

Leveraging Big Data to Track the Unwary

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InfraGuard Legal SIG
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Overview

- How They Track You
- Why Tracking Matters
- Big Data in Action
- What You Can Do



The Top 10 Big Data (2013)

- IBM - \$1.39B
- HP - \$869M
- Dell - \$652M
- SAP - \$545M
- Teradata - \$518M
- Oracle - \$491M
- SAS Institute - \$480 M
- Palantir - \$418M
- Accenture - \$415M
- PWC - \$312M

How They Track You

How They Track You

- Cookies
- Flash Cookies (LSO's)
- Social Media
- IP Address
- Browser Parameters
- Javascript

towerd@ta

acxiom.



Testing Models of Consumer Search Using Data on Web Browsing and Purchasing Behavior

By BABUR DE LOS SANTOS, ALI HORTAÇSU, AND MATTHIJS R. WILDENBEEST*

FORTHCOMING IN THE *AMERICAN ECONOMIC REVIEW*

Using a large data set on web browsing and purchasing behavior we test to what extent consumers are searching in accordance to various classical search models. We find that the benchmark model of sequential search with an a priori known distribution of prices can be rejected based on both the recall patterns we observe in the data as well as the absence of dependence of search decisions on observed prices. Our findings suggest that fixed sample size search provides a more accurate description of observed consumer search behavior. We then utilize the fixed sample size search model to estimate demand elasticities of online book stores in an environment where consumers' store preferences are heterogeneous.

JEL: D43, D83, L13

Keywords: consumer search, electronic commerce, consumer behavior

File Edit View Go Bookmarks Tools Window Help

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Admin - Clerical (1)	Nintendo of America Inc. (1)	San Mateo (1)	California (1)

