θ9-B4

BST Application

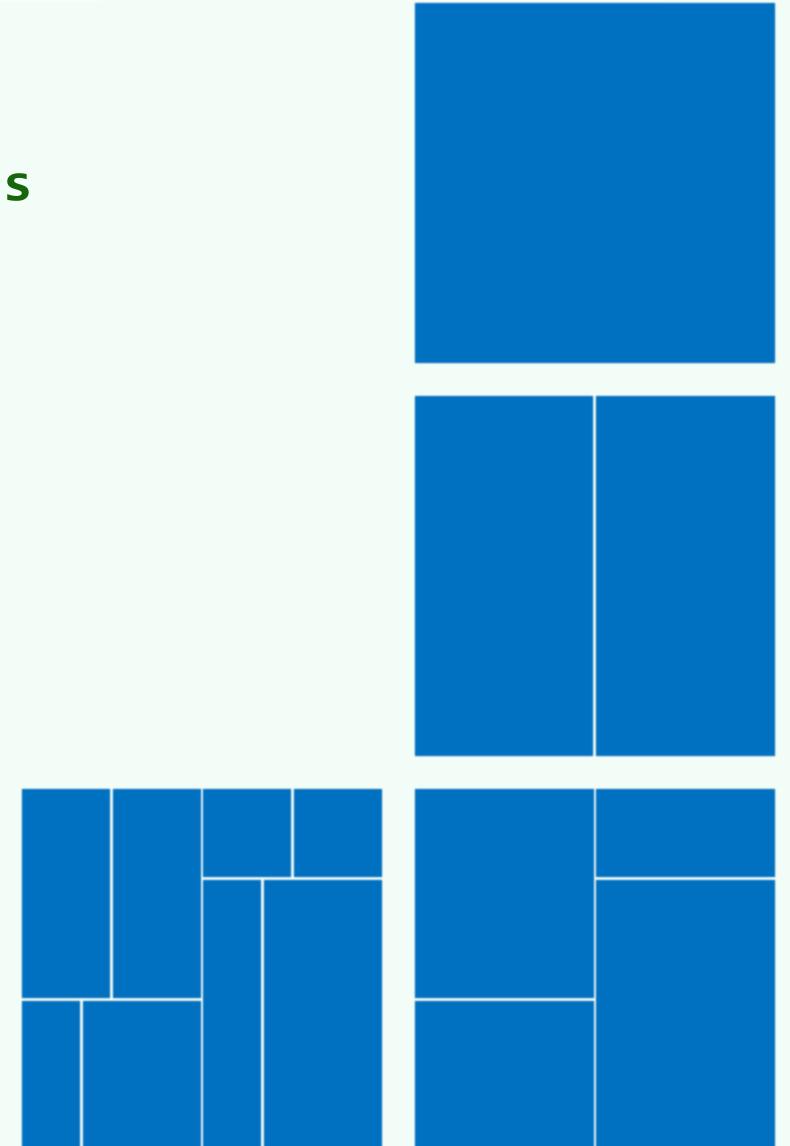## kd-Tree: Canonical Subsets

韦小宝跟著她走到桌边，只见桌上大白布上钉满了几千枚绣花针，几千块碎片已拼成一幅完整无缺的大地图，难得的是几千片碎皮拼在一起，既没多出一片，也没少了一片。

邓俊辉

deng@tsinghua.edu.cn

Canonical Subset

- 👁 Each node corresponds to

    - a rectangular **sub-region** of the plane, as well as

    - the **subset** of points contained in the sub-region

- ❖ Each of these subsets is called a **canonical subset**

- 👁 For each internal node X with children L and R,

    region(X) = region(L) ∪ region(R)

- 👁 Sub-regions of nodes at a same depth

    - never **intersect** with each other, and

    - their **union** covers the entire plane

- ❖ We will see soon that each 2D GRS can be

    answered by the **union** of a number of CS's

Example