

Bringing Immersive 3D from the Movies to Medicine



syngo.fourSight Workplace allows users to experience 3D images in true 3D.

Utilizing technology that has its roots in immersive 3D movies, the new Siemens ultrasound *syngo.fourSight™ Workplace* image management software demonstrates how patients and their doctors can view remarkable, high-resolution, 3D/4D images of a fetus. The solution employs an NVIDIA® Quadro® FX 3800 professional graphics card, a Samsung 2233RZ 22-inch (56-centimeter) 3D Vision-ready LCD, and NVIDIA 3D Vision™ glasses. Siemens *syngo.fourSight Workplace* manages clinical images, clips, and 3D/4D volume data.

The clinical images, obtained with the ACUSON S2000™ ultrasound system, are further enhanced using Amnioscopic Rendering, a Siemens-exclusive technology that produces photo-realistic 3D

images. While conventional 3D ultrasound technologies use two-dimensional monitors for the evaluation of 3D images, with NVIDIA 3D Vision technology, viewers can experience these images in true 3D, which vastly improves the overall ultrasound experience.

"This technology offers a truly remarkable experience that is rewarding for parents and their doctors, while also delivering practical benefits in medicine," says Barbara Del Prince, Global Segment Manager, Obstetrics and Gynecology at Siemens Ultrasound. The quality improvement may provide additional information to the physician and assist in communication with surgeons and parents or aid in treatment or interventional planning.

Journey Through the Stomach

Siemens and Olympus Medical Systems Corporation are collaborating on developing technology for a Magnetically Guided Capsule Endoscope (MGCE) System. This innovative technology is intended to allow stomach examinations to be performed easily and comfortably by having the patient simply swallow an endoscope in the form of a capsule. The patient is to then lie down in a magnetic guidance system. It is envisioned that the physician, via a joystick, will then be able to navigate the capsule easily to the areas of interest and that the capsule will provide real-time, high-resolution images on a display in the examination room. Haruhito Morishima, President, Olympus Medical Systems Corporation, explains, "Our aim is to create endoscopes that minimize the stress on patients and that are user-friendly for physicians. We see this joint development project with Siemens as the

realization of one of our visions for the future of capsule endoscopes." Hermann Requardt, CEO of Siemens Healthcare adds, "In cooperation with our partner Olympus, we usher a new era in endoscopy. We believe that the magnetically guided capsule endoscope will enable quick examinations that are comfortable for the patient."

It is often difficult to guide the capsule to a specific location, and examinations today are therefore limited to confined areas of the gastrointestinal tract such as the small intestine. Siemens and Olympus are jointly developing the capsule endoscopy unit, the magnet guidance system, and the image processing and guidance information systems. The capsule endoscope will be approximately 31 mm (1.22 inches) long and 11 mm (0.43 inches) in diameter. Camera systems are mounted at both ends of



the capsule. Currently, the two providers have developed a prototype that will be used to determine the safety, effectiveness, and benefits of this new generation of endoscopic technology. During the examination, the patient's stomach will be filled with water to provide a field of vision for the capsule endoscope and enable navigation. It is anticipated that the physician will control the motion of the capsule with a joystick, which enables real-time observation of the complete stomach.

