Interactive Sculpture

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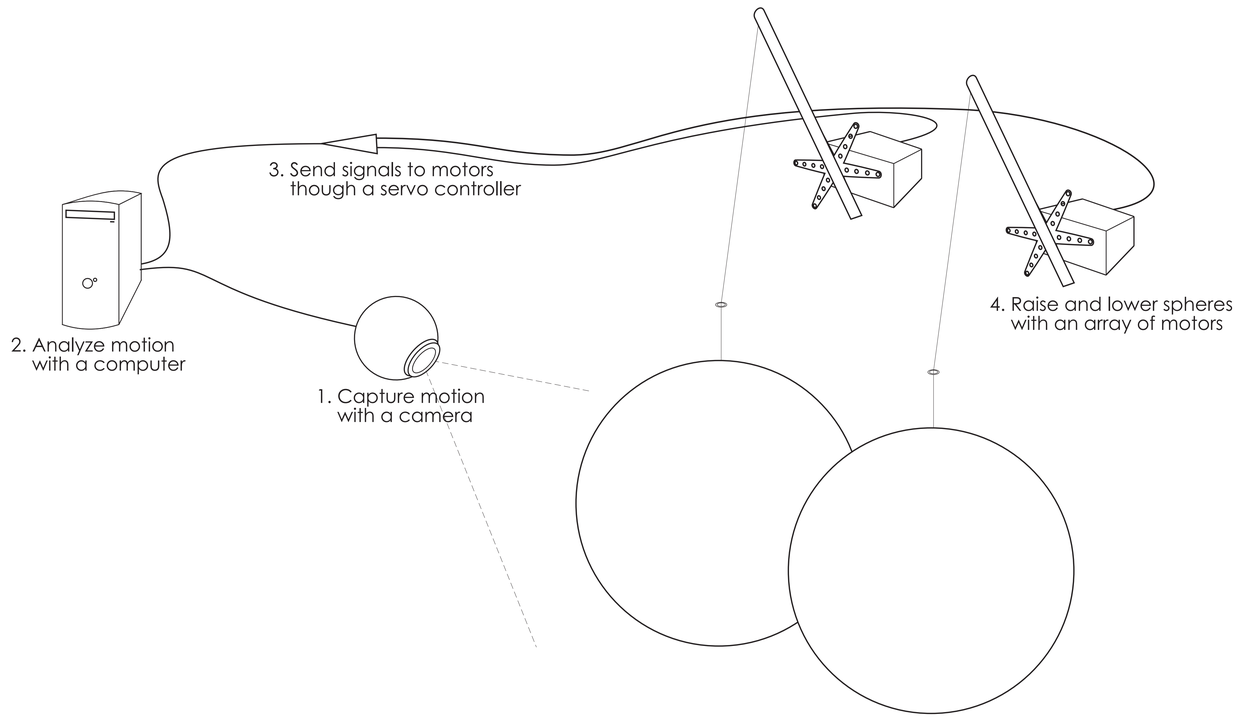

What Did I Do?

I installed an interactive sculpture in the University Center, consisting of a matrix of 36 light blue balls, 4” in diameter, suspended from the ceiling, 8’ 6” above the floor, with monofilament. These balls hang from a framework, housing an array of low-voltage electric motors and sensing equipment, capable of raising and lowering each individual ball based on what is below the sculpture. The sculpture functions as a mirror, changing and rippling in response to the people and objects below it.

The sculpture is a reflection of those below it; the gloss surface of the balls reflect the color of the clothing of those below it, and the balls positions raise and lower to reflect what’s underneath them. On the other hand, it is not a reflection, but an abstraction of what lies beneath. It digitizes the organic movement and presence of the people and objects below it, analyzes this presence quantitatively, then transforms this information back into the realm of the organic for display. Much like a map, it is an abstracted method for communicating what exists in our spacial reality and where. However, the sculpture attempts to convey this information within the context of day-to-day human activity, rather than on a piece of paper that is folded up in your pocket. Has the sculpture succeeded, or failed in this attempt?

What’s the Medium?

Currently, a user must interact with a computer on its own terms. Using a mouse and keyboard, the user must push an arrow around a flat screen that contains various abstract windows that presumably house some sort of useful information; although the computer screen itself is 2-dimensional, some windows can hide behind other windows, and there’s no particularly good way for users to deal with this. Of course, we as users take the clumsiness of the window interface for granted, because that’s the primary way we’ve interacted with computers for the past 15 years. We have been trained, or trained ourselves, to talk to the computer on in a windowed land that’s completely foreign to our natural experiences.

There is a push, from both users and from designers, to shift the interaction between the user and the computer into the physical realm of the user. Rather than forcing users to handle a mouse and keyboard to navigate a series of menus, Tangible Media is an effort to shift computer interaction into the realm of the user’s natural world. This push is to create devices that can be used without knowledge of what the device is or how it works; to create information displays that can be analyzed by a user with little knowledge of how the machine retrieved this information.

What Was My Motivation?

I have an interest in exploring how people interact with machines, and how machines are designed to interact with people, whether this interface is on a computer screen, in an input device, or in the physical world. Thus, human-computer interaction is a major theme in this sculpture. It was designed to be inconspicuous, existing above the normal day-to-day activities; the location of the sculpture’s installation was chosen in an area where people already walk routinely. The reason for this is to challenge people’s awareness of the surrounding world; certainly there will be those who will immediately notice a large, writhing thing on the ceiling, but how many people walk underneath it completely unfazed?

Once a passer-by notices the sculpture, how long does it take them to realize that they can control it? The motion detection equipment turns the entire human body into the input device, or more accurately, it turns the human *presence* into the input device. How do people realize that they can control the sculpture, and how long does this discovery take? How does this discovery affect them? Is the reaction enjoyment or amusement, is it curiosity or speculation, or is it apprehension? Is it some combination of these equally valid reactions, or a progression from one to the other?