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Internet Trends 2006

Mary Meeker November 8 @ Web 2.0 Summit

Morgan Stanley

The State of the Internet, Part 3

The World's Information is Getting Organized + Monetized

web 2.0 – 11/8/06

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Market Value of Top 5 Global Internet Market Leaders = 46% Higher than 3/00 Market Peak Thanks to Google

Google + Yahoo! + eBay + Yahoo! Japan + Amazon.com

- \$ 2B = market value pre-2000 IPO
- \$178B = market value Nasdaq peak 3/10/00
- \$ 32B = market value Nasdaq trough 10/9/02
- \$259B = market value 11/7/06

Source: FactSet and Morgan Stanley Research.

It's Tough to Succeed

- In public markets, ~2% of technology companies have created ~100% of net wealth
- On average, 2 technology 'ten-baggers' (stocks that rise 1,000%) go public each year

Source: Morgan Stanley Technology IPO Yearbook.

Internet Highlights...

- Users / Usage Yahoo! has base of 418MM+ unique monthly visitors (+19% Y/Y with 24% Y/Y page view growth, CQ3)
- Customer Acquisition Google (500K 1MM advertisers / vendors, and rising); 30%+ clicks (and rising) on sponsored links effective targeting should continue to improve + drive rising monetization
- Commerce / Payments PayPal (123MM accounts, +41% Y/Y, CQ3) + Shopping.com has 40MM+ products in 325+ categories

...Internet Highlights...

- Advertising 8% of total US advertising online in 2006E growing to estimated 13%+ within 5 years - Google + Yahoo! = key drivers + beneficiaries
- Significant targeting / conversion improvements (related to technology improvements + data leverage) could bolster annual global revenue per unique user of \$9 for Google (+42% Y/Y) and \$10 for Yahoo! (+29% Y/Y) 2-3x in next 5 years
- Personalization Recommendation engines improve monetization
 examples include Amazon.com + Yahoo! Music

...Internet Highlights...

- Communications / Telephony Skype (136MM registered users, +20% Q/Q, CQ3 may be fastest growing product in history). Based on CQ1 data, Skype traffic = ~7% of global international long distance minutes. Global mobile data services revenue (ex. messaging) has \$10 ARPU (and rising). If Skype were a carrier, global registered user level would rank it #3 behind China Mobile (274MM subscribers) and Vodafone (187MM). IM (instant messaging) + SMS / MMS showing strong growth
- Video ~60% of Internet traffic may be P2P file sharing of unmonetized video ramp in tagging (for search) + partnerships + monetization note recent moves by likes of ABC / CBS / FOX / NBA / Sony / Warner / Universal / Google / Yahoo!. Challenges (especially related to copyright and infrastructure stress) are significant, but over time, consumer demand should rule and content creators should benefit

...Internet Highlights

- Local Google 'Long Tail' + eBay Classifieds (19MM+ unique visitors, +140% Y/Y, CQ2) traction emerging
- Community / Social Media Likes of Wikipedia, MySpace, YouTube, Yahoo! Flickr + Yahoo! Answers have experienced extraordinary growth. CyWorld (Korea) + TenCent (China) monetizing. 57MM blogs – doubling every 7 months, per Technorati. 1B camera-enabled mobiles within 1 year – 'citizen journalism' in infancy
- **Mobile** While 17% of global Internet users (32% in N. America) have residential broadband, 8% of global mobile phone subscribers use 3G. American Idol 63MM votes (via mobiles + Internet) in final 4-hour round, China's Super Girl 12MM votes (primarily mobiles) in final 3-hour round. Mobile data services (bolstered by 2.5G & ex. messaging) revenue ~\$20B, comparable to online advertising revenue illustrates potential monetization opportunity for broadband Internet!

