



# Mobile Broadband Update in the Americas

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# Agenda



-  Market update
-  Technology update
-  Regulatory aspects
-  Conclusion

# 3G Americas Board of Governors



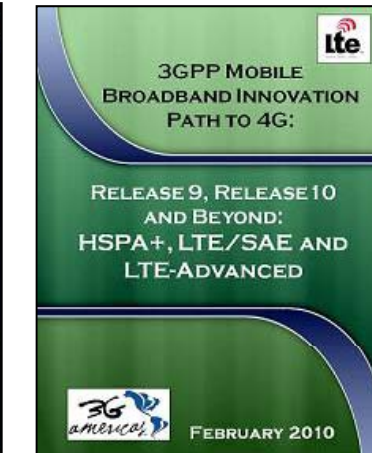
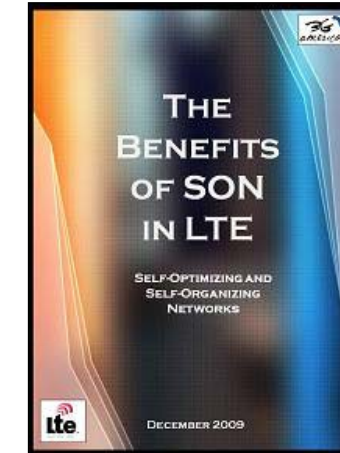
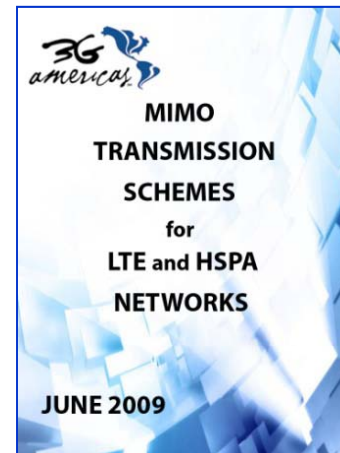
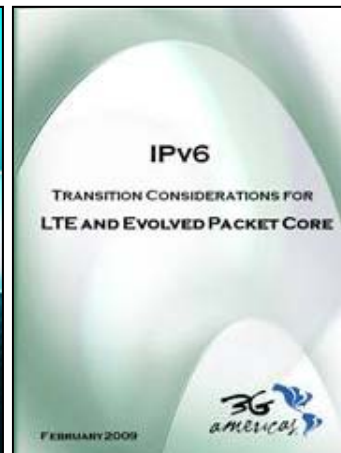
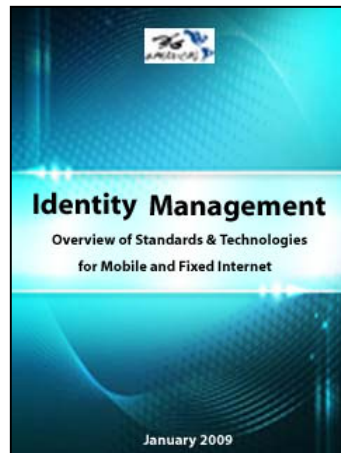
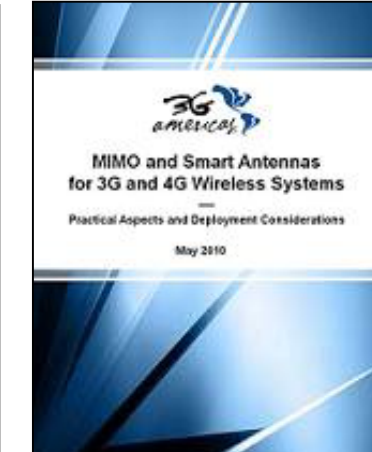
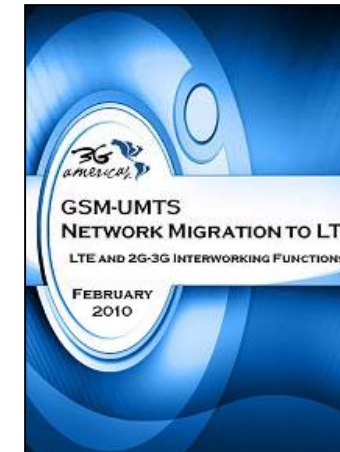
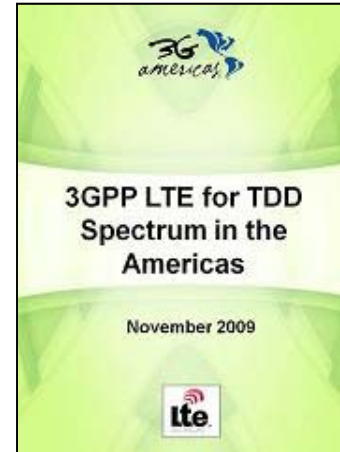
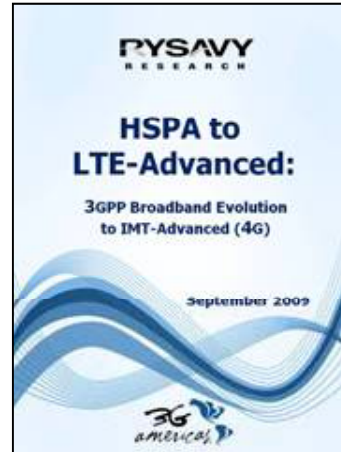
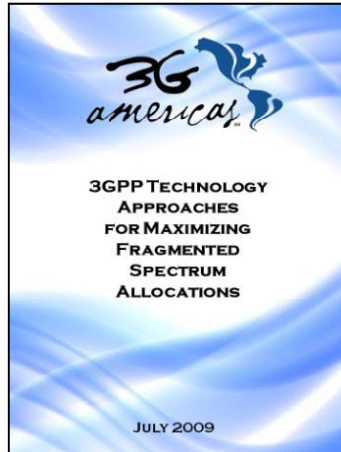
The mission of 3G Americas is to promote, facilitate and advocate for the deployment and adoption of the GSM family of technologies including LTE throughout the Americas.



