



The Case for Wireless and Broadband Competition

7/8/2009



U.S. Wireless and Broadband Competition: Delivering For Consumers

Wireless Competition

1. The mobile wireless network industry in the U.S. is competitive.
2. The U.S. mobile wireless industry is robust and innovative, and it delivers great services to the American people. It's reasonable to expect this to continue.

Broadband Competition

1. The U.S. broadband network industry is competitive.
2. The U.S. broadband industry is robust and innovative, and it delivers great services to the American people. It's reasonable to expect this to continue.



U.S. Mobile Wireless Network Industry is Competitive

- The U.S. mobile wireless marketplace is one of the two most competitive in the world.
- More than half the advanced nations in the world have only 3 wireless providers.
- The U.S. has 4 nationwide service providers, plus more than 140 separate operators in regional markets. No other country comes close.

**Wireless Mobile Competition in OECD Countries
4Q08* Mobile Market Share by Subscribership (%)**

Number of Operators	1	2	3	4	Others
United Kingdom	25.5	25.1	22	20.9	6.5
United States	31*	28.5	18.2	12.1	10.1*
Germany	36.5	33.7	16.6	13.2	
Italy	38.5	33.2	18.7	9.7	
Poland	32.9	32.3	30.2	4.6	
Canada	36.8	30.6	28.4	2	2.2
Australia	40.7	32.6	18	8.7	
Austria	42.6	32.2	19.5	5.8	
Denmark	46.2	26.5	21.8	5.6	
Sweden	46.6	29.3	16.6	7.4	
Greece	41.2	30.9	27.9		
Spain	45	31.5	21.7	1.8	
Finland	39.5	37.5	23.1		
Czech Republic	39.9	38.7	21.3		
Belgium	44.7	30.9	24.4		
Japan	49.6	28	18.3	4.2	
Portugal	44.2	35.5	20.3		
Hungary	43.9	35.1	21.9		
Netherlands	49.8	27	23.1		
France	47.1	36.2	16.7		
Korea	50.5	31.5	18		
Turkey	55.7	25.2	19.1		
Switzerland	61.9	20.4	17.8		
New Zealand	52.7	47.3			
Norway	55.4	44.6			
Mexico	72.3	19.7	4.5	3.5	

Most Competitive



Least Competitive

Sources: Merrill Lynch, "Global Wireless Matrix 4Q08" and CTIA, [The United States and World Wireless Markets: Competition and Innovation are Driving Wireless Value in the U.S.](#) (May 2009).

