

搜索树应用

kd-树：查询

我们竟为这无用的找寻浪费了这么多天
我想找寻的心上人绝对不会在这里出现

邓俊辉

deng@tsinghua.edu.cn

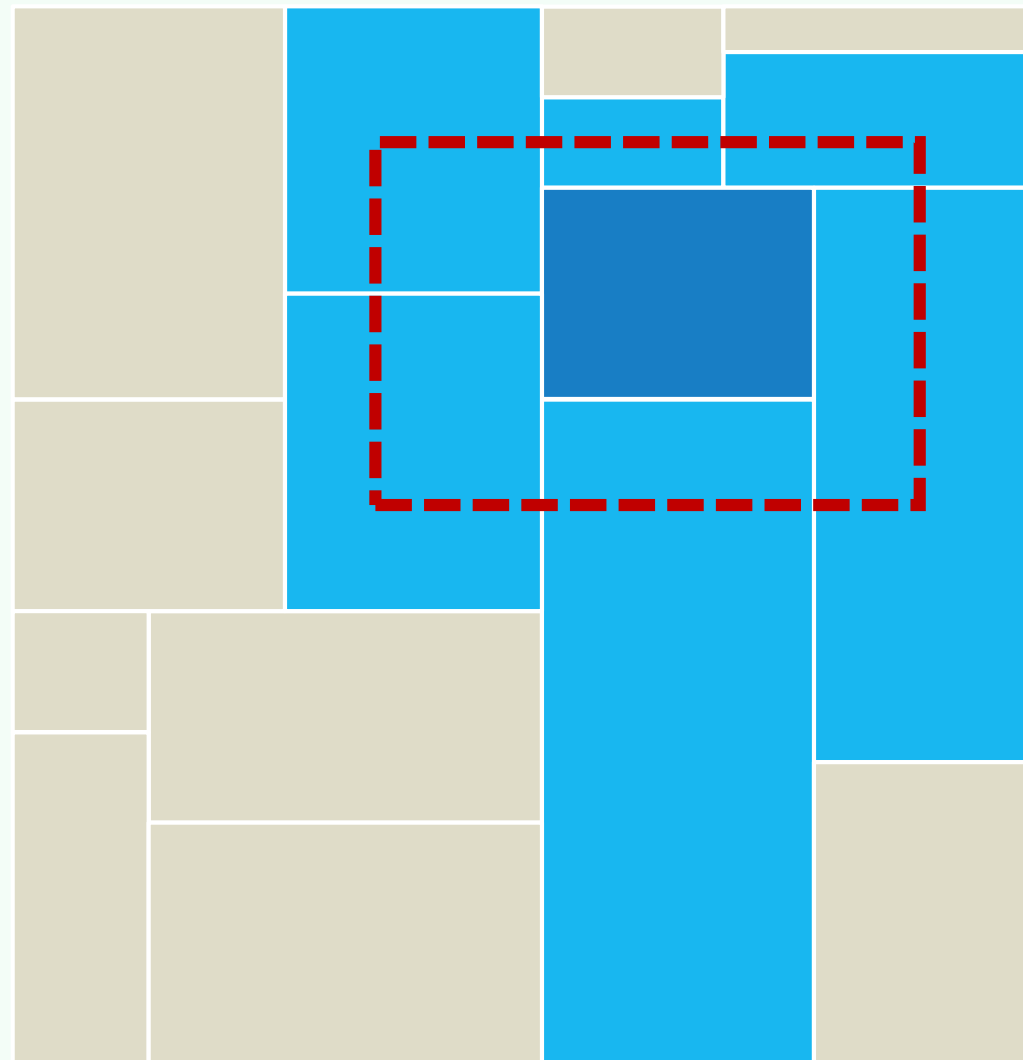
查询：算法kdSearch(v,R)：热刀来切logn层巧克力

```
// Pre-condition: region(v)  $\cap$   $\partial R \neq \emptyset$ 

- if ( isLeaf( v ) )
    if ( inside( v, R ) ) report(v)
    return

- if ( region( v->lc )  $\subseteq$  R )
    reportSubtree( v->lc )
else if ( region( v->lc )  $\cap$  R  $\neq \emptyset$  )
    kdSearch( v->lc, R ) //recurse

- if ( region( v->rc )  $\subseteq$  R )
    reportSubtree( v->rc )
else if ( region( v->rc )  $\cap$  R  $\neq \emptyset$  )
    kdSearch( v->rc, R ) //recurse
```



