Press Release

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New level of quality in image-guided navigation through the first-time integration of flat-panel C-arms into active navigation

Ziehm Imaging and Stryker cooperate in the field of intraoperative imaging Worldwide first installation in the Neurocenter of the University Medical Center in Freiburg, Germany

Nuremberg, Germany, March 3rd 2009 – With the joint development of the Ziehm NaviPort 3D interface, the medical technology manufacturing companies Ziehm Imaging and Stryker have succeeded in integrating 2D and 3D image data from the C-arms with the Stryker active infra-red navigation. Thereby, Stryker, currently the only globally operating provider of navigation systems, also supports the new flat-panel C-arm Ziehm Vision FD Vario 3D. Users in the fields of minimally-invasive orthopedic, trauma and spinal surgery particularly benefit from the new level of quality in image-guided navigation.

Lower radiation dose in the OR

With the new interface, Ziehm Imaging and Stryker present a link to the active Stryker navigation system with fully automatic registration for image-guided surgery. For the first time, doctors are able to integrate intraoperative x-ray images from the newest generation of C-arms into Stryker navigation. The new Ziehm Vision FD Vario 3D image intensifier offers an excellent distortion-free 2D image quality as well as efficient intraoperative 3D imaging. This provides the surgeon with a precise depiction of even the finest bone structures or complex fractures. The navigation can access the real-time data and use them immediately for further procedures. Surgeons and the OR team benefit from an improved orientation during surgery and a reduced radiation exposure. Due to the innovative technologies, x-ray dose levels can be kept to a minimum. Moreover, a postoperative CT scan is rendered unnecessary.

Highly precise image data for better surgery results

With the new development, Stryker and Ziehm Imaging aim to drive forward the qualitative improvement of navigated surgery through particularly detailed intraoperative imaging. The Stryker navigation system is unique in using a high-precision, active 3-CCD camera system, which enables a much more accurate localization of anatomic structures as well as the instruments deployed in surgery, when compared to traditional solutions. In minimally-invasive surgery, the navigation provides the surgeon with a comprehensive overview of the intervention, despite very small incisions. This helps, for example, in the correct calculation of the optimal spinal screw placement. Together with the high-resolution images from the C-arms, precise information is available to the surgeon, resulting in improved OR safety and better clinical results.

Worldwide first installation in the Neurocenter of the University Medical Center Freiburg, Germany

Dr Hubbe, senior physician at the Neurocenter of the University Medical Center Freiburg successfully carried out the first ever spinal surgery with this new technology. He explained: "The combination of navigation and intraoperative 3D imaging enables us to employ minimally-invasive treatment methods. It is precisely the high accuracy of the navigation and the comfortable opening of the 3D C-arm which allows us to routinely carry out surgeries in a way we are used to, without having to adapt to a new clinical workflow otherwise demanded by the introduction of new technology. The systems adapt themselves to clinical procedures and both patients and users benefit equally from modern treatment methods."

"Through the open Ziehm NaviPort 3D interface, our three dimensional image volumes can be used directly from the Stryker navigation systems", explained Martin Herzmann, Director Global Marketing for Ziehm Imaging. "Complex operations consequently become safer for the patients and are often carried out with a lower radiation dose for the OR team, the surgeon and the patient. By combining our imaging technology with Stryker's active navigation, we can contribute to making surgeries faster and less invasive for the patients."

"The better the quality of the 3D data and the intraoperative images available to our navigation, the more precise the measurement results will be," added Joachim Sprung, Marketing Manager Navigation for Stryker. "Through our active infra-red camera system, which permits an accuracy of measurement of up to 0.07mm, and our newest software generation, we are able to optimally use the high-quality intraoperative images from the Ziehm Imaging C-arms for navigated surgery. Physicians and patients benefit from the increased precision in the operating room. The high image quality contributes systematically to the improvement of clinical results."

About Ziehm Imaging

Ziehm imaging specializes in the development, manufacturing and worldwide marketing of mobile x-ray-based imaging solutions. The company has been market leader in Germany for more than seven years as well as in many other European countries for two years. Today, Ziehm Imaging is a global systems provider, employing over 250 people worldwide. Extensive in-house development know-how is reflected in the Ziehm Imaging C-arms' high medical imaging performance, intelligent generator technology, significant dose savings and seamless digital network integration. Building on competence and creativity, as well as continuous dialog and close cooperation with renowned universities, research centres and hospitals, Ziehm Imaging has developed groundbreaking technologies that have made the company a global trendsetter in intelligent interventional imaging. Ziehm Imaging products are known for their outstanding versatility and their easy handling for a wide variety of medical applications. In addition, they offer seamless integration into existing IT environments for digital image data acquisition, image evaluation and image management.
Please see www.ziehm.com for more information.