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RELATIONSHIP CAPITAL

TOP MOBILE INTERNET TRENDS

Matt Murphy / Mary Meeker – 2/10/11

http://www.slideshare.net/kleinerperkins/kpcb-top-10-mobile-trends-feb-2011

| COLLABORATION | LEADERSHIP | VISION | EXPERIENCE | PASSION |

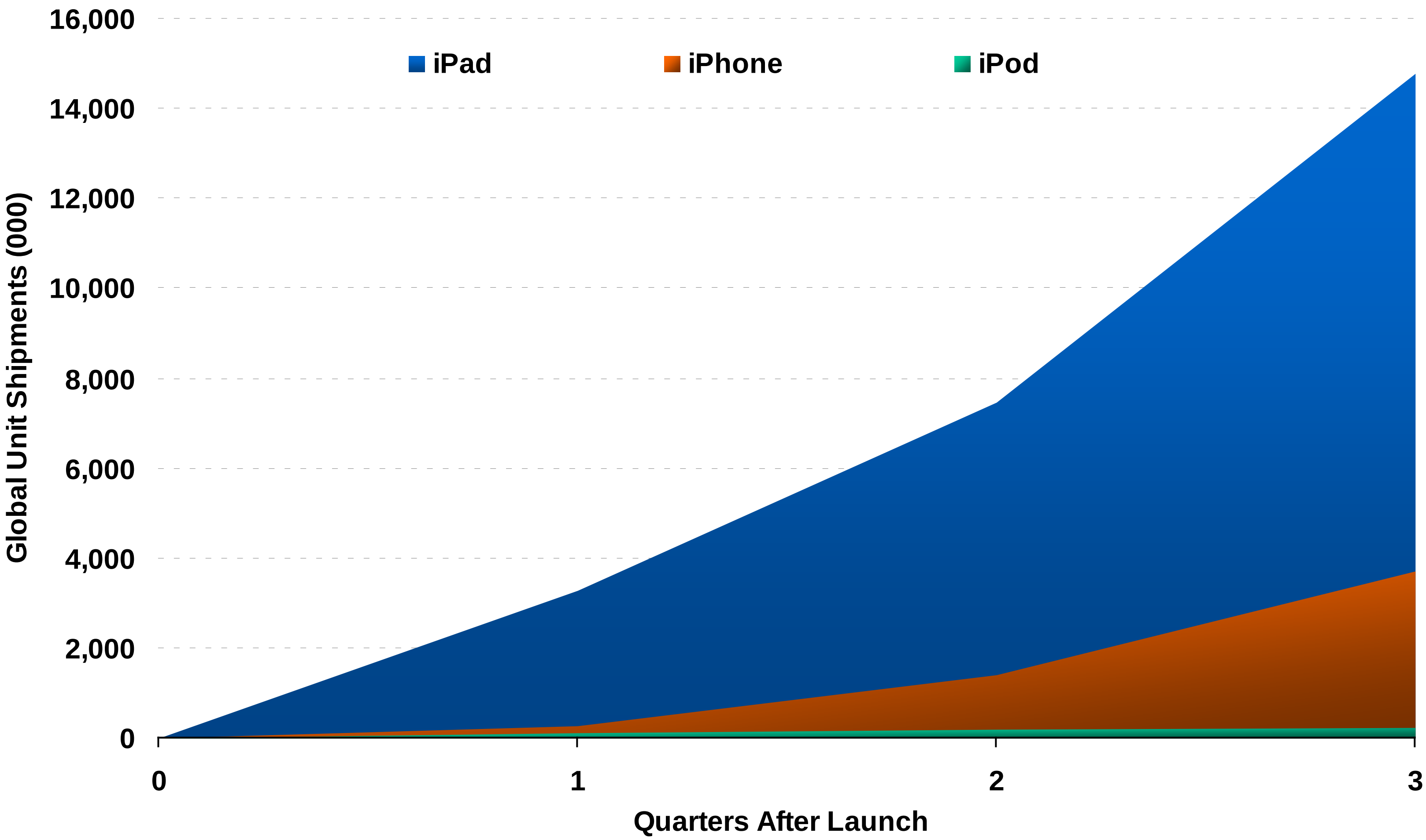
Mobile Trends – Rapid Growth + Disruption

1. Mobile Platforms Hit Critical Mass
2. Mobile is Global
3. Social Networking Accelerating Growth of Mobile
4. Time Shifting to Mobile Usage
5. Mobile Advertising – Growing Pains But Huge Promise
6. mCommerce – Changing Shopping Behavior
7. Emergence of Virtual Goods & In-App Commerce
8. Not All Platforms Are Created Equal
9. Change Will Accelerate, New Players Emerging Rapidly
10. Summary Trends to Watch

MOBILE PLATFORMS HIT CRITICAL MASS

iPods Changed the Media Industry…iPhones Ramped Even Faster…iPad Growth Leaves its "Siblings" in the Dust

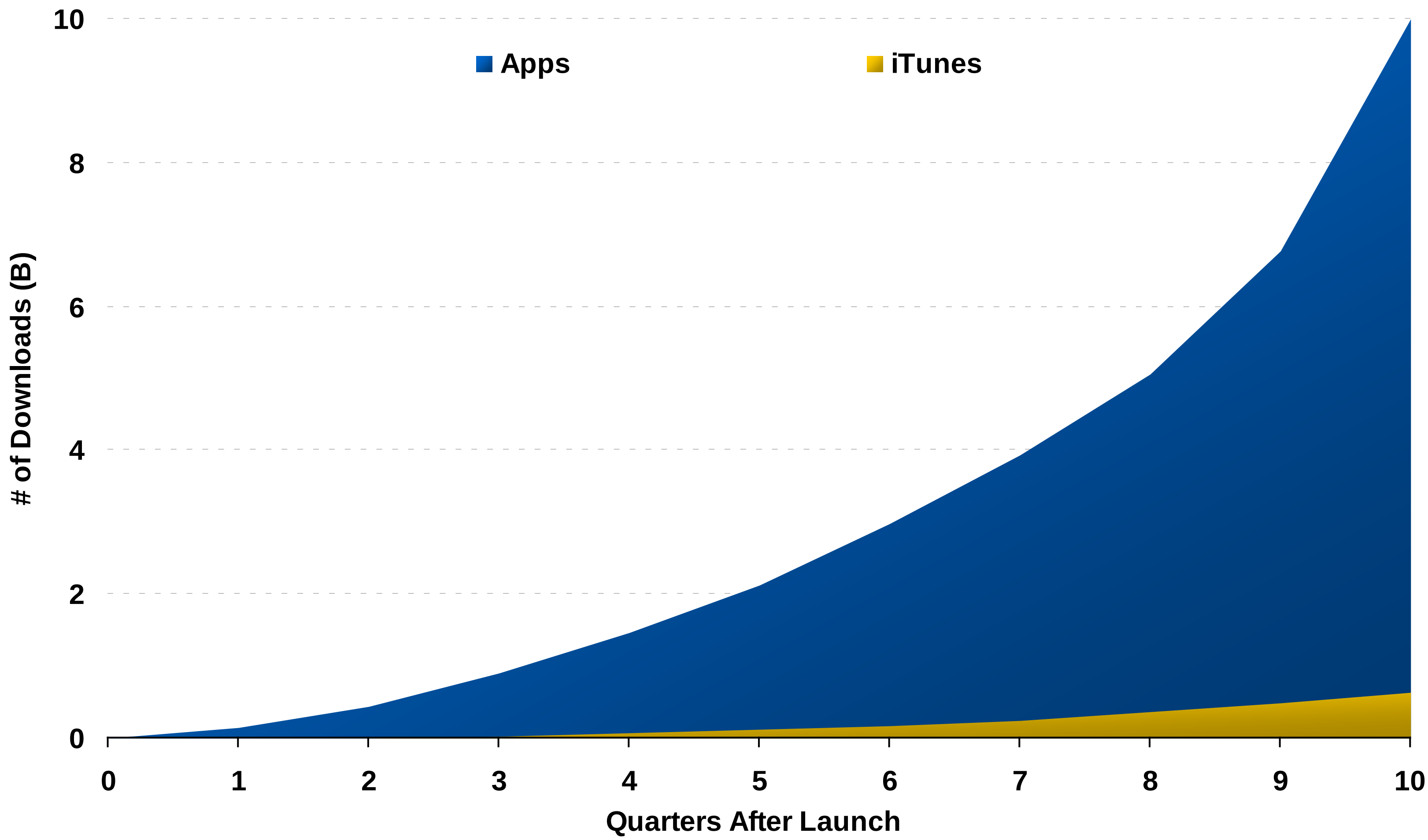
First 3 Quarters Cumulative Unit Shipments, iPod vs. iPhone vs. iPad



Source: Apple.

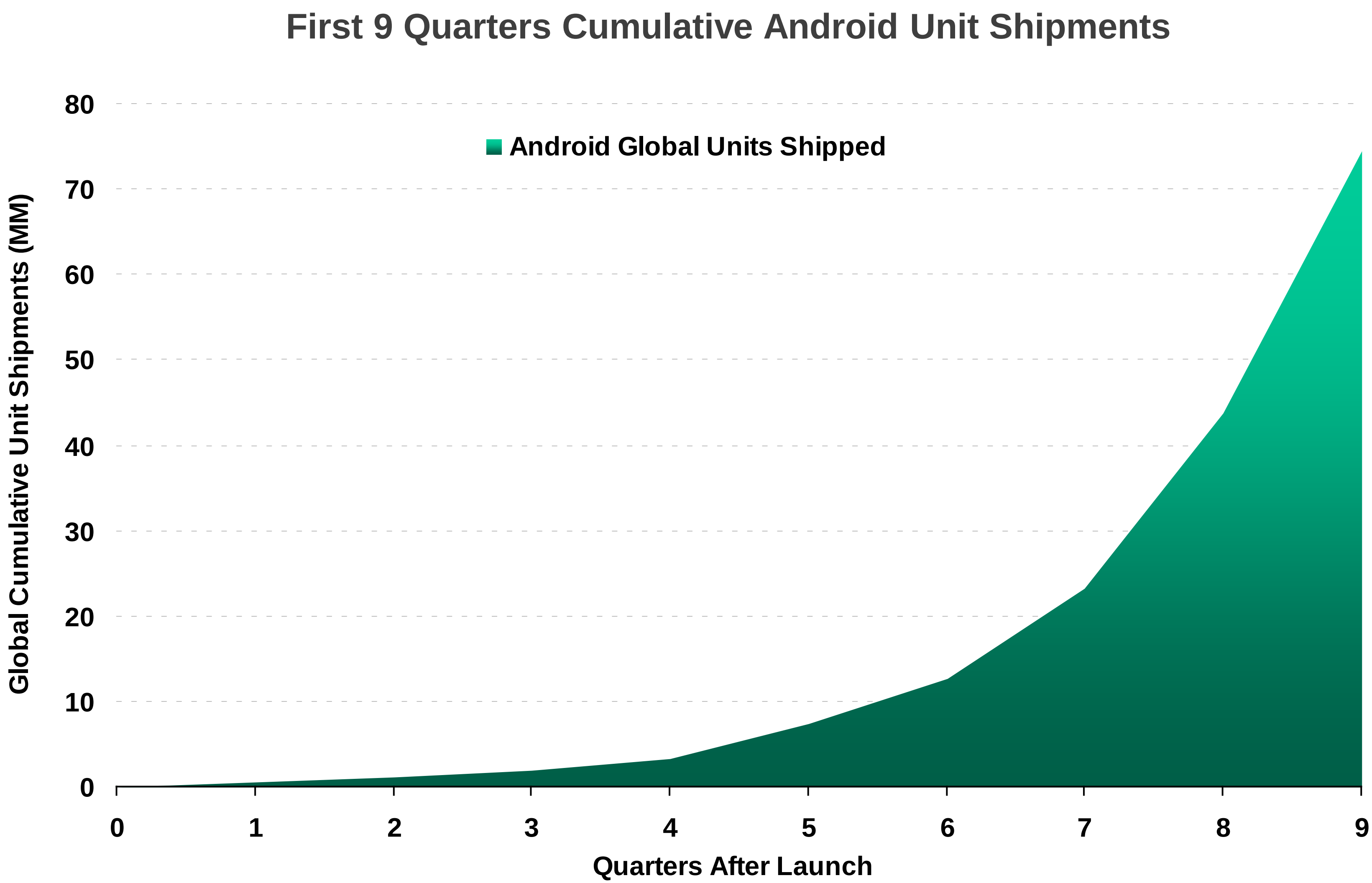
iTunes Changed the Media Industry…App Store Growth Leaves it in the Dust

Cumulative Number of Downloads, iTunes Music / Video / Movie vs. Apps, First 10 Quarters



Source: Apple.