User-Generated Content (UGC) - Wikipedia + MySpace + YouTube Have Moved to Top of Internet User Pack

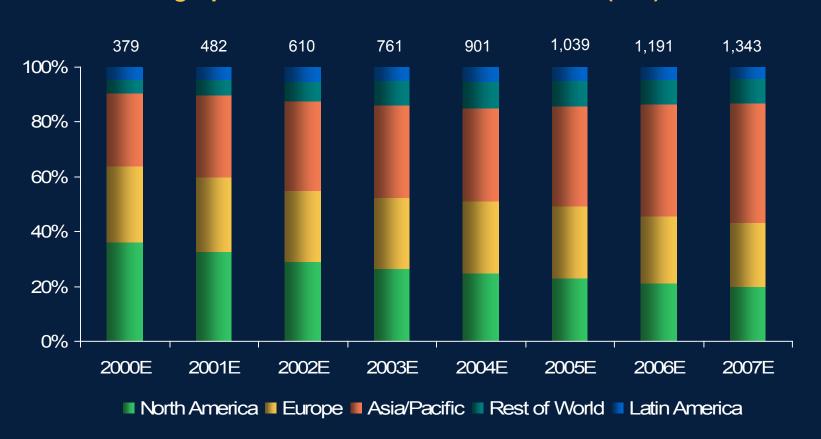
Total Global Unique Visitors (MM)

		Total Global Gilique Vieltere (IIIII)		
Rank	Property	9/06	Y/Y Growth	
1	Microsoft	505	5%	
2	Yahoo!	481	8	
3	Google	467	11	
4	еВау	237	4	
5	Time Warner	218	20	
6	Wikipedia	155	110	
7	Amazon	134	9	
8	Fox	118	303	
9	Ask	113	(0)	
10	Adobe	95	5	
11	Apple	95	38	
12	Lycos	91	(3)	
13	CNET	84	(10)	
14	YouTube	81	2,662	
15	Viacom	66		

Source: comScore Media Metrix Global Data.

of Users – ROW Continues to Rise in Relevance N. America @ 36% of Users in 2000E; 20% in 2007E

Geographic Distribution of Internet Users (MM)



Note: ROW denotes rest of the world. Source: Morgan Stanley Research.

China / India / Russia = Will Likely Continue to Make Impressive TMT Gains

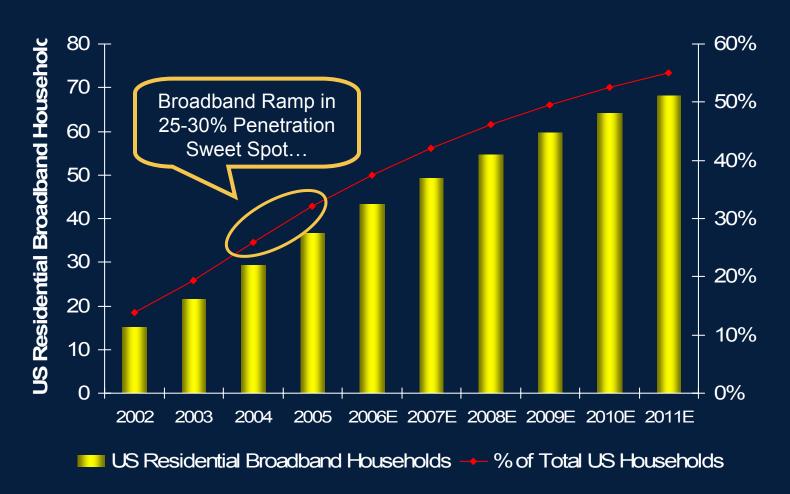
	2004	Relative			Relative	
Rank	Country	Weighting		Rank	Country	Weighting
1	USA	9.0		1	China	8.7
2	China	8.2		2	USA	7.7
3	Japan	6.5		3	India	7.0
4	Germany	5.7		4	Japan	5.9
5	United Kingdom	5.5		5	Germany	5.3
6	India	5.3		6	United Kingdom	5.2
7	France	5.2		7	Russia	5.2
8	Italy	5.2		8	France	5.1
9	South Korea	5.1		9	Brazil	5.1
10	Canada	5.1		10	South Korea	5.0

From our database on market sizing of global TMT (Technology, Media & Telecommunications) products and services. We measure market sizes and growth rates for core TMT metrics: nominal GDP per capita (current USD); telephone lines; cable subscribers; installed PCs; mobile phones in use; Internet users and credit/debit cards in use. For each economy, we calculate past / present / potential global market weightings across seven TMT metrics - we call this our relative weighting and we use it to measure / rank a country's propensity for TMT products and services. We do this for the 50 most important economies based on purchasing power/economic strength, as measured in terms of population size, land mass and GDP per capita. We standardized each country's position in the global market in each category and adjusted the values to reflect a positive scale. The relative ratings and ranks were determined by calculating an average of z-scores across categories. For example, in the United States, standardized and adjusted values of 6.4 in GDP per capita, 8.4 in telephone lines, 11.3 in installed PCs, 7.6 in mobile subscribers, 8.9 in cable subscribers, 10.7 in Internet users, and 9.6 in credit/debit cards produces a relative weighting of 9.0. 2010E relative weightings derived by assuming 2003-2004 growth CAGR for each category to 2010, and ensuring category penetrations were not exceeded.

