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**LS-AMS: AN ADAPTIVE INDEXING STRUCTURE FOR REALTIME SEARCH ON MICROBLOGS**

**Abstract:**

Indexing microblogs for realtime search is challenging, because new microblogs are created at tremendous speed, and user query requests keep constantly changing. To guarantee user obtain complete query results, micro-blogging site maintains huge indices which leads to index fragmentation or extra merging overhead during realtime search. This paper proposes an efficient LogStructured index structure with Adaptive Merging Strategy (LS-AMS) for realtime search on microblogs. LS-AMS structure consists of an inverted index buffer and a sequence of dynamically adjustable index packages with exponentially increasing sizes. These index packages manage their inverted indices using adaptive merging strategy, which can reduce the merging overhead to improve query performance and can adjust the index structure based on environmental factors, such as the arrival rate of query requests and new microblogs. Experimental results show that LS-AMS can greatly improve query performance without increasing the update cost and improve the self-adaptability in dynamic environment.