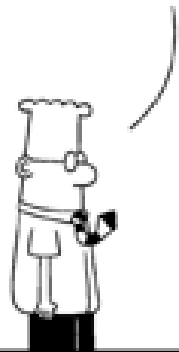


Paul Karaffa

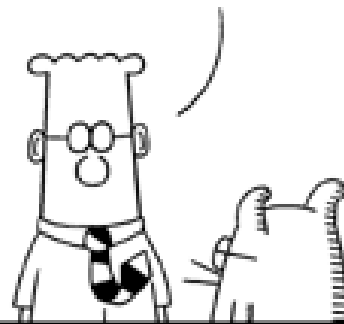
# ENERGY STAR MOBILE

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



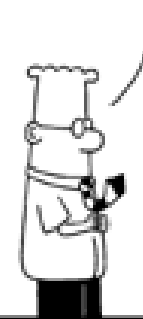
www.dilbert.com scottadams@aol.com

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



10-33-07 © 2007 Scott Adams, Inc./Dist. by UFS, Inc.

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



NO.

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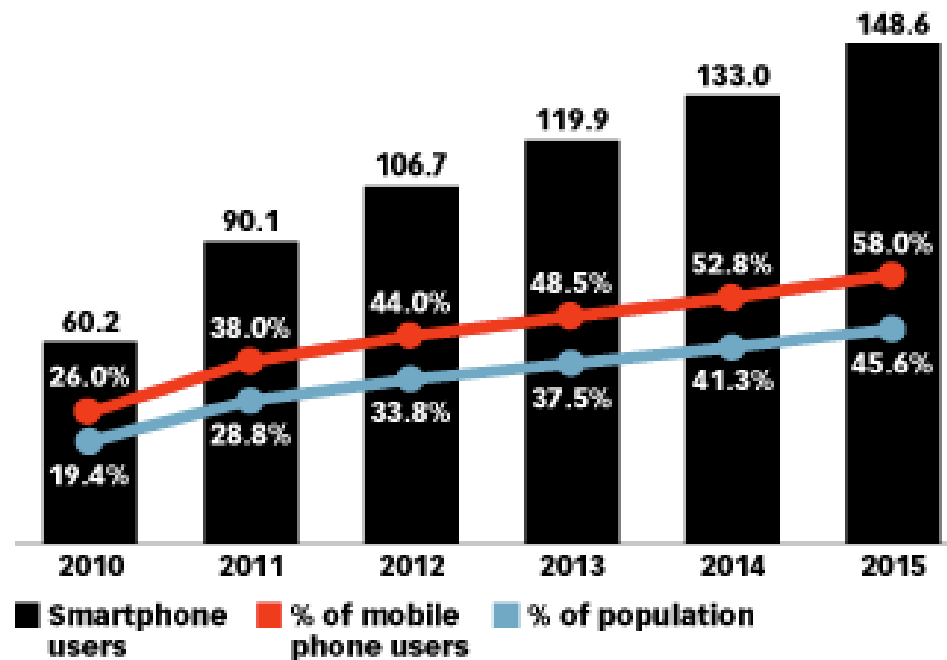
# Why do we access mobile?



# 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](http://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



# 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





## BUY PRODUCTS THAT MAKE A DIFFERENCE

U.S. Environmental Protection Agency • U.S. Department of Energy

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## Find ENERGY STAR Products

