

# When One Interactive System is not Enough

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The Art Institute of Chicago's pioneering development of public computer programs jump started with two fortuitous events. In 1987 the museum was asked to join a consortium of museum education directors from seven art museums whose main goal was to research and experiment with educational computer technology. Soon afterwards, the Art Institute became one of sixteen American institutions selected to receive an Apple Macintosh computer, Sony videodisc player and monitor from the Agnelli Foundation of Italy with a single requirement: that the equipment must be available in a public space with the Agnelli videodisc of Italian culture. Dr. Kent Lydecker, then executive director of museum education at the Art Institute, eagerly accepted both the consortium membership and equipment, envisioning that the proverbial cart and horse were, for once, arriving at the same time.

Through involvement in the Museum Education Consortium Art Institute staff - including myself, Alan Newman director of imaging and technical services, Robert Eskridge, associate director of school programs, as well as Dr. Lydecker - became well-versed in the vocabulary and practice of many different kinds of multimedia products. Most of these fell into expensive, high-end equipment categories such as HD Television and digital color reproduction. As a result, the prototype visitor program produced by the consortium required three years of development, six-figure grants and non-standard equipment - all characteristics of ground-breaking, research-oriented projects.

At the same time, the Art Institute's immediate goal was to initiate in-house production of educational programs with existing equipment and little funding. Through the museum's affiliation with the renowned School of the Art Institute, I was able to enroll in a HyperCard course and befriended many art students who were interested in using their programming and graphics skills for the benefit of the education department. The museum's first interactive program was a HyperCard stack created with the help of two such students. Based on *Andy Warhol's factory building, complete with studio, gallery and party floors*, the program was made available in an educational space which itself had been converted into a Warhol Factory with art-making activities for families in conjunction with the Warhol retrospective on view in the summer of 1989. This experimental product was very well-received by museum staff and visitors alike, and is now in the hands of the nascent Andy Warhol Museum, based here in Pittsburgh.

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The ease with which the Warhol stack proved to be a successful experiment encouraged the department to apply for a National Endowment for the Arts Museum Programs grant of \$10,000 to develop similar stacks based on our permanent collection. Eight Art contacts programs based on eight different museum collections have resulted after almost two years' work by fifteen designers, none of whom were professional graphic artists or HyperCard hackers. Working in teams under my directorship, they researched their topics, which ranged from African art to Chicago architecture, and met once a month to share discoveries, problems and solutions. Their imaginative stacks will be available in the museum's educational center opening in May, 1992, as well as distributed free to Chicago area school teachers for use in their classrooms, preferably before or after field trips to the Art Institute.

At the same time that the Art Institute was developing these Art contacts stacks in 1990-91, it was involved in a videodisc project with The Voyager Company. Partially funded by the Markle Foundation, the project's special task was to create an interactive program that would teach children as young as four years old how to look at art. The reputation of The Voyager company for high quality, innovative computer products and the unique challenge of this project made Dr. Lydecker, Mr. Newman and me eager to explore the possibilities.

The result of this team effort has been a lively exploration of 300 objects selected from all aspects of the museum's collections, preserved on videodisc and displayed on a television monitor. Information is also given through voice, music, sound, or poetry that accompany each object and offer clues to its meaning, origin, or nature. The complete program, consisting of a videodisc and a HyperCard stack, will be commercially available through the Voyager Company and the Art Institute's Museum shop, as well as for public use in the education center of the museum.

The reasons for producing this variety of multimedia products are many. First: an intuitive fear shared by members of the Museum Education Consortium that if museums did not set the art history and educational standards of these products, videogame companies and other commercial firms with little or no art experience would flood the market first, leaving little space for independent, better qualified products. Unfortunately, some of this fear has already been justified, as evidenced at the Getty conference on Arts, Education, Technology held earlier this year in Los Angeles.

This is not to say that there is no place for commercial firms in this multimedia arena. After all, the work with The Voyager Company has produced, as others have indicated, a model interactive educational product. However, such a firm must be committed to consulting those institutions whose specific talents lie in educating the public on a given topic and deferring to their content advice when disagreement arises.

The second reason for entering this arena is that the Art Institute recognizes the importance of computer-based learning as a vital educational tool because the nature of the museum audience is so diverse. Novice visitors, art scholars, school children and their teachers all visit our museum every day for very different reasons. Each group needs dif-

ferent information presented in different ways which we have attempted to address with our multi-level approach to hypermedia. For example, the novice visitor might find the free exploration of the videodisc program an entertaining, non-threatening way to learn more about art. Similarly, the more didactic Artcontacts programs are designed for classroom instruction.

