

PETCHARAT UBOLRIABROY : DEVELOPMENT OF AN EXPERT SYSTEM FOR

DETERMINING COST OF ORNAMENTAL RINGS. THESIS ADVISOR :

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The objective of this research was to develop an expert system for determining cost of ornamental rings. This expert system shell was modified by using the thesis titled "DEVELOPMENT OF DEMONSTRATION EXPERT SYSTEM SHELL PROTOTYPE" written by Mr. Opas Nanirattisai for the fact that it used the same method - forward reasoning and rule based representation. However, this thesis was added some features to serve the objective stated above such as processing for further conclusions and updating the value of rule action.

This expert system shell was modified by using C programming on an IBM PC compatible microcomputer. It used rule-based architecture and the certainty factor of each rule can be defined in the action part of the rule. The control strategy was mainly based on forward reasoning. During the inference process, the search method selects the most suitable rule which should be applied. The design was divided into two parts. The first part was the editor and the second part was the stepped consultation already settled in the first part.

Testing is made by using the modified expert system shell and the knowledge base for determining cost of rings which contains rules. The results from this research indicated that this system is capable of determining cost of ring which is closed to the actual cost.