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Ancient writing system gets Internet update

By Dan Vergano, USA TODAY

From the baked-tablet remains of an ancient civilization, scholars are now moving the oldest written language into the 21st century.

With recent funding boosts and increased scientific appreciation for the World Wide Web, the 5,200-year-old cuneiform writing system is going online in dictionary, photographic and 3-D forms.

Starting around 3200 B.C., the civilizations of Mesopotamia — such famed empires as Babylon and Chaldea, located in present-day Iraq — began making wedge-shaped cuneiform symbols on clay tablets. At first, the symbols were simple pictures representing cattle or other goods involved in transactions. Within a few hundred years, however, it changed into an expressive language of literature, religion and early science.

Today, hundreds of thousands of those tablets, filled mostly with the bookkeeping of a sprawling bureaucracy as well as with myths and astronomical observations, reside in museums and other collections worldwide.

For the few hundred cuneiform researchers worldwide, translating tablets today requires a time-consuming and expensive process of jet travel from one collection to another, leaving many of the ancient records unknown to historians and the public. Perhaps 100,000 known tablets still remain untranslated, and more remain buried under the sands of Iraq.

"A large number of us would like to bring this knowledge to the public," says Sumerian-language expert Steve Tinney of the University of Pennsylvania Museum of Archaeology and Anthropology in Philadelphia. His team's effort, the Pennsylvania Sumerian Dictionary Project, aims to translate cuneiform into English online and make it widely available. Last month, the National Endowment for the Humanities continued its long-running funding of the dictionary with a two-year, \$302,000 grant.

Cuneiform flourished from 3200 B.C. to perhaps as recently as A.D. 75. A written language that



By Krista Niles, AP
UCLA graduate student Cale Johnson studies a cuneiform tablet.

Take two tablets

Buried under desert sands for millennia, the tablets bearing the cuneiform writing of ancient Mesopotamia have started to trek to today's World Wide Web.

The University of Birmingham Cuneiform Database Project (www.eee.bham.ac.uk/cuneiform) has a number of cuneiform images and explanations.

The Cuneiform Digital Library Initiative (early-cuneiform.humnet.ucla.edu) details efforts to bring photos of the earliest cuneiform tablets, 120,000 in all, to the Web.

The Initiative for Cuneiform Encoding (www.jhu.edu/ice) describes efforts to codify how cuneiform symbols are translated into modern fonts.

Other efforts are under construction; some are useful only to working scholars. **The University of Pennsylvania Museum of Archaeology and Anthropology** offers a helpful cuneiform explanation site for teachers at www.upenn.edu/museum/Games/cuneiform.html.

combines about 600 common signs representing ideas with rebus-style depictions of sounds, cuneiform recorded the tax receipts, religion, science, medicine and legends of the ancient world.

Cuneiform means “wedge-shaped,” a reference to the triangular impressions that make up the crosses and slashes of each word. Scribes pressed squared-off reeds in clay tablets to make the shapes, twisting the reeds to vary shapes. A fresh tablet could take impressions for a month before it dried out, as some recovered customs records attest. Many of the records were baked and preserved in fires that accompanied the end of each empire (there were at least five) that used cuneiform.

Training records of the scribes, often taught from childhood in homes, also turn up in the tablet record, and these word lists are the reason scholars know enough cuneiform to attempt their current projects.

The most famous tablets relate the Epic of Gilgamesh, with its flood myth tale of an ancient king, one who finds immortality but then loses it to a desert reptile. But most of the records are taxes and business deals, Tinney says. “If we could bring all those disparate records together, (then) we could build up a comprehensive picture of Sumeria.”

Researchers in history, anthropology and religion would benefit from exposure to these records, he says. Cuneiform tablets hold the Code of Hammurabi, the world’s first recorded legal code, early religious texts and even the world’s first recorded prescription, a hangover cure.

When completed in five to 10 years, the dictionary will tie together three ongoing projects to bring ancient Sumeria into the modern age:

- In England, the Birmingham University Digital Forensic Project aims to create a Web-based cuneiform catalog covering signs made from 3000 B.C. to 323 B.C.
- At the University of California-Los Angeles, the Cuneiform Digital Library Initiative has put digital photos of 60,000 tablets online and hopes to post 60,000 more, all from 3200 B.C. to 2000 B.C.
- Baltimore’s Johns Hopkins University effort, the Digital Hammurabi project, aims to put three-dimensional images of tablets from 2000 B.C. onward online.

“We have a lot to offer and a lot to receive, as well,” says Assyriologist Bob Englund, who heads the UCLA project, which is funded by the National Science Foundation. He envisions researchers worldwide making discoveries based on the tablets, enriching his field as it sheds light on the origins of civilization’s basic features such as taxes, agriculture and literature.

The most ambitious project is Digital Hammurabi, which this month received a grant from the National Science Foundation, a big supporter of putting science resources online. A normal computer scanner can make a digital photo of most early tablets. Later ones require the 3-D view because scribes of the time wrote on every side of a tablet.

“A photo doesn’t really capture it,” says Johns Hopkins Assyriologist Jerrold Cooper. “The beauty of this is that with fast and cheap 3-D scanning, we can practically put the tablet in your hands on your desktop,” he adds.

Scholars in the field point to a flood of tablets smuggled out of Iraq in the past decade as another reason for concern. In May, the online magazine Salon.com reported some of these plundered artifacts have turned up on eBay auctions. Reassembling the origins of such artifacts will take scholars immense effort, Englund says.

"The picture I like to paint is of a vast explosion of tablets as the ancient repositories were removed from their homes and scattered to museums worldwide," he says. "We'd like to reassemble them to get a full picture of that time. It would be a much more accurate one than the propaganda recorded on monuments."

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