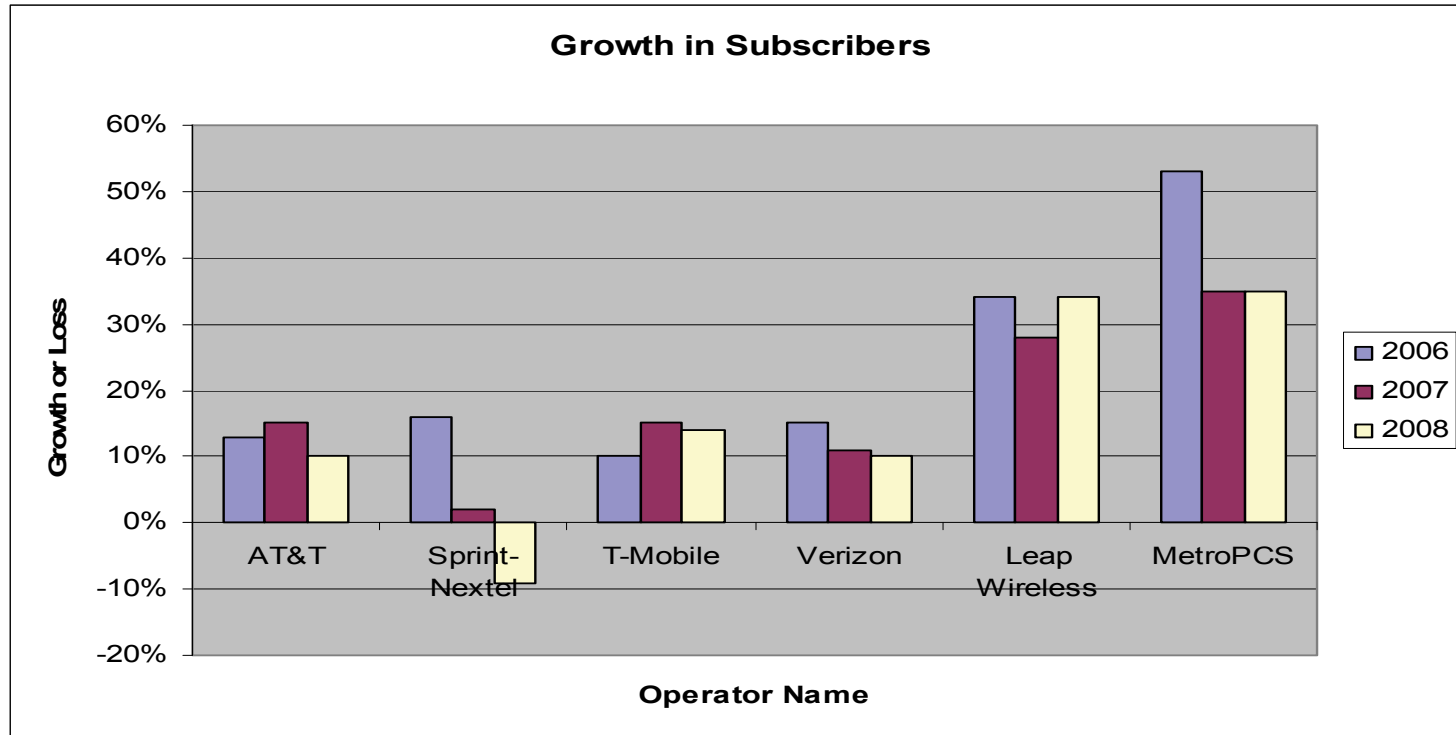
*U.S. market shares have been adjusted to reflect VZW's acquisition of Alltel on January 9, 2009

More Competitive Than in Any Other Country But The UK



U.S. Mobile Wireless Network Industry is Competitive

Smaller Operators in U.S. Are Seeing Robust Growth



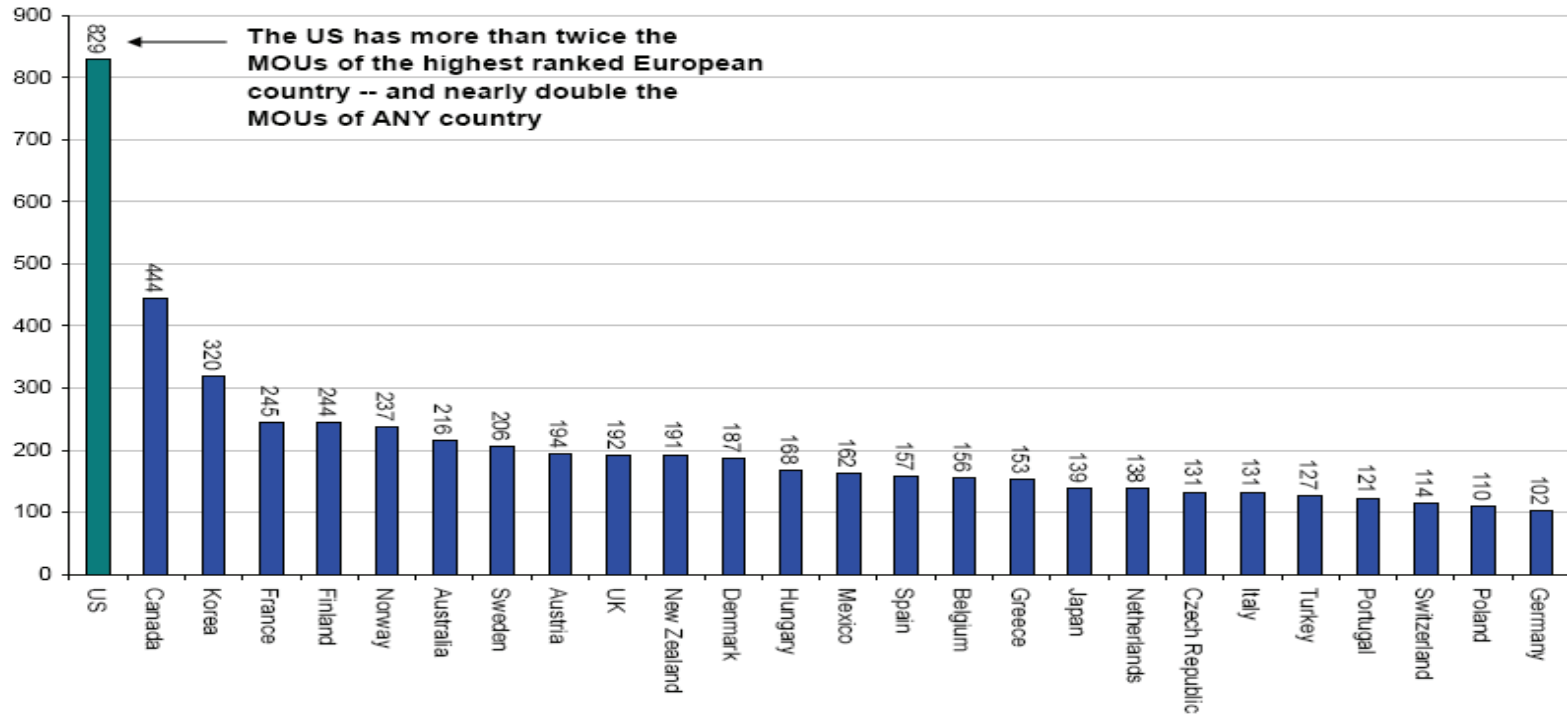
Source: CTIA and Company Reports for Year-End Numbers in 2006, 07, 08

