Social Electricity

Energy Awareness through Social Comparisons

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Problem Statement

In most European countries, including Cyprus, people receive an electricity bill once every month. It is not easy for them to perceive their electricity footprint, i.e. to understand whether their consumption is low, medium or high.

Citizens need an effective way to realize the “semantics” of their electrical consumption!

Motivation

Social Norms

“People tend to follow what other people do and adapt their behaviour and practices according to the stimuli received by their friends, relatives and neighbours”.

“Social norms can motivate people to question their attitude, if they discover it is not ”normal”.

“Social influence is an important factor that motivates people to change their lifestyles”.

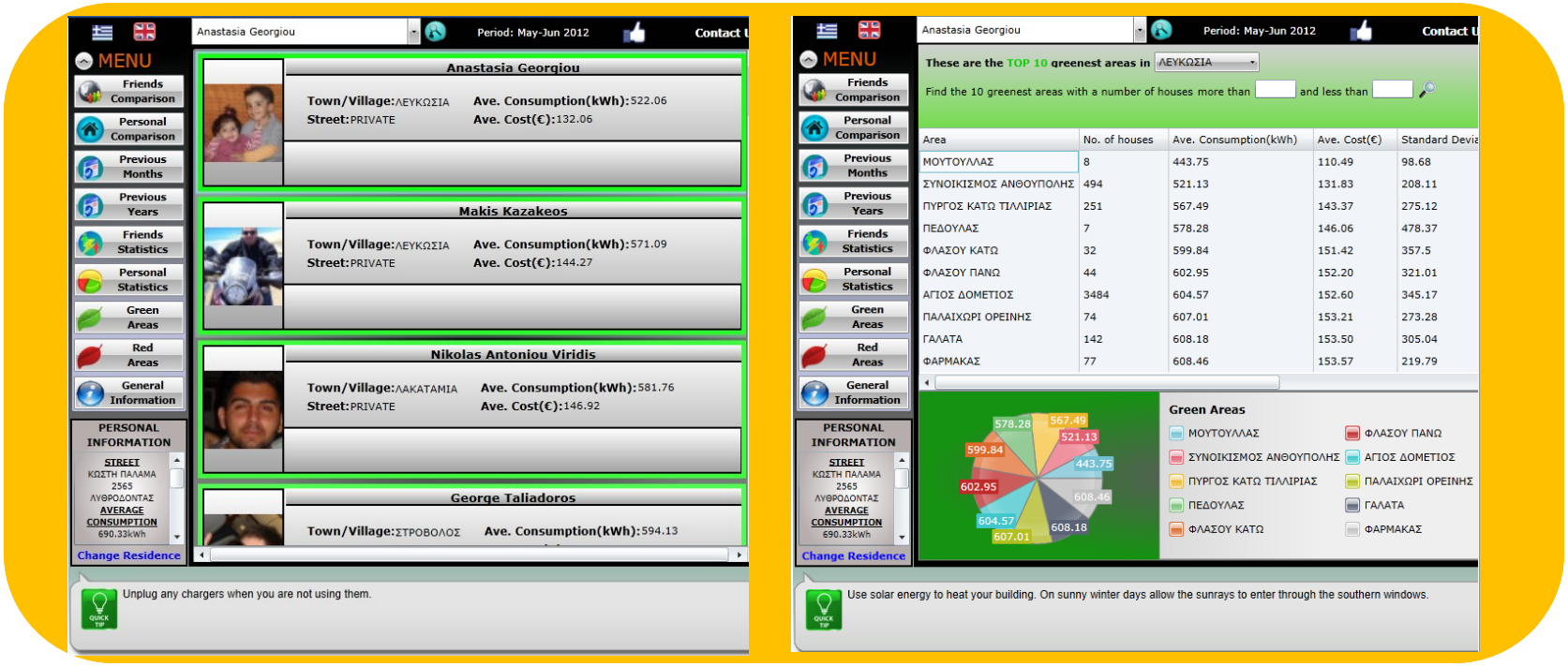
“People are willing and capable to adapt their behaviour to energy-saving lifestyles if given the necessary feedback, support, and incentives”.

General Idea

Energy Awareness through Social Comparisons

- Social comparisons may enable people to perceive the amounts of their consumed electrical energy, by comparing it with their social and local environment!
- Online social networking sites constitute promising platforms to locate people and discover their social networks.