# 3G Americas White Paper Publications 2009-2010



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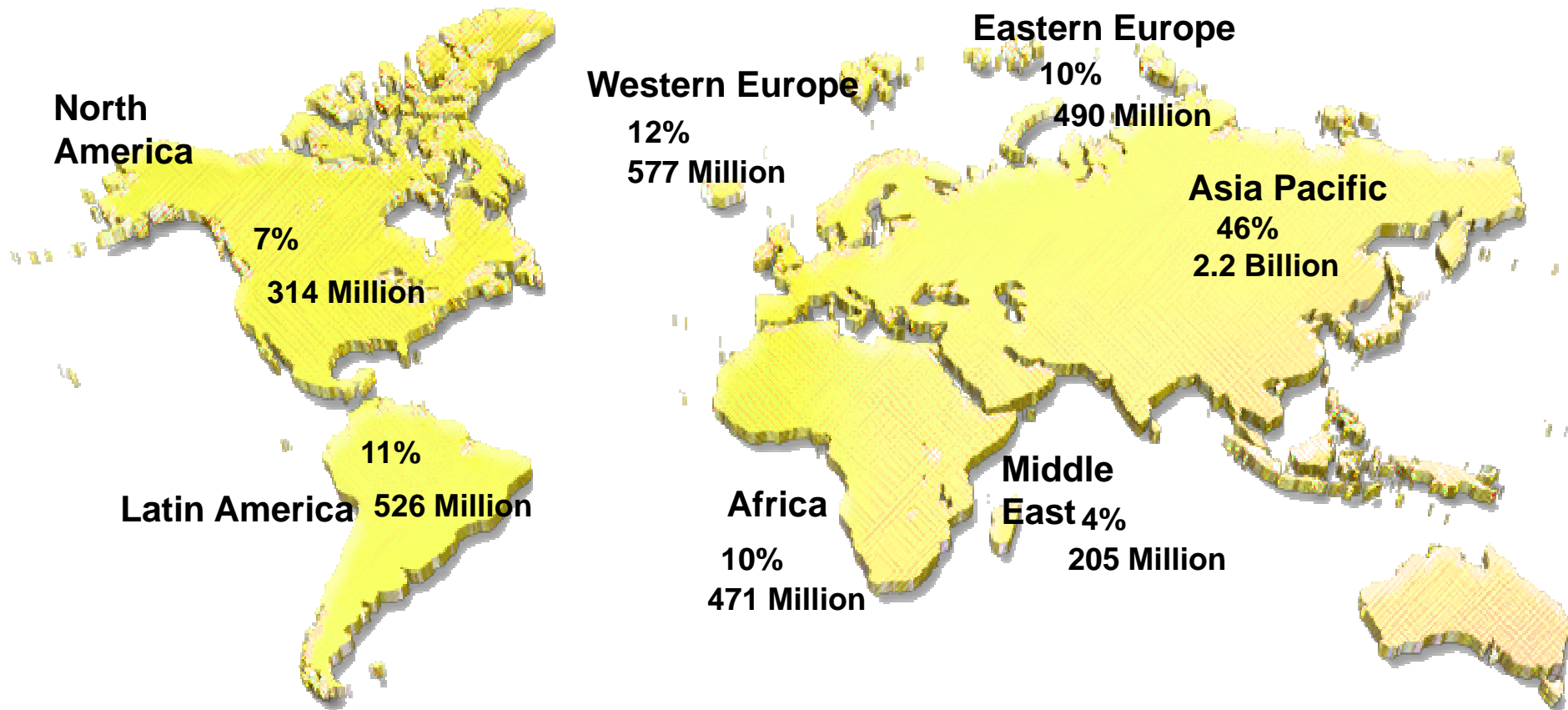


