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OSC Wins Award for Surgical Simulation Tool

Award recognizes virtual temporal bone simulator using SensAble's haptic devices for its potential to improve medical education

WOBURN, Mass., Aug. 4 -- SensAble Technologies, Inc, a leading provider of touch-enabled modeling solutions and haptic devices, announced that its customer, the Ohio Supercomputer Center (OSC), a publicly-funded research partner to Ohio universities and industries, has won national recognition for its Virtual Temporal Bone Project, which utilizes a SensAble PHANTOM haptic device. The system, developed by OSC in partnership with Nationwide Children's Hospital and The Ohio State University Department of Otolaryngology, received the prestigious 'Dr. Frank H. Netter Award for Special Contributions to Medical Education' from the Vesalius Trust for Visual Communication in Health Sciences during the annual meeting of the Association of Medical Illustrators, held July 16-20, in Indianapolis.

The Virtual Temporal Bone simulator creates a true-to-life experience encountered in ear surgery. The temporal bone contains the structures for hearing and balance, and the simulator allows future surgeons to practice delicate surgical drilling techniques on a computer-based teaching system instead of cadavers or as apprenticeships in operating rooms. A multi-institutional validation study is now underway to determine if surgical residents taught by this simulator achieve better surgical results compared to traditional methods.

The system's realism is enhanced with a SensAble PHANTOM haptic device, which allows surgeons to "feel" the surgery they are performing, as well as see and hear it. SensAble's device and accompanying software employ force-feedback technology to literally push back on the trainee's hand as they look through a binocular viewer that replicates the view that a surgeon would see through a microscope during surgery. Drilling sounds are then modulated based upon the pressures and area of bone being removed.

In choosing the Netter Award, the selection committee commended the system's "high production values, the incorporating of multiple sensory modalities -- sight sound and touch -- and the ease of distribution that make the Virtual Temporal Bone a unique learning object with tremendous potential impact in the field of medical education."

"With SensAble's technology in our system, surgeons are not only learning with their eyes, but also with their sense of touch," said Don Stredney, director of the OSC Interface Lab and the project's other lead investigator. Stredney also serves as an adjunct instructor in biomedical informatics and otolaryngology at The Ohio State University.

"SensAble's Open Haptics software developers' kit enabled us to easily integrate haptics into our application, and to provide a training environment that presents a safe, cost-effective way to learn fundamental techniques. This could be an important tool in the learning process for surgeons to develop all their senses in order to guide their surgery," Stredney said.

"This team has built a very impressive virtual environment for surgical training, and we are pleased they have incorporated our PHANTOM haptic device into the solution," said David Chen, PhD, and SensAble's chief technology officer. "We are equally proud to see their work recognized by this award."

The Virtual Temporal Bone Project is funded by the National Institute on Deafness and Other Communication Disorders, The National Institutes of Health.

About SensAble Technologies


Founded in 1993, SensAble Technologies is a leading developer of 3D touch-enabled (force feedback) solutions and technology that allow users to not only see and hear an on-screen computer application, but to actually 'feel' it. With 32 patents granted and over 6,000 systems installed worldwide, SensAble Technologies' haptic technology is being used in applications ranging from designing toys and footwear, to surgical simulation and stroke rehabilitation, to dental restorations, to as well as a range of research and robotic applications. The company markets its own 3D modeling solutions as well as its haptic devices and developer toolkits to medical, dental, design, and manufacturing companies; educational and research institutions; and OEMs. SensAble products are available through direct and reseller channels worldwide. www.sensable.com (<http://www.sensable.com>).

About Ohio Supercomputer Center

Celebrating more than 20 years of service, the Ohio Supercomputer Center (OSC) is a catalytic partner of Ohio universities and industries that provides a reliable high performance computing and high performance networking infrastructure for a diverse statewide/regional community including education, academic research, industry, and state government. Funded by the Ohio Board of Regents, OSC promotes and stimulates computational research and education in order to act as a key enabler for the state's aspirations in advanced technology, information systems, and advanced industries. For additional information, visit <http://www.osc.edu> (<http://www.osc.edu>).

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