

RASimAs prototypes have been released

Viktor Voski, a physician at the Department of Anaesthesia, Uniklinik RWTH Aachen, was at SINTEF, Trondheim, Norway, and at SenseGraphics, Stockholm, Sweden to perform the final tests in the assistant and simulator prototypes before they are released to the clinical centers for evaluation.

The Regional Anaesthesia Assistant (RAAs) provides precise location of the femoral nerve area and accurately identifies the femoral artery and the fascia iliaca. The navigation of the needle, which is a functionality of the Sonix ultrasound system, has also been integrated into the assistant so the user can benefit from both: the assistant itself and the needle guiding assistant.

“During the visit, we have improved the interface of the RAAs and made it more user-friendly. The interface has been optimized for non-stop interaction between the user and the system,” stated Viktor.



The Regional Anaesthesia Assistant (RAAs) is composed of a high-tech ultrasound system, magnetic probe tracking, additional computer hardware, and a large screen to display the augmented reality

In Stockholm, the progress of the Regional Anaesthesia Simulator (RASim) was assessed.

To realistically simulate the Femoral Nerve Block (FNB), not only a high-quality ultrasound image is needed but also haptics and advanced visualization techniques. Technical and medical partners were involved and closely cooperating to improve the system.

“During my stay in Stockholm, I have discussed intensively with the developers on current problems and possible solutions. We have been able to optimize the probe-needle orientation such that in-plane

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and out-of-plane needling approaches can now be simulated. After final tuning of the haptic device, the physician feels realistic tissue resistances while virtually performing a FNB,” reported Viktor.

After final software and hardware tests, the RASim prototype was approved and is now ready for shipping to clinical centers, where a comprehensive evaluation in controlled clinical trials will be conducted.



The Regional Anaesthesia Simulator (RASim) prototype shows a haptic device with the needle on a foam rest. Two screens are required for the situs (left) and the courseware (right).

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