

## Wireless Industry

2012  
SERVICE  
EXCELLENCE  
SUMMIT

S&P  
CAPITAL IQ

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# Overview on U.S. Wireless

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- **Current Environment**
- **Key Wireless Service Trends & Risks**
- **Key Wireless Tower Trends & Risks**
- **Key Wireless Device Trends & Risks**
- **Network Buildouts Unify the Three Sectors**
- **Wireless Valuation**



# Wireless Current Environment

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- **Subscriber growth is slowing, but still solid**
- **Technology and product transitions have trumped poor economy**
- **Carriers focused on 4G network build out for competitive advantage**
- **Post AT&T/T-Mobile, mostly spectrum and smaller deals**
- **Carriers moving away from unlimited data pricing ahead of data surge**
- **Competition among handset vendors**



# U.S. Wireless Service Providers

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## ■ Growth Drivers

- Subscriber growth – slowing, but opportunities in prepaid and multiple devices
- Subscribers upgrading
- ARPU – Voice is slowing, but data growth is surging

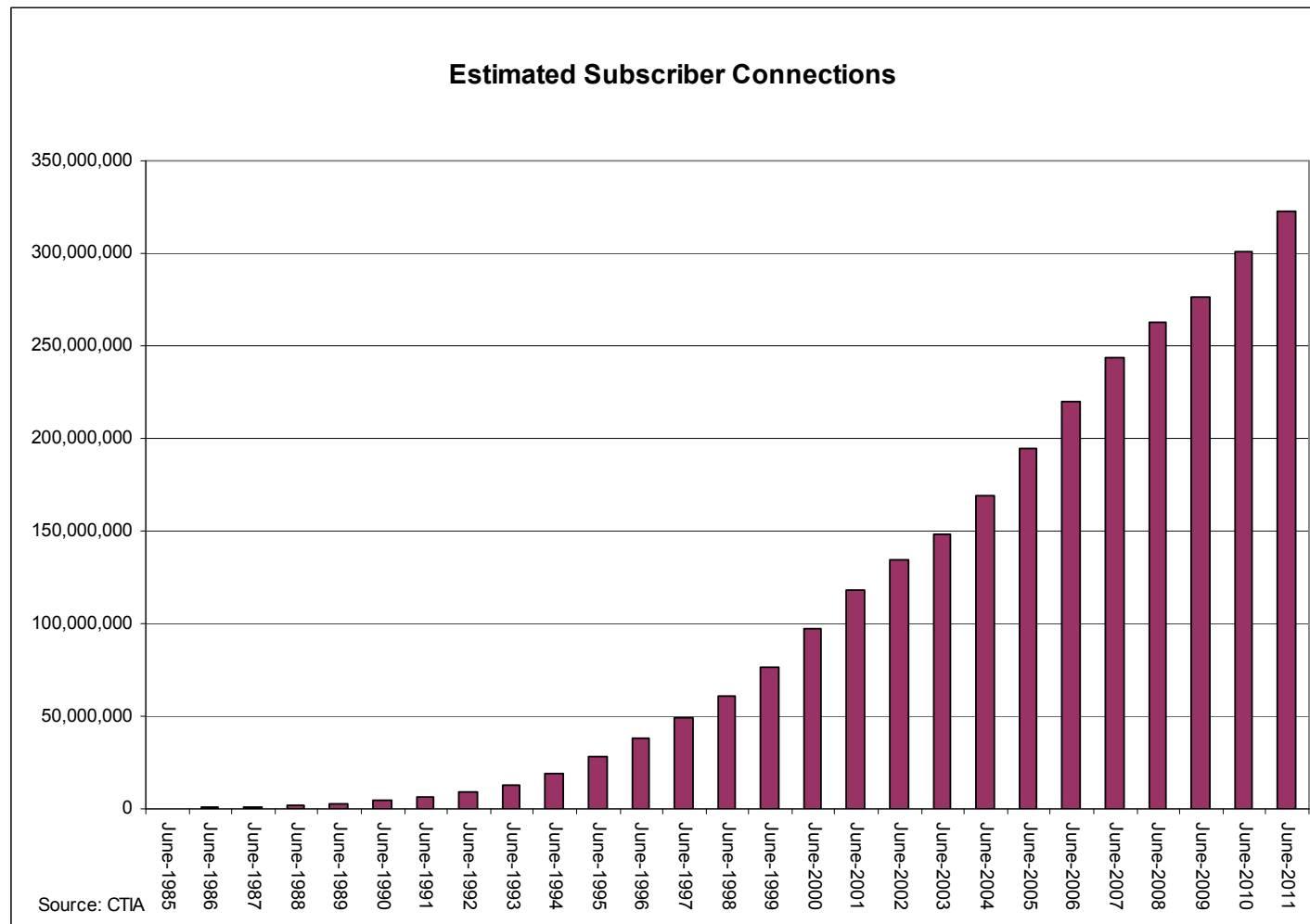
## ■ Risks

- Increasing debt and capex from network upgrades
- Growth in part is from “stealing” customers
- Consolidation could be bad for weaker players
- A price war would be bad for margins



# U.S. Wireless Growth Continues

- **Wireless connections grew 7.4% at end of June 2011 over the prior 12-month period, but down from 14.8% growth in 2005**



# But May Need a Boost

- **U.S. Penetration is now 102.4%, up from 72.5% in 2006**
  - More homes going totally wireless would help
  - Connected devices should continue to drive penetration rate
  - As will multiple devices and data cards

	<b>June-96</b>	<b>June-01</b>	<b>June-06</b>	<b>June-11</b>
<b>Wireless Subscriptions</b>	32.2M	118.4M	219.6M	322.8M
<b>Wireless Penetration</b>	14.0%	40.9%	72.5%	102.4%
<b>Wireless Only Households</b>	N/A	N/A	10.5%	31.6%
<b>Wireless Revenue</b>	\$21.5B	\$58.7B	\$118.3B	\$164.6B

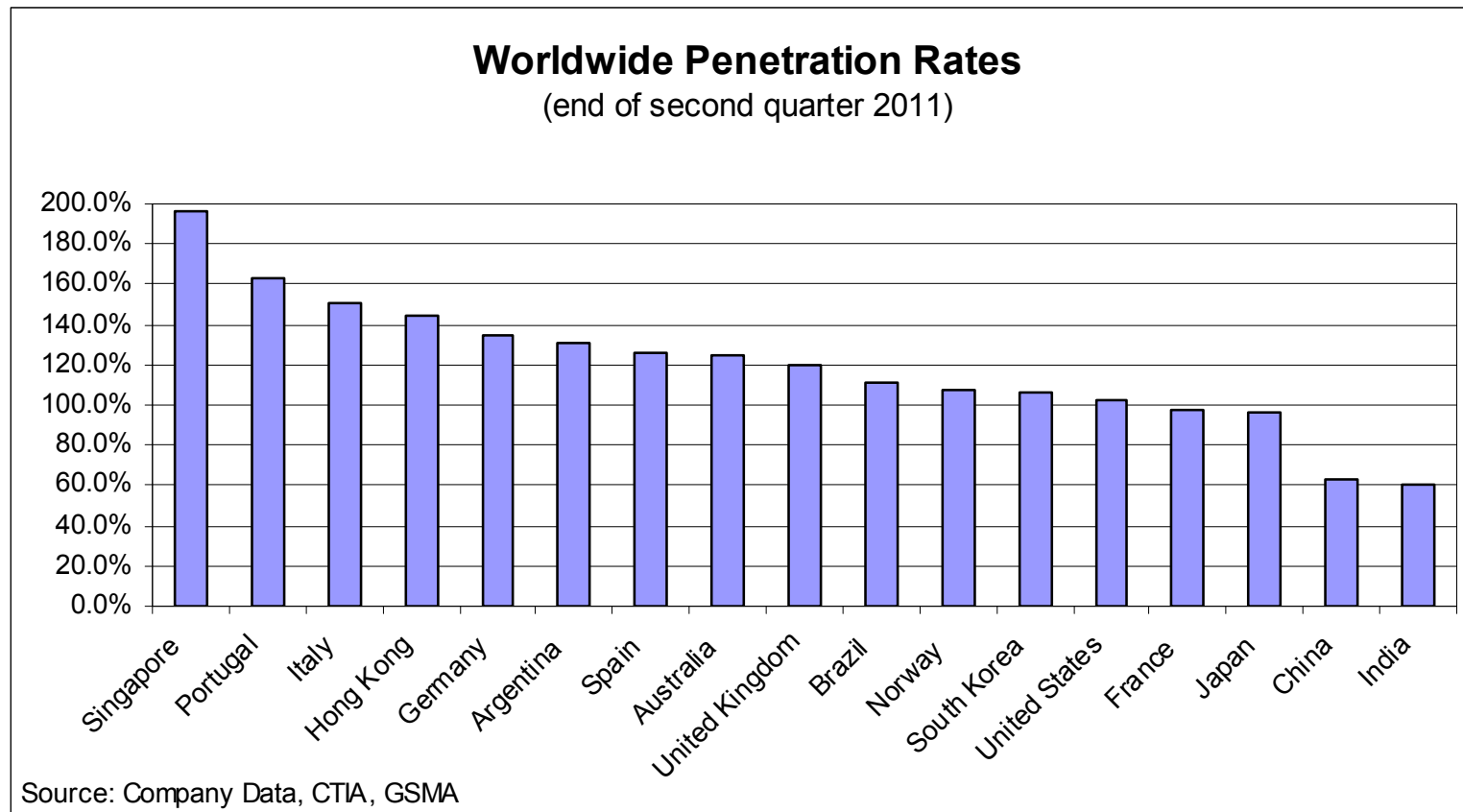
Note: N/A refers to Not Available.

