

A personal energy meter for Android phones

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IB Computer Science

Energy metering provides an incentive to
reduce personal energy footprint

Energy Manager

DOPPLR trips - Simon Hay
<http://lenny.piggott.me.uk/dopplr.xml>

ReadYourMeter - Simon Hay
<http://lenny.piggott.me.uk/readyourmeter.xml>

Room 8, 138 Huntingdon Road - David Piggott
<http://lenny.piggott.me.uk/138cb30hl.php>

WattzOn - Simon Hay
<http://lenny.piggott.me.uk/wattzon.xml>

William Gates Building gas - Simon Hay
<http://lenny.piggott.me.uk/wgb.xml>

Scan Create

Energy Preferences

Updater

Update frequency 
 Select how frequently Energy Meter should update subscribed feeds.

Start updater at boot 
 Run the energy usage updater when the system starts.

Meter graph

Precision 
 Change the number of decimal places shown in the energy graph view.

Meter stack

Precision 
 Change the number of decimal places shown in the energy stack view.

Meter total

Energy Categories

Home (3 feeds) 

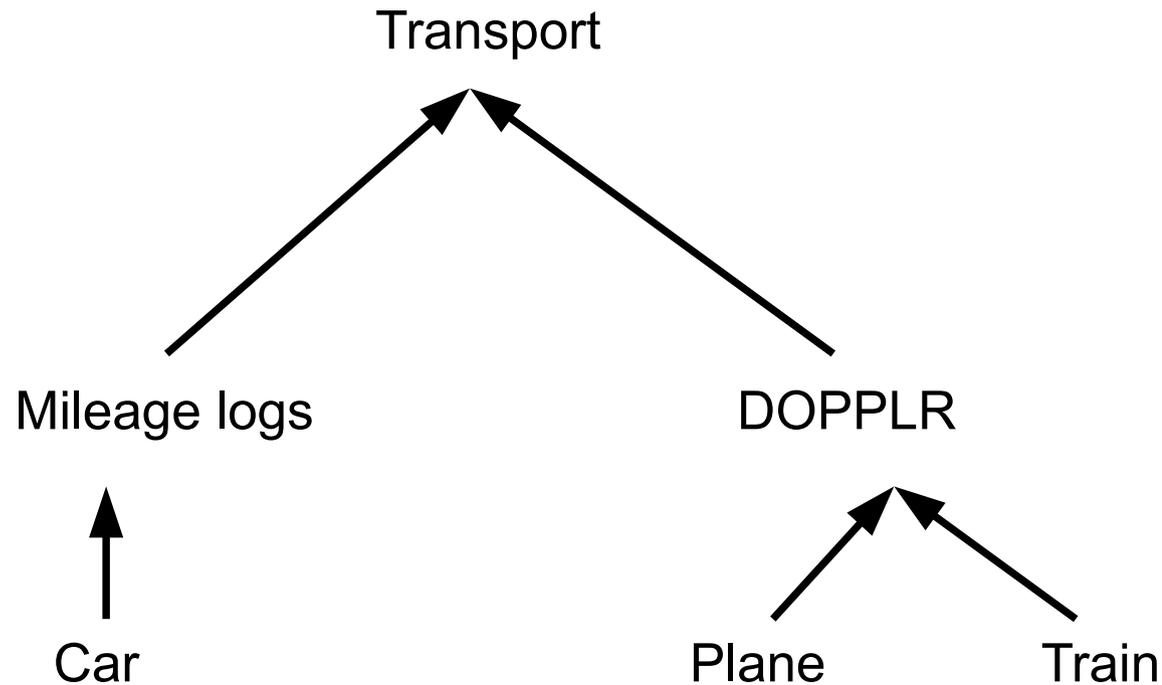
Transport (1 feeds) 

Uncategorised (0 feeds) 

