

ITEA Success Story

NEXXIS

Barco's main result of the ITEA 2 MEDIATE project improves the quality of care for patients and enhances clinical efficiency

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The costs of sustaining healthcare are rising constantly: the global medical technology market, including devices used for pharmaceutical purposes, is in the order of 400 billion euros with a growth rate of 5% per year. Europe spends approximately 10% of its GDP on healthcare. Due to ageing of the population and increase of chronic diseases, growing numbers of patients require complicated surgical interventions, which may increase healthcare costs even further. One way to combat this trend is the replacement of conventional open

surgery procedures by image guided, minimally invasive procedures as these have proven to improve patient outcome and reduce costs. This kind of intervention started with treatment of obstructed arteries but improved techniques and tools are extending this quickly to other clinical domains such as cardiac, oncologic and orthopaedic surgical procedures.

Complete solutions, single supplier

The ITEA 2 project MEDIATE has improved these minimally invasive procedures by developing new imaging protocols, interventional tools and an architecture that fully integrates all medical imaging sources, displays and therapeutic devices into the interventional workflow, including optimised UI's and decision support.

Hospitals are increasingly asking for complete solutions for their intervention rooms, preferably to be delivered by a single supplier but including third party systems. This may include long-term service contracts, with the obligation

to the supplier to keep the equipment up to date for an agreed price. While this reduces financial risks for hospitals, suppliers are required to provide an open and flexible architecture that can cope with future adaptations and extensions of the equipment. MEDIATE fits this trend perfectly, as has been proven by new alliances and quick market acceptance of new products for intervention room integration by Barco and Philips, among others.

IP centric solution for digital operating rooms

Barco, one of the key consortium members, has used the results of the MEDIATE project to create its Nexxis platform, an IP-centric solution for video and image management and distribution in the next-generation digital operating room where, traditionally, AV systems connect devices like endoscopy cameras, computers, scanners and surgical displays. Nexxis, on the other hand, uses a high bandwidth 10 Gbps IP network to integrate surgical equipment. This unique video distribution-over-IP approach



ensures high-quality imaging and enables a smooth distribution of uncompressed medical video, graphics, audio and computer data throughout the operating room with near-zero latency. This open system with its ‘plug & play’ enables medical equipment to be rolled into the operating room and be instantly connected.

Barco benefited from the MEDIATE project by cooperating with multiple partners in MEDIATE, who linked up to the Nexxis API's to add and test new features to the system such as natural UI's. These have been shown in demonstrators. Furthermore, the collaboration with some of the hospitals in the consortium has resulted in clinical feedback on requirements for optimal display and configuration of images. “For Barco,

the collaboration in the ITEA 2 MEDIATE project was key since the operating room market was a new domain for Barco and through the project we were able to interact and work together with international partners that have already been active for many years in this domain. The close interactions within the consortium were very useful for Barco, since quite a few hospitals worked with the consortium to define clinical requirements and were available to give feedback on the progress as well as the final demonstrators.”

Safe, efficient, protective and reusable

Already in March 2013, Barco announced that ten leading hospitals in Belgium and the Netherlands had signed a contract for the

installation of Barco Nexxis, which will form a critical part of their new digital operating room infrastructure. Today, already over 500 operating rooms have installed Nexxis within Europe. Furthermore, the Nexxis system has been selected as the integration and visualisation backbone by leading suppliers of Operating Room equipment, like Karl Storz, Merivaara and Brainlab. The system has been showcased at many medical and commercial conferences, showing Barco as an innovative supplier of new IT solutions for healthcare, in addition to its leading position in medical displays.

Furthermore, Barco has embraced an Environment, Health, Safety And Security Pledge and is committed to conduct business in such a way that the environment is respected, preserved and whenever possible improved. Therefore, Barco introduces products, systems and services in the company's markets that are safe for their intended use, efficient in the use of energy, protective of the environment, and that can be reused, recycled or disposed of safely. More specifically with respect to Nexxis, the integration of all relevant medical information and flexible UI will improve the quality of care for patients and enhance clinical efficiency, and thereby help to counter rising healthcare costs for society. Real-time distribution of images and audio via IP by Nexxis enables tele-consultation of medical colleagues from centres of excellence to improve decision making in peripheral hospitals.

“As Nexxis is Barco's video-over-IP platform for the integrated digital operating room, in future we will continue to expand the scope of opportunity for Nexxis with features like enhanced 4K capabilities, creating additional inroads to cathlabs and endoscopy applications.”