New products

Practix Convenio

The Practix Convenio battery-powered mobile radiography unit combines cutting edge technology with almost unlimited mobility, traveling at a speed that is most convenient for the operator. With 36 APR programs it offers fast workflow and is suitable for the whole range of applications. Practix Convenio demonstrates maximum maneuverability at the bedside. Its swiveling column and telescopic tube arm offer easy and excellent tube positioning. With PCR Eleva (Philips Computed Radiography) cassettes on board, it provides entry into the digital world. The Practix Convenio won the iF product design award 2006, as well as the prestigious I.D. magazine design award 2006, which is America’s largest and most prestigious juried design competition. Its design immediately struck the jurors, and a closer look revealed praiseworthy attention to detail, from the simple, easy-to-read interfaces to the smartly tucked away wheels. The jurors agreed that the machine’s simple forms made it manageable and user-friendly rather than threatening as medical devices can sometimes be.

“It’s iconic,” said one juror. “It doesn’t look like anything else.” “There are very few false moves here,” said another juror, citing the unit’s compactness, mobility, consistent design language, and clarity of idea. A third juror concurred: “There is a symphony of form here. There is nothing gratuitous about it. And there is a tremendous amount of logic. I see real problems in ergonomics being solved.”

Essenta RAD*

The new Essenta RAD is a compact radiography system that covers a comprehensive range of applications. Easy and intuitive to use, it is the ideal system for those requiring high system utilization and an excellent price-performance ratio. With its swiveling column and tube head, it can be used for examinations on its own floating tabletop, or on gurneys or beds in various room layouts.

The column support rails are mounted on the table, giving a choice of three versions: eccentric, left or right centered.

The Essenta RAD can also be combined with a vertical stand, broadening the application range even further. Used in combination with PCR Eleva (Philips Computed Radiography) cassettes, it offers the added benefits of digital imaging.

* Not commercially available in the U.S.A.
Cardiovascular X-ray

At RSNA 2006 Philips continued to demonstrate its leadership in interventional imaging with ground-breaking technology enhancing the interventional capabilities of the angio suite.

The Allura Xper FD20 captures twice the amount of clinical information at a resolution four times greater than that of conventional angiography systems. The Philips 2k flat detector imaging system with pivoting functionality is designed for a complete range of vascular procedures, both diagnostic and interventional.

In addition to the successful Allura Xper FD20 and FD20/10 systems, Philips showed the Allura Xper FD20/20, which gives interventional neuroradiologists even greater flexibility in the choice of configuration for their clinical practice.

The increased complexity of interventions requires that physicians have interventional tools available instantly at the bedside. That is why Philips offers an integrated 3D solution: Allura 3D-RA integrates with the Allura Xper FD20 to provide “real-time” 3D reconstructions of complex vasculature using a single rotational scan.

Enabled by the integrated 3D approach, Philips offers high speed XperCT. This remarkable technology provides soft tissue imaging capabilities in the interventional suite without the need to transport the patient to a CT system. XperCT opens up a new area of clinical applications aiding interventions, with XperCT data being displayed within 90 seconds after acquisition.

Dynamic 3D Roadmapping, another Philips patented technology, ensures that the 3D image is registered with the system in real-time and overlaid with live 2D fluoroscopy providing a sustainable roadmap. The clinical potential for this technology is significant for applications such as real-time catheter navigation and monitoring coil delivery.

XperGuide

The latest feature under development in interventional 3D is XperGuide. This technique is designed for real-time image-guided needle advancement in interventional cath labs.
Precedence 64 slice SPECT/CT system

The Precedence 64 slice SPECT/CT system unites Philips high performance Brilliance 64 slice CT with the exceptionally flexible SKYLight gamma camera—a breakthrough in functional and molecular imaging for cardiology, oncology, orthopedics and infection. Designed for the most challenging patients from head to toe, this merged system affords a comprehensive solution, providing registered SPECT, planar and CT images and individual SPECT, CT, or attenuation corrected nuclear medicine images.