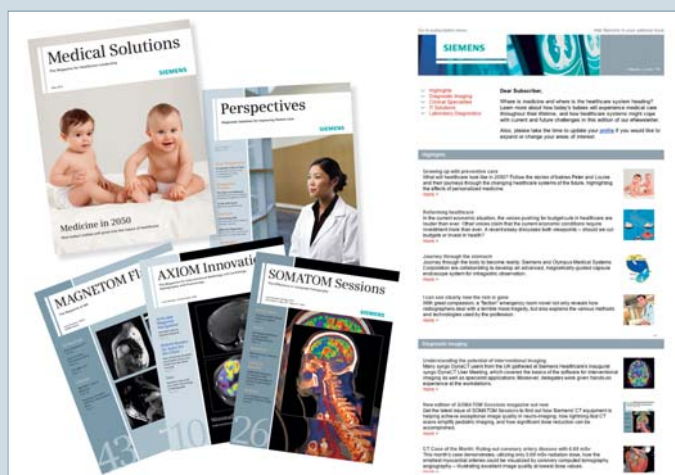
Among Europe's Best

Siemens Healthcare Publications received the Silver Award in the category "Best Crossmedia Solution" at the BCP Best of Corporate Publishing Congress in Hamburg, Germany. Under the topic "Healthcare Publications," Siemens Healthcare submitted its crossmedia publications portfolio, which consists of the business-to-business magazine *Medical Solutions*, the expert magazines *AXIOM Innovations* (angiography, radiography, and fluoroscopy), *SOMATOM Sessions* (computed tomography), *MAGNETOM Flash* (magnetic resonance imaging), and *Perspectives* (laboratory diagnostics), and the Healthcare Newsletter. The jury was comprised of more than 100 renowned

experts from the areas of journalism, design, marketing, corporate/internal communication, print, and direct marketing. Obtaining the BCP Silver Award places Siemens Healthcare among the top corporate crossmedia publishers in Europe. The jury of the largest corporate publishing contest in Europe honored the best publications out of more than 600 entries in 29 permanent and four special categories. The BCP Award has enjoyed an excellent reputation since the first congress in 2003, and quantity and quality of entries is increasing. The 8th BCP congress 2010, under the patronage of the German Minister of Economics and Technology, Rainer Brüderle, took place with the slogan "Smart Content – All Media: Integration in Corporate Publishing." International experts discussed the future of print media and digital trends in the corporate publishing market before dedicating themselves to the award ceremony.

Already in 2008, Siemens Healthcare received two Silver Awards for its customer magazine *Medical Solutions*. This year, in the category "Best Crossmedia Solution," Siemens Healthcare Publications succeeded as the only crossmedia solution in the healthcare field nominated.

We hope you are just as satisfied with our media as the jury. Don't hesitate to tell us your opinion at editor.medicalsolutions.healthcare@siemens.com. If you would like to subscribe to any of our periodicals, please visit www.siemens.com/healthcare-magazine or www.siemens.com/healthcare-eNews.



New Molecular Assay for the Detection of Chlamydia and Gonorrhoea

Chlamydia trachomatis (CT) and Neisseria gonorrhoeae (GC) infections are often asymptomatic and represent a silent epidemic around the world. Siemens' new VERSANT[®] CT/GC DNA 1.0 Assay (kPCR)¹ addresses increasing prevalence of these common sexually transmitted diseases to help aid detection and treatment, thereby preventing morbidity and reducing medical costs. The assay's high sensitivity and specificity provide reliable results and increased workflow efficiency. The new VERSANT CT/GC DNA 1.0 Assay (kPCR) is a qualitative in vitro diagnostic assay for the detection of CT and GC. The assay is designed to detect the presence of CT and GC in both symptomatic and asymptomatic individuals from female endocervical swab specimens, male urethral swab specimens, as well as female and male urine specimens. Increased flexibility is provided by multiple testing options with dual detection of CT and GC or CT only. The VERSANT CT/GC Assay provides features to enhance assay

performance and productivity and shows high concordance to Gen-Probe APTIMA² combo 2 assay. The unique nucleic acid isolation method results in increased DNA recovery and reproducibility. The assay provides real-time and simultaneous detection of CT and GC along with an internal control to monitor PCR inhibition that reduces the risk of false negative results. The unique combination of external controls, using heat-inactivated CT and GT cells, mimics a patient specimen. The chemical contamination control, using heat-labile Uracil-N-glycosylase (UNG), prevents false positive results to provide high system reliability. The minimal sample volume of 250 µL allows for repeat testing, and the total time-to-first result is less than five and a half to six hours. The minimal hands-on time results in increased workflow efficiency with 188 test results per shift and especially addresses the needs of medium volume (50-150 assays/day) testing labs.

¹ Not available for sale in the U.S.

