

SYSTEMS MAINTENANCE Installation by Perry Hoberman

Work Description

"Systems Maintenance" consists of three versions of a furnished room. An ensemble of life-sized furniture occupies a large circular platform on the floor, a virtual room is displayed on a computer monitor, and a 1/8 size physical scale model of the room is presented on a small pedestal. Each version is imaged by a camera (either video or virtual), and the three resulting images are combined into a single large-scale video projection. The camera position, height, angle and field of view are matched between the three cameras. By moving the furniture and camera viewpoints for each of the three rooms, visitors can match or mismatch the components of each of the rooms as they appear in the projected image. The three video signals are fed to a pair of video mixers which are used to perform an additive mix of the three signals, and this combined signal is sent to the video projector.

The images of the three rooms are balanced in intensity, so that the final image appears to represent three different states of the same room. It is nearly impossible to visually distinguish the three versions from each other on the screen, and so the only way to understand the space is to interact with it. There is an implicit goal: to line up the three versions of each piece of furniture, to bring them into harmony. However, there is no correct position for any element, nor is one version of the room the reference for another. Thus, there are an infinite number of possible solutions; and in any case, the goal is continually thwarted by the ease with which a single user can re-introduce disorder into the system.

The digital room exists in a custom real-time 3D application running on a PC, and is displayed on a large computer monitor mounted on a circular pedestal. A Spaceball controller is used to navigate and manipulate the furniture. The monitor itself can be rotated to change the point of view of the room, via a rotary encoder mounted inside the pedestal top, which transmits rotational information to the host PC.

The 1/8 scale model of the room sits on a second circular pedestal, one meter in diameter. Each piece of miniature furniture can be picked up and repositioned. A color video camera with a wide angle lens is mounted on an arm overlooking the platform. The platform itself can be rotated to change the camera's point of view.

The life-size furniture sits on a smooth black circular floor in the center of the room, eight meters in diameter. Each article of furniture is mounted on ball-bearing casters, so that, despite its mass, it can be moved easily. A color video camera with a wide angle lens is mounted on a large aluminum arm assembly (attached to the ceiling) that can be rotated smoothly around the perimeter, pointing inward and pivoting around the center of the room. This rig permits what is in effect a 360 degree dolly shot as the camera circles the room.

During designated hours of operation, an Adjustment Team of two or three workers makes every attempt to synchronize the three rooms precisely, a goal which usually turns out to be unattainable, due to the continual interventions of the public. Each member of the Adjustment Team wears a uniform - a monochromatic jumpsuit - and they are in constant communication with each other via two-way wireless headsets. They work calmly and continuously, staying out of the way of the public, making an endless series of careful adjustments, coordinating their advice, observations and actions. They attempt to maintain order, while the public supplies a source of continuous disorder. The Adjustment Team has a difficult, demanding job, but they perform it with the utmost professionalism and patience. The public functions as a kind of crew, simultaneously filling the roles of directors, actors and audience in an ongoing collaborative spectacle.

On the screen it's difficult to distinguish the images of each version's furniture from those of the other models. Until something is picked up, or pushed, or clicked, it is nearly impossible to tell whether it's in the same "world" as you are. The participants are simultaneously inside the room, looking down on it like a chessboard, and interfaced with it. The video projection becomes, in effect, a "fourth room" where hands, bodies and gadgets mingle in the same hybrid space - a confused space that allows us to enter a virtual world - and, more significantly, allows that same virtual world to invade our own.

"Systems Maintenance" is an attempt to come to terms with, and even revel in, the essential nature of interactivity. Rather than locate structures of meaning in ideas of narrative, they are embodied in concepts of behavior - the behavior of the participants and of the system itself. The goal is to line up the furniture, but achieving this goal is hardly the point of the piece, which functions equally well whether it is moving toward a state of order or disorder at any given moment. The ultimate aim of "Systems Maintenance" is to analyze, comment upon, and open up notions of immersion, virtuality and interactivity itself.