

Richard Satava, M.D.

- Objective Assessment of Surgical Skills
- Operating Room of the Future



FUNDING

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Objective Assessment of Surgical Skills

There is a totally new paradigm in surgical education and training based upon surgical simulation. A national consortium of surgical training centers will define new metrics and outcome performance measures, establish criterion-levels of performance, validate efficacy of simulators as educational tools and then train residents to criterion and evaluate the performance in the operating room.

The conceptual change is to train residents (in the future) not for a given time, but rather to a given criterion level, a level which reduces errors to the absolute minimum and provides maximum quality,

especially for patient safety. The above will be implemented by using the Minimally Invasive Surgery Trainer – Virtual Reality (MIST-VR) and the Xitact Laparoscopic Cholecystectomy simulator, in addition to other systems such as the “Blue Dragon” that are described elsewhere.

This new educational system will initially be implemented and validated at UWMC, then expanded to the WWAMI region, and finally to a national level.

Operating Room of the Future

Recent introduction of robotic systems into clinical surgery indicates a fundamental new direction for surgeons. Research will be conducted to integrate robotics into an entirely new concept for the operating

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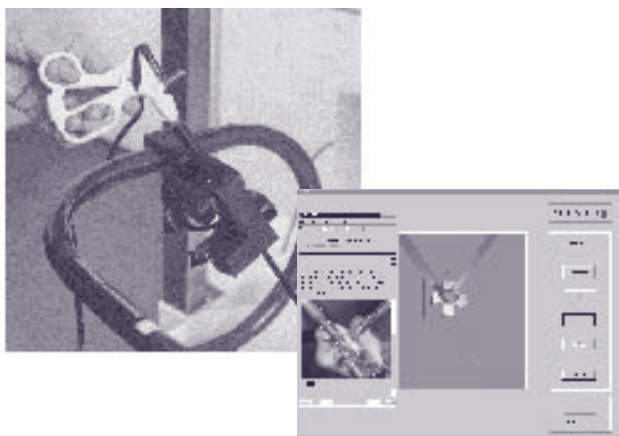


FIGURE 1: MIST-VR basic surgical skills simulator illustrating the image on the simulator screen, and the input handles for tracking motion.



FIGURE 2: Xitact Laparoscopic Cholecystectomy simulator illustrating the portable system and video image.



FIGURE 3: Zeus surgical robotic system.



FIGURE 4: OR of the future – concept drawing from Integrated Medical Systems.

room — one which decreases the number of personnel required, increases efficiency and quality control, and which incorporates the robotic system into the hospital

information system. In addition the robotic systems will be used to train, objectively assess and certify competence of surgeons.

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DEPARTMENT CO-INVESTIGATORS

Mika Sinanan, M.D., Ph.D.

OTHER CO-INVESTIGATORS

Blake Hannaford, Ph.D.; UW Department of Electrical Engineering-Biorobotics / **Marvin Fried, M.D.**; Montefiore Medical Center / **Suzanne Weghorst, M.A., M.S., Ph.D.** candidate; UW Human Interface Technology Laboratory
