ABSTRACT

Frequent pattern mining plays an important role in the association rule mining. However, frequent pattern mining often generates large number of frequent itemsets and rules, thereby it will reduce the efficiency and effectiveness of the mining process because the user has to sift large number of resulting rule to discover important rules [7]. The results of association rule mining can be used to understand the patterns occured so that it can helps in decision making process. Minimum support is a minimum number of occurrences of an item in database that has been specified by the user. The use of same minimum support (single) for all items implicitly assumes that all items in database have the same nature and frequency. Whereas in fact, different items have different criteria depend on their interests. Therefore, Conditonal Frequent Pattern Growth++ algorithms (CFP-Growth + +) will be used in this paper. CFP-Growth + + is an algorithm which used to describe the interesting patterns between items in the process of association rule mining. This study implements MIS-tree structure to mine frequent itemsets using multiple minimum support. MIS-tree is a tree structure which developed by the FP-tree structure. The result shows that association rule mining using CFP-Growth++ algorithm is able to generates a number of rules that include frequent and rare items in transaction database.

Keywords: Data Mining, Association Rule Mining, CFP-Growth + +, Frequent itemsets, Multiple Minimum Support.