Agenda

HW9 live grading
Research Conference Updates
Legible Graphs
HW10
Example of a heatmap (red – high, blue – low)
Annotations
Overlapping legend
Legend order different from line order
Figure 2: The average minimum coverage achieved by various algorithms over 100 real world data sets of 1M items each.

Figure 4: Experimental results for the Independent data set

Legend overlapping data
(c) Reliability with different blacklisting thresholds
We saw two common styles

Arrows and text
Legends
Tools

matplotlib
Gnuplot
Excel
Inkspace
Powerpoint

Learn about: Vector format, high resolution graphics
Screen captured images

Zoom in before capture
Start with a large image

Ideally start with a vector image
Font size
Fig. 4. Performances of various structures for a number of link-interference related problems.

Fig. 5. Minimize the maximum link interference with different spanning ratio requirements.

Unusual placement of legends
Font size of axis labels too small
Just one idea to improve all your graphs

Increase the font size
Range
These graphs do not use consistent y-axis range so hard to compare across graphs.
Idea #1 Range of the metric
Idea #2 Range of the observed values
Caption

Should be mostly self-contained
Don’t just describe the lines
BigBen, a state change time between action rate and that rate if the rate suddenly change. These rate change how does BigBen each activation approximates time keeping. To a low-power Micro Controller (RTC) powered by a reliable time source activation. Now calibrate light change events, advantage change to the clock. This is events locally rather to the RTC, BigBen, the lights turned on ten logs rather than on timer rooms with time (~3 months). The sensors feasible. Monitoring is worthwhile configured to transition a proxy for occupancy detection that many rooms sensitive lights. That are detected in a room no motion is detected by BigBen can detect it. It can infer when the light on, but in some preliminary experiments, energy harvesting power supply.

![Figure 6: Recharge rate in varying lighting conditions.](image)

We measure the time the solar cell based energy-harvester takes to recharge in opportunistic trigger mode under different lighting conditions. As expected, the brighter the room the faster the recharge rate. Rooms with natural light (atrium and office) can support relatively fast recharge rates (in the 10s of seconds). Rooms with only artificial light (lab) cause the sensor to recharge more slowly, but can still support a sample every two minutes.

![Figure 7: CDF of the interval between door open events.](image)

Plotted on a log scale x-axis is the CDF of time intervals between subsequent door opening events of a door over a month period. Also shown are the recharge times for the solar based energy-harvesting power supply in different lighting conditions. Sensors in rooms with natural light would be able to detect most door open events, and even in moderately lit rooms at least 65% of door open events would be detected.
Types of Graphs

Basic
  Bar
  Line
  Scatter
  Pie
  Box

Many others:
  Heat map, ...

Which to use when?
HW10 – Your Paper

Write a complete paper describing your research. Submit it to the conference.