Source: Morgan Stanley Research.

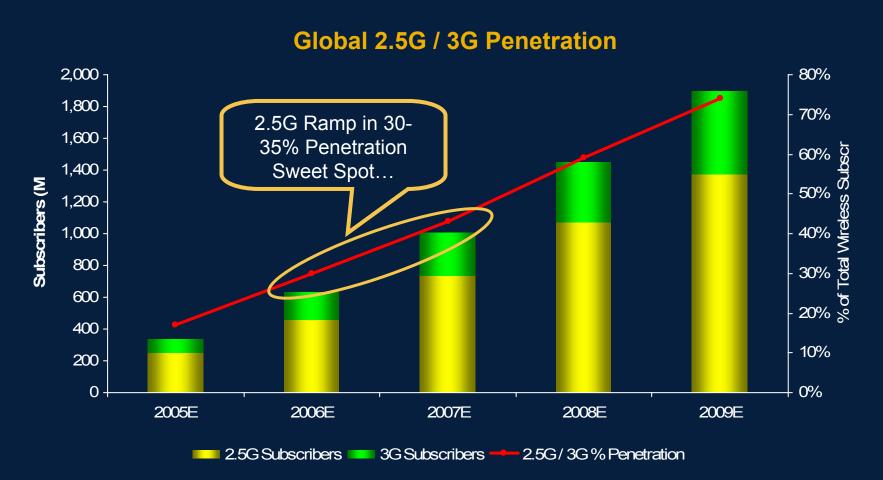
Red indicates countries moving out of the top 10 TMT countries; green indicates countries moving into the top 10. GDP figures from IMF, shown in constant USD

Broadband ("Always On") – In Adoption Sweet Spot (25-50% Penetration)



Source: Morgan Stanley Research.

Mobile – Entering Adoption Sweet Spot – Key to Differentiate 2.5 vs. 3G



Note: 2.5G can be compared to 'narrowband' Internet access, while 3G can be compared to 'broadband / lite' Internet access.

Source: Morgan Stanley Telecom Research Scott Coleman, John Marchetti.

Global Internet Thesis

10-15% user growth

20-30% usage growth

30%+ monetization growth

Online Text / Music / Video – Paths to Monetization

TEXT

Newsgroup (UseNet) Directory (Yahoo! -

Directory



MUSIC / VIDEO

P2P (Napster, BitTorrent) For-Pay (Apple, _____ -

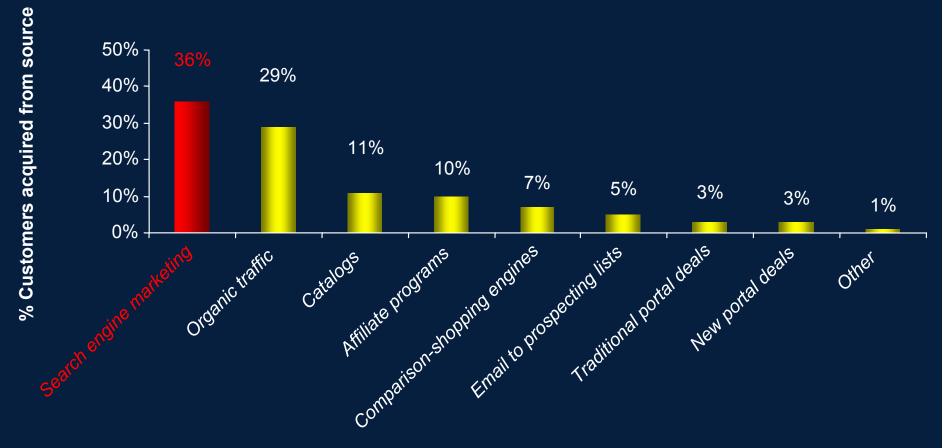
U.S. Internet Advertising – Search Has Been Growth Engine (Largely Related to Text) – Video Next?

