

Applied AI News

By David Blanchard

The **US Army Research Lab** and the Knowledge Engineering Group of the US Army Ordnance Center and School (Aberdeen Proving Grounds, Md.) have developed a visual expert system for diagnostics of the M-1 tank's turbine engine. TED (Turbine Engine Diagnostics) is currently delivered on a color laptop PC one support level behind the front lines. Pictures of the engine and graphical representations of the diagnostic process prompt novice and experienced Army mechanics for input or action as they are guided by TED through the correct maintenance procedures.

The UK-based **Tyne and Wear Development Corp.** is developing a virtual reality model of the city of Newcastle upon Tyne as part of that city's redevelopment project. A visualization of the East Quayside area, including landscaping, the road network, buildings, and the Tyne Bridge landmark, is being created as a virtual world. Prospective tenants and purchasers will be able to experience a "walk through" of the buildings.

Togai InfraLogic (Irvine, Cal.) has been awarded a Phase II Small Business Innovation Research (SBIR) grant by NASA Johnson Space Center to study fuzzy logic control for improving performance of thermal control systems, including industrial applications such as air conditioning and energy control.

Researchers at the **University of Missouri-Rolla's Intelligent Systems Center** have begun a three-year, \$391,000 project to develop a neural network to run the kinds of milling machines used to shape parts for the aerospace, automotive and shipbuilding industries. Their research is aimed at helping manufacturers improve their products while trimming production and retooling costs.

Hill-Rom Co. Inc. (Batesville, Ind.), a producer of electric hospital beds, has developed a system that uses speech recognition technology for controlling hospital room functions by voice. The system, called Enhancemate, will enable bedridden and disabled patients to control bed functions, nurse call, room lighting, television, and make telephone calls with spoken commands and sentences in any dialect or accent.

AT&T Smart Cards (Somerset, N.J.) and **Trendar Corp.** (Nashville, Tenn.), a developer of truck fueling systems, have teamed up to provide a transaction station for truck stops based on AT&T's smart card technology that will move trucks more efficiently through fueling islands and cut down on costly billing errors. The SmartFuel System, located at a fuel pump, can accept smart cards or standard magnetic stripe cards that will instantly authorize a sale. The smart card will store such information as the truck number, purchase authorization limits, driver's license number, the name of the fleet operator, and any discount to which trucks in this fleet are entitled.

Pitney Bowes Copier Systems (Trumbull, Conn.) has developed a line of fuzzy logic-based office photocopiers. The SmartImage Series of copiers uses fuzzy logic and neural network capabilities to improve the quality of photo copiers and overall machine performance.

Scientific Software-Intercomp (Denver, Colo.), a provider of software and services to the petroleum industry, has signed a system integrator agreement with Gensym Corp. (Cambridge, Mass.), supplier of the G2 real-time expert system development tool. SSI is developing LeaXpert, a hybrid expert system and simulation model-based product capable of detecting leaks on pipelines that transport liquids, gases and critical fluids.

Wells Fargo Bank (San Francisco, Cal.) has licensed the Judgment processing system, an expert system for financial applications, from Cybertek-Cogensys Corp. (Dallas, Tex.). Wells Fargo will utilize the system to emulate human

judgment in evaluating potential borrowers for its consumer loan products.

Nestor Inc. (Providence, R.I.) and **Intel Corp.** (Santa Clara, Cal.) have delivered the first samples of a jointly developed, second-generation neural network chip to the Defense Advanced Research Projects Agency (DARPA). Nestor and Intel have also launched a beta site program that will allow companies to begin developing applications based on the new Ni1000 chip technology.

American Medical Laboratories (Chantilly, Va.) has implemented three speech recognition systems to help break up bottlenecks in its anatomical pathology reporting. The three VoicePath systems, developed by Kurzweil AI (Waltham, Mass.), contain a 50,000-word dictionary, and reportedly save several hours of transcription time per case.

Battelle (Columbus, Oh.) and **Ferranti Sciaky** (Chicago, Ill.), a developer of advanced welding systems, have jointly produced an intelligent precision welding system for the repair of jet engine turbine and compressor blades. The new system has been developed to meet the needs of major airlines and contractors who overhaul jet engines.

Speech Systems Inc. (Tarzana, Cal.) has introduced a new version of its large vocabulary, speaker-independent, continuous speech recognition technology that operates over standard telephone lines. The technology will allow developers to create continuous speech applications where users can interact with a computer system via telephone lines using natural speech.

David Blanchard is editor of *Intelligent Systems Report*, the monthly newsletter of applied artificial intelligence. For further details on the above stories, or to report information on other applications of AI, contact ISR at 2555 Cumberland Parkway, Suite 299, Atlanta, GA 30339, (404) 434-2187, FAX: (404) 432-6969.