ABSTRACT

The internet has affected the way of doing online business. Negotiation agent has taken an important role in negotiations between buyers and sellers online. The thesis focuses on one-to-many negotiation agent relationship. The existing type of this relationship is one complex buyer agent negotiates with many seller agents. It has some problems such as scalability and single point of failure. Then new model comes up, which generates sub-buyer agents to relieve workload from one main buyer agent. However, the problems have been found as bottleneck, and thread management. Thus, the proposed model would form a coalition among sub-buyer agents to reduce bottleneck problems, and also add data analysis module to give better result than non-coalition formation model. Threads are easier to manage.

The scenario for developing prototype is based on travel website. Evaluation is based on processing time, utility level and agent's workload. According to the experiment, each model has its own benefits and drawbacks. Applying the model depends on the problem domain and desire outcome.