

CS155b: E-Commerce

Lecture 5: Jan. 28, 2003

B2C E-Commerce

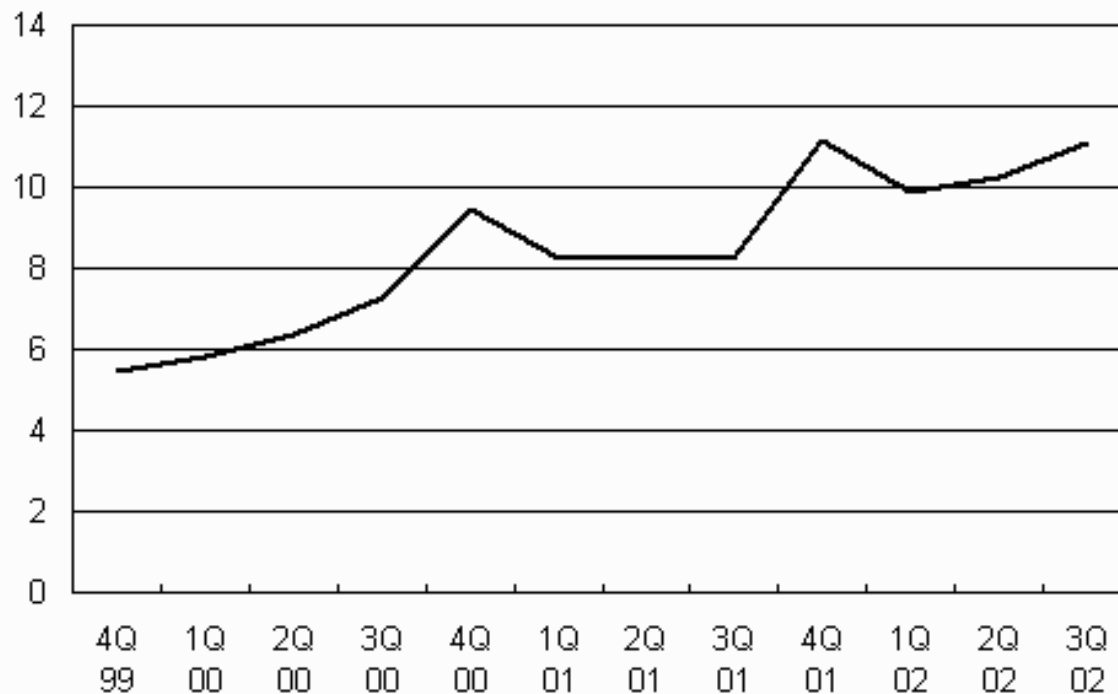
Acknowledgement: H. Chiang

Revenue Models

- Sell goods and services and take a cut (just like B&M retailers).
(*e.g.*, Amazon, E*Trade, Dell)
- Advertising
 - Ads only (original Yahoo)
 - Ads in combination with other sources
- Transaction fees
- Sell digital content through subscription. (*e.g.*, WSJ online, Economist Intelligence Wire)

E-Commerce Retail Sales

Estimated Quarterly U.S. Retail E-Commerce Sales
4th Quarter 1999 - 3rd Quarter 2002, in \$Billions



Source: Commerce Dept.

