

Back to the Future

Simmons professor uses new technology to study ancient China

By John Medearis

Qin Shi Huang Di, China's first emperor, may have thought his place in the full view of posterity was assured. During his brief 15-year reign, he completed the Great Wall of China and prepared for his death a tomb guarded by 7,000 terra-cotta soldiers.

But the first emperor of China did not anticipate that time would place several feet of soil on his clay army, or that Westerners would one day have so great an interest viewing Qin Shi Huang Di's achievements at close hand.

Professor Ching-chih Chen, associate dean of the Simmons College Graduate School of Library and Information Science, set out to bring the findings of the recently excavated imperial monument to the Western public in a manner that unites modern visual and computer technology with the older tools of the humanities. The result is a recording of still images, printed pages, video images, music and narration, all laser-imprinted on a two-hour "interactive" videodisc.

According to Professor Chen, principal investigator and director of "Project Emperor-I," there are a number of advantages to videodiscs over film or videotapes for storing such archaeological information. First, a single videodisc can store 200,000 visual frames, which can subsequently be "frozen" by the viewer for closer examination. Chen says that the discs render high resolution, realistic color images and are durable for archival storage. Most of all, however, the videodiscs can interact with a microcomputer to provide quick access to specific images and information as needed by scholars and students.

The United States' premiere demonstration of the "Project Emperor-I" videodisc was held in Rabb Hall at the Boston Public Library on December 13. The segments shown were two short documentary-style "movies," with narration and music accompanying a montage of images culled from the disc. The first featured the terra-cotta figures at Qin Shi Huang Di's tomb-site in Xian — which Chen calls "one of the most important archaeological finds of this century."

The presentation included videotapes and slides of meticulously crafted terra-cotta soldiers, each uniquely sculpted to reflect different military roles and cultural origins within China — lined up at attention in the long excavations at Xian. Although Qin Shi Huang Di's tomb itself has not

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been unearthed, Chen says the vast terra-cotta army raises high expectations about the tomb's contents. "You can imagine what kind of tomb is inside," she says.

The second "movie" focused on the Great Wall, relating its history and technical features, as well as capturing its varied forms as it crosses China from the sea to the Gobi Desert.

These short segments of the whole disc, however, do not reveal the entire promise of videodisc technology, according to Rus Gant, technical director of "Project Emperor-I." At the completion of the project, says Gant, the 100,000 individual frames on the videodisc will be accessible through a microcomputer, so that archaeological specimens can be viewed selectively, like articles and photographs in an indexed book.

The controlling computer will allow the student or academic to pick particular subjects, select narration in Chinese or English, and ask questions about the frames he is viewing. The computer has stored file of information which allows it to respond to a variety of questions. Gant, who is affiliated with the Massachusetts Institute of Technology Center for Advanced Visual Studies, says that the videodisc is also being developed as a learning tool in other

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fields, such as anatomy.

The project's importance, however, is not merely technological. For Qin Shi Huang Di, in addition to completing the Great Wall, also unified the warring states of China, established the institution of the Chinese emperor — which lasted 2,000 years — and unified the written script for oral Chinese. The emperor was also ironically one of

China's first book-burners and suppressed the Confucian scholars to the best of his ability. "Project Emperor-I" brings this figure into focus for historians, archaeologists, curators and students of all levels.

Chen hopes that three levels of videodisc course software — for beginners, college students and experts — will be ready for trial use by the fall of 1986. Meanwhile, interest in videodisc technology is growing. Despite initial skepticism on the part of some humanities scholars, Chen says that demonstrations have made many academics "excited about the technology."