



# Trends and Forecasts for the Wireless and Tower Industries

By Clayton Funk, Jason Nicolay and Ryan Carr

As carriers focus on enhancing their subscribers' experience by providing consistently reliable service throughout their networks, shared wireless infrastructure will continue to be the rule. Demand for cell sites continues to flourish, as carriers actively seek to modify and amend their existing leases and seek new sites to collocate on in order to meet the rapidly growing need for capacity and ubiquitous coverage.

The wireless industry and its related shared wireless infrastructure subsector continued to witness significant changes over the last year. However, much has also remained the same. The shared wireless infrastructure industry continues to be well positioned for future growth as data and mobile video use increase and continue to strain network capacity. Projected data usage on wireless networks, according to Cisco, is forecasted to grow by more than 66 percent annually from 2012 to 2017 (see Figure 1). We'll examine what has changed over the last 12 months and discuss some developments that probably will affect the shared wireless infrastructure and the wireless industries.

Several specific niches, collectively, make up the shared wireless infrastructure industry. The first niche, towers, includes vertical real estate for wireless carriers and broadcasters. A second niche, rooftops, uses existing commercial, retail and multi-unit residential

buildings for antenna placement in strategic locations. A third niche, distributed antenna system (DAS) networks and small cells, historically a technology of last resort, is now viewed by most carriers as another method in the toolbox for achieving desired coverage and capacity. A fourth niche, backhaul, includes wireless backhaul (microwave) and wired backhaul (fiber-to-the-tower).

Originally, almost all of today's shared wireless infrastructure niches started as single-use facilities. However, speed to market and consumer demand for wireless services are the catalysts for installing more shared facilities. Niches such as small cells (femtocells, picocells, etc.) have gained popularity in the wire-



less infrastructure industry for a coverage and capacity solution as carrier networks continue to evolve and adapt to consumer needs and demands.

#### Attractive to investors

Over the years, one fact remains unchanged — the shared wireless infrastructure industry attracts investors because of the following factors:

- Investment-grade customers (i.e., AT&T and Verizon) and other tenants commit to long-term contracts that produce a steady recurring revenue stream
- Infrastructure owners can financially and operationally leverage their assets
- The businesses are capital-intensive, requiring investors to continually commit capital that will ideally earn an attractive return on investment
- The industry has barriers to entry
- Ownership remains fragmented

Carriers and tower owners publicly decry difficulties with zoning approval for antenna sites and changes to existing sites. They both chafe at the limited access to prime locations to serve as coverage sites, capacity sites or both. However, for investors in shared wireless infrastructure, those same barriers to entry assist in protecting asset value by restricting competition.

Meanwhile, carriers themselves have to overcome their own barriers such as access to spectrum often acquired through Federal Communications Commission auctions and are required to meet established FCC license build out deadlines. Those expensive and lengthy processes limit the carriers' competition. Simply building out a network, even on a limited scale, can cost millions and into the billions of dollars, so access to and the availability of capital is yet another factor that limits who owns spectrum utilized for commercial services.

Tower owners have an ability to leverage their assets because of the recurring, contractual revenue the towers generate. The long-term agreements with investment-grade, national wireless operators

provide stability. The barrier to entry represented by zoning approval and access to capital helps to keep the churn rate among tenants low. Access to both debt and equity capital for tower owners tends to be easier and more abundant when compared with many other industries.

Fragmented ownership in the various shared infrastructure niches typically includes two or three larger companies and a large number of smaller entities. With more and more companies establishing

themselves in these niches, a deeper pool of potential acquisition targets results. These targets attract entrepreneurs with private equity funding who can foresee an exit to a larger consolidator at a future date.

The abundance of capital to invest is favorable for entrepreneurs, who are encouraged by the fact that the wireless industry's fundamentals continue to be sound.