Source: CTIA



# Still Below Other Countries

- Countries that have SIM cards and multiple devices are well ahead of the U.S.



# Are Two Carriers Moving to Duopoly?

- **Verizon and AT&T accounted for roughly 66% of U.S. subscribers – Q4 11**
  - Combined, totaled 71% of net additions in Q4 11
    - However, roughly 30% of net adds were wholesale and connected devices

## PROFILE OF LEADING US WIRELESS CARRIERS

(Fourth quarter of 2011, ranked by number of subscribers)

CARRIER	NUMBER OF SUBSCRIBERS†	MARKET SHARE (%)	QUARTERLY NET ADDS (THOUS.)	% OF TOTAL ADDS	SERVICE REVENUES (MIL.\$)	ARPU (\$)	CHURN‡ (%)	CAPITAL EXPENDITURES (MIL.\$)
Verizon Wireless	108,667,000	33.8	969	19.8	15,106	53.14	1.23	1,787
AT&T	103,247,000	32.1	2,497	51.0	14,347	47.04	1.39	2,858
Sprint Nextel	55,021,000	17.1	1,622	33.1	6,936	58.59*	1.98**	774
T-Mobile	33,185,000	10.3	(526)	(10.7)	4,565	46.00	4.00	551
US Cellular	5,891,000	1.8	(41)	(0.8)	1,030	58.13	1.6**	276
Metro PCS	9,346,659	2.9	197	4.0	1,134	40.55	3.70	190
Leap Wireless	5,934,013	1.8	179	3.7	730	42.09	3.90	152
Total	321,291,672	100	4,897	100	43,848	...	...	6,589

Note: Totals may not add due to rounding. †Directly owned customers (excl. proportionate customers in affiliates and equity investments). ARPU-Average revenue per user. ‡Average monthly churn: the number of customers terminating service in the quarter, divided by 3, as a percentage of total customers for the period. \*ARPU reflects revenue from direct postpaid users.

\*\*Churn rate is for postpaid subscribers.

Source: Company reports.



# But There's Still Room for Other Players

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- **Total postpaid wireless subscribers grew 1.7% in Q4 11, vs. 13% for prepaid**
- **Prepaid may be more suited to a difficult economy**
  - No mandatory contract
  - No credit check necessary
  - Can vary how you pay month to month
  - Can switch carriers at will
  - Cheaper plans, \$50 unlimited plans including tax versus \$80 or higher
    - Less selection for handsets and higher, unsubsidized price for handset.