With regards to distributing hypermedia products outside the museum walls, additional attention must be paid to the various economic backgrounds of the museum audience. Our videodisc computer program will be marketed to those individuals who already have videodisc players and Apple computers at home, but its target audiences are institutions such as schools and libraries whose budgets include purchasing and maintaining this equipment. Within the K-12 school systems, however, many only have donated equipment, which informal studies show, are usually stand-alone Apple computers accompanied by very little funding for software purchase. Therefore to be able to receive free quality programs, such as Artcontacts, is essential for many schools in order for them to integrate computers in their classroom effectively.

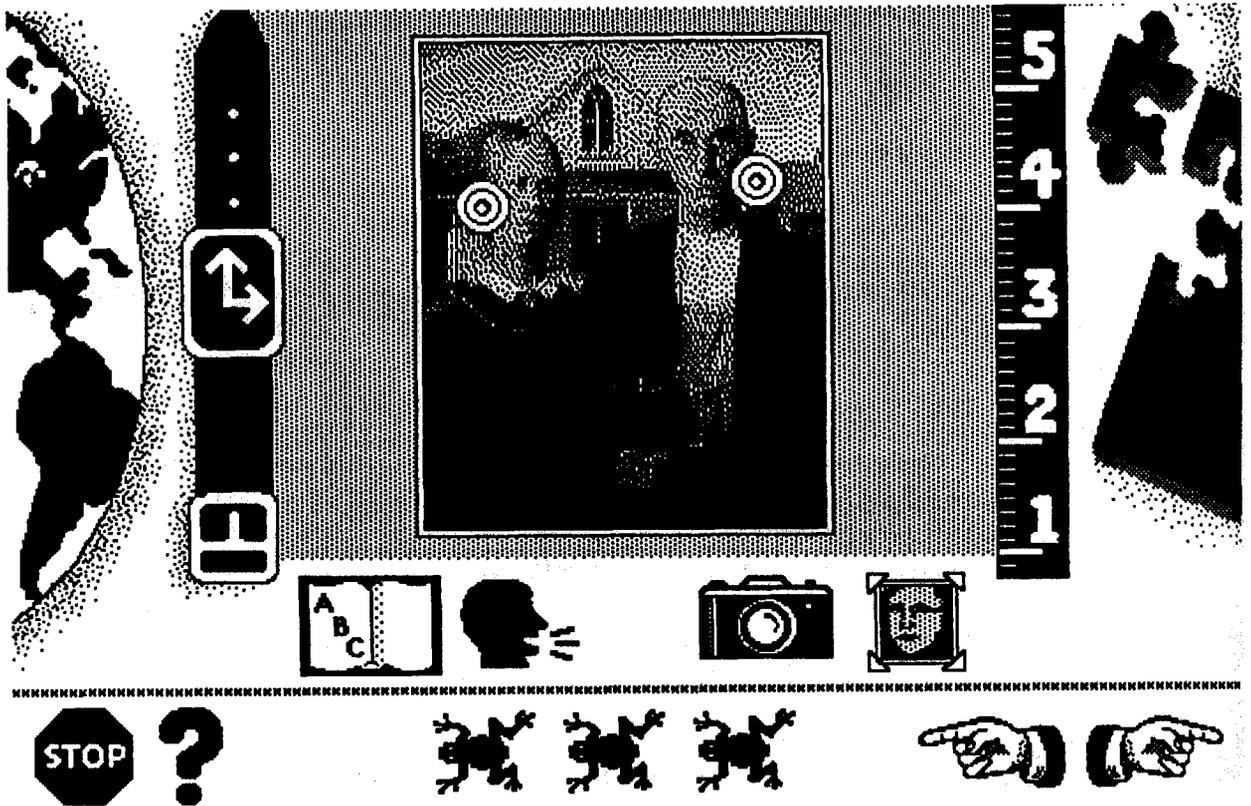
Finally, of all the subjects pertaining to museum education, probably the most hotly debated is the question of how visitors learn. Museum educators spend entire careers studying visitors' learning styles. The most talented lecturers are able to read the learning levels of an audience by watching behavior, listening to questions, and monitoring physical and verbal responses. However, only a small portion of museum visitors attend these live-action educational programs. As a result, there is very little direct knowledge about how most visitors understand, learn, or respond to the information on display in the museum.

Of course there are several good theories about how museum visitors learn, most of which are based on traditional learning models developed by pioneer educators who used classrooms, not museums, as their behavioral laboratories. If we take just one learning theory, for example Howard Gardner's theory of multiple intelligences, we find some interesting correlations between personality and computer ability. Gardner proposes that we all are born with the ability to develop as many as seven kinds of intelligence, including linguistic, logical-mathematical, spatial, musical, kinesthetic, interpersonal (the need to work on one's own), and intrapersonal (the need to work in a group).