Estimated Quarterly U.S. Retail Sales: Total and E-commerce

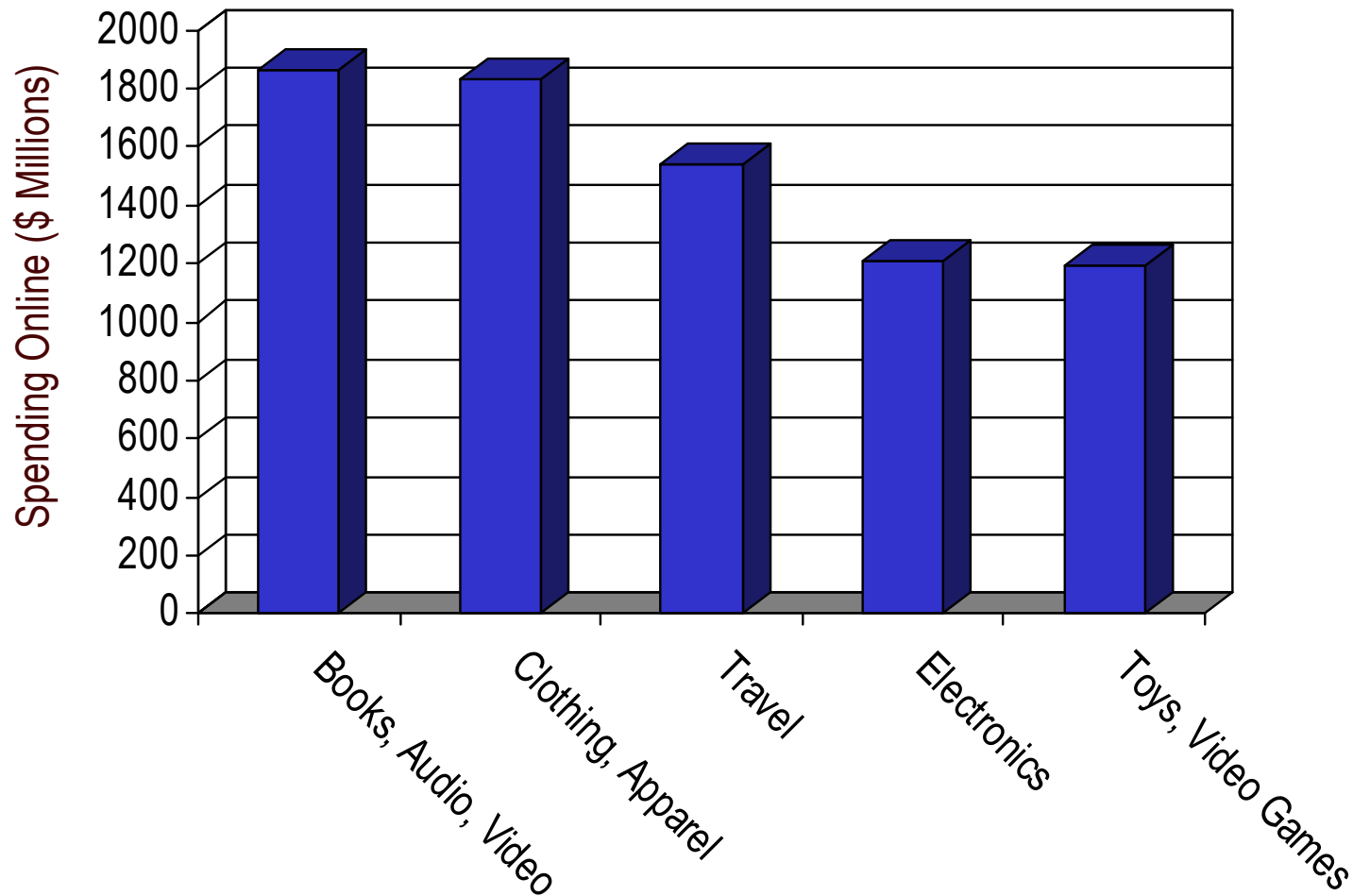
(source: U.S. Commerce Dept. at <http://www.commerce.gov>)

Quarter	Total	E-Commerce	% of total
4Q99	784,278	5,481	0.7
1Q00	711,600	5,814	0.8
2Q00	771,691	6,346	0.8
3Q00	765,536	7,266	0.9
4Q00	810,311	9,459	1.2
1Q01	724,224	8,256	1.1
2Q01	805,245	8,246	1.0
3Q01	782,088	8,236	1.1
4Q01	856,285	11,178	1.3
1Q02	743,810	9,880	1.3
2Q01	825,243	10,265	1.2
3Q02	827,461	11,061	1.3