# Major Players in Prepaid

- Major players still benefit from prepaid base and wholesale

Company	Q4 11 Prepaid Subscribers (MM)	Market Share %	% of Total Subscribers
America Movil	19.762	27.9%	NMF
Sprint Nextel	14.789	20.9%	26.9%
MetroPCS	9.347	13.2%	100.0%
T-Mobile	8.389	11.8%	25.3%
Leap	5.934	8.4%	100.0%
AT&T	7.225	10.2%	7.0%
Verizon Wireless	4.785	6.8%	4.4%
Other	0.576	0.8%	NMF
<b>Total</b>	<b>70.807</b>	<b>100%</b>	

Note: NMF refers to Not Meaningful  
Source: Company data and S&P Capital IQ Estimates.



# Postpaid Remains the Crown Jewel

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- Higher ARPU in the mid \$50s/month to upper \$20s for prepaid
- Lower churn of roughly 1.5% to 2% per month versus 3% to 6%
- Higher data usage and more potential for higher data revenue in the future
- Higher margin customers, but, require higher subsidies of between \$100 to \$200 for smartphones
- Higher end users can clog the network under unlimited plans



# Carriers Differentiating by Network

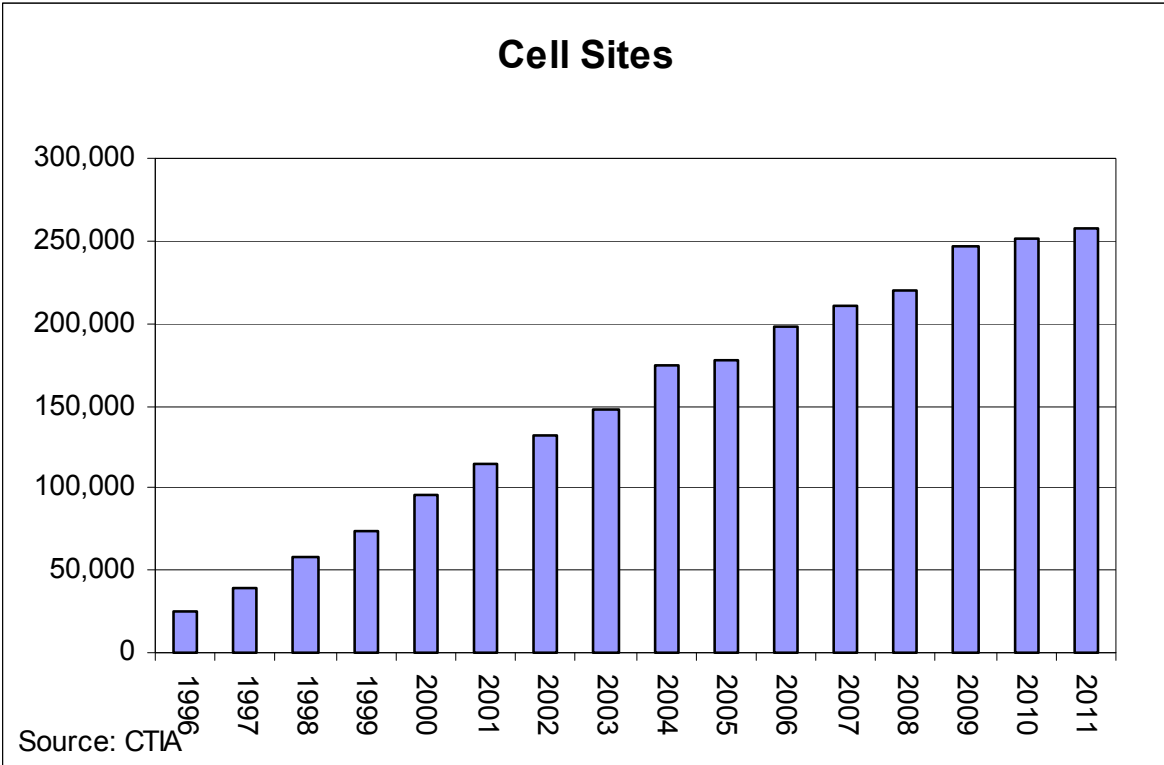
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- Race to 4G has become important as carriers compete on network speed
- Carriers investing heavily in networks to fully deploy LTE by 2013
- Verizon was first mover with LTE, has 200M+ Pops covered and plans to finish by 2013
- AT&T had a later start, but covers 74M and plans for 80% of footprint in 2013
- Sprint expects to cover roughly 120M Pops by end of 2012 and 250M by end of 2013
- T-Mobile plans to launch LTE in 2013 and currently covers 184M Pops with HSPA+42