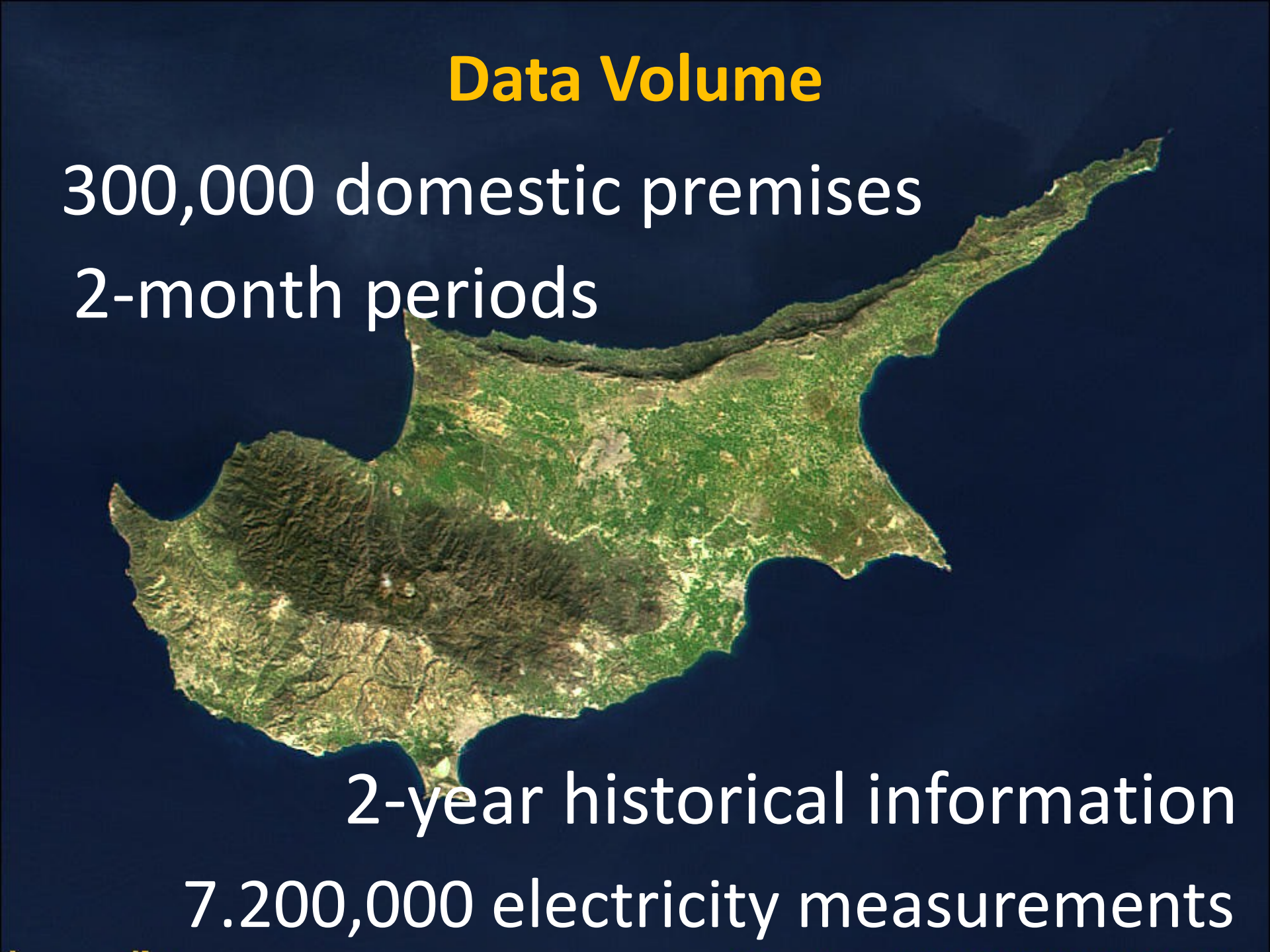
Social Electricity



Social Electricity Facebook application helps Cypriot citizens to understand their consumed energy, through comparisons with their own neighbourhood and their online friends!

- Electricity data is real and accurate, provided by the Electricity Authority of Cyprus.
- Electrical information is aggregated in neighbourhood level (PO code, street).