(US\$ in MM, except where noted)			CAGR
	2001E	2006E	'01E-06E
Search Advertising	\$285	\$6,681	88%
% of Total	4%	(42%)	
Display and Sponsorship	\$4,423	\$4,108	(1)
% of Total	(62%)	(26%)	
Rich Media	\$357	\$1,123	26
% of Total	5%	7%	
Classifieds	\$1,141	\$2,587	18
% of Total	16%	16%	
E-mail and Other	\$927	\$1,498	10
% of Total	13%	9%	
Total U.S. Internet Spending	\$7,134	\$15,998	18
U.S. Internet Users (MM)	141	205	8
U.S. Internet Households (MM)	51	73	8
U.S. Internet Spending per Internet Household	\$140	\$218	9

Source: Internet Advertising Bureau and Morgan Stanley Research estimates.

67% of Global Internet Users Use Search Search = Top Customer Acquisition Tool for Online Retailers

% of New Online Customers for Online Retailers / Marketing Spend Mix (2005)



Note: 8% of global Internet traffic was derived from search while 67% of global Internet users used search in 1H2006, per comScore.

Source: The State of Retailing Online 2006, Forrester Research.

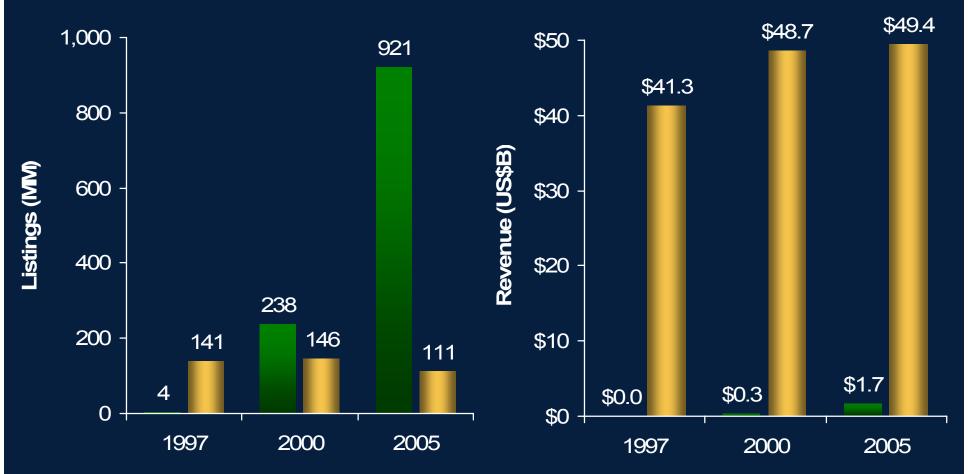
Internet Ad Spend = Movin' on Up - \$217 Per Home vs. \$980 for Newspapers?

Medium	2005 Advertising Spending (\$B)	Households (MM)	Ad Spending / Household (\$)
Promotions	\$106	99	\$1,071
Newspapers	49	50	980
Classifieds	17	55	309
Direct Telephone	97	99	980
Direct Mail	57	99	576
Broadcast TV	45	99	455
Radio	20	60	333
Cable TV	19	70	271
Internet / Online	13	60	217
Yellow Pages	16	99	162
Outdoor	6	99	61
Total	\$428	834	\$5,106
Average	43	83	511

Morgan Stanley Research, PricewaterhouseCoopers, IAB, Jupiter Research, McCann-Erickson, RAB; Newspapers include Classifieds. Promotions (\$106B) include: incentives (\$28B), promotional products (\$23B), point-of-purchase (\$18B), specialty printing (\$8B), coupons (\$7B), premiums (\$7B), promotional licensing (\$6B), promotional fulfillment (\$5B), product sampling (\$2B), and in-store marketing (\$2B). Households may use multiple advertising mediums.

Over 9 Years, Ratio of eBay US Listings to Newspaper Classifieds Moved from 1:35 to 9:1 – But Related Newspaper Revenue Still Outpaces eBay 25:1!?

