five-member working group was picked to oversee the proposal process. Members of the group include Snyder; Lloyd Anderson, a linguist, font specialist and Unicode expert; Karljuergen Feuerherm, a specialist in Akkadian and a computer scientist; John Jenkins of Apple Computer and Unicode Consortium technical director; and Rick McGowan of Apple Computer and Unicode Consortium vice president. Members of the working group intend to make themselves available for presentations and discussion at upcoming conferences in Baghdad, Iraq; Toronto; and Helsinki over the next year.

"It was a great, interesting group of people," Cooper says. "I was amazed at how smart these computer guys were--they were all linguists, they were all fluent in East Asian languages and had a working knowledge of ancient writing systems. I was very impressed."

The conference was supported and funded by Sayeed Choudhury, Digital Knowledge Center, MSEL; James Neal, Dean of University Libraries; Gary Ostrander, Associate Dean for Research, Arts & Sciences; Stephanie Reel, chief information officer; Lee Watkins Jr., Director of Research and Instructional Technologies, Hopkins Information Technology Services Web site; and Johanna Zacharias, Director of Communications, Arts & Sciences.

This story was prepared by Leslie Rice for The Gazette.

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