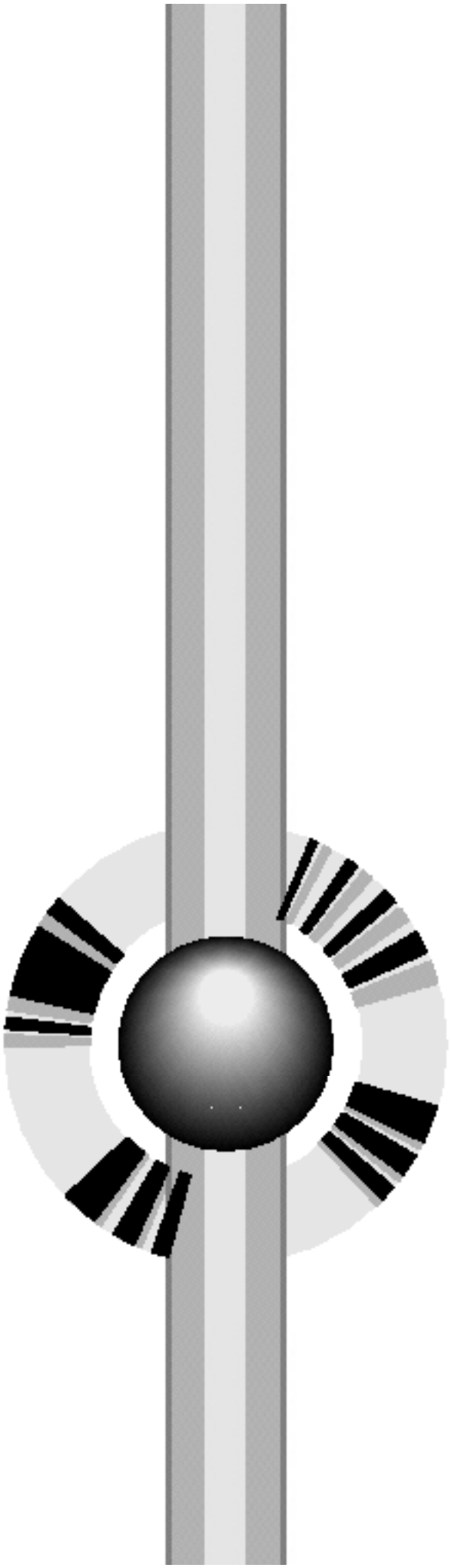
AI-On-Line Panel Descriptions

Ninth National Conference on Artificial Intelligence

Third Innovative Applications of Artificial Intelligence Conference

July 16–18, 1991

Anaheim Convention Center
Anaheim, California



Tuesday, July 16, 2–4 PM

Integrating Advanced AI Technologies into the Commercial Marketplace: Neural Networks and Expert Systems

Organized by Gensym & Neuralware.

Moderator: Kalev Ruberg, IBM Canada.

Expert Systems are now broadly established. Neural Networks represent a newer technology that is impressing users with its ability to solve complex problems cost effectively. This panel will focus on relationships between Expert Systems, newer technologies and existing conventional control systems. Key issues will include knowledge representation, confidence and consistency as well as documentation and updating.

Panelists

Duncan Rowan, DuPont: An overview of AI On-Line Expert Systems for process control which have produced high business value—key issues presented will indluce deployment and integration, and insights into DuPont's work with Neural Networks as inferential measurements of key process properties.

Samuel Sellam, INRETS (France), Department Applied Math & Artificial Intelligence: Object-oriented knowledge base AI technology in traffic engineering, considering heterogeneity of models and diversity of use—looking to second generation Expert Systems for real-time capabilities dealing with diagnosis and control tasks.

Troy Heindel, NASA: A view of NASA's established real-time Expert Systems as they deal with fault diagnosis, isolation and recovery to increase decision-making quality in Mission Control's flight-critical environment.

Jeff Lin, Texaco, Senior System Analyst, Information Technology Department: In just two years Neural Networks have become the hottest technology at Texaco—this presentation will show how Texaco transfers this technology among business units and explain two specific application successes.

Wednesday, July 16, 10:30 AM–12:30 PM

Case-Based Reasoning: Early Application Examples and Commercial Potential

Organized by Cognitive Systems & Inference.

Moderator: Neena Buck, VP, Applied Intelligent Systems Research, New Science Associates.

