**Name: Kevin Jaeger**

**The List of Articles**

**Article 1**

* Title: **Dynamic Presentation Consistency Issues in Smartphone Mapping Apps**
* Author(s): **Hanan Samet, Sarana Nutanong, and Brendan C. Fruin**
* Published year: **2016**
* # of pages: **10**
* Source (full name of the magazine, conference, etc, as it appears in the IEEE/ACM database): **Communications of the ACM, September 2016, Vol. 59, No. 9**
* Is this article from “Magazines” category? (Yes/No): **Yes**

How is the above article related with Mobile Computing or Internet Of Things development?

The way that maps are used on a mobile device is different than the way maps have traditionally been used. Maps on mobile devices are used in a very active way, for navigation and finding a location. When Apple released its own version of maps, its application had significant flaws including misplaced towns and drew widespread criticism. The authors of the articles wanted to compare Apple, Google, and Microsoft mapping applications for consistency based on classical map making principles used by cartographers. Panning consistency, zoom consistency, wraparound, and maximum zoom out, are key metrics measured by the authors. Programming a mapping application to work on the smaller screens of mobile devices provides many challenges, and leads to inconsistencies in presentation. Based on their research, the older Apple IOS 5 mapping application actually scored better than the newer versions of the IOS mapping application, and Google and Microsoft’s applications in terms of presentation consistency. The authors believe that caching map data, and using dynamic map labeling are potential solutions for the consistency problems in mobile mapping applications.

**Article 2**

* Title: **Impact of Ad Libraries on Ratings of Android Mobile Apps**
* Author(s): **Israel J. Ruiz, Meiyappan Nagappan, et al.**
* Published year: **2014**
* # of pages: **7**
* Source (full name of the magazine, conference, etc, as it appears in the IEEE/ACM database): **IEEE Software, November/December 2014**
* Is this article from “Magazines” category? (Yes/No): **Yes**

How is the above article related with Mobile Computing or Internet Of Things development?

Mobile application developers often decide to monetize their apps by including ad libraries in their applications that will display ads for the user. In order to achieve a high ad fill rate, developers will often include multiple ad libraries in their applications including Google Mobile Ads and Flurry’s AppSpot. The authors of this article researched whether or not the number of ad libraries included in an application affected the ratings of the application on the Google Play Store. The apps studied by the authors had as many as 28 ad libraries included in them, however most apps only had 3 or less. Integrating more ad libraries increases the maintenance cost for an application so it can affect the quality of the application. Also, some ad libraries are more obtrusive than others, displaying clickbait or misleading ads which can bring in more revenue, but can also turn users off to the application and lead to negative reviews. Most of the apps with more than 7 libraries had a lower rating on the Google Play Store. Including ads in mobile apps can provide revenue for developers, but must should be done cautiously to avoid harming the app’s ratings and usability.

**Article 3**

* Title: **Discovery in** **The Internet of Things**
* Author(s): **Arkady Zaslavsky and Prem Prakash Jayaraman**
* Published year: **2015**
* # of pages: **10**
* Source (full name of the magazine, conference, etc, as it appears in the IEEE/ACM database): **Ubiquity, an ACM Publication, October 2015**
* Is this article from “Magazines” category? (Yes/No): **Yes**

How is the above article related with Mobile Computing or Internet Of Things development?

By 2020, there will be over 200 billion connected things. The smartphone will be the key component in the IOT. For example, in a theoretical interconnected home, the user’s smartphone can tell when a user is on his way home, and communicate this information the HVAC thermostat which will cool/heat the home accordingly. Also, it could delay or start early if it detects the user is coming home sooner or is caught in traffic and will be home late. Discovery enables applications to access data without needing the know its source or location. The discovery process includes identifying data sources, and then extracting and analyzing it to provide answers around a simple problem. Take for example the heating and cooling of the house example above. What if the user is on a variable peak pricing plan? Should the thermostat turn on before the price drops lower? What if the user is coming home, but is just stopping by to change clothes and then going out for the evening? If a user is having to manually interact then the IOT can be more of a burden than a benefit. As more and more systems become connected, then reasoning techniques that can learn from data across domains will be necessary to maximize the potential of the IOT.

**Article 4**

* Title: **The Internet of Things…of All Things**
* Author(s): **George Hurlburt**
* Published year: **2015**
* # of pages: **5**
* Source (full name of the magazine, conference, etc, as it appears in the IEEE/ACM database): **XRDS, an ACM Publication, Winter 2015**
* Is this article from “Magazines” category? (Yes/No): **Yes**

How is the above article related with Mobile Computing or Internet Of Things development?

The IOT model including sensing, thinking, and acting. Humans have five primary senses consisting of sound, vision, smell, touch, and taste. Computer sensors can detect things humans can, but can also detect radio waves, infrared, ultrasonic waves and others. In fact, if it can be measured then there is very possibly a sensor that can detect and measure it. Major challenges to programming the IOT include how to handle and process data from many sources and how to place boundaries on the networks for security and integrity concerns while allowing the necessary data sharing to proceed needed to make the IOT work. Because of these challenges, multiple loosely coupled networks will be the norm rather than a single all-encompassing network. IOT devices will primarily augment user activity rather than replacing it in the near and medium term future. For example, when IOT devices encounter unforeseen or dangerous situations, then a human will need to intervene. Developing IOT infrastructure therefore should be a cross-collaborative effort with not only computer scientists, but also subject matter experts with broad knowledge of the application domain.