

Siemens Delivers Images per the Customer's Request – “Images My Way”

Advanced visualization, magnetic resonance headline Siemens innovations at RSNA 2009

Chicago, Ill., Nov. 29, 2009 – At the 95th Scientific Assembly and Annual Meeting of the Radiological Society of North America (RSNA), “Images, my way” will resonate throughout the Siemens Healthcare booth (#825) from November 29 to December 3 at McCormick Place (Booth #825, East Building/Lakeside Center, Hall D) in Chicago. This year’s booth displays and demonstrations will tell the story of Siemens support for its customers to generate, process, read, and share clinical images the way they want to.

“Siemens is in a key position to demonstrate the benefits of offering unique integration of image acquisition modalities and image reading software in one-client-server solution.” said Hermann Requardt, CEO, Siemens Healthcare Sector. “With our latest innovations in clinical applications and our newest scanner technologies, Siemens will change the way radiologists are reading clinical images today.”

Through *syngo*®.via¹, advanced visualization (AV) and multimodality reading of clinical cases create an exciting experience in efficiency and ease of use – anywhere, making AV, 3D, and 4D reading part of daily routine tasks. Boasting speed, efficiency and connectivity of workflows, various degrees of automation, and being service-/customer-oriented, *syngo.via* is compatible with any existing IT environment, optimal performance (fast data link) in combination with Siemens modalities.

Visitors to the booth can tour the Siemens Experience Lounge for *syngo.via* for feature theater presentations to be held every 30 minutes, multi-touch panels, allowing visitors to experience the new technology in a self-guided manner, workstations throughout the booth, as well as on-site “classrooms” to provide first-hand learning.

Furthermore, Siemens redefines productivity by multiplying the power of its Tim® (Total imaging matrix) technology with its new Day optimizing throughput (Dot™)² engine. Both technologies are introduced in the new MAGNETOM® Aera² 1.5 Tesla (T) and the new MAGNETOM Skyra² 3T scanners.

At RSNA 2009, Siemens will showcase the following technologies:

Angiography, Fluoroscopy & X-ray

Siemens Healthcare will introduce its comprehensive portfolio for imaging in interventional oncology. Using these minimally invasive procedures for cancer therapy, the interventional radiologist navigates catheters or needles in the millimeter range. To this end, systems and applications are required that supply high image quality for the detection of details in soft tissue. Siemens provides high-end imaging systems and advanced applications for this purpose, which support the physician throughout the entire workflow, from tumor evaluation and procedure planning to therapy and follow-up.

Siemens will also feature the Artis zeego®, the revolutionary, multi-axis system with robotic-assisted positioning that enables variable working height, unique parking positions for hybrid rooms, and delivers large-volume syngo DynaCT image results to meet your current and future clinical needs. Also highlighted at the booth will be the Ysio®, a digital radiography solution with intuitive color touchscreen control that is as individual as your routine. Whether for general, trauma, dedicated chest or other specialized imaging applications, for hospitals or private practices, for budgets large or small, Ysio is available in a variety of combinations: as a wall stand with an integrated detector; a wall and table system with a wireless detector (wi-D); even as a mixed detector solution for high throughput and flexibility. Ysio's ergonomic table design caters to the full spectrum of patient profiles from pediatrics to bariatrics, offering a 660-pound weight capacity and a low table height of 21 inches for convenient positioning when shifting sick or elderly patients from wheelchair to table.

Computed Tomography

Siemens has from the earliest days, developed many significant products and protocols that follow the ALARA (As Low As Reasonably Achievable) principle to reduce radiation dose to the lowest possible level. With the world's first introduction of Iterative Reconstruction in Image Space (IRIS), Siemens now offers dose savings of up to 60 percent for a wide range of clinical applications. In an iterative reconstruction (IR), a correction loop is introduced into the image generation process. IRIS, Siemens' smart approach to IR, overcomes the time-consuming processing of theoretical

iterative reconstruction. In addition IRIS maintains a normal image impression solving the challenge of early statistical approaches.

Highlighting lowest dose and fastest speed, Siemens will also demonstrate the innovations of the SOMATOM® Definition Flash Dual Source computed tomography (CT) scanner. The SOMATOM Definition Flash requires only a fraction of the radiation dose that systems previously required to scan even the tiniest anatomical details. The fastest scanning speed in CT (i.e., up to 45 cm/s) and a temporal resolution of 75 ms enable complete scans of the entire chest region in just 0.6 seconds. Thus, clinicians now have a choice if they require their patients to hold their breath or not during the exam.

