**ABSTRACT**

To developing effective techniques for package queries, may of specialty has focused on developing and proposed excellent approaches. Unfortunately, most of the existing methods focus on a small volume of data. The rapid increase in data volume means that traditional methods of package queries find it difficult to meet the increasing requirements. To solve this problem, a novel optimization method of package queries (HPPQ) is proposed in this project. First, the data is preprocessed into regions. Data preprocessing segments the dataset into multiple subsets and the centroid of the subsets is used for package queries, this effectively reduces the volume of candidate results. Furthermore, an efficient heuristic algorithm is proposed (namely IPOL-HS) based on the preprocessing results. This improves the quality of the candidate results in the iterative stage and improves the convergence rate of the heuristic algorithm. Finally, a strategy called HPR is proposed, which relies on a greedy algorithm and parallel processing to accelerate the rate of query. The experimental results show that the method can significantly reduce the time consumption compared with existing methods.