#### Macroeconomic conditions

Over the last year, the U.S. economy

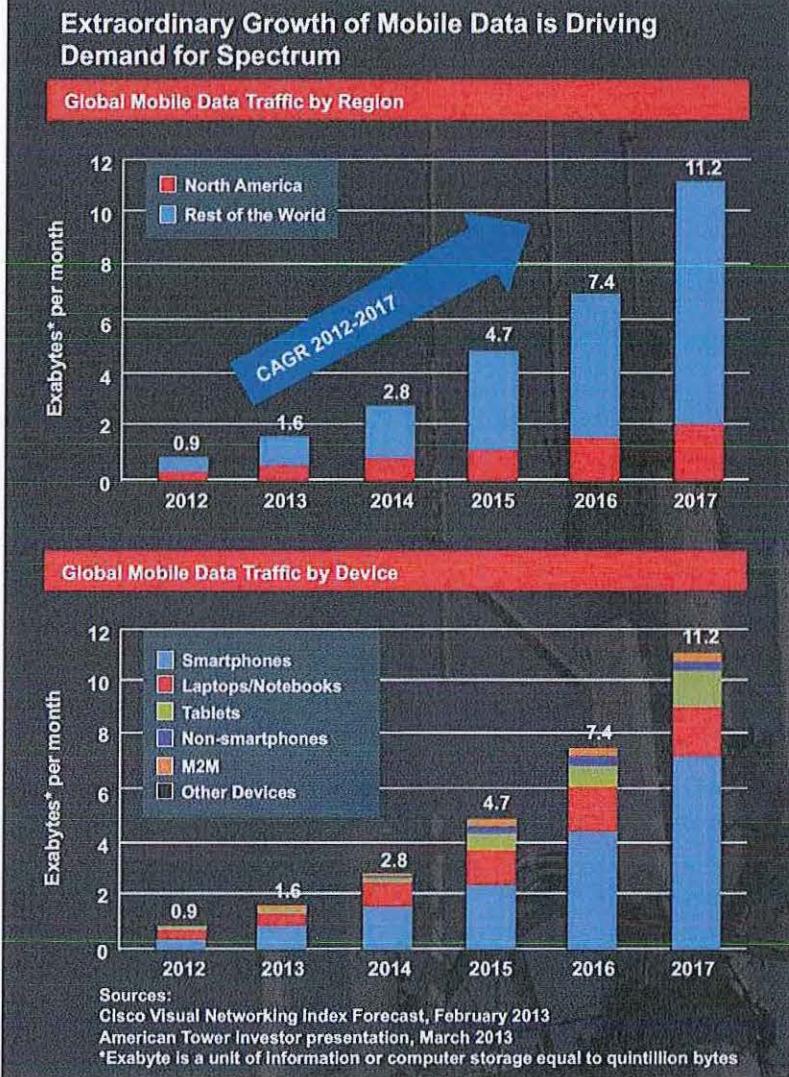


Figure 1. Customers' insatiable demand for wireless access to mobile Internet, data and other information will drive an increase in mobile data traffic by 13x over the next five years.

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has continued to slowly and steadily improve, while Europe remains in a recession and China's economy has softened. In June 2013, consumer confidence remained strong, at a near six-year high. As a result, retail spending is anticipated to keep on pace and grow between 4 and 5 percent during 2013, and unemployment is remaining steady at approximately 7.5 percent despite federal spending cuts and higher taxes. Another positive factor in the U.S. economy is that interest rates remain low. Regardless of recent increases in 30-year mortgage rates and 10-year Treasury notes, Kiplinger believes interest rates will remain low in the near future and it has little reason to believe the Federal Reserve will increase the federal funds rate any time soon.

**So what does an improving economy mean for tower owners? Strong consumer confidence should translate into wireless subscribers continuing to demand a faster and more consistent consumer experience, motivating wireless operators to continue their process of upgrading and enhancing their networks. Access to inexpensive debt should allow tower companies to continue to secure new credit facilities and debt issuances, allowing tower owners to pursue growth through organic development and acquisitions.**

### Wireless trends

Although the U.S. economy continues to steadily improve, there are still key areas to watch as one attempts to forecast where the shared wireless infrastructure industry is headed. First, continue to watch the performance and projections of the wireless carriers. Key metrics include subscriber growth, average revenue per user or account (particularly the growth of revenue from data plans) and capital expenditures. Second, watch the credit markets and take note of the availability of credit and the pricing of that credit. Solid cash flow from high-quality tenants who are under long-term contracts underpins the trends for shared wireless infrastructure companies, such

as tower and DAS owners.

Wireless carriers continue to see their own headwinds in growing their businesses as relates to voice communications. With the mobile phone market nearly completely saturated in terms of voice-only subscribers, price cutting has intensified for voice plans. However, data plans continue to remain stable with ample growth opportunities. Less-expensive, prepaid wireless services that do not require contracts have been increasingly in favor, at the expense of the postpaid sector dominated by Verizon and AT&T. Given the continued explosion in the usage of smartphones as well as the increased number of consumers turning to tablets and e-readers, carriers who can offer consistently reliable, fast networks for data usage have been able to grow their respective market share. Given that AT&T and Verizon are the two largest wireless companies, their operational and financial performance is a good barometer for the wireless industry.

