

Keynote Address

Leveraging Human Capabilities in Information Perceptualization

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The term “information visualization” was coined in 1989, inspired by the idea of applying scientific visualization techniques to abstract information spaces. The fundamental insight was that humans are very good at recognizing patterns, and this can help us make sense out of complex information. Much of the research in information visualization during the last ten years has leveraged human visual perception. But if we take a broader look at natural human capabilities, there are other cognitive and perceptual capabilities that we are not leveraging as well. For example, when we perceive patterns in the real world, we use our other senses, particularly hearing and haptics, in addition to vision. Perhaps we should rename this field “information perceptualization,” and focus on using multiple channels of human information processing to facilitate pattern recognition.

Biography

George Robertson is a senior researcher and manager of the User Interface Research group at Microsoft Research. Before coming to Microsoft, he was a principal scientist at Xerox PARC, working primarily on 3D interactive animation interfaces for intelligent information access applications. He was the architect of the Information Visualizer. He has also been a senior scientist at Thinking Machines, a senior scientist at Bolt Beranek and Newman, and a faculty member of the Computer Science Department at Carnegie Mellon University. In the past, he has made significant contributions to machine learning, multimedia message systems, hypertext systems, operating systems, and programming languages.

