Locy: Energy-efficient sensing with Android smartphones.

Martin Kukla (Supervisor: Dr Tristan Henderson)

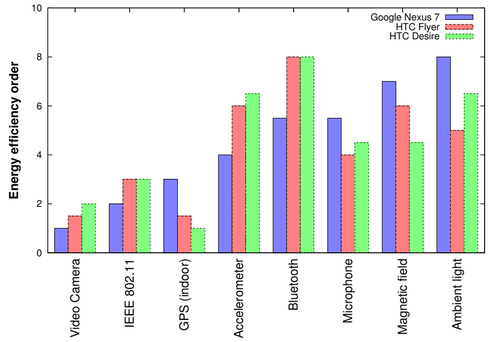
Introduction

- Phone sensing may be utilized by mobile applications to provide **advanced services** such as navigation systems.

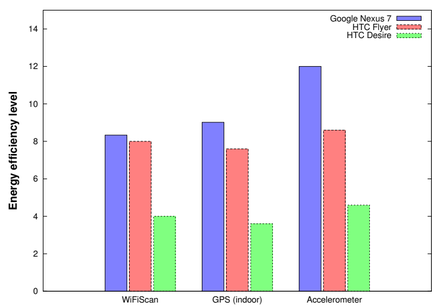
- **Phone sensing** fetches raw sensor data (e.g. from an accelerometer) and tries to extract high-level information from it (e.g. a user is walking).
- Such a process may have **high energy demands**, which is crucially important to mobile phone users.
- To solve the problem:
  - investigate many devices
  - establish the energy efficiency of their sensors
  - leverage results for energy-efficient sensing

Solution

- Energy efficiency of sensors is **different among the devices**.



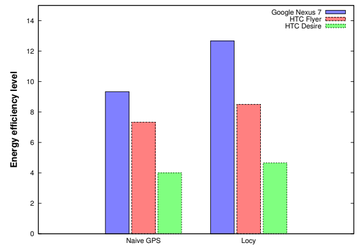
- For all mobile phones, **accelerometer is more energy-efficient** than the standard localization sensors.



- Locy
- movement detection which leverages energy-efficient accelerometer to switch off GPS [MAYBE GRAPH]
- duty-cycling + adaptive towards the battery life

Evaluation

- the **first scenario**:



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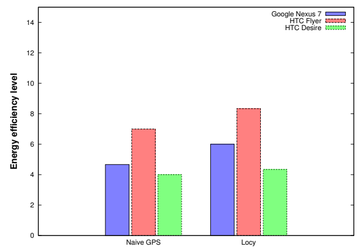
- the **second scenario**:



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Conclusions

What does it mean?