

## Wu Tung On Project Emperor-I: An Interview

*Project Emperor-I is an interactive videodisk in both English and Chinese dealing with the history and culture of China during the Qin Dynasty. It contains 54,000 frames on each of the picture sides of two 12" disks, or the equivalent of 675 carousel trays of 80 slides each and ½ hour of video with two sound tracks equivalent to 75 hours of sound. Two discs (four sides) contain the visual materials, textual information, audio music and narration. The first disc contains a ten minute introduction on the First Emperor of China, Qin Shihuangdi, a five minute narrative sequence on the Great Wall built in his region, an eight minute introduction on the excavation of the terra-cotta sculptures and other artifacts near the ancient city Xi'an. It also includes 200 segments of films and videotapes and about 4000 still frame slides. The second disc contains interviews with ten leading Chinese and American scholars on this subject. An electronic database will allow searching and retrieval of both information and images.*

**Q. How did this project come into being?**

A. The project should be credited to Dr. Ching-chih Chen. She is a professor and associate dean of the Graduate School of Library Science at Simmons College who is an expert in the computer automation of library materials. She had the innovative concept of applying modern Western technology to the learning of ancient Chinese art and history. In order to carry out her idea Dr. Chen first formed a basic work force which included technicians, researchers and translators. Then she invited three specialists, Professors Kwang-Chih Chang and Robin Yates of Harvard University and myself of the Boston Museum of Fine Arts, to be the consultants for the more scholarly aspects of this exciting project. Professor Yates is also responsible for the English narrative. We were intrigued by the idea that the videodisk could be used for teaching and research purposes. I feel quite confident that the videodisk has an important use in education. As someone who has studied and taught art history for many years, and who has been limited to the use of slides and photographs, or sometimes documentary movies, I am enthusiastic

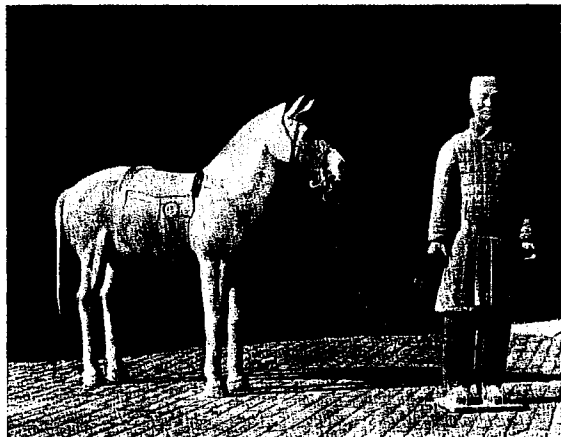
about a videodisk with the capacity of containing 100,000 slides. It is just overwhelming. It is not only slides, but also sounds, such as music, or writings, as well as motion photography. One has a variety of means to examine certain objects or certain periods of artistic expressions or productions.

**Q. Who funded the project?**

A. Dr. Chen secured funding from the National Endowment of the Humanities and from Simmons College in Boston.

**Q. How did you proceed on the Emperor I project?**

A. Dr. Chen decided to use the very particular dynasty which is known as the Qin Dynasty in Chinese history. The Emperor of that dynasty, Qin Shihuangdi, is the first Chinese emperor who unified the whole of China in 221 B.C. Americans are familiar with this dynasty because of the Great Bronze Age of China exhibition of a few years ago at the Boston Museum of Fine Arts and other locations. At that time eight life-size terra-cotta soldiers and horses from the Xi'an excavations were shown. So the videodisk would make a logical successor to the exhibition. Besides, the dynasty is a very important one from the archaeological and historical, as well as the art historical point of view. The Qin dynasty lasted from 221 to 207 B.C. The people came from the area that today forms the Shaanxi province in the central part of China. They started as a relatively primitive, minor state, taking care of imperial horses for the Zhou rulers. They gradually became stronger, finally defeating all the



Terra-cotta cavalryman and horse from Xi'an. Height, c. 6 feet. (The People's Republic of China)

other warring states. Their leader, Qin Shihuangdi, became the first Emperor of China. He ordered the unification of written characters. Formerly each state had their own style of writing. This became one of the most important reasons China is united today. The capital of the Qin dynasty is Xianyang. The magnificent tumulus complex of the Emperor containing thousands of terra-cotta figures is located in a suburb near the ancient capital of Xi'an.

