

Review 1

Review: The authors present a scheduling algorithm for crawling IoT sensors which takes into account the fact that the sensors may have different sleep patterns. I believe the subject itself is of some interest, but the paper lacks in a number of aspects.

The paper is written in poor English and the authors do not bother explaining many of the terms used. To start off, the meaning of expected latency is not defined; similarly, the concept of time slots for the working duty cycles is not explained. Figure 3 doesn't really say anything since the meaning of the vertices is not defined. The authors should provide a detailed example showing all the steps of their method.

The dynamic programming algorithm is not suitable in most applications. The paper claims that the greedy algorithm gives an optimal solution under certain constraints. Since when do greedy algorithms provide optimal solutions ?



The experiments are dealing with a small network of up to 100 sensors and do not compare their method with other state of the art methods.

The authors are not aware of some recent important papers, such as:

"Collaborative Location-based Sleep Scheduling for wireless sensor networks with mobile cloud computing" IEEE Trans. on Computers, 2014



Review 3

Review: This paper introduces a crawl scheduling strategy, EasiCrawl, based on an iteratively improving method. The authors argue that the proposed EasiCrawl is ideal to be used in IoT search system with sensors having sleep behaviors. The paper also evaluates the effectiveness of EasiCrawl by some simulation experiments and a case study with Xively.

Overall, the proposed problem is very interesting and well motivated. The paper is also well organized, but there are still some flaws the authors should improve. 1) The authors assume that the sleeping schedule of sensors is previously known, which is impractical in real-world applications. We can easily crawl the sensor data correctly (avoiding the problems proposed in the Fig.2, e.g., the invalid access) if we know the sensors' sleeping plan in advance. 2) The authors merely evaluate the proposed method by one real-world case, which is less convincing. Thus I support this paper as a "borderline paper".



Review 2

Review: This paper studied a nice problem that identifying available and useful low power sensors for IoTs. The authors raised a new crawling problem for sensors with sleep character and energy constraints, which is a quite common situation in IoT. A sleep-aware heuristic schedule algorithm is proposed to realize the near optimal expected latency. Extensive evaluation on real data showed the effectiveness of the proposed algorithm.

This paper is well written. The problem studied in this paper is interesting and important. The proposed algorithm is nice and the analysis is solid. The evaluation using real datasets is a plus.

There are also some drawbacks of this paper:

The author used Poisson Process to model the arriving of real events, which is relatively weak.

This problem can be more meaningful if the event pattern can be retrieved by analyzing previous event.

There are some grammar mistake in this paper.