## Optimal binary trees in online algorithms<sup>1</sup>

D. Sleator and M. Talupur September 2002 CMU-CS-02-148

School of Computer Science Carnegie Mellon University Pittsburgh, PA 15213

## **Abstract**

Some binary search tree algorithms, such as splay trees, structure the tree in a way that depends on the history of accesses. In this paper we consider what happens if at each point in time the optimal binary search tree (for the access frequencies seen so far) is maintained. We prove lower and upper bounds on the competitive ratio (with respect to the final optimal tree) of such an algorithm

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