实例

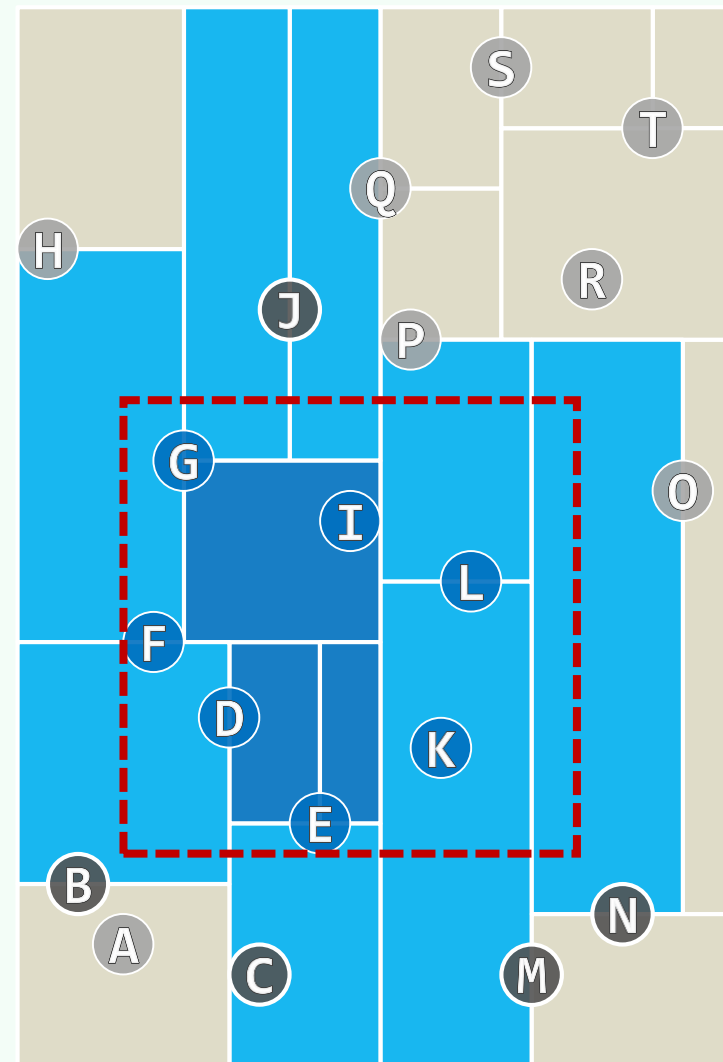