Data Volume



300,000 domestic premises

2-month periods

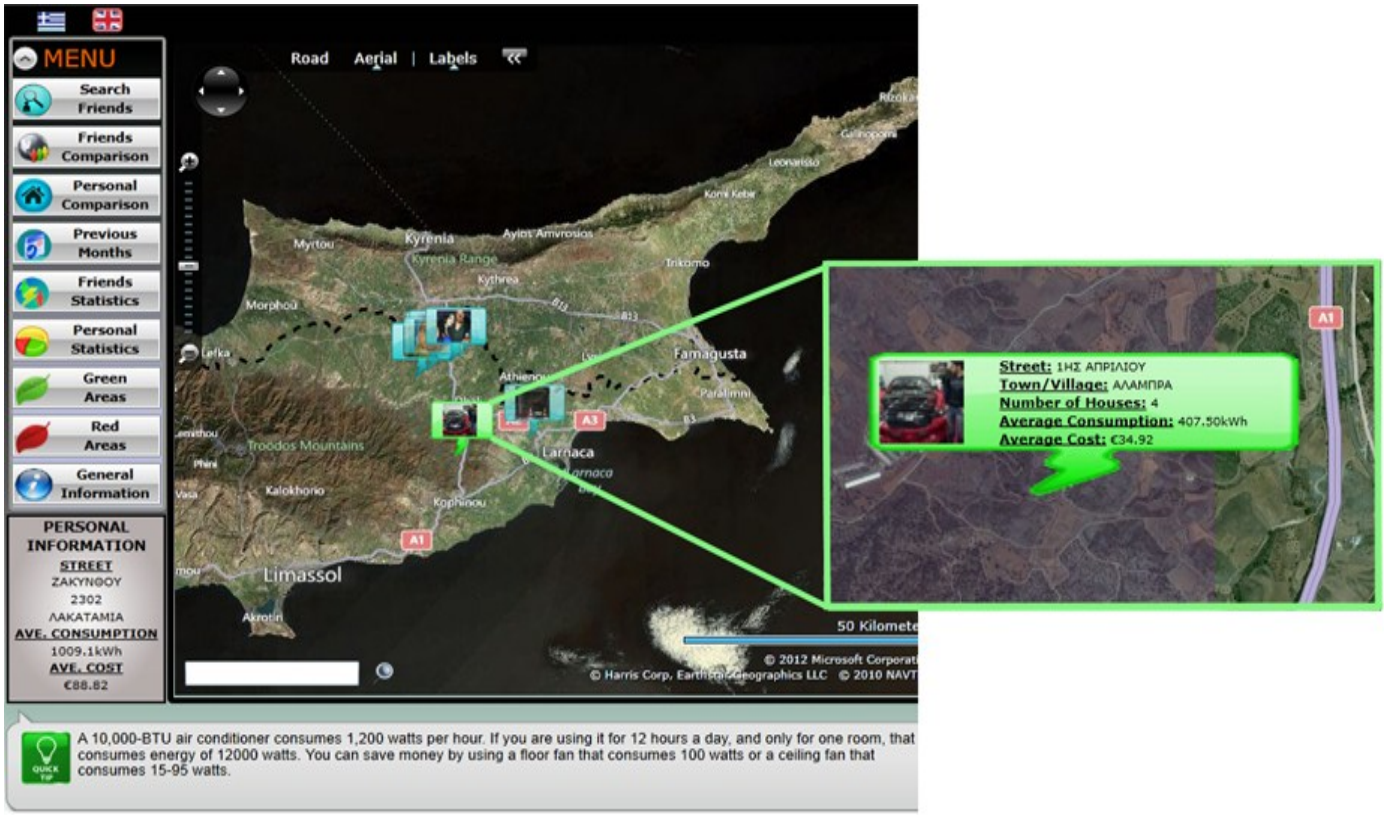
2-year historical information

7.200,000 electricity measurements

Features I

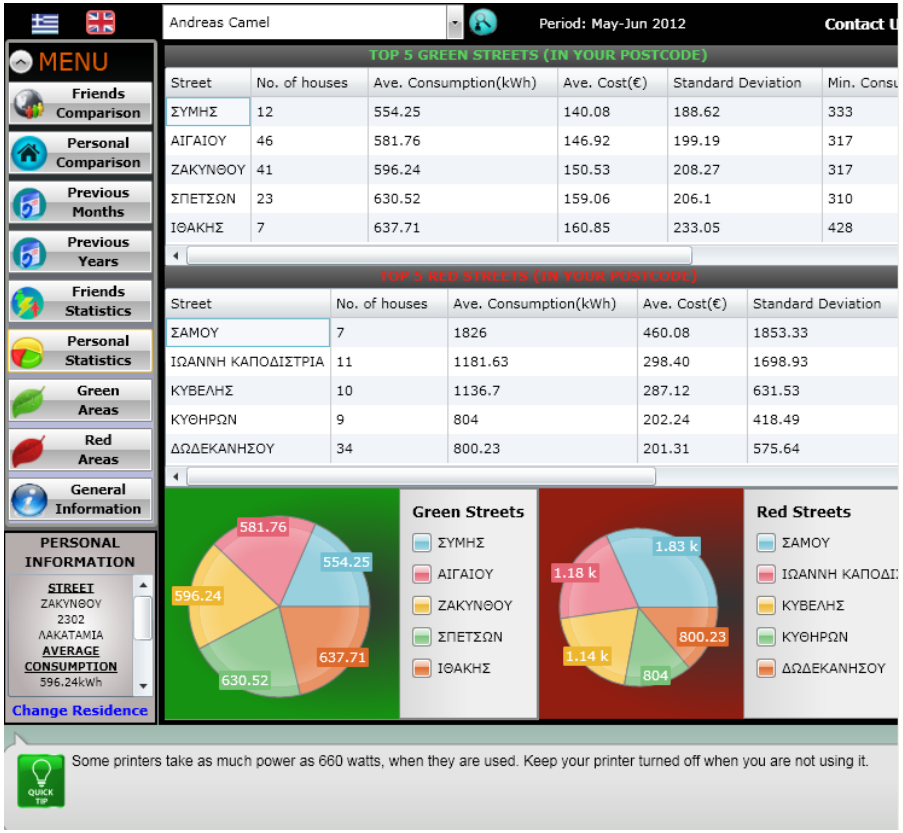
Personal Comparisons: Compare your own electricity footprint with the average amount of electricity consumed at your neighbourhood, village/town or the whole of Cyprus.

