"In the Bag" home shopping via virtual reality

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"IN THE BAG" HOME SHOPPING VIA VIRTUAL REALITY

The full experience of mall shopping one day may be as close as your living room with the help of a new three-dimensional, virtual reality system jointly developed at the University of California, San Diego and the San Diego Supercomputer Center.

Called "In the Bag," the system invites shoppers to navigate through a lifelike representation of a shopping mall. In this virtual world, they can wander through a mall, enter as many stores as they wish, and select their merchandise...all without getting up from their favorite recliners.

The system is designed to resemble the normal shopping experience. As shoppers enter various available stores, however, traditional architectural rules break down, with mall stores designed without real-world restrictions. Architectural innovations create merchandising space that complement product lines.

The idea for "In the Bag" was based on a master's thesis by Marc Fredrickson who attended UCSD's School of Architecture.

Building on Fredrickson's concept, Dema Zlotkin and Michael Kelley integrated the design with virtual reality technology at SDSC.

Here's how it works: Interaction with the virtual shopping mall is made possible by using a cyberglove and a spaceball. The spaceball provides movement and rotation in all directions. The glove tracks the position and orientation of the shopper's hand.

Selections are made from a number of available products by pointing and taking hold of the desired merchandise. To buy the product, the shopper needs only to drop the object into a depicted shopping bag.

Liquid Crystal Display (LCD) shutter glasses that enhance the experience are also worn, allowing the shopper to see spaces and merchandise in three-dimensions. A Silicon Graphics 4- processor Power Series coupled with RealityEngine graphics make "In the Bag" a vivid, real-time experience.

"In the Bag" has been selected by The Edge, an organization that showcases innovative and cutting-edge applications. The system will be demonstrated at SIGGRAPH '94, a conference/exhibition that will be held at the Orange County Convention Center in Orlando, Fla. from July 24-29.

Marc Fredrickson graduated from UCSD with a master's degree from the School of Architecture. His master's thesis "In the Bag" investigated architecture and navigation in virtual environments. Fredrickson also holds a Bachelor of Architecture degree from California Polytechnic State University, San Luis Obispo. Having met all state requirements, he will soon be licensed to practice architecture in the State of California. He can be reached directly at UCSD and SDSC at (619) 534-7839 or through e-mail at u2741@sdsc.edu.

Dema Zlotin graduated from UCSD in 1991 with a Bachelor of Science degree in Computer Science. Since then, he has worked at IBM and Andersen Consulting. Zlotkin currently owns Sharkbyte, a computer consulting company located in Solana Beach. He has been programming for more than seven years, using a variety of programming languages and operating systems. He can be reached directly at UCSD and SDSC at (619) 534-7839 or through e-mail at u2741@sdsc.edu.

Michael Kelley graduated from UCSD with a Bachelor of Science degree in Computer Science. For the past two years, he has specialized in the integration of virtual reality input and output hardware with high-end 3-D graphics software to visualize scientific data. Kelley is now working with the Sequoia 2000 Visualization Group at SDSC. He can be reached directly at (619)534-5000 or through e-mail at kelley@sdsc.edu.

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