Internet Advertising

Alan Montgomery
Associate Professor
Carnegie Mellon University
Graduate School of Industrial Administration

e-mail: alan.montgomery@cmu.edu

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Outline

- Personalization
- Overview of Internet Advertising
- Impact on Traditional Media
- Using Communities for Promotions
- Measuring Internet Traffic
- Implementing Interactive Marketing Strategies

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Personalization

The use of cookies by DoubleClick

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Cookies

- Small piece of information sent by a web server and saved by a user's web browser
- Can be used to read back later from the web server
- Some examples
  - Online ordering system (shopping baskets)
  - Site personalization (MSNBC)
  - Website Tracking
  - Targeted Marketing
  - User ID's
- Visit CookieCentral.com
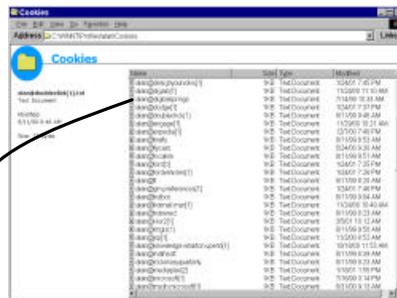
4

Banner Ad Generation by DoubleClick
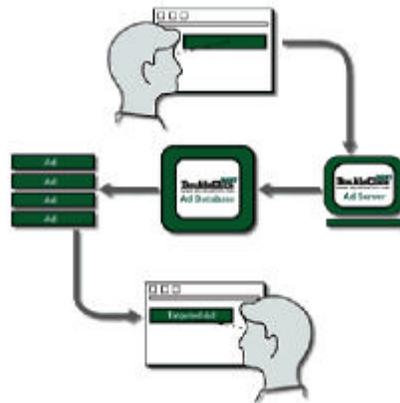
Source: http://www.doubleclick.com/publishers/service/how_it_works.htm [5]

Using Cookies for Advertising

- Check your browser's cookie list for "DoubleClick"
- DoubleClick inserts ads into other people's web sites
  - Track users across sites
  - Limits number of exposures to ads
  - Target ads to certain types of individuals
- User remains "anonymous"

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What has DoubleClick learned?

Frequency and Banner Burn-out
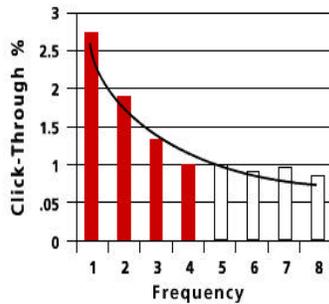
Source: DoubleClick, 7/96.

- After studying millions of impressions they concluded that after the fourth impression, response rates dropped from 2.7% to under 1%.

  Banner burnout

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Advertising Case Study

- Introduce Datek to potential online investors through banners and sponsor buttons on
- DoubleClick Business & Finance sites (StockMaster, Big Charts, ClearStation, Individual Investor Online, Fast Company and EDGAR Online).
- Integrate ads with major brand DoubleClick Select Sites including U.S. News, PBS, the Dilbert Zone and Travelocity.
- Keyword banners on AltaVista during user searches for specific topics like "stock", "online trading," "investments," "brokerage" and "broker."

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"Online Brokerage" Banner Ads

- If we were to go to each of these search engines and type in "online brokerage" what banner ads would be displayed
- This service is performed by www.bannerstake.com

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Results

- Response rates for keywords ranged as high as 15% - 19%. Through sponsorships on DoubleClick Finance sites, the Datek brand is reinforced to 550,000 potential customers every month.
- Since the inception of their DoubleClick campaign, Datek has succeeded in establishing a loyal audience, now exceeding over 32,000 trades a day.
- Over the past two years, DoubleClick has been an integral part of Datek's online budget, helping Datek to generate in excess of $320,000 a day from online trading

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Is it worth it?

- Currently 250,000 customers, 70,000 trades/day, $9.95/trade

Exposures	550,000
CPM	$85
Cost	$46,750
Clickthrough	15%
Conversion Rate	7%
New Customers	5,775
Cost/Acquisition	$8.10
LTV	?

