Power of speech drives military vehicles

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Speech recognition specialist VoxGen has been selected to add speech interface technology to a system, developed for the Department of Defense by Rochester Institute of Technology, which provides for effective maintenance, operations, and engineering support for commercial and military vehicles.

Speech technology will enhance the vehicle preventative maintenance inspections, and will also guide personnel through complex troubleshooting and maintenance procedures. The speech interface provides for hands-free recording of vehicle inspection data. The system will also provide a revolutionary "multimodal" interface that provides maintenance instructions through speech using a wireless headset, and visual access to diagrams and images on their mobile handset or PDA device.

Under the six-month project, speech technology will be incorporated into LEEDS® (Life-Cycle Engineering and Economic Decision System). The system, which has been developed by RIT's Center for Integrated Manufacturing Studies, provides technical and economic data and decision-making tools for equipment maintainers, engineers, and operations managers. The system holds a wealth of useful information including design data, an inventory of repair parts suppliers, operational histories, and maintenance instructions.

The addition of Voxgen's "multimodal" speech technology will give maintenance personnel intuitive and hands-free access to this information whilst engaged in performing maintenance tasks. It will also

provide a hands-free mechanism for adding physical inspection data to the life-cycle history.

"We are delighted to be working with RIT, given its strong track record for delivering innovative solutions to the military," says Simon Loopuit, CEO at VoxGen. "RIT's decision to incorporate VoxGen's technology in its DOD funded technology is a powerful endorsement from a very discerning customer."

Speech interface technology turns an already useful system into something more invaluable. At present, data from vehicle inspections is often not captured digitally and is therefore not readily available for future reference or analysis. In the integrated system, speech technology will be used to guide the user through the inspections and the observations will be recorded directly from the user's speech.

In addition, maintenance technicians do not always follow correct procedures, resulting in ineffective maintenance or even safety concerns. Further, necessary information is often spread across multiple different manuals and is difficult to access. By voice enabling the system, maintenance personnel will be able to rapidly access step-by-step instructions and diagrams to troubleshoot quickly and accurately, saving both time and money.

"CIMS is excited to work with VoxGen on the development of this important technology," adds Nabil Nasr, CIMS director and assistant provost for academic affairs at RIT. "The integration of Voxgen's speech interface technology with our life cycle engineering tools has the potential to significantly improve the maintenance and support of commercial and military vehicles."

Source: Rochester Institute of Technology