# 07-B2

## BST Application

### kd-Tree: 2D

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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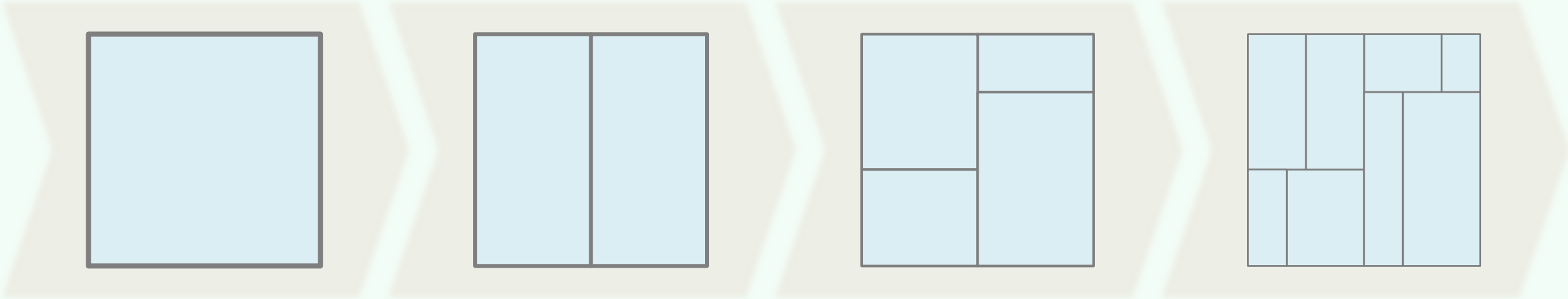
# Divide-And-Conquer

- 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

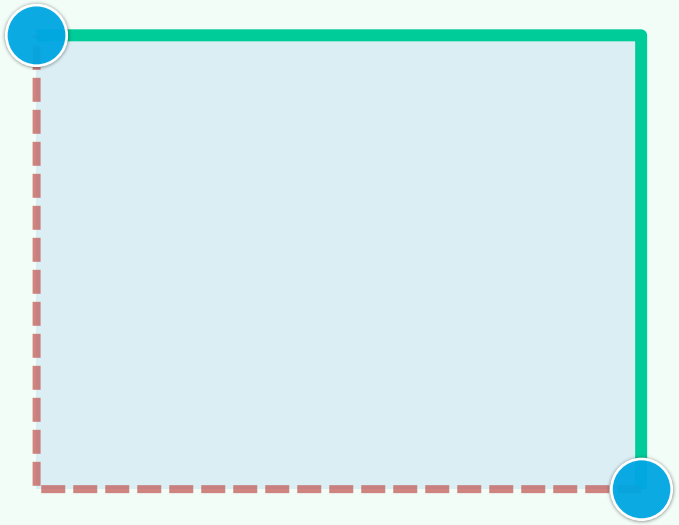
❖ To make it work,

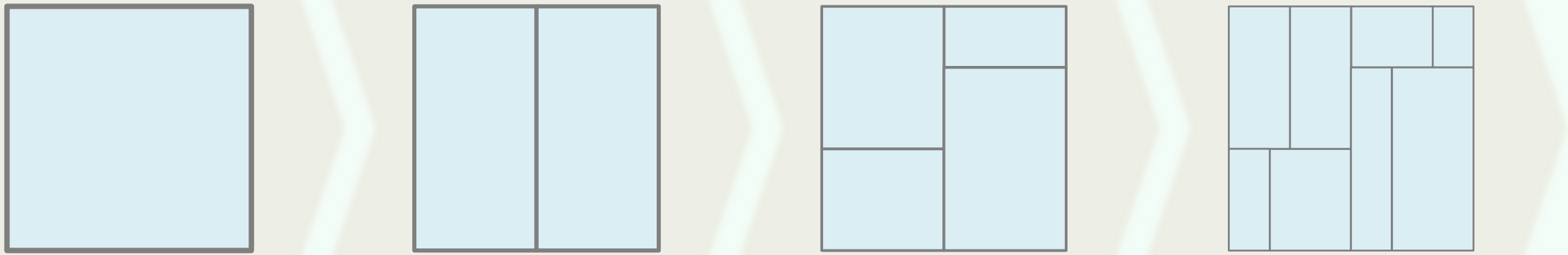
- each partition should be done

  as evenly as possible (at median)

