

PRESS RELEASE

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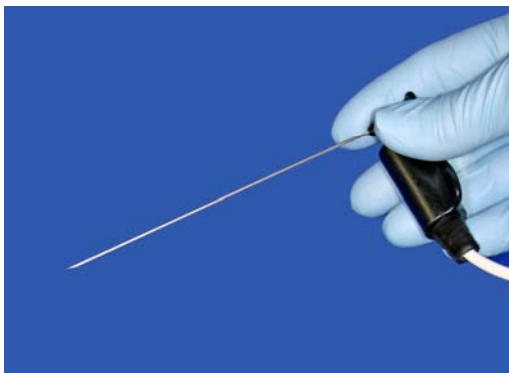
CIVCO and ASCENSION Partner to Offer 3D Guidance of Needles

KALONA, IOWA & BURLINGTON, VERMONT, USA; November 26, 2008: **CIVCO Medical Solutions** and **Ascension Technology Corporation** today announced a new biopsy needle localization and guidance system for minimally invasive medical procedures.

When integrated with 3D ultrasound visualization tools it enables accurate, percutaneous targeting to lesions without radiation or open surgery. The companies will show live demonstrations of the system at RSNA 2008 (<http://rsna2008.rsna.org/>) in Chicago, IL, November 30 – December 4, 2008.

Ascension developed the world's smallest six degrees-of-freedom (DOF) sensor, 0.9mm in diameter, for the application. Key advantages include: inconspicuous guidance of surgical instruments, metallic immunity, and fast, simultaneous tracking of multiple sensors.

CIVCO has designed a proprietary tracking needle with a protective reusable housing for the sensor. Combined with the Ascension sensor technology, the needle allows simultaneous tracking of the distal tip of the needle and the ultrasound scan planes allowing clinicians to visualize the necessary patient anatomy as well as the position of the needle tip in real-time.



As shown here, an Ascension 0.9 mm wide sensor is embedded in the distal tip of CIVCO's new needle guidance tool for real-time biopsy and ablation procedures. The ergonomic handle allows for accurate puncture procedures. A second 8mm sensor attached by a bracket clips onto the ultrasound transducer and visualization software complete the system. Simultaneous tracking of the needle and ultrasound scan planes enables live 3D guidance from the needle's puncture path to an internal lesion.

Ultrasound imaging alone cannot always guarantee the tip of a needle or the electrodes of an ablation probe will hit the center of a three-dimensional lesion – especially a small one. The new approach takes the estimation and inconsistencies out of ultrasound-assisted biopsy and RF ablation by instantly tracking both the 3D location of the ultrasound transducer and the tip of the needle. If pre-operative imaging is indicated for selecting the best interventional path or for comparing the results of different imaging modalities, the sensor aligns the real-time ultrasound image with the pre-operative image in a process called image fusion.

Procedurally, the sensor's real-time spatial data is graphically overlaid on video images of the B-scan plane. The clinician can then monitor the real-time trajectory of the needle through delicate anatomy of the geometric center of an internal target, such as a tumor, cyst or polyp. This process clearly visualizes the location of the needle – either “in” or “out” of plane – for either a longitudinal or transverse approach. Even before the skin is punctured, the system registers the biopsy needle to the center of the target, predicting the path of the needle while avoiding other anatomical structures. As the needle advances towards the target, the fused images provide real-time feedback as the path to be taken. Once optimally positioned, the needle can be rotated to a perpendicular plane to provide three-dimensional verification that the tip is on target. Targets can also be marked and mapped for follow-up.

Measurements are unaffected when tracking in close proximity to intravascular ultrasound arrays, composite beds, low frequency noise sources, and common hospital metals, such as 300-series stainless steels, titanium, and aluminum. When used with Ascension's flat magnetic field generator, the system can be used on gurneys, hospital beds, and procedural tables without distortion of measurements by the presence of ferromagnetic metals.

At RSNA, **CIVCO** will demonstrate the device in **Booth # 8210**, North Building, Hall B. **Ascension** will demonstrate the device in **Booth # 7910**, North Building, Hall B. For more information about Ascension, go to www.ascension-tech.com or contact Trish Scott at 802-893-6657, ext 34.

With over 25 years of experience, **CIVCO Medical Solutions** is recognized as an industry leader in enabling technology for improved treatment outcomes. Its products continue to be the benchmarks for quality and design in diagnostic ultrasound imaging, patient positioning and radiation oncology. CIVCO's commitment to enhancing patient care is strengthened by the relationships built with clinicians and original equipment manufacturers (OEMs) around the globe. The company's ongoing collaborative research and development efforts seek to simplify procedures and improve the quality of care for patients. Corporate information and product information is available at www.civco.com.

Ascension Technology Corporation is a world leader in magnetic 3D localization and guidance for medical applications. Its third generation magnetic sensors represent the key enabling technology for image-guided procedures. More information about Ascension trackers along with streaming video is available at www.ascension-tech.com.

Biomedical reference and procedures described herein are examples of what can be accomplished with 3D tracking and imaging technology when used in compliance with pertinent FDA/CE/IRB directives.

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