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FDIS, Woodshole  
June 30, 2008

## The Consumer Data Revolution: Who Pays Whom?



## ■ Search

- Query sequence
- Choice set
- Which link the user chooses
- Queries and their refinements, clicks on links and returns
- Use individually and in the aggregate

▶ Use: Search quality

▶ Use: Trends

## ■ Gmail

- Content and social relationships
- Opening up the social graph (Orkut)
- Response behavior: model

▶ Use: relevance ranking

▶ Use: Discovery

▶ Spam

- Mark as spam

- **Toolbar**
  - Since 2002
  - Follow user across sites
  - Always with user, give data to get data
- **Notes**
  - Annotate web pages
- **Analytics**
  - Javascript embedded by site owner
  - Gives insight e.g., on how popular a given link is
  - Insight in what people do going through websites
- **Reader**
  - Read, Mark, Save, Tag
  - Forward to friend
- **Docs**
  - ▶ Content and social relationships

- Google groups
  - Vs Wiki / Google docs
- Talk
  - E.g., chat on webpage
- Maps
  - Intent
  - Repository of 3D objects
  - UGC, being able to change info (200m)
- Location
  - Phone: My Location feature
  - GPS
- Calendar
  - Future

- Design tools for home

- Creates qualified leads for e.g., window manufacturer

- Checkout

- ▶ From the cradle to the grave
- ▶ For purchases of higher priced items, process of learning about product dimensions etc
- ▶ Payment systems
- ▶ Google checkout is a low margin business that drives the high-margin business of ads

# The Consumer Data Revolution

- The First Data Revolution

- ▶ Example: Amazon.com
- ▶ Mainly implicit data, some explicit data

- The Second Data Revolution

- ▶ Example: Facebook
- ▶ Mainly explicit data
- ▶ Customers start interacting

- The Consumer Data Revolution

- ▶ How the attitudes of individuals to their info is changing

- ▶ Who knows about your relationships with others?
- ▶ How does Google (or Amazon) differ from IBM (or Microsoft)?
- Past, present and future
  - ▶ Past
    - Given data, get me insights
  - ▶ Present
    - Given problem, get me data
  - ▶ Future: Consumer data revolution
    - I give you data, you give me money!
- Framework
  - ▶ Architectures of experimentation (Web1)
    - Give set of possible actions, do experiments
  - ▶ Architectures of participation (Web2)
  - ▶ Architectures of interaction (Web3)

# Let Amazon.com access your camera and microphone?

- November 2007
  - ▶ Adobe Flash installed on 820 million Internet-connected computers and mobile devices



# Integrated Media Measurement Inc

## IMMI

- Listening into your room
  - ▶ every 30 seconds,
  - ▶ for 10 seconds.

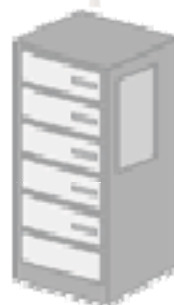
Sample Collection  
Server turns media  
into digital codes



Radio & TV Channel



Comparison and  
Report Generation  
Server matches  
codes, identifies  
media, and  
generates reports



Cell Phone Client  
turns audio into  
digital codes



CDs/DVDs

Radio

Internet

TV

# Data at the heart of the Digital Networked Economy

- Clicks
  - ▶ Music
  - ▶ Dating

The image shows a screenshot of a web browser displaying the moodLogic website. The browser's address bar shows the URL <http://www.moodlogic.com/>. The website has a blue and orange header with navigation links for MOODLOGIC 2.7, NETWORK, FAQs, ABOUT US, and DEVELOPERS. A tagline reads, "We make Mixes from the best music in the world... Yours".

