

Treasures of the Smithsonian

A Museum Orientation You Can Take Home

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Abstract

Treasures of the Smithsonian is one of the first completed applications of the Compact Disc-Interactive (CD-I) format developed by N.V. Philips and scheduled for introduction in September 1991. *Treasures* received a first place "Muse Award" from the American Association of Museums in May 1991.

The *Treasures* program is not an "orientation" program focusing on where to find collections and objects. Indeed, it was not developed for exhibit installation at all, but rather as a consumer product to be purchased and viewed at home. Rather, *Treasures* provides a "sampling" of the objects one might see over several visits to the Smithsonian museums. In that sense, it might serve as a pre-visit orientation or a post-visit souvenir.

The *Treasures* program presents a sampling of 150 objects from the Smithsonian's 14 museums in high-quality audio-visual presentations, with narration, sound effects, and music. Viewers can select treasures by museum, by date, by thematic tour, or by category. Each treasure includes a text Note, giving details about who, what, when, where, materials, dimensions, photo credits, and additional commentary. Each treasure also has "links," allowing viewers to jump from one related treasure to another without using the metaphoric menu scheme. Some treasures have "toys" - special interaction allowing viewers to, say, walk around a sculpture, view a detail of a painting, or hear sounds associated with an instrument or device.

Introduction

Treasures of the Smithsonian is a co-publication of the Smithsonian Institution and American Interactive Media, Inc., a subsidiary of N.V. Philips. *Treasures* is one of the first completed applications of the Compact Disc-Interactive (CD-I) format. Both the disc and the system were to have been introduced in selected U.S. markets in September of 1991.

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The focus of the program is neither the location of objects nor the mechanics of moving from one museum to another, but rather on the variety and richness of the Smithsonian's collections as a whole. The "hidden agenda" of the design is to appeal to viewers' interests in one subject area and draw them into new areas. After viewing the program, for example, someone who might have only visited the Air and Space Museum might consider stopping by the Hirshhorn, or the Museum of Natural History, after exploring some of the connections between treasures on the CD-I disc.

Description

The *Treasures* disc offers a sampling of 150 objects from the Smithsonian's 14 museums. Each object is described in an audio-visual segment featuring 2-5 images, 20-45 seconds of audio commentary (with sound effects and/or music), and a detailed text Note displayed at the viewer's discretion. Some treasures also include "toys" - special presentations that, for example, let you walk around a sculpture, scroll over a painting, or "play" an instrument.

Viewers can select treasures by museum, by date, by category (fine arts, technology, etc.), by the names of associated people, from an alphabetical list, or as part of a thematic "tour" of 5-8 objects at a time. Playing all the presentations in a row takes about 2 hours. Adding time for reading Notes and playing with the "toys" brings the total interaction time to over 3 hours.

About 90 Smithsonian staff members contributed to the project, led by Ralph Rinzler, Bob Dierker, and editor Joe Goodwin. Audio scripts are by Smithsonian Magazine columnist Edwards Park.

The disc was designed and produced by Jim Hoekema, assisted by a team including Mike Nibley (editor & line producer), Amy Hough (production assistant), Mark Phinney (audio), Juliana Montfort (photo research), programmer Jon Singer (CapitolVideo), Taylor Made Images (model maker), Michael Gallelli, Lee Moyer, and Shoshonah Dubiner (graphic design & illustration). Ray Ashton was the AIM executive for product development.

Initial design began in the Fall of 1987. Development began in earnest with the hiring of staff in June 1988 and continued for about a year, with all media elements captured and encoded by September 1989. Programming continued for another nine months, and after a hiatus, testing was completed in 1991.

As a "museum orientation" that would appeal to general adult viewers throughout the world, *Treasures* required a design that would combine: (1) the flair of consumer entertainment, (2) the dignity of a venerable cultural institution, (3) an ease of use appropriate to viewers unfamiliar with interactive media, and (4) a sufficient depth of content to make the novelty worthwhile. To achieve these goals, we addressed a number of major design issues - which are in fact present in any interactive multimedia application.

