

Healthcare Sector

Siemens Offers Imaging Innovation and Affordable High-end Performance at RSNA 2011

Computed tomography, molecular imaging, ultrasound headline Siemens new offerings

Chicago, November 27, 2011 – At the 97th Scientific Assembly and Annual Meeting of the Radiological Society of North America (RSNA), from November 27 to December 2 in Chicago, Siemens Healthcare (Booth #822, East Building/Lakeside Center at McCormick Place, Hall D) again leads the way in medical imaging innovation by offering industry-redefining advancements in computed tomography, molecular imaging, ultrasound technology and more – while demonstrating an increasing cost consciousness that expands the availability of its cutting-edge systems to a wider range of customers than ever before.

“This RSNA, Siemens underscores its commitment to the customer by continuing to deliver cutting-edge technology while demonstrating sensitivity to the increasing cost pressures of the international health care community,” said Hermann Requardt, CEO, Siemens Healthcare. “As an essential part of the new global initiative Agenda 2013, Siemens will further extend the portfolio of systems in the middle price segment, demonstrating how it leads the way in health care innovation by helping to manage price pressures without sacrificing optimal patient care.”

At RSNA 2011, Siemens will showcase the following technologies:

Angiography

Siemens introduces new features to the Artis zeego, the only interventional imaging system on the market utilizing robotic technology. For the first time, an angiography system can rotate 360 degrees in just six seconds with the new *syngo*[®] DynaCT 360 application, which provides soft tissue images with a large (35 x 25 cm, 13.8 x 9.9 inches) field of view. The *syngo* DynaCT 360 enables visualization of the entire tumor anatomy and feeding vessels for chemoembolizations, radiofrequency ablations and chemoperfusions in interventional oncology as well as the entire abdomen to improve graft positioning, check endoleaks, etc. Possessing a shorter acquisition time than the regular and Large Volume *syngo* DynaCT, the *syngo* DynaCT 360 also facilitates less dose and contrast media than the Large Volume *syngo* DynaCT.

All new Artis zee systems now possess all dose reduction/reporting applications as a standard. Available at no extra cost to all existing Artis zee customers, Siemens CARE (Combined Applications to Reduce Exposure) package reduces radiation and simplifies the post-examination documentation of dose values. Applications such as radiation-free collimation and patient positioning, pulsed fluoroscopy and automated Cu-filtration reduce patient and physician exposure up to 75 percent. A new addition to Siemens already comprehensive dose-saving portfolio, the CARE Analytics dose analysis application enables medical staff to evaluate previously recorded dose data and make future improvements.

Siemens is also showcasing new functions to its *syngo* Embolization Guidance imaging software to facilitate the minimally invasive embolization of tumors. An updated version of the software aids with treatment planning based on pre-intervention MR images and delivery, and allows the user to monitor treatment outcomes. *Syngo* Embolization Guidance can accelerate interventional procedures, helping to reduce contrast medium and dose.

Computed Tomography

The ability to deliver outstanding images at low dose is central to innovations developed by Siemens CT. The groundbreaking technologies, which will be on display at RSNA '11, are designed with patient care in mind to help healthcare professionals perform CT examinations faster, safer and more efficiently. For example, the SOMATOM Definition Flash can perform pediatric examinations without the need for sedation and cardiac imaging without the need for beta-blockers. Additionally, FAST CARE – a technology platform for CT scanners – helps hospital staff perform CT examinations faster and more efficiently, while enabling doctors to keep the patient dose as low as possible.

With the SOMATOM line of Siemens CT scanners, patients benefit from lower radiation dose and shorter examination times because the system automates many operating procedures, suggests parameter settings for image quality and dose reduction, and standardizes processes, which makes results readily reproducible.

