

# Used – But as Good as New

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Article from the customer magazine Medical Solutions, RSNA 2006

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The German Knappschaft Hospital Bottrop is convinced by the product quality and consulting services of Siemens Medical Solutions Refurbished Systems Division: The purchase of a refurbished computed tomography system was followed by an overall reconditioned X-ray system. The results: shorter waiting times, improved workflow, and expanded possibilities for the Radiology Clinic.

*By Katja Stöcker, MA*

"I thought it was similar to buying a used car: you don't know what you are getting, and you have to count on strange quirks." A happy Jürgen Hellermann strokes the C-arm stand of the refurbished Siemens RS AXIOM® Artis MP. "I was taught better; this X-ray system is as good as new," says the Administrative Director of the Knappschaft Hospital Bottrop (Ruhr), a hospital of the German miners' and mine-employees' social insurance. The C-arm is already the second system bought from Siemens Refurbished Systems (RS) Division. The hospital management purchased the device in close cooperation with the respective departments. The Chief Physician of the Radiology Clinic and Medical Director of the hospital, Svenja Hennigs, MD, just now explains to her colleague how well and how quickly diverticulitis in the large intestines of a 43-year-old patient was diagnosed.

Neither Hennigs nor Hellermann knew a year ago that the RS Division dismantles used medical systems at customer sites and refurbishes them in an extensive, certified process. Proven Excellence is the seal of quality given to systems that are:

- selected during step 1 because they still perform well, and spare parts availability is ensured for a minimum of five years.
- disassembled during step 2 and transported in protective covers to one of the three worldwide RS sites in Germany and the US.
- cleaned, disinfected and painted during step 3, and parts subject to wear and tear are replaced with original spare parts. Subsequently, all components and sub-systems are thoroughly checked, the latest software is installed, and all new system tests are performed.

When the preowned systems have passed extensive testing, they receive the quality seal of Proven Excellence. The seal stands for system characteristics that closely approach those of new systems. Only then, the fully refurbished medical engineering systems are

- transported and installed in step 4. Prior to system start-up, they have to pass another start-up and repeated check-up of the system's performance.

- given a warranty typically equivalent to that of a new system. In addition, during the 5th and final step, Siemens offers extensive service contracts.

## Reducing the Waiting Time to One Day

This summer, Hennigs and her Radiology Clinic moved into the new addition of the 75-year-old Knappschaft Hospital Bottrop. Until recently, another refurbished system from Siemens was located there. Workflow was greatly improved by the multislice computed tomograph (CT) RS SOMATOM® Sensation 16: "We were able to reduce the waiting time for a CT examination from two to three days for our old CT to a maximum of one day." Which makes the Administrative Director happy as well. "This allowed us to not only provide our inpatients with an earlier appointment, but also our outpatients from our regional partners," adds Hellermann. This is an important reason why the hospital, since 2003, has been able to increase its patient volume by more than 1,000 in a two-year period. In 2005, the patient volume was approximately 12,000.

Both parties gained advantages: Radiology is able to generate better diagnoses, use less contrast medium, and shorten the waiting time, while administration is able to successfully follow its strategy to expand the offer spectrum for outpatients. "In the future, we would like to meet the requirements of working people by expanding our outpatient services, including examinations in the evening as well as on Saturdays," explains Hellermann. "Since we need less contrast medium with the refurbished, better CT system and use just one instead of two contrast media, we obtained considerably improved purchasing prices," adds Hellermann.

## Excellent Quality at a Fair Price

The offering spectrum and status of radiology in the hospital increased since the move and the procurement of next-to-new Siemens technology: "Considering our limited budget, it would have been impossible to afford a

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Jürgen Hellermann,  
Administrative Director,  
Knappschaft Hospital,  
Bottrop, Germany

»The changeover from film to digital has tremendously improved workflow in our department.«

Svenja Hennigs, MD  
Chief Physician,  
Radiology Clinic,  
Medical Director,  
Knappschaft Hospital,  
Bottrop, Germany

new system with the same performance. With the next-to-new Siemens CT, we received excellent quality at fair price,” says Hellermann.

