

## Healthcare

Trade press release

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**ECR 2008**

### **European Congress of Radiology 2008: Overview of the Siemens highlights**

**At the European Congress of Radiology 2008 (ECR 2008) Siemens Healthcare presents its comprehensive portfolio for radiology and introduces numerous new solutions and products for the improvement of workflows in this special medical field. On the occasion of the Women's Health Days organized by the European Society of Radiology in Vienna, Siemens also places special focus on the topic of "Breast Care". The company therefore shows its Breast Care products and solutions not only at the trade show booth but also in a special trailer that is accessible to the public.**

The innovations presented at the ECR 2008 in Vienna include the new system for digital radiography, Ysio from Siemens. By selecting modules from a program, users can create their own Ysio X-ray system customized to their needs.

Encouraged by the outstanding marketing success of the worldwide first dual-source CT system Somatom Definition with two X-ray tubes that simultaneously generate different energies, Siemens Healthcare has already developed six specific dual-energy applications. At the ECR 2008, Siemens presents four new applications that simplify the diagnosis of diseases of the heart, brain, lungs and extremity joints.

The new Acuson S2000 platform is the first ultrasound system of the new S product line presented by Siemens Healthcare. The latest technologies integrated in the platform are

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intended to optimize the workflow and considerably simplify the physician's work. The system is also well equipped for future applications: It enables the implementation of innovative ARFI (Acoustic Radiation Forced Impulse) imaging and is prepared for integration of the latest silicon ultrasound technology, which is almost ready for the market.

The new role-based portals syngo Portal Radiologist, syngo Portal Referring Physician and syngo Portal Executive, support radiologists and hospital personnel with intelligent access to and management of patient images, data or reports. All portals contribute at various levels not only to optimization of workflows, but provide users with innovative applications from within their own work context. This is supplemented by new applications for computer aided diagnostics (CAD) such as the software syngo TrueD.

In addition, Siemens presents a whole series of different highlights from its radiology portfolio at the ECR 2008.

## **Magnetic resonance imaging (MRI)**

### Siemens is pushing the boundaries again

Siemens has proven again its technology leadership in MRI with the introduction of two new magnetic resonance systems based on Tim (Total imaging matrix) technology – namely the MAGNETOM ESSENZA and the MAGNETOM Verio. MAGNETOM ESSENZA meets customer requirements for a cost-effective, yet qualitatively high magnetic resonance system. MAGNETOM Verio is the world's first MRI system to combine 3-tesla technology with a 70 centimeters Open Bore plus Tim technology. The enlarged opening accommodates patients who could not be examined with earlier 3-tesla systems, such as claustrophobic and obese persons and patients who require special positioning. The unique Tim technology was developed by Siemens. Since its introduction in 2004, it has been installed more than 3000 times. Tim enables superior image quality, higher patient comfort as well as optimal workflow. It has been demonstrated that customers with Siemens MR systems equipped with Tim technology have shown patient throughput increases up to 50 percent. In some cases examination times have been cut in half- a whole-body examination requires less than 10 minutes, for example.

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One of the main goals of Siemens is improving the workflow by the automation of single steps. From the work at the scanner to post-processing and evaluation, syngo, the highly intuitive Siemens cross-modality user interface enables to operate the scanner quickly and easy. The Inline technology automates daily post-processing activities. Clinical results can be evaluated immediately. In the cardiology sector, fully automatic detection of heart contours and their motions are performed during image acquisition. The physician is able to evaluate heart functions directly following the examination. Previously, the image data had to be transferred to a post-processing computer, and contours had to be frequently post-processed by hand.

Even getting a second opinions and answers to clinical questions while a patient is being scanned, is possible. Using syngo Expert-i, physicians and experts can remotely access the MR suite from anywhere in the network.

## **Computed tomography**

### One for all: Somatom Definition AS

With the Somatom Definition AS (Adaptive Scanner), Siemens introduces a new way to use single source CT. This is the first time that a scanner adapts to virtually any patient and any clinical need, making it an expert in any clinical field and allowing comprehensive examination even of most different patient groups like children and obese or trauma patients. An innovation to minimize dose is the Adaptive Dose Shield. With this technique patients benefit from dose saving by up to 25% in all spiral CT examinations. Moreover, the Somatom Definition AS is the first CT scanner to provide 3D image guidance for interventions to facilitate not only routine biopsies but also complex interventions such as radio frequency (RF) ablations and minimal invasive procedures. Another outstanding feature is the new Adaptive 4D-Spiral scan mode. The continuous movement of the patient table permits whole organ perfusion and dynamic studies up to 27 cm. In a stroke situation, for example, the entire brain perfusion can be evaluated. With previous systems, only a portion of the affected organ could be imaged. The extraordinary adaptability of the Somatom Definition AS to most diverse clinical needs and patients makes a decisive contribution to workflow optimization and facilitates integration of CT imaging in medical procedures. The new Siemens scanner

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can be used, for example, for stroke diagnosis, can function as a non-invasive catheter laboratory or as a tool for therapy management with cancer patients or even as an intervention suite – all according to the need of the individual patient.

## **Angiography**

### Artis zeego – Robotic technology for medicine

The new Artis zeego angiography system from Siemens Healthcare introduces unprecedented flexibility for angiography, cardiology and hybrid operating rooms. The robot technology integrated in Artis zeego allows the physician to move the C-arm to almost any position around the patient. This makes it easier than ever before to visualize internal organs from various sides, if - for example - tumors or vessel diseases have to be treated. Artis zeego supports innovative 3D imaging such as cross sectional imaging with syngo DynaCT. Artis zeego's unique Large Volume cross-sectional imaging capability, allows for example for better coverage of the entire abdomen which is a clear advantage when treating obese patients or patients with liver cancer.