Local and Regional Operators Don't Even Exist Outside the U.S.



U.S. Mobile Wireless Industry is Robust. It Delivers Great Services to the American People

Comparative Monthly Wireless MOUs in 26 OECD Countries, 4Q08



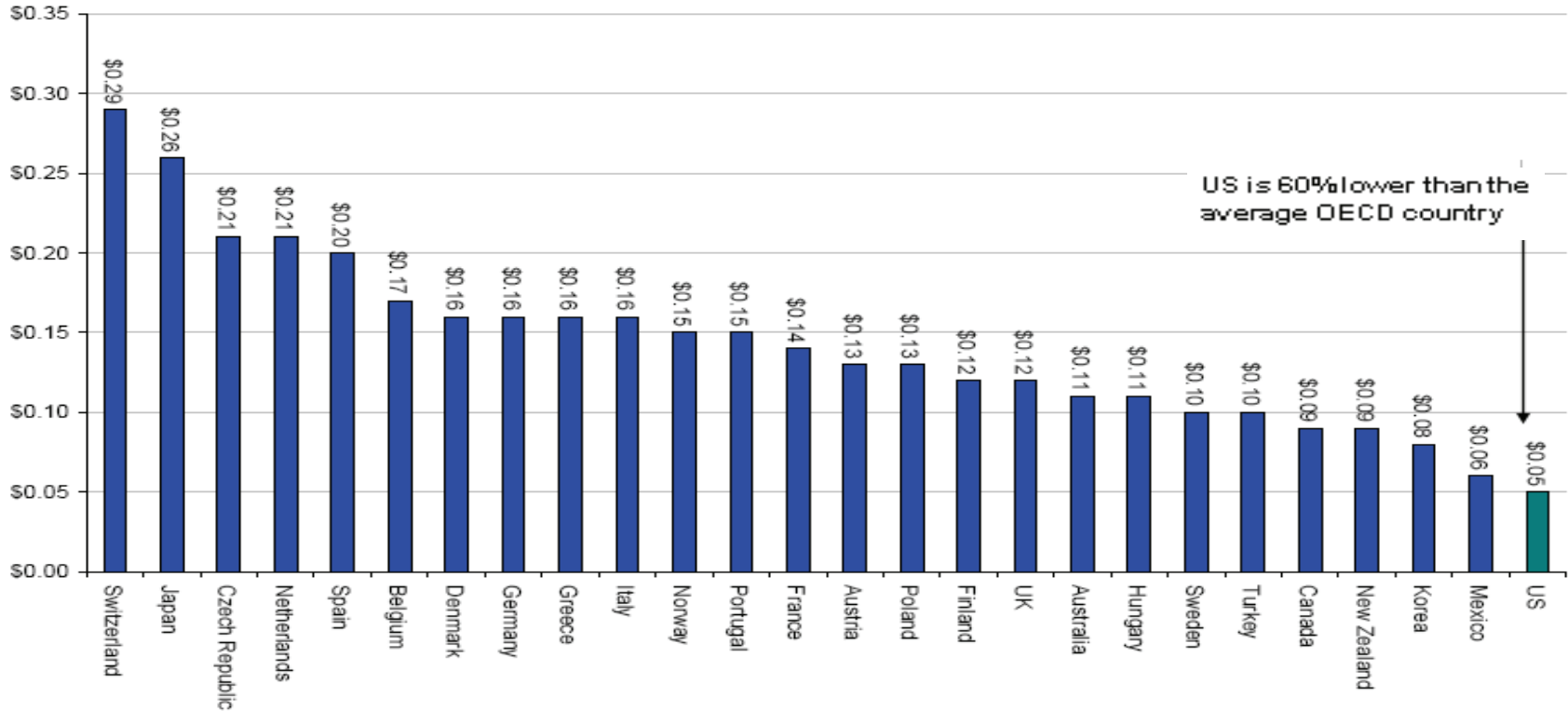
Source: Merrill Lynch, "Global Wireless Matrix 4Q08"

