



# EXPERT SYSTEMS -- A TECHNOLOGY FOR INTELLIGENT ASSISTANCE

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## Abstract

Researchers in artificial intelligence have developed several systems capable of providing an expert level of assistance in solving complex problems. Areas addressed have included medical diagnosis and therapy, determination of molecular structure, design of experiments in molecular genetics, and application definition. These systems are generating interest in both the industrial and academic communities, and widespread development is beginning to emerge.

Expert systems share a common architecture and this presentation will describe this architecture and contrast it with classical problem solving techniques. Several examples of these systems will be discussed, including a new expert system developed at the IBM Scientific Center in Palo Alto. While most expert systems have been programmed in LISP, this one was built using APL, and the experience has illuminated both strengths and weaknesses of APL as a language for this area of artificial intelligence.