Scope of Content

The Smithsonian Institution includes 14 museums (and a zoo), and their collections total more than 100 million objects! The first issue to be solved for a title like *Treasures of the Smithsonian* was, which ones? Before that could be solved, we had to ask, how many? And how much information should be presented for a typical object?

We quickly realized that the disc would have to be a "sampler" of the Smithsonian holdings. This decision gave us considerable freedom in selecting objects for inclusion. But it also obliged us to treat the selected objects well! If we weren't offering a definitive quantity of material, we had better offer a unique and attractive quality of experience in the program. An apt analogy might be: the smaller the dinner party, the greater the attention you give to each guest!

Presentation Style

Given an arbitrary number of treasures, we resolved to give every treasure its due in audio-visual presentations with the best images we could find, a lively narration with humor when appropriate, and a soundtrack with music and/or sound effects that would reinforce the overall interpretation. As a result, every treasure has its own mini-movie. When viewed together, the presentations offer a wide variety in music, mood, and content.

To achieve high "production values" of the kind people are accustomed to seeing on television, we sought out the highest-quality images (mostly 4x5" color transparencies), researched music and sound effects thoroughly, planned the sequences of images and narration with great care, and took pains to produce a relaxed, intimate narration seamlessly integrated with music and effects. (We mixed in analog format and then converted to PCM digital audio and converted to CD-I's mid-level "B-stereo" format.)

Personality

Interactive multimedia programs are not databases: true, they present information, but they also reflect an editorial purpose and viewpoint, just like a book, a speech, or a movie. As in other media, interactive programs are more successful when they have a clear point of view, a sense of personality.

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To give *Treasures* a point of view, we chose to present commentaries on the objects written by one person: Edwards Park, a professional writer with a monthly column in Smithsonian magazine. In his writing, as in person, Ted combined an irreverent Yankee "show me" skepticism with a strong curiosity about virtually any subject, and a particular enthusiasm for the human story behind every artifact. Ted had no experience in interactive media, but he knew the Smithsonian like the back of his hand. As we put it, there are many different ways to visit a museum or find out what's there, but going with "Uncle Ted" is always a little more fun, because he always has interesting stories to tell or a surprising "take" on a familiar object.

Ease of Use

Consumer titles require a rigorous level of ease of use. The most rigorous definition I know of would be as follows: A program is easy to use if a typical user can begin at any point and, after a couple pokes, pretty much figure it out. "Typical user" means the sort of the person the program was designed for. It's not necessary that every screen contain instructions on all possible actions; the qualifier "pretty much" means we can expect users to have enough exploratory interest to try one or two navigational paths and see what happens.

In the design of *Treasures*, we tried to achieve this level of obvious ease of use through a number of strategies.

For one, we simplified the hardware user interface through software: while the CD-I player has two "select" buttons, we treated them as one button. (With two buttons, you have to explain the difference somewhere, and users have to remember it. With one button, there's nothing to explain, and a viewer coming in "cold" to the middle of the program is more likely to have a successful experience after only one or two attempts at interaction.)

Icons are easily recognized and distinguished one from another, but they are not always easy to interpret when first seen (especially when they're only 25 pixels high, as on TV systems like CD-I). On the other hand, words (text) are better for explaining a function precisely; however, words all "look alike," and a long row of words across the the screen is boring and unappealing.

For *Treasures*, therefore, we tried to combine the best of both worlds. Standard functions appear as icons in the normal state; when the cursor "points" to an icon, it changes to a word describing the function. This change thus explains the icon at the time it is needed, while simultaneously confirming that the program knows where the user in pointing.

In other contexts, where the "hot spots" are not buttons but objects in a metaphoric room, the same technique is used: objects identify the function or pathway they represent in words when the user points the cursor at them.