This convinced the hospital to buy an additional X-ray system a year later, and to change from a 16-slice to a 64-slice CT of the SOMATOM Sensation family. “We have to be able to meet the regional competition and want to stay ahead of the game by using innovative technology,” reasons Hellermann in defense of the investments that became possible due to subsidies.

Based on the hospital’s excellent experiences, inquiries were made concerning a refurbished 64-slice CT scanner from Siemens. However, since this is a rather new system, preowned systems are not readily available. “The leap of innovation for the entire region as well as the availability of excellent consulting services convinced us in the end to buy a new system,” Hellermann and Hennigs

agree. To cover many clinical offerings, the hospital bought extensive software for its new 64-slice CT system. They purchased software for neurology, as well as tumor and dental diagnostics. This will help to maintain clinical pathways, adds Hennigs.

## Digitalization Further Improves Workflow

In addition to radiological examinations with computed tomography and angiography, Hennigs’ 40-head team also prepares reports based on magnetic resonance, general X-ray diagnostics, and mammography. Nuclear medical devices are also available for diagnostic purposes. Like the entire Knappschaft Hospital, the Radiology Clinic runs without film, meaning that the department works digitally. “In addition to using the newest in medical engineering, the change from film to digital has tremendously improved workflow in our department,” explains Hennigs while she is evaluating the CT images of a 56-year-old patient together with her Assistant Physician Martin Vyleta, MD. The patient’s left carotid is nearly occluded. “Before this, we would have needed, for example, an invasive angiography to reach this kind of diagnosis,” says Hennigs. With the CT, the resulting images clearly show brain aneurysms and stenoses as well.

In the future, the Knappschaft Hospital will go through intensive efforts to determine the possibilities of buying a new system or an almost new, refurbished system. Both Hennigs and Hellermann agree on this approach.



“WITH THE NEXT-TO-NEW SIEMENS CT, we received excellent quality at fair price,” Hellermann (left) and Hennigs are sure.

**Author:** Katja Stöcker works in the editorial office of Medical Solutions. Prior to this, she was a freelancer for Deutsche Presse-Agentur (dpa) (German Press Agency), various daily newspapers, and the online editorial office of Mitteldeutsche Rundfunk (mdr).



A YEAR AGO Jürgen Hellermann and Svenja Hennigs did not know anything about Siemens RS Division or Proven Excellence Program – now they have bought several refurbished systems.

## Knappschaft Hospital Bottrop, Ruhr, Germany

The Knappschaft Hospital Bottrop, located in the Ruhr area, is an acute care hospital. Approximately 350 beds are available throughout its nine departments, as well as 12 additional dialysis beds for outpatient treatment. During the past year, 12,000 patients were treated as inpatients and spent 110,000 care days in the hospital. This year, the hospital's approximately 900 employees are celebrating its 75th anniversary.

Matching a medium-sized corporation, the Knappschaft Hospital reached a business volume of €48 million during the past year.

According to its own statement, the hospital's administration is aiming at an integrated approach for out- and inpatient treatment. The operation of the hospital is pursuing holistic patient care in accordance with the overall concept of the miners' and mine-employees' social insurance (Knappschaft), and is based on well-

established scientific knowledge supported by modern technology. All decisions are based on ecological and economical aspects. The hospital includes the following departments and specialties:

- Clinic for Anaesthesia, Intensive Care, and Pain Therapy
- Clinic for General and Visceral Surgery, Center for Minimally Invasive Surgery
- Clinic for Internal Medicine
- Clinic for Angiology
- Clinic for Urology, Pediatric Urology, and Urological Oncology
- Clinic for Vessel Surgery
- Clinic for Nephrology and Rheumatology
- Clinic for Neurology
- Clinic for Radiology/Nuclear Medicine/Neuroradiology
- Physical Therapy
- Neurological Rehabilitation

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Publisher:

**Siemens AG**

Medical Solutions

Henkestrasse 127, D-91052 Erlangen, Germany

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Design and Editorial Consulting:

independent Medien-Design, München, Germany

in cooperation with Primafila AG, Zürich, Switzerland

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Widenmayerstrasse 16, D-80538 München, Germany

Printer:

MEDia\_asset\_pool

Waldstrasse 18, D-91054 Erlangen, Germany

Photo Credits:

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