



PRESS RELEASE

PO BOX 527
BURLINGTON, VT USA 05402
www.ascension-tech.com
802.893.6657

MEDIA CONTACT
Anna W. Januszczuk
ajanuszczuk@ascension-tech.com
802.893.6657 x10

Ascension's 3D Guidance medSAFE™ Advancing Earlier Diagnosis of Infantile Cerebral Palsy

BURLINGTON, VERMONT; July 7, 2008: Ascension Technology Corporation's **3D Guidance medSAFE** is being used by medical researchers at the **Center for Child and Adolescent Medicine at Heidelberg University Hospital in Germany** to develop a computer-based system for the early diagnosis of Infantile Cerebral Palsy (ICP). ICP is a major impairment of the human motor system due to early damage of the central nervous system. It affects about seven out of 100 extremely premature babies, and two out of 1,000 term born children.

Historically, physicians have been unable to make valid early diagnosis of ICP because many newborns and premature infants show noticeable, but non-lasting signs of potential neurological impairment. In common clinical evaluations, these symptoms seem like emerging ICP, but they often resolve completely and do not require therapy.



Ascension's 3D Guidance medSAFE sensors, just 1.8 mm in diameter and weighing less than one-tenth gram each, are attached by University of Heidelberg researchers to an infant's arms and legs with ultra-light cables to track and visualize movement patterns. Trajectory analysis is an emerging computer-based tool for accurately diagnosing infantile cerebral palsy and intervening at an early stage to mitigate symptoms.

For infants with ICP, early detection is of great importance to successful therapy. “General Movement” analysis (based on video recordings of the first few months of life of an infant) can be helpful in ICP diagnosis, but requires high level training to analyze the recordings and is at present limited to few experts.

The aim of the University of Heidelberg’s computer-based system is to offer a valid diagnostic tool that can analyze the movement development of infants and differentiate between normal movement patterns and cerebral movement impairments.

Dominik Karch of the University of Heidelberg states: “Infants have very small limb segments. Therefore the sensors attached to them have to be very small. Furthermore, the attached sensors must not irritate the infants because we are interested in their spontaneous movements. Ascension’s new trackers meet both of these requirements. The sensors can be attached easily with patches. Children are not irritated by them and can move arbitrarily, so we can record their spontaneous movements.”

Karch notes that another crucial advantage of Ascension’s magnetic tracking device versus optical systems is that there is no line-of-sight problem. “During examination, the infant lies on his or her back. No matter on which side of the arm the sensors are attached, there may be poses in which the sensors face the mattress. Using the 3D Guidance medSAFE, this is not a problem.”

Jack Scully, Ascension’s Vice President for New Business Development, states: “The work at the University of Heidelberg is an exciting example of the use of miniaturized 3D tracking technology in medical research. Ascension is highly motivated to work with researchers worldwide who are developing new and improved tools for the diagnosis and treatment of medical conditions.”

Ascension Technology Corporation, based in Burlington, Vermont, USA, is a world leader in magnetic and optical tracking solutions for medical, biomedical, and commercial applications. News about Ascension trackers in biomedical research is available at www.ascension-tech.com or from Joanna Harrington at: 802-893-6657, ext. 44.

For more information about The University of Heidelberg Hospital’s ICP program, contact Dominik Karch via email: dominik.karch@med.uni-heidelberg.de

Biomedical references and medical procedures described in this release are examples of what can be accomplished with tracking and imaging technology once users and have complied with all pertinent FDA/CE/IRB directions.

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