Healthcare Policy and Clinical Affairs

At this year's RSNA, the Siemens Healthcare Policy and Clinical Affairs department will share information on "Preparing for Tomorrow's Healthcare," detailing ways in which health care entities can deliver better, more cost-effective patient care. The booth presentation will examine future trends in healthcare, provide an overview of imaging reimbursement, chart global imaging trends,

examine public perception vs. reality in U.S. imaging, and describe the ways in which Siemens will lead the way in the coming diagnostic revolution.

Imaging IT

syngo®.via¹ means efficiency and ease of use in advanced visualization, anywhere.² It automatically preselects the information and workflow, and provides insightful guidance on disease-specific requirements. Now at RSNA '11, unleash *syngo*.via's full potential with its latest version, which enables more than double the applications. Thousands of new features and improvements open up a broad range of clinical fields and new use cases, making *syngo*.via a one-of-a-kind solution. With *syngo*.via Mobile Applications, physicians and referrers within and outside the hospital can securely access images and reports for viewing in a standard Web browser or on an Apple® mobile device.³

syngo.plaza is the agile PACS for clinical routine, offering 2D, 3D and 4D reading in one place. With more than 150 installations already in clinical production worldwide, the new version of *syngo*.plaza is scheduled for release in December. Highlights of *syngo*.plaza VA20C are increased loading performance and support of central application management⁴ to reduce complexity and costs. Through case-specific reading and a wide application range, *syngo*.plaza supports users in efficiently reading complex multimodality cases. It allows a smooth transition between different applications and helps speed up the reading workflow in small and large hospitals alike.

Finally at RSNA '11, Siemens will spotlight the Cardiovascular Workplace, which provides personalization of the healthcare provider workspace by bringing together the power of *syngo* Dynamics for multi-modality cardiovascular imaging and information, and *syngo*.via for advanced visualization and auto case preparation. The Cardiovascular Workplace provides a holistic patient-centric view of the cardiovascular record and enables exam review, reporting and distribution through a single point of control. Anytime, anywhere access to reporting, imaging and user management is provided through Web-accessible applications.²

Magnetic Resonance

Dot™ (Day optimizing throughput) – Siemens MRI workflow solution for consistent, more reproducible results and increased productivity – is currently available on the MAGNETOM Aera 1.5T and MAGNETOM Skyra 3T. It enables up to 50 percent more productivity⁵ by offering exam personalization, user guidance and workflow automation. Three new Dot engines – the Breast Dot Engine,⁶ Spine Dot Engine⁶ and Large Joint Engine⁶ – for additional clinical indications

complementing the existing seven Dot engines are in the pipeline for the MAGNETOM Aera 1.5T and MAGNETOM Skyra 3T. Next in Siemens pipeline is Dot for the MAGNETOM Avanto⁶ 1.5T and MAGNETOM Verio 3T.⁶

After proven innovation leadership on the receive side with Tim (Total imaging matrix) integrated coil technology, Siemens will expand on the transmit side: TimTX TrueShape⁶ is Siemens upcoming architecture for parallel transmit (pTX) imaging.⁶ Based on this technology, the first parallel transmit application *syngo ZOOMit*⁶ is introduced, enabling the technologist to zoom into an MRI image, accelerating the scan. This new technology and application will be fully integrated into the MAGNETOM Skyra 3T.

A year after its global introduction, the Biograph mMR – the first fully integrated whole-body molecular MR offering simultaneous MR and positron emission tomography (PET) imaging – has been embraced by research institutions, as well as private practices and the clinical environment. The Center for Modern Diagnostics (CEMODI) in Bremen, Germany, is the first private practice facility to use the Biograph mMR for routine patient examinations. More than 20 Biograph mMR units have been ordered by university hospitals, research sites and private practices worldwide. Clinical cases and images from around the world support this pioneering imaging system's arrival into the clinical world.

Molecular Imaging

At this year's RSNA, Siemens will highlight its Symbia™ family of SPECT and SPECT•CT scanners, as well as exciting new areas in imaging biomarker production and distribution. Symbia offers a broad range of specialty diagnostic tools and can satisfy the needs of virtually all facilities through innovative technologies such as IQ•SPECT and automated productivity features.

