**Literature** [**survey**](http://www.blurtit.com/q876299.html)

Literature [survey](http://www.blurtit.com/q876299.html) is the most important step in software development process. Before developing the tool it is necessary to determine the time factor, economy n company strength. Once these things r satisfied, ten next steps are to determine which operating system and language can be used for developing the tool. Once the [programmers](http://www.blurtit.com/q876299.html) start building the tool the programmers need lot of external support. This support can be obtained from senior programmers, from [book](http://www.blurtit.com/q876299.html) or from websites. Before building the system the above consideration r taken into account for developing the proposed system.

**Summary of the project**

Domingos et al., first study the influence maximization problem, while Kempe et al. later establish the problem formally as a discrete optimization problem and propose a hill-climbing greedy algorithm with a 1 – 1/e approximation guarantee. However, the proposed solution does not scale to large networks as it requires a large number of Monte-Carlo simulations for influence estimation. Following the seminal work , many researchers have been working on design efficient algorithms for Influence Maximization problem, leading to a large number of different methods . The proposed methods can be mainly categorized into two types. The first type of algorithms aims at improving the efficiency of the hillclimbing greedy algorithm while preserving the 1-1/e approximation guarantee . For example, Leskovec et al. design the CELF method to accelerate the greedy algorithm by utilizing the sub modularity of the objective function to carry out lazy evaluation . More recently, Zhou et al. have achieved further acceleration by incorporating upper bound on the influence function . Based on the idea that pG(S) u;v <= pG u;v, in this work, we utilize the same idea in our UBI algorithm with an improved upper bound for node replacement gain. Moreover, we extract the formula that is used to calculate the node replacement gain to two parts of marginal gain and then our major task becomes to provide an upper bound and a lower bound of the marginal gain. With the calculation of the upper and the lower bound on the terms, we achieve a much tighter bound than just improving the method of . Moreover, we design an efficient method to update the upper bound as network structure changes.

On the other hand, the second type of algorithms applies various heuristics without provable approximation guarantee . For instances, Jung et al. proposes the state-or-art algorithm IRIE for Influence Maximization problem based on the idea of PageRank. While Jiang et al. use simulated annealing to optimize the influence function while Wang et al. utilize community structure to accelerate influential node discovery.

However, all the previous methods aim to discover the influential nodes under one static network. As far as we are concerned, the only paper on Influence Maximization under dynamic networks is by Aggarwal et al. . Nevertheless, their work is merely marginally related to this paper in that they focus on finding a seed set at time t, that maximizes the influence at some t+ given the dynamics of the evolution of network during the interval [t; t +]. In contrast, in our work, we consider fast update of seed set across different snapshot graphs, each of which is a static network that we would like to maximize the influence of the seed set. The major difference is that in their work, the diffusion process is taking place under a dynamic network while we consider maximizing the influence under a series of static snapshots taking from a dynamic social network. Zhuang et al. study the influence maximization under dynamic networks where the changes can be only detected by periodically probing some nodes. Their goal then is to probe a subset of nodes in a social network so that the actual influence diffusion process in the network can be best uncovered with the probing nodes. That means, their algorithm is to minimize the possible error between the observed network and the real network through probing a small portion of the network. In contrast, the whole structure of the dynamic network is known and our goal is to track the influential nodes and try to maximize the influence coverage of a particular size of seed set. We focus on fast tracking of influential nodes. Moreover, our algorithm can be applied when the changes in network structure have already been discovered by their probing method.