Online Holiday Sales, 2002

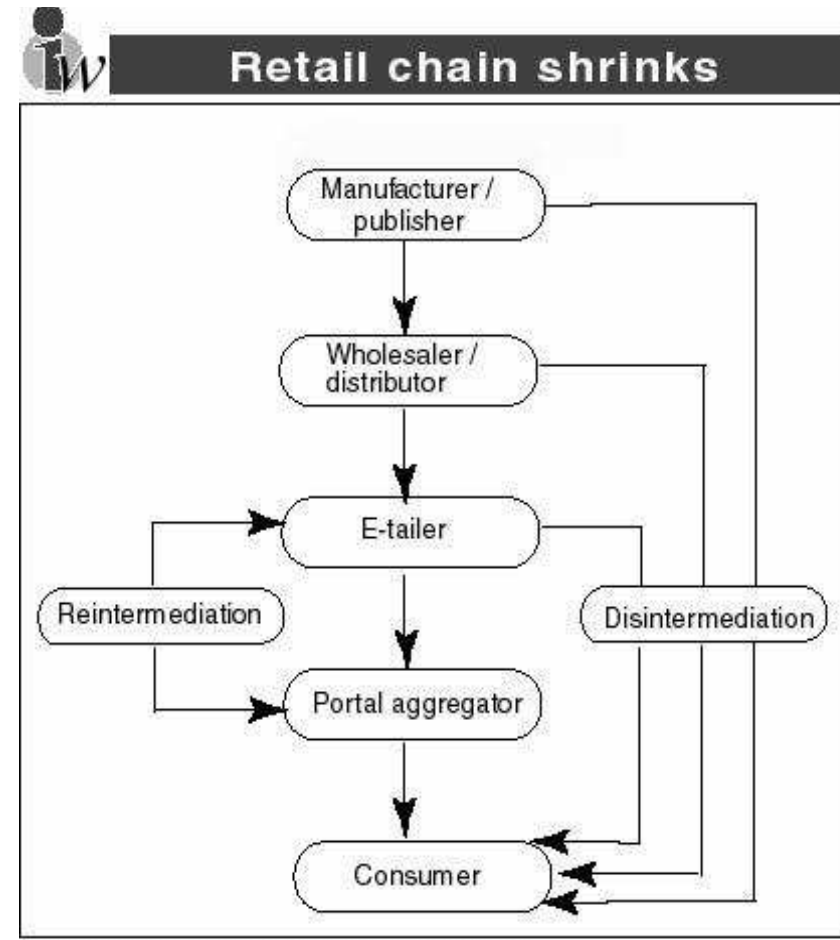
(source: Nielsen//NetRatings data from Nov.-Dec. 2002)

% Market Share: 17.8% 17.5% 14.7% 11.6% 11.4%



First-Generation B2C

- Main Attraction: Lower Retail Prices
- "B2C Pure Plays" could eliminate intermediaries, storefront costs, some distribution costs, *etc.*
- Archetype: www.amazon.com



Source: Benchmark Capital Group ; The Economist

Current Theories (after first shake-out)

- High order frequency and large order size are more important than large customer base.
- E-tailers should strive for average order sizes of $\geq \$50$ and concentrate on high-margin product categories ($>35\%$).
[Traditional grocery margins: 2-3%.]
- Concentrate on making transactions profitable, not on VC-supported market-share wars.
- Combine e-tailing with B&M stores.

"Multi-Channel" Retail (B2C w/ B&M)

- Exploit multiple marketing and distribution channels simultaneously
 - B&M ("bricks and mortar") stores: Customers browse on the web before going to the store.
 - Catalog sales, telephone, tv advertising,...
- In 2002, multi-channel retailers (*i.e.*, B&Ms or traditional catalog companies that also sell online) made up 69% (estimate) of B2C e-commerce. Mostly high-margin sales, *e.g.*, computers, travel, and automotive.
- Multi-channel retailers are more profitable, on average, than web-based and store-based retailers.

(source: Boston Consulting Group)

Advantages of Multi-Channel Retail

- Leverage existing brands.
- Biggest B&M retailers have huge clout. (Walmart's annual sales are \$138B, much more than all e-tailers' combined.)
- Profits from existing channels can subsidize e-tail start-up. No need to quit when VCs lose interest.
- Use established distribution and fulfillment infrastructure (e.g., LL Bean, Land's End, ...).
- Cross-marketing and cross-datamining.



- Full Name: Barnes & Noble.com
(not the same as Barnes & Noble, Inc.,
booksellers [NYSE:BKS])
- Stock Price [NASDAQ:BNBN]:
 - 1.11 (close 1/24/2003)
 - 52-wk range: 0.43 to 2.44
 - No earnings
- 40% owned by Barnes & Noble Booksellers,
Inc., 40% owned by Bertelsmann AG, 20%
by public shareholders

bn.com History

- May 1997: Website launch
 - Business conducted by a wholly owned subsidiary of Barnes & Noble, Inc.
- October 1998: Web site "split off"
 - 50-50 joint venture with Bertelsmann
- March 1999: Incorporated
- May 1999: IPO
 - \$18/share; raised \$486M (largest Internet IPO at the time)

BNBN Stock Chart

(source: Quicken.com, as of close 1/24/2003)



bn.com Business Strategy

(source: bn.com Investor Relations website)

- “Build a profitable e-commerce business by focusing on information, entertainment, and education products and services that can be delivered either physically or digitally.”
- Barnes & Noble.com is trying to become the central website for consumers to purchase *information-based products*.
- Not all products are physical: new subsite starting Jan. 2003 sells eBook content.