1 jobs found within 30 miles of San Francisco, CA

Earn More Money with a College Degree

Show me: Closest jobs first | Relevant jobs first | Newest jobs first

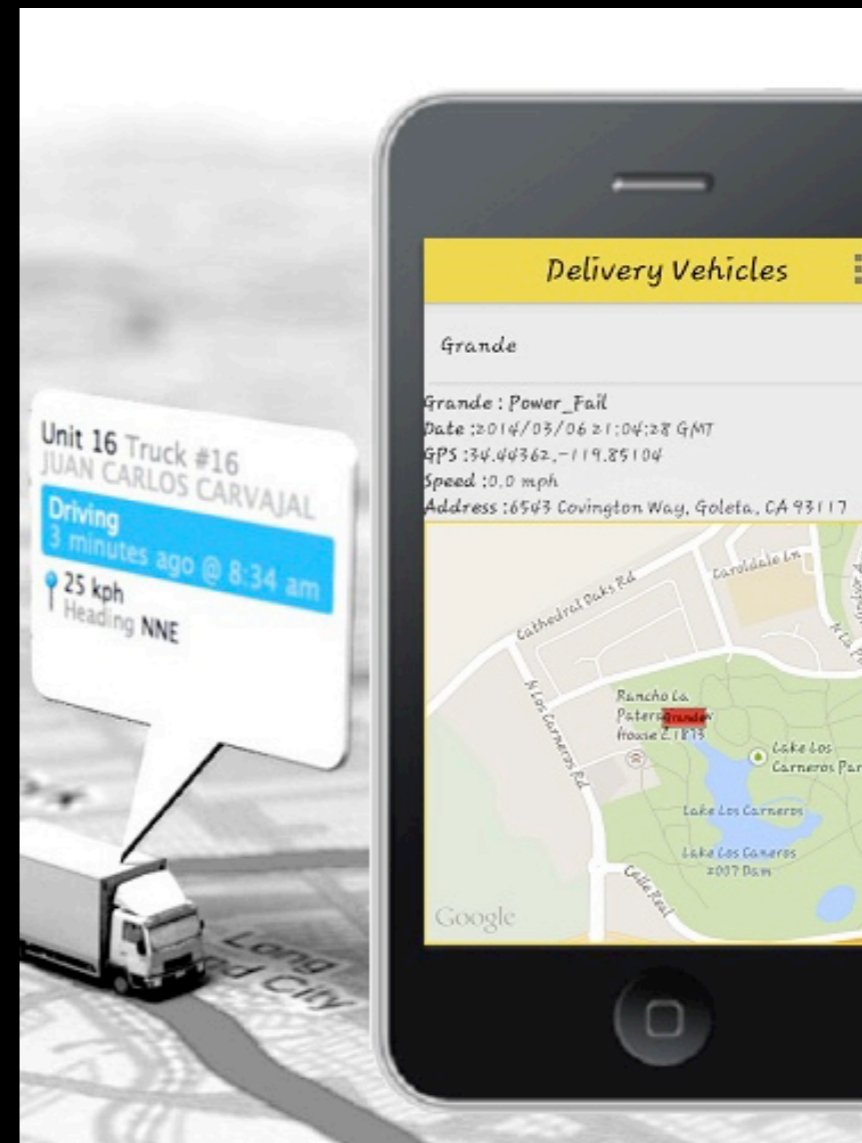
Search Results

Job Title / Description (show titles only)	Company	Location (Distance)
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About NoScript... Options...
Forbid scripts Globally (advised)
Revoke Temporary Permissions
Untrusted
Forbid www.careerbuilder.com
Allow rubiconproject.com
Temporarily allow rubiconproject.com
Allow adsonar.com
Temporarily allow adsonar.com
Forbid icbdr.com
Allow quantserve.com
Temporarily allow quantserve.com
Allow pulse360.com
Temporarily allow pulse360.com
Allow undertone.com
Temporarily allow undertone.com
Forbid adbureau.net
Allow trafficmp.com
Temporarily allow trafficmp.com
Allow advertising.com
Temporarily allow advertising.com
Allow tacoda.net
Temporarily allow tacoda.net
Forbid doubleclick.net

How They Track You

- Tracking Algorithms
 - Google Search
 - EdgeRank (Facebook)
 - Beacon (Facebook)
 - Google Buzz



How They Track You

- Their own website
- Reverse DNS
- Your Browser Data
- Open Source Tools (Apache Spark & Storm, H2O, others)



Why Tracking Matters

- Most pre-filing “discovery” is performed on the Internet
 - Usually review the opponents website for information
 - Obtain the information before the opponent removes it
 - Normally thought to be “benign”

A Few Words About Big Data

Big Data...

- Is always watching you
- Doesn't allow opt out
- Won't "Do Not Track"
- Knows your secrets
- Doesn't ask for your name...
- ... but will figure it out
- Controls who sees which deals and discounts
- Is tracking your smartphone too
- Might have wrong info (but no way to fix it)

What You Can Do

Buy the data about the
other guy



The Revolutionary New Data Exchange Platform

More data about more consumers than any other data platform!



Buy Data

Learn more about your audience. Purchase the only real-time data in the industry with the most advanced tool set anywhere across over 3000 data segments. The only place where you can combine multiple data points and time segments. The most precise targeting possible.



Sell Data

Take control of your own data. Utilizing BDEX's unique real-time tool set your valuable data will flow to our Exchange in real-time, where you set all your own pricing. Monetize your data like never before and you keep all the profits.



Data Scoring

The industry's first quantitative and impartial scoring of all data transacted. Every piece of data sold in the Exchange is scored based on the value it provided to the buyer and cross-referenced with the relative industry. Visit the Data Scoring Page to learn how you can take advantage of this incredible option.

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DATA

Data Solutions

Database Services

Data Packages

Small Business Solutions

Local Search

Identity Solutions

DATA ANALYTICS & DECISION SCIENCES

Audience Propensities

Personicx

MARKETING SERVICES

Strategy and Analytics

Data Science Safe Haven

Web Personalization

Marketing Maturity Model

Acxiom Impact

EMAIL / MOBILE MARKETING

Acxiom Impact

v
h

Email Intelligence, a TowerData Service

Formerly Rapleaf.com



- ✓ Get data on 80% of U.S. email addresses
- ✓ Find alternate points of contact, including postal & social
- ✓ Determine which email addresses are active

[Create A Free Account](#)