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Personalization

- Doubleclick illustrates only one application of personalization. Many techniques for deciding what to show:
  - Rule based approaches
    "If user has visited page YYY then show ZZZ"
  - Collaborative filtering/Clustering
    Show choices of similar users
  - Statistical Models
    Offer coupon if probability of purchase is less than 10%
  - Computer Agents
    The computer can be intelligent in seeking out information (OpenCola.com)

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Overview of Internet Advertising

Comparison of ad costs

- **Direct Mail**
  $30-$1000 CPM ($1-$5 per response)
- **Magazine**
  $86,200 for full-page 4/c ad in *Cosmopolitan* with a circulation of 2.5m for a $35 CPM, PC Week CPM $100
- **Newspaper**
  $20 CPM
- **Web banner**
  $10,000/month for 500,000 page views on *infoseek*, $20 CPM

- **TV**
  $120,000 for a 30 second prime-time ad reaches 10 million households, $12 CPM
- **Local spot radio**
 $11 CPM
- **Cable TV**
  $6 CPM
- **Billboard**
  $1 CPM

Internet Site purchases from traditional media

- Newspaper classifieds ($11b)
- Direct Mail ($9b)
- Magazines ($2b)
- Television ($4b)
- Radio ($.4b)
- Yellow Pages ($.3b)

Total $27b or 10% of all US ad spending, versus $2.8b for online advertising revenues in 1999, Jupiter estimates $5.4b in 2000, $7.3b in 2001
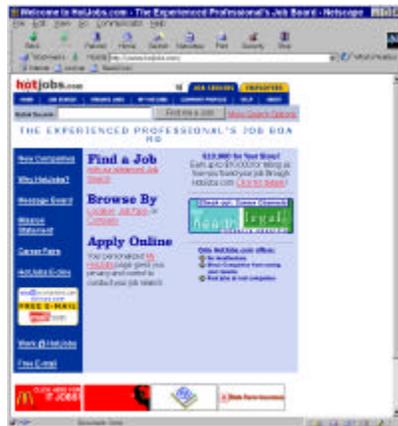
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Trend in Banner Click Rates

2.2% in 1997

0.5% in 1999 (range .1% to 30%)
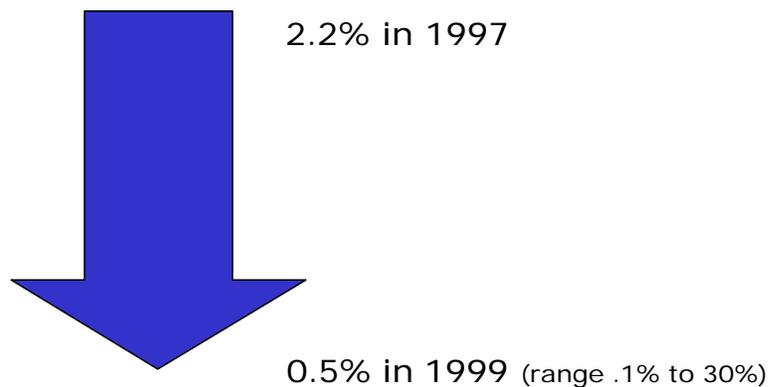
Source: Forrester Research 16

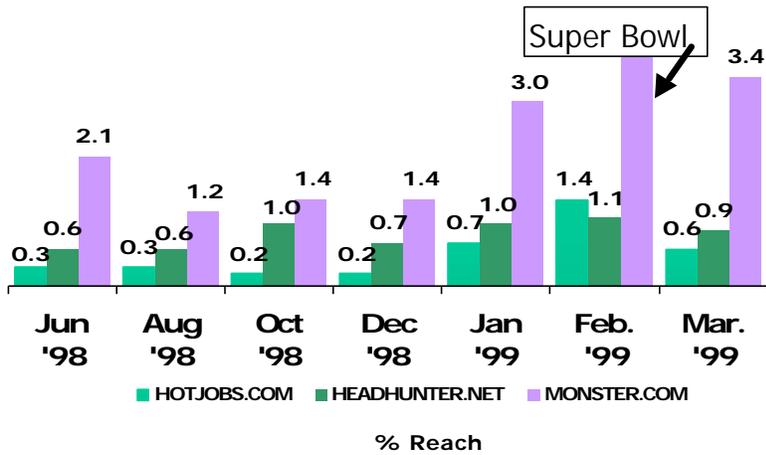# How does the Internet impact traditional advertising?