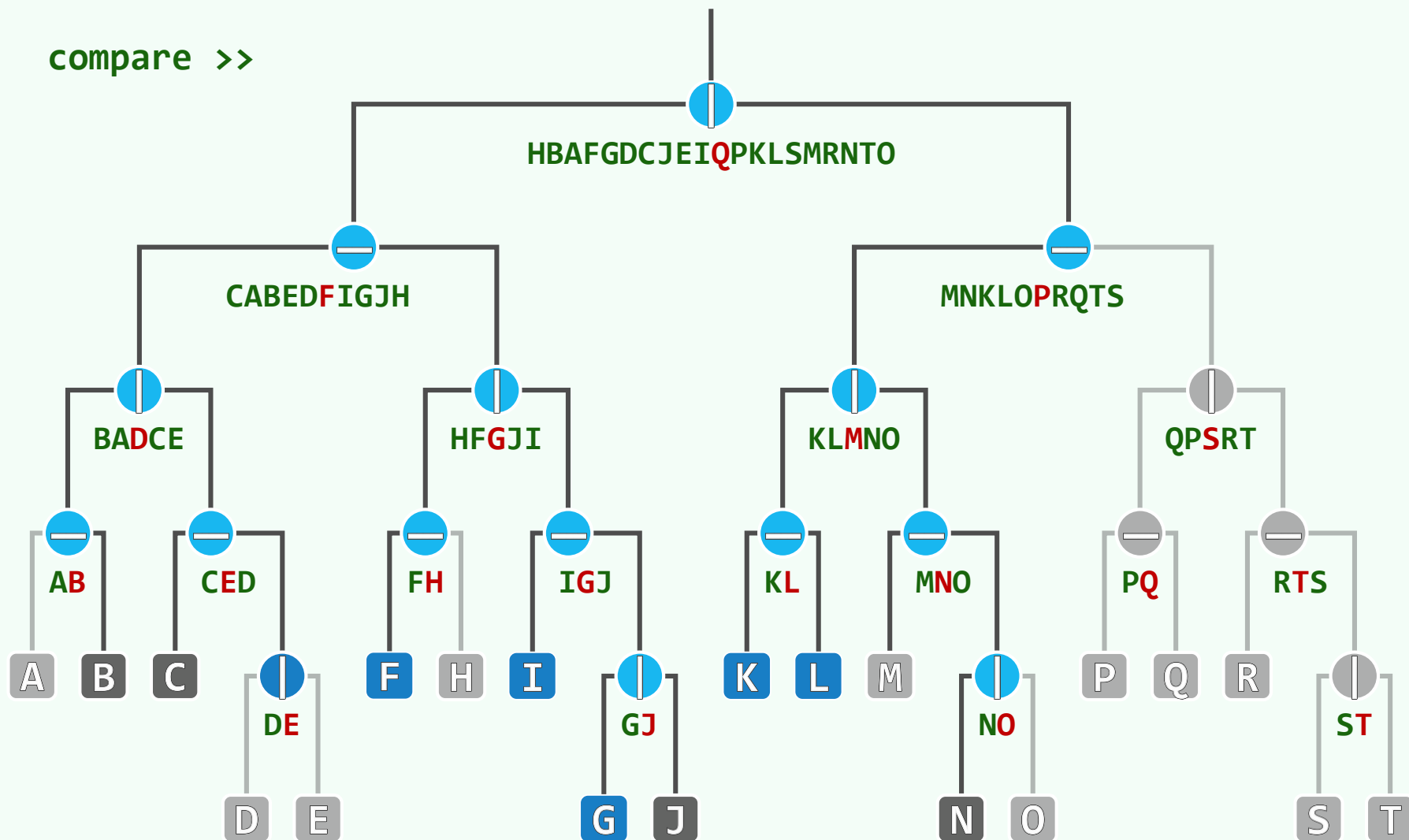
◆ 因待判而递归