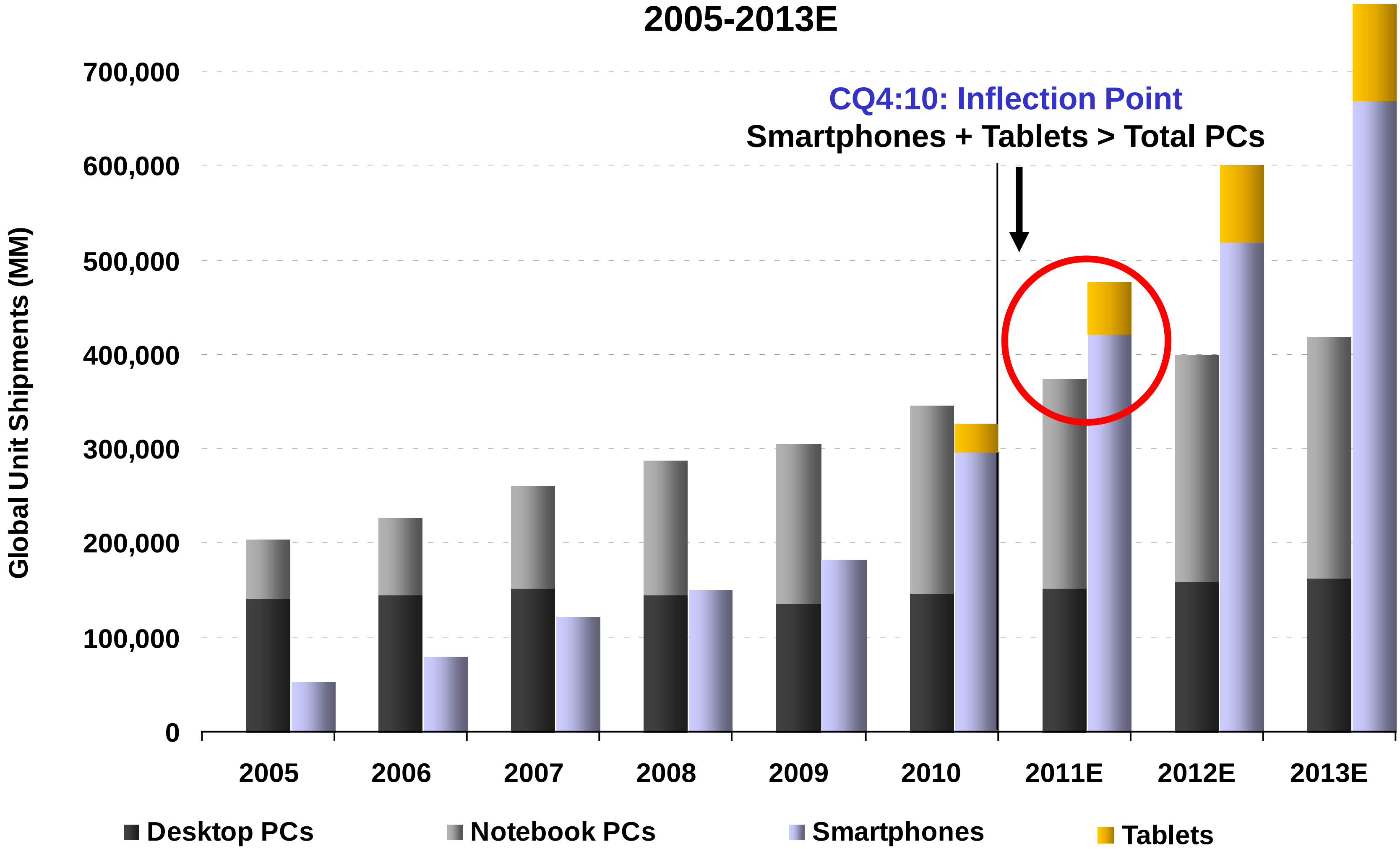
Android has Hit Critical Mass



Source: Gartner.

Smartphone + Tablet > PC Shipments Since CQ4:10

Global Unit Shipments of Desktop PCs + Notebook PCs vs. Smartphones + Tablets, 2005-2013E



Note: Notebook PCs include Netbooks. Source: Katy Huberty, Ehud Gelblum, Morgan Stanley Research.
Data and Estimates as of 2/11

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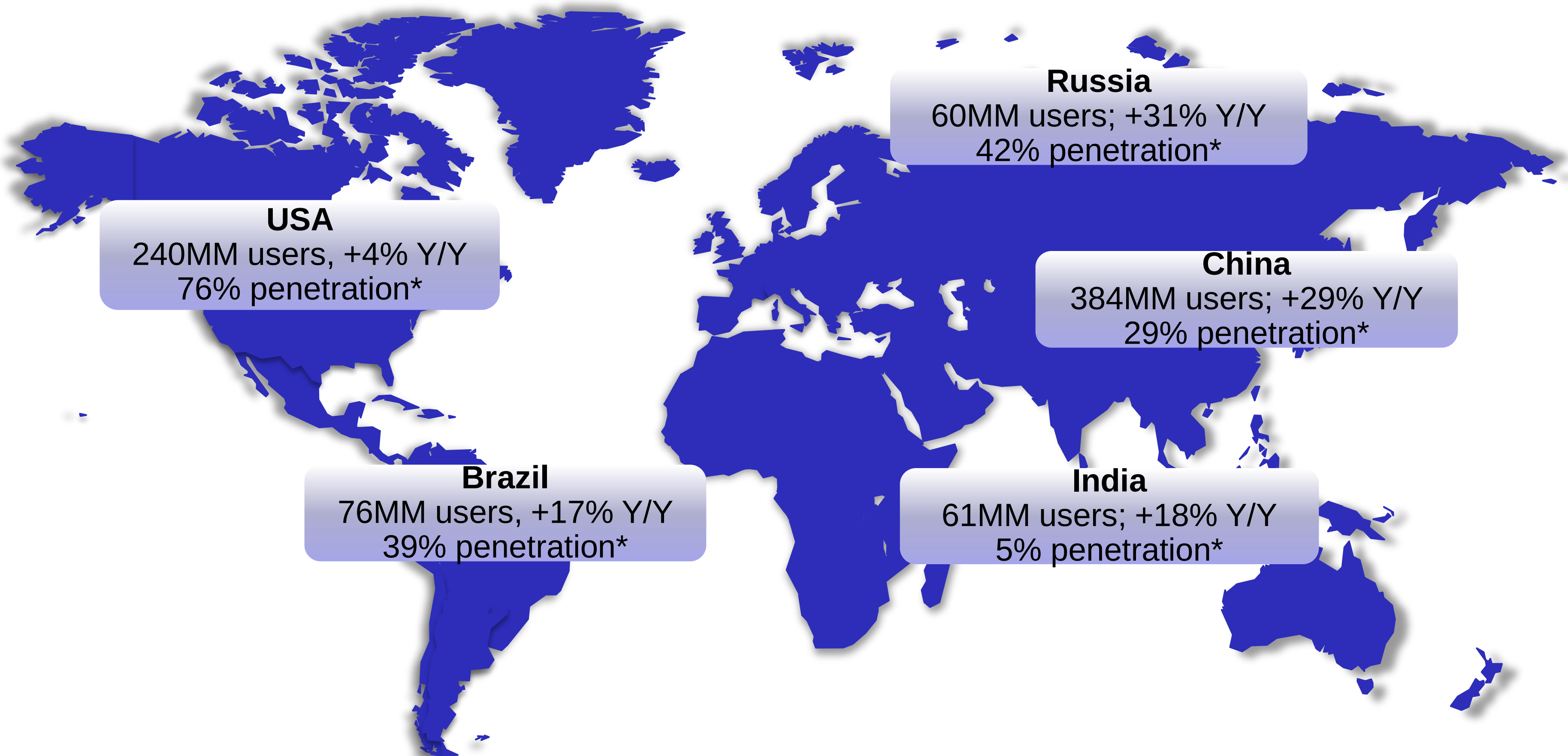
MOBILE IS GLOBAL

5 Countries = 46% of Internet Users – China, USA, Russia, Brazil, India

2009 – 1.8B Global Internet Users, +13% Y/Y[1]; 18.8T Minutes Spent, +21% Y/Y[2]



Note: *Penetration is per 100 inhabitants.
Source: 1) Internet user stats per International Telecommunications Union; 2) time spent data per comScore global 12/09.

35% Y/Y Global Mobile 3G Subscriber Growth to ~726MM, CQ3

Rank	Country	CQ3:10 3G Subs (MM)	3G Penetration	3G Sub Y/Y Growth	Rank	Country	CQ3:10 3G Subs (MM)	3G Penetration	3G Sub Y/Y Growth
1	USA	141	47%	27%	16	Taiwan	11	42%	40%
2	Japan	109	95	12	17	Malaysia	9	26	23
3	Korea	40	79	12	18	Saudi Arabia	8	18	50
4	Italy	34	40	21	19	Sweden	7	57	43
5	UK	31	41	32	20	South Africa	7	15	36
6	Germany	28	28	28	21	Turkey	6	10	160
7	Spain	27	48	21	22	Netherlands	6	32	27
8	Poland	23	50	35	23	Philippines	6	7	98
9	Indonesia	21	11	54	24	Portugal	6	35	8
10	France	21	33	30	25	Austria	6	46	30
11	China	20	2	458	26	Israel	5	52	18
12	Brazil	19	10	177	27	Vietnam	5	4	707
13	Australia	18	66	29	28	Singapore	4	59	48
14	Canada	12	50	147	29	Egypt	4	7	34
15	Russia	12	5	67	30	Greece	4	26	28

Global 3G Stats: Subscribers = ~726MM Penetration = 14% Growth = 35%

Note: *Informa reports a lower global 3G subscription # vs. Ovum due to the exclusion of 4G and the use of different sources. 3G includes CDMA 1x EV-DO and Rev. A/B, WCDMA, HSPA; Source: Informa WCIS+.

SOCIAL NETWORKING ACCELERATING GROWTH OF MOBILE

Different Types of Platforms = Facebook + Apple + Google

SOCIAL

facebook

662MM users
+41% Y/Y

550K+ apps
500MM+ downloads

MOBILE

iPhone/iTouch/iPad

130MM+ users
+103% Y/Y

350K+ apps
10B+ downloads

SEARCH

Google*

972MM users
+8% Y/Y

CQ4: CPCs +4% Q/Q
paid clicks +18% Y/Y

Source: Company data, comScore global 12/10.
*Google Android momentum especially strong too.

Emerging Types of Social Networks…More to Come

INFORMATION SHARING

twitter

253MM
unique visitors
+85% Y/Y

GAMING

zynga
CONNECTING THE WORLD THROUGH GAMES

130MM+
monthly active users
+15% Y/Y

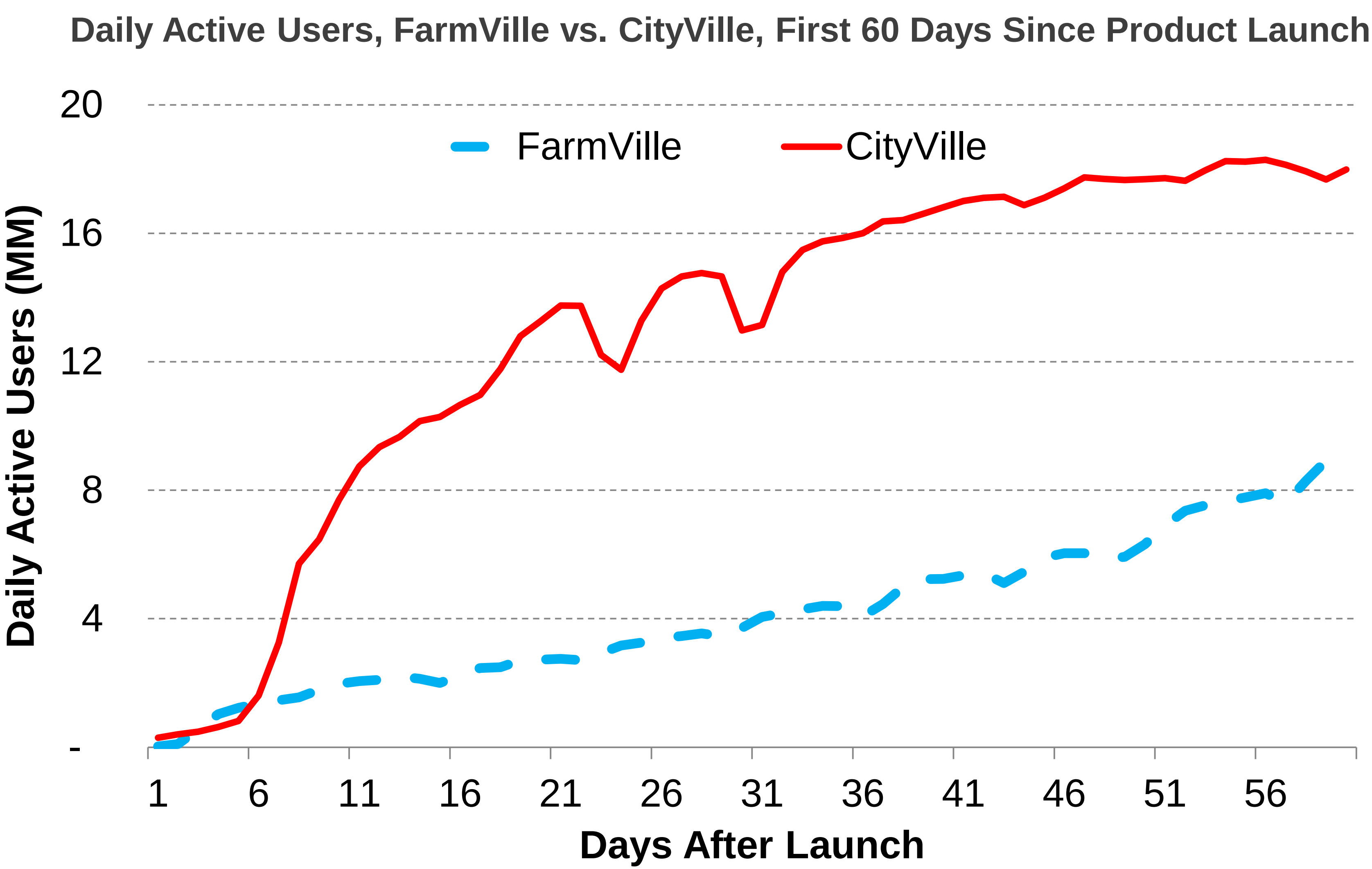
COMMERCE

GROUPON
Collective Buying Power

51MM
subscribers
+25x Y/Y

Source: Groupon, Twitter, Zynga.