Furthermore, *syngo.via* provides a client-server solution for advanced visualization that makes AV, 3D, and 4D reading part of daily routine tasks, providing additional speed, accuracy and connectivity to all clinical decision makers.

Image & Knowledge Management

Get ready for advanced visualization to become common practice in the clinical routine when Siemens introduces *syngo.via*¹ at the RSNA 2009. With *syngo.via*, Siemens' new imaging software for multimodality reading of clinical cases, the company is placing special focus on reading efficiency through automated case preparation and structured case navigation across multiple specialties, including cardiology, oncology, and neurology. *syngo.via* uniquely integrates imaging devices and IT, such as Siemens MRI, CT, and PET-CT scanners and its new Picture Archiving and Communications System, *syngo®.plaza*³. Siemens is demonstrating the benefits of this integration, which creates a comprehensive solution based on client-server technology.

Siemens is also presenting *syngo.plaza*, a new agile PACS solution that will combine 2D, 3D, and 4D reading – enabling fast reading in any dimension – together in one place. *syngo.plaza* complements Siemens advanced imaging offering and integrates with its newest imaging software, *syngo.via*. The system features case-specific reading: based on clinical images, it automatically knows when to call up 2D, 3D, or 4D applications. The system remembers users' preferences and sorts images accordingly. Furthermore, the reading tools and layouts can be adapted to users' daily requirements. Due to its flexibility and minimal hardware requirements, users can re-use existing hardware components and easily add storage capacity.

Magnetic Resonance

Siemens Healthcare redefines productivity in MRI with the groundbreaking introduction of its new power couple: Tim® 4G², Total imaging matrix technology and Dot™², Day optimizing throughput engine. Both technologies are now available in the new MAGNETOM® Aera² 1.5 Tesla (T) and the new MAGNETOM Skyra² 3T Magnetic Resonance (MR) systems. The combination of Tim 4G and Dot delivers patient-centered care and significantly improved productivity across the entire MRI workflow. Tim 4G, now available with up to 204 coil elements and up to 128 receive channels, takes flexibility, accuracy, and speed to the next level. Dot, the imaging world's first MRI "throughput engine," offers patient personalization, user guidance, and exam automation to help optimize every part of the practice. It takes two to redefine productivity: Tim and Dot.

Mammography

syngo® MammoReport, Siemens Healthcare's reporting workstation for mammography, is not only fast and efficient for reading mammograms, but also allows to include 2D ultrasound and MR images into decision. From the end of 2009 on, *syngo* MammoReport is also adapting to new applications in breast imaging, by including the ABVS Workplace for the diagnosis of 3D ultrasound images. With this solution only one workstation is required for comprehensive breast diagnosis, enabling easy comparison of 3D ultrasound and mammography images. With this integration, *syngo* MammoReport is the only system that combines different breast reading tools and applications from one manufacturer.

Finding suspicious lesions or microcalcifications in breast images, often results in a biopsy. The MammoTest™ is Siemens fully digital prone table biopsy system with the largest breast aperture (11 inches) in the industry. It is ideally suited for visualizing the smallest microcalcifications and diagnosing masses and suspicious lesions, optimal contrast and spatial resolution for easy visualization of entire breast anatomy. Its unique polar coordinate system offers unobstructed view to needle/lesion with precise positioning (with +/- 1mm targeting accuracy), and "Target on Scout" capability (due to the exclusive angled-needle approach, a straight-on (0 degrees) Scout View can be used for targeting and confirming needle tip location).

With MammoTest, the patient always rests in a more comfortable prone position. The large aperture lets the breast and axilla fall away from the chest, offering unobstructed access to the region of interest. The special table design together with a rotating gantry, as well as the lateral arm offer true all-angles and fully 360 degrees patient and lesion access.

