Title: A Moving-Object Index for Efficient Query Processing with Peer-Wise Location Privacy

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Summary
Nowadays location based services attract more and more attention. The corresponding privacy issues are the most concerned weak point for all kinds of location based services. Users may have various privacy requests for different people, different places and different times. Based on previous indexing approach for moving objects, this paper novel embedded an elastic privacy policy system to meet these different requirements. The PEB-tree method enjoys good efficiency according to the experiments.

Detailed comments
The strong points of this paper are:
-S1: PEB-tree inherits the good properties of B+-tree, which enjoys high I/O efficiency and is easy to implement in real database management systems.
-S2: The concept of location privacy policy is very novel and can model the problem very well. Also the corresponding encoding method with the help of compatibility value is very helpful for encoding the index with privacy policy.
-S3: This paper has very comprehensive experiments which evaluate the effect of many variables against the query efficiency.

The weak points of this paper are:
-W1: I/O cost should not be the only point which represents the efficiency of the method. Other factors such as the accuracy should also be considered.
-W2: The updates of privacy policy should be considered as well as the updates of the status of moving objects.
-W3: More detail about the space-filling should be presented.

Research Questions:
-D1: For location or tracking problem, parallel algorithms might be very efficient since many of the queries can be processed parallel.