Zynga Proves that Great New Social Products for 'Old' Users Can Ramp Extremely Quickly



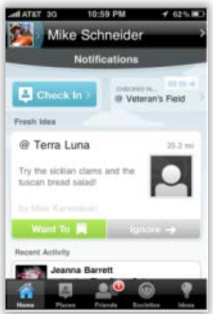
Source: Zynga. Note that FarmVille launched in 6/09, CityVille launched in 12/10.

Real-Time Social Features Accelerating Mobile Usage Growth - Sharing + Location + Friending...

Location Sharing

FourSquare

Whrrl

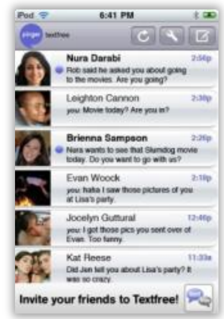


Communication

Twitter

TextPlus

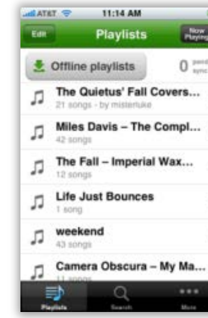
TextFree



Music Sharing

Shazam

Spotify

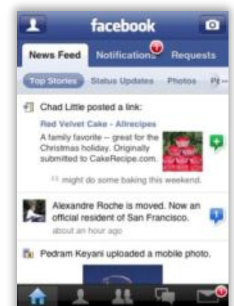


FB Connect for Mobile – Built in Friend Connectivity, Share, Virality

Invite Friends

Share

Feed



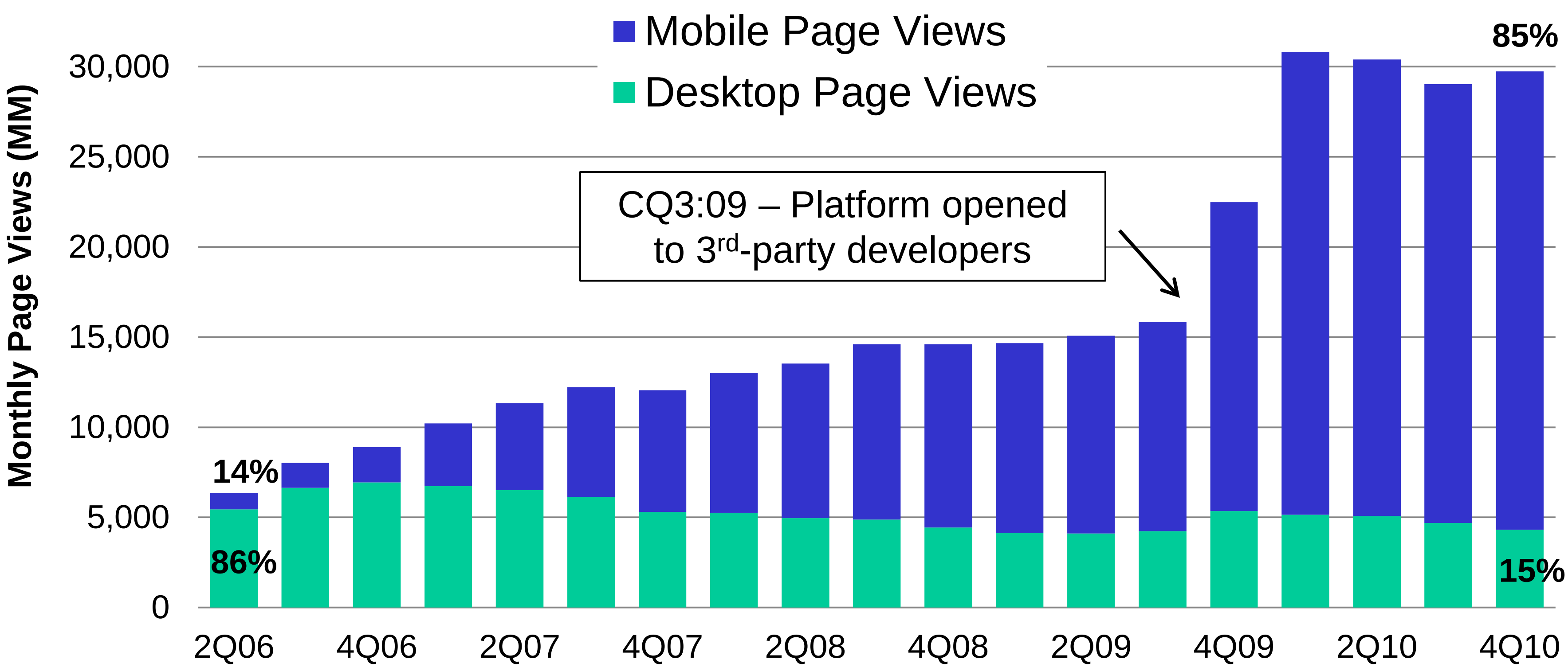
KPCB's John Doerr Calls It "SoLoMo"…

SoLoMo		
So	**Lo**	**Mo**
Social	**Local**	**Mobile**

TIME SHIFTING TO MOBILE USAGE

Japan Social Networking Trends Show Importance of Mobile – Mixi Mobile Page Views = 85% vs. 14% 4.5 Years Ago

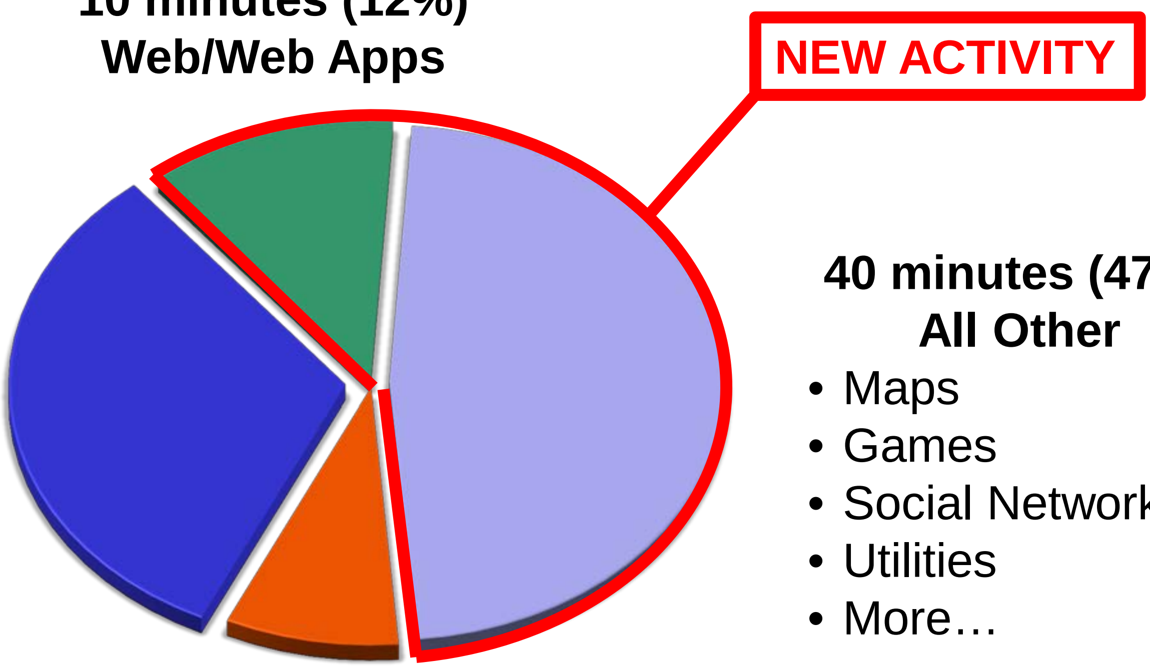
Mixi's (Japan's Leading Social Network) Monthly Page Views, Mobile vs. PC, CQ2:06-CQ4:10



Note: Mixi is one of Japan's leading social networking sites on PC and mobile with 20MM registered users as of 12/31/10. It monetizes mobile usage via sales of avatars, customized homepages and other premium services.
Source: Company reports, Naoshi Nema, Morgan Stanley Research

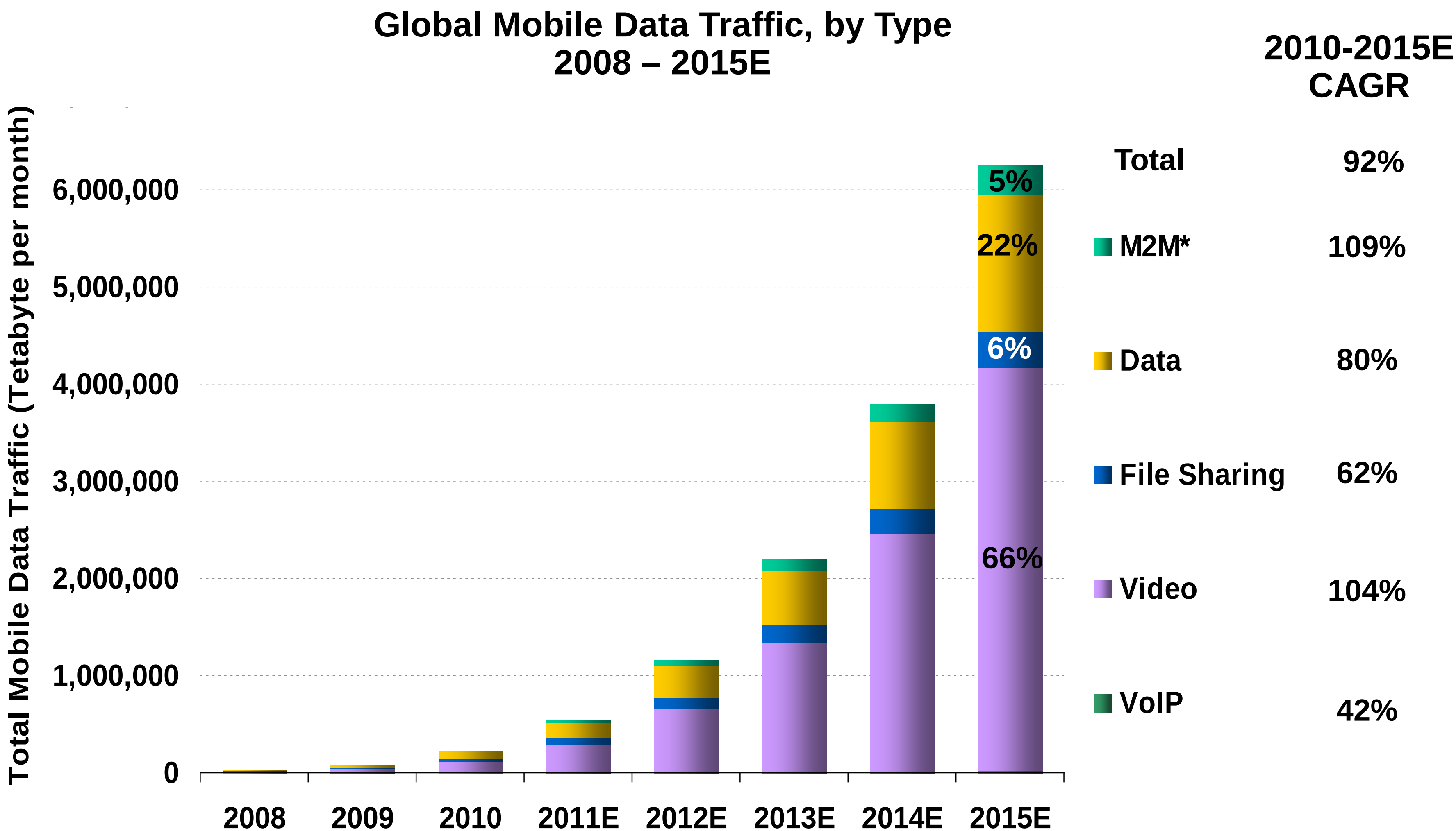
60% of Time Spent on Smartphones is New Activity for Mobile Users

Average Time Spent on Various Mobile Functions, 1/11



Source: AppsFire, 1/11.
Note that Android users show a higher % browsing activity.