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Hotjobs.com

- Business model: connect job seekers and employers, revenues raised through referral fees charged to employers and advertising
- Expects revenues of $17m in 1999
- Raised $16m from venture capital companies earlier this year
- Spent $12m on advertising (broadcast and outdoor), $1.6m for SuperBowl spot, $400k for *Frasier* finale

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Super Bowl Advertisers' Reach Growth - Career Sites

Super Bowl

	Jun '98	Aug '98	Oct '98	Dec '98	Jan '99	Feb. '99	Mar. '99
HOTJOBS.COM	0.3	0.3	0.2	0.2	0.7	1.4	0.6
HEADHUNTER.NET	0.6	0.6	1.0	0.7	1.0	1.1	0.9
MONSTER.COM	2.1	1.2	1.4	1.4	3.0	3.4	3.4

■ HOTJOBS.COM   ■ HEADHUNTER.NET   ■ MONSTER.COM

% Reach

Source: Media Metrix

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A new hi-res medium

Resolution: 640 x 100
CPM: $15
Duration: <5 seconds
~~Life: 10 seconds~~

Resolution: 9600 x 12000
CPM: $40
Duration: 10 seconds
~~Life: 30 days~~

Which would you choose?

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Co-existence at Eddie Bauer

Primary avenues of interacting with customers:

- Mail Catalogs
- Retail Stores
- Online Shopping

Each avenue can support the activities of the other avenues, online kiosks at retail stores can virtually expand selection and increase sales

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Using communities to do your advertising

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Geocities.com

- What is the value of an online community?
- How does a community alter retail channels?

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Intel's Pentium Chip Flaw (1996)

- How many Pentium designers does it take to screw in a light bulb?

  1.99904274017, but that's close enough for non-technical people.

- What do you get when you cross a Pentium PC with a research grant?

  A mad scientist.

- What's another name for the Intel Inside sticker they put on Pentiums?

  Warning label.

- Why didn't Intel call the Pentium the 586?

  Because they added 486 and 100 on the first Pentium and got 585.999983605.

Top ten new Intel slogans for the Pentium:
1. The Errata Inside
2. Were Looking for a Few Good Flaws
3. Division Considered Harmful
4. Why Do You Think They Call It *Floating* Point?
5. We Fixed It, Really
6. Redefining the PC and Mathematics As Well
7. You Don't Need to Know What's Inside
8. Nearly 300 Correct Opcodes
9. It's Close Enough, We Say So
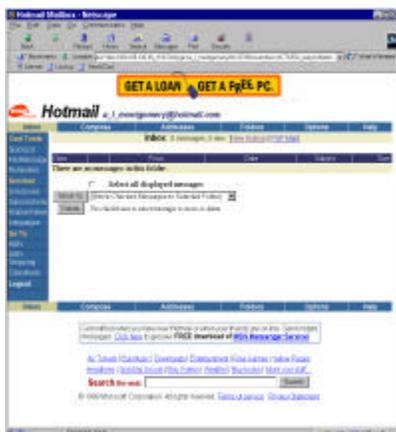10. It's a FLAW, not a Bug

Source

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hotmail.com
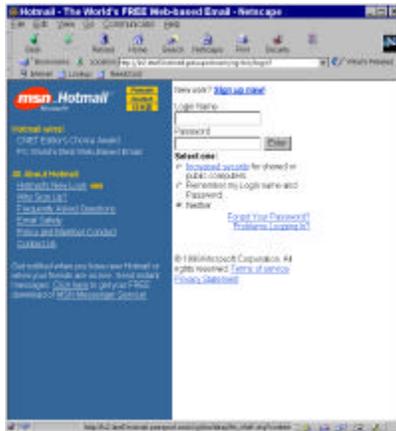
- Free Web-based email
- 1996 Startup Company

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How's it work?

