A fuzzy system approach to negotiation pricing

A dissertation submitted to The University of Manchester for the
degree of Master of Software Engineering
in the Faculty of Engineering and Physical Sciences

2008

Peng Zhang

School of Computer Science
Abstract

One of the problems faced by pricing decision managers is how to produce an appropriate price satisfying both customers and companies in a negotiation business transaction. It demands pricing managers to decide the price considering not only the profit of the company but the various influencing factors of customers. However, the amount of influencing factors involved in negotiation pricing problem is quite large and they often reveal as vague, noisy and imprecise. Although more attentions are attracted by the negotiation pricing problem, few researches are done to suppose an efficient solution for it. And the current negotiation support systems show dissatisfied capability in dealing with the problems.

In this project, we introduce a systematic method that uses the hierarchical fuzzy systems approach which combines the machine learning approach and expert’s expertise to solve the problem. The hierarchical fuzzy systems approach is able to extract an explicit outcome from imprecise and vague input information and give the inference process to users, which enhance the reliability of the system. With the support of this approach, we established the negotiation pricing decision support system which would provide a nicer capability for the user to obtain the promising pricing support.