

Another Tool in the Toolbox

Prototyping a Visitor Orientation Program for the Freer Gallery of Art.

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Introduction

This is a non-academic and primarily non-technical article about a small museum's leap into multimedia. It is intended to document the experience leading to the conclusion that small museums with little technological expertise can author multimedia economically, in-house, without sacrificing elegance or performance.

In 1993 the Freer Gallery of Art began researching production scenarios for the execution of a prototype visitor orientation program. At that time we were complete novices with interactive technology. Now, in the fall of 1995, by a series of incremental (and by no means entirely premeditated) steps, we are viable multimedia authors. We are able to accurately evaluate, plan and budget proposals and we can demonstrate credible expertise to potential funding sources. We accomplished this by abandoning commercial multimedia production values and committing to a relatively miniscule investment of museum time and money. It is hoped that this account of our development from helpless novices to capable producers will be helpful to other small museums who are considering new technology ventures.

I. Planning

Why did we choose an orientation program for our first effort rather than a less complex or less visible entity? Like many small museums the Freer presents an enigmatic and sometimes confusing persona to the public. Other Smithsonian museums in Washington have hugely popular collections and self-referential museum names.¹ Architecturally the Freer is a uniquely stylized neo-Palladian structure

that reveals little about the collection to uninformed passers-by. Add to that the public's generally low level of knowledge about Asian art and the potentially confusing presence of the Freer's American collection and you have a recipe for mystified first-time visitors. Nonetheless the Freer has an enviable location adjacent the Smithsonian's Metrorail station. This puts approximately 3.5 million potential visitors within 100 meters of our front door every year, not to mention tourists who arrive in downtown Washington D.C. by other means.²

In the spring of 1995, preliminary results from an ongoing visitor survey indicated that roughly half of our visitors were entering the Freer for the first time. Anecdotal evidence suggested that a significant number of these first-time visitors were leaving after only five or ten minutes in the building.³ A vast potential audience of casual visitors was escaping our grasp. Our conviction was (and is) that our collection can captivate a broader audience if we can dissolve few critical barriers with the application of solid and reassuring information about the museum, the arts of Asia, and the arts in general. People visiting Washington museums are looking for new experiences, but they need to be met half-way.

Like most museums the Freer has an arsenal of brochures, gallery guides, stylish posters and carefully trained volunteers to welcome visitors. Each of these devices have their unique strengths, and in combination they are intended to cover the spectrum of visitor needs. However, this particular visitor group seemed unimpressed by traditional material. A colorful, kinetic, interactive kiosk seemed more likely to slow these visitors down long enough to give them some focus and lure them into the exhibition galleries.

Thus the project's goal was defined to tell first time visitors where they are, dangle beautiful images in front of them and motivate them to venture into the galleries where the quality of the collection could work its magic. The program would tell casual visitors "Hey! You're in an important place with a lot of beautiful and interesting objects. Stay a while." It would be inviting and simple. We decided to resist the temptation to be encyclopedic or to create an educational learning center. We would concentrate on getting casual visitors to the art.

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- 1 Tourists know they will see airplanes and rockets at the National Air and Space Museum. The title "Freer Gallery of Art" does not clearly connote any particular type of artwork.
 - 2 The National Air and Space Museum, four blocks from the Freer, is visited by over 30 million visitors every year.
 - 3 Admission to the Freer and all Smithsonian museums in Washington is free, and tourists are able to wander in and out of buildings as they please.

In addition to accomplishing its visitor-related goals the project would not be a success unless its production fit into the Freer's established way of doing business. A breach of organizational etiquette such as the spurning of traditional content creators, the violation of implicit didactic guidelines, or the uncontrolled escalation of expenses (or the uncontrolled lowering of performance) would poison the well for future projects. Long term success for multimedia applications at the Freer depended on demonstrating that technology could complement our traditional goals and Modus Operandi.

The issue of expense was foremost in our minds. Initial benchmarking indicated that it would be impossible to create a satisfactory touch-screen orientation program for anything less than \$100,000, and more likely it would cost \$250,000 (plus staff time). This level of investment was unconscionable given the competition for resources by established initiatives at the Freer.

The first project had to be cheap, but it could not look cheap. As an orientation this program would provide visitors with important clues about the Freer's presentation standards; it was not an option to have static, hazy, bitmapped screens inviting visitors to peruse lovingly prepared exhibition galleries. The program had to live up to the Freer's existing standards for graphic presentation and kinetic elegance, otherwise visitors - and Freer decision makers - would be turned away.