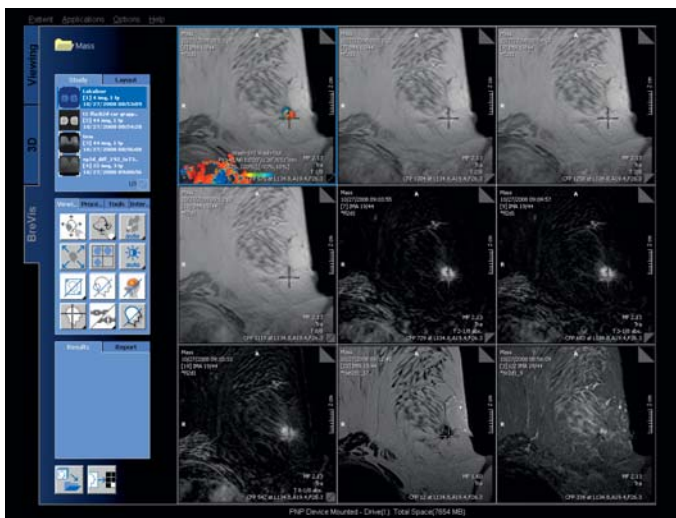
² APTIMA is a trademark of Gen-Probe Incorporated, San Diego, CA, USA.

Efficient and Standardized Workflow for Breast MRI

The clinical team at the University Hospital of Jena, Germany, has put *syngo*® BreVis to the test. The result: improved reading of magnetic resonance imaging (MRI) breast exams, both in the clinical and in the research setting. Siemens' dedicated MRI breast care workplace includes *syngo* BreVis for streamlined reading and reporting and *syngo* BreVis Biopsy for a fast and accurate MRI breast biopsy workflow with automatic calculation of target coordinates.

In Jena, both tools are used in the clinical routine as well as in research settings. *syngo* BreVis is improving workflow in both. Among its advantages are robust performance, simple operation, and the possibility for individual adjustments. The latter allows for compensation of unexpected clinical and technical variations that are encountered in daily clinical routine.

Routine clinical images in Jena are acquired using a 1.5 Tesla MAGNETOM® Avanto MRI system. The imaging protocols enable examination of four patients per hour and thus, 40 to 50 patients per day and per scanner. In the research scenario (using MAGNETOM Avanto and 3 Tesla MAGNETOM Trio), a variety of dynamic protocols, including high temporal and/or spatial resolution dynamic sequences in 2D or 3D techniques, in part with fat saturation, are performed. As a result, fewer patients are examined, but much more data is acquired per patient. *syngo* BreVis handles these amounts of data and even automatically detects double dynamic imaging (split dynamics) protocols. The additional display segments easily allow the review of supplemental (e.g., diffusion weighted imaging) data together with dynamic as well as morphologic analysis.



Efficient lesion evaluation with *syngo* BreVis

Providers Embrace Outsourcing as Part of their IT Strategy

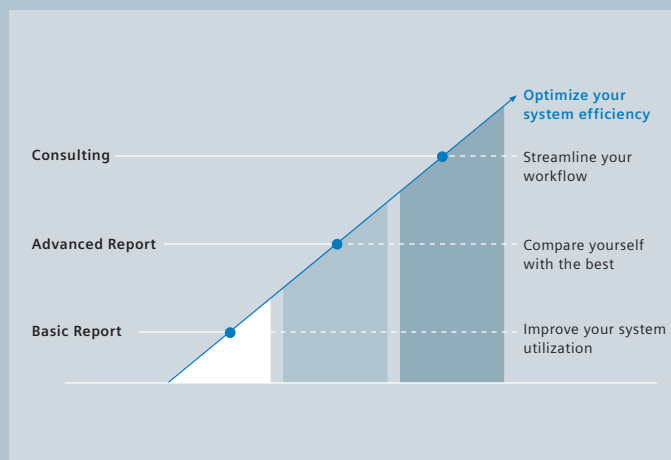
In the face of decreasing healthcare budgets and an aging population, healthcare providers across the globe need an IT strategy that offers the flexibility and scalability to meet tomorrow's needs. The long-term goal for any healthcare provider should be to implement staff and solutions to maximize the ability to collect and analyze data, helping improve the quality and delivery of patient care. Managed Services IT Outsourcing is a good way to keep pace with growing service demands in a time of ever-increasing IT complexity.

