Canon transforms X-ray imaging at Bremen medical clinics with XEED Medical projectors

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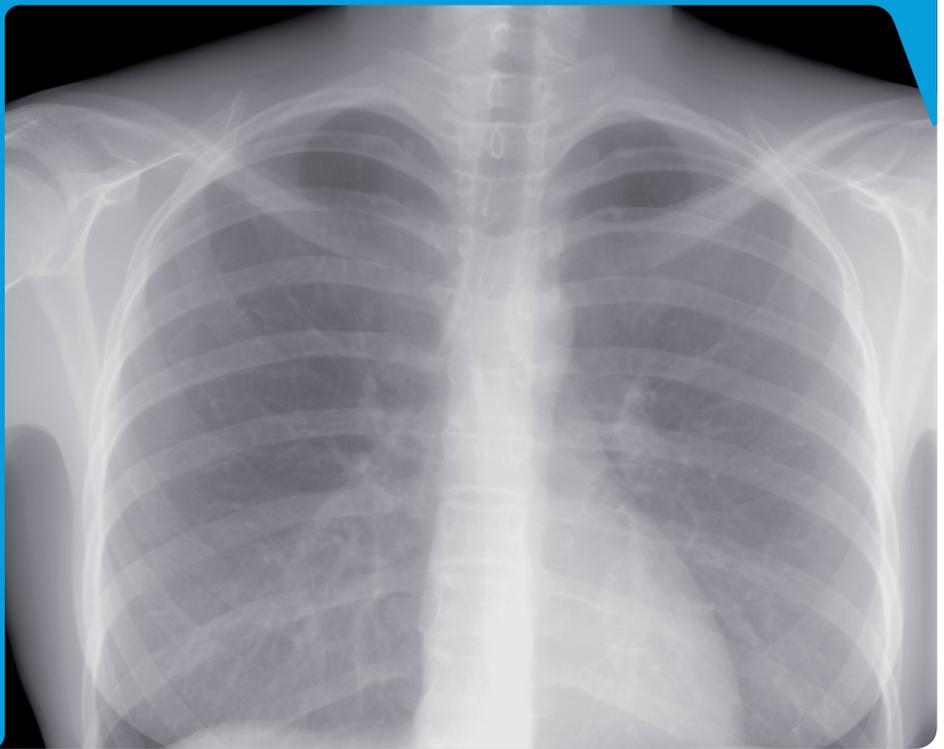
Company	Gesundheit Nord Klinikverbund Bremen gGmbH
Founded Location	January 2004 Bremen
Services	Medical facilities and health services
Website	www.gesundheitnord.de

Canon's video projectors deliver the sharpest images for the doctors in the 'Gesundheit Nord Klinikverbund Bremen gGmbH' group. Using Canon's XEED SX80 Mark II Medical video projectors, it has modernised its day-to-day routine and digital X-ray systems are now used in daily consultations across four clinics in Bremen.

" Our digital X-ray systems deliver high-resolution images which doctors can access on their workstations at any time – the era of examining X-rays against the light is over for us."

Thomas Jacob, Internal Organisation Department Manager for Gesundheit Nord Klinikverbund

The medical centre in Bremen Ost, one of four medical centres at the group, has already been using the digitally based radiological archive solution, PACS (Picture Archiving and Communication system) for several years. This process replaced the old X-ray film pictures, still in widespread use in medical centres, with digital versions. They found it immediately saved physical filing space and improved the accessibility of archive folders by allowing users to view them from their computer screens.

All Gesundheit Nord's medical centres are now equipped with radiological meeting rooms and Canon video projectors where regular demonstrations take place with doctors and radiologists to discuss findings and treatments with their colleagues. With dual projection available on the radiologist's monitors, two Canon XEED SX80 Mark II Medical video projectors are available for each room, supplied by medical digital imaging specialist Larivière.

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Frank Oerke, Larivière project manager, says: "We first equipped the medical centre of Bremen Ost with two Canon XEED SX80 Mark II Medical video projectors in September 2010. These allowed us to create very exact medical representations that were clearly superior to other systems and radiologists were able to discuss each case with their clinical colleagues."

In order to make the correct diagnosis, radiologists would first view all X-rays on a pair of specially calibrated monitors. From here, the images would then be transferred directly to doctors in their clinics along with the diagnosis. The picture reproduction adheres to the strict medical standards laid down in the DICOM protocol (Digital Imaging and Communications in Medicine). As a medical display device, the Canon XEED SX80 Mark II Medical projector is also equipped with a DICOM Preset image mode. As is the case with any projector, the images cannot be used for diagnostic purposes. Therefore, the true value of a projector with a DICOM Preset mode lies in the ability to display medical images to a group of people, for example during radiological case discussions, or the training of medical students.

The LCOS technology in the Canon XEED SX80 Mark II Medical series provides a clear advantage because it combines the strengths of LCD and DLP projector technology. It helps eliminate the weaknesses of LCD technology in the black spectrum, as it is unable to project small gradations from black to white exactly.

Also, the human eye has weaknesses in this field as it cannot see all X-ray details from black to grey to white. "On the other hand, DLP technology has slight disadvantages in exact colour projection, as you can see rainbow effects in high resolutions," Oerke explains. "Additionally, the integrated DICOM preset edits the PACS data with an algorithm in a way that our eyes can see the essential details immediately."

As a long-standing partner of Canon, Larivière now calibrates and maintains Gesundheit Nord's XEED Medical video projectors. All are pre-set before installation with Larivière's AcuScreenPRO Calibration tool and can be post-calibrated any time when the system is on site. Before each projector is installed, Larivière adjusts the colours so the paired projectors are synchronised.

After this, the pictures of the two fit to each other to create the enhanced projection images. Added client PCs can access the images via the PACS server. "As a Canon partner we offer the Canon XEED SX80 Mark II Medical video projectors with DICOM-Preset, so we can persuade more and more customers of the advantages of this system," says Oerke.

Thomas Jacob, Internal Organisation Department manager for Gesundheit Nord Klinikverbund says: "Our digital X-ray systems deliver high-resolution images which doctors can access on their workstations at any time – the era of examining X-rays against the light is over for us.

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"Using our remote distribution and integrated media control system means images can be viewed on doctors' PCs as well as in the discussion rooms. We made the decision to use Canon because they offer the best image quality and because we have worked with our partner Larivière for many years. Since we installed the system we have had feedback from doctors to say they are very satisfied with their new solution."