Addressing two of the most challenging issues facing physicians today – improving patient safety and increasing productivity – Symbia IQ•SPECT technology enables routine scans using half dose and double speed. Its proven technologies provide a comprehensive cardio workup, while easing the burden of the global molybdenum shortage via a reduction in technetium dose. Diagnostic SPECT•CT, including calcium scoring, uses half of the typical technetium dose and cuts acquisition time from approximately 20 minutes to less than five minutes with the addition of IQ•SPECT.

In the area of imaging biomarker production and distribution, PETNET Solutions, a wholly owned subsidiary of Siemens Medical Solutions USA, Inc., is continuing to expand to meet the growing demand for PET radiopharmaceuticals. PETNET Solutions recently entered into a nationwide commercial agreement with Eli Lilly and Company that grants Siemens PETNET Solutions the right to manufacture and distribute Lilly's molecular imaging agent that is currently under review by the U.S. Food and Drug Administration (FDA) for positron emission tomography (PET) imaging.

Radiography and Surgery

Luminos Agile is the first patient-side controlled system with a dynamic flat detector, height-adjustable table and true dual-use capability for fluoroscopy and radiography. Luminos Agile's 17 x 17 inch dynamic flat detector yields an image that is up to 116 percent larger and allows for better patient coverage than a 13 inch image intensifier, enabling users to view objects without repositioning the patient or changing the field of view, and reducing overall fluoroscopy time and dose. Luminos Agile's 606 lb. table weight capacity and 24 inch wide opening provide easy access for bariatric and immobile patients, and the space-saving open design enables easy access from all table sides.

The Ysio sets the industry standard in digital radiography with fingertip convenience, digital speed and future reliability. Offering excellent flexibility in every dimension as well as a wireless detector, fully automated positioning and a wide variety of configurations, the system is as individual as your routine.

Siemens also is showcasing the Mobilett Mira, the company's first mobile digital X-ray system with a wireless detector that transmits image data via W-LAN to an integrated imaging system, facilitating examinations of critically ill patients with limited mobility. One of the smallest mobile X-ray systems available and possessing a resolution exceeding 7 million pixels, the Mobilett Mira features a detector that delivers image quality comparable to high-resolution stationary systems, and works with very short exposure times beyond one millisecond. Furthermore, its mobile X-ray swivel arm system not only moves vertically but also rotates up to 90 degrees.

The ARCADIS Avantic mobile C-arm X-ray system offers an overall ergonomic concept that redefines clinical workflow in many fields of practice. Features include powerful performance (generator power of 25 kW, high tube currents of up to 250 mA, and surpassing endurance through 2.57 Mega Heat Units heat capacity) and precise imaging with a larger field of view. Thanks to its optimally matched and fully digital 1K² imaging chain from image acquisition to viewing and

archiving, its Mu-metal shielded 33 cm (13 inch) image intensifier, and EASY (Enhanced Acquisition System) with automatic dose, contrast and brightness control, ARCADIS Avantic yields brilliant images in every situation.

Refurbished Systems

High-quality economical and ecological solutions are what Siemens Refurbished Systems is all about – which is why Siemens is proud to launch its new Ecoline product portfolio at RSNA '11. Ecoline provides customer solutions in two vital areas: cost-efficient, high-quality care, courtesy of Siemens five-step Proven Excellence refurbishment process, coupled with an environmentally friendly impact. Due to healthcare's changing demands, Ecoline now fulfills an expanded range of medical imaging and economical needs, offering a new scalable solution that allows customers to select system refurbishment options that are tailored to their needs, as well as the latest refurbished technology that has undergone Siemens in-depth Proven Excellence quality process to produce a like-new system. And Siemens Proven Excellence refurbishment process can reduce annual CO₂ emissions by as much as 20,000 tons, since refurbished systems boast an average material reuse rate of 98 percent.

