Poster paper

Fuzzy Clips: a Rule Based Teaching Tool

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This Poster explains what Fuzzy Clips is and how it has been employed to train students in the past on a DipICT level 6 module about Expert Systems. (EX600) It is a free tool developed by NASA and requires only registration to obtain it.

Many of the students have formally been taught Procedural programming Languages, very few in the polytechnic sector are taught programming using heuristics. It comes as a shock to them that problems that can not be solved easily or indeed at all by algorithmic methods can be defeated with a few simple "rules of thumb". Expert systems have been around for well in excess of 20 years, they represent the lower practical edges of A.I and a wonderful means of capturing human knowledge in a computer system and putting to practical use.

Fuzzy Clips has the added Fuzzy Logic extensions and is managed by the National Research Council of Canada, version 6.04 is stable and has been an excellent tool to introduce the concepts of the imprecise reality of problems. Students can be exposed to fuzzy facts and rules that they unknowingly use every day themselves. The concept of solutions with fuzzy patches, no algorithms, formulae or mathematics does open up a new world of vital awareness for them. At the very least they begin to understand the concepts behind fuzzy control in white ware, cameras, elevators, network control and a multitude of other practical devices. They recognise the term Knowledge Bases and Knowledge Engineering, whilst they use a new programming language associated with Clips.

Clips also supports Object Programming as well as the normal Procedural Methods.

Despite the fact that the Interface of Clips is very basic, there are benefits and spin offs for students. Sad that this area is now only taught in Universities, this is a great loss to the vocational sector.

Keywords:

Fuzzy Logic, Knowledge Base, Heuristic Programming