



Simultaneous visualization of carotid artery and stent enable stent deployment assessment

syngo iDentify

Redefining 3D imaging during intervention with syngo iDentify

3D visualization is a well-established tool in interventional imaging. Initially, only one volume data set could be displayed allowing for the visualization of contrast-filled vessels, stents, clips, coils, and bone. *syngo iDentify* enhances 3D visualization during interventional procedures by enabling dual-volume visualization of high-contrast objects. It provides differentiation between two 3D objects of high contrast that have virtually the same contrast density.

Moreover, it allows clear visualization of a clip, stent, or coil placed in a vessel as well as soft re-stenosis within a stent and differentiates calcified plaque from a vessel. The benefits for the interventional radiologist are obvious. Stent placement can be exactly verified and calcified plaque becomes clearly visible. In line with *syngo* applications, *syngo iDentify* can be displayed in the examination room and integrated into the *syngo* user interface.

MULTIX Swing* going once, going twice, sold!



On December 7, 2006, the first compact radiography system, our MULTIX Swing was sold by Internet auction. After two hours, the system found a buyer in southern Germany. This online auction followed the principle of a Dutch auction or reverse auction: in this case, the system went to the first – not the highest – bidder. The price started at a certain level and dropped continuously from there. The first buyer to (virtually) raise his or her hand and set the price, won the auction. All interested buyers were able to register online and place a bid either during or prior to the auction. It was not even necessary to be online during the auction. What made this method even more exciting was the “Buy it now” option.



The virtual marketplace for MULTIX Swing

Any bidder can use it anytime during the auction to immediately buy the system at the price displayed. This was our first attempt to use the Internet as a sales channel and increase interest among customers. The project was pioneered in Germany, but may be available in other countries in the future. For upcoming auctions, please visit our website www.siemens.com/multix-auktion

* Not available in the U.S.

syngo DynaCT: Results in less than a minute

Soon after its introduction to the market in 2004, cross-sectional imaging with *syngo DynaCT* is developing towards a worldwide standard in the interventional environment.

With more and more clinical staff realizing the numerous advantages *syngo DynaCT* delivers, it has quickly become common practice to plan interventions on the basis of *syngo DynaCT* results.

Successive software development and clinical experience have led to ongoing progress in image quality. However, the time required for reconstruction of the volume data was largely determined by hardware constraints. Thanks to further basic development in computer hardware like the launch of the Intel® Core™ 2 Duo processor and extensive research by Siemens engineers, this process has accelerated noticeably.

The new version of *syngo DynaCT* requires less than a minute to reconstruct all *syngo DynaCT* protocols – a major improvement to reconstruction performance, which marks a new stage of development for *syngo DynaCT*. Even better, further improvements to image quality were implemented in the new version.

A full year of research and development was invested in order to profoundly redesign the entire processing pipeline underlying the imaging process. The latest technologies available on the market were extensively leveraged, e.g., the increasing capabilities and performance of FPGA chips used on a

dedicated CT-reconstruction CPU reduce the computational time of particularly expensive 3D reconstruction algorithms by factor of 90. In-depth performance analysis led to a focused optimization of algorithms, thereby ensuring full utilization of the computational power of the new hardware and software architecture. “We are confident we can satisfy the ‘need for speed’ in the modern clinical environment and enhance the interventional workflow of our customers,” states Dr.-Ing. Benno Heigl, manager of 3D application development at Siemens Medical Solutions, AX.



The new version of *syngo DynaCT* with optimized reconstruction performance was first presented to the public at the RSNA 2006 and resonated very well among experts and healthcare professionals.