Global Mobile Data Traffic Should Grow 26x Over Next 5 Years



Source: Cisco Visual Networking Index (VNI) Global Data Traffic Forecast, 2010-2015

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Strong Mobile Trends for Leading Social Companies

facebook

200MM mobile active users vs.
50M in 9/09
2x more active than desktop-only users

twitter

Mobile = 50% of total active users,
vs. 25% Y/Y
Mobile = 40% of all tweets

Spotify™

Introduction of mobile product drove 2x conversion
ratio from free to paying subscribers
Mobile users = 25-30% total users in mature markets

SHAZAM®

100MM mobile users vs.
50MM Y/Y

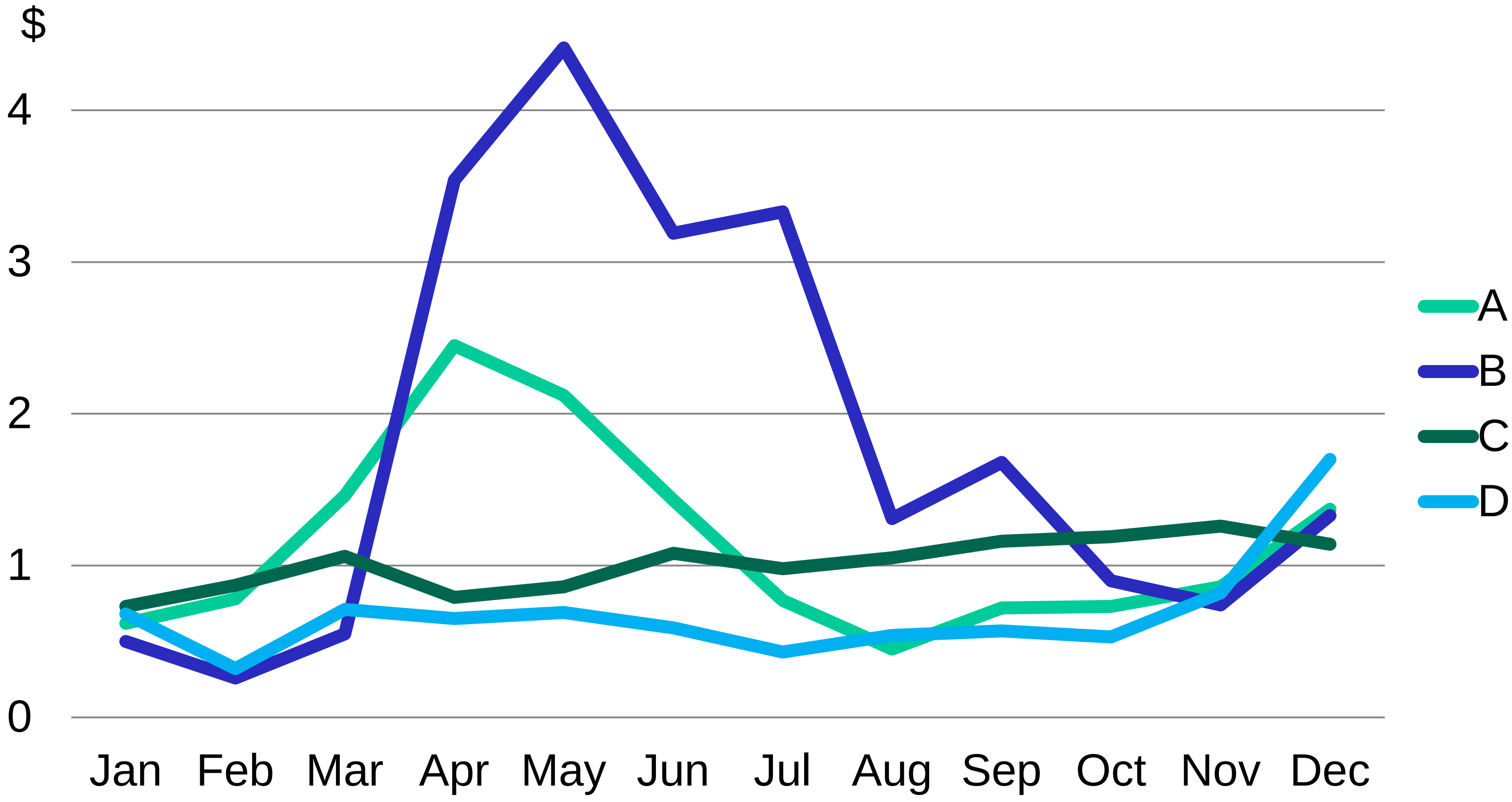
PANDORA®

Adding 3MM users per month
50% of all users subscribe on mobile

MOBILE ADVERTISING – GROWING PAINS BUT HUGE PROMISE

So Far, Difficult to Build Consistent Mobile Ad Revenue Owing to Lumpy Buys, Need for More Premium Advertisers…

2010 Mobile eCPMs for 4 KPCB Portfolio Companies



Source: KPCB Companies

…Yet the Efficacy of Mobile Ads vs. Other Media is Compelling

Relative Efficacy of Mobile vs. Other Advertising Media, 1/11

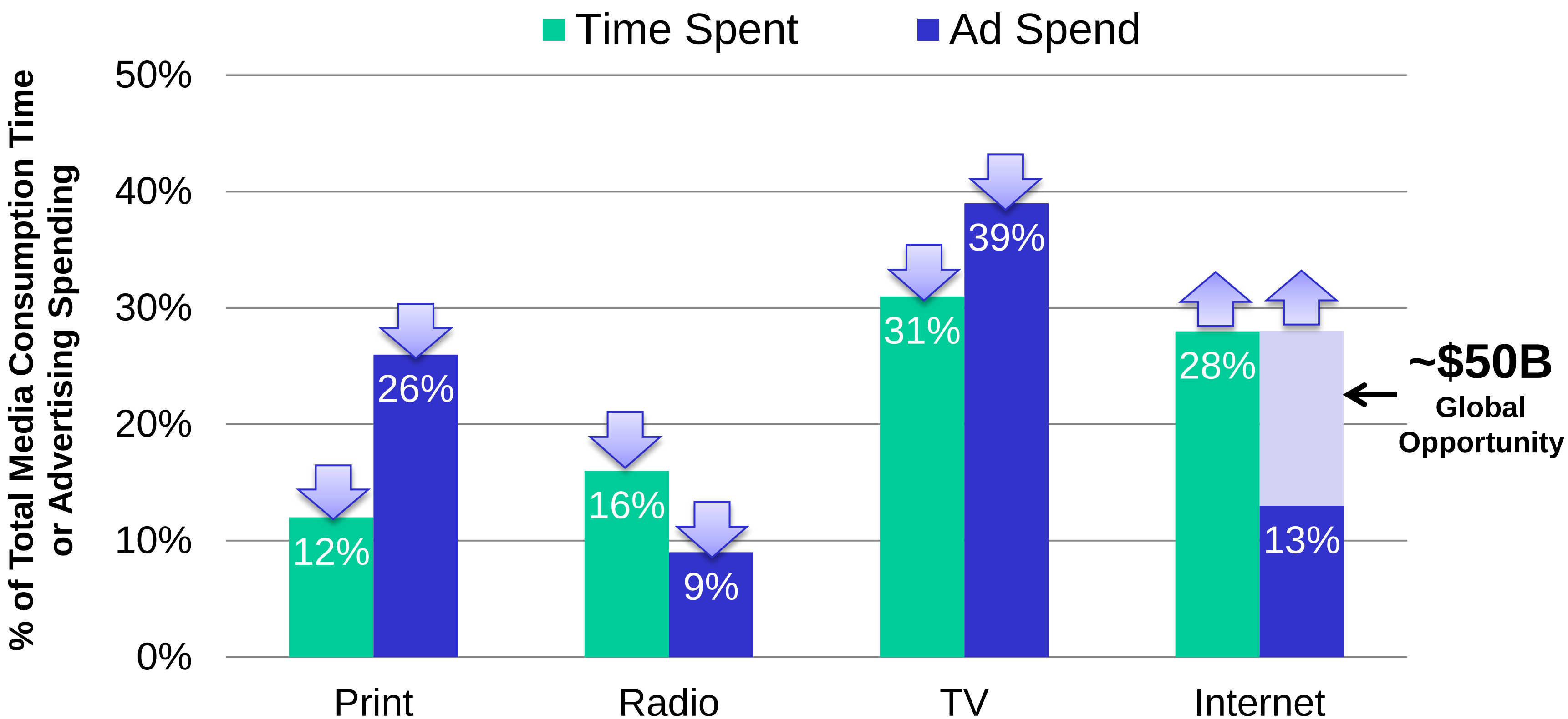
	Reach	Targeting	Engagement	Viral	Transaction
Mobile	100	90	70	80	80
Internet	50	50	80	40	60
TV	50	30	90	10	20
Print	40	10	20	10	10
Radio	60	10	40	10	
Outdoor	20	10	10		

Source: Chetan Sharma, January 2011

Media Time Spent vs. Ad Spend Still Out of Whack

Internet/Mobile (upside…) vs. Newspaper/Magazine/TV (downside…)

% of Time Spent in Media vs. % of Advertising Spending, USA 2009



Note: Time spent data per NA Technographics (2009), ad spend data per VSS, Internet advertising opportunity assumes online ad spend share matches time spent share, per Yahoo!. Source: Yahoo! Investor Day, 5/10.

Advertising $s Follow Eyeballs –
Ad Revenue per User = $46 in 2009E vs. $0 in 1994E

	1995E	2009E
Global Internet Ad Revenue	$55MM	$54B
Ad Revenue per User	$9	$46
Global Internet Users	6MM	1.2B

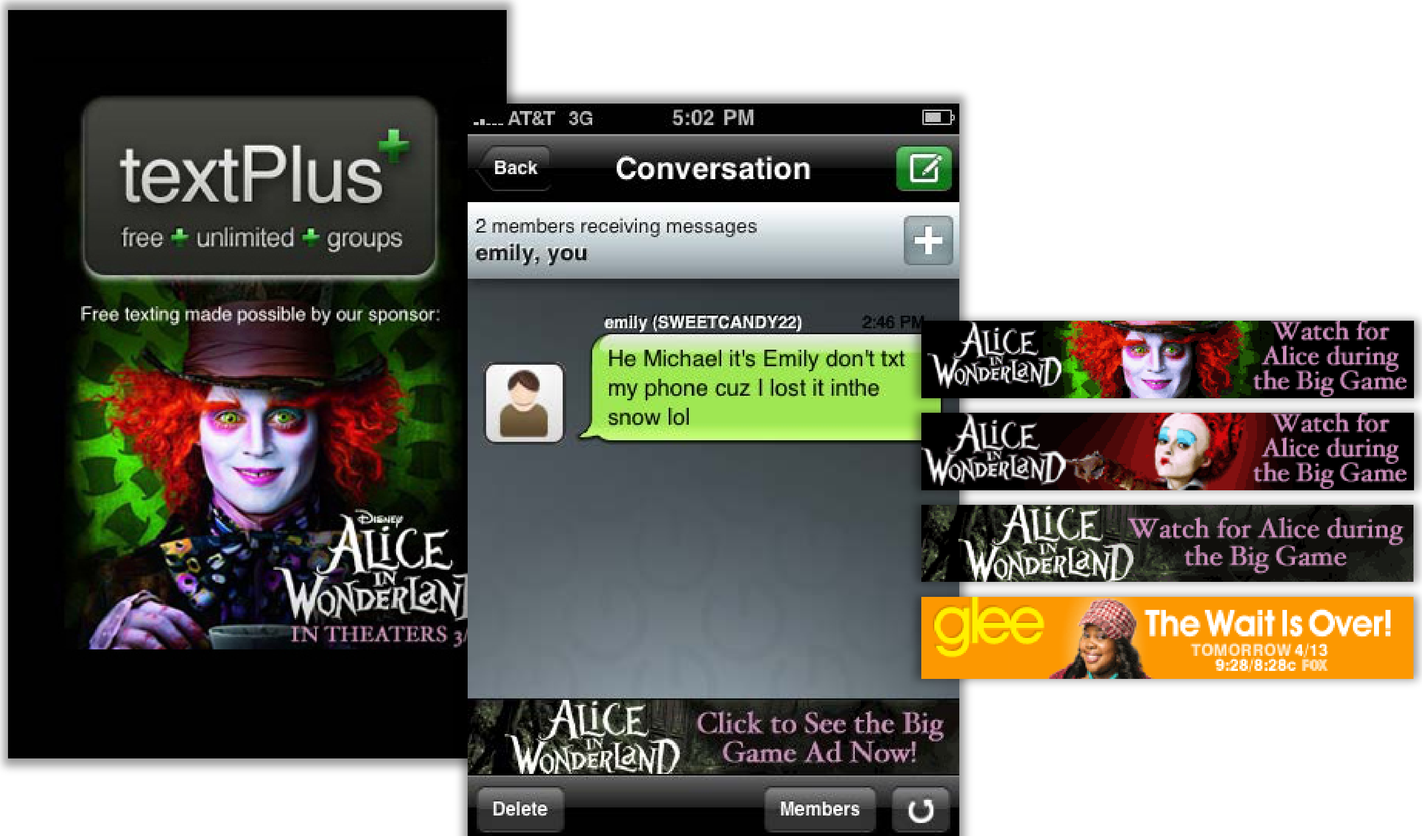
Source: Global online ad revenue per Juniper Communications (1995), ZenithOptimedia (2009). Internet users per Morgan Stanley estimate (1995) and comScore (2009). We note that comScore reports a lower global Internet user # than International Telecommunications Union. Morgan Stanley Research.

KP CB

Google Paid Clicks & Cost-Per-Click Continue to Accelerate…Mobile Search as a Key Driver?

