Fractal Boxes - The Virtual World

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GOAL AND PURPOSE

This installation is a journey designed to explore graphically the interconnectiveness and interdependence of the major ecological problems on our planet. The purpose is not to analyze each global problem individually but to see how the different individual problems are connected to each other. We are attempting to draw upon our intuition to better visualize the complex problems of our earth.

LEVEL I

We enter into the environment and see the earth spinning in blackness. Surrounding the earth are boxes connected by beams of light (between 10 and 12 boxes total for Level I). Each box represents a particular global problem (see Network Map – Level I). Each box is texture mapped with text on the outside to identify it.

This network of boxes and beams is an overview of the major global problems. This view is important as it sets the tone and defines the look of the project. The goal is to show visually and beautifully that the ecological problems of the earth are interconnected. The structure the network creates is visually dynamic and intriguing. We need to be able to come back to this place easily as it represents our place of departure.

In order to get more information about the connections and to find new ones we need to get to Level II. We can fly into any one of the boxes to reach Level II.

LEVEL II

The box becomes a room as we fly into it. In this room is another set of boxes connected by beams (see Network Maps for Level II). This network is different from the network map in Level I as it represents the next level of connections between global problems. Each Network Map inside of the 10 to 12 boxes from Level I are different from each other, depending on the information. Some maps are not as complicated as others.

We repeat the process of flying through the boxes in order to get to Level III. As to not create a huge unmanageable amount of information we will need to limit the number of boxes that we can fly through. In Level II some of the boxes will not be active, so they will still have texture mapping and text on them but we can't fly through them to get to Level III.

On the inside walls of each room/box are text and graphical information that provides information about the global problem of that particular box and its relation to the next box/global problem it is connected to.

This enables you to not only get to the connections quickly but get to the text and graphical information at the same time. The disadvantage is there is a tendency to get lost and not know where you are.

In addition to the multiple levels, there will be a 'navigation' map in the foreground displayed in a translucent manner to depict the network levels, allowing the visitor to know his current location within the various levels.

LEVEL III

This level is like the other two levels but (see Level III Network Maps) color or value is used to differentiate between the different levels – it gets darker as we go deeper into the network. Although if we get lost it is very easy to back out of the box to get to Level I or Level II again.

EXPANDING ON THE GOAL AND PURPOSE

I have pulled out a few selected quotes from an article in the The Elmwood Institute Newsletter, called "Feedback Loops in Ecological Restoration" by Stephanie Kaza, Ph.D. This article seems to articulate better than I can the problems that we're exploring.

"Ecological feedback loops are accelerating the rate of global change dramatically … As the environmental crisis escalates, the scale of the problem has become enormous, beyond the grasp of any single human mind the tendency is toward despair and hopelessness, leading to denial in escalating, reinforcing feedback loops,"

"To break these self-reinforcing feedback loops, we need a new way to experience ourselves in relation to the environment".

> **"Habituated to our limited notion of self as body, we have grown accustomed to a narrow view of species and individuals as independent objects in space. However the environment includes human society and human inadequacies in perceiving the whole system. Our part of the conversation is a critical element in the system. The mental habits that reinforce our self-regulating character have a powerful influence over what we perceive as threatening or healthy for the environment. As relationship and process are fundamental; to the work of ecological restoration, we need to examine our mental habits closely for barriers to understanding."**

I would suggest reading the entire article (enclosed), also chapter 2 and the foreword in Turbulent Mirror which are helpful for inspiration and direction.

USE OF TEXTURES AND IMAGES

The entire project revolves around the use of texture images to communicate the concept for each box. High resolution images are a necessity to clarify and correctly communicate the concepts to the viewer. The use of high quality, high-resolution images will provide a backdrop for each individual global issue. Texture images will be a combination of original, hand rendered images, existing photographs, original new photographs, and existing digital images. Images not already in a digital format must be scanned into the computer with a full-color, high-resolution scanner. Our recommendation is the Ricoh FS1S Color Scanner due to its superior resolution and capabilities. Images will be manipulated with Adobe Photoshop image processing software to gain the full impact of the image. Photoshop has been chosen due to it's wide availability and low-cost. It is available on the Apple Macintosh, making it usable by anyone with a Mac. In order to display these texture images in a real-time manner, the only hardware capable is the Silicon Graphics Powervision series system.

INTEGRATION OF AUDIO

In order to integrate audio capabilities into the presentation, we will need to integrate a system such as the Personal IRIS or NeXT computer. These computers will require a 'network' interface to allow communication between the visualization system and the audio system. The visual system will signal the audio system when an appropriate sound 'bite' is required. These small 'bites' of audio need to be digitized into a computer from some original or commercial source and be played back without delay. At this time, we know very little about what the other members of the group are doing within the audio realm, and more information about this would help to define the audio requirements and capabilities.

NOTES

In order to make this project really good and unusual, it is important that we introduce such elements, completely foreign to science, as humor and irony to the network.

The story of the whales stuck in the Alaskan ice floes may be a good example of an ironic ecological event (I don't know about humorous). The story became a huge media event, but at the same time whales were being obliterated. How many whales where killed during that time period by the countries still whaling like Norway, Japan and the USSR? How much money did the rescue cost? If that money were used to eliminate whaling forever, it would have been that much more useful. The idea of Bart Simpson in the center of the Universe has possibilities also.

As we work on this project we need to keep in mind how to introduce elements of humor and irony into the project as we are attempting to reach our viewers on many different levels from the rational to the intuitive and all the levels in between.

HARDWARE REQUIREMENTS

System Requirements:
• Silicon Graphics 4D/320VGX or better (PowerVision) (we already have this.) (Multiprocessor required for communication with Audio Device)
• Ricoh FS1S Color Scanner (SCSI/Parallel)
• Macintosh IICX w/color option
• Adobe Photoshop – Image processing software
Audio Requirements:

• **Silicon Graphics 4D/35TG Personal IRIS**
• Digitized Audio "Sound Bites"
• Speaker System – for final Presentation

Misc Requirements:
• Ethernet Network (for final Presentation to communicate between the 320VGX and Personal IRIS).