- Sign up for an account and access your email from anywhere using an HTML interface to your mail account
- Nice features:
  - Portable
 - Familiar interface
  - HTML web messages

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"Viral Marketing"

- Hotmail places a small "ad" at the bottom of every e-mail message automatically, whether the sender wanted it there or not. As people see the "ad" they click and may themselves become subscribers
- Hotmail signed up 12m users with a total marketing budget of $50,000; compare that to AOL and E-Trade who are spending $100 to $300 per customer account
- Compare this to Alladvantage.com, www.seeUthere.com, SDMI (after six listenings an encryption inside the song triggers a message your free time is over)
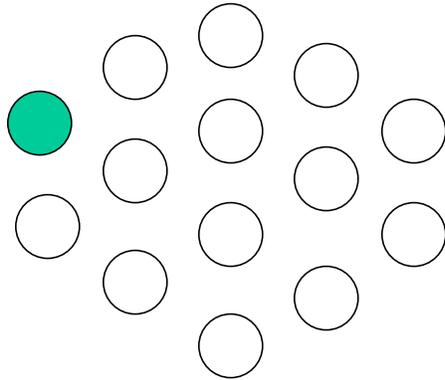
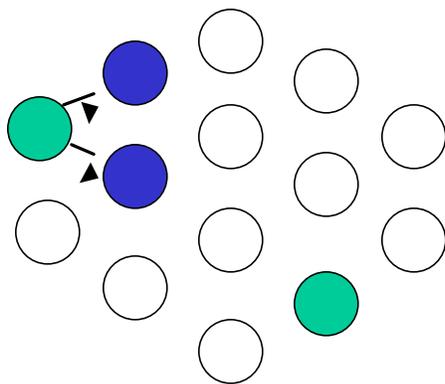27

Modeling Diffusion Processes
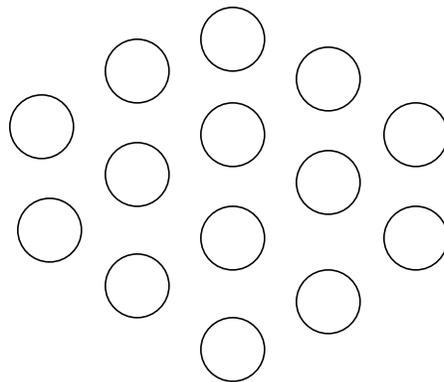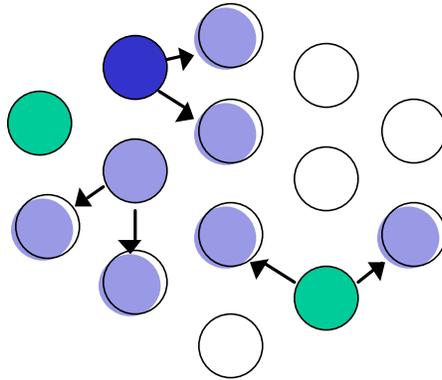
28