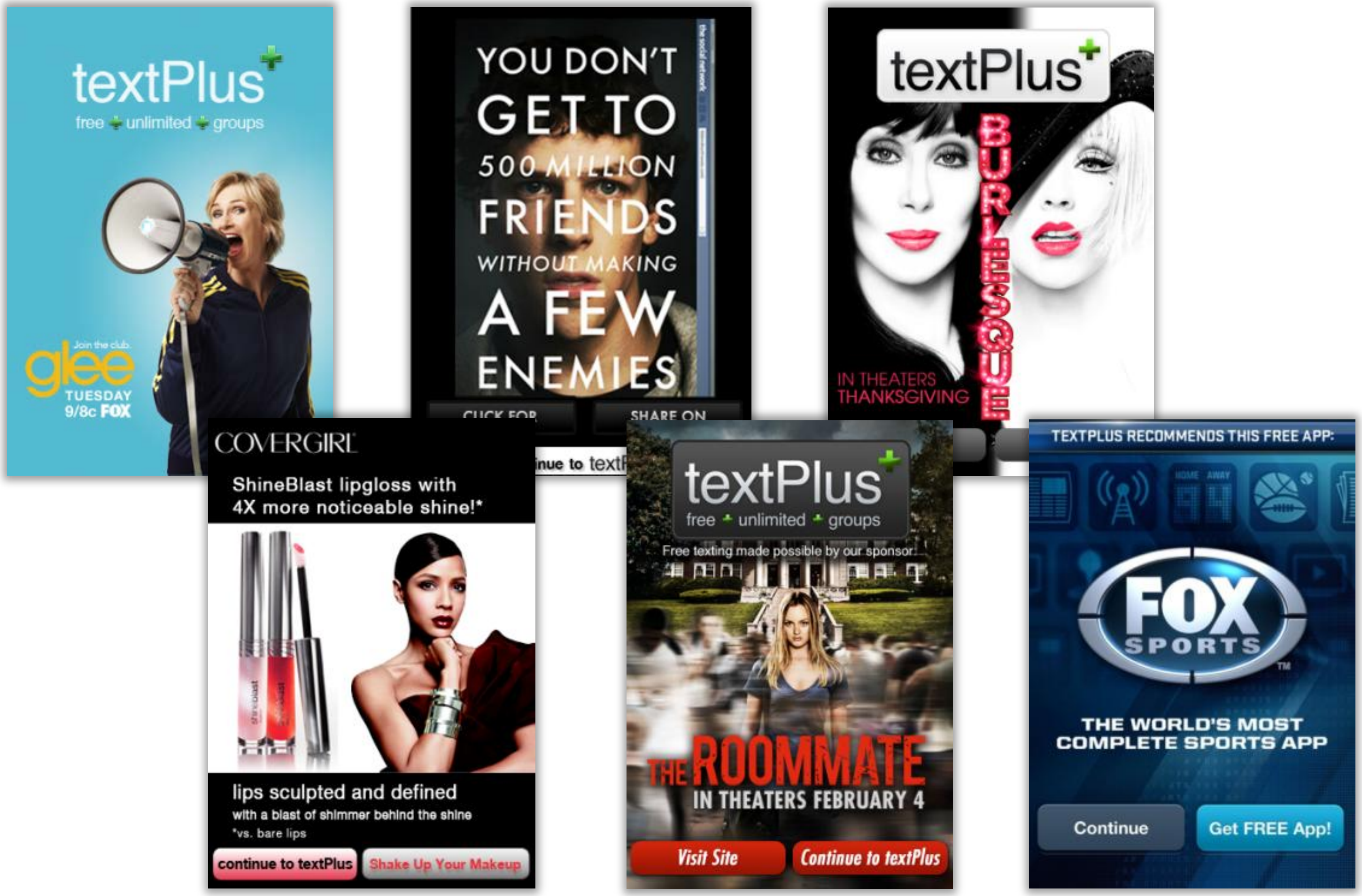
	CQ4:09	CQ1:10	CQ2:10	CQ3:10	CQ4:10
Gross Advertising Revenue ($MM)	$6,465	$6,475	$6,562	$7,032	$8,167
Y/Y Growth	*17%*	*21%*	*23%*	*22%*	*26%*
Q/Q Growth	*12%*	*0%*	*1%*	*7%*	*16%*
Aggregate Paid Clicks (MM)	12,401	12,909	12,651	13,157	14,669
Y/Y Growth	*13%*	*15%*	*15%*	*16%*	*18%*
Q/Q Growth	*9%*	*4%*	*-2%*	*4%*	*11%*
Cost per Click (CPC - $)	$0.52	$0.50	$0.52	$0.53	$0.56
Y/Y Growth	*4%*	*6%*	*7%*	*6%*	*7%*
Q/Q Growth	*3%*	*(4%)*	*3%*	*3%*	*4%*

New & More Powerful Ad Units are Rolling Out Quickly in Mobile…



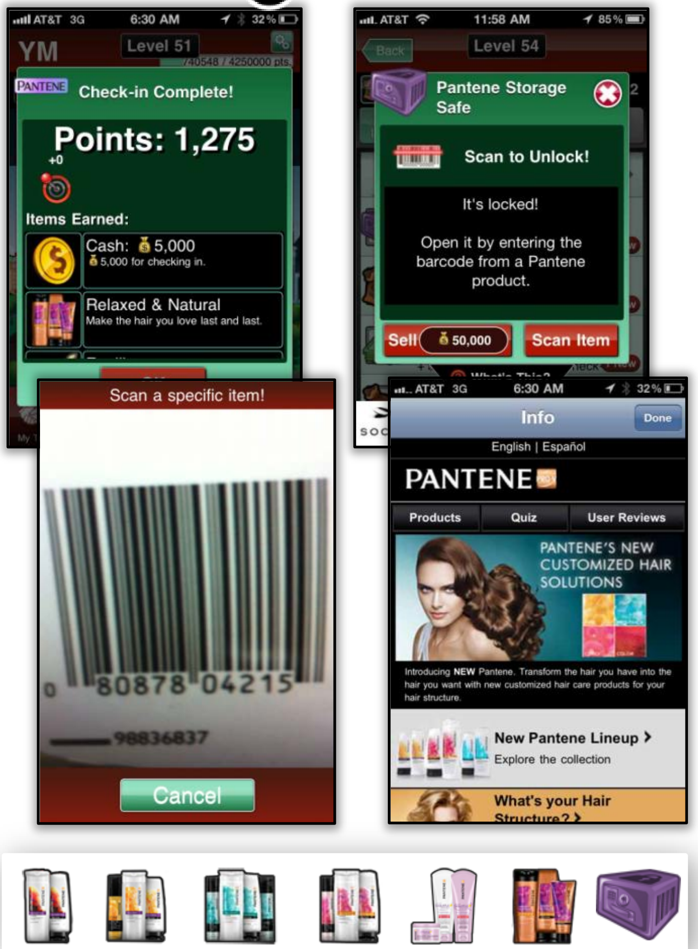
Disney Super Bowl Sunday takeover campaign -- All pages of textPlus, February 7, 2010

…And Many Brands are Testing



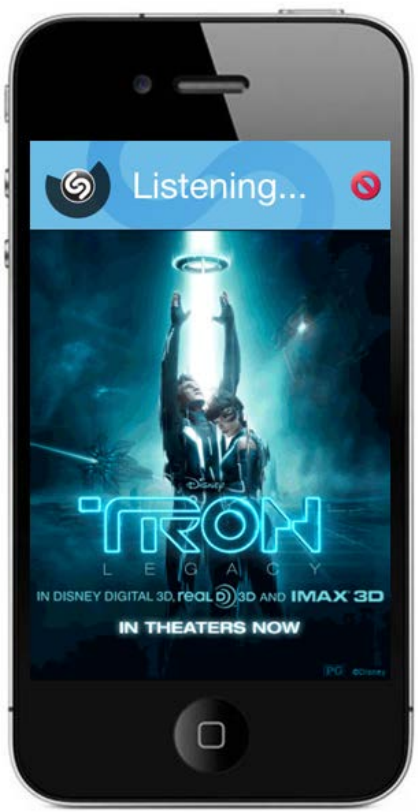
Branded Virtual Goods & Sponsorships are Impactful

myTown

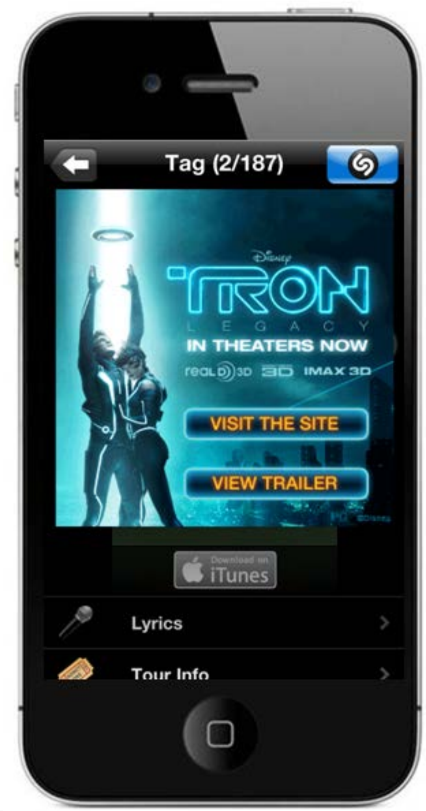


shazam

Interstitial



Call to action – click to mobile site, app, call, location, add to calendar, and more

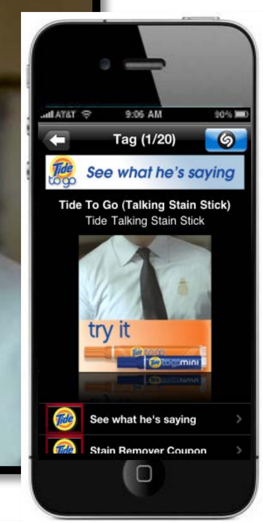


Source: Booyah and Shazam.

Smartphones Can Make TV Interactive

TV Action Via Mobile:

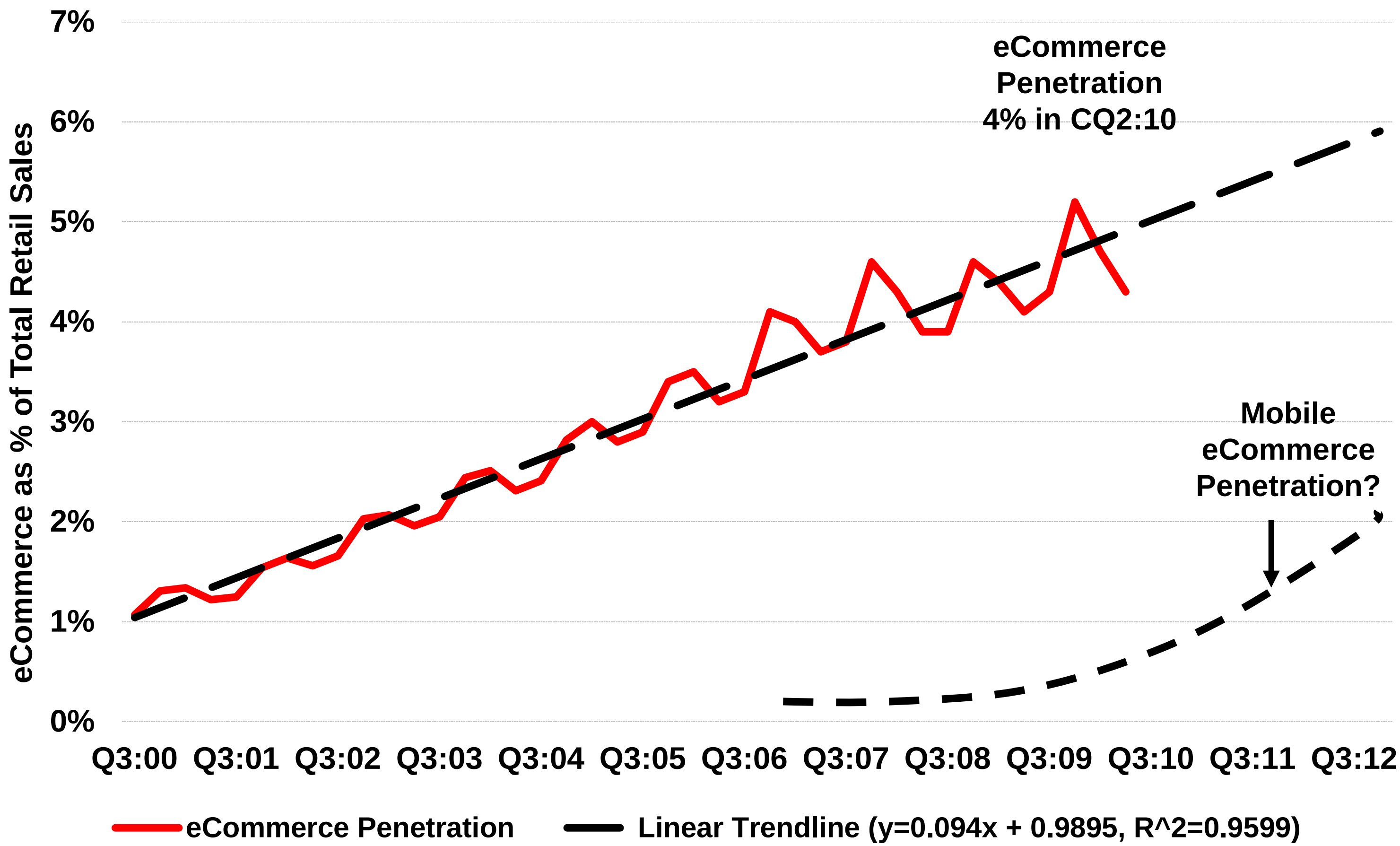
- Get coupons / offers
- Learn more about products
- Share content with friends



M-COMMERCE – CHANGING SHOPPING BEHAVIOR

Online Commerce Gaining Share vs. Offline –
Online at ~5% of USA Retail, Mobile Should Get to Same Level Much Faster

USA eCommerce % Share[1] of Total Retail Sales, CQ3:00-CQ4:12E



Note: (1) Adjusted for eBay by adding back eBay US gross merchandise volume;
Source: US Dept. of Commerce (CQ2:10), Morgan Stanley Research.

