

## CASE STUDY

### Inselspital Bern, Department of Radiology, Neuroradiology and Nuclear Medicine (DRNN)

The Institute for Diagnostic, Interventional and Paediatric Radiology (DIPR, Director: Prof Dr med Peter Vock) and the Institute for Diagnostic and Interventional Neuroradiology (DIN, Director: Prof Dr med Gerhard Schroth) of the Inselspital Bern employ more than 150 staff. Apart from 14 diagnostic radiologists, the institutes comprise 22 medical assistants, more than 80 medical-technical radiology assistants and many other helping hands.

In recent years medicine enjoyed major progress and research and development are still running at top gear. This applies, in particular, to the technically highly developed field of radiology. In the primary diagnostics area the use of digital results displays, for the presentation of the various diagnostic procedures, is gaining increasing importance. We spoke with the project manager Dr Henry Beland, Manager Systems Engineering, Administration Inselspital Operations and with the project managers of DIPR, Senior Physician Dr Peter Herrmann and of DIN, Private Lecturer Dr Christoph Ozdoba, about the PACS (Picture Archiving and Communication System) realised at Inselspital Bern.

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## INTERVIEW

### **Dr Beland, how was the increasing level of digitalisation introduced at Inselspital?**

"Following a pilot in the summer of 2003, PACS was introduced hospital-wide at Inselspital in 2004. As early as mid-2004, paediatric radiology converted to film-free operations. To convert the entire hospital to film-free operations, all 32 operating theatres of Inselspital must be equipped with PACS viewing stations. Conversion is currently in progress and will have been completed by the end of April 2005."

### **Which goal was pursued at the product evaluation stage and which factors were weighted in the process?**

"In respect of digital image results reporting it was determined that all reporting stations were to be uniformly set up. This relates to the hardware (workstation and results monitors) and, naturally, to the software, PACS and RIS. Both 2-megapixel and 3-megapixel LCD grey scale monitors were selected for evaluation, from two different manufacturers each. Image quality, service quality and economic aspects (price/performance, maintenance costs, etc.) were weighted."

### **A decision was made in favour of TOTOKU. Which factors were decisive in this?**

"The radiologists involved in the comprehensive tests clearly decided that all workstations were to be equipped with 2 20.8" 3-megapixel

monitors each, with the exception of the reporting workstation for mammography, which was to be equipped with 5-megapixel grey scale reporting monitors. There were no differences in quality among the products tested so that both price and service were the decisive factors in favour of TOTOKU."

### **What kind of experience have you had with the TOTOKU displays in practice?**

The TOTOKU results displays have proven their worth in day to day operations. The quality is generally considered to be very good. To date we have not experienced a decline in quality, which emphasises the correct product choice, even for long-term use."

### **Could you describe your cooperation with Rein Computer (Switzerland) AG?**

"It was very good, straight from the word 'go.' With regard to consultation this relates not only to expertise and an overview of the market but also to the readiness to enter into queries and special issues immediately and at all times and to quickly provide solutions. In general, we are very happy with the support and service we received from Rein AG."

## INTERVIEW

### Would you repeat your cooperation with Rein Computer (Switzerland) AG?

"We never regretted our choice to cooperate with Rein AG. In the event of new tenders we would certainly consider Rein AG."

### End of interview

The picture on the right shows a VIEWMEDIC DUO 19C in an operating theatre of the Orthopaedics department. The closed, ventilator-free casing which can be wiped down and sports a hinged foil keyboard hides state-of-the-art PC technology and two viewing displays. Theatre solutions by VIEWMEDIC are used in more than thirty operating theatres of Inselspital. Most theatres use VIEWMEDIC DUO. The systems were either mounted flat on the wall or integrated into the theatre walls of Maquet (e.g. operating theatre Womens Clinic). Plans have already been made for the incorporation of VIEWMEDIC DUO 19C into the walls of the new building INO. In several cases, where the operating theatre was very small, a decision was made in favour of VIEWMEDIC UNO 19 C. This compact system, sporting only a single display is cheaper and requires less space."



## REPORTS

### Report by Private Lecturer Dr Christoph Ozdoba, Head of the Institute for Diagnostic and Interventional Neuroradiology (DIN):

"As sub-project manager "Clinical Implementation" I experienced a certain amount of scepticism, despite the euphoria for PACS. People who have spent twenty years at alternators, reporting results from high-resolution films, must initially be convinced of the benefits of monitor reporting.

Of course we had a few problems with PACS that needed to be solved but that is normal in a project of this order. The monitors, however, were accepted immediately and, what is as important, have not generated any problems to date, 1 ½ years down the track. In fact, we constantly receive queries from our colleagues in the clinics, whether they could also have these "fantastic monitors."



Senior Physician Dr P. Herrmann reporting results at a PACS reporting station with TOTOKU 3 megapixel results displays (ME3 15L)

### Report by Dr Peter Herrmann, Senior Physician at the Institute for Diagnostic, Interventional and Paediatric Radiology (DIPR):

"After initial scepticism regarding the image quality on the monitor - we were, after all, used to the quality of the films – both my colleagues and I were very positively surprised.

The contrast, the resolution and the excellent viewing angle of the monitors are convincing (viewing angle: 170° vertically and horizontally). It is precisely in situations such as discussions with assistants or a clinician where more than one person sits or stands in front of the reporting station that there are no limitations with regard to image quality."

#### Project information

Location	Inselspital Bern (Teaching hospital)
Project Partner	Rein Computer (Switzerland) AG Philips AG Medical Systems

#### Systems used and application areas

ME 315L incl. x-ray-desk	PACS reporting workstations at the DIPR (Institute for Diagnostic, Interventional and Paediatric Radiology) of Bern Teaching Hospital
VIEWMEDIC UNO 19C	Used in the ENT operating theatre for minor surgery
VIEWMEDIC DUO 19C	Used in the operating theatres of Inselspital

#### Contact Information

Germany: Phone, E-mail	+ 49 (0) 2156 /4949-12, info@medisol.org
Switzerland: Phone, E-mail	+ 41 (0) 71 /9295599, info@rein.ch
Spain: Phone, E-mail	+ 34 (0) 91 /5308824, info@reincomputer.es