Modeling Diffusion Processes

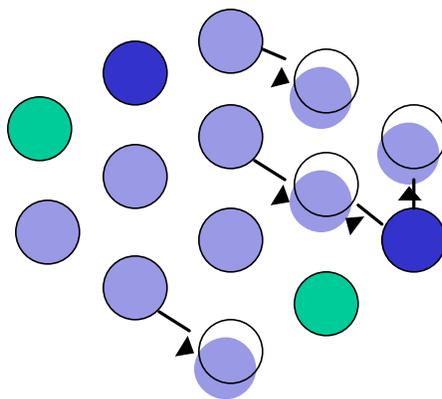# Modeling Diffusion Processes

Modeling Diffusion Processes
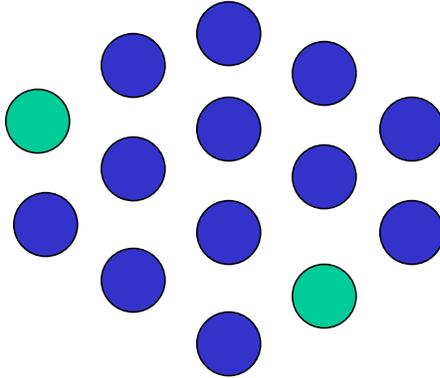
31

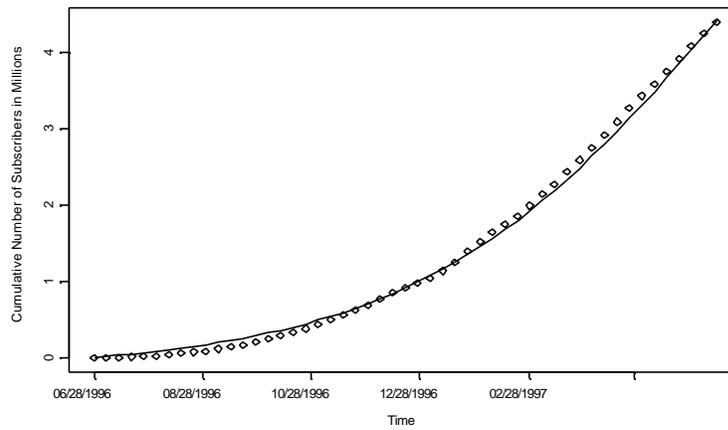# Modeling Diffusion Processes

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Modeling Diffusion Processes

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Word-of-mouth effects

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"It's About Capturing Eyeballs"

- Microsoft buys Hotmail for $385 million
  - Email is the "killer-app" of the Internet, everybody has to have it
  - After the buyout, one-quarter of Hotmail's 60 employees became instant millionaires
  - 10 million subscribers
  - This would double MSN's 2 million paying subscribers, an increase its advertising revenues, but more importantly help position it to become a major portal
- After effects:
  - Rocketmail sold out to Yahoo! in Oct 1998
  - Currently hotmail has 40m subscribers

Source: *Business Week*, Jan 19, 1998

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Some Recent Success Stories

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Measuring Internet Traffic

Source: Media Metrix Inc.
Tod Johnson, CEO
November 1999

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Collecting the Clickstream Using the PC Meter

- Media Metrix: the PC Meter Company
- Has been collecting web data since July 1995
- Subsidiary of the NPD Group, Inc.
- Provides syndicated data to more than 100 client companies
- Business model organized around traditional advertising measures: reach and frequency

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How does the PCMeter work?

1. Randomly Recruit A Panel of PC and Internet Users

Household # 324404

Male, 45	PC #1: IBM Desktop, Pentium 200Mhz
Female, 42	Location: At Home
Male, 17	PC #2: Compaq Presario, 350 Mhz
Female, 14	Location: At Home
	PC #3: Dell Latitude Notebook
Income: $85,000	Location: Mobile/Work
Geography: Boston, MA	
HHSize: 4	
Home: Own Single Family Dwelling	
MH Occ: White Collar/Administrative	
FH Occ: White Collar/Administrative	

Household# 908363

Male, 61	PC #1: Gateway, PIII 400Mhz
Female, 60	Location: At Home
Income: $35,000	
Geography: Madison, WI	
HHSize: 2	
Home: Rent, Multi-Family Dwelling	
MH Occ: Retired	
FH Occ: Retired	

How does the PCMeter work?

