# Ad Targeting in Gmail

Benjamin Silver CPSC 457 November 17, 2011

### Who can advertise

- Must be family-friendly
  - Not obscene/pornographic
  - No hate speech
  - Nothing illegal

### What is viewed

- Message
- Header
- Addressing information
- "Internal" vs. "External" information

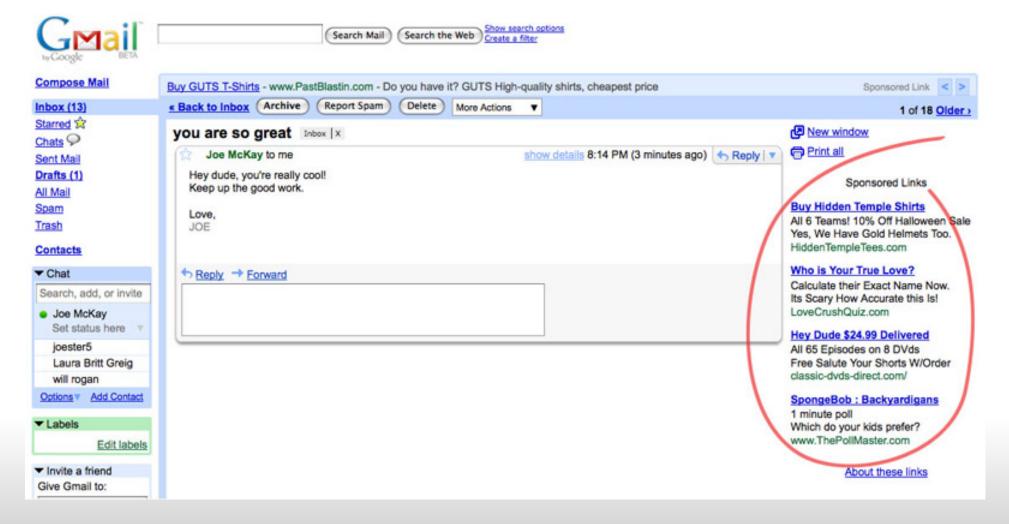
Internal e-mail Information	External e-mail Information
Subject line	
Body of the e-mail	Concepts derived from body
Sender name	
Actual sender e-mail address	
Concepts from sender e-mail address (e.g. e-mail address based on hobby)	
Recipient type (e.g. direct, CC, BCC)	
Business card file (e.g. vcard)	
Directory paths of attached files	Concepts derived from attached files
Attached files (e.g. word processing files, pictures, etc.)	
Information from a web page link included in e-mail	Concepts derived from files web page links
	Time e-mail was sent
	Geographic location of sender
	Geographic location of recipient
	Information derived from search results of a query on extracted e-mail information (i.e. a Google search on the derived concepts)

### Basis for ads

- "Concepts"
  - $_{\odot}$  Not currently recorded by Google
  - Ads served also not recorded
  - Disturbs some users

# Workaround

- "Catastrophic or tragic news"
  - Avoid insensitive advertising
  - Either eliminates ads, or makes them more generic
    - based on other targeted factors besides the email