Features II



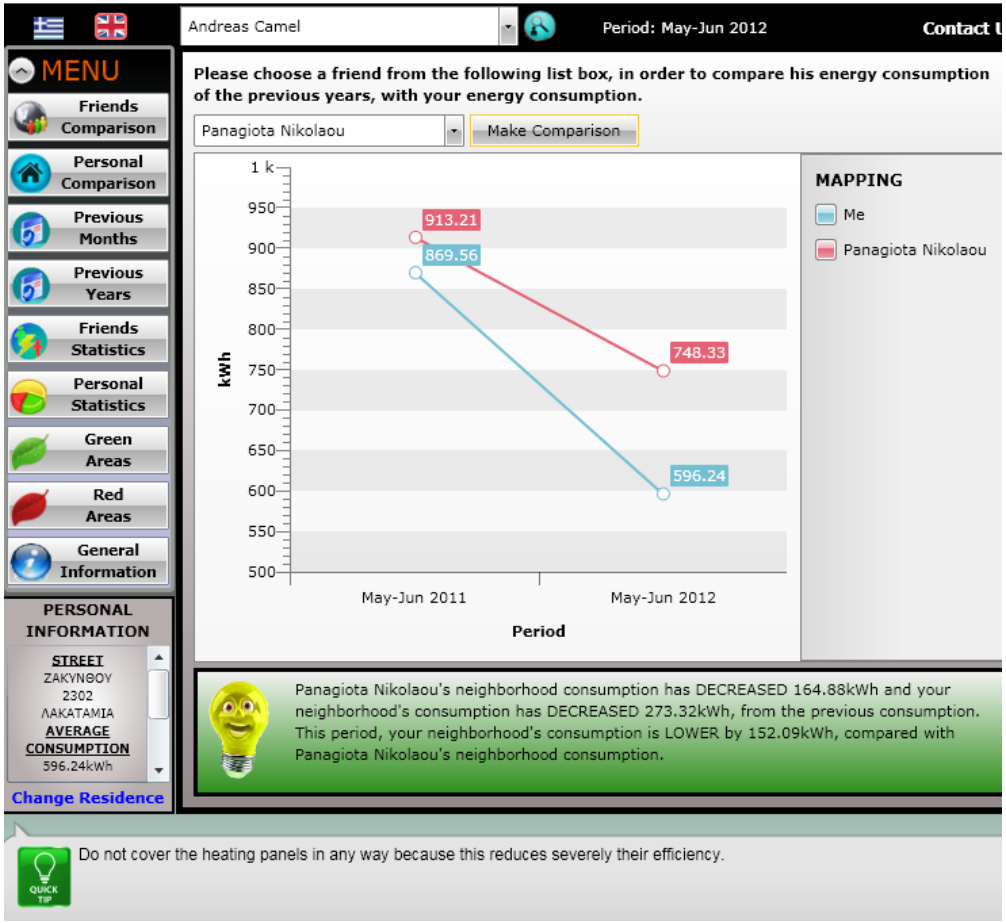
Social Comparisons: Compare the electrical consumption at your street with that consumed by the streets of your friends, who are tagged on the map of Cyprus where they live.

Features III



Location-based Statistics: Observe the most and least energy efficient streets in your neighbourhood as well as the most and least energy efficient areas and villages around Cyprus.

Features IV



Historical Comparisons: Compare the energy behaviour of your street in previous months or at the same month in previous years. Make this comparison more social by including the energy behaviour of your friends' streets.

Some Initial Facts

- The application started officially at 1st August 2012.
- More than 1,000 users after 6 months, 1,400 likes on our Facebook page.
- Eponymous supporters like the Cyprus Interior Minister Mrs Eleni Mavrou and the Commissioner for the Environment Mr Charalambos Theopemptou.
- The most popular group of users (39%) is between 25-34 years old. Younger people between 18-24 are also highly interested (32%).
- 65% of users live in an urban environment, 28% in the suburb, 17% in rural areas.
- 48% of users live in the capital of Cyprus, Nicosia.

Some Initial Facts

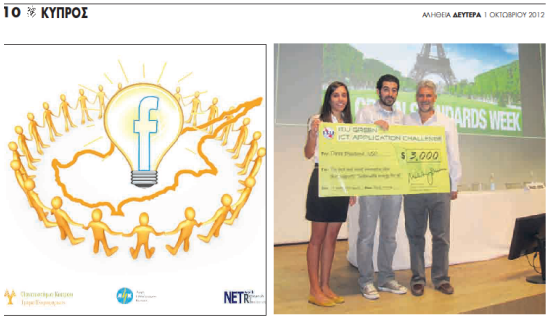
Extensive reportages and publicity in large media of Cyprus (TV channels, radio channels, newspapers, magazines, online blogs).