**Q. How was Dr. Chen able to gain access to this material?**

A. Dr. Chen communicated with Chinese authorities, not only in the central government, but in the province, and with the local authorities in Xi'an, where the excavations are being carried out. Endless negotiations, personal connections and Oriental patience played their part. The consultants' involvement in this project also helped smooth the way with the Chinese authorities.

**Q. Were there any problems?**

A. An unprecedented project of this magnitude and scale is unknown in China, and naturally problems arose here and there.

**Q. Was there no precedent for this kind of cooperation?**

A. In other fields. Back in 1980, when China and the United States signed a cultural treaty, the State Department asked the Boston Museum of Fine Arts to organize a show of American oil paintings in China. Jan Fontein, the Director, and I went to China to negotiate a contract. The negotiations were rather complicated. But through cooperative spirit from both sides the exhibition finally materialized, and its long-lasting impact on young Chinese artists can still be seen today.

**Q. I understand that it is difficult to get photographs of archaeological sites from Chinese authorities.**

A. Yes, there were some difficulties at the beginning, but later on the Chinese were quite helpful.

**Q. Does cooperation over this project represent a change of policy, or did you succeed despite the policy?**

A. Yes and no. The Chinese tend to deal with cases according to individual merits. In the case of the Emperor-I project, I think they believed that it would promote understanding in the West of China's past.

**Q. Is most of the disk still photographs or is quite a bit of it motion picture film or videotape?**

A. I would say about two-thirds are still images.

**Q. All color?**

A. Mainly color, but not always. Some of the early historical photographs are, of course black and white. Sometimes, also black and white was used for artistic reasons.

**Q. Can one view the videodisk as kind of a narrative?**

A. Yes, it is like an electronic book. It contains three different levels of sophistication. One for graduate students and specialist study, one for undergraduate students and the public, and a third is for high school.

**Q. Are they three different parts, or three different records?**

A. There are three different structures of organization. If you choose to select the C level, the high school student would receive a more general, over-all view of the dynasty and the cultural, historical significance.

**Q. So there is different selection of visual materials for each level. What about the narrative?**

A. The narrative is done for the entire disk, there you can always program it with more or less detailed information.

**Q. It is really interactive.**

A. Yes, it is so convenient that it is almost unbelievable to the old school art historians.

**Q. What about the person who really wants the full documentation of the site? Is that there too?**

A. They can go to the most detailed, sophisticated level.

**Q. Every figure could be viewed from all sides?**

A. I must say, not for every figure. There are more than 12,000 figures. That would be impossible. There are many types. Each type has some representative figures. What the photographer did was to photograph a particular figure of each type from the front, from the side, from three-quarter view, from the back, sometimes even from the top, from the bottom.

**Q. Are they numbered or keyed into a list? Is there some kind of chart of the site so you could retrieve particular figures?**

A. Yes, they are numbered into an index list. The Chinese museums provided original labels so we could even have the name of the particular figures, a general, a soldier or an officer.

**Q. Are there inscriptions on the figures?**

A. Yes. Mainly potter's marks.

**Q. Is that all documented?**

A. Yes.

**Q. What is the advantage of this over a full documentation in slides or photographs. Is it the flexibility with which you can manipulate it?**

A. Right, tremendous flexibility. A lot more than photographs or slides. The computer is doing the turning of the pages, so to speak. At such a speed that you can go through quite a number in one minute. The entire mechanism of the computer is something amazing.

**Q. How difficult is it to use the program?**

A. It should not be difficult at all.

**Q. Could the high school student use it?**

A. There should be a teacher supervising this with the students. One student or a number of students can watch together and discuss questions with the teacher. They can have their own research projects and look for information contained in the disk. At the present time high school students make perhaps one visit to our museum per semester. A videodisk such as this could bring more art and culture into the classroom than these infrequent visits could provide. It would also help to prepare classes for museum visits.