US Consumers Use Twice As Many MOUs As Consumers In Any Other Country



Mobile Wireless Consumers are Reaping the Benefits

Comparative Revenue Per Minute in 26 OECD Countries, 4Q08



Source: Merrill Lynch, "Global Wireless Matrix 4Q08"

U.S. Wireless Consumers Enjoy Unparalleled Value



U.S. Mobile Wireless Industry is Robust, Innovative and is Delivering Great Services

More handsets are available in the U.S. than in any other country in the world.

- More than 630 different wireless handsets & devices available in the U.S.
- 23% of handsets sold in 4Q 2008 were broadband-enabled smartphones. Broadband-enabled wireless handsets are fast becoming tools for productivity and gateways to information
- Only 147 different hands sets available to UK consumers

HANDSET MANUFACTURERS PRODUCING/SELLING IN THE UNITED STATES		
Alcatel	HTC	PCD
Apple	Huawei	Research in Motion
ASUS	Jitterbug	Samsung
Axxesstel	Kyocera	Sanyo
BandRich	LG	Sharp
BenQ	Motorola	Siemens
Cal-Comp	Nokia	Sierra Wireless
Casio	Novatel Wireless	Sony Ericsson
Firefly	Option	Uniden
HP	Palm	Waxess USA
	Pantech & Curitel	ZTE

Source: CTIA, [The United States and World Wireless Markets: Competition and Innovation are Driving Wireless Value in the U.S.](#) (May 2009).

U.S. Leads In Handset Innovation



U.S. Mobile Wireless Industry Delivers Innovation and Great Services to the American People

- With increased ability to access the Internet on-the-go and significant growth in smartphones, an explosion of applications to run on these devices has emerged.

Wireless Smartphone Application stores that are available to U.S. consumers:

Application Store	Date Launched	Number of Apps Available
iTunes App Store (for iPhones & iTouch)	July 2008	>35,000
Android Market	October 2008	>1,000
Palm Software Store	January 2009	>5,000
BlackBerry App World	April 2009	Launched with approx. 1,000
Palm Ap Catalog	Pending formal launch of Palm webOS	
Nokia Ovi Store	Launch slated for July 2009	20,000 Apps and Media Files
Windows Mobile Marketplace	Launch expected as early as July 2009	Developers now signing up

- Listed are 3rd party application stores for smart phones. Not included are carrier-specific application stores like Verizon's Get it Now

Source: CTIA, [The United States and World Wireless Markets: Competition and Innovation are Driving Wireless Value in the U.S.](#) (May 2009).

