



Microsoft Surface - and other emerging technologies

By **BOBBY L. HICKMAN**

Microsoft Surface, the first in a new category of surface computing products from Microsoft, was among the emerging technologies featured at SIGGRAPH 2007 this week.

Surface turns an ordinary tabletop into a vibrant, dynamic surface that provides effortless interaction with all forms of digital content through natural gestures, touch, and physical objects. The intuitive user interface works without a traditional mouse or keyboard, allowing people to interact with content and information on their own or collaboratively with friends and families, just like in the real world. Surface is a 30-inch display in a table-like form factor that small groups can use at the same time. From digital finger painting to a virtual concierge, Surface brings natural interaction to the digital world in a new and exciting way. Beginning at the end of this year, consumers will be able to interact with Surface in hotels, retail establishments, restaurants, and public entertainment venues.

"This is just one of many SIGGRAPH opportunities to experience cutting-edge technology - for products both months and years away," stated Joe Marks, SIGGRAPH 2007 Conference Chair from Walt Disney Animation Studios. *"In fact, surface computing in its early stages was showcased at previous SIGGRAPHs, and we're very excited to feature the technology in its market-ready form in San Diego."*

SIGGRAPH 2007 Emerging Technologies received 75 submissions from six countries including France, Hungary, Japan, Korea, and Sweden. Only the most technically proficient and thought-provoking installations were selected by an elite group of industry experts. Of the 23 accepted pieces more than seven feature display technologies and five feature haptic technologies for interaction with attendees. In addition, there are at least eight additional curated technologies.

Kathy Ryall of Mitsubishi Electric Research Laboratories, one of the Emerging Technologies co-chairs, said about a third of the program's technologies were curated. While previous shows have relied entirely upon a juried selection process, Ryall said this year SIGGRAPH has made a concerted effort to find and invite new exhibitors who might not otherwise participate in the conference.

Other innovative technologies displayed at SIGGRAPH 2007 include...

- Three different display technologies that allow users to view their screens in direct sunlight.
- A "transparent cockpit" that allows airplane pilots and automobile drivers to see in all directions.
- Wind technologies that allow users to blow into a screen and see the results in an online display, such as blowing a pinwheel.
- Robotic gloves and pivoting robotic heads.
- Gravity Grabber," a virtual mass sensation system that delivers the sensations of weight when "feeling" virtual objects.
- An interactive 360-degree light field display system.



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