**Q. Is there also bibliographical information? Does it refer to various articles?**

A. Yes. There is a large body of bibliographical data.

**Q. Will this dimension be upgraded as more literature on the site becomes available?**

A. I hope so. It will depend on funding and on how the public reacts to the disk.

**Q. How much will the disk market for?**

A. I have no idea.

**Q. Do you know what the overall cost of the project is?**

A. I don't know exactly how much, but the project is funded for about \$270,000.

**Q. Who has now all the photographs, all the materials that were used? If you are a scholar who wishes to publish something and would like to use some of the images . . .**

A. The Chinese government has the original material, except for the things that we did not get from the Chinese government. And I think Dr. Chen and Simmons College own the copyright.

**Q. What was your role in Emperor-I?**

A. I served as the project's consultant for artistic and art historical interpretation. Of the three scholarly consultants, I was the only one who went to Xi'an for the on-site filming. I made decisions as what was to be included and how it should be presented. When difficulties arose, I used my Chinese connection to smooth the working relationship. I also helped to interview archaeologists in China for this disk.

**Q. You can just turn on this disk and it will run as a program, but then you can also call up individual aspects of it?**

A. Right. It is just like any computer product. They will ask you what you would like to have and you just tell the computer what you want.

**Q. Is the narration keyed to these three prearranged programs?**

A. Yes, Prof. Yates did a splendid job with English narration.

**Q. What if you want to look at a particular figure? Is there narration then?**

A. You may not get the narration.

**Q. How do you get scholarly information about a particular figure?**

A. There is an index. Say you want to know about a certain type of bronze weapon of that dynasty, you go to the index.

**Q. A printed index or a computer index?**

A. Computer index. One may ask, for example, for a sword, a two-edged sword. A number of swords will begin to show up. After reviewing them, you select one.

**Q. How will you know the exact information about that sword? Location, size, date?**

A. There are textual documents which describe the image.

**Q. And that is on the computer screen?**

A. They can be displayed side by side.

**Q. Is there a full art historical entry for each object?**

A. The entries in general are more historical and archaeological data than art historical.

**Q. This must be the most sophisticated use of the videodisk yet attempted in art history.**

A. It needs to be seen when the disk is marketed, but I think so.

**Q. How is it improved over the videodisks that you have seen?**

A. In the other disks, the image is not sharp enough, colors are poor, they lack flexibility. Perhaps if you want to know how many Monets a museum has, it would tell you. In a few minutes you could know the whole collection. Other than that there is little you could do.

**Q. How about the present disk?**

A. This videodisk is far more advanced. The image is sharp, color is accurate, and the details are valuable. Of course they have to be pre-programmed. If the photographer did not take a detail, there is no detail to be seen. If you want to see the left side of a figure, there may not be the left side, but only the entire figure. If you want to know if there is a potter's mark for a particular figure, and ask for it, the detail will come.

**Q. What about the image quality?**

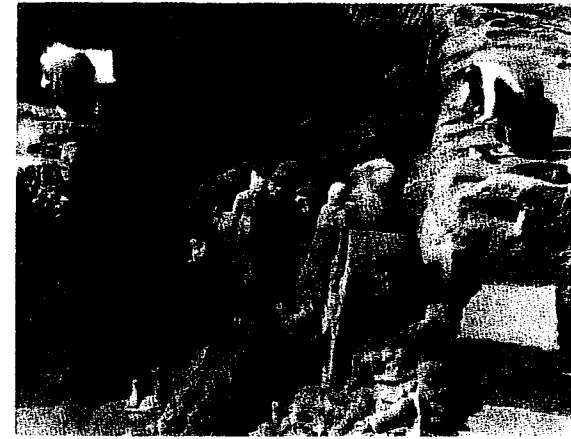
A. In general it is very good.

**Q. Is it as good as a slide?**

A. Personally speaking, I am so accustomed to slides, that I would not say so. I think the details in slides are still better than in videodisks, but they function entirely differently.

**Q. This kind of videodisk, if developed, would take over some of the function of slides, but not all?**

A. Yes, it might reduce the function of slides, especially if the disk can be further improved. But the cost will be different. The slides will also be



*View during excavations of the terra-cotta figures at Xi'an (People's Republic of China)*

much more portable. Wherever you go you can take them with you. All you need is a projector and screen, or even a white wall is good enough. With a videodisk, you have to have a player and a computer.