# Growth of Cell Sites Benefit Tower Providers

- Increasing data growth should require service providers to add and split cell sites



# Handset Vendors

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## ■ Growth Drivers

- Subscriber upgrades to 3G and 4G
- Handset innovation
- Service provider promotions
- Tablets

## ■ Risks

- High level of competition
- Shortening life of handsets due to innovations and new technologies
- Economy, high-end smartphones are not cheap



# The Battle Remains Fierce Among Handset Vendors

- Nokia and RIMM are slipping while others make their move

## ESTIMATED GLOBAL SMARTPHONE MARKET SHARES

*(Ranked by fourth quarter, 2011, market share)*

VENDOR	MARKET --- SHARE (%) ---		UNIT GROWTH
	Q4 '10	Q4 '11	(%)
Apple	15.9	23.5	128.4
Samsung	9.4	22.8	275.0
Nokia	27.6	12.4	(30.6)
Research in Motion	14.3	8.2	(11.0)
HTC	8.5	6.5	17.2
Others	24.3	26.6	69.4
<b>Total</b>	100.0	100.0	54.7

Source: IDC Worldwide Quarterly Mobile Phone Tracker.



# As Operating Systems Have Helped Bridge the Gap

- Android has let carriers such as HTC gain ground

## WORLDWIDE MOBILE DEVICE OPERATING SYSTEM MARKET SHARE

(In percent)

	2010	2011	2012E	2013E	2014E	2015E
<b>SMARTPHONES</b>						
Android	23.3	49.0	52.2	49.9	48.4	46.5
Blackberry OS	16.0	11.1	10.2	10.1	10.1	10.0
iPhone OS	15.6	18.2	20.1	20.1	19.8	19.3
Linux	3.0	3.1	3.1	3.2	3.4	3.5
Maemo/MeeGo	0.2	0.0	0.0	0.0	0.0	0.0
Symbian	36.4	16.4	5.6	1.8	0.3	0.1
webOS	0.6	0.2	0.0	0.0	0.0	0.0
Windows Mobile	4.9	1.9	8.8	14.8	18.2	20.6
Other	0.0	0.0	0.0	0.0	0.0	0.0
<b>MEDIA TABLETS</b>						
Android	23.9	36.7	39.0	44.1	45.9	46.7
QNX	0.0	1.3	1.1	1.2	1.5	1.7
iOS	75.9	60.5	59.9	54.6	52.6	51.6
webOS	0.0	1.4	0.0	0.0	0.0	0.0
Windows Embedded	0.3	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0

Totals may not add due to rounding.

Source: IDC's December 2011 forecast report.



# Handsets Have Become Weapon of Service Providers

- **Carriers use exclusivity to lure subscribers**
  - iPhone and other high-end smartphones carry high subsidy
  - Increase in smartphone penetration is good for revenue, but brings higher subsidies
  
- **But high competition and shorter handset lives are ending exclusivity**
  - More carriers, such as Sprint Nextel are getting premier handsets
  
- **LTE should drive smartphone growth**

## WORLDWIDE SMARTPHONE SHIPMENTS

(In 000s)

	2010	2011	2012E	2013E	2014E	2015E	5-yr CAGR (%)
<b>4G SMARTPHONES</b>	3,000	13,100	41,200	91,500	140,900	202,200	131.7%
<b>TOTAL SMARTPHONES</b>	304,697	476,405	628,533	763,124	891,962	1,016,964	27.3%
<b>4G as % of Total</b>	1.0%	2.7%	6.6%	12.0%	15.8%	19.9%	