Overlaid on the website is a screenshot of the moodLogic desktop application. The application window has a menu bar with File, Edit, View, Mix, Tools, Gear, and Help. The interface includes a sidebar with options like My Music, MP3 Player, Messages, Instant Mix, Profile Center, Mellow Mix, 70s Disco Party, Classic Rock, Romantic 80s, and Like Chemical Bros. The main area features filters for Genre (Alternative, Blues, Country, Easy Listening, Electronica, Gospel/Christian) and Artist (A Taste of Honey, Aaron Neville & Brothers, ABBA, Afro Celt Sound System, Afro Cuban All Stars, Al Di Meola & John McLal). It also has sliders for Tempo (Slow to Fast) and Year (<60 to 90 to 00), and a mood selector with buttons for Aggressive, Upbeat, Happy, Romantic, Mellow, and Sad. A table at the bottom lists tracks:

Artist	Track Name	Duration
Chemical Brothers	The Sunshine Underground	8:38
Chemical Brothers	Under The Influence	4:16

At the bottom of the application window are playback controls (play, stop, search, volume) and a search bar.

To the right of the application window is a promotional graphic with the text "Try now!" in large orange letters, followed by "The Mix Maker for your MP3s". Below this are two buttons: "DOWNLOAD" and "TiVo Owners". Further down, it says "More information on version 2.7.1". At the bottom right is the CNET logo and the text "Best Music Organizer 2003".

# A data revolution, not a software revolution

- Mapping companies did not realize that users can add value...
  - ▶ Example: NAVTEQ
    - acquired by Nokia for USD 8.6B in Oct 2007
    - spent USD 300M to reach breakeven
    - 1000 employees driving with GPS...
    - ... vs 100M GPS-enabled Nokia phones alone sold in 2008
  
- ...vs Amazon.com realizing early on that users can add value
  - ▶ E.g., by reviewing books
  
- ... vs Google enabling external developers to build services using company's data
  
- Q: When will airlines, banks etc follow?

# “Pay as you drive” insurance (Norwich Union)

## Motor

Car Insurance

Breakdown Cover

**“Pay As You Drive”™**

Motorcycle Insurance

Scooter Insurance

Van Insurance

Business Vehicle Insurance

Short Term Car Insurance

Collector's Car Insurance

Maps and Route Finder

## Travel

Home and mortgage

Health

Money and investing

Personal Accident

Retirement

Life cover

## “Pay as you drive”™ insurance

“车开起来再付钱” 保险

“Pay As You Drive”™ overview ▾

The Benefits ▾

Here's How it Works ▾

Fairer Pricing ▾

Summary of Cover ▾

Added Value Extras ▾

Frequently asked questions ▾

## We can give you...

“Pay As You Drive”™ insurance, which is a new and fairer way to insure your car, is designed for people who don't use their car as much as others. You simply pay variable costs based on when and where and how far you drive plus a fixed monthly fee.

How much will it cost ▶

You could save up to

**30%\***



### Car Insurance is now fairer by miles

- If you drive less than 6000 miles, “Pay As You Drive”™ could save you up to 30% on your car insurance\*.
- A Global Positioning System (GPS) is fitted to your car for free. The GPS allows us to work out how you use your car, so you can enjoy a fairer premium.

# Give data to get data about applicants (JobScore)

- Use information about candidates from interviews at other companies



[Solution](#) | [Tour](#) | [Customers](#) | [Cost](#) | [About Us](#) | [Employer Sign In](#)

[Job Seekers Click Here](#)

## Hire Great People

Build your pipeline, stay organized, and find great talent, all for free!

[Take a Tour or Sign Up](#)

Already have an account? [Sign In](#)



### MARKET JOBS

using your careers website, job boards and email campaigns.



### TRACK APPLICANTS

and see how well they match what you are looking for.



### FIND CANDIDATES

that are both qualified and interested in the JobScore Network.

