

### Healthcare Sector Imaging & IT Division

#### **Siemens Showcases New Gold Standard in Volume Imaging for Ultrasound**

ACUSON SC2000 is the World's First Echocardiography System to Acquire Instantaneous, Non-Stitched Full-Volume Images of the Heart in One Single Heartbeat

**Washington, D.C., June 6, 2009 – At the 20th Annual Scientific Sessions of the American Society of Echocardiography (ASE) in Washington, D.C., from June 6-10, Siemens Healthcare (booth #411) will be demonstrating a new Gold Standard in Echocardiography: Non-stitched, real-time full-volume 3D images of the heart acquired in one single heart cycle with the ACUSON SC2000™ volume imaging ultrasound system. The latest release of the system features unique technologies and applications that improve diagnostic confidence and workflow in echocardiography. The company will also showcase the world's first volume 3D intra-cardiac echocardiography catheter, the ACUSON AcuNav™ V ultrasound catheter, which delivers real-time volumetric information from inside the heart.**

“Performing echocardiography procedures with the ACUSON SC2000 system is like flying an airplane as opposed to driving,” said Klaus Hambuechen, chief executive officer, Ultrasound, Siemens Healthcare. “Volume echocardiography is powerful, high-precision and fast. And the level of automation offered by the system gives busy echocardiographers exactly what they need in today's demanding clinical environment: A tool that lets them focus on the patient and procedure instead of the technology, ultimately, delivering the highest quality of care, while at the same time, simplifying and accelerating clinical workflows.”

The system has unprecedented information rate processing power that allows the acquisition of a full volume of the entire heart at 90 x 90 degrees, up to 40 volumes per second at 16 cm depth. With 16 times the processing power of a conventional 2D system, more than 540 volumes per second at maximum information rate is possible – a performance that dramatically reduces acquisition time, improving the overall workflow in the echocardiography suite.

## **Superior Diagnostic Imaging Performance and Workflow**

New to the ACUSON SC2000 volume imaging system is the unique INFocus coherent imaging technology. Without the need to continuously set and select a given location of best focus, INFocus technology sharpens the full-field image at all times – without sacrificing frame rate. The technology delivers continuous full-field transmit focusing and uses the power of 64 receive beams, maximizing imaging information rate to better resolve cardiac structure and motion for superior diagnostic imaging.

“One-beat full-volume acquisition caters to a wider variety of patients,” said Michael Snyder, global segment manager, Cardiology at Siemens Healthcare’s Ultrasound Business Unit. “It allows care givers to provide the benefits of best-in-class echocardiography for difficult-to-image persons or patients who have difficulty holding their breath.”

The ACUSON SC2000 volume imaging system offers a number of new workflow enhancements, including individually customizable workflow protocols and knowledge-based workflow applications. eSieScan™ Workflow Protocols streamline exam workflows, both on the user level and in the entire lab, bringing both highest reproducibility and quality standards to the volume imaging workflow. In addition, the system features pharmacologic Rapid Stress™ volume stress echo capabilities which automatically capture all walls of the left ventricle in one single heartbeat, without the need of ECG gating or multiple window acquisition at peak stress. This results in faster acquisition time and comprehensive review of all wall segments in one single capture, leading to potentially improved accuracy and time savings.

## **Knowledge-based Workflow for Highest Efficiency**

The ACUSON SC2000 system features knowledge-based workflow software that uses learned pattern recognition technology and an expert database of real clinical cases to support advanced echocardiography applications. The system recognizes anatomical patterns and landmarks performing automatic measurements to streamline clinical workflow. This includes automatic reference plane extraction from the full-volume cardiac capture dataset, automated full-volume contouring of ejection fraction, and automated measurement of imaging modes.

To further enhance efficiency, the offline workstation enables reporting, as well as complete review and processing of the acquired volumes. Besides using the latest technology advancements and applications to improve efficiency and workflow, Siemens has also addressed the ergonomics of

the system to meet and exceed today's recommended ergonomic guidelines to reduce work-related stress injuries and to accommodate the varied work environment of sonographers.

### **Volume Images from within the Heart**

Siemens will also be featuring the world's first volume intra-cardiac echocardiography catheter, the ACUSON AcuNav V ultrasound catheter. With real-time volumetric information from inside the heart, the new volume catheter will improve therapeutic ablation procedures and other electrophysiology (EP) applications facilitating workflow and improving performance in the EP lab.

"It's like using a flashlight within the human heart," said John Davidson, director of cardiovascular ultrasound solutions, Siemens Healthcare. "The ACUSON AcuNav V catheter provides physicians with high-resolution volumetric ultrasound information about the anatomy and the tools used during EP procedures, reducing the need for fluoroscopic visualization to ultimately improve patient care and increase safety within the EP lab."

### **Complete Cardiology Toolset**

The 1.6 release of its ACUSON S2000™ ultrasound system advances Siemens' cardiovascular portfolio. The system features advanced technologies and applications to offer a complete cardiovascular shared-service toolset in one sophisticated package for cardiac, OR and vascular imaging, including the integration of the 4V1c transducer. Rapid re-start operation makes the ACUSON S2000 system highly suitable for pediatric and neonate bedside imaging, with a variety of transducers carried over from the ACUSON Sequoia™ ultrasound platform, OR compatibility is confirmed through the utilization of the V5M TEE transducer. The system also features user protocol-driven workflow, which additionally accommodates pediatric, adult and vascular imaging.

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 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>.