# World Mobile Subscription Distribution



**4.8 Billion Subscriptions  
Worldwide**

**March 2010**

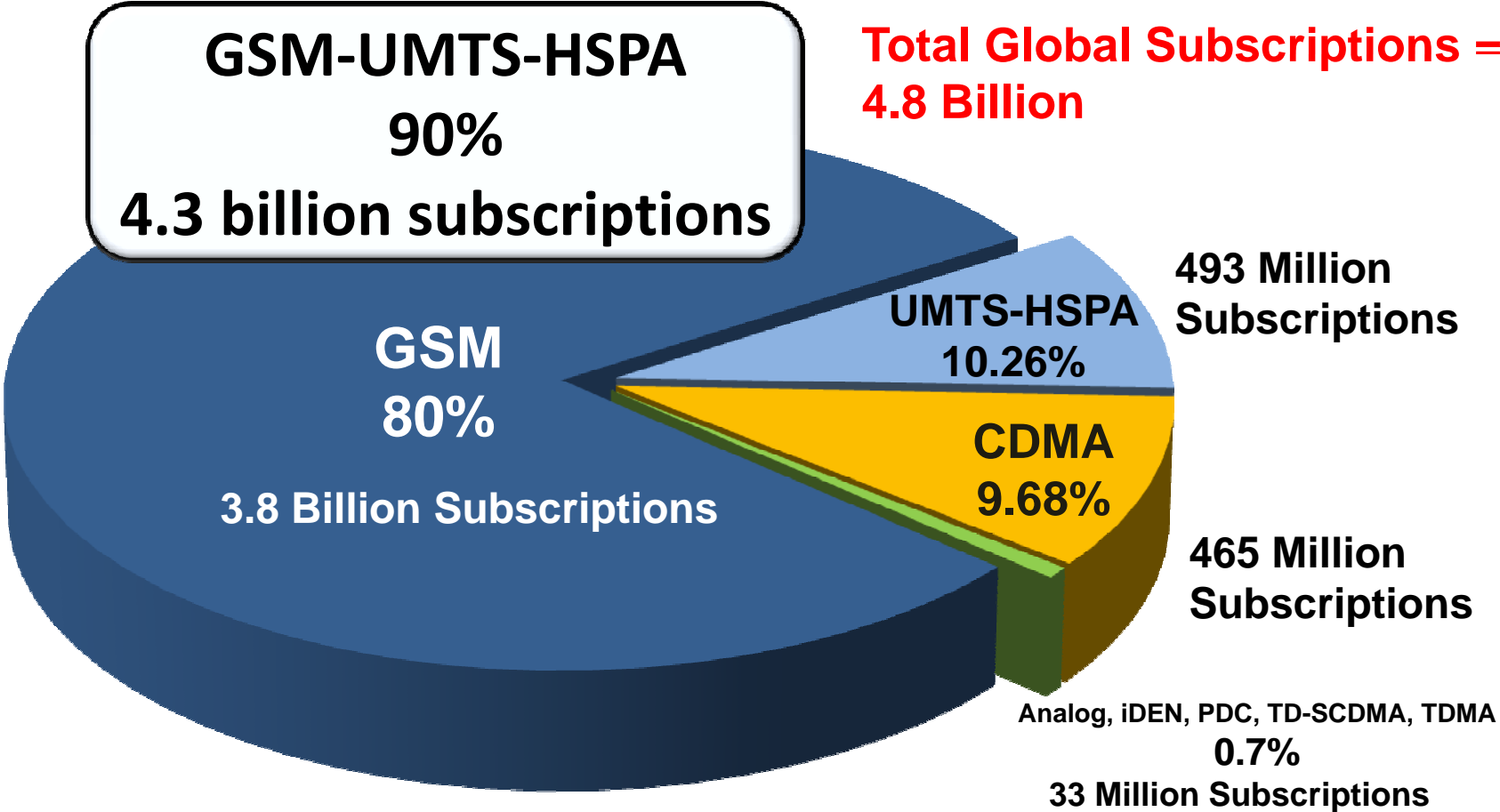


Source: Informa Telecoms & Media, WCIS+ March 2010



# Global Mobile Market Shares

## March 2010



Source: Informa Telecoms & Media, WCIS+, March 2010



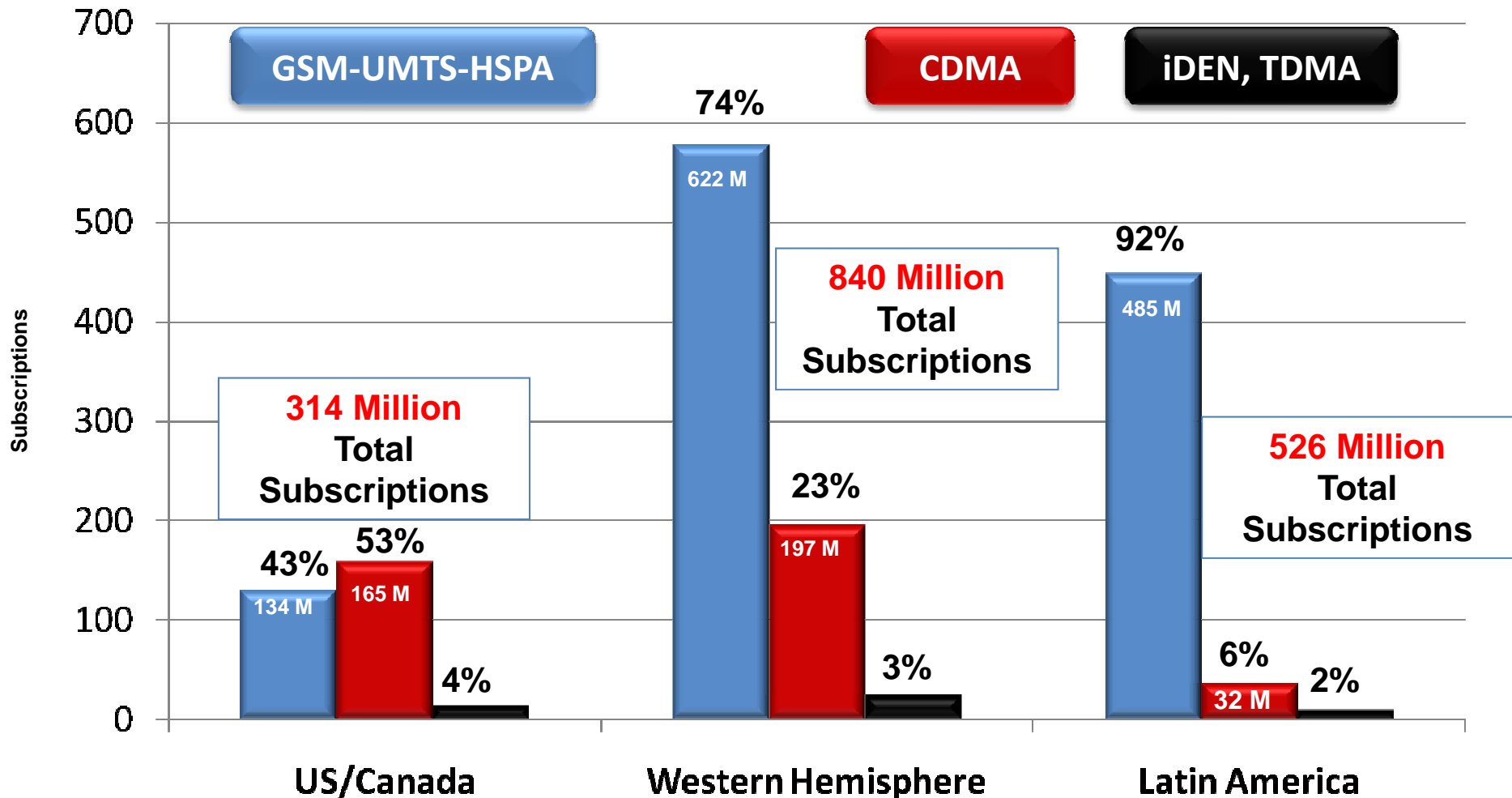
## Some mobile indicators end of 2009

Indicator	North America	Latin America
Wireless users	309 million	509 million
Mobile Penetration	89%	86%
3G HSPA technology market share	11%	3%
Prepaid market share	12%	83%
Average ARPU	USD \$ 50	USD \$ 14
Data as % of service revenues	29%	18%

# Wireless Technology Market Shares in the Western Hemisphere



March 2010



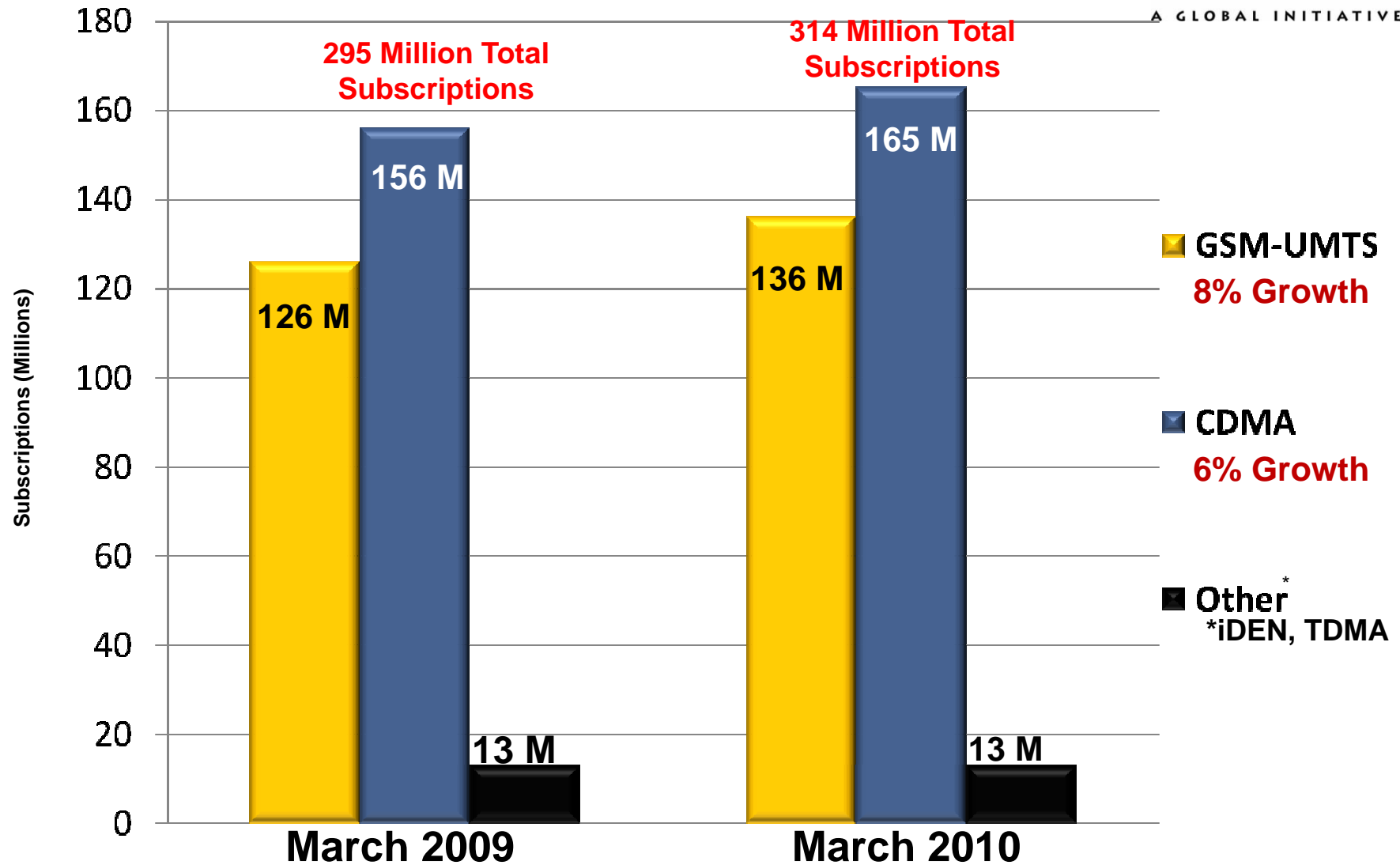
Source: Informa Telecoms & Media, WCIS+ , March 2010



# Annual Wireless Technology Trends in the US/Canada



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Source: Informa Telecoms & Media, WCIS+ , March 2010