All Products			
For Your Home	Business & Government	Products in Development	Can't Find a Product?
<b>Appliances</b> <ul style="list-style-type: none"><li>» <a href="#">Clothes Washers</a></li><li>» <a href="#">Dehumidifiers</a></li><li>» <a href="#">Dishwashers</a></li><li>» <a href="#">Freezers</a></li><li>» <a href="#">Refrigerators</a></li><li>» <a href="#">Room Air Cleaners &amp; Purifiers</a></li><li>» <a href="#">Water Coolers</a></li></ul> <b>Building Products</b> <ul style="list-style-type: none"><li>» <a href="#">Seal and Insulate</a></li><li>» <a href="#">Roof Products</a></li><li>» <a href="#">Windows, Doors and Skylights</a></li></ul>	<b>Computers &amp; Electronics</b> <ul style="list-style-type: none"><li>» <a href="#">Audio/Video</a></li><li>» <a href="#">Battery Chargers</a> ?</li><li>» <a href="#">Computers</a></li><li>» <a href="#">Cordless Phones</a></li><li>» <a href="#">Displays</a> ?</li><li>» <a href="#">Imaging Equipment</a> ?</li><li>» <a href="#">Set-top Boxes &amp; Cable Boxes</a></li><li>» <a href="#">Televisions</a></li></ul>	<b>Heating &amp; Cooling</b> <ul style="list-style-type: none"><li>» <a href="#">Air Conditioning, Central</a></li><li>» <a href="#">Air Conditioning, Room</a></li><li>» <a href="#">Boilers</a></li><li>» <a href="#">Dehumidifiers</a></li><li>» <a href="#">Fans, Ventilating</a></li><li>» <a href="#">Furnaces</a></li><li>» <a href="#">Heat pumps, Air Source</a></li><li>» <a href="#">Heat pumps, Geothermal</a></li><li>» <a href="#">Home Sealing - Insulation &amp; Air Sealing</a></li><li>» <a href="#">Mini-Split Heating &amp; Cooling</a></li><li>» <a href="#">Room Air Cleaners &amp; Purifiers</a></li></ul>	<b>Lighting and Fans</b> <ul style="list-style-type: none"><li>» <a href="#">Decorative Light Strings</a></li><li>» <a href="#">Fans, Ceiling</a></li><li>» <a href="#">Light Bulbs</a></li><li>» <a href="#">Light Fixtures</a></li></ul> <b>Plumbing</b> <ul style="list-style-type: none"><li>» <a href="#">Water Heater, Gas Condensing</a></li><li>» <a href="#">Water Heater, Heat Pump</a></li><li>» <a href="#">Water Heater, High Efficiency Gas Storage</a></li><li>» <a href="#">Water Heater, Solar</a></li><li>» <a href="#">Water Heater, Whole Home Gas Tankless</a></li></ul>



# 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

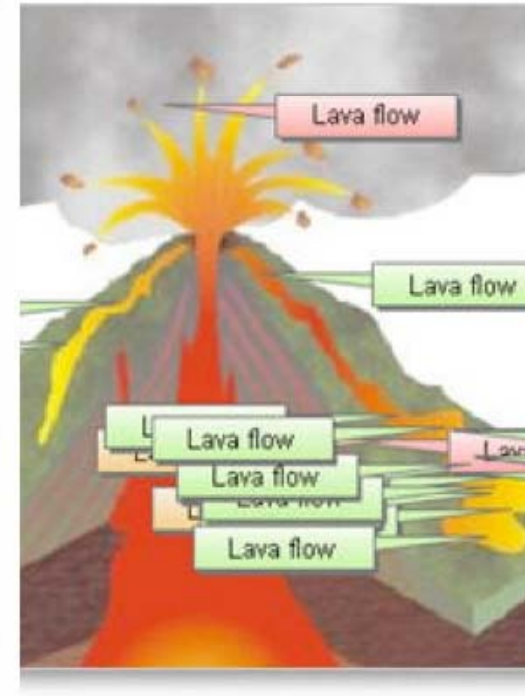
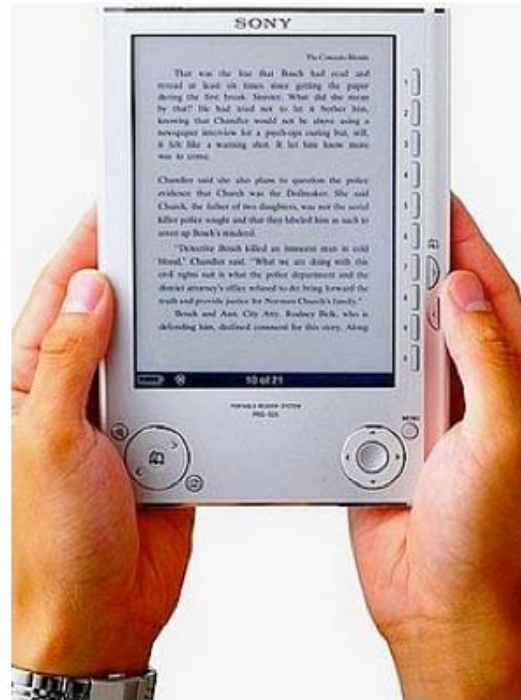


# Where do we put the label?





# What are the energy saving benefits?



# Advances in Labeling – Augmented Reality



# Questions?



Contact Paul at: [karaffa.paul@epa.gov](mailto:karaffa.paul@epa.gov)