

ENHANCEDDESK  
*Juried Exhibit*

Experiments with tangible objects, interaction with computer simulations, electronic-media databases, and paper-based materials are common tools for wide varieties of tasks in offices and classrooms. This richness of semi-connected content leaves us with the burden of media synchronization. For example, the overhead of accessing a computer simulation mentioned in a printed book often disrupts the train of thought. A simple dictionary search on the Web while reading a book requires a series of operations that shifts our focus of attention.

This augmented-desk system novel man-machine interfaces based on direct manipulation of both real and projected objects with hands and fingers. The key technical innovations of the EnhancedDesk include fast, accurate tracking of multiple hands and fingers, interactive object registration and recognition of hand gestures, and overlay of interactive functionality.

When this augmented-desk interface system is put to practical use, it will revolutionize the way people use computers in every aspect of their daily lives. For instance, multimedia materials can be used more effectively for study. An enormous amount of information available on the Internet could be more easily combined with physical objects such as paper documents. And EnhancedDesk's intuitive and interactive management of computer applications will provide assistance to many people who would otherwise have problems using a computer.

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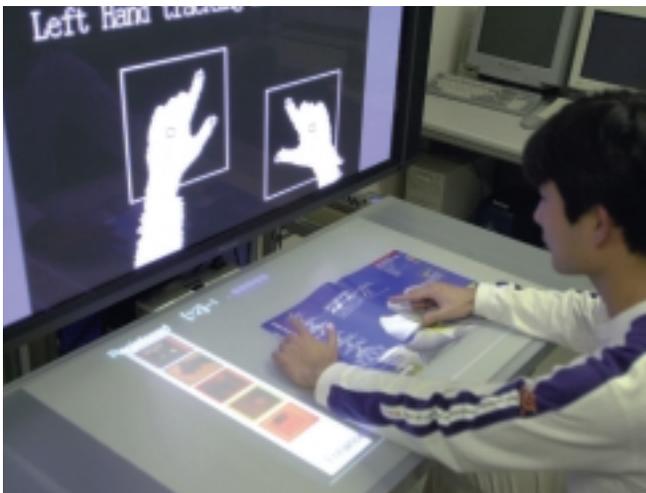
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Real-time tracking of multiple hands and fingertips.



Interactive object registration and recognition.