Mobile Revolutionizing Commerce – With Constant Product Improvements

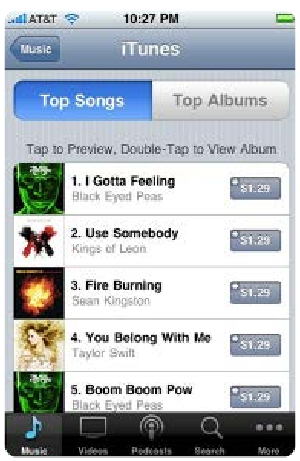
- ***Location-Based Services*** – Enable real-time physical retail / service opportunities
- ***Transparent Pricing*** – Instant local + online price comparison could disrupt retailers
- ***Discounted Offers*** – Deep discounts drive foot traffic to local retailers
- ***Immediate Gratification*** – OTA (over-the-air) instant digital product + content delivery

Location-Based Services
Shopkick iPhone App
Finds deals and offers in your area

Transparent Pricing
ShopSavvy Android App
Comparison shopping among online + local stores

Discounted Offers
Groupon iPhone App
Local Services
Up to 90% Off

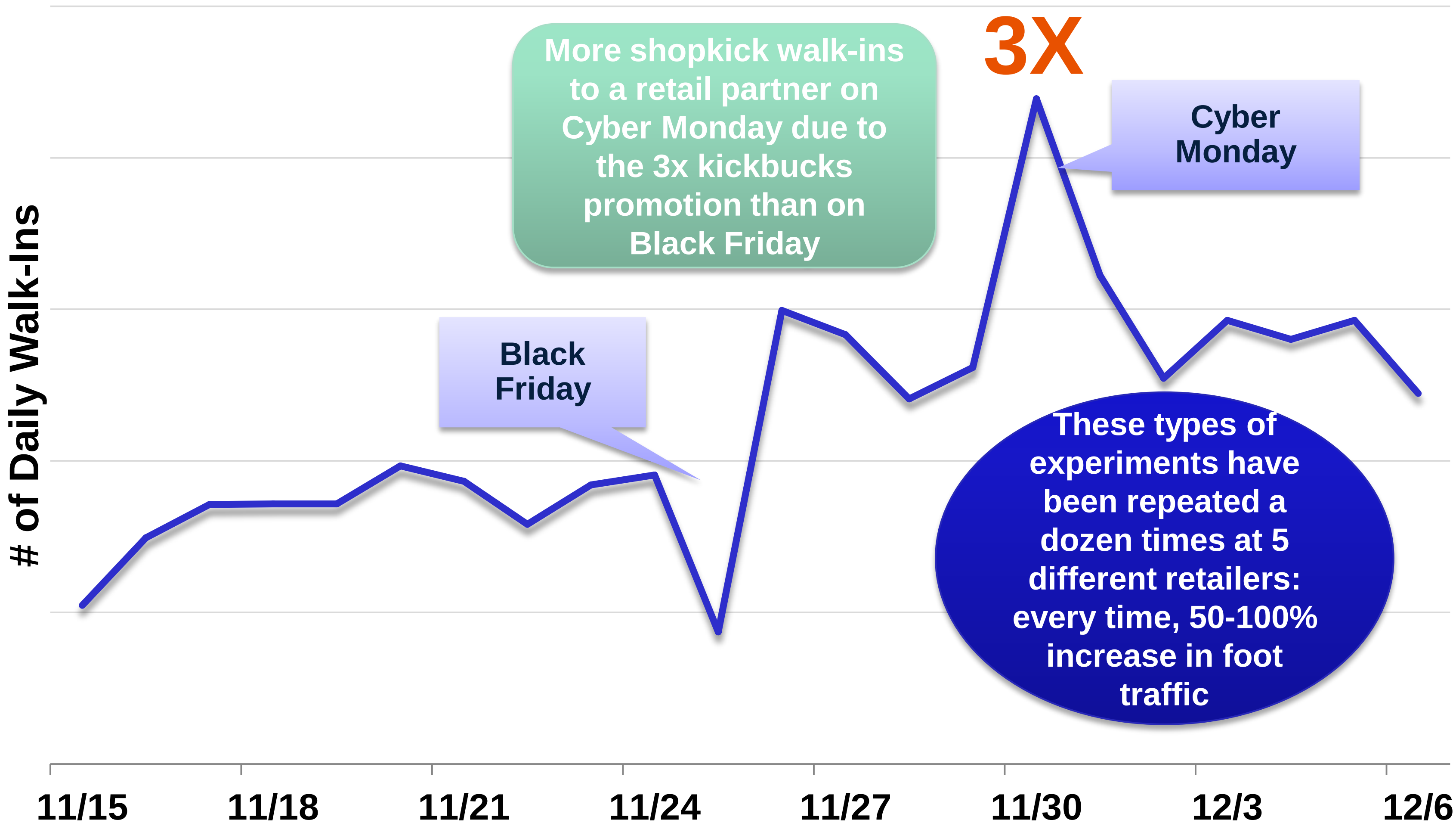
Immediate Gratification
iTunes Store on iPhone
Music / video / apps delivered wirelessly



Source: Company Reports, Morgan Stanley Research.

Mobile Shopping Apps - Changing Behavior + Driving Revenue & ROI For Retail Partners

Shopkick's Daily Walk-Ins to Retail Partners, 11/15/10 – 12/6/10



Source: Shopkick. Note Shopkick has 750K users in five months since launch.

Mobile Devices + Services Driving New Ways to Shop

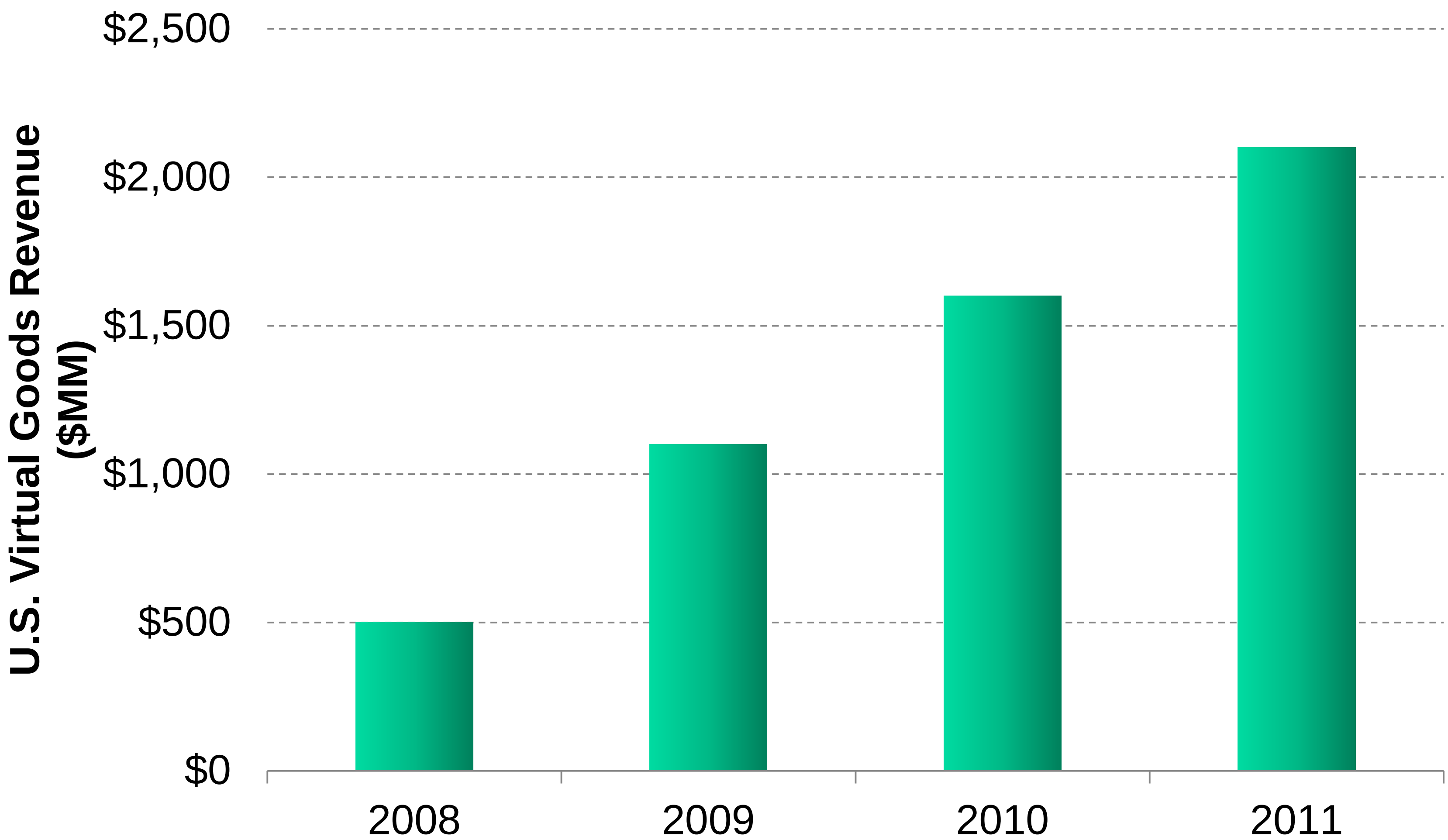
Mobile is clearly becoming a new way people shop…[eBay has] nearly tripled mobile GMV (gross merchandise value) year-over-year to nearly $2 billion, with strong holiday shopping momentum in Q4. In 2011, we expect Mobile GMV to double to $4 billion.

- John Donahoe, President & CEO, eBay
CQ4:10 Earnings Call

EMERGENCE OF VIRTUAL GOODS & IN-APP COMMERCE

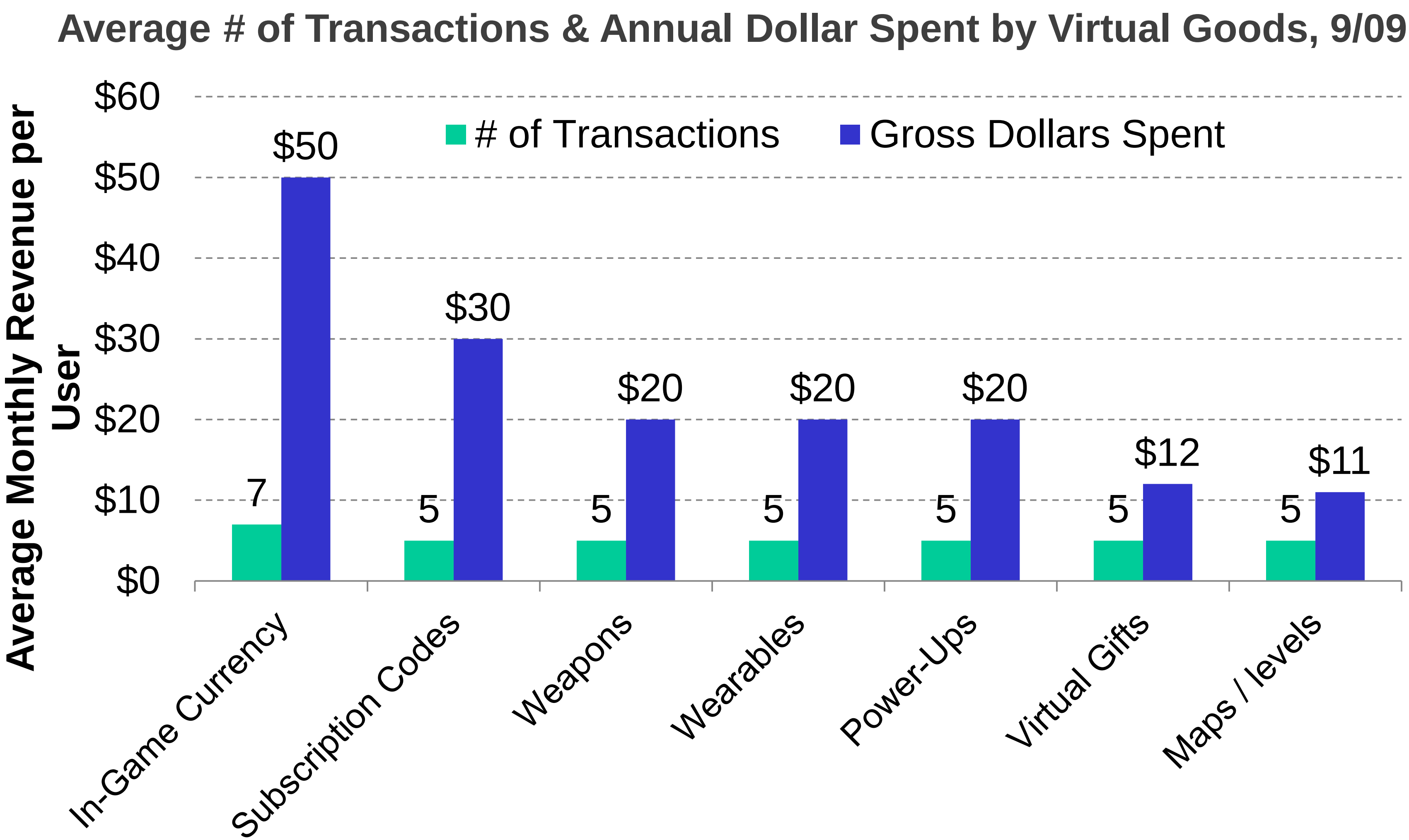
Virtual Goods = $2B Market in USA

U.S. Virtual Goods Revenue, 2008 – 2011E



Source: Inside Virtual Goods: The US Virtual Goods Market 2010-2011.