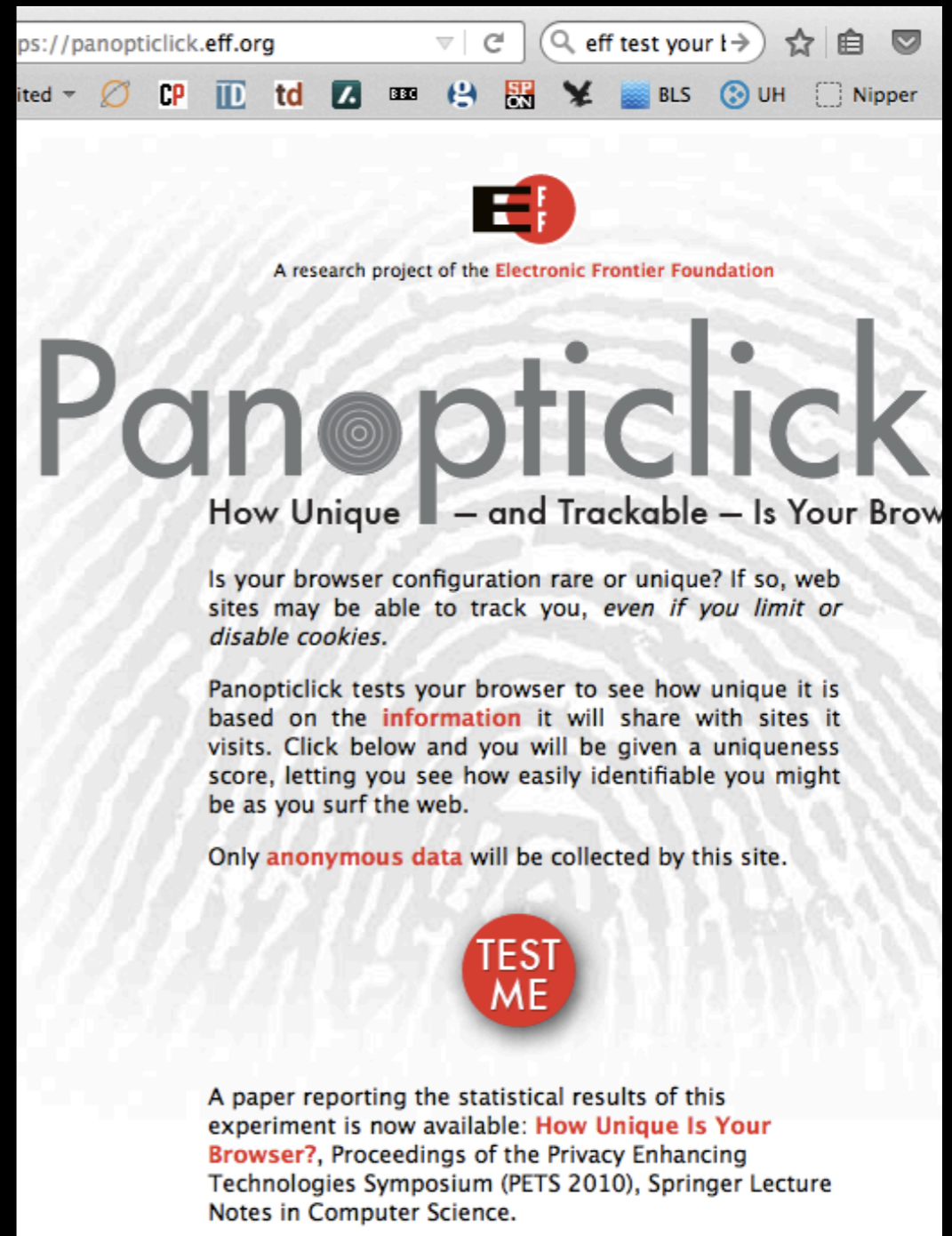
Try to prevent the
other guy from
knowing about *you*

Try to prevent the
other guy from
knowing about *you*

(So as not to violate DR 1.05)

What You Can Do

- Learn what your browser is telling them
- Introduce a cookie policy
- Use privacy add-ons
 - Google Fix
 - Ghostery




The screenshot shows a web browser window with the URL `ps://panopticlick.eff.org`. The page features the EFF logo and the text "A research project of the Electronic Frontier Foundation". The main heading is "Panopticlick" with a fingerprint icon in the letter 'o'. Below it, the subtitle reads "How Unique – and Trackable – Is Your Browser?". The page contains several paragraphs of text explaining the test's purpose and privacy policy. A prominent red circular button with the text "TEST ME" is visible. At the bottom, there is a link to a paper reporting the statistical results of the experiment.

ps://panopticlick.eff.org

eff test your browser

CP TD td BBC SP ON BLS UH Nipper

 A research project of the **Electronic Frontier Foundation**


Panopticlick

How Unique – and Trackable – Is Your Browser?

Is your browser configuration rare or unique? If so, web sites may be able to track you, *even if you limit or disable cookies.*

Panopticlick tests your browser to see how unique it is based on the **information** it will share with sites it visits. Click below and you will be given a uniqueness score, letting you see how easily identifiable you might be as you surf the web.

Only **anonymous data** will be collected by this site.



A paper reporting the statistical results of this experiment is now available: **How Unique Is Your Browser?**, Proceedings of the Privacy Enhancing Technologies Symposium (PETS 2010), Springer Lecture Notes in Computer Science.