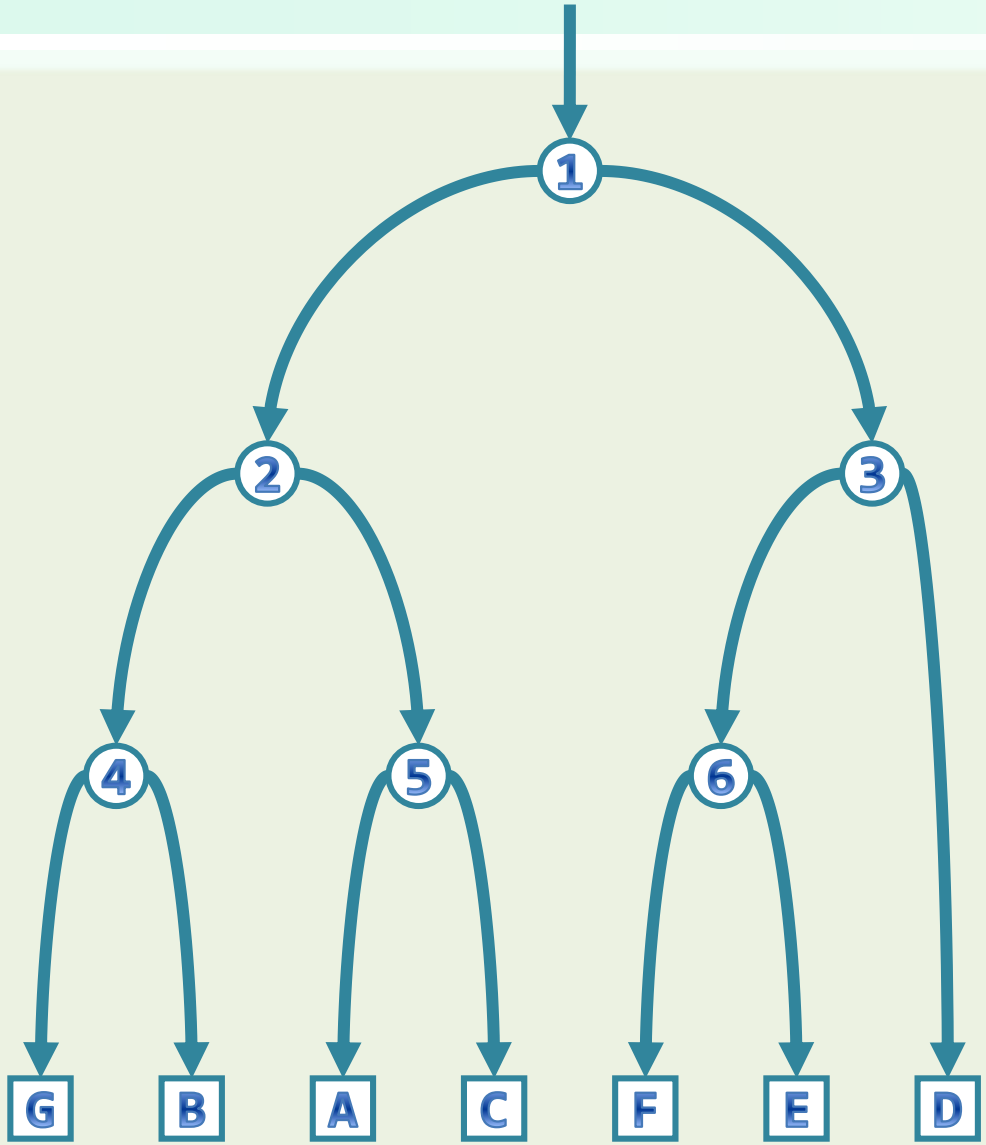
- each region is defined to be open/closed