Increasing bn.com's "Market Share"

- Leverage Barnes & Noble name.
- Use partnerships with media (*e.g.*, Bertelsmann) and online (*e.g.*, Yahoo) companies.
- Increase partnerships through its **affiliate network**, where websites get a cut when a bn.com purchase is made through a partner's link.
- Improve advertising and user-customization services.

E-tailers are Adding "Offline" Channels

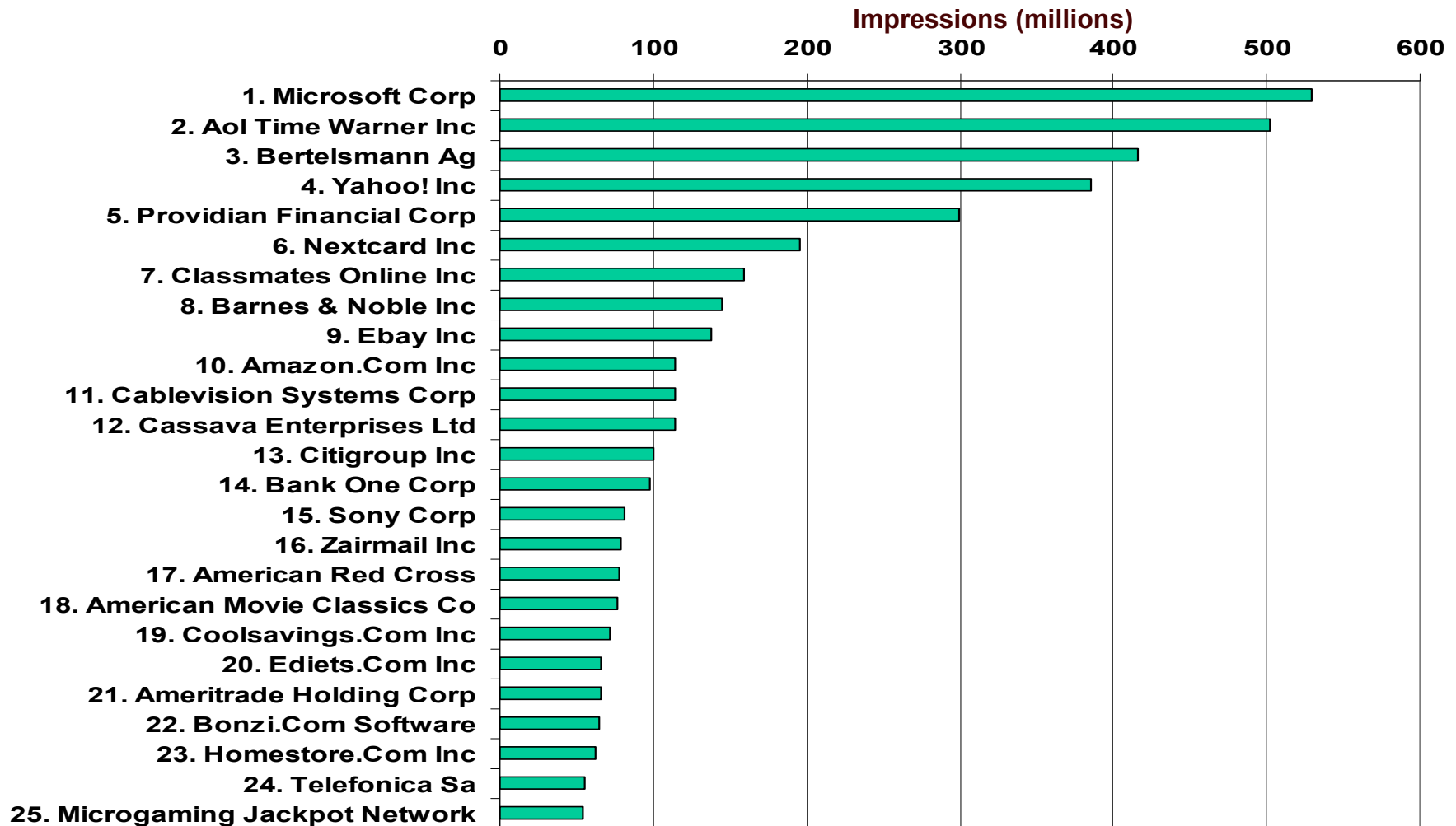
- Alloy.com sold clothes and accessories, but it became a hit only after its catalog was launched.
- Drugstore.com once dismissed B&M retailing, but it agreed to sell a 25% stake to Rite-Aid not long after rival Soma.com was bought by CVS.
- Gateway sells computers through WWW and catalog, but it also has 164 stores across U.S. They carry little stock, but they allow customers to "get a feel for the product" before ordering it.

