Applied AI News

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Automobile manufacturer **Ford Motor** (Dearborn, MI) has opened a facility for developing tools and applications in virtual reality and advanced visual engineering. Ford's new lab will develop tools for a variety of engineering design and evaluation applications, including vehicle-packaging studies, design verification, and a "walk-up" virtual reality station for designers to evaluate future generations of Ford vehicles.

Sandia National Laboratories (Albuquerque, NM) has developed HOLDFAST, an intelligent computer-aided design tool that automatically designs fixtures and pallets. The tool enumerates all possible fixtures, taking into consideration the workpiece's shape, the task constraints, and the fixture kit. Pallet fixtures using HOLDFAST have been designed for the vertical assembly of a personal cassette player and a glue gun.

Trico Products (Southfield, MI), a supplier of automotive windshield wipers, is using knowledge-based systems to capture, retain, apply, and evolve its best product-development processes. These intelligent systems have allowed Trico to perform detailed analysis on a number of product-development activities, from conceptual design through cost accounting.

Storm Integration (Herndon, VA), which provides solutions to the aerospace industry, has developed its CERES (Center for Research Support) satellite-control system using intelligent, real-time technology. The intelligent software helps link disparate commercial, off-the-shelf products in a mission-critical environment.

The **U.S. National Library of Medicine** (Washington, DC) has developed MEDINDEX, an intelligent medical-indexing system based on Common Lisp technology. The system introduces a new type of data structure that encodes the combined factual and procedural knowledge established in the conventional indexing system.

Xerox (Stamford, CT), a photocopier manufacturer, reengineered and validated its nonproduction-related purchasing procedure using an intelligent system. The expert system helped Xerox identify a number of steps in its process that could be changed to achieve a purchase order life-cycle time savings of 10 to 15 percent and an overall cost savings of $150 million.

World Builder (Rochester, NY), a company focused on environmental, health, and safety applications, has developed a virtual reality application to educate companies on recognizing pollutant-producing hazards in the workplace. Using a virtual reality model, a user can "walk through" a virtual building complex containing over 200 auditory health messages, covering such topics as computers, copiers, air sprays, insulation, cigarette smoking, cleaning solvents, and radon. Facilities managers can take advantage of this virtual world for preventive maintenance.

The **University of California** has implemented intelligent-agent software to deploy employee benefits through self-service applications. The distributed applications will serve more than 200,000 people across all the university's 9 campuses.

National City Processing (Louisville, KY), a financial transaction and settlement processing firm, has contracted with NeuralTech (Fairfax, VA) to develop an automated system for processing Visa and MasterCard chargebacks. The image-enabled expert system, called CADRE, provides management information directly to clients to help them minimize risk and prevent lost sales.

GDE Systems (San Diego, CA) and the U.S. Army Armament Research Development and Engineering Center (ARDEC) (Picatinny, NJ) are using virtual reality to meet the U.S. Department of Defense's mandate for efficient and cost-effective weapons system design.

Pacific Northwest Laboratory (Richland, WA) is developing two neural network systems for medical applications in the area of cardiovascular diagnosis and simulation. The first system is an adaptive life simulator that exhibits the cardiovascular behavior of an individual. The second is an adaptive personal diagnostician that monitors an individual in real time.

EDS Technology Architecture (Plano, TX), an information technology research group, has developed the virtual activity–based costing system, which helps the company understand how money is being spent at all levels of its operations, thanks to a three-dimensional virtual world of its finances. The system uses different sizes, shapes, and colors in a three-dimensional landscape to convey financial information.

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