The summer and fall of 1993 were spent researching the specifics involved in producing interactive multimedia. A junior member of the design staff was freed from his responsibilities one afternoon each week to meet with multimedia production studios, vendors and museums, experiment with software, and read publications (one of the first consumed was the ICHIM proceedings). These activities amounted to detective work beginning with word-of-mouth leads and cold phone calls.

I would specifically like to recommend this as an excellent way for museums to improve their technological literacy. It costs almost nothing and creates a staff member who is able to help navigate the technology gauntlet with the best interests of the museum at heart. Even without a specific project in mind I would unhesitatingly recommend this course of action for small museums.

Half the battle of becoming involved with new technology is seeing useful working examples of real applications. This may seem painfully obvious to museums who are either already aggressively involved in new technology, have existing staff with applicable expertise, or who enjoy symbiotic relationships with community technophiles. For institutions without these assets, or for departments or individuals within sophisticated museums who are lagging behind, the task of getting the key in the ignition and the car out of park can be overwhelming. Fortunately, as a group, multimedia professionals are refreshingly generous with their expertise⁴, and if an institution can put its pride to the side and ask those first few embarrassingly ignorant questions it will be much wiser for the wear.

4 The following individuals and institutions were particularly generous with their time; Vicky Porter, National Gallery of Art; Yechiam Halevy, Thunder Wave (National Holocaust Museum); Carol Hargan and Virginia

Several months of these afternoon-a-week research sessions helped develop an indispensable body of knowledge and produced several concrete conclusions. The first and most important was that multimedia production need not be prohibitively complex. The success of a multimedia program seemed to have very little to do with its complexity and everything to do with clarity of purpose and good design. Basic production values are part of the traditional palette of museum skills, and they are entirely transferrable to designing in new media. Based on from this observation we also concluded that the strength of multimedia lies at its core. Video, audio, flashy animation and graphics often seem to be pleasant distractions rather than devices that truly illuminate their subjects. At the heart of interactive multimedia is its ability to let users find compelling information; well thought out exchanges of text and images seem to be more satisfying than elaborate displays of bells and whistles. In this paradigm multimedia serves as a window through which one sees content — it does not substitute for content itself.

This is an important premise for museum multimedia because it contradicts widespread industry practice and shifts the burden from technical wizardry to writing, editing, and graphic design; all areas where, again, museums have an established track record of success. With an investment of faith in the Freer's ability to design, write and organize a sensible sequence of screens, we guessed that a successful orientation kiosk could indeed be produced for a small fraction of the \$100,000 to \$250,000 quoted to us by vendors. We set our budget to \$15,000 plus staff time for a two touch-screen installation in the main lobby of the Freer.

In the fall of 1993 the orientation kiosk was given definition by a working group consisting of individuals from the following areas of expertise: administration, education, public affairs, design, photography, and the appointed technology researcher. This working group quickly created a flow-chart of the program and established the following general goals:

1. Motivate casual visitors to enter galleries.
2. Assist in wayfinding, spatial orientation.
3. Encourage rapid user turnover (do not create a learning center)
4. Build in-house computer literacy through the production process.
5. Finish the program quickly, evaluate its impact, then find funding for improvements.

Rice, Luneria, Inc.; The National Technology Demonstration Laboratory at the Library of Congress.

II. The Program

The program has five main menu headings. On View Today takes visitors to an interactive map of the main exhibition level of the Freer. When a user touches the gallery labeled “Chinese Art” the screen changes to an enticing image from the Chinese collection with a brief text overlay. Clearly marked buttons give users access to interactive maps of other areas in the building.

Today’s Tours and Programs is an updatable listing of scheduled tours and special events, and leads to an updatable listing of Future Tours and Programs. The premise here is that visitors walking in the door expect an information kiosk to tell them what is happening in the building today, and that anything less than a specific and accurate listing of events would be unrewarding.⁵

A short linear narrative section titled About the Freer Gallery of Art gives visitors upbeat information about the genesis of the museum and the nature of the collection. A similar section, Next Door at the Sackler Gallery, explains the relationship between the Freer and its sister museum the Arthur M. Sackler Gallery (which is connected to the Freer by an underground exhibition space).