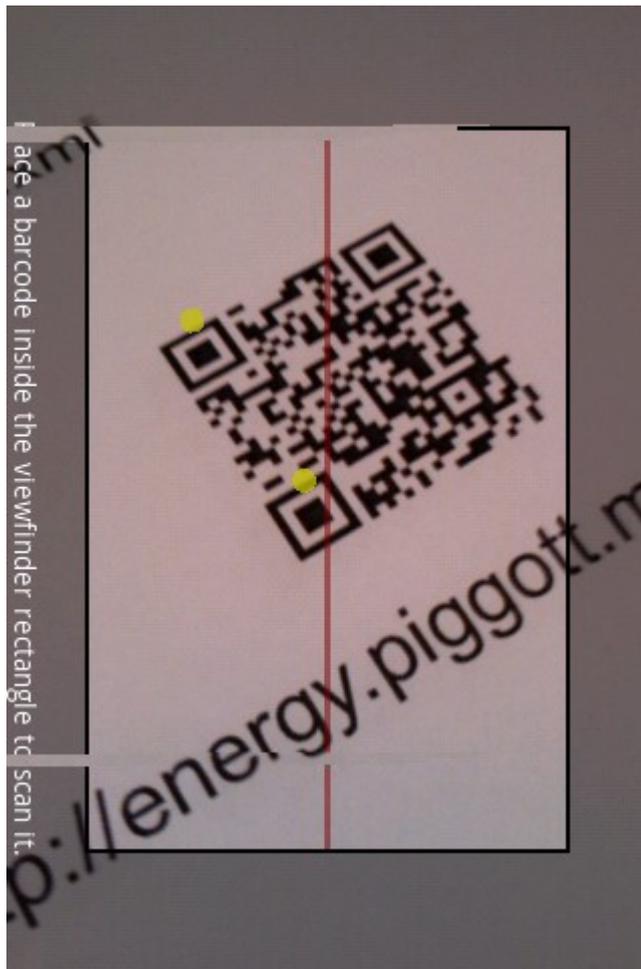
Work (1 feeds) 

Create new Delete selection

Ontology (grouping) lets us see where the biggest changes can be made



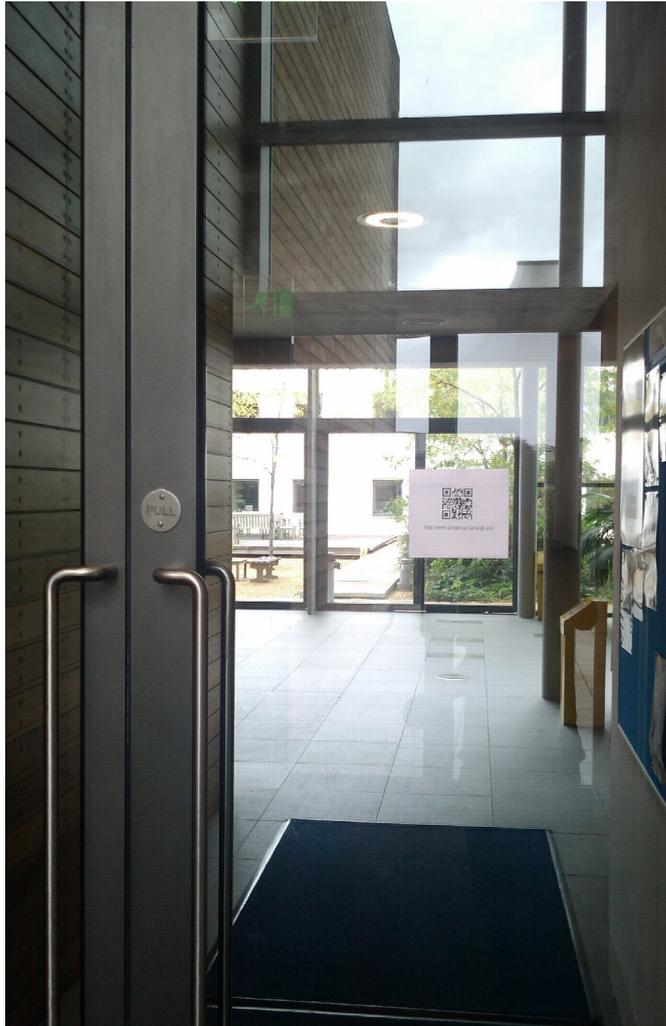
Barcode Box uses Barcode Scanner functionality to save to a list



A screenshot of the Barcode Box 2 app page on an Android device. The page shows the app's name, developer, and status. The app is titled "Barcode Box 2" by "dtg-android" and is marked as "Installed". It has a 5-star rating. The page also displays the number of downloads (1,000-5,000) and the number of ratings (5). A note indicates that the app requires the Barcode Scanner to be installed. The description states that the app records a list of barcodes when scanned and reminds the user if they've seen it before, useful for remembering books or items in a shop. At the bottom, there are "Open" and "Uninstall" buttons.

