

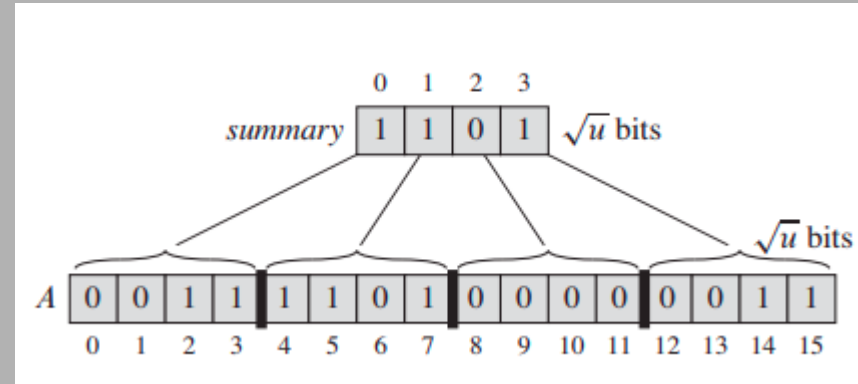
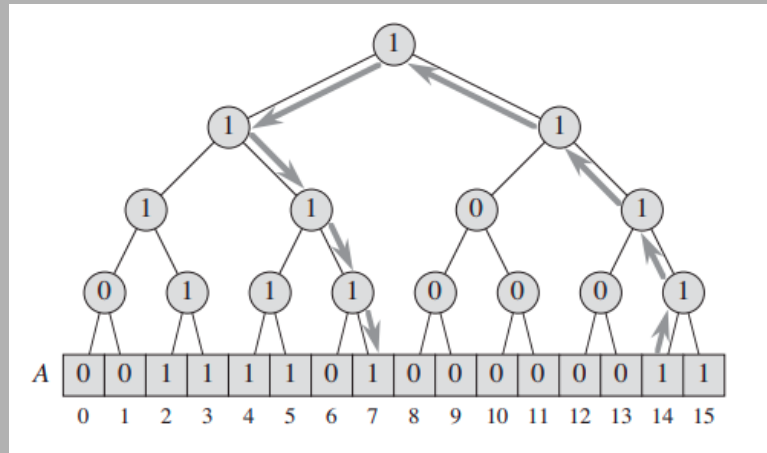
van Embe Boas Trees

Why vEB tree???

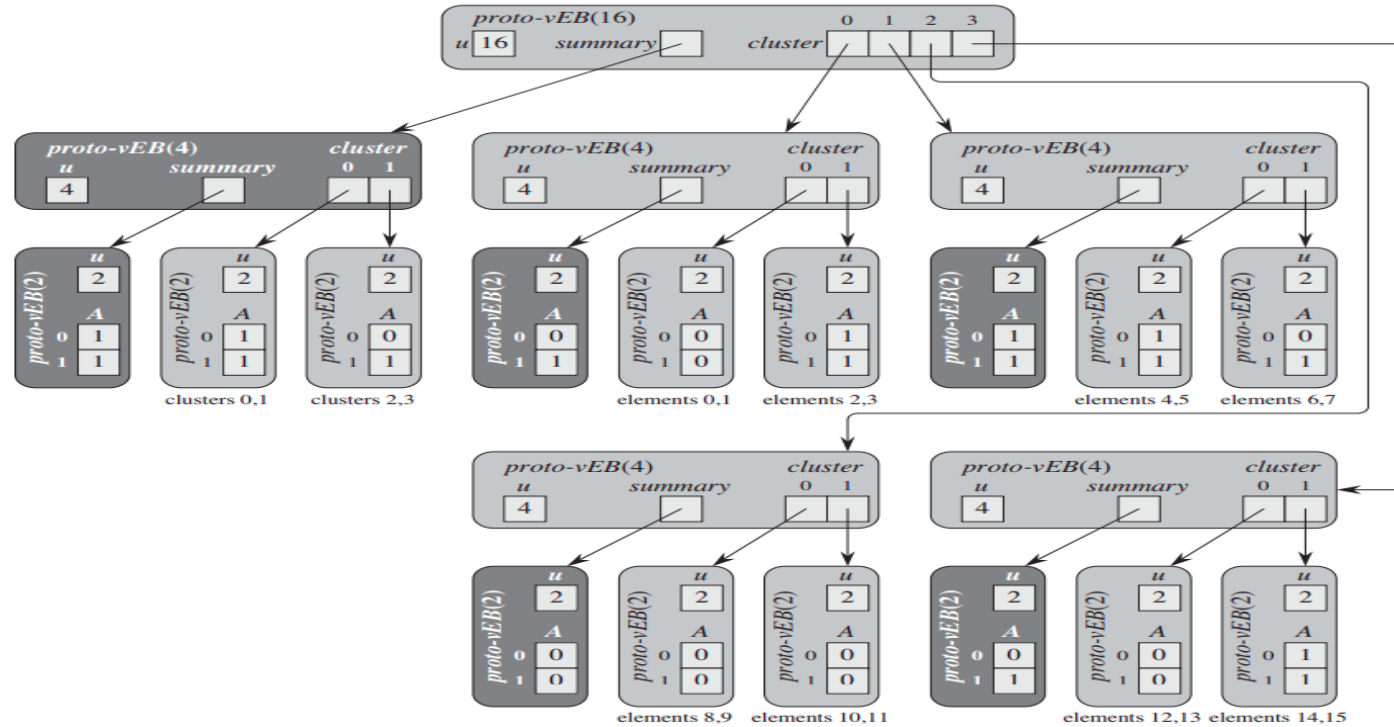
- In the data structures like Binary heaps, Fibonacci heaps, Binomial heap at least one important operation took $O(\lg n)$ time, either worst case or amortized.
- van Emde Boas trees support each of the dynamic set operations SEARCH, INSERT, DELETE, MINIMUM, MAXIMUM, SUCCESSOR, and PREDECESSOR—in $O(\lg \lg n)$ time.

