

Healthcare Sector Imaging & IT Division

Siemens Automates Ultrasound Applications to Achieve Improved Diagnostic Confidence and Reduce User Dependency

ACUSON S2000 ultrasound system is a platform for workflow automation in image fusion, breast volume scanning, and application procedures and protocols

New York N.Y., April 1, 2009 – Siemens Healthcare (www.siemens.com/healthcare) demonstrates the benefits of workflow automation on the new release of its premier general imaging platform, the ACUSON S2000™ ultrasound system, at the annual conference of the American Institute of Ultrasound in Medicine (AIUM), April 2-5, in New York City at booth # 413. These solutions comprise a palette of exam procedures and protocols which address the challenges that handheld ultrasound faces in regards to user-dependence and variability, as well as scan-related injuries. Siemens will also highlight how automation can support the viability of fusing ultrasound and computed tomography imaging in the clinical routine.

Offering the best of both worlds, computed tomography (CT) and ultrasound fusion combines the benefits of real-time ultrasound imaging with global imaging display of CT. However, current fusion techniques require bulky transmit and receive equipment to track the patient's anatomy in real time. Also, patients need to lie completely still during the entire exam to prevent elaborate manual realignments before the examination can continue.

“This is unrealistic and impractical. And it usually requires several attempts to get the job done, which makes the procedure time-consuming and the results inaccurate,” says Klaus Hambüchen, chief executive officer, Ultrasound, Siemens Healthcare. “Our fusion solution* incorporates miniaturized, flexible sensors and proprietary technology that automatically aligns the CT image to the current ultrasound view. This approach will dramatically accelerate workflow and improves the accuracy of image alignment, allowing fusion imaging to be seamlessly integrated into a routine ultrasound exam.”

Automated Acquisition Changes Role of Ultrasound in Breast Imaging

The limitations of handheld ultrasound in terms of scan time and user-variability have limited ultrasound's role in imaging to that of a secondary modality to look at a palpable mass or a finding identified on a mammogram. The ACUSON S2000 Automated Breast Volume Scanner (ABVS) has the potential to change that. In less than 15 minutes, the system acquires full-field sonographic volumes of the breast. These volumes offer new insight into the intricate anatomy and architecture of the breast, including the intuitive anatomical coronal view, which has not been available using conventional hand held ultrasound.

After acquisition, the volume data is sent to a workstation for comprehensive offline review and diagnosis, as well as semi-automated reporting and BI-RADS® reporting. A complete ultrasound breast imaging solution, the ACUSON S2000 ABVS system also supports handheld ultrasound for innovative breast imaging applications, such as fatty tissue imaging, eSie Touch™ elasticity imaging and biopsy procedures.

Automated Protocols and Measurements

Siemens will also be highlighting their proprietary eSieScan™ workflow protocols on the ACUSON S2000 system. Allowing the user to focus on patient care, not system interaction, eSieScan workflow protocols automatically guide the operator through the exam process by anticipating and executing exams based on customizable programs. Major modes, such as 2D, color, PW Doppler or M-mode can be automatically activated along with a variety of sub modes, such as eSie Touch elasticity or Cadence™ contrast pulse sequencing technology** for contrast studies.

eSieScan protocols are available for Vascular, Breast and OB exams, but an unlimited number of user-defined protocols can be added to the system. By reducing the interaction of the user with the system, eSieScan protocols may lead to the reduction of repetitive stress injuries while at the same time increase the consistency and predictability of the exam content for the physician.

In combination with *syngo*® Auto OB measurements, eSieScan workflow protocols help save up to 75 percent of the keystrokes required in routine fetal exams.

The **Siemens Healthcare Sector** is one of the world's largest suppliers to the healthcare industry. The company is a renowned medical solutions provider with core competence and innovative strength in diagnostic and therapeutic technologies as well as in knowledge engineering, including information technology and system integration. With its laboratory diagnostics acquisitions, Siemens Healthcare is the first integrated healthcare company, bringing together imaging and lab diagnostics, therapy, and healthcare information technology solutions, supplemented by consulting and

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support services. Siemens Healthcare delivers solutions across the entire continuum of care – from prevention and early detection, to diagnosis, therapy and care. Additionally, Siemens Healthcare is the global market leader in innovative hearing instruments. The company employs around 49,000 people worldwide and operates in 130 countries. In the fiscal year 2008 (Sept. 30), Siemens Healthcare reported sales of €11.2 billion, orders of €11.8 billion, and Sector profit of €1.2 billion. Further information can be found by visiting <http://www.siemens.com/healthcare>.

*Work in Progress

**At the time of publication, the U.S. Food and Drug Administration has cleared ultrasound contrast agents only for use in LVO