

# Non-Traditional Interaction Environments for Information Exploration

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Developments in technology are providing new opportunities for interaction techniques. A decade ago, virtual reality spaces became more readily available. This gave researchers the opportunity to experiment with physical movement and gesture as interface elements for data exploration and navigation in both physical and abstract information spaces. Subsequent developments in projector and camera technologies, and computer vision algorithms, have opened up possibilities for brighter work environments and optically tracked user interaction. Current trends in technology include robust wireless networks, a plethora of personal information access devices, and auto-identification technologies. Computing technology is rapidly becoming smaller and cheaper, suggesting that computing capability can be embedded throughout the physical world in which we live. As we populate a physical space with computing devices, we can create interaction spaces that are aware of our presence, aware of our activities, and proactive in assisting us with our tasks. This talk reflects on the ongoing evolution that moves us beyond traditional desktop computer interfaces towards smart interaction spaces.

Dr. Baker is Distinguished Scientist and Director of the Visualization and Interactive Spaces Lab, part of the Pervasive Technology Labs at Indiana University. She is an Associate Professor in the Department of Computer Science and the School of Informatics. Dr. Baker researches the use of computer-generated graphics, human computer interaction and smart space technologies to create environments for data exploration and learning. Before joining Indiana University, Dr. Baker worked for 15 years at the National Center for Supercomputing Applications at the University of Illinois, where she contributed to the evolution of scientific visualization and the use of virtual reality for science data. She is co-author of a series of textbooks on computer graphics, used around the world for almost 20 years.