ThinkSpatial

The UCSB brownbag forum on spatial thinking

Presents

Jack Loomis
Professor of Psychology, UCSB

Twenty years of research on the Personal Guidance System:
What did we learn?

Ellison Hall 6824, 12:00 p.m. Tuesday, 1 April 2008

Abstract: Since 1987, Reginald Golledge (Geography, UCSB), Roberta Klatzky (Psychology, Carnegie-Mellon) and I have been doing research and development of a GPS-based navigation system for blind people. We had the world’s first system up and running in 1992. I will go over a little of the history behind our project (how it came to be and what was involved in getting the first system working). Since those early days, many similar projects have sprung up around the world and there are now several successful commercial products, but the unique feature of our design has been the use of a virtual acoustic display as part of the user interface. Such a display allows the traveler to hear buildings and other points of interests speaking their names, as if coming from loudspeakers at these locations. Most of my talk will focus on user studies evaluating this and other “spatial” displays in comparison with conventional synthetic speech displays, studies which reveal the superiority of virtual sound.

Jack Loomis has been a Professor of Psychology at UCSB since 1974, where he has conducted basic research on a broad range of topics including tactual perception, visual space perception, auditory space perception, visual control of locomotion, spatial cognition, and social interaction. In the 1980s, he came up with the idea of a navigation system for blind people, designed a virtual acoustic display as part of its user interface, and has been director of the R&D project ever since. In the 1990s, he and Andrew Beall developed technology for creating visual virtual reality and introduced virtual reality as a basic research tool at UCSB, where it has been widely used. He also has been an instrument rated private pilot with an interest in improving flight safety.

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The objectives of the ThinkSpatial series are to exchange ideas about spatial perspectives in research and teaching, to broaden communication and cooperation across disciplines among faculty and graduate students, and to encourage the sharing of tools and concepts. Please contact Don Janelle (ext 5267, janelle@spatial.ucsb.edu) to review and schedule possible discussion topics or presentations that share your disciplinary interest in spatial thinking.