C-02 : IMPLEMENTATION OF INPUT INTERFACE FOR AN EXPERT SYSTEM SHELL IN PROLOG

A Arasilango, Maya Rainford ; Computer Unit, Eastern University, Chenkalady,*
**Computer Div., Open University, Nawala.*

An Expert System is a computer program that produces the behaviour of human experts in some specific domain, asking questions, solving problems, and providing explanatory facilities. It has mainly three components viz. Inference Engine, User Interface(Input/output Interfaces), and the Knowledge Base. The Inference Engine provides a mechanism to solve problems whereas the User Interface allows users to communicate with the Inference Engine. The major role of the User Interface is to display a series of questions and to accept answers from the user. The part of the Interface that is used to provide and select answers can be regarded as an Input Interface. The Knowledge Base consists of facts and rules regarding the domain knowledge.

As Prolog itself has built-in searching mechanisms it is widely used as a tool for the development of Expert Systems. The Art of Prolog (Leon Sterling, Shapiro 1986) explains an Expert System Shell which provides a poor Interface for inputs. A new Input Interface is introduced, and integrated with this shell, which eliminates complications, saves time and gives improved performance.

This paper explains the design and implementation of this Input Interface and the need for the extensive use of it for Expert System applications. This implementation resulted in advanced interfacing facilities for smooth communication between the Expert System and the user and also exploited the feature of Wisdom Prolog for inputs.