

PRESS RELEASE



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6DOF Tracking Sensors Fit into Distal Tips of Needles, Scopes, and Catheters

Ascension To Show Magnetic Sensors for New Biopsy Needle and Bronchoscope Procedures at RSNA 2008

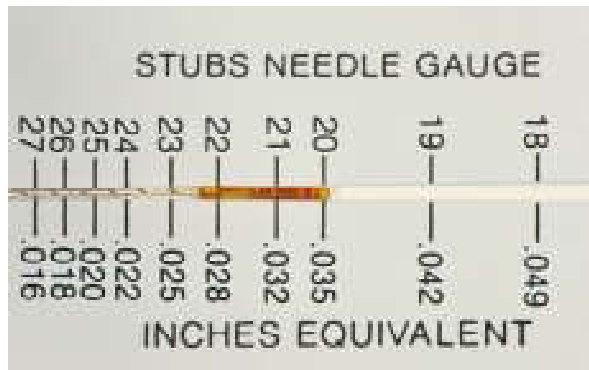
BURLINGTON, VERMONT; November 1, 2008: Ascension Technology Corporation will showcase its newest sub-millimeter sensors for localization and guidance of biopsy needles, catheters, and guidewires at **RSNA 2008** -- the **Radiological Society of North America Conference and Exposition** (<http://rsna2008.rsna.org/>) in Chicago, IL, November 30 - December 4, 2008.

The company's **3D Guidance medSAFE™** tracker now supports the world's smallest six degrees-of-freedom sensors, 0.9 mm in diameter. This dimension accommodates tip localization of hollow needles as small as 19 gauge and catheters as small as 3 French. Key advantages include: inconspicuous guidance of surgical instruments, environmental immunity, and fast, simultaneous tracking of multiple sensors.

At RSNA, Ascension will show the new sensor in two groundbreaking medical procedures:

- Percutaneous guidance of a **biopsy** needle to soft tissue lesions
- Navigation of a **bronchoscope** guidewire to deep lung lesions

For the **biopsy procedure**, a 0.9 mm sensor is embedded in the tip of a hollow needle with a second 8 mm sensor attached to an ultrasound scanhead. Simultaneous tracking of the needle and the ultrasound scan planes enables live 3D guidance from the needle's puncture path to an internal lesion. Visualization software superimposes a trajectory path on the ultrasound imagery to show advancement of the needle towards the target. The sensor can similarly be used for percutaneous 3D guidance, referenced to markers on pre-acquired images, such as CT or MRI. It can also be used to fuse preoperative and ultrasound images together for improved procedural vision, patient gating, and navigation of needles and probes.



Ascension's newest medSAFE sensor is 0.90 mm in diameter and weighs less than one-tenth gram. It freely fits into the tip of a hollow 19-gauge needle, which can be rapidly tracked in all six-degrees-of-freedom. Besides monitoring needle and guidewire location, the new sensor with imaging software provides immediate feedback of a successful intervention without over reliance on X-rays.

For the **bronchoscope procedure**, VIDA Diagnostics will be in the Ascension booth to show its DC magnetic navigation system for bronchoscope. Its system includes a 0.9 mm magnetic sensor located in the 1.2 mm working channel of an Olympus ultra-thin bronchoscope. 3D tracking enables clinicians to accurately navigate tools to deep lung lesions for diagnostic and therapeutic purposes. The system combines VIDA's proprietary lung mapping and modeling technology, referenced to pre-acquired CT scans, for real-time, interventional guidance to previously inaccessible lung regions.



medSAFE 0.9 mm sensor is seen protruding from the working channel of an Olympus ultra-thin bronchoscope. VIDA Diagnostics' Pathfinder software presents the bronchoscope's position and the planned route to target in a fully 3D view on a virtual 3D model of the patient's airway. The application's path based registration process is easy to use, faster than traditional fiducial point based methods, and can be completed during the initial scout of the major airways. The Pathfinder application is compatible with VIDA's Pulmonary Workstation, seamlessly integrating guidance and airway analysis into a powerful treatment tool.

3D Guidance medSAFE fully meets electrical safety regulations. 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 its flat magnetic field generator, **3D Guidance medSAFE** measurements are immune from ferromagnetic metals beneath its planar surface, such as structural members in OR and procedural tables.

This year's conference will be held at **Chicago's McCormick Place. 3D Guidance medSAFE** will be shown in **Booth # 7910, North Building, Hall B**. Ascension Technology Corporation, based in Burlington, Vermont, USA, is a world leader in magnetic guidance and localization solutions for medical navigation. See www.ascension-tech.com or contact Trish Scott at 802-893-6657, ext 34. For more information about VIDA, see www.vidadiagnostics.com.

Biomedical references and procedures described herein are examples of what can be accomplished with tracking and imaging technology once end users and/or systems integrators have complied with all pertinent FDA/CE/IRB directives.

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