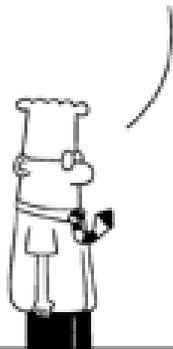


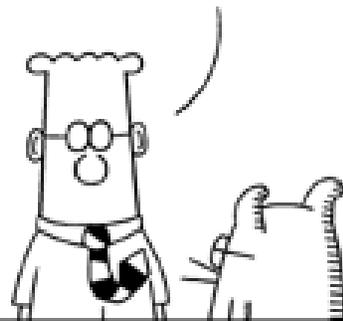
Paul Karaffa

ENERGY STAR MOBILE

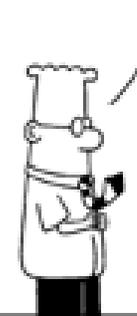
I CAN'T DO MY WORK
BECAUSE THE INTERNET
IS TOO FASCINATING.



THE PHYSICAL WORLD
NO LONGER HOLDS MY
INTEREST. I FIND JOY
ONLY ON THE INTERNET.



CAN I TAKE A HIT
ON YOUR IPHONE
BEFORE I GO BACK
TO MY CUBICLE?



NO.

www.dilbert.com scottadams@aol.com

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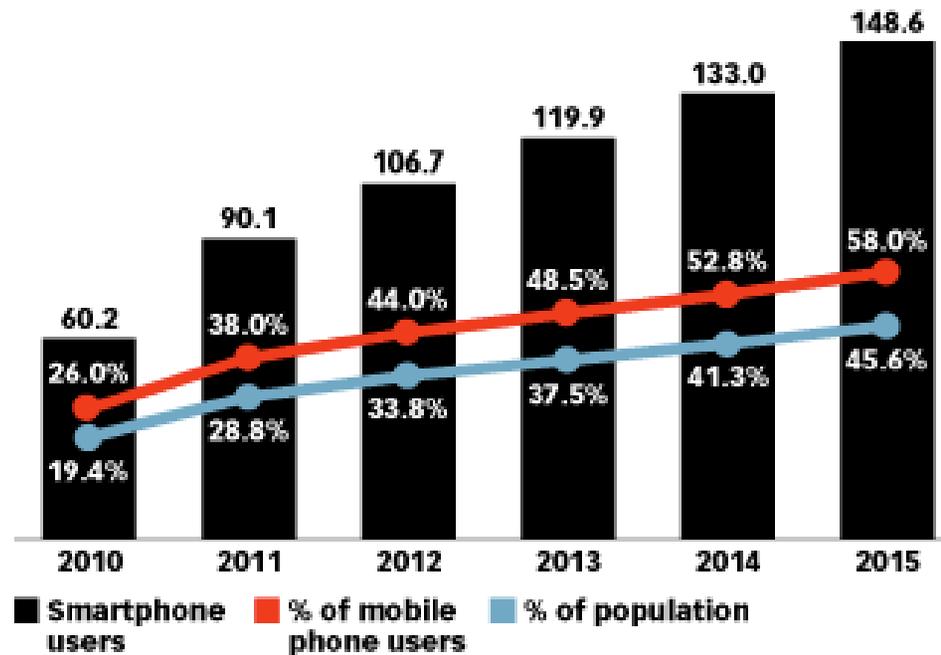
Why do we access mobile?



Why should we care?

US Smartphone Users and Penetration, 2010-2015

millions, % of mobile phone users and % of population



Source: eMarketer, Aug 2011

130909

www.eMarketer.com

Why should we care?

U.S. Mobile Apps vs. Web Consumption, Minutes per Day



© FLURRY

Sources: comScore, Alexa, Flurry Analytics

Why does EPA ENERGY STAR care?



energy star app

- energy star appliances
- energy star appliances tax credit
- energy star appliance rebate
- energy star appliance tax credit 2011
- energy star appliance rebates 2011
- energy star appliances list
- energy star application
- energy star appliance credit
- energy star approval
- energy star approved led

Google Search I'm Feeling Lucky

Advanced search
Language tools

Why should ENERGY STAR Partners care?

- Mobile has been shown to benefit the consumer experience
- Differentiating your product
- Smartphones are personable
- Studies on emotion
- Physical interaction & lasting impressions

What can EPA and its Partners Do to Reach Mobile Customers?



The ESM Application Demo



ENERGY STAR

How? – Digital Watermarking and ENERGY STAR Products



Pilot Concept: Product Category Specific

- Individual for all ENERGY STAR models
- Dynamic Webpages
- Limited Models

In which product categories is this technology most powerful?



