

Applied AI News

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Microelectronics supplier **TRW** (Redondo Beach, CA) is using virtual reality (VR) to decontaminate nuclear facilities. The company has developed a system called characterization analysis planning system (CAPS) that uses VR technology to generate information needed to decommission, decontaminate, and dismantle old buildings once used for producing radioactive materials for atomic bombs during the height of the Cold War.

MCI's Network Systems Engineering Group (Washington, DC) has deployed an expert system-based telecommunications network monitoring and control system in its DIGINET, a core component of MCI's real-time restoration (RTR) system. RTR provides real-time restoration of telecommunications services in areas affected by disaster or accidents. DIGINET pinpoints the location of a service outage and its adjacent switching nodes and confirms the outage through a series of tests, 24 hours a day, 7 days a week.

Hewlett-Packard's (HP) U.S. Field Service Operations Group (Atlanta, GA) has developed a paperless wage-review system using intelligent agents to deal with quarterly reviews of its 11,000 employees. The intelligent-agent software lets managers and personnel access employee data from both the personnel and e-mail databases, drive e-mail communications, and initiate phone and fax transactions through the telecommunications network. HP has eliminated the expense of express shipping 20,000 forms throughout the country and allowed its managers more time to focus on their employees rather than on paperwork.

Ohio Edison (Akron, OH) is using an online, real-time, neural network-based closed-loop supervisory control system. The neural net-

work optimizes the combustion process in a coal-fired utility boiler, reducing nitrogen oxide emissions and loss on ignition while improving unit heat rate.

Xircom (Thousand Oaks, CA), a manufacturer of external local area network and Ethernet adapters, has developed an intelligent installation program for its PC card networking products that advises users on possible configurations based on the user's portable computer environment. An expert system makes recommendations on an optimum system setup that will enable the smooth installation of Xircom's modems and network adapters.

NeuralWare (Pittsburgh, PA), a provider of neural network software, and **Texaco** (White Plains, NY), a major petrochemical supplier, have been granted a patent for a control system using an adaptive neural network for target and path optimization for a multivariable, nonlinear process. This patent is incorporated within NEUCOP, which is designed for controlling, stabilizing, and optimizing complex industrial processes such as petroleum refining and chemical, steel, utility, pharmaceutical, food processing, and pulp and paper operations.

Virtual reality (VR) is being used to help keep members of the U.S. National Guard and Reserves up to date on the expensive technology they are expected to understand, operate, and repair. Under contract to the Advanced Research Projects Agency of the U.S. government, the **Research Triangle Institute** (Research Triangle Park, NC) has designed and implemented an advanced training system for National Guard tank mechanics that is believed to be one of the largest commercial VR projects to date.

Clothing manufacturer **Wrangler** (Greensboro, NC) has developed a neural network system to improve production planning and forecasting. The system generates forecasts based on consumer-demand data, rather than retail buyers' orders, to drive production planning.

Unisys Corp. (Blue Bell, PA), an information-management company, is using an intelligent agent-based system to provide self-service human-resource applications to its 36,000 employees worldwide. The intelligent agents allow employees secure and controlled access to their records through the World Wide Web.

Pacific Gas & Electric (PG&E) (San Francisco, CA), a public utility, has implemented an intelligent information and control system to automate the distribution of electricity to its customers. The system allows PG&E to offer customers flexible energy plans to cater to specific individual needs.

3Com (Santa Clara, CA), a producer of global data-networking products, is using intelligent agents to generate plans and schedules that balance material and capacity constraints. The agent-based software allows users to consider a number of options before choosing one. Schedules can then be adjusted based on current requirements.

David Blanchard is the editor of *Intelligent Systems Report* and *Intelligent Manufacturing*. Contact Lionheart Publishing Inc. at 2555 Cumberland Parkway, Suite 299, Atlanta, GA 30339, (800) 392-7294, ext. 204, for a free sample copy of either publication or on the World Wide Web at <http://lionhrtpub.com>.