What You Can Do

- Use Multiple Browsers
 - Google for Gmail
 - (Hardened) Firefox for general use
 - Low powered browser with no cookies / Javascript



What You Can Do

- Tape Over webcam
- Clear Browser History After Every Use
- (Re)Review Privacy Policies and Settings
- Remove/Impede Flash Cookies (LSO)



What You Can Do

- Microsoft introduced user tracking “features” in Windows 8
- Windows 10 takes user tracking to a new level
 - Similar to cell phone tracking





MUST READ MORE HANDS-ON WITH THE RASPBERRY PI ZERO: LOADING, BOOTING AND CONFIGURING

Want Windows 10 to stop tracking you? Now there's an app for that

The open-source app is available to download for free.



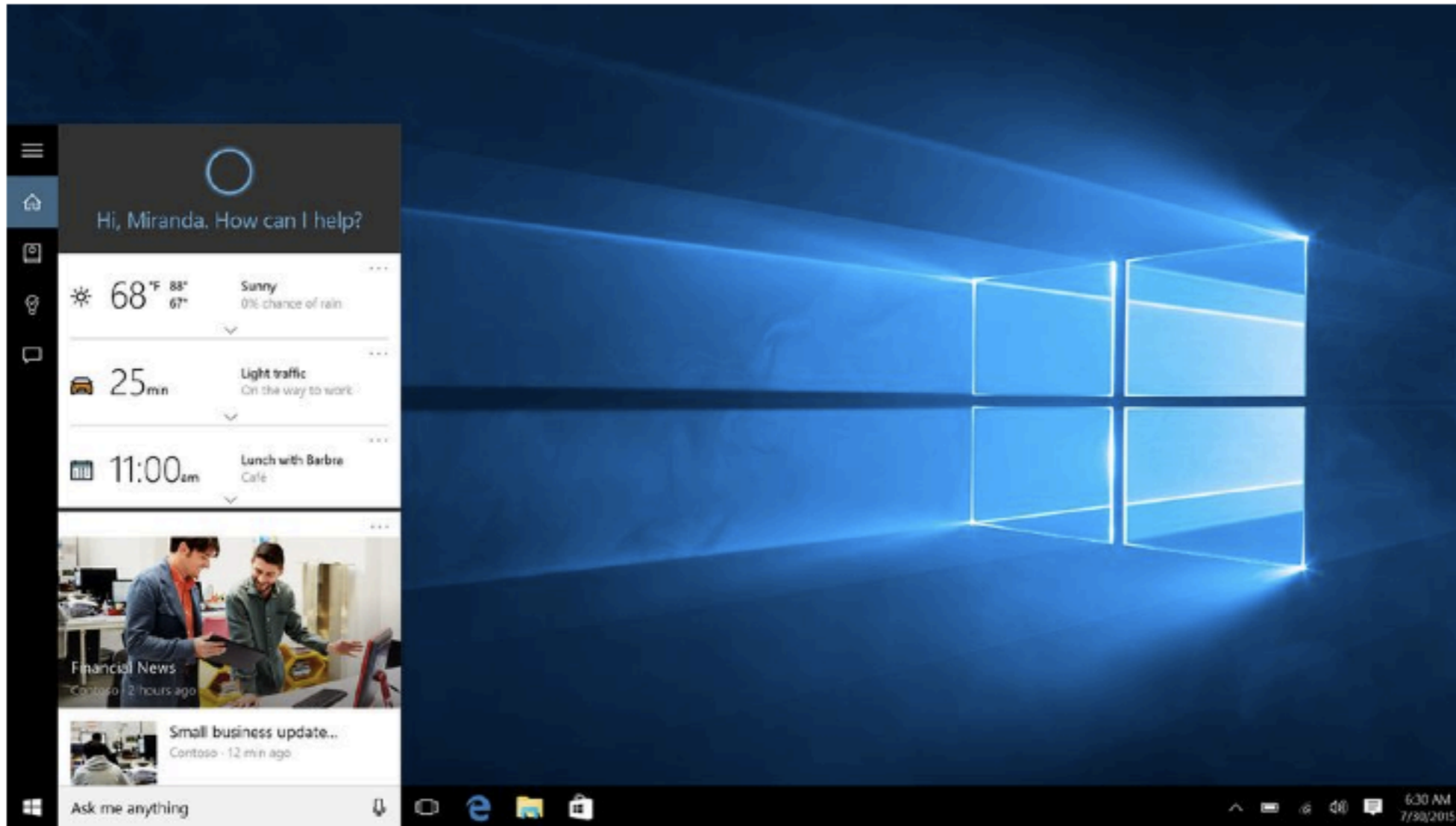
By Zack Whittaker for Zero Day | August 4, 2015 -- 19:43 GMT (12:43 PDT) | Topic: Security

How to stop Windows 10's prying eyes

By Samit Sarkar on Jul 31, 2015 at 12:30p @SamitSarkar

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Just Cause 3
By Ben Kuchera

Bridging the

Questions?

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