http://homepage.mac.com/joester5/art/gmail.html

by Coogle	Search Mail Search the Web Create a fil	ch options liter	
Compose Mail	NYT Travel - Check In, Check Out: Islands of Style in a Sea of Grit - Oct 13	3	Web Clip < >
Inbox (12)	Back to Inbox Archive Report Spam Delete More Actions	•	1 of 19 Older >
Starred 😭 Chats 🖓 Sent Mail Drafts (1) All Mail Spam	you are so great 2 Inbox X Joe McKay to me Hey dude, you're really cool! Keep up the good work. Love,	show details 8:29 PM (1 minute ago) A Reply V	Print all
Trash Contacts Chat Search, add, or invite	JOE PS. Suicide death 9/11 murder		
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COMPOSE MAIL	☆ ● Ben Silver show details 4	:32 PM (0 minutes ago) <b>See Reply</b>	▼ Windstar Luxury Cruises Sailing Yachts in the Caribbean,
Inbox (2,871) Important Sent Mail Drafts (78) Causes (362)	I'm thinking about going on a Viking River Cruise Ben  Benjamin N. Silver 260.433.4714 benjamin.silver@yale.edu Computer Science Yale University 2013	₽	Greek Isles, Europe and Costa Rica. www.WindstarCruises.com Cruise Ship Ratings Unbiased Cruise Ship Ratings, reviews, buying guide and more. VacationCruisesInfo.com/Ratings Cruise Europe River 12 Day Europe River Cruises Start at \$190 per day including Air!
Colleges (434) Corporate (2,790) FB (2,267)	◆ <u>Reply</u> → <u>Forward</u>		vantagetravel.com/EuropeRiverCruise Norwegian Cruise Line® Official Site: Sign Up & Be First To Get Our Exclusive Cruise Deals! www.NCL.com
Google+ (100)			More about
New Yorker (258) Salon (311) ST (2.120)			Cruise Ship » Cruise Line » Carnival Cruise Jobs » NCL Cruise Alaska »
ST (2,120)	Holland America Line® - www.HollandAmerica.com - View Our Special Offers for Europe Cruises Now	ſ!	Switch to the new look 🗙

Gmail	SEARCH MAIL     SEARCH THE WEB     Show search options Create a filter	
by Google	Click here to enable desktop notifications for Gmail. Learn more Hide	
Mail	← Archive Spam Delete 🕑 ⊡ Move to v Labels v More v	1 of 5030 4 🕨
Contacts		
Tasks	Cruise! 🕞 x Inbox X	Ads
COMPOSE MAIL	Show details 4:34 PM (0 minutes ago)	Saybrook point inn & spa ct Old Saybrook Hotels, Resorts,
Inbox (2,871) Important Sent Mail Drafts (78)	I'm thinking about going on a Viking River Cruise! I really hope I'm not dismembered or slaughtered or terrorism. Ben Benjamin N. Silver 260.433.4714 benjamin.silver@yale.edu Computer Science Yale University 2013	Hotels, Packages, Condos, Compare www.ResortsandLodges.com Overstock Laptops: \$37.79 Get a brand new laptop for \$37.79. 1 Per Customer. Limited Quantities. www.NoMoreRack.com/Laptops The New GoFlex for Mac® 500GB-3TB, TimeMachine®
Causes (362) Colleges (434) Corporate (2,790)	$\clubsuit \underline{Reply} \rightarrow \underline{Forward}$	Compatible. Get Our Discounted Prices from CES! www.Seagate.com
FB (2,267) Google+ (100)		Web Hosting with Yahoo! As the Economy Grows, Grow Your Biz. Hosting as Low as \$7.46/mo. WebHosting.Yahoo.com
New Yorker (258) Salon (311) ST (2.120)		More about Hard Drive Recovery » USB Drive Software » Portable External HDD »
ST (2,120)	Medical Billing & Coding - www.topcareerschools.com/MedBilling - Get Certified in Medical Billing & Coding. Online or On Campus.	Switch to the new look X

