

Speak and You Shall See!

By Stan Stephenson

One day all you may use to call up needed service information will be a lightweight mini-headset and mike, and access to the Internet. This unique concept uses standard software and voice commands to display what you are looking for.



A dynamic demonstration was given recently at an East Coast regional trade show run by the ASP-PA (Automotive Service

Providers of Pennsylvania). It showed almost 200 attendees the latest system developed for service information acquisition. The demonstration was given by Jim Roach of Intelliworxx, Sarasota, FL. Roach is a former GM engineer who knows that service technicians need to find information easily and fast.

What Roach showed the trade show group literally blew everyone away. His demo ran on a military-spec and 'ruggedized' \$6000 portable PC designed by Intelliworxx, and titled the VoiceTablet. The unit has a



(Photos: Bill Calman)



The "Big Event In The East," Mechanical & Collision Auto-Expo Extravaganza was sponsored by the Automotive Service Professionals of PA (ASP), and held in Fort Washington, PA in October. One of the highlights was former GM Engineer Jim Roach demonstrating a futuristic diagnostic system now used by the U.S. military to diagnose and repair complicated weapons systems. This type of system could end up in automotive service bays in the foreseeable future.

removable self-powered display screen to allow complete walk-around portability. He showed how U.S. military service techs are now simply speaking to request technical service and diagnostic information for a wide variety of weapons systems, helicopters, and tanks.

It took no great leap of imagination to see how this kind of data presentation could work very practically in the automotive service bay. Any automotive database of technical information which could be displayed on the screen would be accessed from the Internet. Roach told us he envisions a data update schedule that could be refreshed at least weekly, or daily if needed. The point is that automotive data could be constantly updated if necessary.

Off-the-shelf programs

Roach stressed that the military specs for development

of this voice-recognition information retrieval technique called for readily available commercial software: no special operating systems, no custom-designed software. The result is an information delivery system which runs on a Pentium II VoiceTablet portable, using Windows and PC-level voice recognition software.

If the Intellivorxx VoiceTablet is neither desired nor affordable, the entire system of software and web-accessed data could be run on a conventional laptop PC, but that would not have the rugged and durable features for shop use which are built into the VoiceTablet.

Operating normally, the system responded to Roach's voice commands, many of these being just one or two words such as: 'Menu,' 'Scroll Up (or Down),' and so on. Screen displays come up almost instantly.

What appears on the screen once a command has been spoken are sub-menus divided into symptoms, service procedures, diagnosis, components, wiring diagrams, and so on. There is almost no delay from stating a command until the screen is filled with what has been requested. 'Symptoms,' for example, may show a wide variety of specific possibilities, each one numbered. As the command 'Scroll' is given, the menu scrolls up, and when a likely match is found, the user says his or her choice of symptom, '15' for example.

Symptom 15 then shows an expanded description of the symptom, the possible cause of the problem, and the steps to take to correct the condition. It is slick and simple, and absolutely beats hunting and pecking at a keyboard or clicking a mouse. Speech commands take the user right there, fast!

See that current flow?

The Wiring Diagram package also was very dynamic in the way it played. If the scale of the wiring diagram is too small, just say 'Zoom In,' and a screen-graphic section will be instantly enlarged. If the electrical current routing needs to be seen, at the appropriate command you will begin to see a red line move slowly through the wiring layout, all the way through the circuit

until it reaches ground.

There is also a notepad feature which allows a full-size yellow screen to come up after the command 'Notepad' has been given. If you wish to make permanent notes about a specific kind of failure or component for future reference, all you do is dictate your thoughts. About three seconds after dictation is complete, the words scroll on to the yellow pad to show what you said, exactly as you said it. Any dictated note may then be stored for future reference the next time the same kind of technical solution is needed.

Automotive possibilities

Roach showed the demo program for the service and diagnosis of the Army's Hell-fire rocket weapons system. And while what was shown had been formatted for that specific military use, he told

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his audience that if he had the service information for a given group of year/make/model of vehicles, the same technique, smoothness and rapidity of voice-command access could be used in the typical service bay. It was a compelling demo of what could be done if someone wanted to invest the money to make it happen.

How much? We asked that question of Roach, and while he was guarded in his answer, he suggested a final price would depend on the kinds of illustrations that would be involved, and the complexity of the information to be formatted. As to how much the

system might cost in the service aftermarket, that was much less clear. Jim Roach felt it could be "marketed competitively compared with other current information delivery systems."

The best part of this new system is that it would not rely on CDs for information storage. The Internet web-access feature starts automatically when the unit is switched on. "This allows for the greatest flexibility to the user," Roach told us. As to pricing if this unique system ever came to the automotive service market, and if the Intelliworxx proprietary VoiceTablet was



Marines use MentorWorxx Systems to maintain sophisticated guided missile systems on selected aircraft. With the right content, it's easy to imagine the same easy access to automobile information in the service bay. And Intelliworxx is no stranger to the automobile and mobile computing; they manufacture the computer board for Visteon's in-dash AutoPC product called ICES that provides voice-driven access to Internet news, email, turn-by-turn navigation, hands free mobile phone and more.

not needed, the charges could be based on an initial subscription fee, plus a monthly or quarterly fee for the service.

Pattern failure benefits

In thinking about the power and smoothness of the demonstration we saw, it would seem to be a perfect way of delivering technical and/or service procedure information to a tech right in the service bay. Almost any database collection of pattern failures, for instance, or vehicle specs, could be made completely usable with this Intelliworxx concept.

While pricing remains to be determined, it would seem to be worth almost anything within competitive reason, given its ease of use and flexibility of

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data delivery. Many who saw Jim Roach demo his system at the Pennsylvania trade show said they would rather work with something like this than spend time at a PC keyboard, or shuffling CDs to acquire data from some of the available systems in the market today.

Roach listened and understood. After all, the first genera-

tion of his concept was shown at the 1998 New York Auto Show on the Cadillac stand. It has come a long way since then, when it was only a touch-screen system. Voice command techniques have streamlined its delivery, and you will not believe it until you have seen it; it's that impressive! —

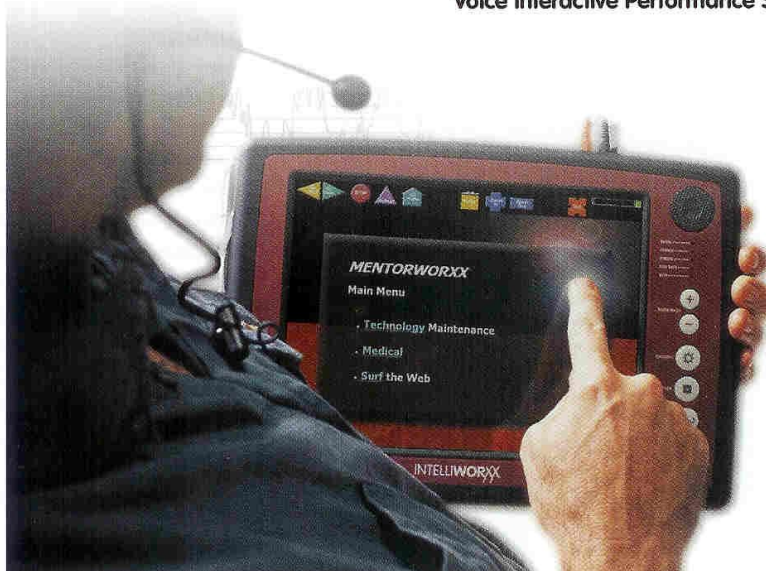
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