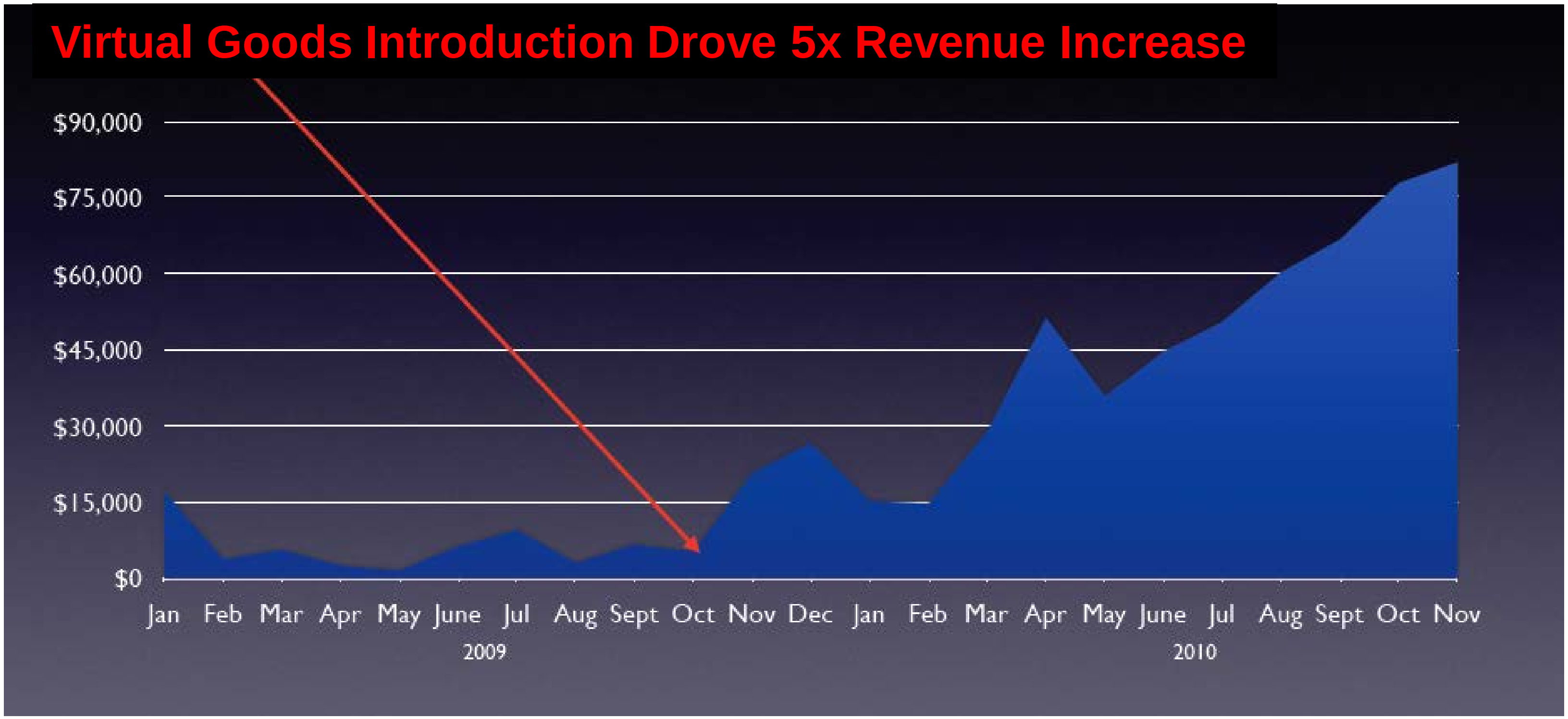
What Are Virtual Goods Anyway?



Source: Playspan survey of 1736 respondents in 9/09.

Monetization Shift From Paid Downloads To Virtual Goods Has Been Profound For Many Developers

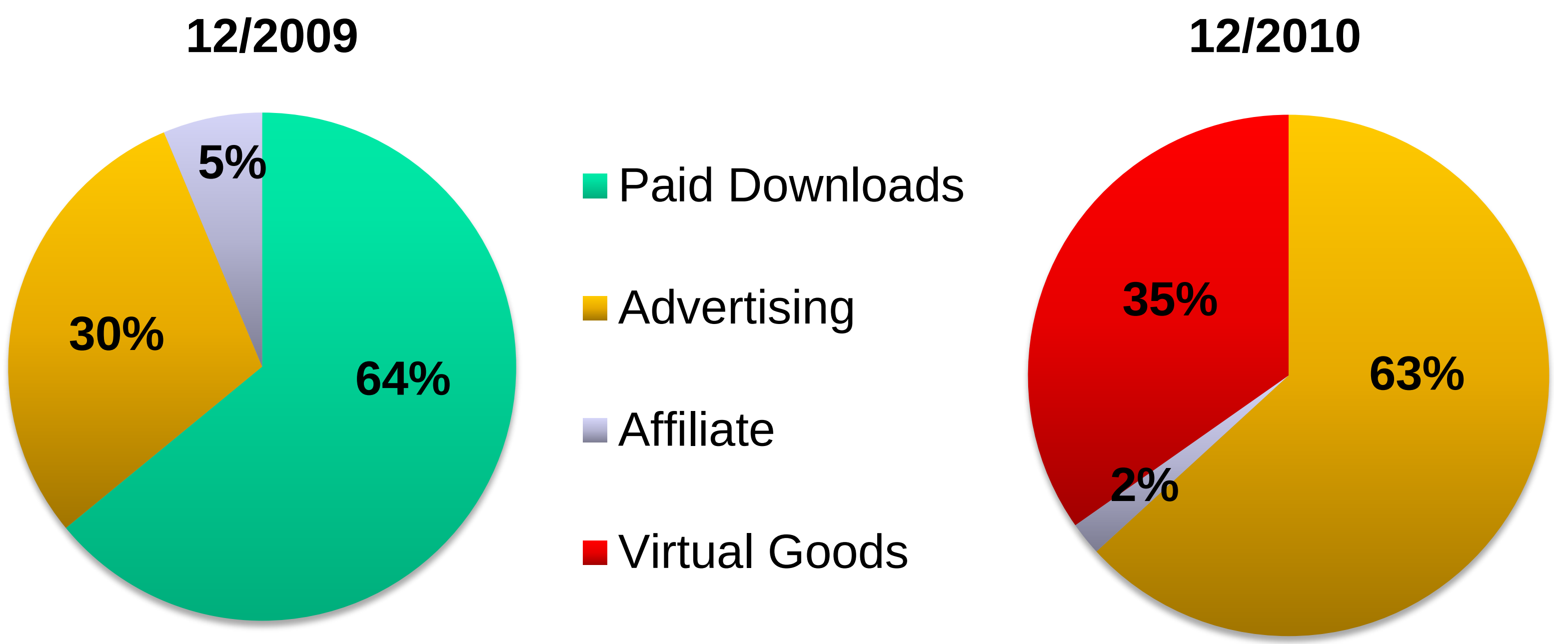
Average Daily Revenue for a KPCB Portfolio Company



Source: KP Portfolio Company

Powerful Shift to Ad & Virtual Good Monetization from Initial Pay per Download Models

Revenue Composition for Pinger – a KPCB Portfolio Company



Source: Pinger.

Gaming Elements = Key to Success For Many Mobile / Social Applications

’Gamification’ of apps is the ultimate way to engage a new generation of audiences.

Bing Gordon, KPCB Partner, AIAS* Hall-of-Famer

Note: *AIAS is the Academy of Interactive Arts & Sciences.

NOT ALL PLATFORMS ARE CREATED EQUAL

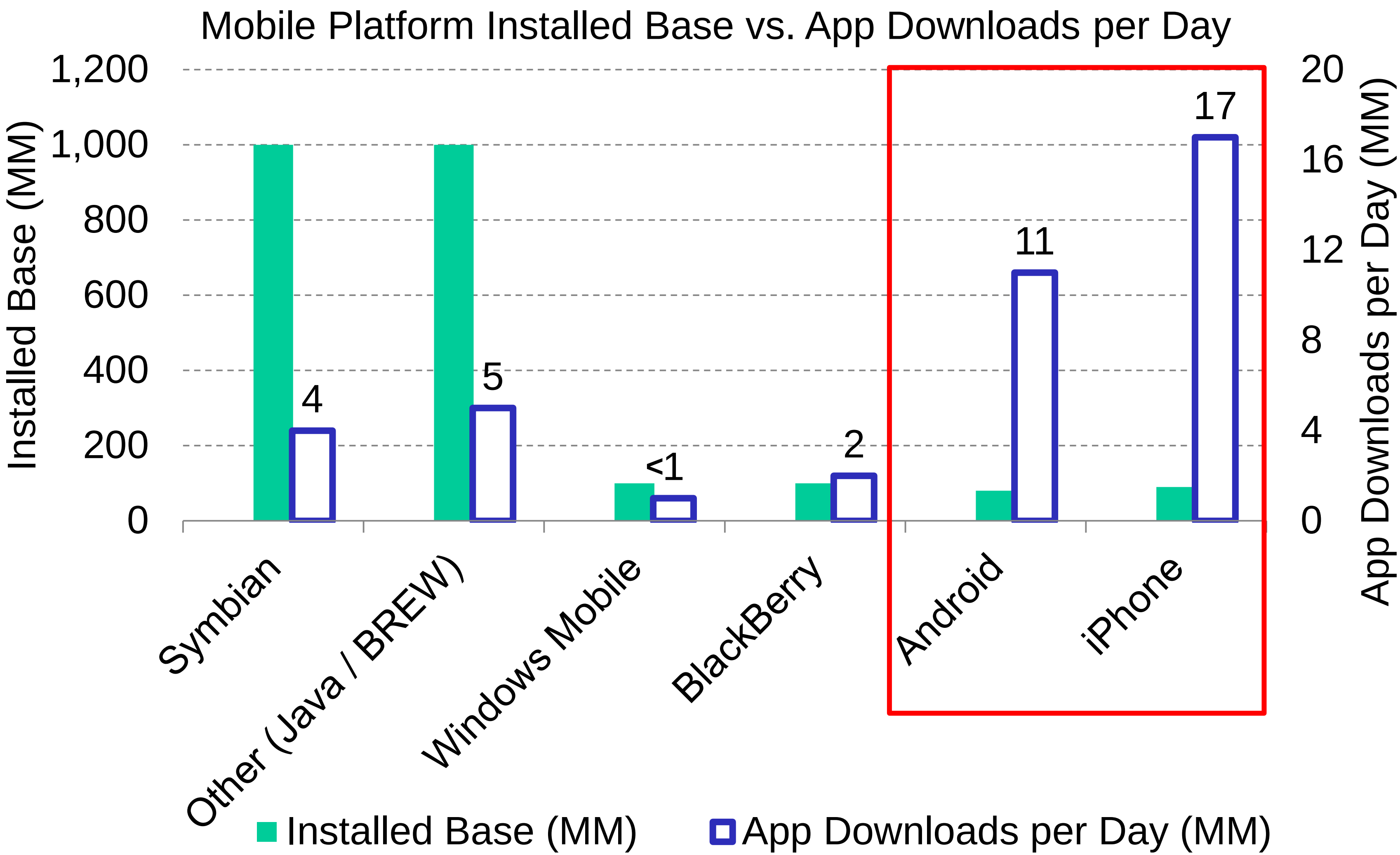
Global Smartphones – Huge Android + iPhone Growth