## **Radiation therapy**

### Low-impact and efficient: Artiste linear accelerator for adaptive radiation therapy

The Artiste linear accelerator from Siemens provides various imaging modes and numerous treatment protocols and thus offers all prerequisites for adaptive radiation therapy. The objective of this treatment method is to focus maximum radiation intensity on the tumor while preserving the surrounding healthy tissue. Before the treatment is started, a CT scan is performed or - what is particularly time-saving - the treatment beam is directly used to check whether the tumor is located exactly at the position calculated in the treatment planning. The Adaptive Targeting concept of Artiste enables the oncologist to detect and correct changes in the anatomy and shifts in the patient position at the time of the treatment and maximize the dose exactly in the tumor. All clinical decision makers can view the image and patient information on the monitor of user-specific syngo Suite for Oncology workplaces. Artiste uses the 160 high-speed blades of its MLC (Multi-Leaf-Collimator) to adapt the treatment beam to the tumor shape at highest accuracy and optimize homogeneous dose distribution.

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## **Molecular Imaging**

### PET-CT: High-Definition PET from Siemens sets new standards for image sharpness

Siemens has set new standards for the quality of molecular imaging by introducing the high-resolution positron emission tomography (High-Definition PET, HD•PET) for PET computed tomography systems (PET-CT). The worldwide unique 2-millimeter resolution technology enables more sharpness and clearness of the images in the entire field of view. Thus, the physician is able to define small lesions more precisely - even inside lymph nodes, in the abdomen, in the head and neck region and in the brain. Moreover, the improved signal-to-noise ratio provides sharper images on which the physician can differentiate more easily between healthy and possibly diseased tissue. This allows the initiation of selective treatment earlier than before. HD•PET is based on the Siemens TruePoint technology, a unique combination of technical features and workflow solutions for PET-CT imaging that optimize patient diagnosis, treatment and care. HD•PET is available for all biograph TruePoint systems and can – as an extension – be integrated in already operating TruePoint systems.

## **Intraoperative imaging**

### The Arcadis C-arm family: Efficient workflow and excellent image quality in the OR

Siemens introduces the newest generation of the company's Arcadis C-arm product family at the German Congress for Orthopedics and Trauma Surgery in Berlin, Germany. With this generation, surgical workflows have been optimized through numerous improvements. These include, for example, the new ergonomic monitor trolley and the easy user interface. Also an intelligent algorithm automatically adjusts and optimizes the image quality. All systems are suitable for broad clinical applications: in orthopedics, trauma and neurosurgery as well as gastroenterology, vascular and cardiac surgery or in urology. The new generation of the Arcadis C-arm family includes such systems as Varic, Avantic and Orbic (Orbic 3D) that have been successfully used in their initial version in hospitals around the world. These mobile C-arms of Siemens are based on syngo, an intuitively operated Siemens software platform that facilitates clinical workflows in many ways.

## **Customer Services**

### Customer Care. Life – Customer Care program with comprehensive services

The Customer Care. Life care concept offers training courses for almost all modalities as presence events or as e-learning in German and English. Customer Care. Life also includes services for customers who want to utilize today's investments throughout the system life cycle and realize a maximum return on their investments.

The Customer Care program offers a multitude of innovative proactive services that enable the detection of potential faults in medical systems before malfunctions occur. This minimizes downtimes at the customer and decisively improves planning security and workflows in hospitals and medical practices. The Siemens Guardian Program, for example, allows the real-time, proactive online monitoring of medical systems. System errors and potential deviations from the current standard values can be quickly detected and remedied so that reliability and availability of the system are considerably increased. This is enabled by the Siemens Remote Service (SRS) platform to which Siemens can connect the systems of its customers worldwide. Today, up to 50 percent of all system malfunctions can be remedied by SRS via remote access.

## **Consulting**

### Consulting for service providers in the healthcare sector

With its consulting services, Siemens Healthcare assists service providers in the healthcare sector in successfully positioning themselves on the market today and in the future.

Interdisciplinary consulting teams concatenate the fields of strategy, clinical and administrative process optimization, technology and infrastructure planning. They devise action plans in due account of economic aspects and individual customer requirements. For example: Siemens consultants assist the Diakonessenhuis Utrecht, Netherlands, in optimizing its workflow. As a result, the number of process steps for varicose vein treatment has been reduced there by half.

## **Refurbished Systems**

### Environmental Siemens concepts for medical engineering systems

To reuse pre-owned systems as much as possible is an important component of the company's philosophy. Resources are conserved by extending the life cycle of a product. For example, computed and magnetic resonance tomographs, ultrasound, radiation therapy and radiography systems are accepted back by Med and reconditioned by the Refurbished Systems division. For this purpose, an extensive five-level quality process was developed (system selection, qualified disassembly, refurbishing process, installation, liability for material defects) that matches the same high quality standards for new systems. Through this integrated approach, a yearly discharge of 10000 tons of CO<sub>2</sub> is eliminated. These energy savings correspond to the yearly electrical energy demands of 3,000 3 person households.

**Siemens Healthcare** 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 fully integrated diagnostics 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. The company employs more than 49,000 people worldwide and operates in 130 countries. In the fiscal year 2007 (Sept. 30), Siemens Healthcare reported sales of €9.85 billion, orders of €10.27 billion, and group profit of €1.32 billion. Further information can be found by visiting <http://www.siemens.com/healthcare>