2. Install Tracking Software on Panelists' Home & Work PCs
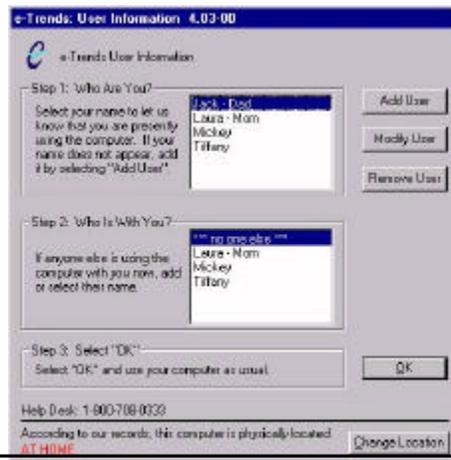
40

How does the PCMeter work?

3. Software Gathers Data On Personal "Clickstreams" As Panelists Use Their PCs

TIME	WEB SITE & PAGE	TOM S., Age 39
6:42:07 pm	America Online - Login	
6:42:54 pm	America Online - Email	
6:53:12 pm	America Online - Today's Headlines	
6:56:44 pm	www.cnn.com/news	
6:57:25 pm	www.cnn.com/news-chicago	
7:03:00 pm	www.yahoo.com	
7:03:56 pm	www.yahoo.com/travel/recreation	
7:03:58 pm	www.yahoo.com/travel/SanFrancisco	
7:04:58 pm	www.sfgate.com	
7:05:00 pm	www.sfgate.com/entertainment	
7:15:24 pm	www.sfgate.com/entertainment/restaurants	
7:20:45 pm	microsoft word application	

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How does the PCMeter work?

4. Data is Processed and Provided to Clients Online and/or in Hard Copy

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Example Media Metrix Clients

Applications of Clickstream Data

- Clients are Using Media Metrix Services to:

  - Plan, Buy & Sell Digital Media Advertising
  - Understand Consumer Behavior
  - Gain Marketplace & Competitive Intelligence
  - Support Product, Marketing & Advertising Strategy Development
  - Corporate Benchmarking
  - Basis for Partnership Alliance Decisions
  - Use With The Financial Community

What do we learn from clickstream data about the digital landscape

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The Internet: Then & Now

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Top Fifteen WWW Sites

January 1996

AOL.COM
WEBCRAWLER.COM
NETSCAPE.COM
YAHOO.COM
INFOSEEK.COM

PRODIGY.COM
COMPUSERVE.COM
UMICH.EDU
PRIMENET.COM
WELL.COM

CMU.EDU
GNN.COM
MCOM.COM
MIT.EDU
TELEPORT.COM

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Top Fifteen WWW Sites

January 1996	**July 2000**
AOL.COM	YAHOO.COM
WEBCRAWLER.COM	MSN.COM
NETSCAPE.COM	AOL.COM
YAHOO.COM	MICROSOFT.COM
INFOSEEK.COM	LYCOS.COM
PRODIGY.COM	PASSPORT.COM
COMPUSERVE.COM	HOTMAIL.COM
UMICH.EDU	GO.COM (Disney/Infoseek)
PRIMENET.COM	NETSCAPE.COM
WELL.COM	EXCITE.COM
CMU.EDU	ALTAVISTA.COM
GNN.COM	AMAZON.COM
MCOM.COM	REAL.COM
MIT.EDU	EBAY.COM
TELEPORT.COM	ANGELFIRE.COM

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The Net Has Gone "Mass"

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The Gender Gap Has Narrowed

- Men 18+ — 40%
- Women 18+ — 41%
- Kids 2-17 — 19%
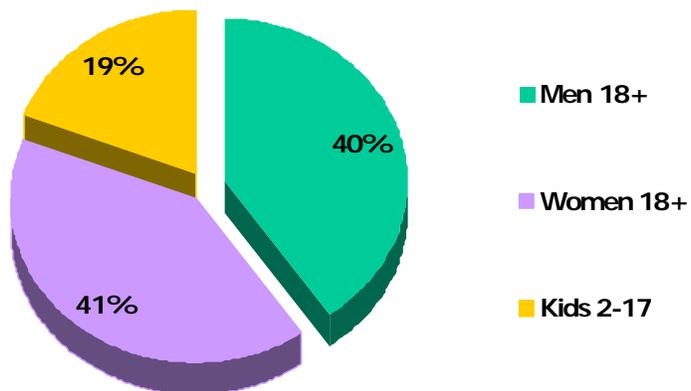
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Last Digital Divide: Income

