Critique of GruMon: Fast and Accurate Group Monitoring for Heterogeneous Urban Spaces

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1. **Summary**

The paper summarizes the process that the researchers went through to develop the GruMon system. After discussing previous attempts to create classifiers with the same goal the paper describes the method it uses. The system is used to distinguish individuals from groups by detecting activity/location information using phone sensors, computing similarities between pairs, and passing them through a classifier. The motivations behind developing GruMon were primarily for group detection to allow for better advertising and resource planning in crowded areas. There were three trials used for measurement and testing: a Korean mall, a Singaporean mall, and an International Airport. The three trials had varying means of detection, participants, and incentives for participation.

2. **Critique**

- Airport didn't have ground truth group number, cannot apply accuracy at any other scale than O(100)

- Device fragmentation (i.e. h/w differences) + poor signals = wat do?

- BLE increasingly viable bc smartwatches (bluetooth usually on) - even back in the ancient days of 2014

- Weird choice to hand out phones for one venue but allow use of personal phones at others; introduces bias towards potential hardware pros/cons whereas that bias is nonexistent for other venues

- tl;dr becomes an engineering problem at the end of the day

- They make mention of the fact that if there are folks in a party who aren't sending signals, they're useless (i.e. partial party) - what's the motivation to get folks to share their signals? (You'd have to already have a good sense of what your "shopper profile" is like prior to doing anything...)

- Interesting that they punted on locked down OSes after mentioning anon traces – something something wifi triangulation? (Is it the case that access points just broadcast and it's up to the end user device to ack & request connection, or is it the case that the end user device polls the AP?)