InvenioIP - Technology Details

Institution: University of Maryland, Baltimore

Docket: YX-2004-012

Title: A novel system of distributing video and other data for coordination

Summary: VideoBoard is a system based on video to provide context and status information to collaborators in dynamic settings, such as the management of operating rooms. VideoBoard uses passive data collection methods with no active human input and provides video images for viewers to obtain context information, along with patient care event information. VideoBoard contains a set of privacy control mechanisms to modulate the amount of information, so that the right amount of information is presented to the right groups of viewers while privacy-intense information is stripped out to enhance patient and staff satisfaction. VideoBoard provides a user-friendly interface that does not require training and can work with existing electronic or manual workflow systems.

Applications:
- Management of large operating room suites, catheterization laboratories, emergency rooms.
- Management of patient flows in high turn-over areas, such as same-day surgeries.

Advantages:
- Addresses the number one concern of using video displays - staff and patient privacy.
- Passive, making the information continually available for those who need it.
- Addresses a key workflow concern in acquiring and maintaining status of information.
- Works with co-existing workflow systems, manual or electronic.

State of Development: The VideoBoard has been used for several years in the operating rooms of University of Maryland, Baltimore Shock Trauma Center, and is considered an essential tool by the management and healthcare providers.

R and D Required: Further development will likely require testing at multiple healthcare institutions to refine operating parameters and conditions.

Licensing Potential: UMB seeks partners for clinical development.

Patent Status: U.S. Non-Provisional Patent Application 10/926,665 Techniques for delivering coordination data for a shared facility, filed August 26, 2004, pending.

Related Publications:
- The use of distributed displays of operating room video when real-time occupancy status was available. Xiao Y, Dexter F, Hu P, Dutton RP. Anesth Analg. 2008 Feb;106(2):554-60
- Video technology to advance safety in the operating room and perioperative environment. Xiao Y, Schimpff S, Mackenzie C, Merrell R, Entin E, Voigt R, Jarrell B. Surg Innov. 2007 Mar;14(1):52-61.
- Advanced visualization platform for surgical operating room coordination:

distributed video board system. Hu PF, Xiao Y, Ho D, Mackenzie CF, Hu H, Voigt R, Martz D. Surg Innov. 2006 Jun;13(2):129-35. Review

- An algorithm for processing vital sign monitoring data to remotely identify operating room occupancy in real-time. Xiao Y, Hu P, Hu H, Ho D, Dexter F, Mackenzie CF, Seagull FJ, Dutton RP. Anesth Analg. 2005 Sep;101(3):823-9.

Files:

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