**Q. How have the Chinese responded?**

A. The Chinese are fascinated. The archaeologists especially so. I can see that it will mean more to the Chinese than to the Americans. China wants to return to the normal way of education. They are concerned that their youngsters are not well educated. This will be a wonderful thing for mass education in art history, history and archaeology.

**Q. Do you think that this educational function is more important than its potential research function?**

A. In research it will be also very convenient. It all depends in which area, in which country. In China archaeologists will have the original objects to study, but scholars outside of China will have to depend on published books and articles or slides and photographs of the objects. This videodisk will be very helpful. It can give to Western students and scholars a far more complete picture of the entire site, the entire project, than slides.

**Q. There must have been an enormous amount of scholarly time going into this disk.**

A. Oh yes, even in the organization alone.

**Q. Was it Chinese scholars who did this, or was it you?**

A. Primarily Dr. Chen.

**Q. What can you tell me about the technical aspect of this project?**

A. A team of three technicians led by Rus Gant from the Massachusetts Institute of Technology worked with Dr. Chen to achieve the translation of the data into the videodisk. The system used was described by Dr. Chen in an article, "Online Information and Interactive Videodisk Technology: Case Presentation about the Project Emperor-I." Published in *Proceedings of the 9th International Information Meeting, London, Dec. 3-5, 1985*. London: Learned Information Inc., pp. 159-161.

**Q. Do you foresee the time when art historians can go to a videodisk library and pull out videodisks of Chartres, Reims, all the paintings in the Boston Museum of Fine Arts and have a whole library of videodisks with which to work?**

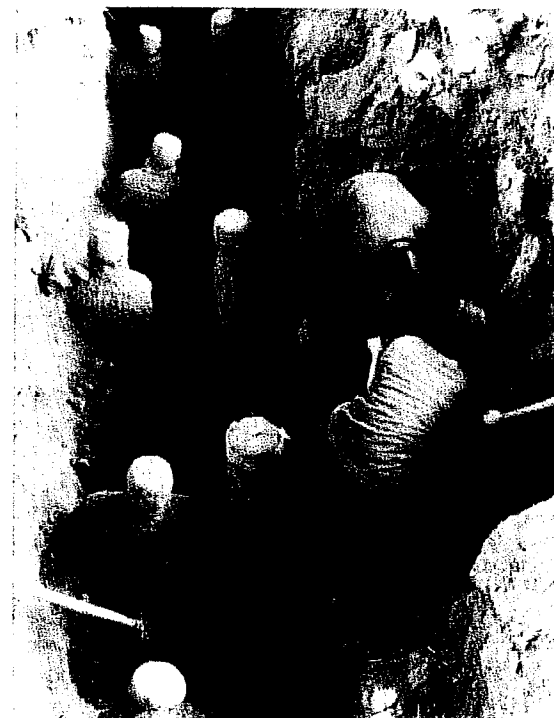
A. I see in the future a visual collection that has slides and photographs as well as videodisks, side by side, next to each other. They will peacefully coexist. Scholars will have great freedom to select whichever format is most suitable to his or her research work. There are ways in which the videodisk cannot measure up with a number of slides which are so easy to carry about. But there are things which slides cannot provide. Slides lack the multi-media capacity of a disk. I think the two will help each other rather than hurt each other.

**Q. Is there anything else you wish to say about the disk?**

A. I'm not sure how soon the Chinese will be able to apply this new technology to education. Perhaps it will be in the West and in Japan that this new technology will flourish first. Perhaps one day China will also collect videodisks of Western art and civilization to educate their youngsters. It is going to be important in the field of cultural exchange. I heard that Peking has already promised one hundred million Chinese dollars to build a new museum with twenty galleries, each gallery specializing in a special subject: architecture, sculpture, textiles, of the Qin dynasty. The new complex will surround the tumulus itself. There will also be further excavations when conservation practices are more advanced to the point where, for example, the color on the surface of the excavated figures can be preserved. It is even rumored that an equal number of figures of civilian officers have been found to the other side of the tomb. All these would make the disk a more suitable technology for the Chinese archaeologists to have.

**Q. If there is one thing more than any other that you hope the Emperor-I videodisk project will achieve, what is it?**

A. We hope that it will help to show the way for the future use of videodisks in education and research.



*View during excavations of the terra-cotta figures at Xi'an. (People's Republic of China)*