Household Income Composition of the World Wide Web
June 2000

18.7%

9.7%

27.3%

17.9%

12.7%

13.8%

- Under $25K
- $25K-$40K
- $40K-$60K
- $60K-$75K
- $75K-$100K
- $100K+
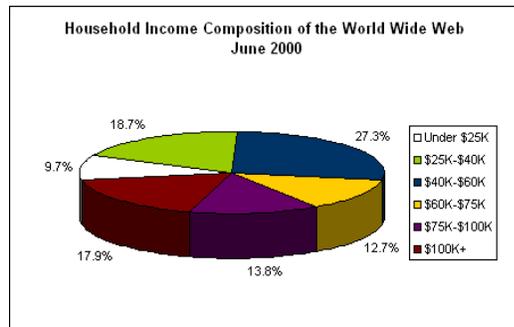
- High income individuals still overrepresented
- 50% growth in Web usage for under $25k, yet still represent <10% of Internet-using population
- In the U.S. population, lower income brackers (<$25k) represent 32%, while highest income braket (>$100k) comparise 11% of U.S. households

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#3

Growing Beyond Reach

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Source of Internet Growth

Percent Change 9/99 vs. 9/98

12% — Unique Visitors

53% — Gross Pages

41% — Total Time Spent
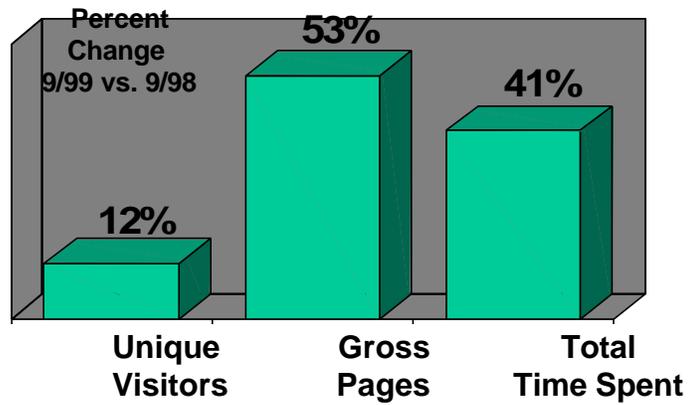
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Category % Growth
9/98 to 9/99

11.5	Total
35.0	Shopping
29.0	Travel
4.6	Adult

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Category Penetration

% Audience Reach

Category	%
Real Estate	11.0
Careers	16.7
Hobbies/Lifestyle	22.2
Auctions	22.2
Automotive	23.3
Business to Business	24.7
Sports	25.3
Health	27.4
Government	30.1
XXX Adult	33.3
Regional/Local	35.7
Travel	36.8
Education	36.9
Community	37.2
News/Information	46.8
Business/Finance	47.5
Search/Navigation	50.4
ISP	53.5
Directories/Resources	56.8
Corporate Presence	63.6
Retail	66.8
Entertainment	74.6
Services	82.4
Portals	88.8

Source: Media Metrix Web Report - U.S. July 2000

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#4

Stickiness Counts

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The *Stickiest* Sites

Average Time Per Visitor Per Day

1. AOL NETWORK   48.8 Minutes
2. LYCOSCHAT.COM   36.5 Minutes
3. POGO NETWORK   32.1 Minutes
4. GAMESVILLE.COM   27.3 Minutes
5. MPLAYER. COM   26.4 Minutes
6. PRIZEPOINT.COM   22.6 Minutes
7. EBAY.COM   22.5 Minutes
8. UPROAR.COM   20.4 Minutes
9. VOYEURWEB.COM   19.8 Minutes
10. FREERIDE.COM   19.2 Minutes

Source: Media Metrix WWW Audience Ratings Report 57
Average Minutes Per Month Per Person 8/99