Application Innovation Is Exploding



Many Testaments to Wireless Customer Satisfaction

The GAO, FCC, Consumer Reports and the ACSI all have testified to wide U.S. customer satisfaction with their wireless service . . .

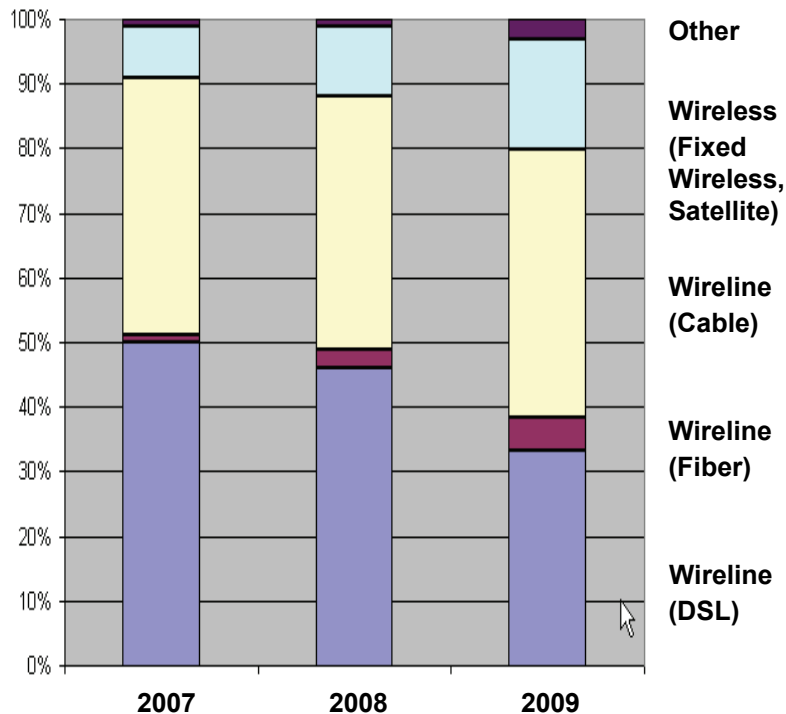
- "According to our survey results, overall, wireless phone service consumers are satisfied with the service they receive. Specifically, we estimate that 84 percent of adult wireless phone users are very or somewhat satisfied with their wireless phone service." *Source: Testimony of Mark Goldstein, Director, General Accounting Office, to the Senate Committee on Commerce, Science and Transportation, June 17, 2009.*
- "U.S. consumers continue to reap significant benefits -- including low prices, new technologies, improved service quality, and choice among providers -- from competition in the CMRS marketplace." *Source: FCC, Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Radio Services, January 16, 2009.*
- "Overall, cell-phone service has become significantly better Sixty percent of readers were completely or very satisfied with their service." *Source: Consumer Reports, "Best Cell-Phone Service," January 2009.*
- "Customer satisfaction with wireless telephone services reaches a new all-time high for the third consecutive year." *Source: American Customer Satisfaction Index, "Customer Satisfaction Rises Again, Now Joined by Other Economic Indicators," May 19, 2009.*



U.S. Broadband Network Industry is Competitive

Types of Broadband Connections People Use at Home

(% of those with broadband at home)



Source: Pew Internet & American Life Project, "Home Broadband Adoption 2009)

Consider the example of Verizon, which faces competition for all its network-based services

The company offers:

- Wireline broadband to 24 million households. *1 in 3 takes the offer.*
- Fiber-based broadband to 10 million households. *1 in 4 subscribes.*
- Video entertainment to 10 million households. *1 in 5 watches us.*
- Wireless to 290 million people. *3 in 10 accept the offer.*
- Wireline phone service to 30 million households. *2 in 3 use us, and that number is shrinking 8-10% a year.*
- In some markets it has already shrunk to a take-rate of *4 in 10.*

Broadband Networks have High Fixed Costs. In This Context, Working to Win Customers Who Have Alternatives Drives Pricing and Innovation



US Broadband Network Industry is Delivering Great Services to the American People

