

## AT&T Mobility

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Asset Valuation Conference**  
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### Status of 2013 Conference Predictions

- Regulators would fast track the transition from TDM networks to Internet Protocol (IP) for Incumbent LECs  
**Regulation in terms of change is business as usual – Slow**
- AT&T's Request for IP trials would be expedited with the FCC not being an impediment to moving forward  
**The trials finally started. First IP transition mid-year 2015**
- Much progress would be made on the regulatory front in a relatively short timeframe  
**Only progress if one considers attempted imposition of Title 2 for broadband service progress**
- Circuit networks would begin shutting down following 2015  
**Perhaps in the two test market (Carbon Hill, AL and Del Ray Beach, FL)**
- Recommendation to buy AT&T stock and Short Google  
**See following stock chart**

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## AT&T vs. Google Stock History

AT&T, Inc. (T) ★ Watchlist

**33.80** +0.54(+1.62%) NYSE - As of 3:22PM EST



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## Regulatory Issues

- Title 2 regulation of data services including wireless data
  - In part a result of Verizon winning a law suit overturning 2010 rules governing internet access
  - Reclassify broadband as an old style public utility service
  - Prohibit paid priority services
  - Government might set rates
  - Require providers to share networks with competitors
  - According to the AT&T Chairman Net Neutrality is the most important issue for the telecommunications industry
  - Likely to result in protracted litigation
  - Google supportive of the move to Title 2
- President Obama intent on overturning anti-municipal broadband laws
  - Requests repeal of laws that restrict towns and cities from setting up there own broadband networks.

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## Project Velocity IP

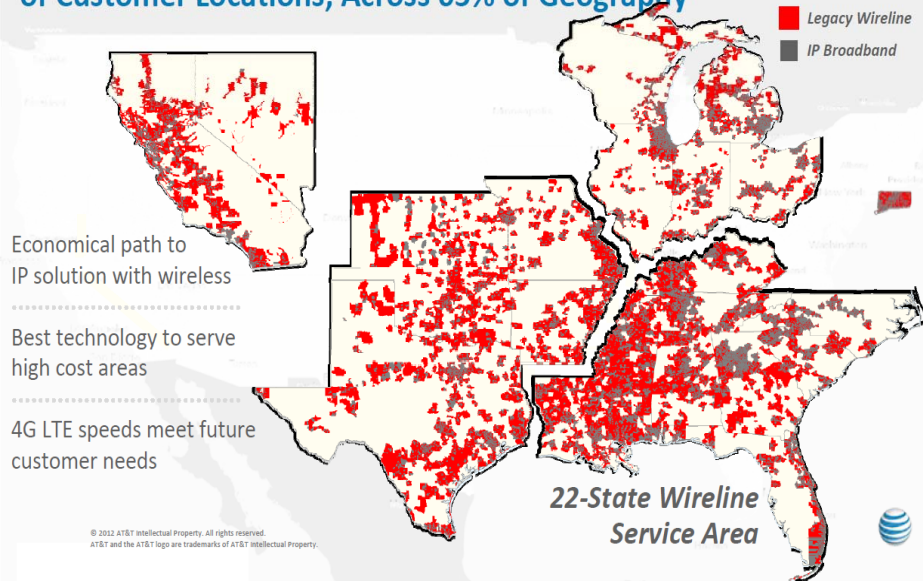
### Catch-Up Mode of Operations

- AT&T announced its \$14 Billion (\$6B in Wireline & \$8B in Wireless) Project Velocity IP CapEx thru 2015. In addition to normal Cap Ex levels
- Complete nation-wide 4G LTE build out by 2015
- Project Velocity IP will move 25% of its wireline customers constituting **65% of its service territory** off the wireline network.
- In remaining 35%
  - **U-verse coverage will expand to an additional 8.5 Million customers** for a total of 33 Million homes where the service is offered.
  - Internet download **speeds will increase up to 75 Mbps capability** by 2015 for customers within approximately 1,900 feet of a launch point
  - **IP DSLAM Broadband service during 2013** will provide customers within approximately 2,600 feet of a launch point with **download speeds up to 45 Mbps**

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### Plan to Alter Legacy Wireline Cost Structure for 25% of Customer Locations, Across 65% of Geography