Scott & White Healthcare in Temple, Texas, a fully integrated health system with the sixth largest group practice in the USA, and Caldwell Memorial Hospital, a 110-bed, community, non-profit hospital in Lenoir, North Carolina, both use Siemens Managed Services IT Outsourcing offering. Their examples show that they are not only well positioned to meet today's challenges, but also take a leadership role in healthcare. Finding qualified IT staff is a challenge for any healthcare organization. "As part of our outsourcing arrangement with Siemens, we are able to leverage its national presence to bring the best and most qualified IT talent to our facilities," says William McCombs, PhD, Chief Information Officer at Scott & White, whose IT staff consists of 30-percent Siemens personnel. Also, Laura Easton, Chief Executive Officer at Caldwell, whose entire staff is comprised of Siemens employees, states that, "It is comforting to know that Siemens always brings talented leadership to the table to coordinate projects and manage our staff and complex systems."

To offer maximum flexibility, Siemens' leadership meets with the customer each year to assess the previous year's projects, current direction, and strategic goals to define the scope of that year's agreement. Scott & White recently extended its original ten-year contract for another eight years, establishing new service levels and building additional resources into the contract. "Siemens offers us the flexibility to change focus and service levels, and works with us to determine and maintain consistent year-over-year costs," says McCombs. "To be successful in tomorrow's healthcare arena, you need to find a good partner with the utmost flexibility. That is what we found in Siemens."

New Features to Improve System Efficiency

The Siemens Utilization Management Report comes with new features to advance customized system evaluation of computed tomography (CT) and magnetic resonance imaging (MRI) systems in order to improve efficiency and workflows. Utilization Management evaluates current system usage and reveals hidden potential, based on the continuous evaluation of current anonymous usage data through a secure remote connection between the customer's system and the utilization database. Among the enhanced offerings are a multiple-month report that allows customers to select a reporting period of several months instead of the previously used one-month reporting period. The information can now not only be retrieved on a daily, but also on a monthly basis. To further customize benchmark results, the Advanced Package expands its benchmark options by including the possibility to select core working hours as the baseline for comparison. Furthermore, the report features a new design to boost clarity and to communicate results in a more customer-friendly and self-explanatory format. The measures implemented on this basis gained transparency results in an improved system utilization and consequent cost savings, as well as higher patient throughput, improved workflow, and reduced personnel overtime.



Utilization Management is available for three different service levels to meet individual customer needs: Basic, Advanced, and Consulting¹.

¹ Utilization Management Consulting is not available for all countries and markets. Please contact your local Siemens sales representative for availability and technical requirements.

Advanced Imaging in a Complete Solution



The 6.0 release of the ACUSON X300™ ultrasound system, premium edition (PE), offers advanced imaging performance across a wide range of applications including general imaging, cardiology, OB/GYN, urology, and many more. New imaging enhancements improve visualization, and contrast agent imaging expands clinical utility to increase efficiency and diagnostic confidence.

The system provides a comprehensive urology solution. The new ergonomically designed BP9-4 transducer with live dual biplane imaging allows for simultaneous viewing of both the longitudinal and transverse imaging planes for enhanced efficiency and diagnostic confidence. Further enhancing the offering is the live biplane biopsy functionality to clearly identify needle placement for faster, more confident biopsy, while dual needle paths improve patient comfort.

All-digital signal processing and multi-beam formation technology on the ACUSON X300 PE system provide excellent image quality in all modes. Two new high-frequency linear transducers are supported by the PLUS Option: the VF13-5 and the VF13-5SP. Improvements have been made to the cardiac application, including improved M-Mode resolution and sensitivity and connectivity enhancements. New applications for imaging the pediatric abdomen and neonatal head have been added. The system features several Siemens-exclusive applications such as *syngo*[®] Auto OB measurements for automated measurements of fetal biometry and comprehensive CARTO system communication capabilities to support intracardiac catheterizations.