Barcode Box 2
dtg-android
Installed
★★★★★
My review
★★★★★
Rate it!
1,000-5,000 downloads 5 ratings
* Requires Barcode Scanner to be installed *
Records a list of barcodes when you scan them and reminds you if you've seen it before. Useful for remembering which books you've read or things you've seen in the shop.
Open Uninstall

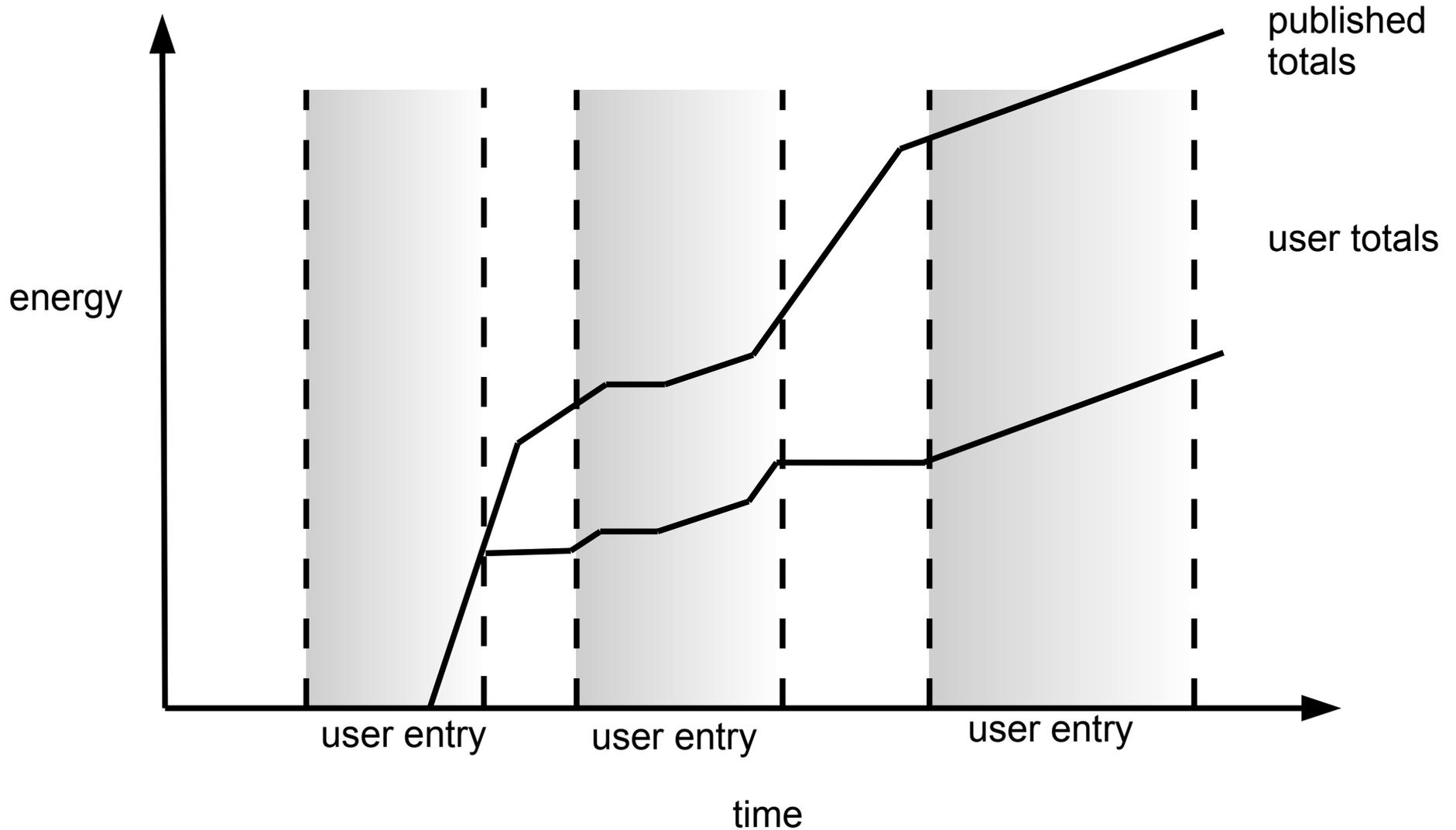
QR codes can be placed on energy consuming facilities for easy logging