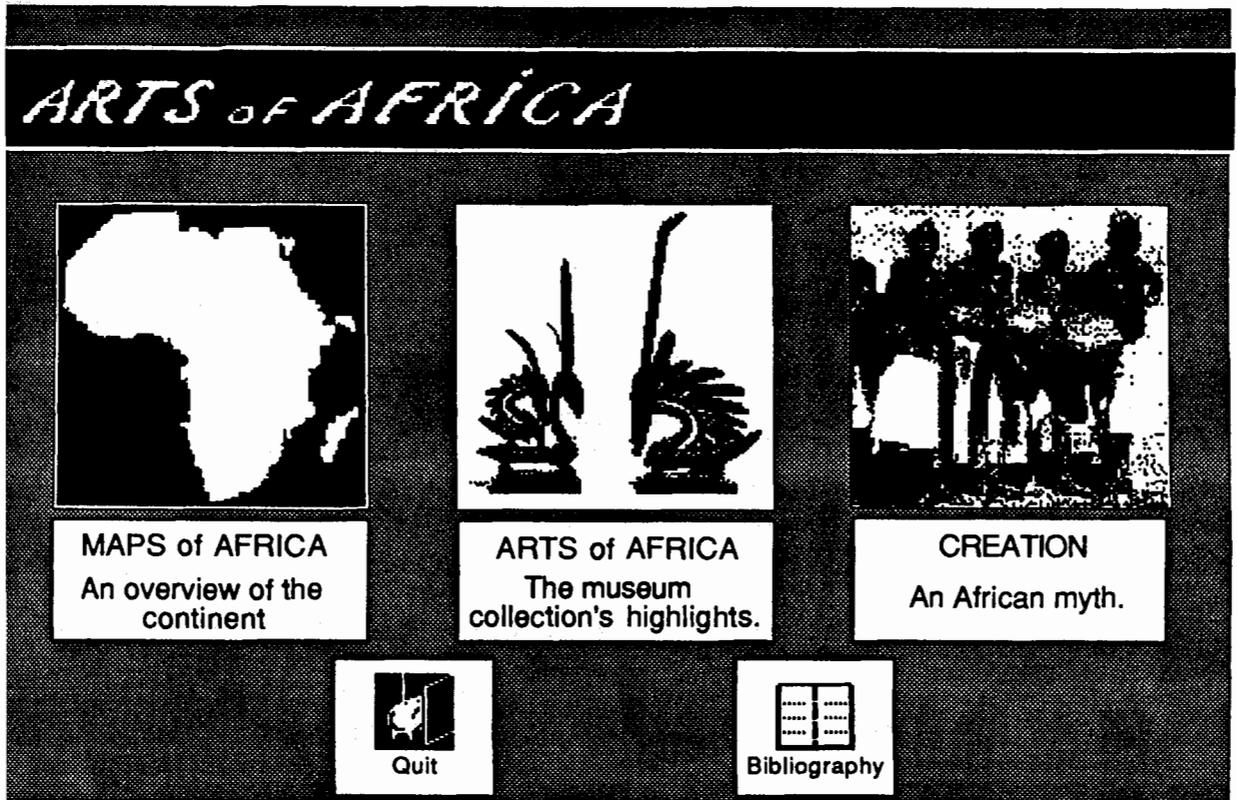
Because interactive technologies are able to deliver information in a variety of formats according to a user's multiple learning styles, the educator is no longer posed with the question of what is the SINGLE learning style of its audience. Programmed appropriately, computers used in museum settings have a unique opportunity for accommodating an individual's learning preferences, as well as developing those which appear to be recessive. In other words, the first time a logical, linguistic type person uses the museum's videodisc program, he may choose to work alone, look at the details, hear the title and artist and see how large the objects are. After a few sessions however, he might be more interested in the relationship of the music to the objects, locate them on the map and encourage others to join with him.

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In closing, a word of advice to those museum professionals who are considering a jump into the multimedia world. No matter how seductive the equipment and its increasingly sophisticated software, never lose sight of your ultimate reason for developing these projects: to make your collections more accessible to the public. If a program is too complex, too expensive, and too time-consuming to make and use, it is not serving the best interest of your audience, a precious museum resource.



Sample computer screen from AIC-Voyager videodisc project displaying Grant Wood's painting, American Gothic.



Sample computer screen from "Arts of Africa" Artcontacts program, designed by Pierre Archambault and Gian-Luca Ferme for the Art Institute of Chicago.