# 移动P2P网络预载一缓存策略研究

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**摘 要**:为了提高缓存命中率,减少用户访问时延,提高网络服务质量,针对具有超级节点的半分布式移动P2P网络,提出一种基于兴趣-相关度的移动P2P预载策略,通过对移动节点的历史访问记录统计并进行数据挖掘,筛选出价值高的数据资源并进行预载;为了避免频繁预载-缓存而导致的缓存命中率降低,提出一种基于兴趣-相关度和信息素的缓存替换策略,该策略充分考虑了用户对数据资源的兴趣趋向性.仿真结果表明,所提出的预载与缓存替换策略能够有效提高缓存命中率.

**关键词**:移动P2P网络;预载;兴趣-相关度;缓存替换
**中图分类号**:TP393 **文献标识码**:A **文章编号**:1000-7180(2015)11-0069-05

# Strategy of Prefetch and Cache Replacement for Mobile P2P Networks

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**Abstract**: In order to improve the cache hit rate, reduce the access delay and improve the network quality of service, aninterest-based prefetch strategyfor semi-distributed mobile P2P network is proposed. The history access recordes of mobile nodes is counted and the data resources which is with the highest value is prefetched. A cache replacement strategy based on interest-relevancy and pheromone is presented to void the reduction of cache hit rate that is caused by preload-cachefrequently. The user interest tendency for data resource is adequately considered in this strategy. The simulation results show that the proposed strategies of prefetch and cache replacement can effectively improve the cache hit ratio.

**Key words**: mobile P2P network; prefetch; interest-relevancy; cache replacement

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**收稿日期**:2014-12-29;**修回日期**:2015-01-30