

# B-Trees

- Large degree B-trees used to represent very large dictionaries that reside on disk.
- Smaller degree B-trees used for internal-memory dictionaries to overcome cache-miss penalties.

# AVL Trees

- $n = 2^{30} = 10^9$  (approx).
- $30 \leq \text{height} \leq 43$ .
- When the AVL tree resides on a disk, up to 43 disk access are made for a search.
- This takes up to (approx) 4 seconds.
- Not acceptable.

# Red-Black Trees

- $n = 2^{30} = 10^9$  (approx).
- $30 \leq \text{height} \leq 60$ .
- When the red-black tree resides on a disk, up to 60 disk access are made for a search.
- This takes up to (approx) 6 seconds.
- Not acceptable.