## AT&T Wireless Home Phone

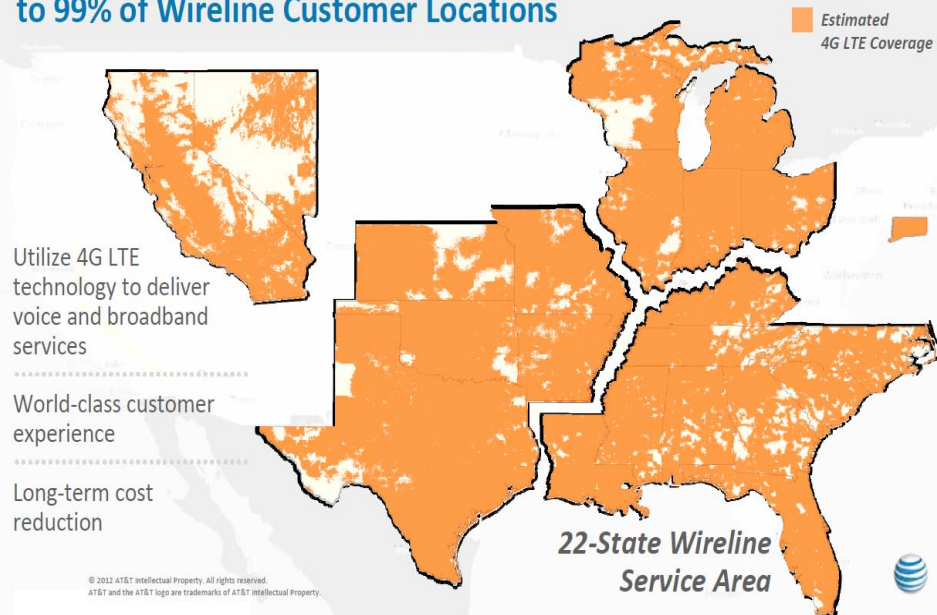


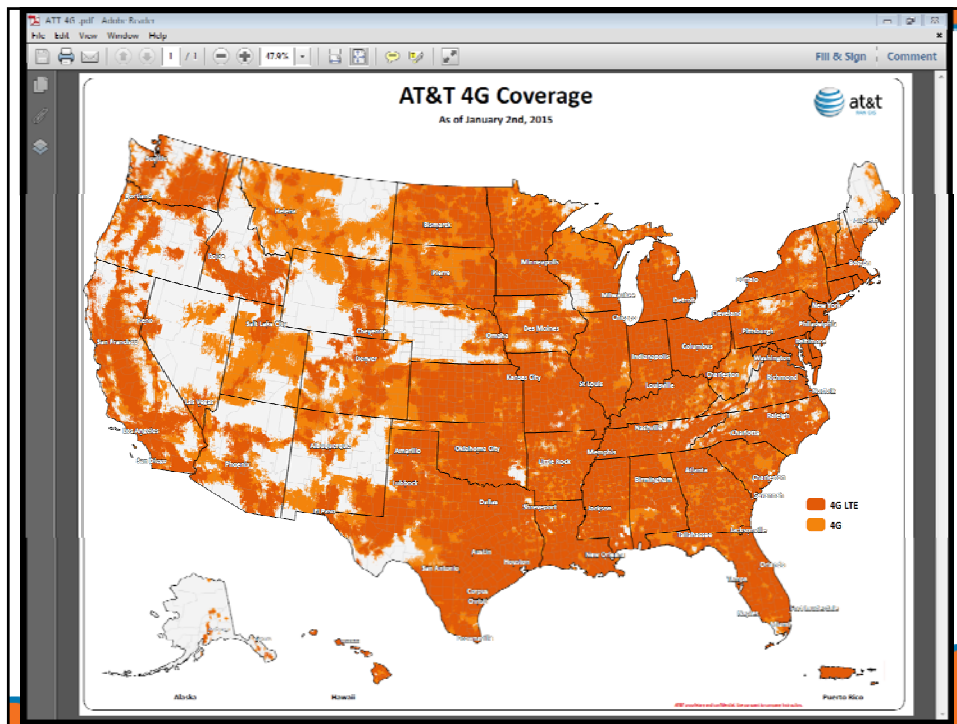
- The offering, dubbed A&T Wireless Home Phone, became available in July 2012 in "select domestic markets where AT&T did not offer traditional landline service,"

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## Plan to Deliver 4G LTE Wireless IP Solution to 99% of Wireline Customer Locations





