Network Connected POCT Analyzers - Report of a RADIANCE Implementation

B. Pollwein,
University of Munich (D)

Today`s physicians taking care of critically ill patients now require that laboratory results are made available in realtime and if possible, at the patients point of care. Many new testing devices have been developed to address this need; however hospitals often implement such distributed devices with little or no attention to the information technology requirements. (Kenneth E. Blick, 2000)

RADIANCE offers a flexible connectivity solution for blood gas analysers at the point of care. Also non-Radiometer analyzers can be connected, providing a common software platform for data management functionality. Protocol support includes standards ASTM, HL7 POCT-1A and nonstandards like LIS (Bayer) as well.

Our motives for implementation of a POCT device network
- **Remote device control**- facilitating online troubleshooting, service and maintenance functions
- **Paperless quality management-** Transmission, central storage and evaluation of quality control and calibration data, legal documentation according German RiliBÄK.
- **Sending of patient test results-** connection to our online anaesthesia documentation system NarkoData.

Clinical environment
The "Klinikum der Universität München" has 2.479 beds, cares for 86.900 inpatients and performs 46.000 anaesthesias per year.

RADIANCE set up
Due to historical reasons three RADIACE servers are implemented. The department for Anaesthesiology runs one system connecting 16 analysers (ABL 5xx, 6xx, 7xx Rapidpoint 400, 800). Connection is implemented on basis of the clinical network wired and wireless (WLAN). A side by side VPN connection to Radiometer is realized for remote support.
We are currently running software 2.3.

Experience
Since one year the RADIANCE system is running very stable without extraordinary amount of work. Information technology can help you unburden your busy testing environment by automating testing procedures, quality control, documentation and data management. Not to mention enabling control of decentralized analyzers from a central location.

Message to vendors of POCT devices
Accuracy and precision are no longer most important, information technology and networking issues have become the determining factor. For those vendors not providing state-of-the-art, open IT solutions along with their devices, the future looks black.