U.S. eBay ■ U.S. Newspapers

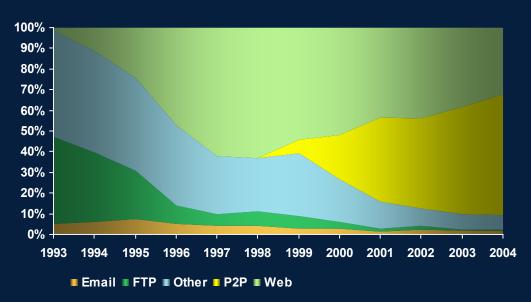


Note: eBay (One Website) vs. All U.S. Newspapers (1,468 Dailies) Annual Classified Ads (MM).
U.S. Newspaper market size excludes online revenue. U.S. eBay revenue shown excludes classifieds revenue such as Craigslist.
Source: Newspaper Association of America, eBay, Morgan Stanley Research.

Rapid P2P Growth (Mostly Video) is Stressing Internet + Is Undermonetized

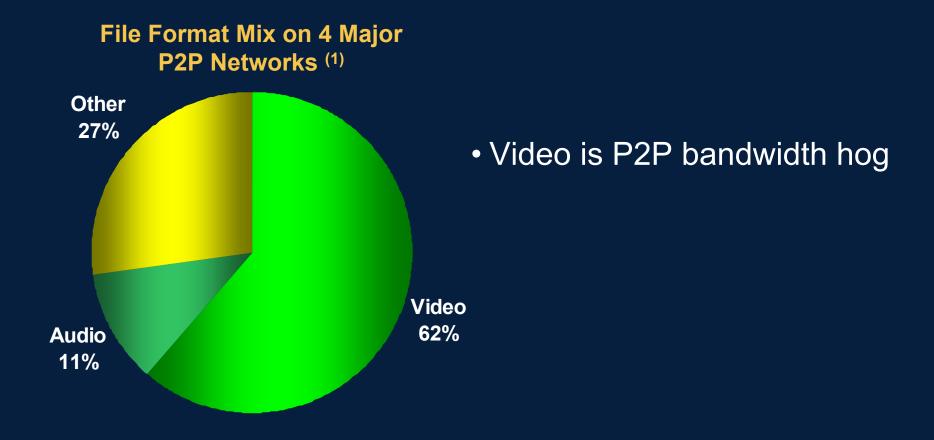
- Peer-to-Peer (P2P) traffic was 60% (and rising) of Internet traffic in 2004, with BitTorrent accounting for 30% of traffic, per CacheLogic
- "P2P affects Quality of Service (QoS) for ALL subscribers" (1)

Internet Protocol Trends (1)



(1) Source: CacheLogic "P2P in 2005," (9/05).

Video Dominates P2P



(1) Source: CacheLogic "P2P in 2005," (9/05). Mix of file formats by volume of traffic generated over 4 main P2P networks: BitTorrent, eDonkey, FastTrack, and Gnutella. Weighted by volume of traffic on each network.

Online Video Momentum – Building and Building...

- 1. 10/05 Disney / ABC and Apple to offer episodes of popular shows like *Lost* and *Desperate Housewives* available ad-free via iTunes for \$1.99 apiece
- 2. 10/05 1MM+ videos, priced at \$1.99 each, downloaded from Apple's iTunes site in less than 20 days
- 3. 11/05 Comcast / CBS and DirectTV / NBC to offer on-demand TV shows for \$0.99
- 4. 11/05 Cisco to acquire Scientific Atlanta for \$7B to prepare for demands of online video; expecting network traffic increases of 4-6x annually, instead of 2x gains seen in US and Europe, driven by video consumption requirements
- 5. 11/05 Time Warner to stream episodes for free (supported by 2-minute blocks of 15-30-second commercials) in Jan 2006. Initial run limited to 30 series (*Wonder Woman*, *Growing Pains*, *Kung Fu*...) but TWX plans to expand to 100+ series and 300+ episodes per month
- 6. 11/05 NBC Nightly News to air its entire broadcast on the Internet -- NBC Nightly News Netcast with Brian Williams will be available for free beginning at 10PM EST
- 7. 12/05 NBA to digitize 60+ years of footage and post on NBA.com, beginning in 2006, with a searchable database that will include players involved and exact locations on court
- 8. 12/05 CBS will offer NCAA basketball March Madness games for free in 2006, on streaming ad-supported basis
- 9. 12/05 CBS offers free streaming video of 2 comedy programs *Two and a Half Men* and *How I Met Your Mother* on Yahoo! during the week of 12/27
- 10. 12/05 AOL / Google to collaborate to showcase AOL's premium video service within Google Video