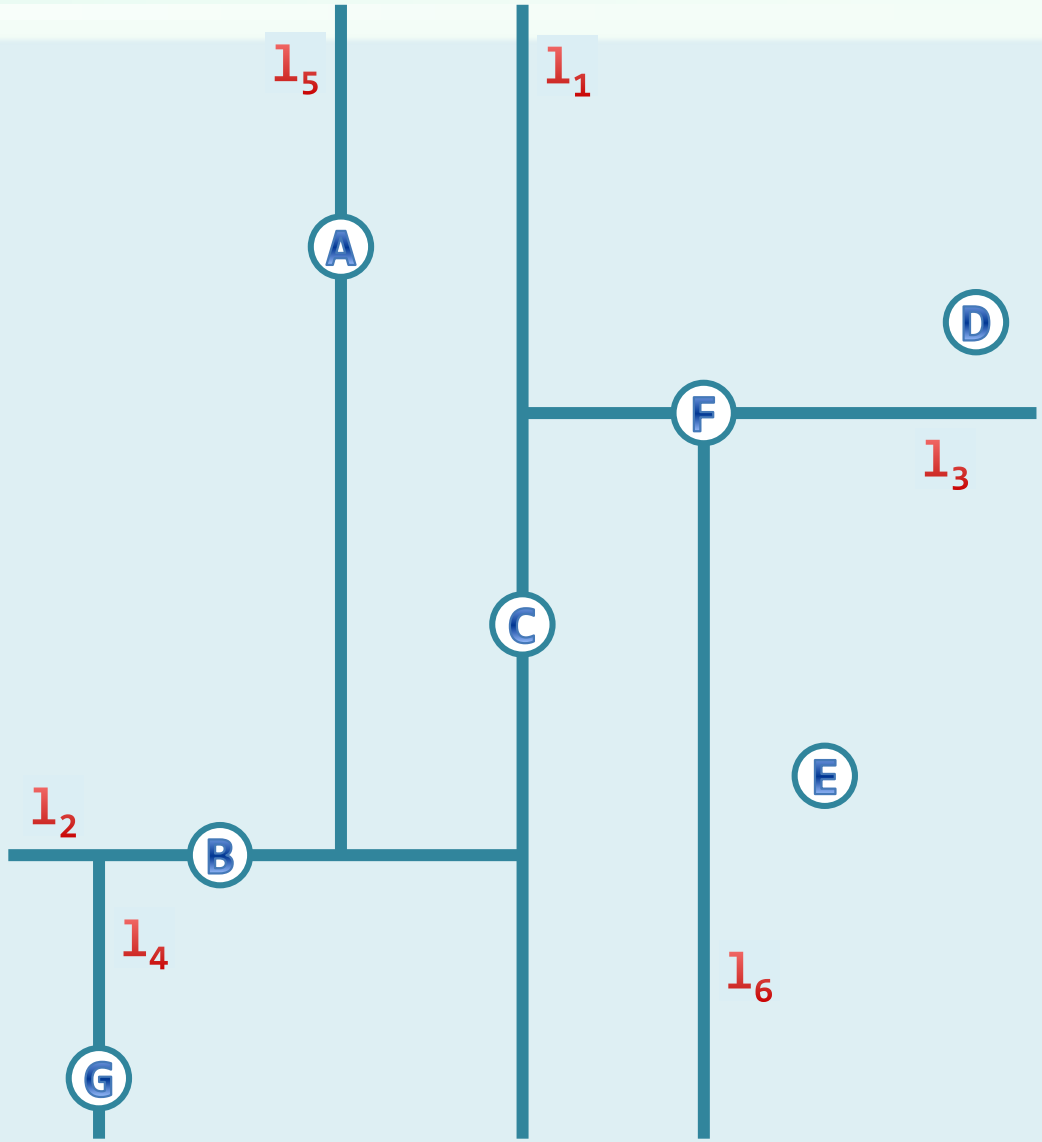
  on the left-lower/right-upper sides





# Example



# Quadtree