

# Advanced Balanced Search Tree

Range Tree

Y-Lists

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## BBST<BBST<T>>

While we descend the search in the  $x$ -tree,

for each node, we need to

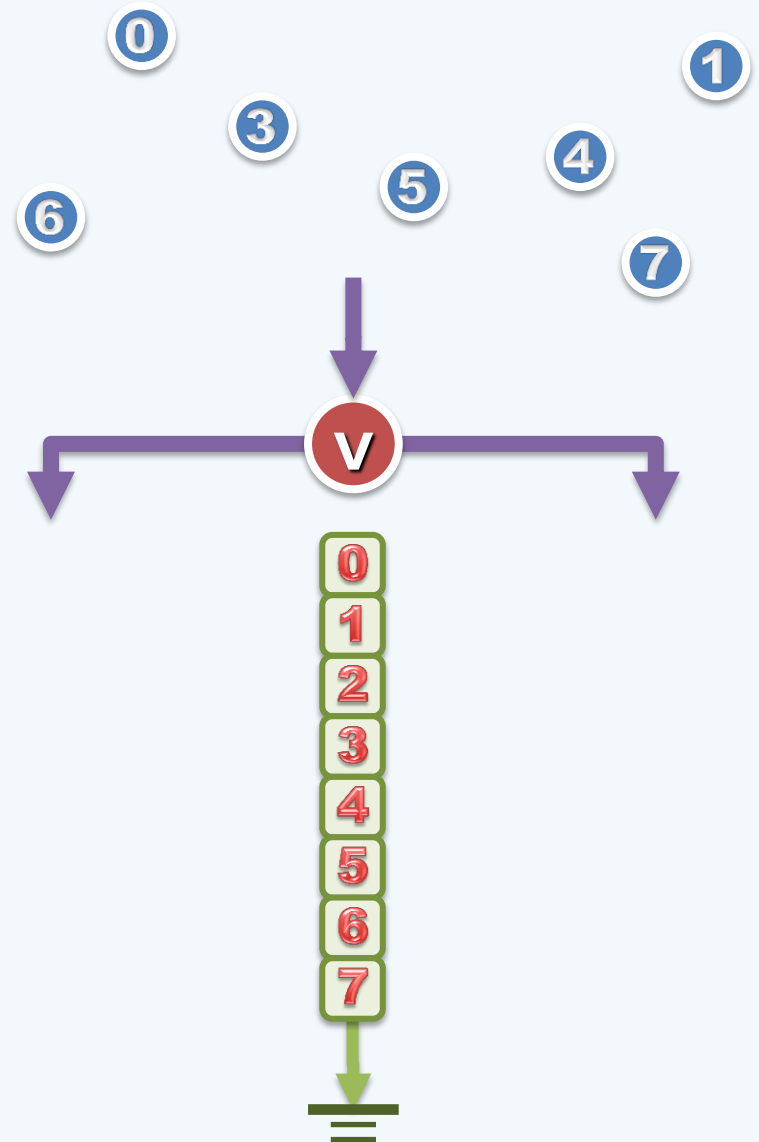
search the corresponding  $y$ -tree

It is this combination that leads to

the squaring of the logarithms

If each  $y$ -tree can be searched in  $O(1)$  time,

the second  $\log n$  factor will be eliminated!



## BBST<Vector<T>>

- ❖ For an easier visualization,  
let's regard each  $y$ -tree, equivalently,  
as a sorted array (called  $y$ -list)
- ❖ Actually, this is also  
a more efficient way  
to implement all  $y$ -trees