Other aspects of the *Treasures* design promoting ease of use include the following arrangements:

- After you select anything from a menu by name (a museum, for example, or a treasure), you go to a screen with that name displayed prominently (so you know the program got it right).
- Viewers can interrupt any audio-visual sequence, then resume it, start it over, or skip to the end. (In my opinion, all audio-visual programs should have this feature.)
- All treasure presentations follow an identical format, so that viewing one or two treasures yields reliable expectations about all others. (The only exception is the "More" function, described below, available for only about 25% of the treasures.)

Depth of Content

Obviously, an interactive program should be easy to use. But it should be *worth using* as well! To be appealing as an interactive program, truly different from other forms of entertainment, a consumer multimedia title must be *significantly* interactive.

In the case of *Treasures*, there was a need for more depth, so that individuals who found an object particularly interesting could pursue their interest farther, without forcing that level of detail on all viewers. Our solution involved (1) adding more detailed information for every treasure, and (2) adding special features that were available only for some objects.

For all treasures, we added a scrolling text field called "Notes," which contained an extended caption, giving the who, what, when, where, materials, dimensions, etc. for every object, as well as an additional sentence or two of written comments. If the audio commentary was essentially a light-hearted, passing comment on the object, the text note could go into more detail, or make a point not mentioned in the soundtrack.

For some treasures - only about 25% as it turned out (we had hoped for more) - viewers can select an icon labeled "More." The "More" presentations are not simply additional audio-visual segments; rather, they offer some way of interacting with the object under a higher degree of user control. They let the viewer "play" with the object in some way. We called them "toys" (a term devised by Larry Lowe, who suggested the feature).

For example, the toy for a work of sculpture lets you "walk around" the work by moving a slider bar from left to right, which takes you through a half-dozen views of the work. For a painting or other piece of "flat art" such as wallpaper or a quilt, you can scroll left and right on a close-up view of the work. For some paintings, a slider takes you closer and closer to a tiny detail. On two or three works, the toy lets you point to a scene or a figure in a group portrait in order to have the subject identified verbally.

Sometimes the toys are aural instead of visual. For the Telegraph Key, you can click on a letter of the alphabet and hear the Morse Code symbol for that letter. For some musical instruments (the Servais Cello and the Appalachian Dulcimer), you can hear a complete com-

position played on that instrument. For the African Thumb Piano, you can "play" the instrument in simulated form by pointing and clicking on the piano's protruding prongs.

These types of interactions complement the standard audio-visual presentations by offering more direct user control, adding an appealing element of discovery and playfulness. In effect, the "toys" are additional "layer" of content.

Visualizing Navigation

A metaphor is like an extended figure of speech, rendered visually. It works by saying, in effect, "Moving through this program is like moving through an environment like this." In the case of *Treasures*, we struggled with one major structural problem, along with the general question of what sort of visual style would be appropriate for the Smithsonian.

The structure of the program allows users to select treasures by different means: they can look up a treasure by date, by museum, by name, by category, or by the person who was associated with the object. These methods were essentially designed for looking up a single treasure. In addition, however, we wanted to offer "tours," groups of 4-8 treasures united by a common theme or pretext. Thus, we needed to represent two kinds of choices (single-object lookups and multiple-object "tours") from the same main menu.

Much thought was given to the appropriate metaphor and "look" for the Smithsonian. An architectural theme seemed obvious for an institution comprising 14 museums and a zoo, although even this decision was not unanimous among AIM executives. In the end, we retained the architectural theme with objects representing pathways: a map for choosing by museum, a tree-stump for choosing by date, a file cabinet (by category), a bust (by person), and posters for tours. This space was created in a model (at a 12:1 scale), lit with stage lighting techniques (spots, fills, masks, etc.), then shot in 16mm film, transferred to videotape, and then captured and encoded into CD-I formats.

The model strikes an appropriate balance between realism and abstraction. The objects are obviously not real when you get close up (which helps viewers see them as symbolic), yet the realistic surfaces and dramatic lighting - in a large public space obviously intended for display, with a few enigmatic objects lying about - evokes the combination of grandeur and mustiness associated with "the nation's attic," as the Smithsonian is often called. The visual theme of masonry surfaces reappeared in control panels and menus throughout the program.