Revenue Models for Online Ads

- "Number of Impressions"
(How many times does the user cause the advertiser's content to be displayed?)
- "Click Through"
(How many times does the user click on the ad to go to the advertiser's site?)
- "Pay-per-sale"
(How many times does the user click through and then buy something?)

Top Online Advertisers

(By Impressions) Source: Nielsen/NetRatings (9/23/01)



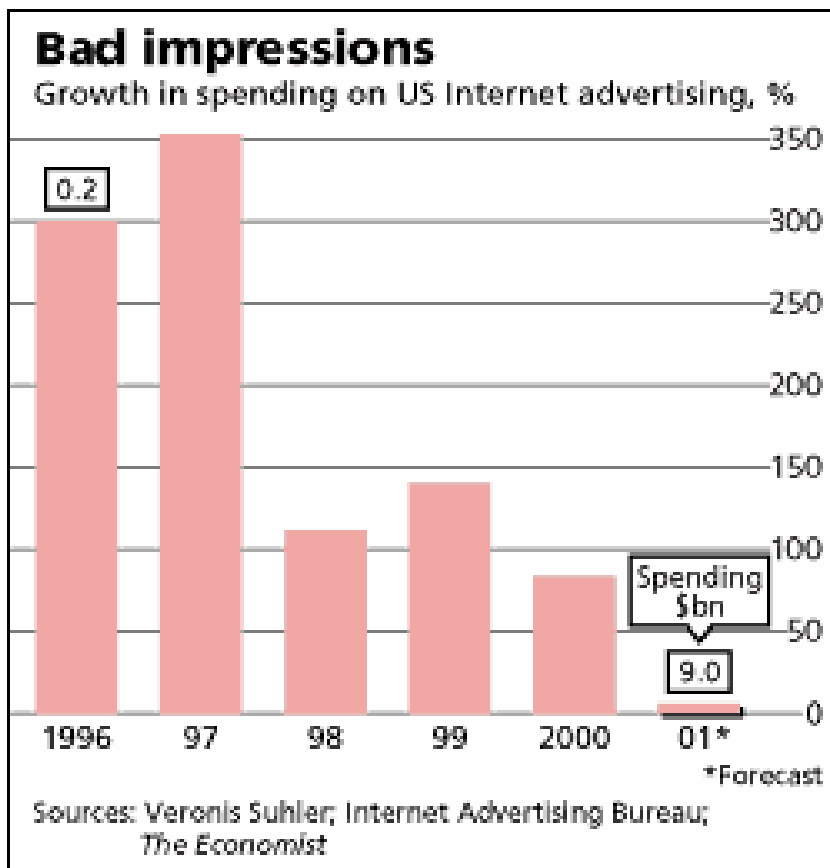
Status as of 4th Quarter 2000

- 3% of all ads; radio twice as big
- 55% of online ads are by dot coms
- 79 companies place 1/2 of all online ads
- Most ads run on 1 site for <3 weeks
- * Portals and Search Engines host more ad impressions than any other type of site (44%).
- * 63% of ad impressions have a "branding focus"