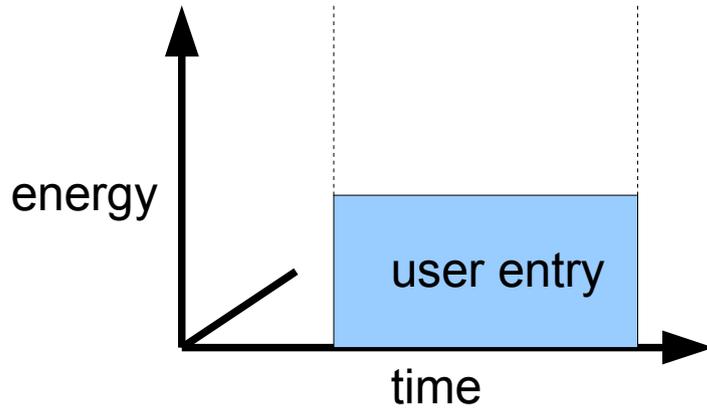


<http://energy.piggott.me.uk/wgb.xml>

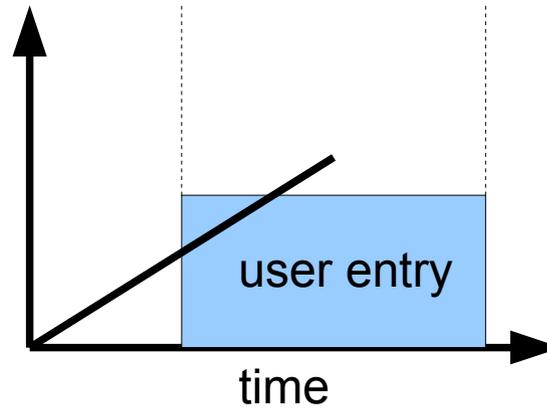
Energy Meter only counts energy used during periods defined by the user



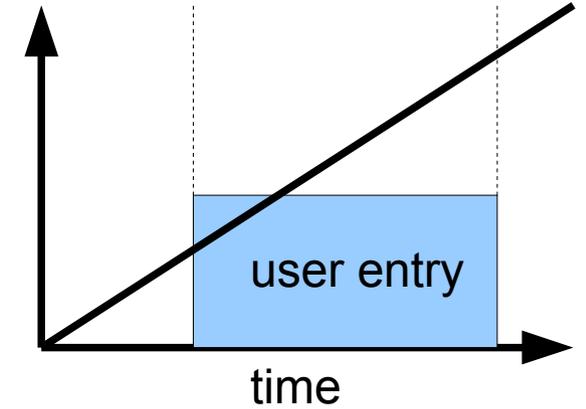
This is harder than it seems



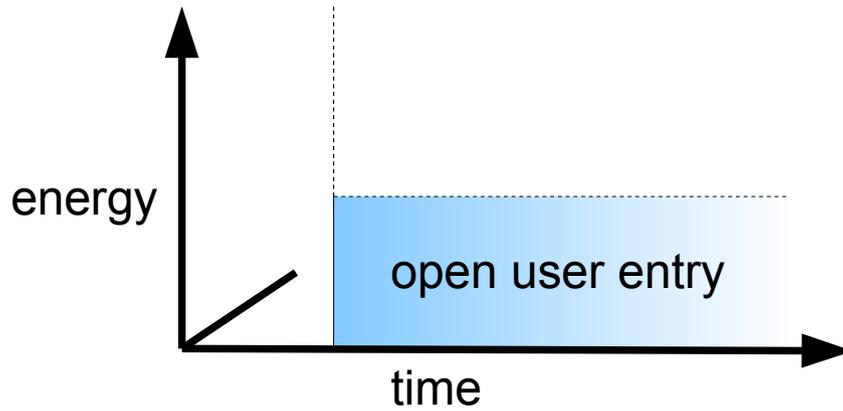
Case 1 – do nothing



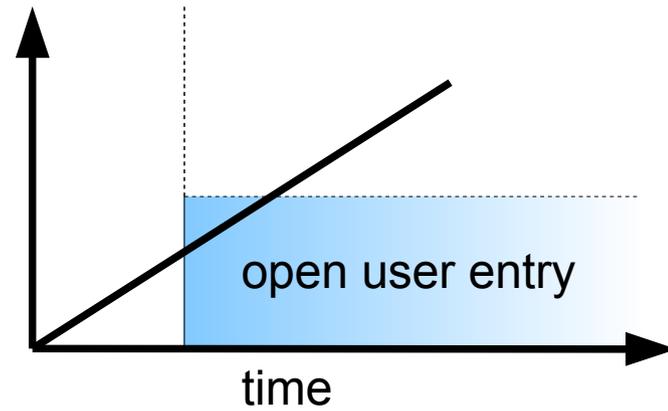
Case 2 – partial update



Case 3 – full update,
mark entry as cached



Case 4 – do nothing



Case 5 – partial update

Energy feeds are based on the Atom format and so are easy to create



```
<entry>
  <id/>
  <facility>1</facility>
  <title>Desktop computer</title>
  <updated>2010-09-13T09:00:00+01:00</updated>
  <content>375.54kWh</content>
  <category term="constant"/>
</entry>
```

Conclusion

Clear charts make it obvious which facilities are the largest contributors to an individuals energy footprint

Plenty of scope for more work