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The World Is Dominated By
U.S. Multi-Nationals

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Consolidated Landscape Of Global Brands (alphabetical)

FRANCE TOP 25	GERMANY TOP 25	UNITED KINGDOM TOP 25	UNITED STATES TOP 25
			About.com
Altavista Search	**Altavista Search**	**Altavista Search**	**Altavista Search**
	Amazon	**Amazon**	**Amazon**
AOL Services	**AOL Services**	**AOL Services**	**AOL Services**
Chez.com	Bahn.hafas.de	BBC.co.uk	Ebay.com
Citeweb.net	Comdirect.de	Demon.co.uk	
Club-Internet.fr	Fireball.de		
Free.fr	GMX.de		
		Excite	**Excite**
Ifrance.com	Kostenlos.de	Freeserve.net	Go.com
Infonie.fr		Lineone.net	Hotbot.com
Libertysurf.fr			Looksmart.com
	Lycos	**Lycos**	**Lycos**
Microsoft Sites	**Microsoft Sites**	**Microsoft Sites**	**Microsoft Sites**
Multimania.com	Puretec.de		
Nomade.fr	01019Freenet.de		
Pagesjaunes.fr			
Real.com	**Real.com**		**Real.com**
Voila.fr	T-Online Services	Ukplus.co.uk	Snap Services
Wanadoo.fr		Virgin.net	
Xoom	**Xoom**	**Xoom**	**Xoom**
Yahoo Sites	**Yahoo Sites**	**Yahoo Sites**	**Yahoo Sites**

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But how do you implement 1to1 Marketing Systems?

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Is Your Company Ready?

- How well can your company *identify* its end-user customers?
- Can your company *differentiate* its customers based on their value to you and their needs from you?
- How well do you *interact* with your customers?
- How well does your company *customize* its products and services based on what it knows about its customers?

Peppers, Rogers, and Dorf (1999)

Information is key!

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Information is key to implementing a 1to1 System

- **Implicit**
  - Previous purchase histories
  - Clickstream Data
  - Cookies
- **Explicit**
  - Questionnaires
  - Credit histories
  - External Databases

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How to think in terms of "Share of Customer"

- Identify your customers, or get them to identify themselves
- Link their identities to their transactions with you
- Ask your customers about their business with your competitors

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Customer Retention Arithmetic

Cost to acquire one new customer: $20
Cost to retain one current customer: $4

Acquisition Emphasis

Acquire 6 customers: $120
Retain 5 customers: $20
Total Cost: $140
Total Customers: 11

Retention Emphasis

Acquire 3 customers: $60
Retain 20 customers: $80
Total Cost: $140
Total Customers: 23

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Customer Lifetime Value

- Computed by factoring in historical customer retention statistics, marginal costs of the products sold, promotional expenditures, and pricing to the customer
- Example
  - *Customer buys office supplies of $300/month*
  - *Marginal Profit per month = $60*
  - *Projected buying life = 2 years*
  - *This customer is worth $1440*

Does this show up on the balance sheet?

Computing Customer Value

How to treat Customers as Collaborators

- Stop thinking of your customers as "targets"/adversaries
- Don't even think about "share of customer" without a quality product and quality service, which your customers will collaborate with you to develop
- To generate satisfied customers you must attend to each individually
- You should remember your previous transactions with your customer
- To deepen your relationship with an individual consumer, you must first learn about an eliminate any obstacles in the way of this person's continued happy patronage
- Treat complaints as opportunities for additional business
- Create opportunities for your customers to collaborate with you

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Conclusions

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Summary

- A foundation for Internet Marketing can be found in One-to-One Marketing
- Information is critical, the most valuable information is purchase history
- New and better measures of the information content of clickstream data and customer acquisition costs are needed

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A research conjecture

- Clickstream histories are valuable, even more so than demographics. A lesson from scanner data about the value of information

Profit Index	Information
100	No information
110	Demographics
150	Last Purchase
250	Complete Purchase History+Demo

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