Sources: IDC's December 2011 "Worldwide Mobile Phone 2011–2015 Forecast and Analysis"

IDC's December 2011 "Worldwide Smartphone 2011–2015 Forecast and Analysis"



# Drivers of LTE Handset Adoption

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## ■ Lower prices

- We believe prices will drop in H2'12 and drive adoption
- MetroPCS expects LTE handset prices of \$99 - \$149 in H2'12

## ■ Longer battery life

- Initial LTE handsets had short battery life
- Bigger handsets of 4.8" incorporating larger capacity batteries
- Some carriers requiring battery capacity of 1,700 – 1,900 mAh
- Motorola RAZR Maxx has 3,300 mAh battery

## ■ Faster processors

- Dual-core, 1GHz becoming standard
- Starting to see quad-core, 1.5GHz



# And Do Not Forget Tablets

- New area of growth for vendors and service providers alike
- We see strong growth in the consumer and enterprise markets

## U.S. CONSUMER AND COMMERCIAL MEDIA TABLET SHIPMENTS

(In percent)

	2010	2011	2012E	2013E	2014E	2015E	5-yr CAGR (%)
<b>CONSUMER</b>							
GROWTH (%)	NA	167.8	37.3	25.3	8.4	4.6	39.2%
SHARE (%)	96.8	95.9	93.6	92.6	91.8	91.2	
<b>COMMERCIAL</b>							
GROWTH (%)	NA	238.1	121.4	47.3	21.2	12.0	71.8%
SHARE (%)	3.2	4.1	6.4	7.4	8.2	8.8	

Note: NA refers to Not Applicable.

Source: IDC Worldwide and U.S. Media Tablet 2011–2015.



# Tablets Should Benefit from LTE

## U.S. MEDIA TABLET SHIPMENTS BY CONNECTIVITY

(In percent)

	2010	2011	2012E	2013E	2014E	2015E	5-yr CAGR (%)
<b>WI-FI ONLY</b>							
GROWTH (%)	NA	217.5	48.7	32.6	10.5	3.8	53.9%
SHARE (%)	65.3	76.8	81.2	84.9	85.8	84.7	
<b>3G EMBEDDED</b>							
GROWTH (%)	NA	79.6	-38.5	-44.4	-85.8	NA	NA
SHARE (%)	34.7	23.1	10.1	4.4	0.6	0.0	
<b>4G EMBEDDED</b>							
GROWTH (%)	NA	NA	8,028.7	84.3	39.2	18.1	NA
SHARE (%)	0.0	0.2	8.8	10.7	13.6	15.3	

Note: NA refers to Not Applicable.

Source: IDC Worldwide and U.S. Media Tablet 2011–2015.



# New Data Plans Should Drive LTE Adoption

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- **We believe the launch of data family plans will be a big driver for tablets**
  - No need for multiple plans
  - More subscribers using wireless on the go, good for carriers and data consumption
  - Subscribers will most likely upgrade to bigger buckets of data



# Connected Home Becomes Reality

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- **QCOM has Snapdragon and WiFi chipsets in new Lenovo TV**
- **Tablets and smartphones could operate a home full of connected devices**
- **The Jetson Age is upon us.**



# LTE Is the Lynchpin

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- **We believe LTE will be the key to growth for service providers, handset vendors and the tower companies in the coming years**
- **Should be the first truly global standard and will allow scale**
- **Should further accelerate smartphone penetration from roughly 35%**
- **Should drive increased data traffic that benefits service providers and tower companies**
- **Newer, faster handsets should drive consumers to upgrade handsets**



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**EBITDA- Earnings Before Interest, Taxes, Depreciation and Amortization**

**EPS- Earnings Per Share**

**EV- Enterprise Value**

**FCF- Free Cash Flow**

**FFO- Funds From Operations**

**FY- Fiscal Year**

**P/E- Price/Earnings**

**PEG Ratio- P/E-to-Growth Ratio**

**PV- Present Value**

**R&D- Research & Development**

**ROE- Return on Equity**

**ROI- Return on Investment**

**ROIC- Return on Invested Capital**

**ROA- Return on Assets**

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