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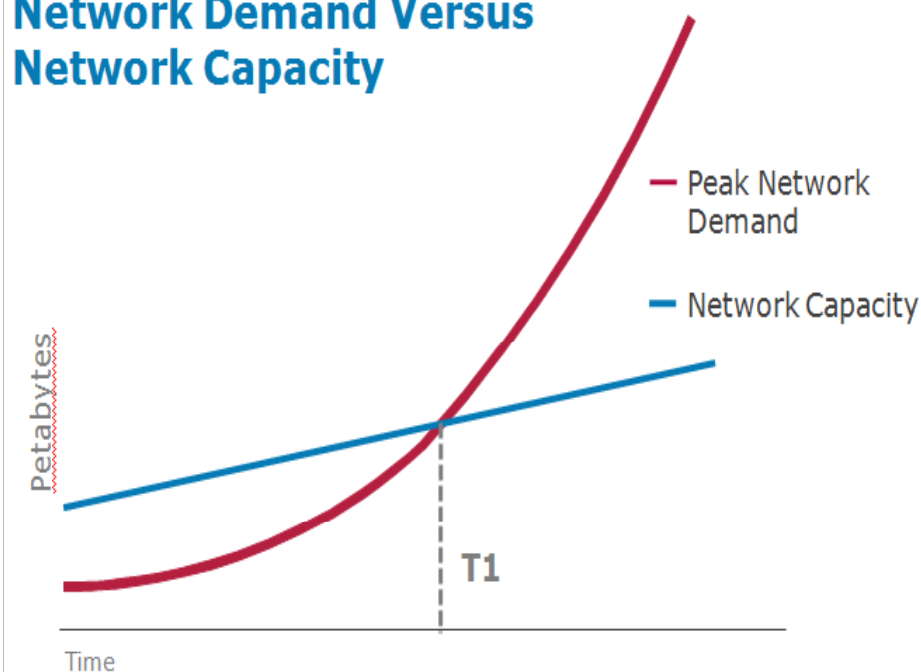


# Meeting the Mobile Broadband Bandwidth Demand



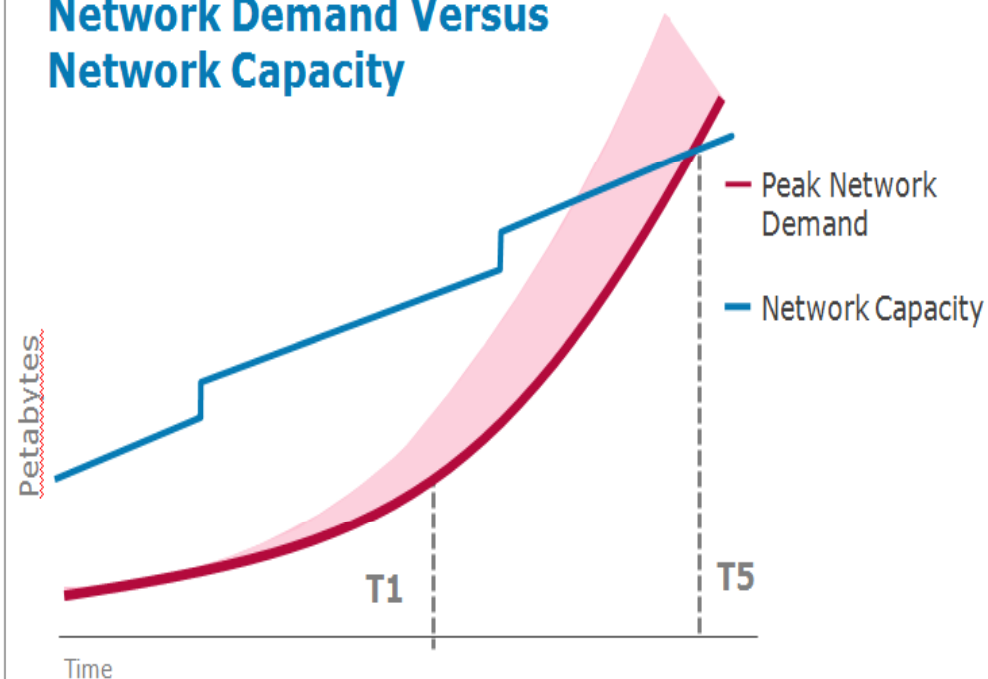
## Without Action

### Network Demand Versus Network Capacity



## With Action

### Network Demand Versus Network Capacity



**With Action:** More spectrum and more efficient technologies, use of complementary technologies (Wifi, femtocells) and more efficient applications on smartphones

Source: AT&T, CTIA Wireless, March 2010

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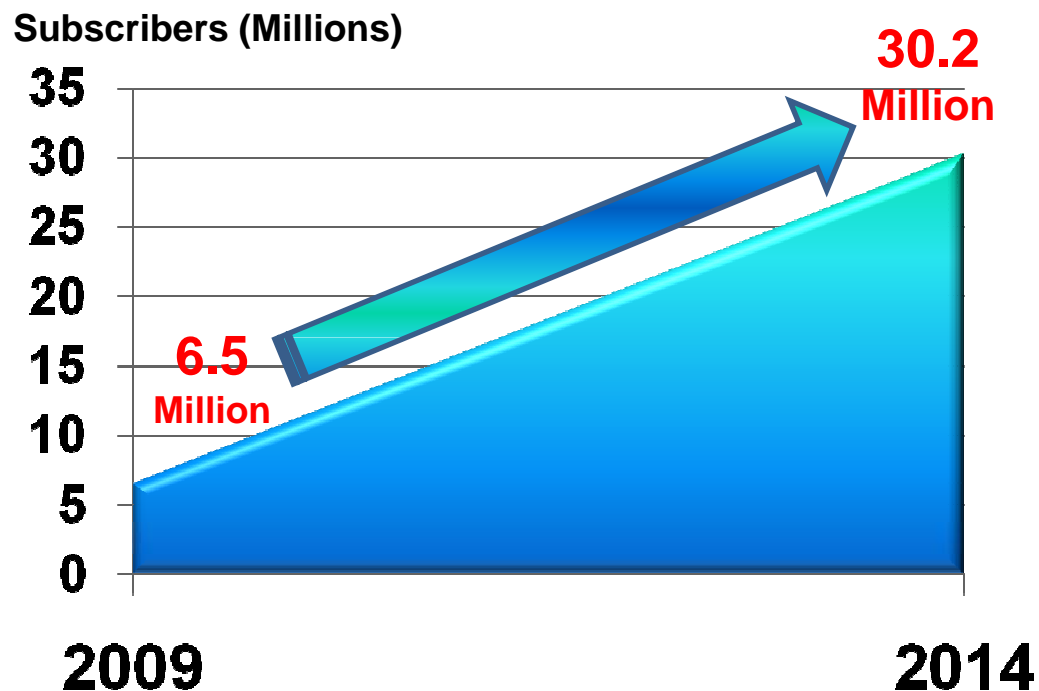


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# US Mobile Broadband Market Forecast



