

Abstract

Spatial database optimized to store and query data associated with objects in space, including points, lines, and polygons. Spatial database possessed some type of search process, one of which is Nearest Neighbour. Nearest Neighbour is a query that can estimate the nearest point of finding an object. However, Nearest Neighbour has the disadvantage. When the computation, the results of searches take a long time. This can be remedied by using a partition space that is Voronoi diagram. However Voronoi diagram also has the disadvantage that the data object sought can not be directly taken. Optimal indexing method can optimize or reduce the object to be inspected upon a query process. One of the most index structures proposed for indexing spatial data is the R-tree. R*tree is one variant R-tree node to improve during handling overflow. R*tree merge area optimization, margins and overlap of each rectangle so that the scope of the directory will provide the optimum performance of indexing.

In this final task will be indexing the region Highest Order Voronoi Diagram using R*-tree method. By dividing partition region with MBR. Multiple MBR form a bigger MBR, hence creating a hierarchy of MBRs. The Larger MBR that contains smaller MBRs completely and properly covers all its MBRs that it contains. MBRs recursively grouped into larger MBRs to form a tree, whereby the largest MBR which cover all spatial objects continuously. By using this method it will increase performance of indexing to find a region on an object.

Kata Kunci: spatial database, region, voronoi diagram, nearest neighbour, r*-tree