CBR is proposed as an alternative model of expert reasoning where well-established rules are not available. Where there are many rule exceptions, expert knowledge consists of a collection of experiences or case histories that are retrieved by matching similar (not identical) cases to the problem through multiple indexing schemes. Case-based systems may tend to be more flexible than rule-based ones. This panel will present current user experiences.

Panelists

Lynden Tennison, American Airlines, Manager, Knowledge Systems SCS: With seven AI production systems in operation and six under development, a review of American's AI involvement and plans for new CBR technology—and a look at the initial pilot effort automating an external customer support help desk, and other problems targeted for solution.

Joe Carter, Andersen Consulting, Director, Knowledge-Based Systems Group: How CBR can be used to develop business solutions—highlighting a new system designed to expedite generation of client proposals, building on existing experiences—covering use of system in conjunction with model-based design methodology.

William Bain, The Boston Company, Data Processing Consultant: Planned use of CBR within Boston and American Express in credit recovery, customer service, account reconciliation.

Walter Elkins, Intervoice, Director, Field Service Department: How CBR was used to develop the Help Desk Expert System as a primary touble-shooting tool to answer both hardware and software problem calls—the knowledge base built from cases collected in on-line tracking databases.

William Mark, Lockheed, Chief Scientist, AI Center: How Lockheed is applying Case-Based Reasoning to its critical aerospace needs, including autoclave loading, configuration for composite materials processing, diagnosis and recovery of machine tool equipment.

Robert L. Simpson, NCR, Director, Human Interface Technology Center: CBR at NCR within larger systems —how it is aiding service people in diagnosis and recovery of computer equipment—and possibilities for CBR systems on-board NCR hardware.

Wednesday, July 17, 2–4 PM

How to Involve Management in AI to Assure AI Success

Organized by Digital Equipment Corp.

Management approval is often the most challenging aspect of AI application. Our panelists will present behind the scenes looks at how a cross-section of businesses overcame management skepticism to gain acceptance and commitment.

Panelists

Peter Stockhausen, Ameritech Services, Senior Director, Advanced Systems Development: How Ameritech started with "skunk works" to create AI benefits in a conventional systems environment that demanded prior business justification for projects and now supports AI as a standard development tool.

Ron Ribitsky, Boston Children's Hospital,Director, Applications Information Services Department: The process model developed to obtain management approval for integrating AI in health care organizations, treating AI not as isolated application, but as dynamic interface with evolving IS infrastructure.

Don Rasmus, Hughes Aircraft, Manager, Knowledge Systems: The SMART project at Western Digital: how the implementation team learned to sell AI as a solution technology by concentrating on problem-solving rather than technology.

Elizabeth Byrnes, Manufacturers Hanover, Information Systems: With bank management's necessary bot-tom-line orientation, IS developed a money-making trading application as its first AI venture—how this high visibility/high risk gambit won management approval and future commitment to AI.

Thursday, July 18, 8:15 – 10:15 AM

Grand Slam Success Stories: Strategic AI Applications in Conventional Business Environments

Organized by AICorp.

Moderator: Nancy Martin, Coopers & Lybrand, Director, Advanced Technology Group.

This panel will showcase successful AI systems in standard commercial environments—with specifics on implementation, impact on day-to-day operations and bottom-line contributions.

Panelists

Larry Lefkowitz, Bellcore, Knowledge-Based Systems Development District: Use of AI in very large scale software systems to handle complex expert tasks and complex data processing tasks—benefits include enhanced functionality-flexibility-maintainability in day-to-day business operations.

Mike Hulley, Covia Technology, Manager AI/Expert Systems: A report on installation of a PC-based message and data record queue handler that has saved over $2 million annually in one application—with specifics on how the buy-in was achieved and the payback.

Steve Shavel, Frito-Lay, Senior Systems Engineer: How PAX, a packaging application expert system, streamlines a complex scheduling process, allowing for meaningful interaction between human scheduler and knowledge-base system.

Chris Morrison, London Life, Knowledge Base Engineer: A new menu-driven Expert System requires only a policy number to enable customer service to answer client inquiries, providing far-reaching benefits in this sensitive area.

George Clay, LEGENT, Product Development Manager: How AI technology is delivering value-added products that are providing major gains in diagnosis, installation, customization.

Mike Rogolski, Sears, Senior Technical Consultant, Merchandise Group: The selling, development, implementation of a nationally deployed knowledge base system in Sears' credit operations—a look at the challenges of working with multiple experts, tactics used in validation and verification, and benefits derived in a critical mainstream business application.