What consumers use now

The screenshot displays the ENERGY STAR website's product selection page. At the top, the ENERGY STAR logo is on the left, and a banner reads "BUY PRODUCTS THAT MAKE A DIFFERENCE" with the U.S. Environmental Protection Agency and U.S. Department of Energy logos. Navigation links include "About ENERGY STAR", "News Room", "FAQs", and "KIDS". A search bar is on the right. Below the navigation, a breadcrumb trail shows "Home > Products > Find ENERGY STAR Products". The main heading is "Find ENERGY STAR Products". A blue bar labeled "All Products" contains four tabs: "For Your Home", "Business & Government", "Products in Development", and "Can't Find a Product?". The "For Your Home" tab is active, showing four columns of product categories: Appliances, Computers & Electronics, Heating & Cooling, and Lighting and Fans. A fifth category, Plumbing, is listed below the others. Each category has a list of sub-products with right-pointing chevrons. Some items have a question mark icon, likely indicating a help or information link.

ENERGY STAR

BUY PRODUCTS THAT MAKE A DIFFERENCE
U.S. Environmental Protection Agency • U.S. Department of Energy

About ENERGY STAR • News Room • FAQs • **KIDS** Search **Go**

Products Home Improvement New Homes Buildings & Plants Partner Resources

Home > Products > Find ENERGY STAR Products

Find ENERGY STAR Products

All Products

- For Your Home
- Business & Government
- Products in Development
- Can't Find a Product?

Appliances	Computers & Electronics	Heating & Cooling	Lighting and Fans
<ul style="list-style-type: none">» Clothes Washers» Dehumidifiers» Dishwashers» Freezers» Refrigerators» Room Air Cleaners & Purifiers» Water Coolers	<ul style="list-style-type: none">» Audio/Video» Battery Chargers ?» Computers» Cordless Phones» Displays ?» Imaging Equipment ?» Set-top Boxes & Cable Boxes» Televisions	<ul style="list-style-type: none">» Air Conditioning, Central» Air Conditioning, Room» Boilers» Dehumidifiers» Fans, Ventilating» Furnaces» Heat pumps, Air Source» Heat pumps, Geothermal» Home Sealing - Insulation & Air Sealing» Mini-Split Heating & Cooling» Room Air Cleaners & Purifiers	<ul style="list-style-type: none">» Decorative Light Strings» Fans, Ceiling» Light Bulbs» Light Fixtures

Building Products

- » Seal and Insulate
- » Roof Products
- » Windows, Doors and Skylights

Plumbing

- » Water Heater, Gas Condensing
- » Water Heater, Heat Pump
- » Water Heater, High Efficiency Gas Storage
- » Water Heater, Solar
- » Water Heater, Whole Home Gas Tankless

Other Tools Explored: UPC & QR Codes

- What are they
 - Machine-readable barcode
 - Human-readable 12-digit number
 - 6-digits – Manufacturer
 - 5-digits – Item Number
 - 1-digit – Check digit
- How do we get them
 - Uniform Code Council
- Can they be tracked
 - Yes. But not well.
 - A particular product gets only 1 UPC code (but different Item Numbers are given to the same items that are sold at different retailers) (ex. Samsung Televisions)
 - Retailers can reassign UPC codes
- Major Con: Expensive transition for manufacturers & would only solve wildcard database issues. Therefore, lists don't match models on shelves and this approach doesn't solve that problem



Other Tools Explores: Model Numbers

- Manufacturer databases for model numbers are mostly separate from ENERGY STAR databases and the cost of merging them would be extensive.
- Retailers can apply separate model numbers than manufacturer
- Model numbers can be hard to find
- Model numbers may not appear on product
- Confusing/Wildcards

Built for Retail



Voluntary

- Participation
- As many products
- As many models

Where do we put the label?



What are the energy saving benefits?