◆ 命中 (个别或批量报告)

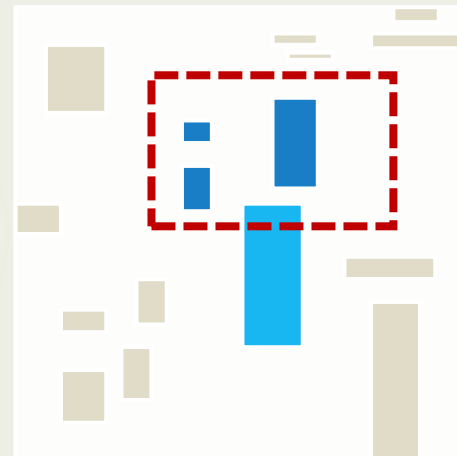
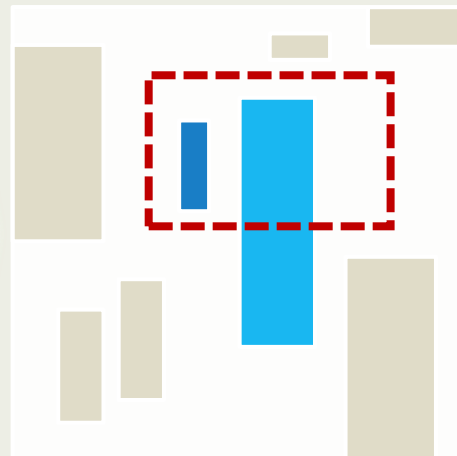
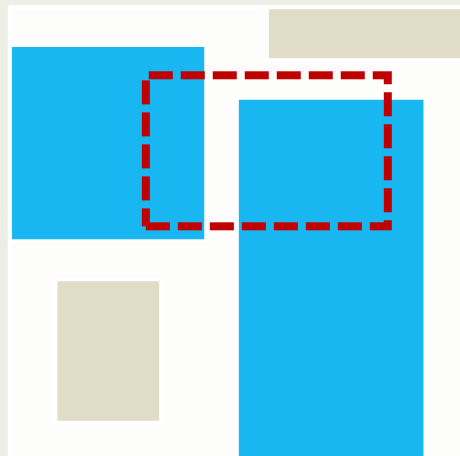
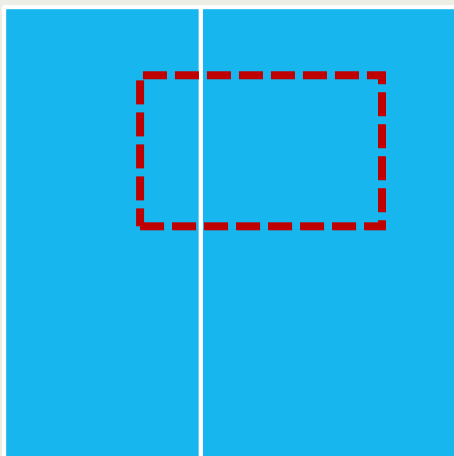
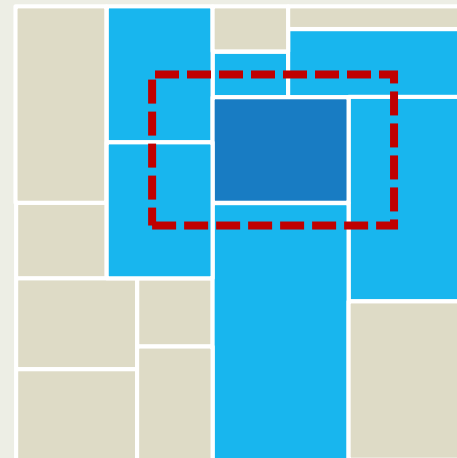
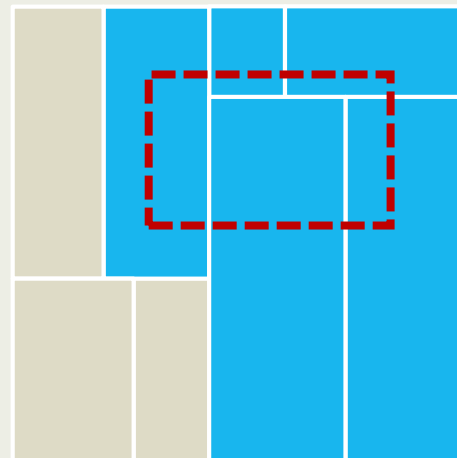
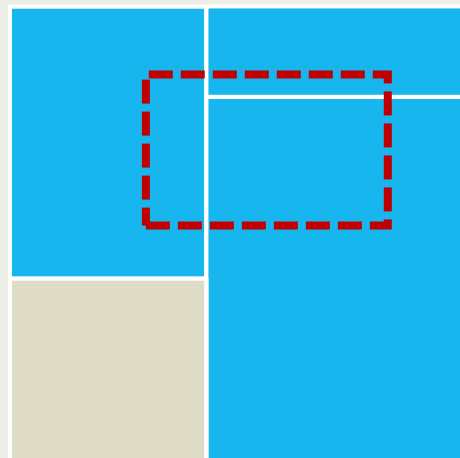
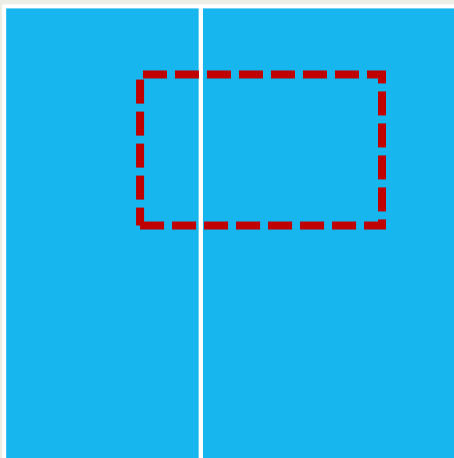
◆ 经核对后排除

◆ 因剪枝未访问

compare >>



Bounding Box



实例: Bounding Box

◆ 因待判而递归

◆ 命中 (个别或批量报告)

◆ 经核对后排除

◆ 因剪枝未访问

<< compare

