

'How to implant a port-a-cath?'



Key benefits

- » Real-time interaction
- » Bridging a distance between OR and place of workshop
- » Maintaining perfect image quality
- » Bi-directional audio communication
- » Minimal preparation time



Kris Schoonjans
Project Manager Medical Instrumentation

'We are confident that in the future all live cases will use the NUCLeUS™ platform. You get vastly superior image quality for less setup efforts.'

This was the central question addressed on the 16th of November 2012, during a seminar at the University Hospitals Leuven. Aesculap Academy -sponsor of the event- made good use of NUCLeUS™. A realtime intranet broadcast resulted, based on High Definition video streaming from within the hospital to a remote teaching auditorium. 'Video transmission with NUCLeUS™ provides a substantially richer experience than the previous system.' says *Kris Schoonjans*.

When it comes to live transmissions, UZ Leuven is an expert. Some years ago, the hospital invested in a hardware based telecom system and used this for seminars. During the past years, however, all the operating rooms have been converted into digital ORs, that distribute images via the video-over-IP system NUCLeUS™. It was only a small step to extend streaming within the operating rooms to streaming to any location.

'There are some great benefits when transmitting via NUCLeUS™', says *Kris Schoonjans*, project manager medical instrumentation at UZ Leuven. 'Our *Polycom* streams classic video in good quality but responds badly to computer signals. Our ECG or hemodynamic signals are supplied over VGA. If you transmit these with *Polycom*, the quality degrades to a level where it gets unusable. NUCLeUS™ encodes and decodes these data without loss of image quality.'

The participants of a workshop or seminar traditionally receive hand-outs. 'It is difficult and simply ineffective to explain surgical procedures using slides and static pictures', explains professor *Erwin Bellon*, IT manager multimedia & telematics. A movie, in contrast, can illustrate the consecutive steps and their implications on the patient more accurately. The participants experience the live case as if they were present in the operating room during the procedure. They see and hear what happens without affecting the daily workflow in the operating room.

In the past, offering the transmitted images and videos after such a course was a tedious process. NUCLeUS™ uses the network to transport image material. The streams are recorded at central computers, simultaneously with the broadcast. They are available in different formats so that they can be used on all kinds of devices.

A video infrastructure used in daily routine

Kris Schoonjans: 'We already observe a shift in the technical support for such events. Previously, this involved several technicians in and around the operating rooms just for managing the conference. Now that NUCLeUS™ is a basic infrastructure on top of the ubiquitous computer network, such events can be organized without rolling in additional machinery in the operating room and ad-hoc connections.' This is beneficial for the quality of the surgery and the quality of the course.