Μάθετε πόσο ρεύμα καταναλώνετε

Εξοικονόμηση ενέργειας μέσω κοινωνικών συγκρίσεων

Καινοτόμο έργο σε παγκόσμιο επίπεδο

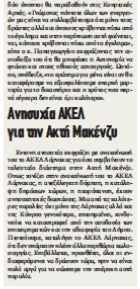
Πώς χρησιμοποιείτε την Εφαρμογή



Τεχνολογία και ψυχολογία

Συγκρίνω και εξοικονομώ ρεύμα

Στάχος της εφαρμογής είναι η συνειδητοποίηση των Κυπρίων πολιτών όσον αφορά την ηλεκτρική ενέργεια που καταναλώνουν



Διεθνής διάκριση για Κύπριο φοιτητή

Ο Α. Καμηλάρης πήρε πρώτο βραβείο από την ITU για τον «Κοινωνικό Ηλεκτρισμό»

Ανησυχία ΑΚΕΛ για την Ακτή Μακένζυ

Some Initial Facts

First prize award at the 2nd Green ICT Application Challenge, organized by the International Telecommunication Union (ITU).

Initial Evaluation

- Via questionnaires. 178 subjects.


44% found the app very useful. 36% found it just useful.


55% were affected positively to become more energy-aware.


16% believed their energy consumption was high. 78% perceived their "energy profile" through the app.


62% claimed their consumption was reduced in regard to last year.


57% are aware of their "green" and "red" friends.

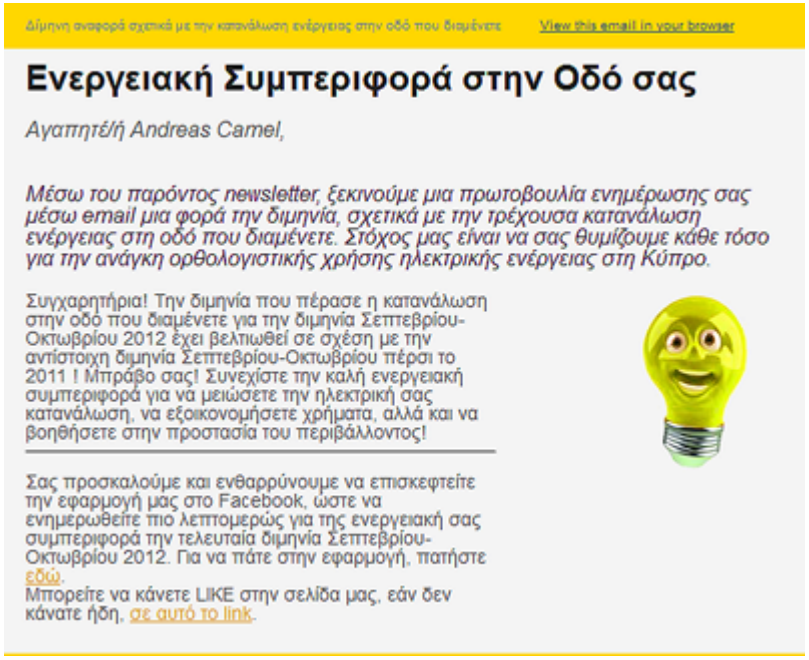

48% used the app from curiosity. 71% for environmental reasons. 71% for financial reasons. 14% for responsibility as a citizen.


Most popular incentive for energy reduction is discount on the bill.


38% believe the app will be more useful in a few years.


64% believe the app will reduce their consumption more than 10%.

Current Work


Δίμηνη αναφορά σχετικά με την κατανάλωση ενέργειας στην οδό που διαμένετε View this email in your browser

Ενεργειακή Συμπεριφορά στην Οδό σας

Αγαπητέ/ή Andreas Camel,

Μέσω του παρόντος newsletter, ξεκινούμε μια πρωτοβουλία ενημέρωσης σας μέσω email μια φορά την διμηνία, σχετικά με την τρέχουσα κατανάλωση ενέργειας στη οδό που διαμένετε. Στόχος μας είναι να σας θυμίζουμε κάθε τόσο για την ανάγκη ορθολογιστικής χρήσης ηλεκτρικής ενέργειας στη Κύπρο.

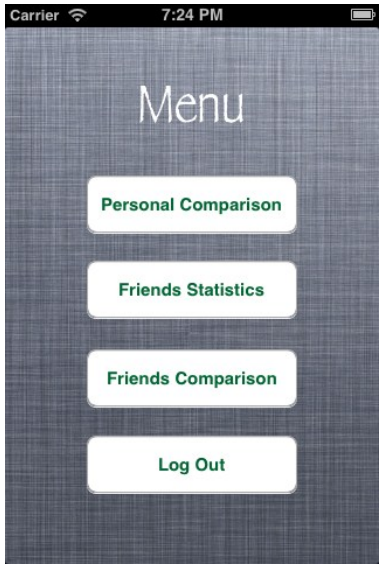
Συγχαρητήρια! Την διμηνία που πέρασε η κατανάλωση στην οδό που διαμένετε για την διμηνία Σεπτεβρίου-Οκτωβρίου 2012 έχει βελτιωθεί σε σχέση με την αντίστοιχη διμηνία Σεπτεβρίου-Οκτωβρίου πέρσι το 2011 ! Μπράβο σας! Συνεχίστε την καλή ενεργειακή συμπεριφορά για να μειώσετε την ηλεκτρική σας κατανάλωση, να εξοικονομήσετε χρήματα, αλλά και να βοηθήσετε στην προστασία του περιβάλλοντος!

