**Scope**

we compared the sequential replacement method with the HPPQ algorithm. For the sake of convenience we called it HPQ and compared it with the existing package queries algorithms SKETCHREFINE and HS from the following aspects: (1) different sizes of real and synthetic datasets; (2) comparative experiments on convergence; (3) the impact of varying the partitioning region size threshold on the performance of algorithms; and (4) the impact of varying the partitioning coverage on the run time of algorithms