

# A Tradeoff Between Search and Update Time for the Implicit Dictionary Problem

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## Abstract

This paper proves a tradeoff between the time it takes to search for elements in an implicit dictionary and the time it takes to update the value of elements in specified locations of the dictionary. It essentially shows that if the update time is constant, then the search time is  $\Omega(n^\epsilon)$  for some constant  $\epsilon > 0$ .