First-quarter 2013 results had AT&T adding 365,000 net subscriber connections for a total of 107.3 million connections, while Verizon, with 720,000 net adds, had 98.9 million retail customers. AT&T reported postpaid net adds were just 296,000 to reach 70.7 million, while Verizon reported 677,000 retail postpaid net additions during the quarter, growing its postpaid subscriber base to 93.2 million. Connected devices such as tablets, e-readers and others continue to boost both AT&T and Verizon's net additions and served to attract new subscribers desiring access to the hottest consumer wireless devices.

Carriers will continue to focus on growing revenue from sources other than voice-only customers as they work to maintain and grow their average revenue per user or account. The good news is that 45 percent of AT&T wireless subscribers are postpaid smartphone subscribers as of March 31, 2013, an increase of 17.4 percent year-over-year. In its most recent quarterly report, AT&T said that approximately 31 percent or \$5.1 bil-

lion of its wireless revenue is derived from data services, an increase of nearly 21 percent from the prior year. Verizon reported that over 61 percent of its retail postpaid subscribers used a smartphone device, an increase of 14 percent over a year, which has assisted with Verizon's total first-quarter service revenue increasing by 8.6 percent year-over-year to \$16.7 billion. These metrics indicate that both AT&T and Verizon continue to shift away from their dependence on voice for revenue, which is further supported by the fact that more than 57 percent of Verizon's total network traffic goes over its LTE network.

Over the last 12 months, merger and acquisition activity among wireless carriers has been extremely active and robust. During that time, there are five deals to highlight that are driving consolidation and resulting in an infusion of capital into the carriers.

- **T-Mobile/MetroPCS:** T-Mobile USA entered into a reverse merger with MetroPCS, which valued the deal at \$33 billion for the combined company. This transaction provided T-Mobile with access to highly desirable spectrum in urban markets and a significant number of subscribers. This deal closed in May 2013.
- **Sprint/U.S. Cellular:** U.S. Cellular divested its Chicago and St. Louis operating markets and sold the operations and related subscribers to Sprint for \$480 million. This transaction closed in May 2013.
- **Softbank/Sprint:** Softbank agreed to acquire 70 percent of Sprint for a \$20.1 billion valuation, which will provide an \$8 billion capital infusion into the third-largest wireless carrier. Despite Dish Network's attempt to acquire Sprint, Softbank prevailed by sweetening its offer to shareholders. This deal has received shareholder approval and is awaiting the FCC's final blessing.
- **Sprint/Clearwire:** After multiple offers and counteroffers, Sprint received shareholder approval to acquire the remaining interest in



Clearwire it didn't already own. Despite multiple efforts by Dish Network to secure the opportunity to acquire a significant stake in Clearwire, Dish was outbid by Sprint. This deal closed in July.

- **AT&T/Allied Wireless:** AT&T agreed to acquire Atlantic Tele-Network's Allied Wireless operations (former Alltel assets) for \$780 million. AT&T will receive attractive 700-MHz spectrum, an operating network covering 4.6 million people and approximately 585,000 subscribers. This deal is pending.

In addition to several carriers acquiring other notable carriers or wireless operations, most of the Big Four wireless operators (AT&T, Sprint, T-Mobile and Verizon) have been busy securing additional spectrum. Most recently, T-Mobile announced a \$308 million purchase from U.S. Cellular of AWS spectrum covering the Mississippi Valley and its population of more than 32 million. In January 2013, Verizon successfully exited its 700-MHz B Block holdings through a series of divestitures, which concluded with AT&T agreeing to acquire 39 markets covering 42 million people for \$1.9 billion. While these were two of the most significant and sizeable transactions announced, the secondary spectrum market has remained active with more than 70 transactions closed or pending FCC approval since the beginning of the year.

### Consolidation

Given the flurry of wireless and spectrum transactions over the last year, it is not unrealistic to assume there will be further consolidation among the Big Four wireless carriers, national pay-as-you-go operators and local wireless carriers. Future consolidation will provide carriers with additional access to much needed spectrum and support the need for additional capacity in urban markets especially.

The overall good news is that today's fundamentals for the wireless infra-

structure industry differ widely when compared with fundamentals from over a decade ago (see Figures 1 and 2).