Gmail	SEARCH MAIL     SEARCH THE WEB     Show search options Create a filter	
by Google	Click here to enable desktop notifications for Gmail. Learn more Hide	
Mail	← Archive Spam Delete 💌 🖻 Move to v Labels v More v	1 of 5034 4 🕨
Contacts		
Tasks	Catastrophic news 🕞 x Inbox x	Ads
COMPOSE MAIL	Show details 6:12 PM (26 minutes ago)	Continental OnePass® Card
Inbox (2,871)	My dog was murdered last night by a terrorist	Earn Up to 40,000 Bonus Miles-More Than Enough for a Roundtrip Reward! CHASECreditCards.com/Continental
Important	Benjamin N. Silver	Round The World Itineraries
Sent Mail	260.433.4714 benjamin.silver@yale.edu Computer Science	Enjoy the world from the deck of a ship. Visit Asia, Europe and more. Seabourn.com/Destinations
Drafts (78)	Yale University 2013	Bradley Parking for \$4.95
Causes (362)	◆ <u>Reply</u> → <u>Forward</u>	Print Our Seasonal Stimulus Coupons Valet parking, free fast shuttles
Colleges (435)		www.zairportparking.com
Corporate (2,790)		Business Class 70% Off Get Discount Business Class Fares
FB (2,267)		With Live Agents. Call & Save! www.WholeSale-Flights.com
Google+ (100)		More about
New Yorker (258)		Cheap Flight Tickets » Flight Booking »
Salon (311)		Flight Confirmation » Reservation Flight »
ST (2,120)	New Zealand Vacation - www.NewZealand.com - Planning a New Zealand Trip? Great Airfare Deals, Travel Info & More.	. Switch to the new look $ imes$

# Affiliation with other sites

- AdSense/AdWords
  - Gmail "concepts" not stored, so not used by AdSense or AdWords
  - $_{\odot}$  Reserves the right to do so
- DoubleClick
  - Cookie sometimes used to serve ads in Gmail

#### Patents

- United States Patent Application 20040059712: "Advertisers are permitted to put targeted ads on e-mails. The present invention may do so by (i) obtaining information of an e-mail that includes available spots for ads, (ii) determining one or more ads relevant to the e-mail information, and/or (iii) providing the one or more ads for rendering in association with the e-mail."
- United States Patent Application 20040059708: "The relevance of advertisements to a user's interests is improved. In one implementation, the content of a web page is analyzed to determine a list of one or more topics associated with that web page. An advertisement is considered to be relevant to that web page if it is associated with keywords belonging to the list of one or more topics. One or more of these relevant advertisements may be provided for rendering in conjunction with the web page or related web pages."
- United States Patent Application 20040093327: "Advertisers are permitted to put targeted ads on page on the web (or some other document of any media type). The present invention may do so by (i) obtaining content that includes available spots for ads, (ii) determining ads relevant to content, and/or (iii) combining content with ads determined to be relevant to the content."

# **Privacy Concerns**

- Stored data
  - o amount
  - o duration
- Profiles of users
- May reduce reasonable expectation of privacy in emails
   Relation to Spam Filters
- Non-gmail users do not consent

# New York Bar State Bar ethics decision

- No REP on cell phones till 1986 (ECPA)
- 1999: ABA allows use of email for privileged communication
- Gmail
  - Humans do not read
  - Google functions as a contractor
  - No greater risk to REP or confidentiality

### Wiretap issues

- US (ECPA--Electronic Communications Privacy Act, 1986)
   Governs interception of electronic communication
  - Only one party need consent
  - Must explain "essential nature" of access
- California
  - cannot "willfully and without the consent of all parties reading/attempting to read or learn the contents or meaning of any communication while it is in transit or being sent from/received in California"
- EU (Data Protection Directive)
  - o Liability
  - o Confidentiality
  - Persistence after account deletion

# Conclusion

- Does not lessen REP in email
- May be legally questionable
- May violate rights of some email (non-gmail) users, but not significantly



http://epic.org/privacy/gmail/faq.html

http://digital.law.washington.edu/bitstream/handle/1773.1/452/Raudebaugh, %206%20Wash.%20J.L.%20Tech.%20%26%20Arts%2083.pdf?sequence=3

http://mail.google.com/support/bin/answer.py? hl=en&answer=1304609#targeted\_ads

http://mail.google.com/support/bin/answer.py?answer=6603

http://www.google.com/intl/en/privacy/privacy-policy.html

http://www.google.com/privacy/ads/privacy-policy.html

http://homepage.mac.com/joester5/art/gmail.html

### Questions?/Thank you!