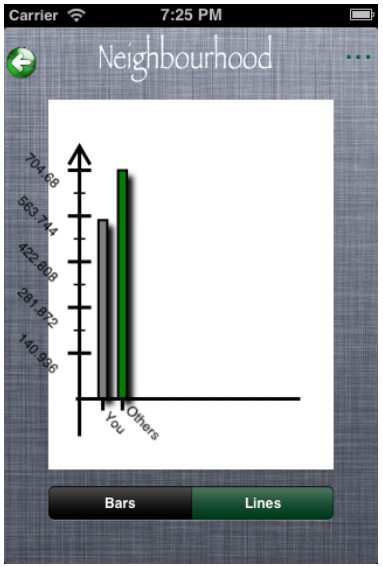
Σας προσκαλούμε και ενθαρρύνουμε να επισκεφτείτε την εφαρμογή μας στο Facebook, ώστε να ενημερωθείτε πιο λεπτομερώς για της ενεργειακή σας συμπεριφορά την τελευταία διμηνία Σεπτεβρίου-Οκτωβρίου 2012. Για να πάτε στην εφαρμογή, πατήστε εδώ.
Μπορείτε να κάνετε LIKE στην σελίδα μας, εάν δεν κάνατε ήδη, σε αυτό το link.

A newsletter sent by email to the users of the application every two months, to inform them about their electricity footprint, comparing it with their local and social environment.

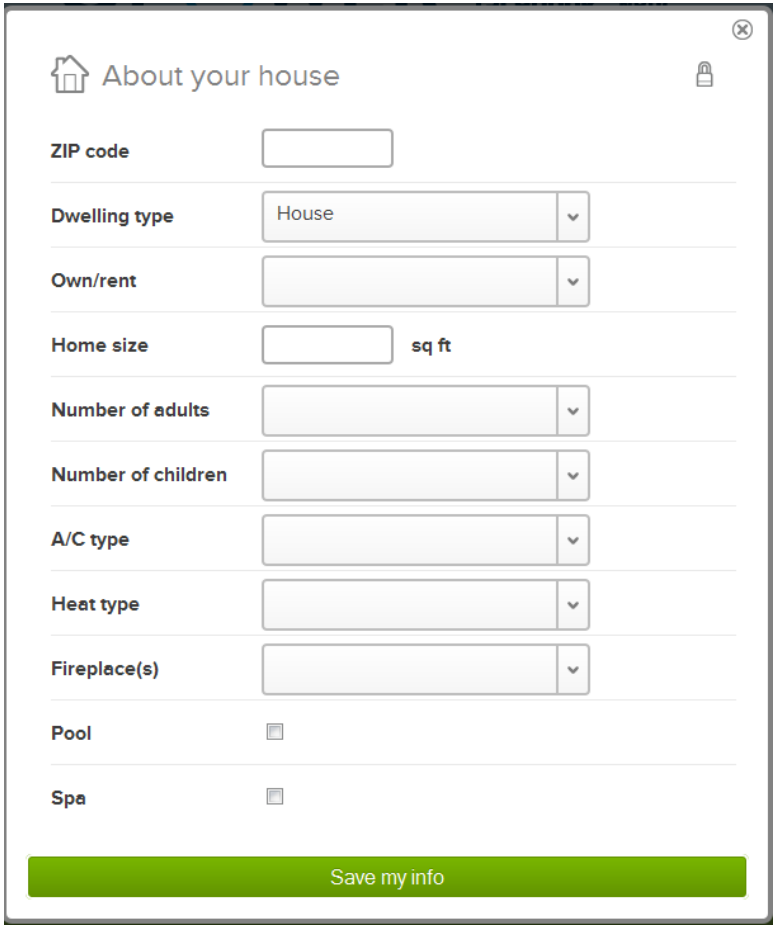
Current Work

Mobile applications for mobile Facebook users.





Current Work



More effective electrical comparisons between people that share common house preferences (e.g. home size, number of residents, heat type).

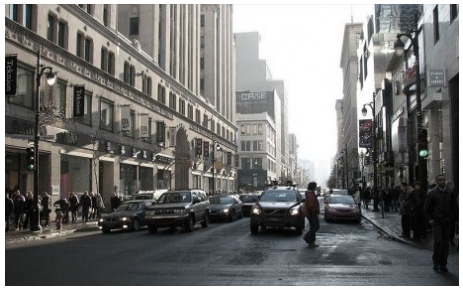
Next Steps

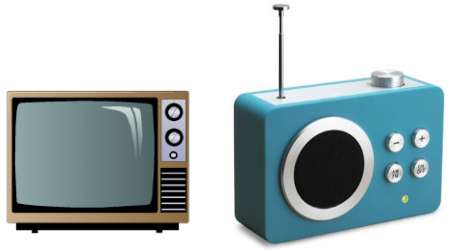
Access to Social Electricity by people who do not have Facebook through a Web site that offers location-based statistics and general information to Cypriot consumers of electricity.

More effective statistics including a colour map of Cyprus according to the electric behaviour in different areas of the country. Discussion for building-specific statistics.