Compound annual growth rate (CAGR) of 36.1% over the period 2009-2014



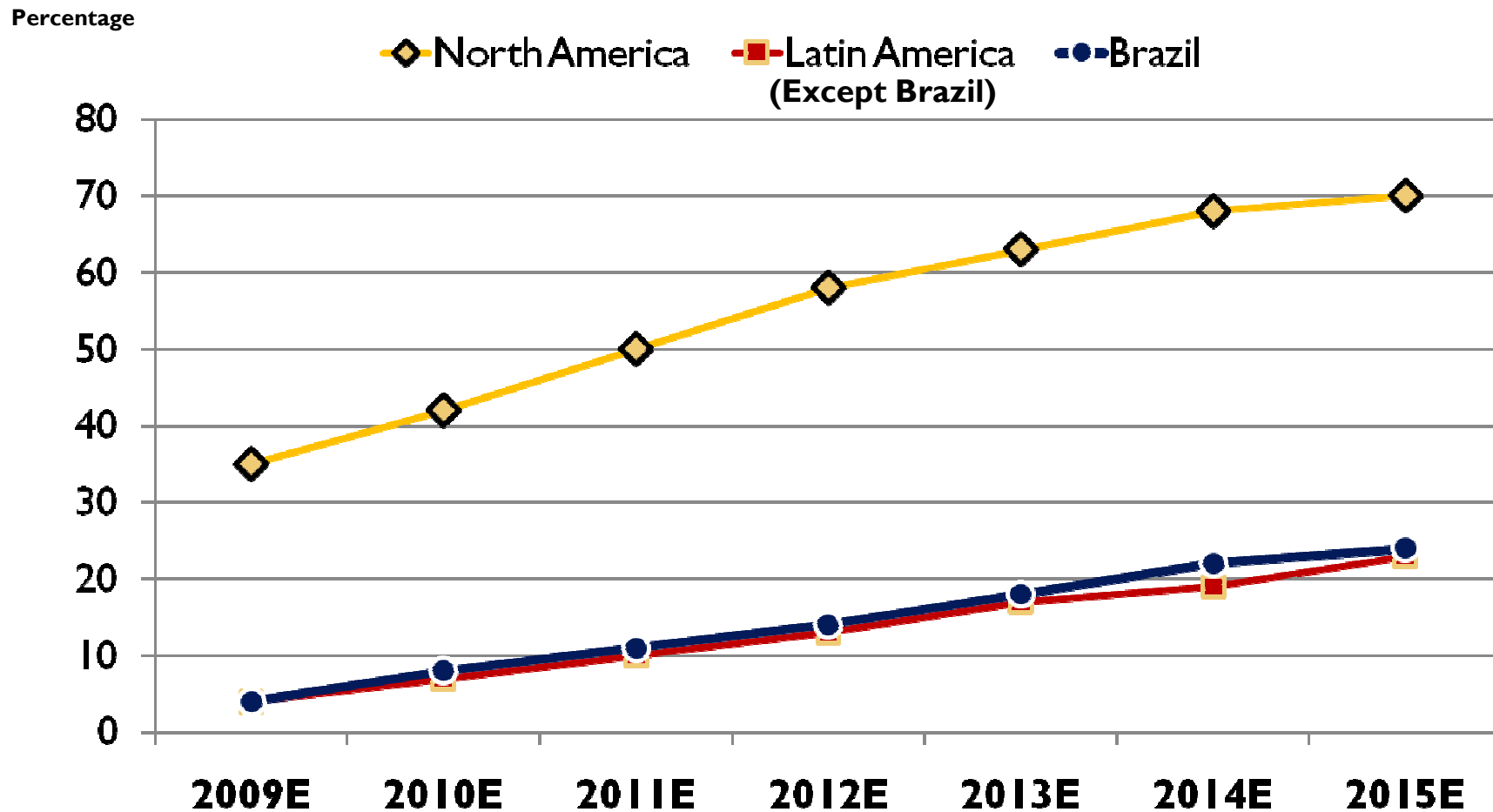
Source: IDC Press Release, 15 June 2010

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# Smartphone Penetration Forecast



Source: Deutsche Bank Securities, 29 March 2010

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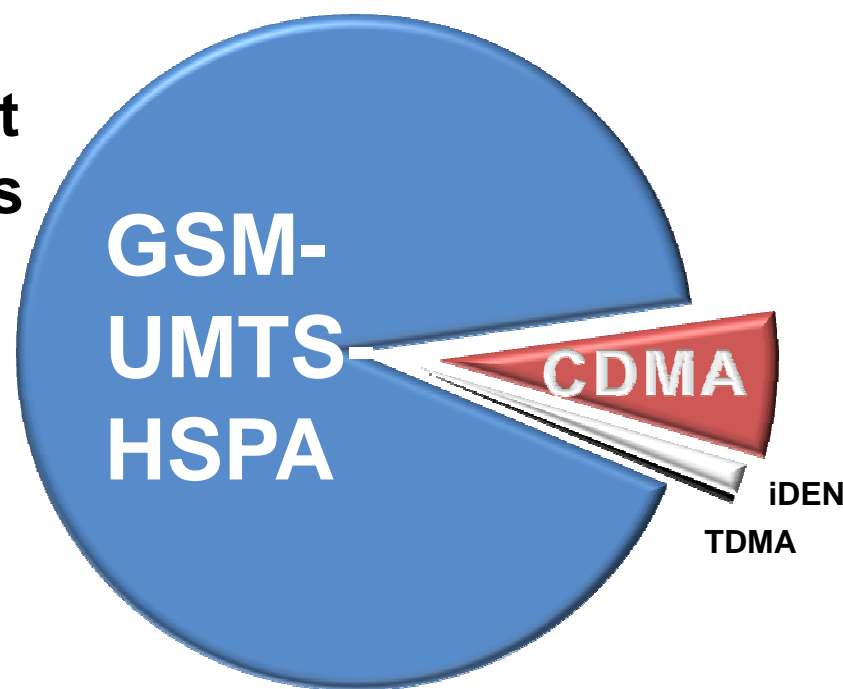
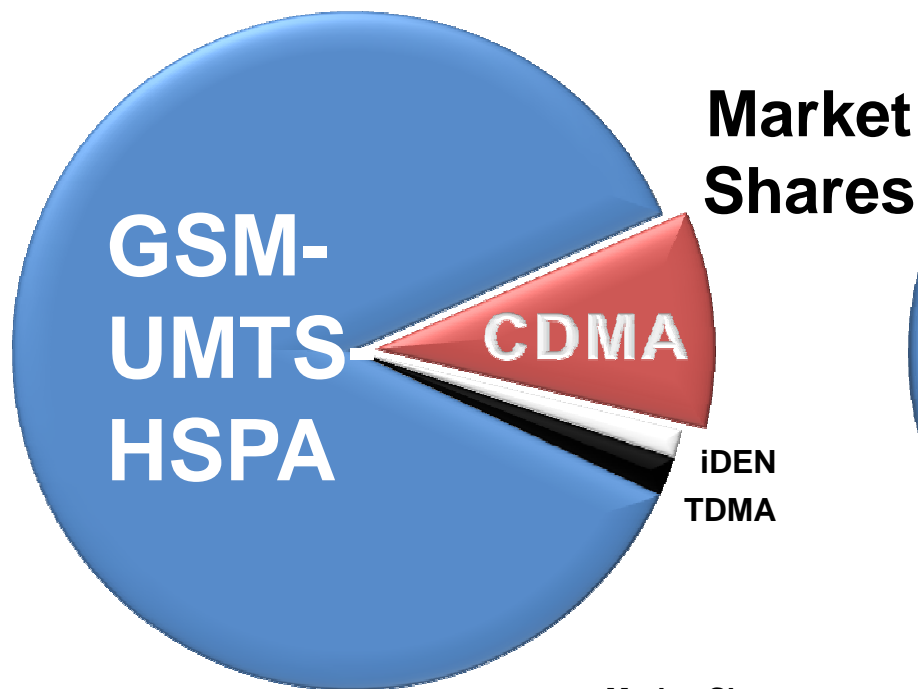