For institutions planning to upgrade to 64 slice CT, Precedence offers an opportunity to build procedure volume. The Precedence 64-slice SPECT/CT is a hybrid imaging device that can produce CT-based attenuation correction and perform advanced cardiac CT procedures such as calcium scoring and coronary CT angiography (CTA) in one episode of care, on one system.

In addition, Philips proprietary Astonish SPECT resolution recovery technique provides PET-like resolution for added diagnostic value in difficult cases. It can produce SPECT myocardial perfusion imaging in half the time of conventional scanners.

Designed to perform currently reimbursable nuclear medicine and CT procedures and as a platform for future molecular imaging advances, the system’s unique features promote interpretation confidence, efficiency and ease of use.

“CT improves SPECT imaging on multiple levels,” said John Mahmarian, M.D., director of nuclear cardiology at The Methodist Hospital in Houston, Texas. “For patients with normal myocardial perfusion scans, equivocal nuclear studies or abnormal myocardial perfusion scans, hybrid SPECT/CT can improve care tremendously by helping identify early disease states and clarify diagnostic ambiguity.”

BrightView SPECT system

Designed from the ground up to put patients first, the new BrightView SPECT system is a “genuine Philips” product, with a wide range of features, including variable angles and exclusive CloseUp technologies, enabling higher resolution through smarter software, new electronics, and minimal distance between detector and patient, ensured by BodyGuard automated contouring.

An ultra-thin imaging pallet and exceptionally small cardiac dead space provide outstanding image quality in bone and cardiac studies, while new PET-based digital detectors with PinPoint iterative positioning algorithms improve workflow by the use of a single uniformity correction for multiple-energy imaging.
GEMINI TF

GEMINI TF with TruFlight technology is a revolutionary advance in PET/CT: the first PET/CT system to feature time-of-flight PET imaging. GEMINI TF is creating a new benchmark in consistent image quality - especially in large patients - and it is opening a new pathway to molecular imaging applications.

**Time-of-flight and TruFlight technology**

In conventional PET imaging, each annihilation of the positron-labeled radiopharmaceutical produces two photons traveling in opposite directions. These gamma rays are detected by the detectors surrounding the patient and assigned to a line of response (LOR) joining the two relevant detectors. In this way, positional information is gained from the detected radiation without the need for a physical collimator.

With time-of-flight PET imaging, the infinitesimal time difference between the detection of two coincident gamma rays is measured. This time difference, or timing resolution, is then used in the data reconstruction to pinpoint the point of origin along the path of the gamma rays.

TruFlight technology is Philips’ implementation for optimizing the scanner components in order to achieve time-of-flight PET imaging.

**Clinical Benefits**

GEMINI TF clinical benefits include small lesion detectability, short scan time for patients as well as consistent image quality — especially in large patients. GEMINI TF with TruFlight improves image quality by a factor of 2-4 x compared with conventional PET systems. The increase in sensitivity enables shorter patient scan times - as fast as 10 minutes for a WB PET scan - and increases patient throughput.

An alternative to shorter scan times would be scanning patients a little longer to obtain images of superb quality. Small lesion detection is also enhanced through the use of a smaller crystal and fully 3D acquisition and 3D reconstruction.

The benefits of TruFlight increase as patient size increases, providing consistent image quality even in large patients. In fact, GEMINI TF with TruFlight technology is “perfect for (almost) every body”.

Available in 16- and 64-slice CT configurations, GEMINI TF is designed to meet our customer’s needs for oncology, cardiology, neurology and molecular imaging applications. Whether the customer desires a system with a high patient throughput, or better small lesion detection, GEMINI TF delivers new levels of image quality, consistency and performance.

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Pinnacle³ Radiation Therapy Planning System

**Image Guided Radiation Therapy (IGRT): Efficiency through integration.**

Fast, accurate and interactive treatment planning tools have made Philips Pinnacle³ the #1 radiation treatment planning system of choice - and the foundation for IGRT adaptive planning. Our Model Based Segmentation (MBS) software includes an anatomical library of 3D patient organ structure models, which reduce the time oncologists spend manually drawing contours. IGRT workflow is enhanced with our (MBS) software, allowing clinicians to propagate organs to alternate 4D datasets to determine the extent of tumor movement within the patient.