Global Smartphone Market Share - Q4:10 vs. Q4:09

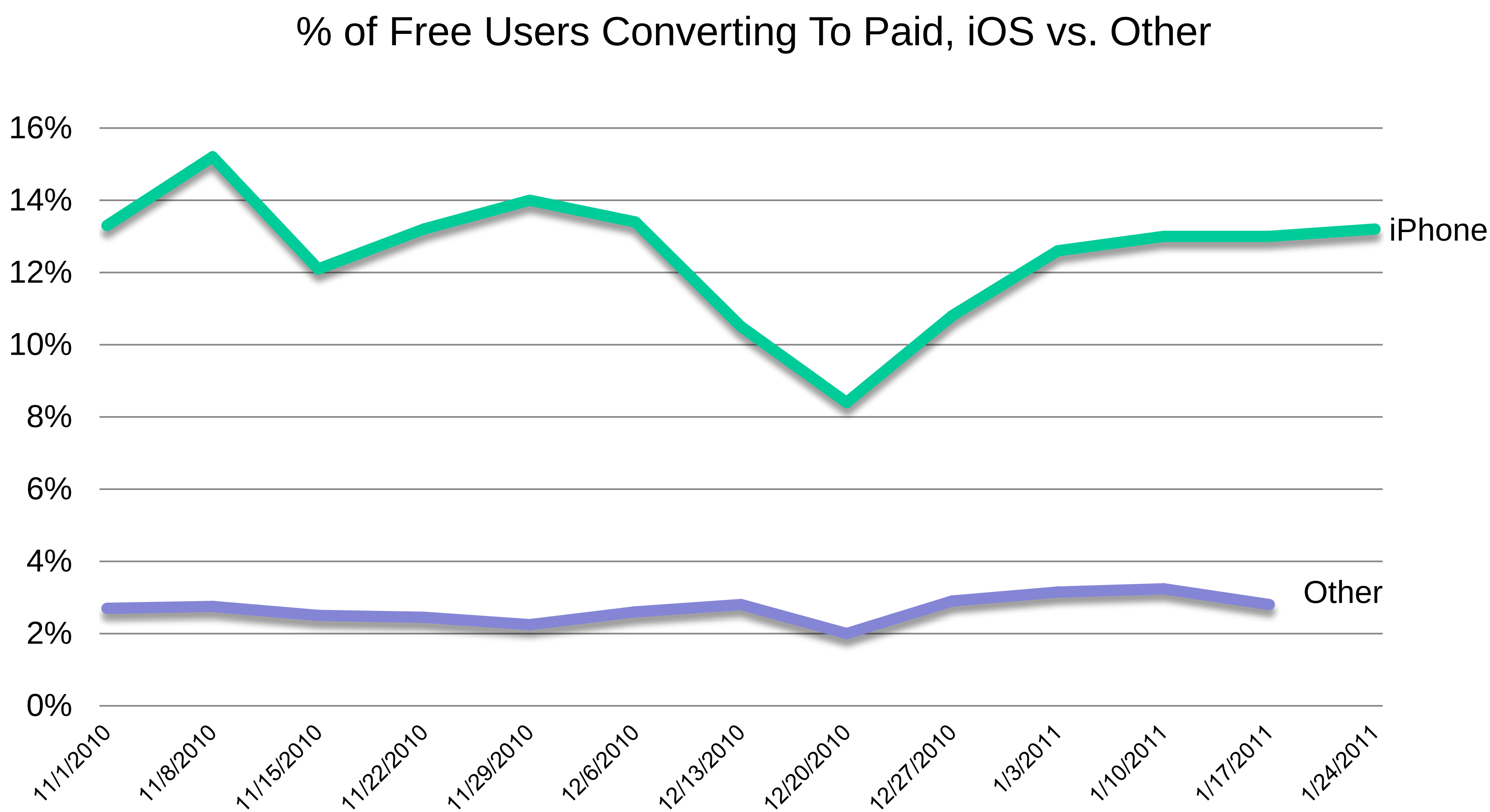
OS vendor	Q4 2010 shipments (M)	% share	Q4 2009 shipments (M)	% share	Growth Q4'10/Q4'09
Total	**101**	**100%**	**54**	**100%**	**89%**
Google*	33	33%	5	9%	615%
Nokia	31	31%	24	44%	30%
Apple	16	16%	9	16%	86%
RIM	15	14%	11	20%	36%
Microsoft	3	3%	4	7%	-20%
Others	3	3%	2	3%	65%

*Note: The Google numbers in this table relate to Android, as well as the OMS and Taps platform variants.
Source: Canalys estimates, ©Canalys 2011

Differences in Platform Engagement – Internet + App Usage Massively Higher on Android + iOS



Platform Differences Can Significantly Impact Monetization - Built-in Billing & In-App Commerce are Key



Source: KPCB Portfolio Companies

CHANGE WILL ACCELERATE, NEW PLAYERS EMERGING RAPIDLY

Global Public Internet Companies – Reflection on Changes Over Last 6 Years

Top Global 15 Publicly Traded Internet Companies by Market Value – 2011 vs. 2004

Rank	Company	Region	2011 Market Value ($B)	2010 Revenue ($MM)
1	Apple	USA	$327	$76,283
2	Google	USA	198	29,321
3	Amazon.com	USA	83	34,204
4	Tencent	CHN	45	1,898*
5	eBay	USA	42	9,156
6	Baidu	CHN	42	1,207*
7	Yahoo! Japan	JPN	22	2,995*
8	Yahoo!	USA	22	6,325
9	Priceline.com	USA	22	2,338*
10	Alibaba.com	CHN	11	568*
11	Netflix	USA	11	2,162
12	Rakuten	JPN	11	3,204*
13	NHN	KOR	8	1,062
14	Expedia**	USA	7	2,955
15	Netease	CHN	5	573
	Total		$667B	$117B

Rank	Company	Region	2004 Market Value ($B)	2004 Revenue ($MM)
1	eBay	USA	$62	$3,271
2	Yahoo!	USA	45	3,575
3	IAC/Interactive*	USA	37	4,188
4	Yahoo! Japan	JPN	36	1,101
5	Google	USA	30	3,189
6	Amazon.com	USA	17	6,921
7	Apple	USA	14	8,279
8	Rakuten	JPN	8	445
9	Monster	USA	3	846
10	WebMD	USA	2	134
11	Index	JPN	2	357
12	Shanda	CHN	2	157
13	NCSoft	KOR	2	280
14	NHN	KOR	1	253
15	For-side.com	JPN	1	85
	Total		$262B	$33B

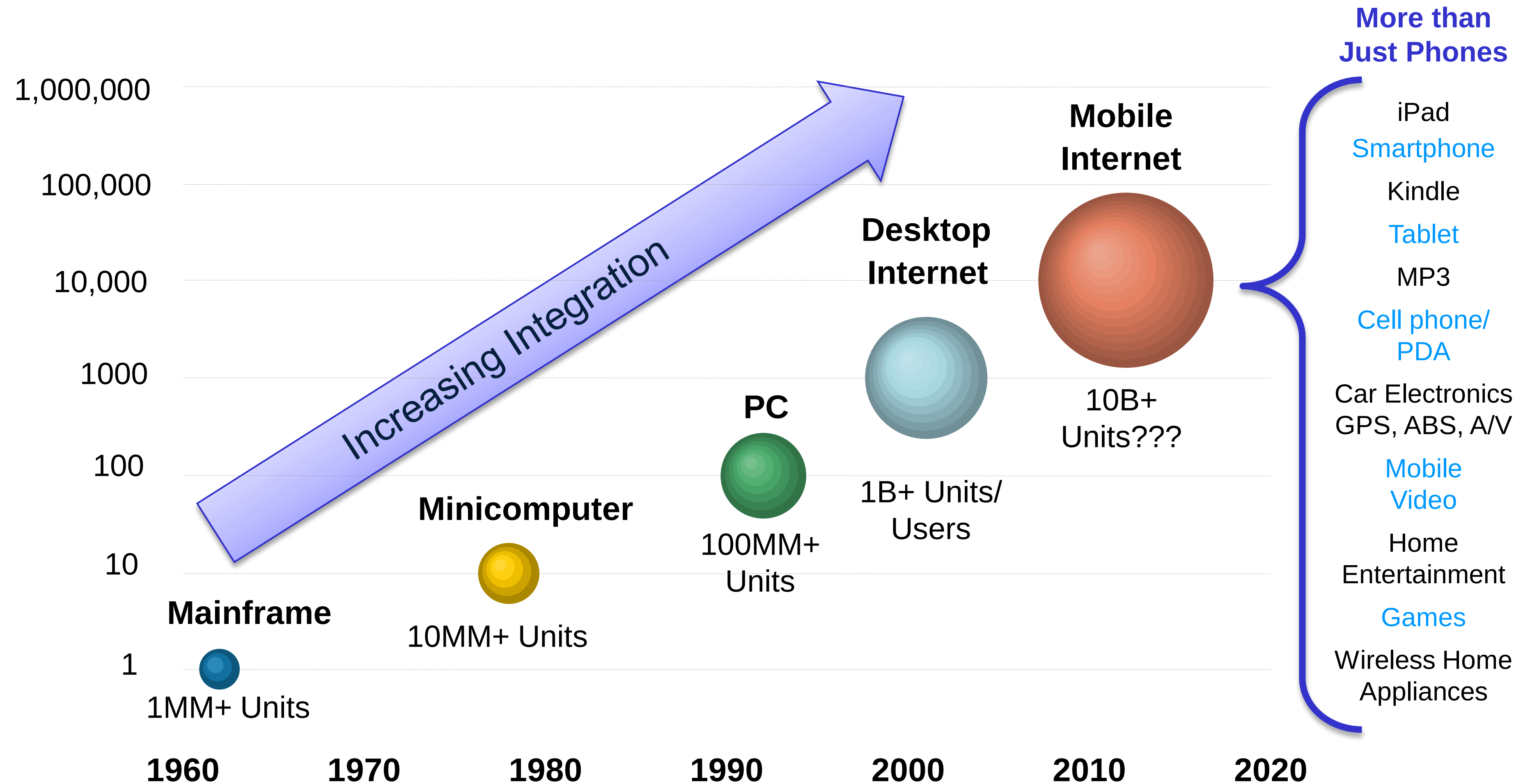
3 of 2009 Top 15 Companies (Alibaba, Baidu, Expedia*) Went Public Post 2004

Note: 2011 data as of 2/8/2010; 2004 data as of 9/17/2004. *2010 data not available, 2009 revenue data shown instead. **Expedia was owned by IAC/Interactive in 2004 and later spun off. Source: FactSet, Google Finance.

New Computing Cycle Characteristics

Reduce Usage Friction Via Better Processing Power + Improved User Interface + Smaller Form Factor + Lower Prices + Expanded Services = 10x More Devices

Computing Growth Drivers Over Time, 1960-2020E



Note: PC installed base reached 100MM in 1993, cellphone/Internet users reached 1B in 2002/2005 respectively;
Source: ITU, Mark Lipacis, Morgan Stanley Research.

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Technology Wealth Creation/Destruction Cycles

New Companies Often Win Big in New Cycles While Incumbents Often Falter

Mainframe Computing 1960s	*Mini* Computing 1970s	*Personal* Computing 1980s	*Desktop Internet* Computing 1990s	*Mobile Internet* Computing 2000s
New Winners	**New Winners**	**New Winners**	**New Winners**	
IBM	Digital Equipment	Microsoft	Google	
NCR	Data General	Cisco	AOL	
Control Data	HP	Intel	eBay	
Sperry	Prime	Apple	Yahoo!	
Honeywell	Computervision	Oracle	Yahoo! Japan	
Burroughs	Wang Labs	EMC	Amazon.com	
		Dell	Tencent	
		Compaq	Alibaba	
			Baidu	
			Rakuten	

Note: Winners from 1950s to 1980s based on Fortune 500 rankings (revenue-based), desktop Internet winners based on wealth created from 1995 to respective peak market capitalizations.
Source: Factset, Fortune, Morgan Stanley Research.

iPhone + Android Apps for Nearly Everyone – Lots of Disintermediation Already…More to Come

Existing Products	Potentially Displaced by…	…iPhone Solutions	Existing Product Shipments/Users
Landline Phone	Wi-Fi enabled VoIP Apps (Fring/Truphone…)	Free calling + online status + IM/SMS integration	1B 2008 global phone lines
Standalone Radio	Pandora/Spotify/iMeem/Last.fm/Public Radio (app)…	Personalized radio station based on genre/artist	233MM* 2008E USA listeners
Portable DVD/ Multimedia Players	Integrated iPod Function/YouTube/tv.com/Netflix	Better UI/local storage not a limit (for streaming apps)	130MM 2009E global shipments
Low-end Digital Camera	Built-in Camera/Nationwide Insurance app…	3.0 Megapixels/tap to select focus/anti-shake shutter/OTA sharing on Facebook/Flickr/email/Nationwide Insurance app	103MM 2009E global shipments
MP3 Players	Integrated iPod Function/Spotify	Better UI/local storage not a limit (for streaming apps)	62MM 2009E global shipments
GPS Devices	Built-in Google Maps/App Store (ATT Navigator…)	Same basic function + always-on Internet connection	48MM 2009E global shipments
Portable Gaming Devices	Tap Tap Revenge/Bejeweled/Flight Control…	Lower ASP/instant OTA download/multi-touch control	48MM 2009E global shipments
Low-end Camcorders	Built-in Video Capture Function/FOX News UReport…	Built-in video editing/OTA upload to YouTube/OTA upload to FOX News	14MM 2009E global shipments
Standalone Voice Recorder	Built-in Voice Recorder	Digitized/easy to manage/sync with PC	--
Compass	Built-in Electronic Compass	Synergy with built-in maps feature	--
Audible Dictionary	Lonely Planet Mobile Phrasebook	Available in 10 languages, 600+ spoken phrases in each language	--

Note: *OTA = Over the Air; 233MM radio listeners in USA, per SNL Kagan/Arbitron.
Source: Future Horizons, iSuppli, IDC, Morgan Stanley Research.

SUMMARY TRENDS TO WATCH

Early Innings of a Massive Phenomenon…

- **Ubiquitous Computing –** Real-time connectivity / 24x7 / in palm of hand
- **More Affordable –** Device and data plan pricing falling
- **Faster** – Networks and devices improving (owing to Moore's Law)
- **Personal** – Location / preferences / behavior
- **Fun to use –** Social / casual / reward-driven marketing
- **Access nearly everything anywhere -** "Stuff" in cloud
- **Explosion of apps and monetization** – More and making more money
- **Measurable real-world activation -** Driving foot traffic to physical stores
- **Reward / influence behavior in real-time** - for exactly the right people

…Early Innings of a Massive Phenomenon

On the horizon – 2011 and Beyond:

- **HTML5** vs. downloadable apps
- **NFC** (Near Field Communication) for payment / offers / loyalty
- Consumer led **mobile health** for monitoring / diagnosis / wellness
- Rapid **enterprise adoption of tablets** for productivity
- **Tipping Point** – > 50% population in developed markets will have Smartphone
- **“SoLoMo”** – Social / local / mobile converging
- **“Gamification”** – Ultimate way to engage a new generation of audiences
- **Empowerment** – impact of empowering billions of people around the world with real-time connected devices has just begun...

It's going to be a fascinating decade

KPCB

Big Changes Ahead

We're at the beginning of a new era for social Internet innovators who are re-imagining and re-inventing a Web of people and places, looking beyond documents and websites.

- John Doerr, Partner, KPCB

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http://www.slideshare.net/kleinerperkins/kpcb-top-10-mobile-trends-feb-2011