# Latin America Wireless Technology Growth



**March 2009**

**March 2010**



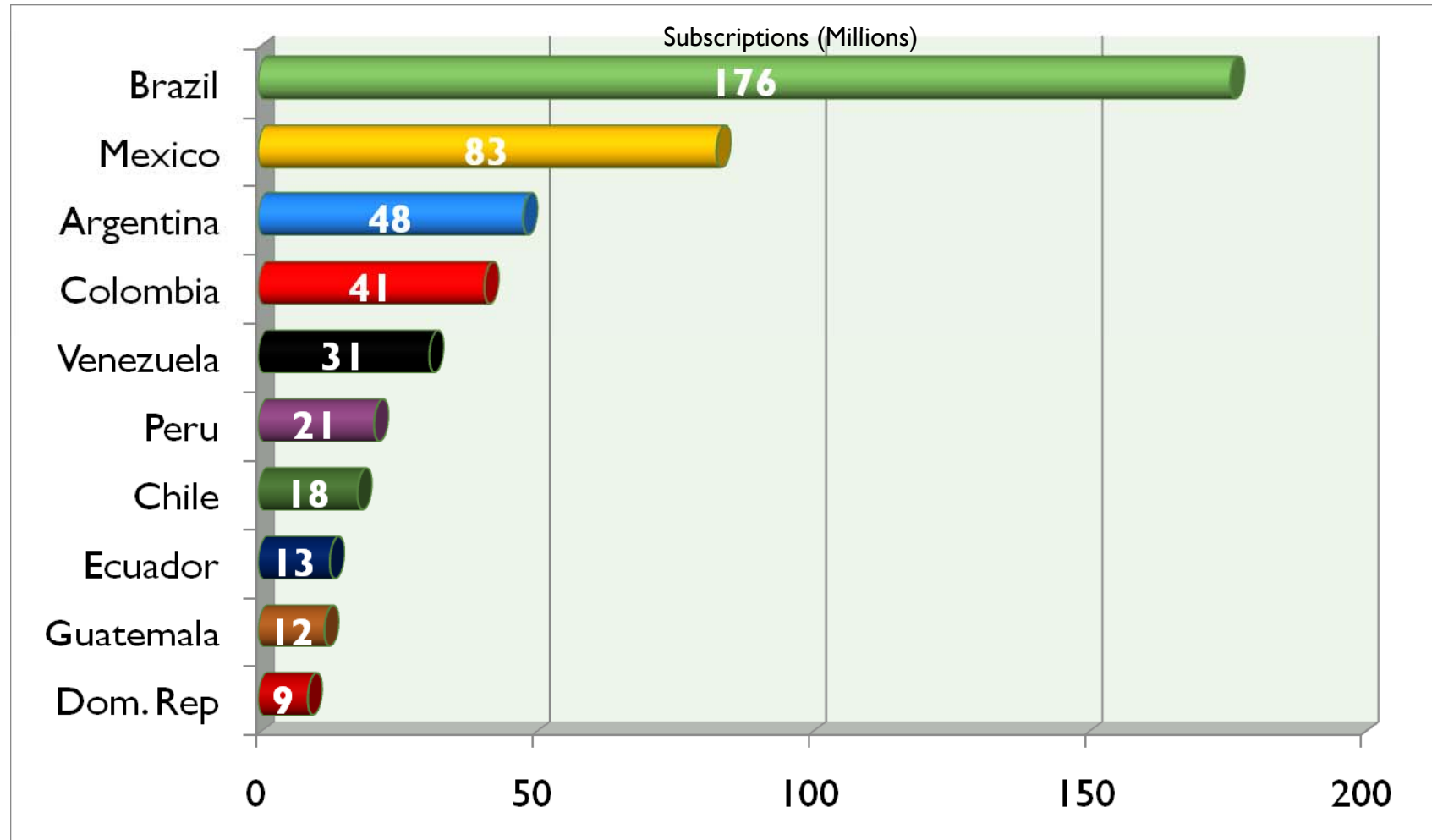
	Subscriptions	Market Share
GSM-UMTS-HSPA	417 M	89%
CDMA	39 M	9%
iDEN	6.5 M	1%
TDMA	4 M	1%

	Subscriptions	Market Share
GSM-UMTS-HSPA	486 M	92%
CDMA	32 M	6%
iDEN	8 M	1%
TDMA	0.7 M	0%

Source: Informa Telecoms & Media, WCIS+ , March 2010

# Top Ten Wireless Markets in Latin America

## End 2009



Source: Informa Telecoms & Media, WCIS+ April 2010

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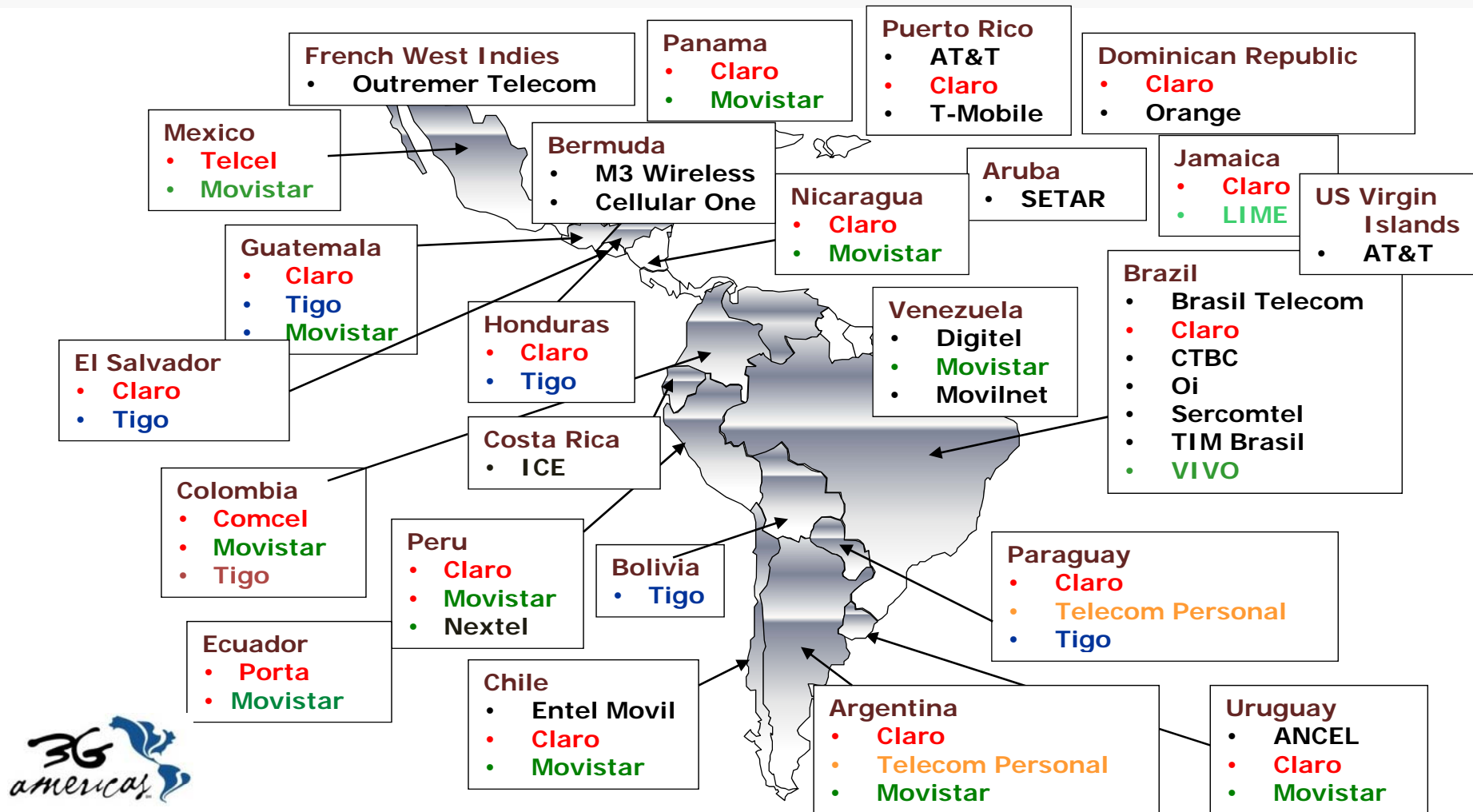




