

## ABSTRACT

In today's environment where the electronic commerce becomes more and more available and important, a case-based reasoning (CBR) is one of the widely used techniques in product searching and sales selection process. As it becomes more popular, the library scale of the CBR system is also growing. Theoretically, large scale of library will impact the overall efficiency of the system in term of searching, retrieving data as well as storing new cases.

As a result, a maintenance so called case-based maintenance is required in order to prevent any effect from having large database. However, the reducing amount of case library must be done carefully in order not to produce any damage to the system's objectives and overall accuracy. Some previous researches usually maintain the case library by focusing only either on the performance or the competency of the case-based system. But in electronic shop, removal of case library needs to concern more than just performance. The other factors, such as the frequency of sell, the availability of the product if that case represent product existing in the stock, should also be taken into account when maintaining the case library.

Deletion method should minimize the size of the case-based while maintaining the benefits (objectives) of the domain (electronic shop). This thesis aims to propose the deletion method, where the benefit of the domain will not be traded off. The proposed deletion method will be done by taking all necessary factors into consideration and modeling the relative benefit value, which is mainly guided in deleting the case library.