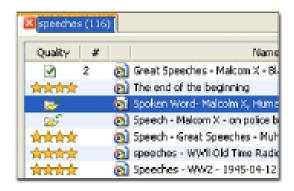
...Online Video Momentum – Building and Building

- 11. 1/06 Google to offer for-pay video over Internet from likes of CBS and NBA
- 12. 1/06 DirectTV / FOX to offer on-demand TV shows for \$0.99 and pre-air shows for \$2.99
- 13. 3/06 Cingular to offer on-demand video service for 3G mobile phones for \$20 a month
- 14. 4/06 Disney to offer many TV shows for free anytime on the web
- 15. 5/06 Italy to get mobile TV in time for World Cup. Service offered by Mediaset and Europa TV
- 16. 6/06 Yahoo Video hosts video uploads and allows users to search videos on other sites
- 17. 7/06 A&E's History Channel UK makes appearance on audio / video search engine Blinkx
- 18. 7/06 Amazon to open online movie store
- 19. 7/06 Warner Bros. Entertainment to sell studio shows on iTunes
- 20. 8/06 AOL opens video portal
- 21. 8/06 Google and Viacom sign video distribution deal
- 22. 9/06 Amazon launches Amazon Unbox, offering downloadable movies and TV shows
- 23. 9/06 Apple to offer downloadable movies from Miramax and Walt Disney via iTunes at prices of \$9.99 \$14.99
- 24. 10/06 Microsoft to use Blinkx technology to power the video search on its MSN Internet sites and Live.com
- 25. 10/06 CBS and YouTube strike strategic content and advertising partnership
- 26. 10/06 Google to acquire YouTube for \$1.65B in stock
- 27. 10/06 AOL and Brightcove launch distribution service for selling digital video downloads

Online Video – It's Getting Tagged / Findable / Easy to Search!

LimeWire 4.10

The Fastest P2P File Sharing Program on the Planet



- + Guaranteed clean install with no bundled software
- + Windows- and Mac-compatible
- Firewall-to-firewall transfers
- + Cleaner, updated interface with new icons
- + Proxy support



You also get:

- Ease of use just install, run, and search
- Ability to search by artist, title, genre, or other metainformation
- Elegant multiple search tabbed interface
- "Swarm" downloads from multiple hosts help you get files faster
- ITunes Integration for Mac and Windows users
- Unlique "ultrapeer" technology reduces bandwidth requirements for most users.
- Integrated chat
- Directly connect to a computer
- Browse host feature--even works through firewalls
- Added Bitzi metadata lookup
- International versions: Now available in many new languages

Minutes Growth Outstripping Page View Growth – Video Usage?



Source: comScore Media Metrix Global Data.

Power of the Door...

Sometimes you know what you are looking for and sometimes you don't - editing / organizing can help...

Selectively placed on Yahoo!'s front page / door

THE 9 is a daily broadcast on Yahoo! TV, showcasing 9 daily selections from millions of Web content files



Exclusive sponsorship by Pepsi

THE 9 features the 9 "best, weirdest, and funniest videos, photos, and stories" on the Web

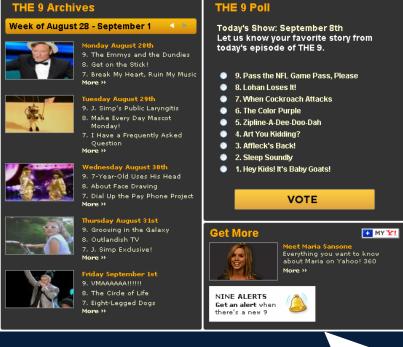
"The best Video Blog"
"One of the 50 coolest websites of 2006" –
TIME Magazine (8/06)

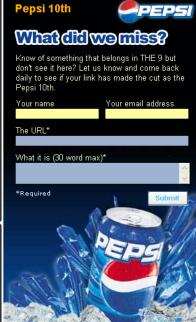
Vlog host: Maria Sansone

...Power of the Door

UGC + User Participation + Social Networking + Monetization

Watch video clips from previous "THE 9"s





Interactive -Online voting + user participation

Utilizes Yahoo! 360 as social networking tool

Video – Key Question

In 3 years, what % of content used on Web will be...

