Summary
This paper presents a system that extracts, archives clusters from online streaming data and supports cluster retrieval with a cluster summarization as an input. It designed a hierarchical multi-resolution density-based cluster summarization method with incremental updating. They also offered a filter-refine strategy for search similar clusters.

Positive
a. Not only do they offer a grid-graph based hybrid summarization method, the authors also proposed a hierarchical version and discussed in detail about resolution selection with awareness of budget and accuracy.
b. It used incremental updating of skeletal grid cell with the online clustering process and tackled challenges of expensive updating operations with prior-knowledge.
c. The hybrid summarization method of clusters is robust and stable compared with graph-based summarization method that has more uncertainty and variability. It abstracts original data in a coarser level of partitioned grid.
d. Others include: The formulation of the problem is clear and accurate and the sub-processes are well studied, which makes this work convincing; filter-refine strategy used in matching.

Negative/Potential extensions and improvements
a. Only two kinds of queries are offered, namely continuous cluster extraction and cluster matching.
b. Specific optimizations and adaptations can be made for different stream types, which exhibit different characteristics.
c. Testing dataset is not big. One is collected in 6 hours and the other one day. Though they augment the data using some randomization techniques, it can't reflect the complexity and variability and real data.

Research Questions and Points for Discussion
a. The variety and flexibility of the definition of density-based clustering. In this paper, it's defined as the connected core points together with those points connected with these core points. In a previous paper for automatic map generation with sparse GPS trajectories, the density-based clustering is defined by the directions of continuously sampled location points. Another comparison is the distance measure in K-means clustering in the velocity partitioning paper. These tell us to devise and define suitable measurements tailored for our specific target. A similar point presented in this paper is building index for clusters with features.
b. how to design good features for a cluster?
c. What are the general characteristics of a good summarization/representation of a cluster? For example, robust and nonsingular. spatial partitioning.