# HSPA in Latin America & Caribbean



**57 networks in service in 24 countries: 19 M subscriptions**



Source: Public Announcements, Regulators and Informa Telecoms & Media, June 2010

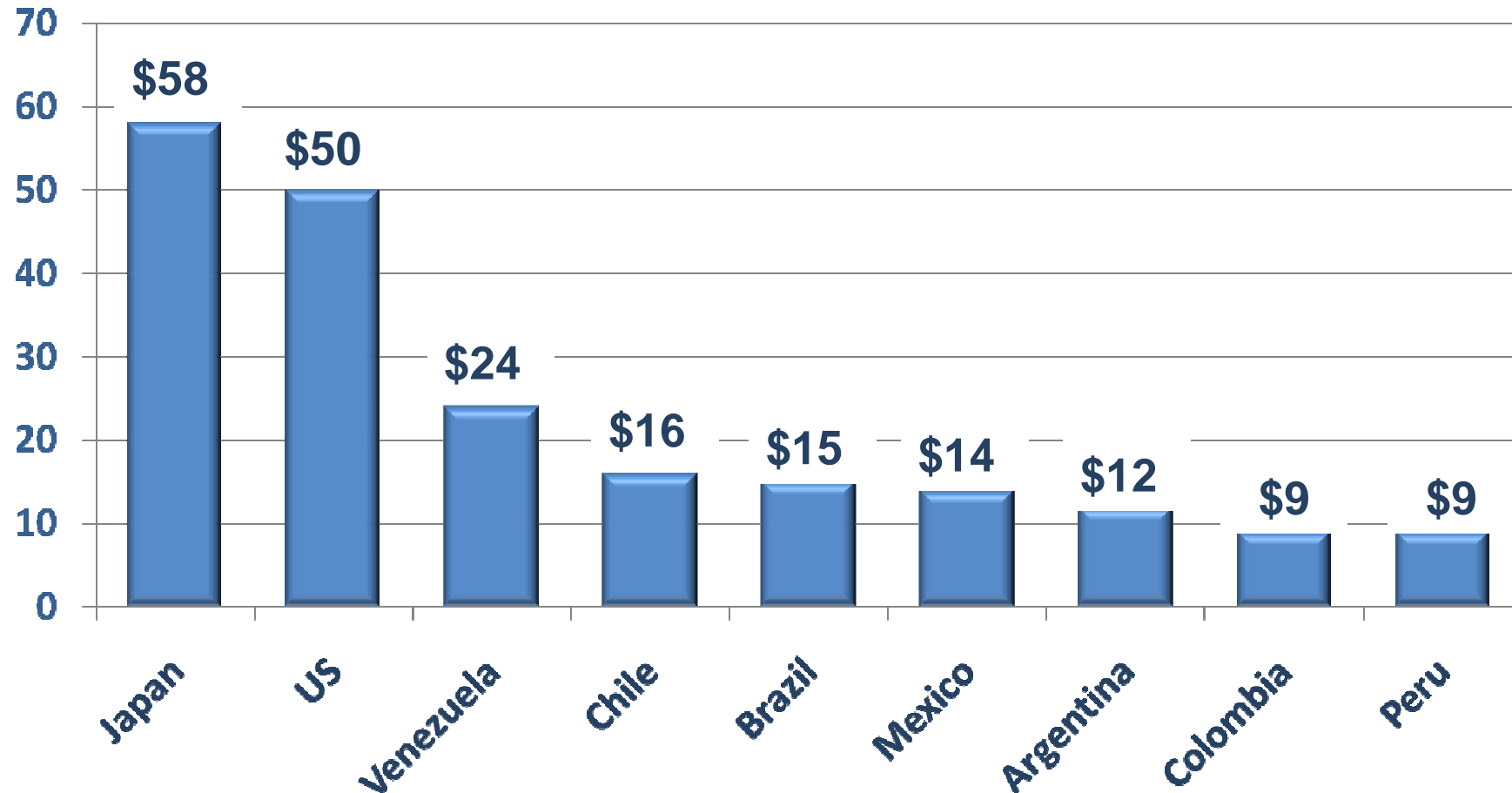


# Typical ARPU as of 4Q09 (US\$/Month)



ARPU: Services revenues divided by the average subscriber base during the quarter. Service revenues include monthly service charges and usage fees, roaming, long distance, and subscriptions to mobile data services