Finally, Where Do I Find..? serves both as an index and a way for visitors to get information about gallery services not directly related to the display of artwork. For example, pressing a the button “Gift Shop” would yield a pertinent sentence or two and provide a link illustrating the gift shop’s location in the building.

An informal inventory of press releases, gallery guides, wall labels and publications revealed that most if not all of the copy for the orientation program could be lifted from existing publications. Additionally, due to an ambitious print-publication schedule, there was a plethora of new photography to draw on. Using previously vetted and approved material would minimize the need for the arduous and time consuming process of generating and approving raw material. The most challenging creative task would be the thoughtful adaptation of existing data.⁶

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- 5 This section was somewhat of a risk for technical reasons, as the programming needed to allow routine update of text across a network was a complete mystery to us at the time. Failing to master the necessary programming skills would have necessitated paying a contractor several thousand dollars.
 - 6 A note about foreign-language and accessibility features. Multilingual and handicapped accessible interfaces were identified early in the process as extremely attractive features — to the point of being absolute necessities. Executing the program in seven languages and the additional research and testing for accessibility proved to be prohibitively complex and costly for the museum’s first multimedia project. We proceeded to calculate budgets for these features and intend to implement them if the initial installation of the orientation program proves successful over time.

III. Production

Despite the project's thoughtful conception, however, lack of funding, the inability to provide at least one full time staff person, and lack of regular access to computer time, production moved slowly throughout 1994. It was difficult to reach the critical mass of activity necessary to push things along with vigor or capture the imagination of the gallery staff. Fortunately in the fall of 1994 a serendipitous concurrence of events landed an \$11,000 grant for the orientation program equipment and an administrative interest in new technology projects. This led to a reassignment of permanent staff towards finishing the program. The lesson of these events was twofold; first that it was easier to plan the project without full time commitment of resources than it was to execute it; and second that we would not have attracted the funding or achieved the reassignment of staff time if the project had not already begun. Perhaps negotiating this catch-22 is a challenge for all new programmatic initiatives.

With staff time and equipment available, execution began in earnest. Time was divided between learning software programs⁷, generating rough drafts from compiled existing texts, and testing interfaces.

Given that the museum was committed to producing a finished product with an enthusiastic but novice staff, several commodities proved essential in making acceptable progress. Access to the Internet was indispensable for riding the arduous learning curve demanded by multimedia authoring software. The usenet and listserv discussion lists proved time and time again to offer peer support and problem solving advice. These internet resources are available even to relatively unsophisticated computer users and I cannot recommend them too highly.⁸

Also important in the production environment were large blocks of uninterrupted time. Because producing multimedia involves orchestrating huge amounts of malleable information in an abstract digital environment, it is vital to have three and four-hour production sessions with no interruptions.

7 On the basis of research and benchmarking it was decided to author the program in Macromedia Director. Imaging was processed from scans and photo-cd's with Adobe Photoshop and Debabelizer Toolbox, and graphics were generated with Photoshop and Director's own paint tools.

8 Museums interested in technology but without direct access to the Internet should strongly consider purchasing an account with one of the national online service providers (America OnLine, etc.). Dealing with the Internet does involve formidable frustrations for beginners, but these difficulties are quickly offset by the ability to access to large amounts of pertinent information. Most important software publishers have online discussion groups through these services, often someone in a discussion group has already done what you are interested in.

With equipment in place, one full time staff member, online help and a lot of trial-and-error, the orientation program developed from embryonic sketches to a fully functioning beta-version in about five months.

It is not surprising that several unexpected content and production issues emerged in the process of producing the orientation program. The most difficult content problem was determining the appropriate voice for text information pertaining to the collection. The Freer Gallery has a well-established voice for exhibit signage and conventional publications but this voice did not seem entirely appropriate for attracting the program's defined audience. It was decided to advocate a prose style which was more hospitable and a little less formal than the established norm. An early draft describing a gallery of Silk Route objects read;

“Magnificent Metalwork and ceramics represent the peaceful interaction between traders, ambassadors, artisans, and pilgrims who traveled the Silk Route from China to the Mediterranean Sea.”

Through the content approval process this sentence became;

“Metalwork and ceramics illustrate extensive cultural contacts across Asia during the first Millennium A.D.”

Though the edited text conforms with existing stylistic standards, it is perhaps a less attractive lure for uninitiated visitors. Hopefully over time the gallery will be able to forge a new standard for multimedia text directed toward a broad public audience.