	Year	Up to 768 kbps	768 kbps to 1.5 mbps	Up to 3 mbps	Up to 7 mbps	Up to 15 mbps	Up to 50 mbps
Industry Average	2001	*	\$50	n/a	n/a	n/a	n/a
	2002	\$28	\$32	*	n/a	n/a	n/a
	2003	\$28	\$30	*	n/a	n/a	n/a
	2004	\$30	\$33	\$46	*	*	n/a
	2005	\$20	\$27	\$33	\$39	*	*
	2006	\$20	\$23	\$28	\$36	*	*
	2007	\$18	\$25	\$28	\$39	\$51	*
VZ only	Verizon Today	n/a	\$17.99** (1 mbps)	\$27.99**	\$39.99**	\$44.99	\$89.95 (DC, VA, NY only)

n/a = service not available

* = insufficient data, fewer than two reporting carriers and less than one-third of access lines represented

Sources: **Wireline Broadband Pricing, 2001-2007**, US Telecom Association, June 2008, based on company data for the top 5 U.S. incumbent local exchange carriers by access lines; www.verizon.com for Verizon prices for customers with an annual contract.

** Verizon DSL prices are part of current "price-for-life offer." These are directionally correct, but DSL prices normally vary state by state.

Speeds Have Increased. Prices Have Declined.



Competition Has Spurred \$320 Billion In Investments Since 2004 That Have Remade Access Technologies

Wireless Increasingly Competes and Converges with Wireline Broadband

Fixed Connections

- **Dial-up:** 7 in 10 households used dial-up for Internet access in 2004; Today 1 in 10 use dial-up.
- **DSL:** Speeds have moved from 1.5 mbps in 2004 to 7 mbps today.
- **Cable:** Speeds have moved from 1.5 in 2004 to 3 mbps to 8-16 mbps today.
- **Fiber:** Didn't exist in 2004. Today it's available to 15 million and delivers speeds of up to 50 mbps down / 20 mbps up.

Portable Connections

- **WiFi:** 70,000 free and pay hot spots in U.S., more than any other nation.

Mobile Connections

- **WiMax,** offering 6.5 mbps on average
- **Mobile** evolving from dial-up speeds in 2004, to DSL speeds today, and soon to 5-12 mbps.

Outputs – Speeds and Options – Have Increased



Communications Services Are Highly Competitive

Communications Competition in the U.S.*				
Type of Provider	Number of Facilities-Based Competitors in Typical Market	Proportion of U.S. Households Covered		
		Voice	Broadband Data	Video
<i>Cable Network</i>	1	84%	93%	94%
<i>Wireline Phone Network</i>	1	100%	82%	21%
<i>Mobile Network</i>	4 to 5	99%	99%	99%
<i>Satellite</i>	2	-	~100%	~100%
<i>Other Wireless (Wi-Fi, WISPs, etc.)</i>	Varies	Yes	Yes	~100%

- About 94% of U.S. households have at least 1 wireline broadband option.*
- More than 80% have at least 2 wireline broadband options.*
- Among home broadband users with more than one high-speed provider, 63% say they have 3 or more choices.**
- When mobile, satellite and fixed wireless options are included, most U.S. households have at least 4 or 5 options. Many can see 8 options.*
- The latest from Pew pegs U.S. broadband penetration at 63% in April 2009, up from 55% a year earlier.**
- Most analyst calculations of U.S. broadband penetration fall in the range of 63% to 67%, which translates into totals of about 70 million U.S. households connected to broadband.