From a library of pre-defined 3D organ structure models, you just drag and drop anatomical...
templates onto patient image data. MBS software then automatically adapts the shape to fit the patient’s organs. This reduces the time it takes to manually draw contours, enhancing patient care.

**iSlice Ultrasound Image Display**

Finding the best views and content when capturing an ultrasound image can often be challenging for the sonographer. The Philips iU22 ultrasound system with advanced volumetric imaging and new iSlice capabilities makes it faster and easier to capture and find the best views for making a diagnosis.

After acquiring a volume image with the iU22 ultrasound system, the QLAB software can do precision slicing of the volume and display 4, 9, 16 or 25 2D images from the volume set. Clinicians can then examine the images from multiple angles and select the best images for further evaluation and reports.

When rotating the volume the 2D views are instantaneously updated to reflect the new perspective. In addition, volumetric imaging with iSlice gives clinicians the ability to obtain additional views, e.g. coronal, which are unavailable with conventional 2D imaging.
This is very valuable when assessing complex pathologies. The sonographer is also able to adjust the amount of slices desired as well as the interval slicing in order to conform to different applications.

The precision nature of iSlice allows sonographers to display images that could not be achieved manually. No human being could hold his or her hand still enough to sweep or acquire these individual images in such fine slicing intervals or scan from the perspective of the third plane.

iSlice can be especially helpful in examination of a gallbladder with gall stones or in early fetal examinations. In the fetal examination, precision slicing allows the physician to study subtle anatomical structures in detail.

**Achieva 3.0T X-series**

The Achieva 3.0T X-series is a new generation 3.0 T MR system introduced at RSNA 2006. The Achieva 3.0T X-series is a patient-friendly, compact whole-body 3.0 T MR system with a wide-open, patient-friendly, flared short bore design and a large 50 cm field of view. Through its use of new technology in all major subsystems (magnet, gradient, RF-coils), the system provides everything needed to deliver cutting edge whole-body 3.0T imaging.

The system enables routine clinical imaging in all applications, including best-in-class neuro, body and musculoskeletal imaging. Unique, innovative applications include 4D-TRAK, 2k-imaging, DWIBS and SENSE spectro imaging, powered by FreeWave.

The system is equipped with SmartExam for automated planning, scanning and processing, based on ExamCards, to ensure high productivity and efficiency. SmartExam now includes spine and knee in addition to brain, covering 70% of all examinations.

The ease of operation and high-speed image acquisition speed enable very high patient throughput of 40 patients or more per 10 hr period. The Achieva 3.0T X-series is supported by Philips NetForum online user community with ExamCard downloads direct to scanner.
**Xcelera Cardiovascular Information Solution**

Xcelera is an advanced cardiology information management solution that unites information from key cardiology modalities such as interventional X-ray, cardiovascular ultrasound, cardiac CT, cardiac MR, nuclear cardiology, electrocardiography (ECG) and electrophysiology.

This latest release of Xcelera boasts a variety of new or enhanced clinical and reporting tools for 2D and 3D echo, cardiovascular X-ray, nuclear cardiology, 2D and 3D cardiac CT and MR, as well as for managing electrophysiology recording and mapping information.

It enables the standardization of cardiovascular workflow and management for efficient and high quality patient care.

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**xLNA: X-ray Lung Nodule Assessment**

Philips has licensed EDDA Technology’s CAD Chest solution for X-ray images, which supports clinicians in their identification, quantification, evaluation and reporting of pulmonary nodules at an early stage.

As a real-time interactive diagnostic analysis system, it integrates advanced computer analysis technology into the diagnostic process. The product has been re-branded by Philips and is sold under the name xLNA (X-ray Lung Nodule Assessment).

Early diagnosis can dramatically improve patient management. By combining the clinician’s expertise with computer analysis of the radiographic image data, xLNA helps to identify small lung nodules.

The innovative xLNA software will be available as part of the Philips digital radiography portfolio, including the state-of-the-art DigitalDiagnost for direct digital radiography, allowing clinicians to benefit from a powerful array of diagnostic tools, resulting in greater diagnostic confidence and better quality of care.