

KODAK DIRECTVIEW DR SYSTEMS



KODAK DIRECTVIEW
DR 5100 System leads
the way in Lausanne.

HEALTH IMAGING
A BETTER VIEW OF LIFE.





Professor Pierre Schnyder MD, Chef de Service, CHUV, Lausanne, Switzerland

A Kodak DirectView DR 5100 system, featuring a new, integrated operator console, has been installed at the 1000-bed Lausanne University Hospital (CHUV - Centre Hospitalier Universitaire Vaudois), one of the five largest university hospitals in Switzerland. Founded in 1806, the hospital became part of the university in 1890. The DirectView DR 5100 system is a dedicated unit for high volume chest imaging which brings the advantages of digital radiography to chest and other upright examinations.

KODAK PROFESSIONAL SERVICES EXPERTISE, ENSURING A SMOOTH

Head of the radiology department at CHUV is thoracic specialist, Professor Pierre Schnyder MD. His department employs more than 140 people and offers a full range of modalities, including X-ray, angio, CT and MRI, using some of the most modern equipment in Europe. 'Switzerland has amongst the biggest uptake of digital technology in Europe,' explained Professor Schnyder. 'This has mainly been led by private clinics, but it has raised public expectations and they expect improved technology in general hospitals.'

Prof. Schnyder has been at CHUV since 1988. 'Then we used analogue daylight systems, including an old Siemens Thoramat chest changer which processed between 80 and 100 films a day, one third for outpatients and two thirds for in-patients. We realised the equipment was getting old and recognised that digital was the future. Our need to store images was also growing rapidly so, in 1994, we began planning for a hospital wide PACS that would also cater for our separate children's hospital and orthopaedic clinic. We saw the Imation (later Kodak) system at RSNA in 1998 and were convinced it was right for us'.



PROVIDED INVALUABLE PROJECT MANAGEMENT IMPLEMENTATION

A 2.1Tb Kodak PACS was installed at the hospital in 1999, but demand soon outgrew capacity. 'The slope for exponential growth of storage was steeper than we thought', said Prof. Schnyder. 'In the Vaud canton we have a legal need to store images for 10 years. We expected our initial system to cope for four years, but it was full after two. So we upgraded and expanded the PACS to a 40Tb system, which is currently the largest in Europe.'

Carrying out such a large expansion, while keeping the hospital operating normally, created some challenges that needed to be addressed. Kodak Professional Services provided invaluable project management expertise, ensuring a smooth implementation, verification and validation processes, in-depth applications training support and seamless integration of the new technology with existing modalities.

'As you would expect, there were technical problems during the upgrade, but the Kodak team spent a lot of energy at Genoa in Italy and at Fremont in the US to help solve our problems. The Kodak PACS is an intelligent system that has made a significant improvement to the way we work. We are now extremely happy and I've recommended the system to many of my colleagues'.

In advance of the introduction of a hospital-wide web transfer system, the department has installed a CD burning system. 'This will help us on our road to becoming completely filmless', explained Prof. Schnyder. 'The disk can be stored with the medical record and sent to referring physicians, saving considerably on film and postage costs.'

designed to accommodate a wide range of general radiology exams. All Kodak DR systems incorporate an amorphous selenium flat-panel detector which directly converts X-rays into electronic signals, producing a signal profile and resolution that are highly precise for excellent image quality.

“We were convinced when we bought it that Kodak had the best system”

Following development of the PACS, CHUV's relationship with Kodak grew with the installation of four Kodak DirectView CR 800 and CR 900 systems in intensive care, rheumatology and in the separate orthopaedic unit. 'We will soon become fully digitised,' said Prof. Schnyder. 'We only have one remaining daylight processor and one darkroom which will soon be gone.'

Recognising the benefits of running CR alongside digital radiography, the radiology department at CHUV installed the Kodak DirectView DR 5100 system at the end of 2002. Then, in May 2003, they replaced an existing general-purpose room with the first of two Kodak DirectView DR 9000 systems, a fully integrated system



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Installation of the DR 5100 was followed by several days of on site training by Kodak applications consultants. The system was introduced to the staff at CHUV at two presentations that built on their experience of working with the existing Kodak CR systems. ‘The touch screen interface on the new console is extremely user friendly,’ said Prof. Schnyder. ‘It’s almost identical in operation to the CR system console, so operators found it very easy to transfer’. Two ‘super users’ were appointed from the department to receive hands-on training on the system and, within two weeks, seventy radiographers within the department could work independently on the DR 5100.

The Kodak DirectView DR 5100 system has already been fully integrated into the routine workflow of the radiology department at CHUV. Producing an average of 80 to 120 images a day, it is already accounting for almost 50% of all radiographs made in this area of the department, where they also carry out other upright examinations. A destination profile programmed into the DR 5100 outputs images to any of four Kodak MasterPage software workstations and a Kodak DryView 8700 laser imager, with other destination profiles pre-programmed as alternative options.

Following evaluation by Inspectors from the Swiss Health Department in Bern, the DR 5100 at CHUV has been accepted as full 400 sensitivity class. ‘We have found the quality of images obtained by the DR 5100 to be excellent,’ said Prof. Schnyder. ‘We worked with Kodak to adapt the parameters of the final image to reproduce exactly the subjective appearance the radiologists at CHUV need to make faster, more accurate diagnoses. For about 90% of our images no post-processing is needed.’

Professor Schnyder sees clear benefits from the Kodak DR systems. ‘First and foremost is rapidity,’ he explained. ‘We can see results instantly, and the ability to manipulate and enhance those images quickly and easily gives added confidence. For the patient, DR effectively does away with the need for retakes which reduces radiation doses by up to 50%; in fact we are now approaching the agreed ideal dosage.’ He went on, ‘Our radiographers are also very happy. In fact the older ones, who were not so used to dealing with new technology, have become increasingly enthusiastic. The system is very reliable.’

But how does Professor Schnyder view Kodak’s commitment to digital radiography? ‘We’ve come to see Kodak as an established supplier in the digital marketplace,’ he said. ‘They don’t simply sell equipment, they’ve become a high technology systems and service provider. The Kodak team is very strong. They’ve shown great commitment to us and we appreciate the fact that, when they don’t have an immediate answer to a problem, they say they don’t know, then come back with the solution.’

‘We were convinced when we bought it that Kodak had the best system. Subsequent articles in medical journals, and our own experiences, have simply confirmed that belief.’



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