## Current AT&T Wireless Network

- **AT&T Network is Comprised of 3 Separate Technologies & 5 separate networks**
  - GSM - Voice and Data Network.
  - UMTS – Voice and Data Network.
  - LTE – Currently primarily a data network
- **Current configuration inefficient and costly to operate:**
  - Inefficient use of existing spectrum.
  - Cost of building & operating GSM and UMTS networks is excessive in comparison to current technology.
  - UMTS HSPA+ network traffic has peaked
- **AT&T Introduced Voice over LTE (HD VoLTE) in limited markets in May 2014. Further roll out during 2015**

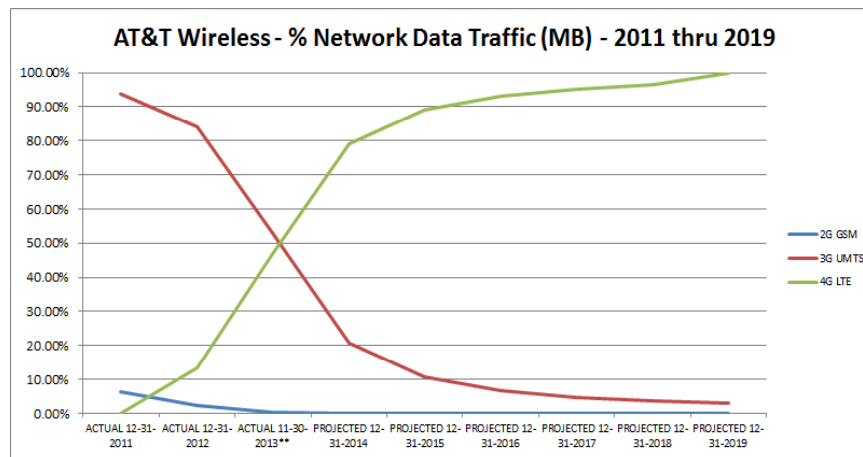
## Traffic by Technology

	Actuals (%)			Projections (%)						
	Dec-12	Dec-13	Nov-14	Dec-14	Dec-15	Dec-16	Dec-17	Dec-18	Dec-19	Dec-20
GSM	2.27	0.65	0.27	0.23	0.06	0.00	0.00	0.00	0.00	0.00
UMTS	84.27	56.13	35.97	33.22	19.48	9.15	5.75	3.56	2.32	1.69
LTE	13.46	43.23	63.76	66.55	80.46	90.85	94.25	96.44	97.68	98.31

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## Historical & Projected Network Traffic Trends



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## Obsolete Technology

- AT&T will Shut Down its 2G Network by 2016
  - ❖ GSM Equipment is at the end of its average service life now.
  - ❖ AT&T has already started to shut down 2G service in some markets
- As the chart reflects on the previous slide, UMTS is rapidly becoming obsolete as customers migrate to 4G/LTE networks.
- AT&T to shut down Leap CDMA network beginning in March/April of 2015. Completing process by August/September

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## Current Cost Comparison Using Same Amount of Capacity — Note: Not adjusted for speed differences/throughput and additional capital costs for spectrum

Technology	Cost
GSM Base Station (including 911 LMU)	\$388,728
UMTS / NodeB	\$109,878
LTE / E Node B	\$38,498

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## GSM BASE STATION



## UMTS BASE STATION



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## New UMTS – NODE B

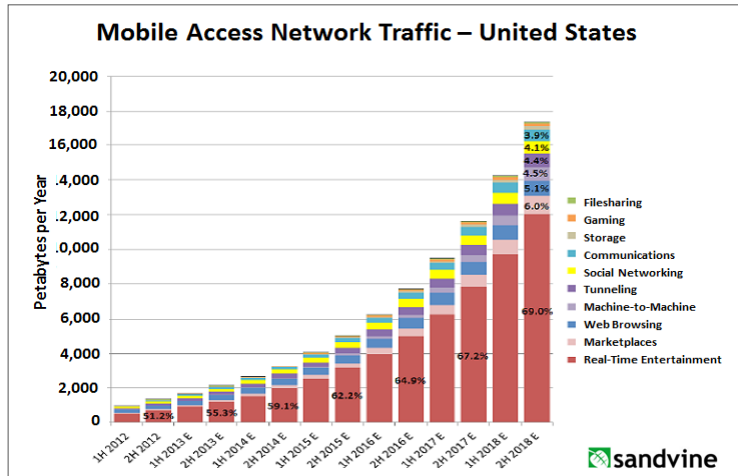


## LTE



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## Projection of Mobile Traffic Trends in the United States