- Amateur
- Professional
- Semi-professional
- Combinations (mashups) of above?

Monetizing Video – Keywords + Adjacent Sponsorships – Do Users Really Want 30 Second Pre-Rolls?



Branding + Interactivity – Think About "Enter Sweepstakes" – Free Month of Puppy Chow... Game with Andy...

Compelling Audio Search Technology Exists



Source: Nexidia.

Monetizing Audio – Apple iPods + iTunes = \$16B, up from \$141MM 3 Years Ago

	CQ2:03E	CQ3:06E
Cumulative iPod Units Sold	972K	68MM
Cumulative iPod Revenue	\$136MM	\$14B
Cumulative iTunes Songs / Videos Downloaded	6MM	1.7B
Cumulative iTunes Songs / Videos Revenue	\$5MM	\$1.8B

Source: Apple Computer and Morgan Stanley Research estimates.

Using Google as Benchmark for U.S. Internet Sites, Inventory Monetization Should Still Have Significant Upside

	Unique Users (000s)	Total Pages Viewed (MM)	Total Minutes (MM)	CQ2E Annualized US Ad Rev. per User	
Total Internet	173,428	462,186	310,466	\$94.31	
Y/Y Growth	2%	2%	15%		
Google	107,365	10,264	5,232	\$36.84*	
Y/Y Growth	23%	62%	80%		
Yahoo!	129,724	39,878	42,715	\$25.95*	
Y/Y Growth	5%	-9%	25%		
Microsoft	119,376	18,721	22,125	\$9.75	
Y/Y Growth	4%	-14%	0%		
Time Warner	120,276	18,000	36,106	\$4.85	
Y/Y Growth	1%	-43%	-6%		
MySpace	55,849	34,988	11,503	\$3.95	
Y/Y Growth	158%	263%	634%		
еВау	78,991	10,972	6,480	\$0.98	
Y/Y Growth	13%	1%	-7%		
YouTube	20,759	1,326	1,047	< \$3.00*	
Y/Y Growth					

^{*} Denotes net revenue estimates. Source: comScore Media Metrix and Morgan Stanley Research estimates.

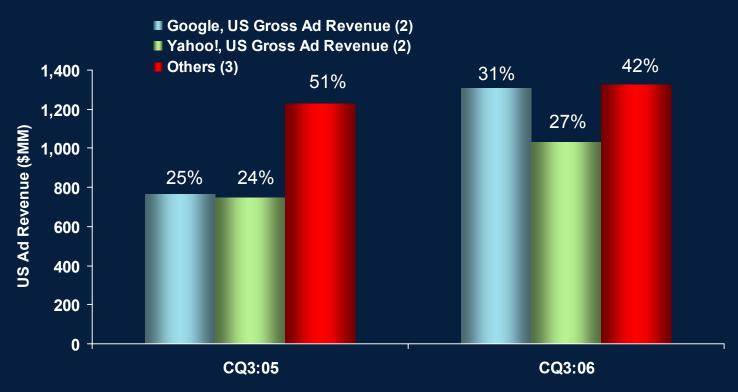
Only 13% of Top 15 Online Retailers are Internet Pure-Plays – What About Media?

		2005 Online Global	2005 Online Global Sales
Rank	Company	Sales (US\$MM)	as % of Total Sales
1	Amazon.com	\$8,490	100%
2	Office Depot	3,800	27
3	Staples	3,800	24
4	Dell	3,779 *	7
5	HP Home & Home Office	2,829 *	3
6	OfficeMax	2,567	28
7	Sears Holdings	2,160 *	4
8	CDW	1,769	28
9	SonyStyle.com	1,625 *	2
10	Newegg.com	1,300	100
11	Best Buy	1,267 *	4
12	Wal-Mart	1,050 *	0.3
13	J.C. Penney	1,039	6
14	QVC	1,017	16
15	Apple Computer	901 *	7

^{*} Denotes 'Internet Retailer' estimate. Source: Internet Retailer Report (2006).

Google + Yahoo! = ~58% of US Online Ad Revenue

US Online Ad Revenue Mix (1)



(1) Source: Ad revenue totals from IAB/PriceWaterhouseCoopers Interactive Advertising reports.
 (2) Calculated as reported revenue multiplied by the reported percentage of US Ad Revenue.
 (3) Calculated as the difference between total IAB US revenue and the sum of Google, Yahoo! gross revenue.
 (4) Assuming that TAC of Google and Yahoo! was included in others total, this segment would have been up 20% Y/Y.

