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New Mobile C-Arm from Siemens

At the 2012 Annual Meeting of the Radiological Society of North America (RSNA) 2012, Siemens Healthcare introduced Cios Alpha, a new mobile C-arm system with greater power output and a larger field of view in the operating room (OR) than conventional C-arms.

Cios Apha includes a user-friendly touch screen interface, a unique

position storage feature and a special cooling system that helps to ensure high image quality.

Because image intensifiers and flat detectors for mobile C-arm systems historically provide the surgeon with a round field of view when rotating the image, important image information can be lost. Due to its new radiographic collimators, Cios Alpha with flat-panel detector has an operating area field of view that is up to 25 percent larger than current mobile C-arms. When the surgeon rotates the originally square image, the new collimators – which shield the patient from unnecessary radiation – follow automatically, tracking image rotation to help ensure that the monitors display the maximum field of view.

The system's 30 x 30 cm detector, combined with its 25 kW power output, provides high-resolution, high-contrast images and can cover the finest structures in the range of submillimeters – a particularly beneficial feature in minimally invasive surgery, where fine catheters and instruments are used frequently. Due to the flat, compact design of its flat-panel detector, Cios Alpha also provides doctors and medical personnel with additional space and thus better patient access than traditional image intensifiers.

At 25 kW, Cios Alpha is the most powerful mobile C-arm system available. This is especially beneficial when operating on obese patients, who require more system power to obtain images of sufficient quality. The Cios Alpha's special cooling system protects it from overheating, helping to ensure consistently high image quality even during long operations. This is critical, as an

overheated system automatically reduces the power level, which leads to reduced image quality. In that case, the C-arm system would have to be changed to complete the intervention, while the original system would require a longer cooling period prior to reuse.

Cios Alpha has a new touch screen interface for greater safety and convenience in the OR. The system can be operated with three identical touch screens — on the C-arm, the monitor cart and the table-side control. Using these touch screens, the surgeon has full control of the equipment at any time during interventions. Operating staff members who often lack full view on the monitor cart can use small image previews integrated into the touch screens that enable direct control of image manipulations such as zooming or running-in of radiographic collimators. Cios Alpha also has a unique C-arm position storage feature. With one click, the motorised C-arm takes on a previously stored projection, eliminating manual repositioning. For a better overview during vascular procedures, the surgeon can use Cios Alpha's vessel overlay software.

Cios Alpha will be available in the summer of 2013. For use in disciplines such as trauma surgery and orthopedics, the system is available optionally with 12 kW power output and a 20 x 20 cm flatpanel

detector.

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