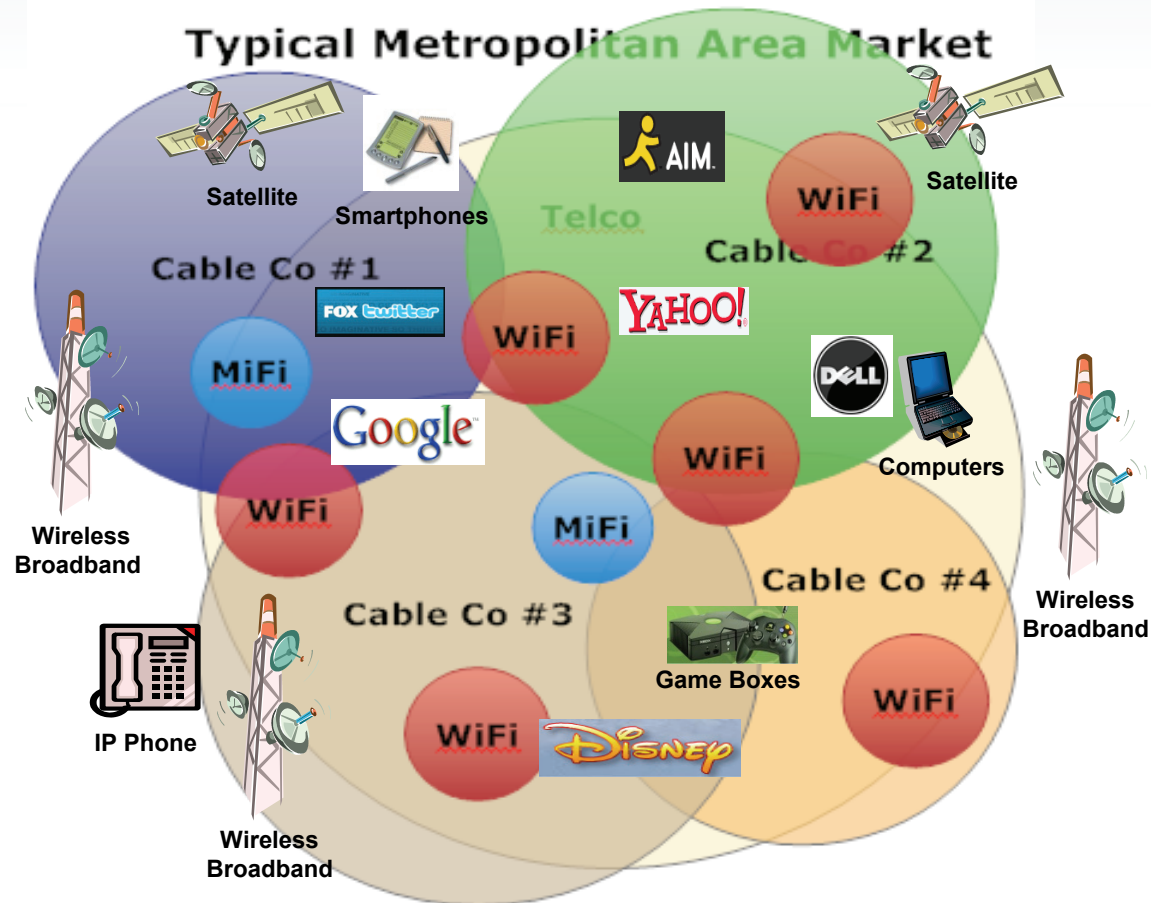
* Sources: SNL Kagan, Federal Communications Commission. Empiris LLC

** Pew Internet and American Life Project: Home Broadband Adoption 2009

About Two-Thirds of US Households Now Subscribe to Broadband



Broadband Enables Robust Competition for Customer Relationships



Ultra-Fast Broadband Enables New and More Ways for Many Branded Services to Compete for Primary Customer Relationships



Broadband Consumers are Reaping the Benefits

TIME	ACTIVITY
7:00 AM	Check morning headlines online.
8:00 AM	Check blackberry on the way to work.
9:00 AM	Turn on desktop at work.
10:00 AM	Video conference call with clients in London.
11:00 AM	Pay bills online.
12:00 PM	Order lunch on SeamlessWeb.com.
1:00 PM	SKYPE with parents, who are on a cruise in Alaska.
2:00 PM	Refill prescriptions online.
3:00 PM	Receive a text message that Sam got home from school alright.
4:00 PM	Email Mai to let her know you'll be on time to pick her up from ballet.
5:00 PM	IM Mark to pick up salad-fixings at the store.
6:00 PM	Check blackberry on the Metro.
7:00 PM	Download a movie to watch with the kids.

Always-On Connections Transform How We Work and Live -- Consider How You Spend Your Day