Approach

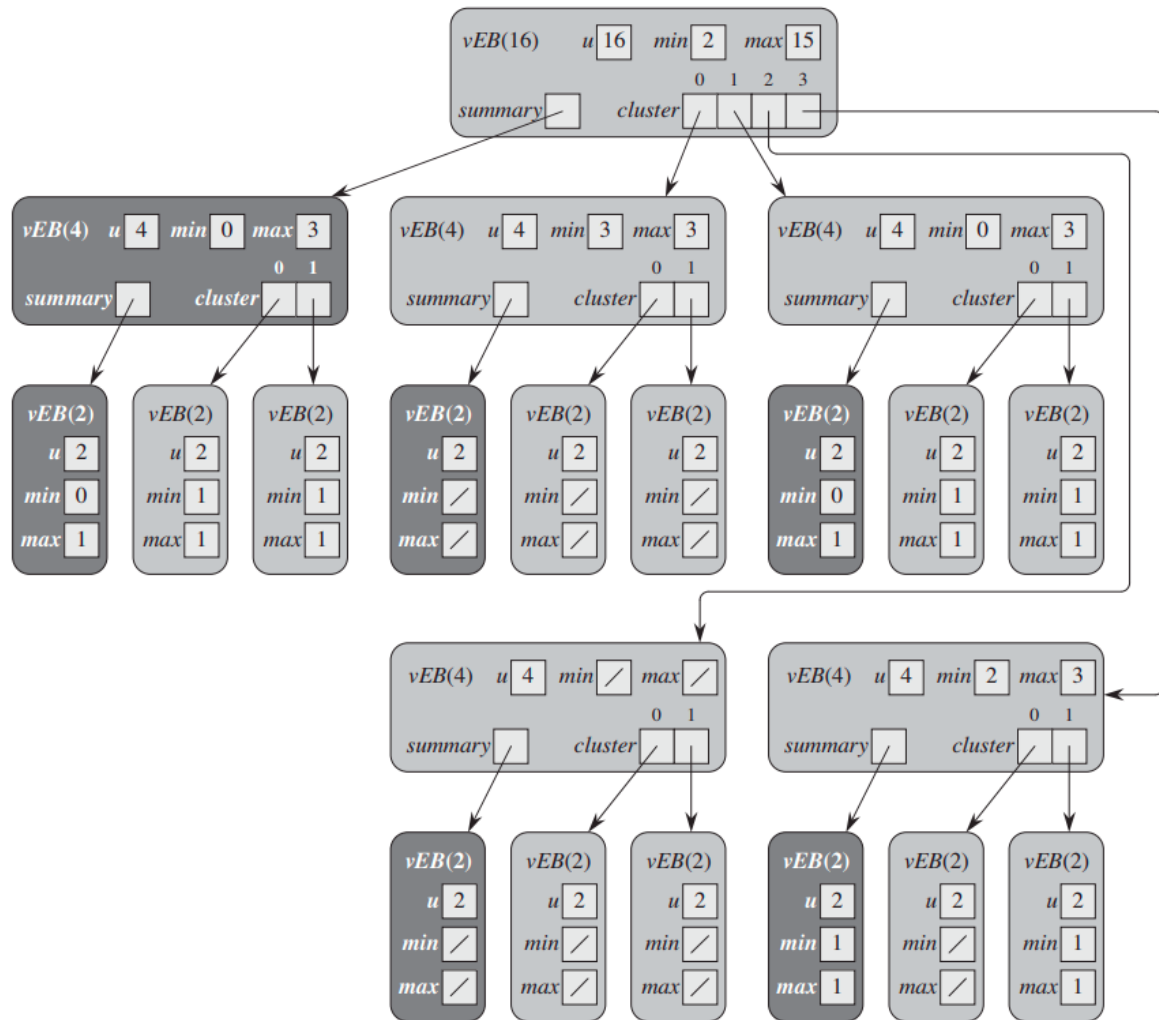
- Direct addressing
- Superimposing a binary tree structure.



Proto vEB Tree



vEB



Applications

- In network router vEB trees can be use pratically to find the next destination node.
- The will consists of ip form routing table and then at any perticular router will use find the next destination node for the data to be transmitted.