Advanced Balanced Search Tree

2d-Tree

Structure

08-F1

凡见字数，如停匀，即平分一半为上卦，一半为下卦。
如字数不均，即少一字为上卦，取天轻清之义，以多
一字为下卦，取地重浊之义

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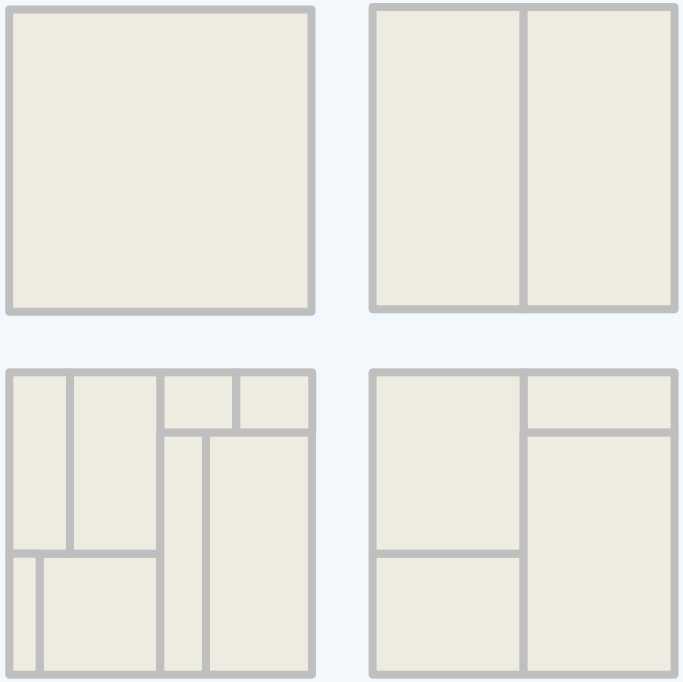
Divide-And-Conquer

❖ To extend the BBST method to planar GRS, we

- divide the plane recursively and
- arrange the regions into a kd-tree



❖ Start with a single region (the entire plane)

Partition the region vertically/horizontally on each even/odd level

Partition the sub-regions recursively

More Details

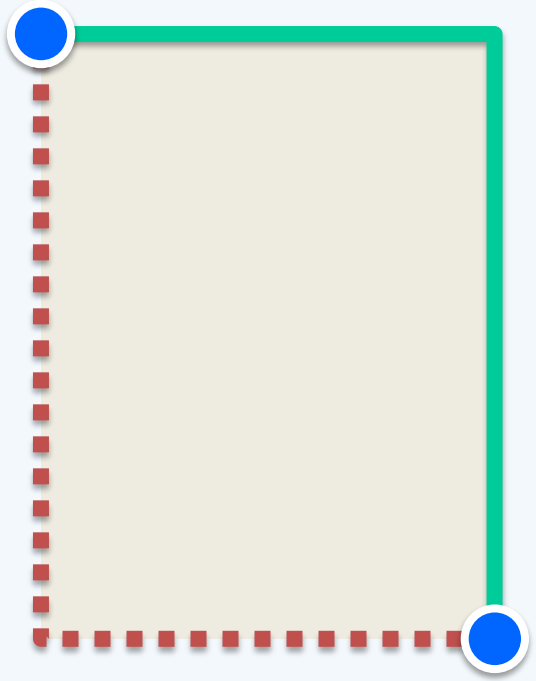
❖ To make it work,

- each partition should be done

  as evenly as possible (at median)

- each region is defined to be open/closed

  on the left-lower/right-upper sides



❖ Degeneracy assumption:

no two input points lie on a same vertical/horizontal line

Example