# Architectures of Participation: Some Attributes of Web2

- User focus (Me-business, not E-Business)
  - ▶ User is at the center of Web2  
(not the company)
  - ▶ VRM (Vendor Relationship Management)  
not CRM (Customer Relationship Management)
- System engineered for feedback
  - ▶ System engineered to improve over time by leveraging user data  
(not deteriorating over time)
- Network effects
  - ▶ Demand-side economies of scale  
(not only supply-side economies of scale)
- Transparency
  - ▶ Google Maps: Create API for developers to use the data  
(not increase security)

# Communication

	Sources	Metrics	Applications
<i>Collect</i>	Wall Street	Trading models	"Idea"
<i>Experiment</i>	Clicks	Company centric	E-business
<i>Contribute</i>	Profile	User centric	Me-business
<i>Interact</i>	Links	Relationship centric	We-business

	Recommendations	Conversations
<i>Collect</i>	Expert	-
<i>Experiment</i>	Algorithm	Targeting/ Push
<i>Contribute</i>	Situation	Discovery/ Pull
<i>Interact</i>	Social	Genuine conversations

# The Data Business: Who Pays Whom?

▶ Value of data proportionally to their impact on decisions

## ■ Traditional data business

### ▶ Acxiom

- Who do I send my advertisements to?
- (economics of communication)

### ▶ Maps

- What route do I take?
- (discussed earlier)

### ▶ OAG

- What flight suits me best?
- (user generated, screen-scraped)

### ▶ MLS (Multiple listing service)

- What house do I buy?
- (user generated: Zillow, Redfin, Trulio)

### ▶ Contacts

- Who do I sell to? Hire?
- (LinkedIn, jigsaw)

# Buy and trade business cards (Jigsaw)

- ▶ 7M business cards (2007.12)
- ▶ 200k members
- ▶ Community corrects

• Full Name  
• Title

• Direct Phone Number  
• Email

• Address

**Garth Moulton**  
Co-Founder/Director of Business Development

**Jigsaw Data Corporation**  
2 Waters Park Drive Ste 250  
San Mateo, CA 94403  
USA

Direct Tel: 1-850-235-8383  
Email: garth@jigsaw.com

**Jigsaw contacts are purchased with points.**  
You can earn points by:  
Adding Contacts\*\* (5 Points+)  
Correcting Contacts (5 Points+)  
Referring others (125 Points)  
\*\* All contacts are added anonymously.

**Jigsaw has two choices for participation:**  
1) PLAY  
Trade contacts for Contacts  
2) PAY  
Subscribe for a low monthly fee to receive contacts  
If you need more information, call 1-877-Jigsaw9.

**Sign Up**

- ▶ Loss of control

# Where do people go for information?

- 20 years ago: Produced news

- ▶ Publicized opinion



- 10 years ago: Search

- ▶ Search: Already know what you are looking for
- ▶ Discovery: Find something you didn't know you were looking for (Serendipity)
- ▶ Blogs, Wikipedia