Thursday, July 18, 10:45AM – 12:45 PM

Hybrid AI Solutions: Beyond Expert Systems (Including Neural Networks, Fuzzy Logic, Operations Research, Machine Learning

Organized by Andersen Consulting & Schwartz Associates.

Moderator: Alan Zeichick, *AI Expert*, Editor.

Effectively solving complex problems often requires use of a variety of decision technologies. Expert Systems work well in representing and reasoning using heuristics, but other technologies are better suited for quantitative and common sense reasoning. These include Operations Research, Fuzzy Logic, Neural Networks—often cooperating with Expert Systems to handle both qualitative and quantitative aspects of problem-solving.

Panelists

Robert Pap, Accurate Automation, President: Neural Networks promise to advance control of complex systems like the National Aerospace Plane—a hybrid system may be the only way to handle certain control functions, like the flight controller—Expert System performs the functions as Neural Network updates sequences to optimize operations.

John Darvish, Boeing, Artificial Intelligence Specialist, Computer Services: A new "Fuzzy Flight Controller" aligns velocity vector with localizer beam to adjust aircraft to desired altitude, using Fuzzy Logic and a quantitative simulation system —created in just three months, it contains 20 rules and performs as well or better than conventional controllers.

Pilar de la Orden, CAMPSA (Spain), Chief of Systems Planning (Spain): Secondary Distribution Planning system integrates Operations Research techniques and knowledge based systems technology, incorporating multitude of needed quantitative and qualitative constraints to deal effectively with resource scheduling.

Christopher Culbert, NASA, Artificial Intelligence Specialist: New NASA hybrid system assistts in developing crew training plans for future missions—plans span years and require large teams to develop and maintain, requiring consideration of huge amounts of data from diverse sources as well as domain specific expertise—other tools are being developed.

Murray Ruggiero, Promise Land Technologies, VP Research & Development: A new hybrid decision-making system incorporates spreadsheets, Neural Nets and Expert Systems to predict outcomes of harness races with equal or greater accuracy than professional experts.

Thursday, July 18, 1:00 – 3:00 PM

True & Unexpurgated Stories: What AI has Done for Me Lately

Organized by IBM.

Moderator: Rick Walsh, Synapse, Senior Knowledge Engineer.

This panel will focus on AI systems applications that arose out of pure business needs, discussing specific problems addressed and sharing specific information on financial and strategic benefits achieved. The case histories will look ahead to AI potential for satisfying additional commercial requirements.

Panelists

Susan Garavaglia, Chase Manhattan Bank, Vice President: This knowledge base application filters massive company profile data and identifies most appropriate marketing prospects for the bank's wide range of financial products and services.

Robert Epps, Continental Insurance, Vice President Systems Technology: This knowledge base system helps spread limited expertise in supporting policy writing problem resolution to field agents from the network command center.

Alen Baker, Duke Power, Information Architect: The highly successful DB2 Performance Analyzer provides significantly easier means of maintaining huge DB2 data sets, and has delivered impressive cost benefits.

Rob Bigini, Dun & Bradstreet, VP Product Development: This project started with the need to handle customer billing more efficiently and with greater speed, an easy-to-define but complex-to-program business problem that responded well to AI technology.

Thursday, July 18, 3:30 – 5:30 PM

New Advances in Design Automation with AI

Organized by Carnegie Group.

Moderator: D Vivek, Unique Business Systems, Senior Systems Analyst.

How automating the design process with the help of AI technology advances design, analysis, and creation of products in automotive, telecommunications and computer businesses. How analysis at design stage achieves substantial savings—reducing prototyping iterations to save time and money, improving productivity and response through advanced technologies, and simplifying customization.

Panelists

Mark Fox, Carnegie Mellon, Director, Center for Integrated Manufacturing Decision Systems: Towards excellence in product design and manufacture using knowledge-base systems.

Fritz Prinz, Carnegie Mellon, Director, Engineering Design Research Center: AI technology in the modernization of manufacturing.

Dave Fawcett, Ford, Manager CIM and Expert Systems, Electronics Division: The role of design in manufacturing automotive components and how AI technology is helping optimize the process.

Bill Blake, Digital Equipment, Engineering Manager, Advanced Design Systems, Midrange Products: automatic design analysis and manufacturing of computers with an AI assist.

Ted Smith, U.S. West, Director, Knowledge-based Systems Group: Insights into the modernization of the telecommunications industry with special focus on the AI component.

Alice Agogino, University of California at Berkeley.