

IVIS helps document archaeological finds from ancient China

by Lois Slavin

In 246 B.C., the First Emperor of China, Ch' in Shih-Huang-Ti, enlisted thousands of Chinese peasants to build him an imperial tomb consisting of a full-scale underground palace and an outer city guarded by over 6,000 individually fashioned terracotta soldiers. In 1974, farmers in the northern province of Shansi unearthed part of this magnificent treasure. Scholars around the globe declared it to be another wonder of the world and compared it to King Tutankhamen's tomb in Egypt. And in 1985, thanks to Dr. Ching-chih Chen and Dr. Robert D. Steuart of Simmons College, the Ministry of Culture and the Provincial Bureau of Museum Affairs of the Shansi Province of the People's Republic of China, Rus Gant of MIT's Center for Advanced Visual Studies, a grant from the National Endowment for the Humanities, and Digital's gift of two IVIS units, images of many of these splendid artifacts will be stored on videodisc, thus giving thousands of people around the world a special type of access to an important part of China's history and culture.

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"PROJECT EMPEROR-I: China's Treasure Revealed via Videodisc Technology," is designed to apply videodisc technology, such as IVIS, in presenting and interpreting one of China's major historical/archeological periods. It is important because it was during this time that the First Emperor transformed China from a feudal state into a powerful kingdom with a centralized government that lasted, almost without interruption, until the twentieth century. The First Emperor also standardized the written language, currency, roads, laws, and measurements, and commissioned the building of the Great Wall of China. Although it hasn't been fully excavated yet, the burial complex outside his tomb is believed to consist of over 7,500 life-size clay figures including soldiers,

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officers, calvarymen, chariots, a small number of horses, a palace, pavilions, and a burial chamber. Therefore, the videodisc project promises to give its viewers a unique and rich insight into the political, social, artistic, economic and military systems of that time.

Immediate interest shown

Digital became involved with the project through the initial efforts of Robert Guarente, Senior Product Promotions Specialist. Robert introduced Dr. Chen, an international information science expert and Professor and Associate Dean at Simmons College's Graduate School of Library and Information Science, and Rus Gant, a research fellow at MIT's Center for Advanced Visual Studies and a leading expert on videodiscs, to Rob Mostecky, Small Systems Manager for Country Development Region (CDR).

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"Dr. Chen and Rus had been working on the idea for PROJECT-EMPEROR-I for quite a while. When Robert heard about it, he set up a meeting between Dr. Chen and Rus and a number of people here," Rob explains. "Their project was of immediate interest to us because it seemed like an ideal opportunity for Digital to display its technology in a very practical, if unique, environment. We worked with Dr. Chen and Rus for about a year to identify their needs and help bring them to fruition."

According to Dr. Chen, author of more than 15 books in information management and technology and principal investigator and director of PROJECT EMPEROR-I, this endeavor is concentrated very heavily on examining how new technology can be applied to mass information storage, processing, dissemination and retrieval. "The videodisc is a very aggressive, active, dynamic way of providing information," she says. "This fits in with my concept of the library as an information source, which is different from many other people's."

Dr. Chen goes on to explain that, for her, the library is just one of many different kinds of information providers and that it's important for libraries to work with other information providers, including the high tech industry, in stretching far

beyond the four walls of the building. Then researchers, scholars and the general public will no longer be limited to what a library actually contains within its confines.

"This videodisc project will bring information to people," says Dr. Chen. "The finished product will allow organizations and people in the humanities to disseminate information about the First Emperor of China and enable them to use the project's visual database in many different ways."

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Dr. Chen began exploring the possibilities of using videodisc technology for a humanities information project with Dr. Steuart two years ago. She decided to explore the possibility of combining this with her interest in China, and one of the first subjects that crossed her mind was the burial site of the First Emperor. She applied for and received a planning grant from the Humanities Project in Libraries at the National Endowment for the Humanities (NEH) to explore the feasibility of the project. After talking extensively with international scholars and researchers, as well as Digital employees and officials from the Ministry of Culture and the Shansi Provincial Bureau of Museum Affairs of the People's Republic of China, she found that the project, although an enormous undertaking, would be possible. NEH subsequently awarded her a grant of over \$200,000 for the project's implementation.

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In March and April, Dr. Chen and a number of experts in technology and humanities visited Beijing and Shansi to begin the videotaping and data collection. Upon their return, the actual production of the videodisc will begin at the Athena Labs at MIT. The projected completion date is late 1986. All aspects of the videodisc production process will be overseen by Dr. Chen and Rus Gant who both believe this project raises some important issues in information gathering, aesthetics and learning.

Limited number of books available

"The First Emperor's tomb is one of the largest archeological finds to date, yet books on the subject have been very limited," says Rus. "And, books can't really reflect the nature of three-dimensional subjects. Dr. Chen and I felt that this became an ideal problem for structuring a visual database because everything—video images of the artifacts themselves, as well as photographs, drawings, maps, charts, and building plans—could all be put on videodisc. This can be used as the basis for developing a series of courses on Chinese history and art on the elementary, intermediate and specialized levels. It can also become a part of a traveling museum exhibit."

Because the visual database can be utilized in many different ways, depending on the persons designing the finished pieces, Rus thinks that videodiscs can offer a new way to learn. "By watching a particular version of this disc, a person can begin to replicate the creator's patterns of thought and perhaps copy the experience," he explains. "While many instructors may come up with essentially the same material, they got there in different ways. For example, using the IVIS videodisc, students will be able to see how their professors actually derived and structured their information gathering process."

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Tom Phelps, Program Officer for the Humanities Project in Libraries at the National Endowment for the Humanities sees PROJECT EMPEROR-I as a link between scholarship and technology. "We explored other videodisc projects, but we're watching this one as a basis for others," says Tom. "It will give NEH a way to learn more about videodisc technology. And the final project will enable people to see more of the First Emperor's burial pit than they've ever seen before. Cross-cultural appreciation will definitely be increased. And we're pleased that Digital is donating the IVIS systems to the project. This frees up monies to be used in other ways."

Rob Mostecky sums up what involvement in PROJECT EMPEROR-I means to Digital.

"Dr. Chen is an expert in information science. Rus is one of the foremost individuals in interactive video. We're pleased they're using IVIS units to link the humanities and high tech, East and West, present and past. And Digital looks forward to assisting them and the NEH in this venture into cross-cultural understanding."