US\$/Month



Source: BofA Merrill Lynch Global Research estimates 1Q10

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# LTE in Latin America



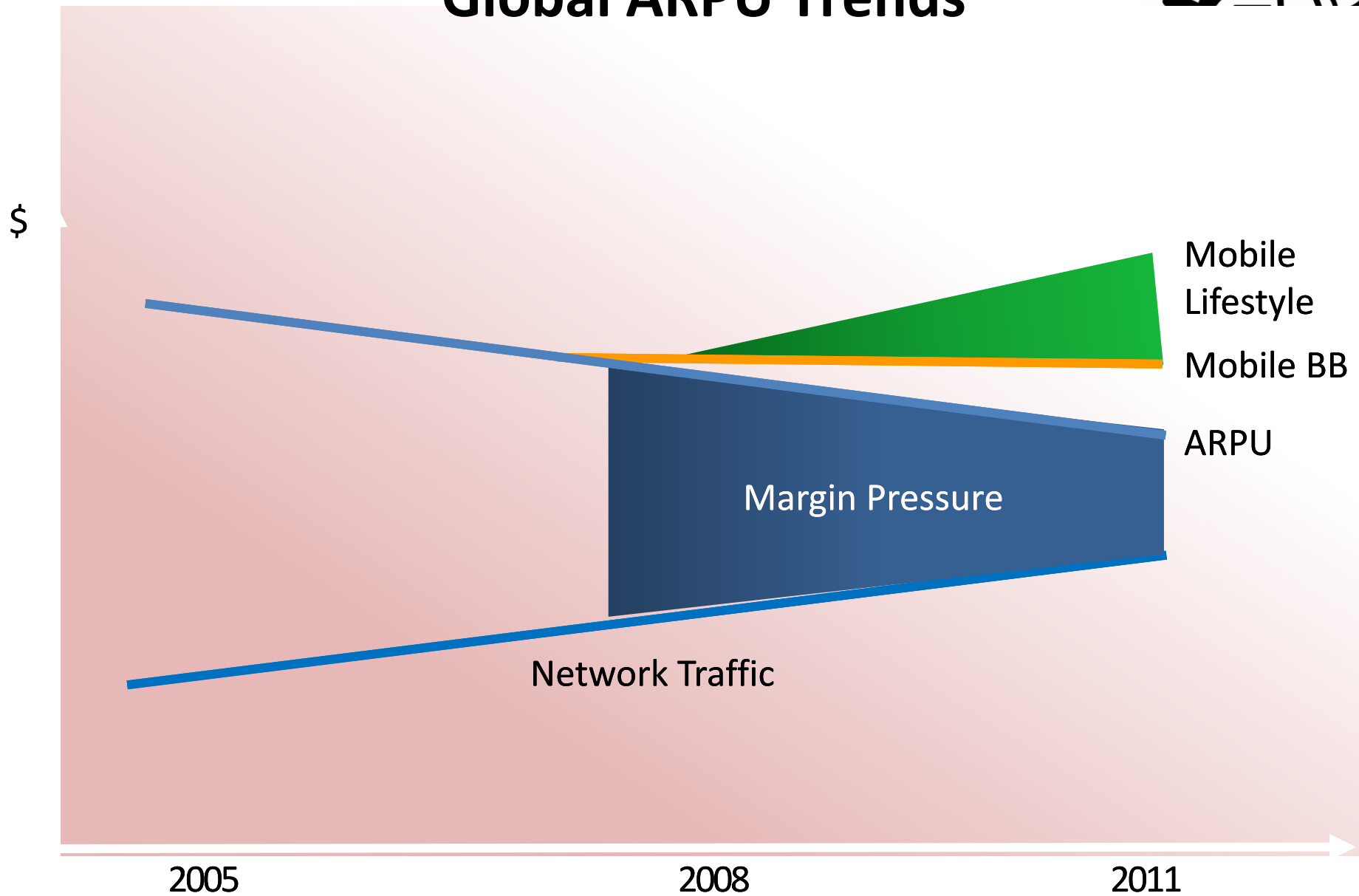
## Trials

- Chile: Entel PCS, December 2009 in **2.6 GHz** (experimental license)
- Argentina: Telecom Personal, June 2010 in **2.6 GHz** (experimental license)
- Peru: Telefonica makes first field data call, June 2010 in **700 MHz**
- Telefonica has announced trials during 2010 in Argentina and Brazil

## Spectrum

- 1.7 / 2.1 GHz: auctioned in Chile, being auctioned in Mexico, might be auctioned in Argentina end 2010
- 2.6 GHz: 50MHz auctioned in Colombia and under consideration in Brazil
- 700 MHz: will be studied in Mexico and Argentina

# Global ARPU Trends



Source: GSMA, December 2009

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# Mobile Traffic will keep Growing

Voice services will continue growing but information-based services will grow much more



Source: 3GPP

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GSMA Americas Conference, 21<sup>st</sup> June 2010

[www.3gamerica.org](http://www.3gamerica.org)



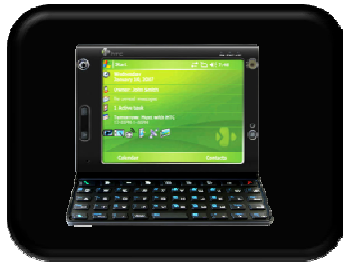


# Embedded Mobile Broadband

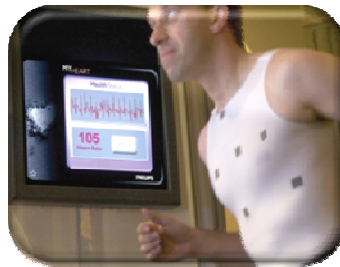


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## Consumer Electronics



## Healthcare



## Government



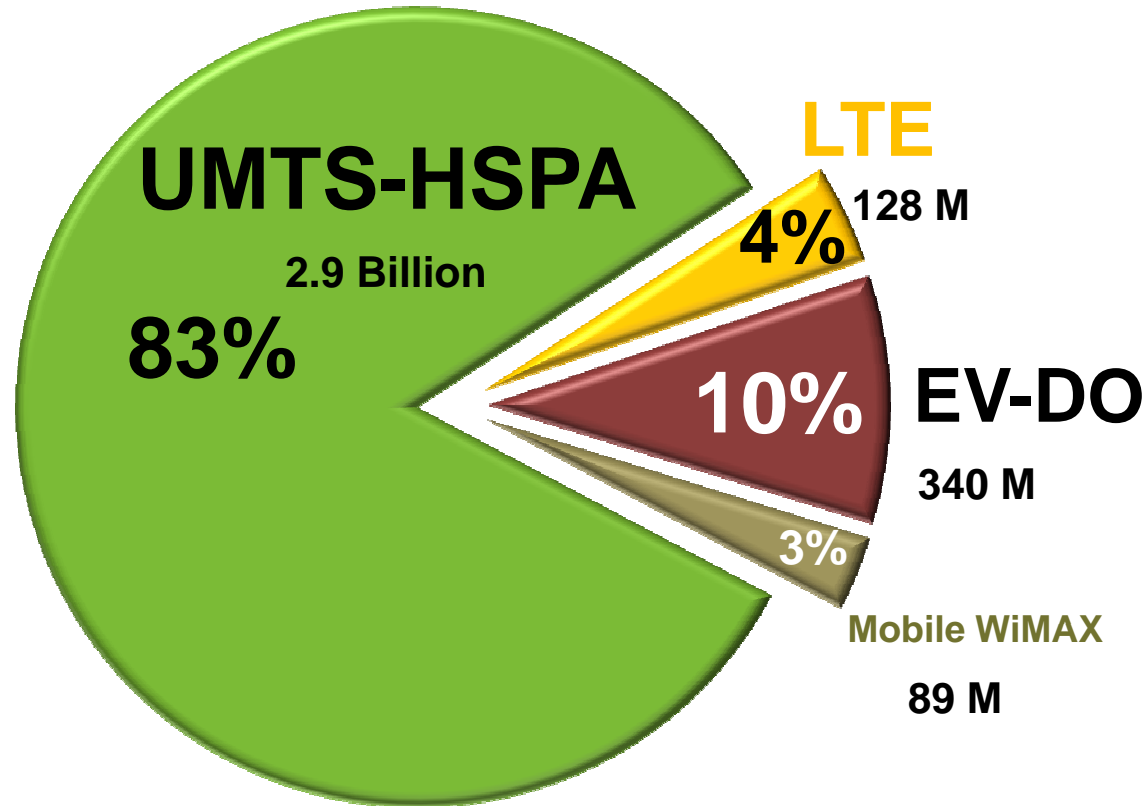
## Automotive



## Utilities



# 2014 Global 3G Subscription Forecast







**3GPP technologies (UMTS+HSPA+LTE): 87%, CDMA: 10%, Mobile WiMAX: 3%**

Source: Informa Telecoms & Media, WCIS+, Mar 2010



# Spectrum and Regulatory Update



-  **700 MHz** band being considered in Chile, Mexico and Argentina
-  **1.7/2.1 GHz (AWS)** auctioned in Chile, being auctioned in Mexico and will be auctioned in Argentina
-  **2.5 GHz** first auction in Colombia, June 2010; 50 MHz awarded to a Colombian fixed operator UNE EPM
-  **3.5 GHz:** Fixed WiMAX deployed in several countries

# Challenges in Latin America



- 📶 More spectrum is needed for advanced mobile broadband services
- 📶 Governments are promoting new entrants by using spectrum caps to limit established mobile operators
- 📶 High taxes for wireless services and equipment
- 📶 No spectrum auction for 4G; likely bands are 2.5 GHz, 1.7/2.1 GHz and 700 MHz
- 📶 Low broadband penetration (less than 10%)

# Thank you!

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