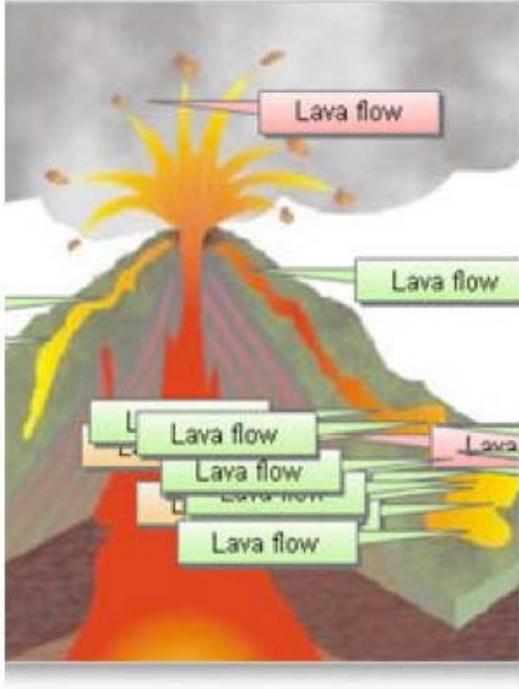
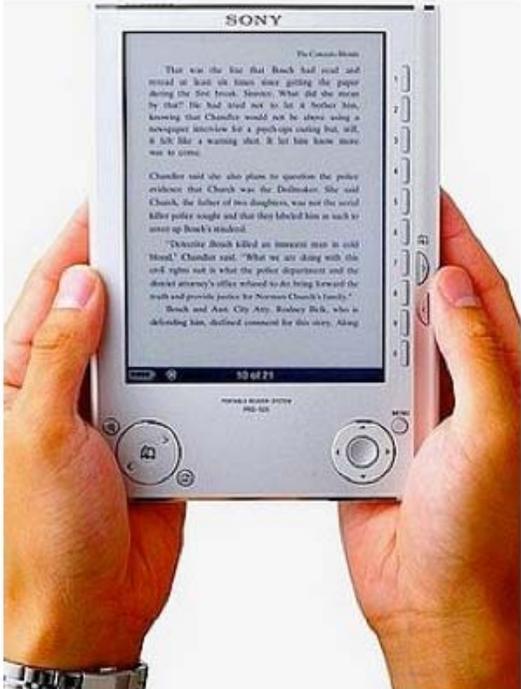


The Open University

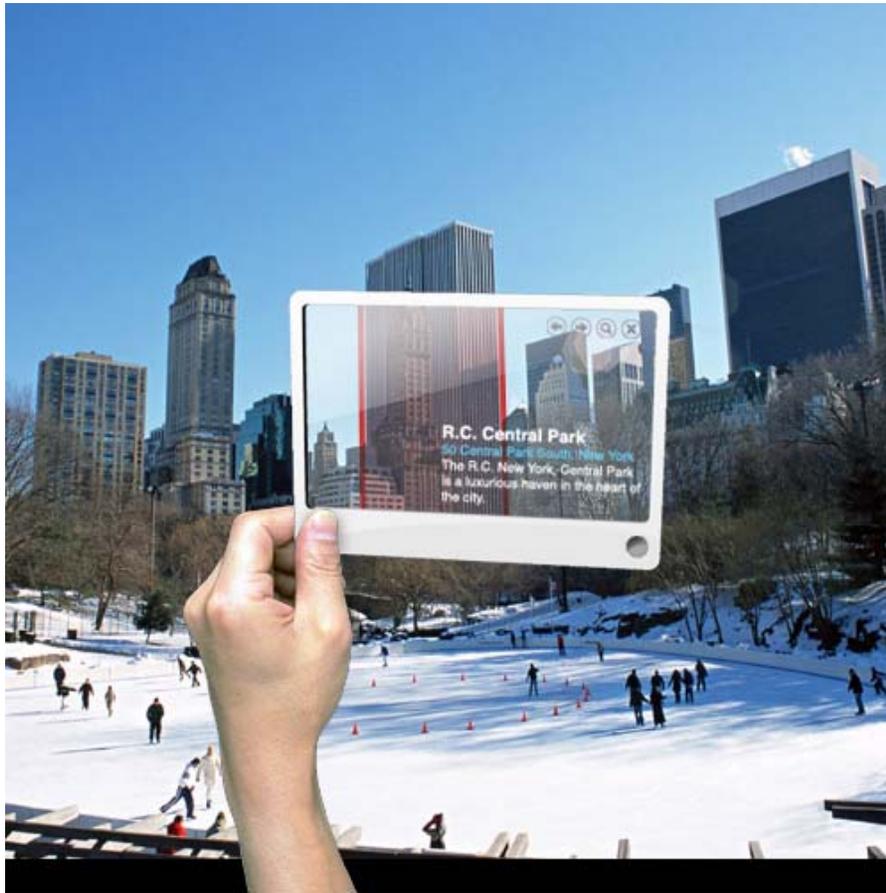
Handel: A Classical Icon

NOTEWORTHY [See All >](#)

- iPhone Premiere ...**
University of Michi...
- Remembering W...**
De Anza College
- Entrepreneurship**
IE Business School
- Psychodiagnosti...**
Open Universiteit ...
- BackStory**
University of Virginia
- Great Ideas in Ps...**
Missouri State Uni...
- The Political Eco...**
University of War...
- Start writing fiction**
Open University



Advances in Labeling – Augmented Reality



Questions?



Contact Paul at: karaffa.paul@epa.gov