Molecular Imaging

Siemens Healthcare demonstrates the power of the Biograph™ mCT, the world's first molecular CT at RSNA 2009. Biograph mCT enables facilities to serve both the nuclear medicine and the radiology department with one system. It achieves this duality through the integration of powerful PET and CT technologies, offering High-Definition PET, time-of-flight technology, and CT configurations up to 128 slices. Biograph mCT is ultra-efficient, offering institutions cutting-edge technology, optimum patient care solutions and potential for increased return on investment. Siemens Healthcare highlights this game-changing technology, where Biograph mCT is utilized both as a dedicated CT and PET-CT imaging system, as well as sophisticated diagnostic tool for oncology management.

Siemens will also highlight Symbia®.net⁴, the new client-server solution for SPECT and SPECT-CT imaging applications for anytime, anywhere processing and reading. Symbia.net is part of Siemens Molecular Imaging's ongoing commitment to innovation and access. In addition to the recent release of several new systems into the PET-CT and SPECT-CT markets, this new client-server solution will allow facilities that require reading from multiple locations to easily share and access patient imaging data. Symbia.net is designed for the specific needs of molecular imaging with a user-friendly interface and advanced automation features. It improves clinical workflow by providing hospital staff with easy, economical, access to all patient cases and applications.

Ultrasound

Siemens Healthcare Ultrasound will highlight a new release of its premium ACUSON S2000™ ultrasound platform featuring significant advancements in Acoustic Radiation Force Imaging (ARFI) and contrast imaging, as well as a complete new imaging line for OB/GYN. In addition, the company will be showcasing the revolutionary ACUSON S2000™ Automated Breast Volume Scanner (ABVS).

Siemens' implementations of Acoustic Radiation Force Imaging (ARFI), Virtual Touch™ Tissue Imaging⁵ and Virtual Touch Tissue Quantification⁵, have been further optimized on the ACUSON S2000 ultrasound system. These leading-edge technologies add an independent parameter to the existing morphological diagnostic process by interrogating and measuring the mechanical strain properties or stiffness of tissue, which may be correlated with pathology. Virtual Touch Tissue Quantification is the first and only application to provide a numerical value related to tissue stiffness at a precise anatomical location which is highly promising in identifying early stages of liver diseases causing cirrhosis.

Furthermore, the system integrates advancements for Cadence™ contrast pulse sequencing technology⁶, providing highly sensitive agent detection with outstanding enhancement uniformity at high frame rate contrast agent imaging at frequencies from 1.5 to 18 MHz.

Siemens will also be introducing their new Women's Imaging line: the ACUSON S2000 ultrasound system – *Women's Imaging* and the ACUSON X300™ ultrasound system, premium edition (PE) – *Women's Imaging*. Both systems offer best-in-class imaging performance and a broad spectrum of applications designed to optimize workflow for the most demanding requirements in maternal-fetal medicine as well as routine clinical environments.

The automated volume breast ultrasound with the ACUSON S2000 ABVS system takes operator dependence and variability out of breast ultrasound, while at the same time streamlining workflow with an acquisition time of less than 10 minutes. Never-before-seen anatomical views of the breast, such as the coronal view, increase diagnostic confidence while semi-automated reporting and comprehensive BI-RADS® reporting capabilities further enhance the clinical workflow.

¹ *syngo.via* can be used as a standalone device or together with a variety of *syngo.via*-based software options, which are medical devices in their own rights.

² The information about this product is being provided for planning purposes. The product requires 510(k) review and is not commercially available in the U.S.

³ The information about *syngo.plaza* is being provided for planning purposes. The product is pending 510(k) review, and is not yet commercially available.

⁴ *Symbia.net* is pending 510(k) review and is not yet commercially available in the U.S.

⁵ Not available in the United States.

⁶ At the time of publication, the U.S. Food and Drug Administration has cleared ultrasound contrast agents only for use in LVO. Check the current regulation for the country in which you are using this system for contrast agent clearance.

The **Siemens Healthcare Sector** is one of the world's largest suppliers to the healthcare industry and a trendsetter in medical imaging, laboratory diagnostics, medical information technology and hearing aids. Siemens is the only company to offer customers products and solutions for the entire range of patient care from a single source – from prevention and early detection to diagnosis, and on to treatment and aftercare. By optimizing clinical workflows for the most common diseases, Siemens also makes healthcare faster, better and more cost-effective. Siemens Healthcare employs some 49,000 employees worldwide and operates in over 130 countries. In fiscal year 2008 (to September 30), the Sector posted revenue of 11.2 billion euros and profit of 1.2 billion euros. For further information please visit:

www.siemens.com/healthcare.