Google + Yahoo! Share Significant (~30%) Portion of Revenue with Partners + Affiliates – Trend Will Continue

- Google generated \$2.7B in gross revenue in CQ3; it PAID OUT \$825MM to thousands of partners like AOL, Ask Jeeves, Blogger, EarthLink, and HowStuffWorks
- Yahoo! generated \$1.6B in gross revenue in CQ3; it PAID OUT an estimated \$459MM to thousands of partners like CNN, ESPN and The Wall Street Journal

Watch Where Global Younger Generation Goes

Ringtone Downloads, Connecting Mobiles to Net



Social Networking







Video









Web OS Programs











In-Game Advertising



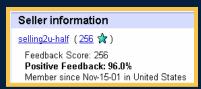


Community / UGC / Personalization are Key...

Yahoo! Movie Reviews



eBay Feedback Ratings



Amazon Recommendation Engine

Customers who bought items like this also bought

Fever Pitch (Boston Red Sox Collector's Edition) DVD ~ Peter Farrelly

Now I Can Die in Peace: How ESPN's Sports Guy Found Salvation, with

Still, We Believe - The Boston Red Sox Movie DVD ~ Paul Doyle Jr.

Reverse of the Curse of the Bambino DVD ~ George Roy (II)

Tencent Instant Messaging (PC / Mobile)



Social Networking / Tagging



Blogs



...Community / UGC / Personalization are Key

Multimedia Content Sharing



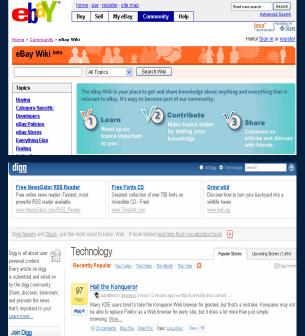






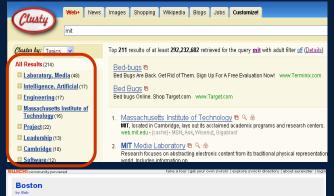


Knowledge Sharing





Personalized Internet Browsers & Search Engines





Showing top results (1 - 20)

Boston Red Sox : The Official Site





Hot Searches

boston tourist attractions boston

airnorts, boston cinemas

boston restaurants

hoston weather redsox

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(as of October 31, 2006)

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	Coverage Universe		Investment Banking Clients (IBC) % of Total % of Rating		
Stock Rating Category	Count	% of Total	Count	IBC	Category
Overweight/Buy	801	38%	309	44%	39%
Equal-weight/Hold	942	45%	308	44%	33%
Underweight/Sell	345	17%	78	11%	23%
Total	2,088		695		

Data include common stock and ADRs currently assigned ratings. An investor's decision to buy or sell a stock should depend on individual circumstances (such as the investor's existing holdings) and other considerations. Investment Banking Clients are companies from whom Morgan Stanley or an affiliate received investment banking compensation in the last 12 months.

Analyst Stock Ratings

Overweight (O). The stock's total return is expected to exceed the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Equal-weight (E). The stock's total return is expected to be in line with the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Underweight (U). The stock's total return is expected to be below the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

More volatile (V). We estimate that this stock has more than a 25% chance of a price move (up or down) of more than 25% in a month, based on a quantitative assessment of historical data, or in the analyst's view, it is likely to become materially more volatile over the next 1-12 months compared with the past three years. Stocks with less than one year of trading history are automatically rated as more volatile (unless otherwise noted). We note that securities that we do not currently consider "more volatile" can still perform in that manner.

Unless otherwise specified, the time frame for price targets included in this report is 12 to 18 months.

Analyst Industry Views

Attractive (A): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be attractive vs. the relevant broad market benchmark, as indicated below.

In-Line (I): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be in line with the relevant broad market benchmark, as indicated below.

Cautious (C): The analyst views the performance of his or her industry coverage universe over the next 12-18 months with caution vs. the relevant broad market benchmark, as indicated below.

Benchmarks for each region are as follows: North America - S&P 500; Latin America - relevant MSCI country index or MSCI Latin America Index; Europe - MSCI Europe; Japan - TOPIX; Asia - relevant MSCI country index.

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