Top 25 National Advertisers

Rank 1999	Advertiser	Total U.S. ad spending in 1999	Network TV	Spot TV	Network radio	National spot radio	Internet	% of Total
1	General Motors Corp.	4,040,374.00	887,893.20	503,807.40	5,963.20	28,189.50	25,074.10	0.62%
2	Procter & Gamble Co.	2,611,766.60	621,527.30	113,294.70	10,265.90	10,838.70	8,039.30	0.31%
3	Philip Morris Cos.	2,201,600.90	383,215.50	200,873.10	2,995.30	10,613.00	873	0.04%
4	Pfizer	2,142,433.70	364,704.20	59,059.30	11,805.10	1,425.90	1,254.20	0.06%
5	AT&T Corp.	1,950,871.20	258,716.10	100,987.90	8,249.80	32,705.00	13,644.80	0.70%
6	DaimlerChrysler	1,804,055.50	286,520.60	664,880.60	2,068.30	23,610.50	9,958.30	0.55%
7	Ford Motor Co.	1,639,761.50	364,989.10	229,678.40	4,959.40	16,981.00	13,638.50	0.83%
8	Sears, Roebuck & Co.	1,505,205.50	186,855.70	48,573.40	12,343.00	7,859.90	1,444.40	0.10%
9	PepsiCo	1,315,712.50	189,049.90	62,371.00	0	5,454.30	581.3	0.04%
10	Verizon Communications	1,312,749.00	1,690.50	135,634.90	0	74,497.40	1,876.20	0.14%
11	Walt Disney Co.	1,304,002.20	242,015.30	128,353.70	1,578.80	23,867.90	16,360.50	1.25%
12	Time Warner	1,202,905.90	189,959.60	97,659.40	1,999.20	35,172.00	7,487.40	0.62%
13	Diageo	1,198,445.20	269,970.40	78,186.80	0	34,430.10	80.7	0.01%
14	McDonald's Corp.	1,134,802.30	296,766.10	179,444.60	36.9	3,238.90	599.6	0.05%
15	IBM Corp.	1,128,462.30	105,545.30	10,526.60	0	11,748.40	32,158.80	2.85%
16	Intel Corp.	1,119,330.40	77,448.20	2,573.00	0	7,391.20	13,464.10	1.20%
17	WorldCom	1,108,381.50	274,400.00	21,760.20	0	5,030.10	5,581.50	0.50%
18	Viacom	1,064,529.80	115,080.10	192,982.50	10,332.20	32,321.90		0.00%
19	Toyota Motor Corp.	1,025,231.70	227,478.10	201,210.70	0	4,009.20	9,769.90	0.95%
20	Johnson & Johnson	1,004,497.00	466,870.70	33,974.10	32.1	3,036.90	3,484.80	0.35%
21	U.S. Government	998,050.90	239,004.60	37,917.30	12,703.90	21,972.30	4,533.10	0.45%
22	J.C. Penney Co.	995,868.40	114,657.30	15,517.90	5,526.30	10,489.80	1,652.00	0.17%
23	SBC Communications	926,103.60	7,472.60	127,474.60	0	43,552.30	2,851.20	0.31%
24	Sony Corp.	922,678.80	149,800.30	65,719.20	292.7	12,763.80	9,719.90	1.05%
25	L'Oreal	899,815.10	209,916.90	19,719.80	0	3,126.00	402.7	0.04%

WWW Growing Faster Than Ad Supply



- Immediate problem: Too many pages, too few advertisers
- Price ~2 Years Ago: \$1 per thousands of impressions
- Price ~5 Years Ago: \$10 to \$50 per thousands of impressions

Inherent Difficulty with Online Ads

- Downward Spiral
 - Banner ads easy to ignore
 - Average click through has fallen to less than 1 in 200
 - Leads to creation of more obnoxious ads, *e.g.*, "pop-ups"
- Entertaining?
 - Getting the "right" ads requires time, effort, and money.
 - Internet market not large enough to justify it.
 - 5 of the world's top 10 advertisers each spent less than \$1 million on online ads last year.

Inherent Difficulty (continued)

- **Accountability:** Advertisers can tell immediately whether their ads "work."
- **High Expectations:** "Well-targeted" ads cost up to 100 times as much as generic ads. But how precisely can one target?

Discussion Point: Will online advertising survive the dot com crash and the unrealistic expectations? Will it stabilize as just one more "branding medium"?

Current Advertising Statistics Not Easily Available

- Many sites gather and publish online business statistics, including advertising, sales, etc. For example:
 - eMarketer.com
 - AdResource.com
 - Nielsen//NetRatings
- These sites no longer make all information freely available! They:
 - combine data with business tools as a package they sell to improve a business's online advertising success
 - limit access to paying subscribers; publish only older data freely; or display only a small part to encourage new subscriptions.

Reading for January 30

- "The Heavenly Jukebox," Charles Mann, in *The Atlantic Monthly*, 9/2000
(<http://zoo.cs.yale.edu/classes/cs155/spr03/mann.pdf>)
- Chapter 2 of *The Digital Dilemma*
(http://books.nap.edu/html/digital_dilemma/ch2.html)