The most visible, most difficult, and most important technical issue was imaging. Working with the head of the Sackler/Freer Photography Department and that department's new scanning device⁹, we began producing digital files from 4 x 5 film positives of collection objects. After months of experimenting with color-correction, image manipulation, and palettes we had satisfactory results 90% of the time, but were still struggling with the art of achieving predictable results with control and efficiency.

Imaging was the most controversial aspect of producing the orientation program. It is still a widely held belief in some museum circles that computer imagery can not only never do justice to the actual

9 Existing commitment to the orientation project leveraged the acquisition of A LeafScan 45, Umax Powerloc, and a powerMac 8100 for the museum's photography department. Having this equipment onboard facilitated the production of finished scans but digital conversion would have been accomplished with Kodak Photo-CD if this equipment had not been available.

appearance of objects - and actually does harm by contaminating viewer expectations of what an object really looks like. Successful imaging projects seem to quickly dissipate prejudices, and it was therefore a major goal to produce unimpeachable images for the program.

There is a void in the literature and information available on imaging for multimedia,¹⁰ and even a certain amount of misinformation. The advice offered by bonafide computer experts and excellent graphic designers is not usually useful if they do not have experience producing high-fidelity digital reproductions of professional museum photographs for multimedia applications.

As a lesson learned and a warning: digital imaging is its own topic and involves complex standards of success. Imaging is perhaps the most formidable obstacle for novice multimedia creators.

The program was completed in approximately six months, and as of this writing has been in place two weeks. It remains to be seen whether it will achieve its primary goal of promoting longer visits by first time visitors, however, the program seems to be working well and staff enthusiasm is high — a success in and of itself.

IV. Conclusion

The Freer's rationale for producing the program in-house seems entirely justified by the results of this process. The Freer has created a dynamic multimedia program and installed two networked touch-screen systems in a public area for about \$15,000 plus staff time. The museum has demonstrated an ability to grapple with new technology which has attracted funding for two additional new-technology initiatives. These projects will not only produce valuable products but will continue to fund a dedicated staff position to coordinate and produce technology projects.

Perhaps most importantly we now have confidence in our ability to use new technology — this is not rocket science anymore. Instead of being an exotic abstraction digital technology is on the verge of becoming simply another tool in our toolbox. We can achieve success by making the commitment to learn the language of technology and accepting the potential for failure (if we could not learn the

10 One possible explanation for this phenomenon is as follows. The industry standard for professional color correction is the software program Adobe Photoshop. However, Photoshop is ubiquitous in graphic design studios as well, and those users far outnumber those using the program for high-end color manipulation. Most of the information available on using the program (tutorials, books, online help, peer support) applies to graphic design applications and not imaging. The skills required for these two types of usage do not overlap much.

technology adequately or if the payoff would be insufficiently rewarding). Considering the inevitability of the continuing union of museum missions with the opportunities of digital communication it was a pretty important risk to take, especially given the reduction of our cash investment to under \$15,000. It is safe to say that in the future it will be increasingly important for small museums to make shrewd and effective judgements about the viability of new media projects.

There is nothing in the Freer's organizational profile that precludes the repetition of this experiment in other small museums. The most important elements were the desire to learn and the willingness to get started.

Appendix

Software

- Macromind Director 4.04 for Mac/Windows
- Photoshop
- Illustrator
- Debabbelilzer

Hardware

- Scanning (photography)
 - PowerMac 7100/80
 - Leafscan 45
 - Umax Powerloc
- Authoring
 - PowerMac 7100/80, Dell 486DX/66
- Implementation
 - Dell 486DX/66 p.c. connected to local area network
 - 2MB #9GXE VL bus video
 - Mitsubishi 20" Diamond Scan monitor
 - Microtouch analog-capacitive touch screen

Main Menu Headings

- On View Today
 - Interactive maps of the gallery featuring brief graphics/info about exhibits and attractions.
 - About the Freer Gallery of Art
 - Answers the most commonly asked questions about Charles Lang Freer, the Museum, and the collection.
- Today's Tours and Programs
 - A listing of special events. Updated automatically from a database on the Freer's local computer network.
- Next Door at the Sackler
 - Answers the most commonly asked questions about the Sackler Gallery - the Freer's sister museum.
- Where do I find..? (Index)
 - An interactive index of all the information available in the program.

Miscellaneous

- 100 linked bitmapped image files (18 MB total)
- 2500 words of text
- 140 designed screens