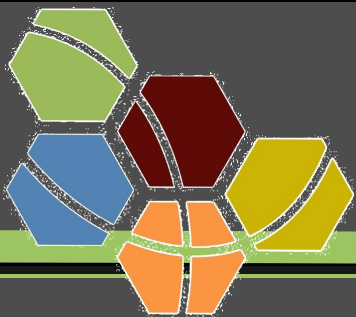




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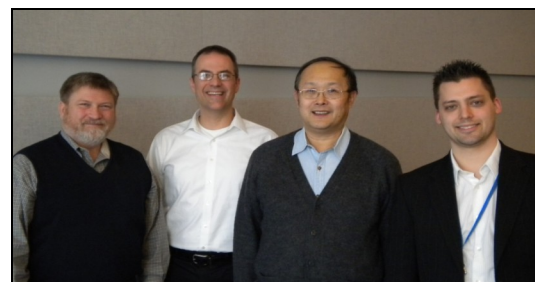
IVN Receives \$400,000 in NEW Funding

Four VA-CASE projects were funded in a recent national VERC T-21 solicitation

Developed by our Wayne State Faculty, with Dr. Kai Yang as the lead, in partnership with the Detroit VAMC - IVN provides an automated and dynamic work flow process incorporating systems and human factors engineering principles to ease the burden on the technician, reduce error in re-processing, provide automated data collection, support Quality Management requirements and reporting, and provide safer and better care to the veteran. The system development and deployment includes an iterative user-centered design process that relies on user feedback at each stage in the CED cycle. Additionally, the design, evaluation, and implementation stages of this tool employ human factor's engineering practices.

only supporting endoscopes. IVN can and will support any RME and other equipment with a work flow process procedure, including corrective and preventive maintenance procedures.

The IVN system is also designed to interface with integrated Quality Management Software (iQMS) Systems, Near Real Time Modeling & Simulation systems (NRT M&S), and ISO 9001 compliancy systems. Additionally, the system can interface with Real Time Locating Systems (RTLS) to provide a system of systems (SoS) configurable approach to automated or semi-automated asset tracking and processing, and maintaining quality control, education, training, and competency requirements as appropriate.



IVN Team—Will Jordan, Dr. Darin Ellis, Dr. Kai Yang, Serge Yee

The first IVN prototype consists of 15 individual IVN modules and is operational. It is currently undergoing user validation at Detroit VAMC. This initial IVN deployment provides navigators for the 15 endoscopes models used in Detroit GI Clinic. IVN is not restricted to

Summary of New IVN Projects

*Enhancement & Expansion of Interactive Visual Navigator (IVN)
into broader OR and SPD Operational Practices*

IVN technology was successfully developed for Scope reprocessing procedures. Among the functional capabilities found in IVN, human factor designed user interfaces and touch screen technology are applied to instruct work process, conduct automatic time studies, and maintain detailed work process information. With the IVN phase two development, additional functionality is being developed, such as events tracking, operator competence validation, and process data retrieving, analysis and reporting. The next phase of IVN technology development is needed to implement automated re-processing procedures

Summary of NEW IVN Projects *Continued*

Full Implementation of IVN in Ann Arbor VAMC

Interactive Visual Navigator (IVN) technology is successfully developed for endoscope reprocessing. IVN incorporates a human factor designed user interface and touch screen technology to instruct work processes, conduct automatic time studies, maintain detailed work process information, and provide RME management and education functionality. With IVN phase two development, additional functionality is added, such as events tracking, operator competence validation, and process data retrieving, analysis and reporting. During Phase two, the IVN is scheduled for implementation in both the Detroit and Indianapolis VAMCs.



Additional VE-TAP Project

The VE- TAP Program was awarded funding to support two innovative opportunities.

Patient Discharge Error and Re-admission Reduction

Erroneous discharge process compliance and subsequent readmission contributes a significant cost to America's healthcare system. For example, patients' non-compliance to the medication instruction may impede their recovery resulting in their readmission for additional treatment. Many of these non-compliances are personal behavior related. And, in many cases 20% of such patients cause 80% of the re-admissions. If an accurate prediction can identify the patients who have a high likelihood of non-compliance with discharging instructions, providing special attention for these patients, such as timely reminders communicated so that the non-compliance is corrected, can reduce their need for re-admission.

RTLS-IVN Interface Module Development

Real time locating system (RTLS) is a technology that used to track and identify the location of objects in real time. This is accomplished using simple, inexpensive nodes (badges/tags) attached to or embedded in objects, and devices (readers) that receive the wireless signals from these tags to determine their locations. RTLS typically refers to systems that provide passive and/ or active (automatic) collection of location information.

In the healthcare industry, RTLS tags can be implanted into medical devices in a medical facility. With the installation of a RTLS infrastructure, the RTLS system can:

- Identify all tagged items in given location(s).
- Identify a category of items (types/models of given equipments) and location throughout the facility.
- Identify a given type/category of items in given location(s).
- If personnel tags are used, RTLS can do the similar activities for employees/patients.

The implication of RTLS technology to healthcare system management is tremendous. This system can track the usage and flow of equipment and employees/ patients in real time. This technology can make processes transparent and traceable. For example, RTLS can be used to track the usage and location of any category of surgery supplies, and can detect the potential shortage of key equipment before the situation occurs.

Future State of RME Re-processing