Siemens debuts its Ecoline portfolio at RSNA '11 even as it celebrates 11 years of customer satisfaction for refurbished systems, offering a broad product line that includes X-ray, angiography, CT, molecular imaging (SPECT•CT, PET, PET•CT), MRI, ultrasound and oncology. Siemens Proven Excellence quality seal – which represents the fulfillment of strict specifications of relevant international norms and standards, as well as safety regulations – ensures a high level of performance for all Ecoline systems.

Ultrasound

Siemens will showcase the 3.0 release of its ACUSON S2000™ ultrasound system at RSNA '11. This latest version of Siemens ACUSON S2000 platform is designed to provide users with powerful imaging performance and penetrating insights to achieve optimal diagnosis. The 3.0 release adds two transducers to its existing suite: the 6C1 HD (high-density) abdominal imaging transducer and the V7M TEE (transesophageal echocardiogram) pediatric cardiology transducer. It also offers sensitivity enhancements to Siemens Cadence™ contrast pulse sequencing technology.⁷

Additionally, the ACUSON S2000 system features second-generation Virtual Touch™ technology⁸ – Siemens proprietary implementation of Acoustic Radiation Force Impulse (ARFI) imaging for the evaluation and quantification of tissue stiffness.

The ACUSON S2000 ultrasound system represents the pinnacle of innovative technology, workflow-enhancing clinical applications and sleek-yet-functional ergonomic design. The latest iteration of this premium system provides stellar B-mode imaging and color Doppler for routine examinations, as well as the deep abdominal penetration needed for particularly challenging cases. Covering the entire continuum of care from screening to diagnosis to therapy and follow-up, the new ACUSON S2000 features applications across general imaging, including obstetrics and gynecology, as well as vascular and cardiac imaging.

Women's Health

On display at RSNA '11, the MAMMOMAT Inspiration offers digital screening and diagnostic mammography, stereotactic biopsy and upgrade capability to future technologies all in one system. With its unique MoodLight™ LED light panel, the MAMMOMAT Inspiration helps provide a warmer environment by illuminating soft, pastel colors. To match breast density and thickness, the Inspiration offers three anode/filter combinations: Mo/Mo, Mo/Rh and W/Rh. The Inspiration's Opdose® feature automatically selects the appropriate anode/filter combination and the lowest radiation dose for individual breast characteristics. The Inspiration's Opcomp® function applies compression only as long as the patient's breast is soft and pliable – stopping at the point of optimal compression.

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 Prerequisites include: Internet connection to clinical network, DICOM compliance, meeting of minimum hardware requirements, and adherence to local data security regulations.

³ Apple®, the iPhone®, the iPad®, iPod Touch® are trademarks of Apple Inc., registered in the U.S. and other countries. *syngo.via* Mobile Applications are not intended for diagnostic use. For iPhone and the iPad country specific laws may apply. Please refer to these laws before using for diagnostic reading / viewing.

⁴ *syngo.plaza* VA20C and Citrix XenApp 6.0 required.

⁵ Data on file; results may vary.

⁶ This product is under development and not commercially available yet. Its future availability cannot be ensured.

⁷ At the time of publication, the U.S. Food and Drug Administration has cleared ultrasound contrast agents only for use in LVO. Check current regulations for the country in which you are using this system for contrast agent clearance.

⁸ Virtual Touch technology is not commercially available in the U.S.

Launched by **Siemens Healthcare Sector** in November 2011, Agenda 2013 is a two-year global initiative to further strengthen the Healthcare Sector's innovative power and competitiveness. Specific measures will be implemented in four fields of action: Innovation, Competitiveness, Regional Footprint, and People Development.

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 offers its 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 51,000 employees worldwide and operates around the world. In fiscal year 2011 (to September 30), the Sector posted revenue of 12.5 billion euros and profit of around 1.3 billion euros. For further information please visit: www.siemens.com/healthcare.

###