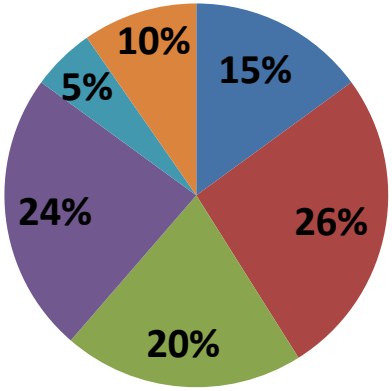
Next Steps

Privacy of electricity data

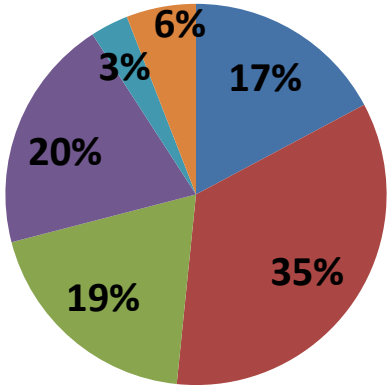




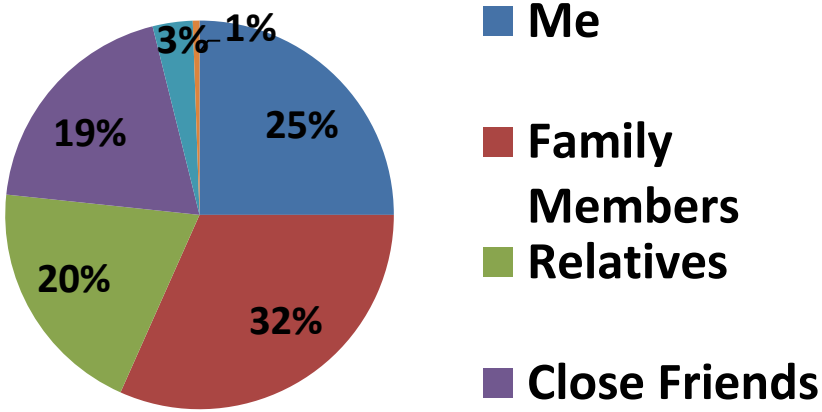
Neighborhood Data



House Data

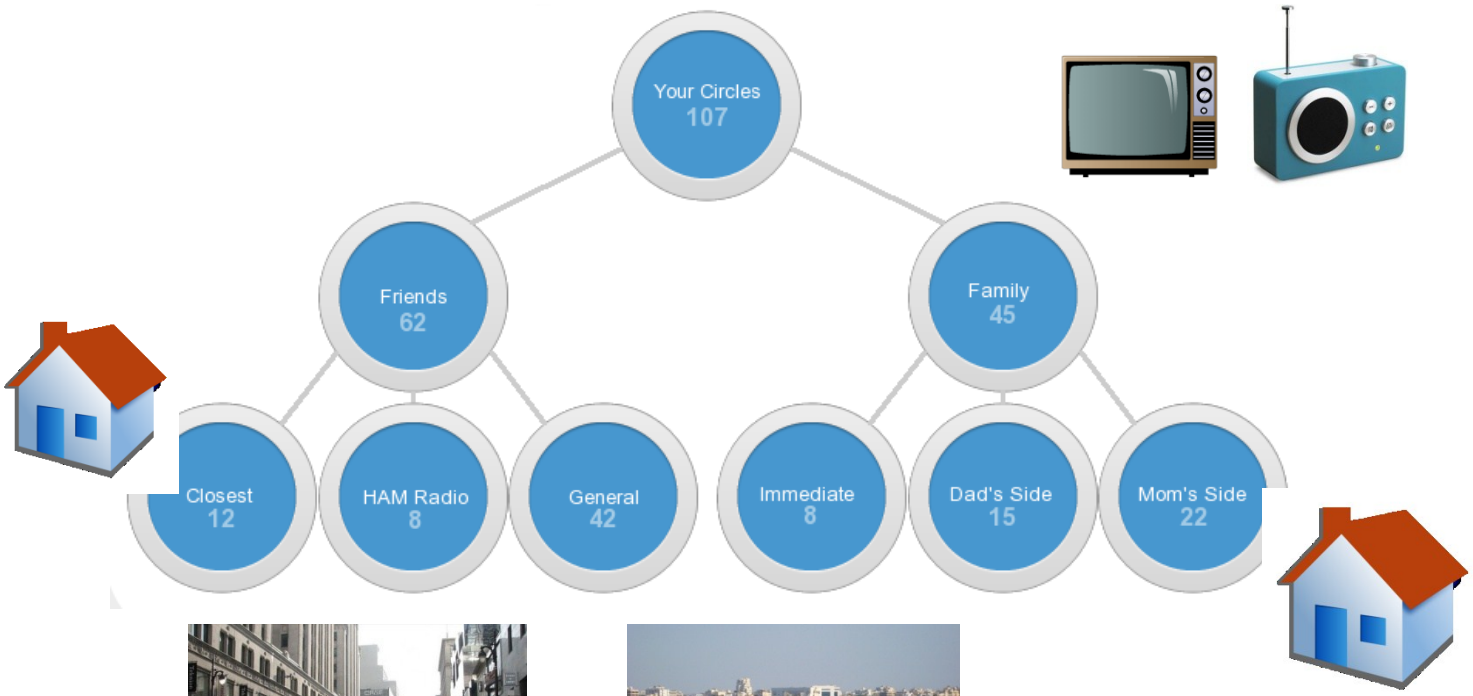


Electrical Appliances Data



Next Steps

Circles of Privacy



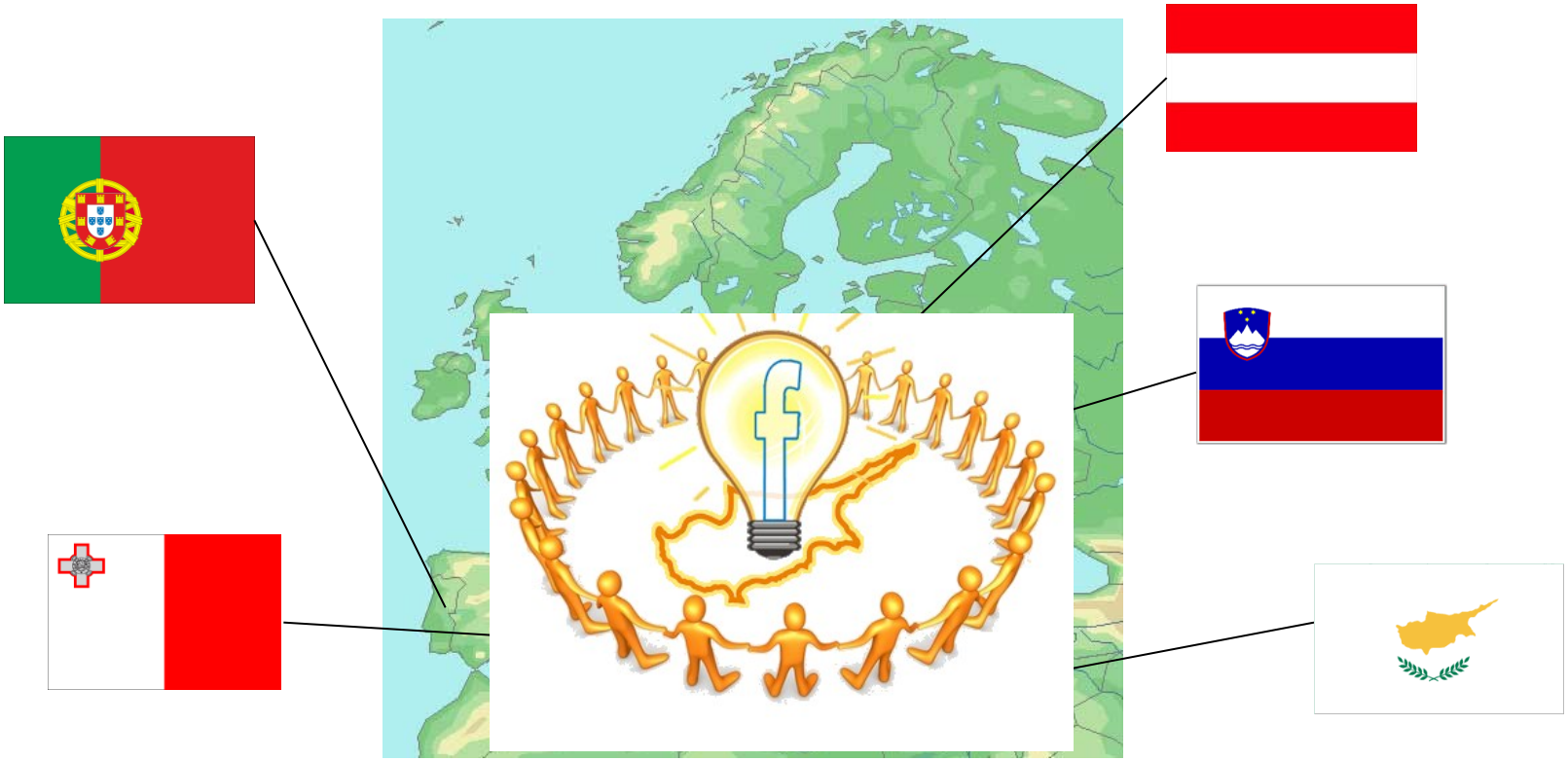
Envisioning the Future

By 2020, the 80% of houses in Europe need to be equipped with smart meters.

- Social Electricity can be extended into a real-time platform for electrical energy awareness and electricity-related comparisons.
- Electrical energy competitions between friends, neighbourhoods and areas in real-time.
- Awards to energy-efficient citizens and locations.
- Financial motives to individuals, organizations and municipalities to save energy.

Envisioning the Future

Energy awareness through comparisons of electrical energy between neighbours, friends and citizens of other EU countries.



Thank you!

For comments/suggestions/feedback you can email me on kami@cs.ucy.ac.cy.