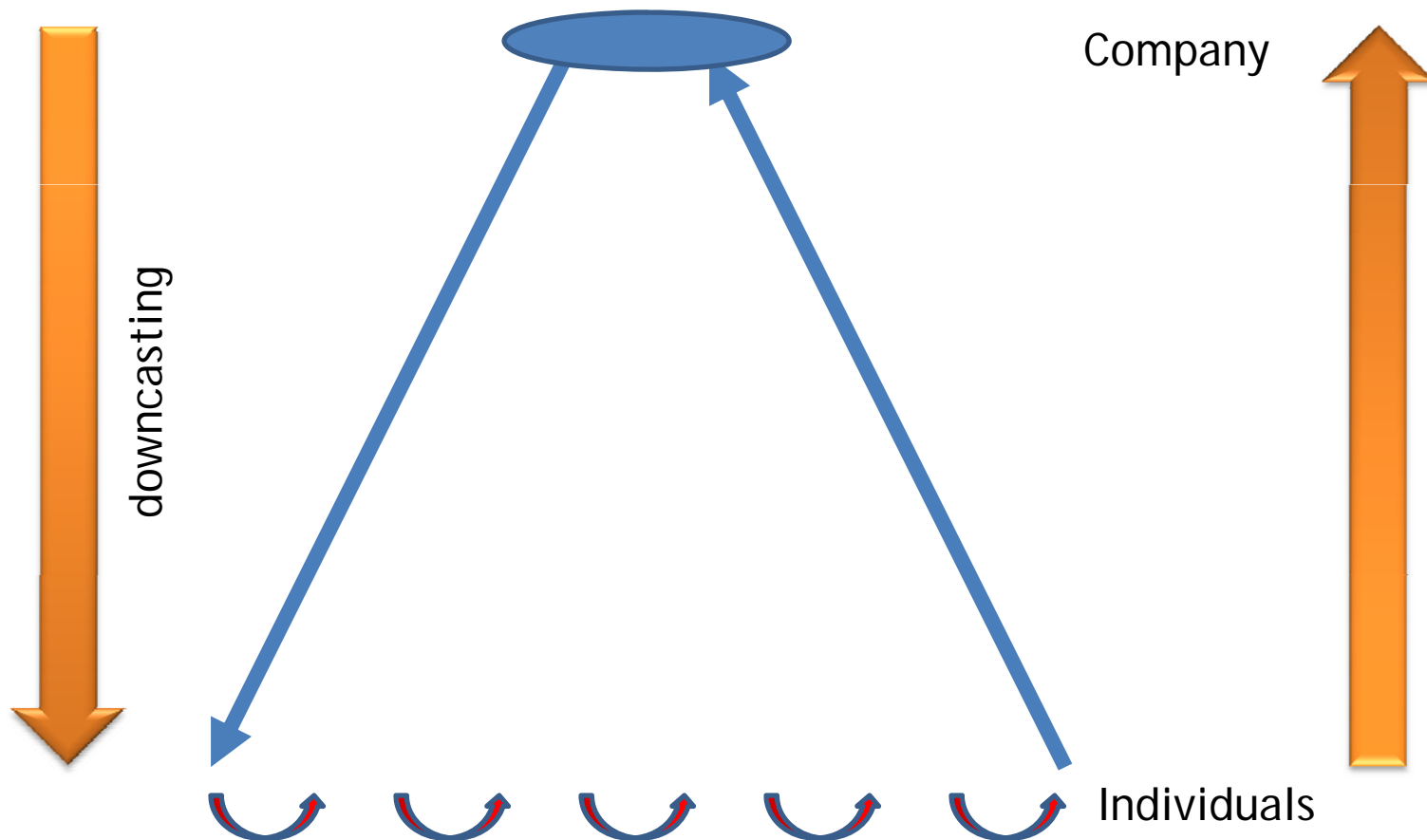
- Now: Social network

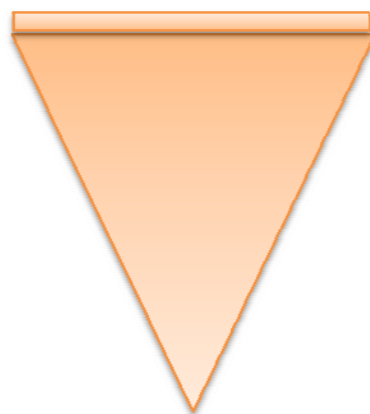
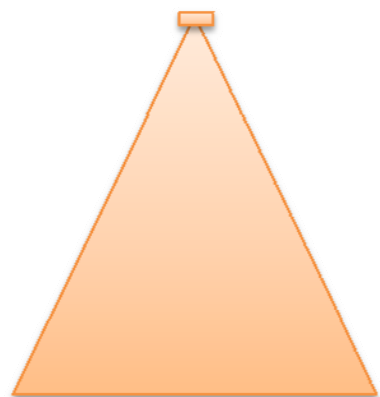
- ▶ Discover via people you are connected to
- ▶ "Generation C"

# Conversational Marketing

- Conversation

- ▶ Between whom?





# The Consumer Data Revolution: Who Pays Whom?

- ▶ What does Google know about you?
- Key: Users now actively contributing data
  - ▶ Four stages
- The data business
- Summary
  - ▶ Data companies pay employees to create data
  - ▶ Implicitly generated data (traces)
    - Experiments
  - ▶ Users contribute data
    - Incentives
    - Data about themselves, about others, about relationships
    - (not binary)
  - ▶ Users expect value for themselves

Thank you!

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