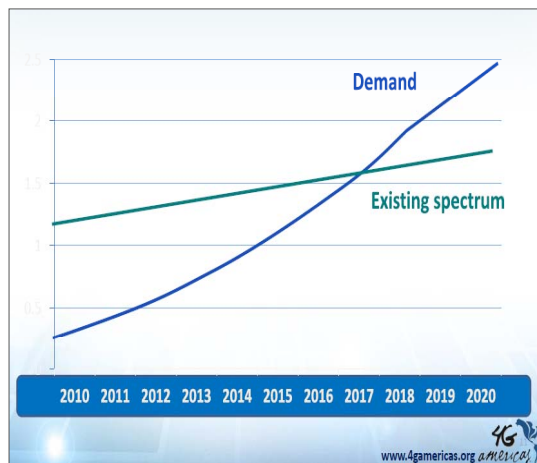


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## Spectrum

### Spectrum vs. Demand in the U.S.



Per the FCC's  
National  
Broadband Plan:

**"The Mobile  
Industry will need  
an additional 500  
MHz above the  
existing spectrum  
base by 2020."**

Source: The Evolution of Mobile Broadband and Regulatory Policy; Chris Pearson, President, 4G America, Presentation at LTE North America, Dallas Texas, November 21-22, 2013.

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## AWS - 3 Spectrum Auction

- Topping \$44.9B and still going
- FCC had originally hoped to raise \$10B
- Round 292
- Bands 1695 to 1710 & 1755 to 1780 & 2155 to 2180
- AT&T expected to spend \$20B to 22B

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## Price War

- Industry disrupters T-Mobile and Sprint
- Price war likely to continue for the foreseeable future given T-Mobile's John Legere's and Sprint's Marcelo Claure declarations of war
- Reminiscent of the long distance wars before all of the LD companies went broke
- Phone buys, 50% price reductions
- Verizon's CEO says pricing is not sustainable.
- Now Google enters the mix as MVNO primarily to pressure carriers for faster speeds and lower pricing
- Cablevision to launch Wi-Fi service in direct competition with wireless carriers using 1.1M hot spots

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## The search for Growth

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## AT&T's Acquisition of Direct TV

- Purchase price:
  - Cash and Stock \$48.5B.
  - Debt Assumed \$18.6B
  - total Cost \$67.1B
- 38M Satellite TV customers compared to AT&T's 5.5M TV customers
- All about cost of content
- Real Value is in the ability to stream Direct TV content on the 10s of millions of mobile devices on AT&T's wireless network
- Significant service provider in Mexico
- Transaction generally expected to be Approved

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## AT&T to launch Multicast in 2015

- Ability to more efficiently broadcast the same content to a large number of users with much greater network efficiency.
- Largest example to date was the Multicast during this year's college championship game at AT&T Stadium in Dallas
- 6.34 Terabits (TB) of AT&T data transmitted
- 1.41 TB over the DAS system and 4.93 TB over wifi
- 2.00 TB used by other carriers (Sprint, Verizon, T-Mobile)
- 8+ TB flowed through the AT&T equipped site
- Video drives the bulk of wireless traffic

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## Lusacell Acquisition

- AT&T acquisition of Mexican wireless carrier Lusacell for \$2.5B
- Acquired all mobile properties, including licenses, network assets, retail stores and 9.2M mobile subscribers
- Currently covers approximately 84M pops, or 70% of Mexico 's 120M citizens
- Market share currently 8%. AT&T expects to become a dominant player
- Will create first ever North American Service area covering 400M people
- One network and one customer experience
- For \$5 per month customers get unlimited calling
- Smart phone penetration about 50% of that in US

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## AT&T Announced Acquisition of Nextel's Wireless Assets in Mexico

- Purchase price \$1.875B less outstanding debt
- Network covers approximately 76M pops
- Big Spectrum Play - Includes 20 Mhz of nationwide 800 mhz spectrum & 100 Mhz of nationwide spectrum in total
- 3M customers, network assets, retail stores
- Nextel currently in Chapter 11 in the US Bankruptcy Court
- Acquisition must be approved by the Mexican telecommunications regulatory authorities & US Bankruptcy Court
- Deal expected to close mid-year
- Speculation that AT&T may also be a buyer for some of Carlos Slims America Movil wireless assets in Mexico

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