All of the Big Four wireless operators have selected LTE technology for their 4G networks. Since last year, the wireless carriers have been busy deploying LTE equipment to upgrade and expand current networks. Verizon is leading the pack because it has substantially

what's next for the carriers? In the past 12 to 18 months, all Big Four wireless operators have indicated their intent to further upgrade their networks to LTE-Advanced in coming years. LTE-Advanced is focused on higher capacity with increased peak data rates, higher spectral efficiency, an increased number of simultaneously active subscribers and improved performance at cell edges.

**Wireless and Towers: 2000 versus today**

	THEN December 2000	TODAY December 2012
<b>Wireless</b>		
Subs (in millions)	109	326
Penetration	38.9%	102.0%
MOUs/Month/Sub	309	586
MBs/Month/Sub	NA	694
ARPU	\$52	\$49
EBITDA Margin	26.7%	35.3%
<b>Towers</b>		
Cell Sites	104,288	301,779
Tenants per Tower	1.5	2.2
EV/EBITDA*	28.6x	19.4x
Leverage	10.4x	5.7x

**Figure 2.** In comparing today's wireless and tower industries with the way they were in 2000, it is important to keep in mind that there are large fundamental differences between the characteristics of the industries today and the characteristics of the industries more than a decade ago. (Source: Media Venture Partners, CTIA company filings and industry news.)

completed its rollout to cover 298 million people with its 4G LTE, then AT&T with 292 million people, Sprint with 100 markets now covered with a target of 200 million people to be covered by year-end, and T-Mobile with 24 million people covered.

With a couple of the 4G LTE network deployments nearing completion,

these achievements will be realized through carrier aggregation, enhanced use of multi-antenna techniques and support for relay nodes. Further network improvements that deliver a more consistent customer experience probably will result in tower owners receiving additional modification requests from their existing tenants and possibly new

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collocation interest as the networks continue to become denser.

**Consistent with the last few annual market reports Media Venture Partners has completed for AGL, the merger and acquisition market for shared wireless infrastructure, especially towers, has shown incredibly robust valuations. Nearly every tower company is expressing strong interest in acquiring good-quality assets ranging from towers to DAS networks to portfolios of underlying ground leases.** The last half of 2012 was filled with a large wave of tower transactions because many sellers wanted to lock in lower capital gains rates. As a result, 2013 to date has provided tower buyers with limited acquisition opportunities. The limited supply, along with the desire to deploy capital into tower assets, is driving strong demand for nearly all types of tower portfolios. With the

current supply-demand imbalance, the deal environment remains extremely competitive with more buyers trying to acquire towers than there are sellers.

Every deal is different, and various types of towers will be valued uniquely depending on a variety of factors. Although circumstances will vary for each transaction and not every tower or tower deal is the same, in general **most deals for telecom towers are being completed at historically high multiples of tower cash flow, roughly between 16x and 19x, and upward of 20x or more in many instances.** Broadcast, government and microwave towers tend to trade at multiples below where telecom towers are bought and sold, but nevertheless are achieving historic highs.

Over the last 12 months, several headline tower transactions with more than 100 sites were reported, but dozens of smaller acquisitions have also been

closed. Figure 3 highlights five larger tower transactions that were publicly announced and closed between June 2012 and June 2013.

### Trading multiples

Public tower companies were trading at over 20x forward EBITDA (earnings before interest, taxes, depreciation and amortization) as recently as the fourth quarter of 2012. Although publicly traded multiples have declined slightly from those recent highs, private tower transactions continued to receive strong multiples at or above where the public tower companies have been trading recently (see Figure 4). For tower companies, despite their high-teens valuations, low-twenties EBITDA multiples have continued to be acquisitive.

### Tower index stock price

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### Large Tower Transactions from June 2012 to June 2013

Closed Date	Seller	Buyer	Towers	(€ in millions) Price	TCF Multiple	Price per Tower
Sept 2012	T-Mobile	Crown Castle	7,200	\$2,400.0	~19.0x	\$333,333
Oct 2012	TowerCo	SBA Communications	3,252	\$1,450.0	~15.5x	\$445,879
Oct 2012	iWireless	TowerCo	119	\$45.5	NA	\$382,353
Dec 2012	Skyway Towers	American Tower	318	\$169.5	NA	\$533,019
Dec 2012	Diamond Communications	American Tower	340	\$322.5	NA	\$948,529

Figure 3. The tower merger and acquisition market during the last four months of 2012 was extremely busy, with the five largest deals in the past 12 months having been completed during this period.

port, public tower company valuations have continued to experience an increase in their per share price. Despite increased market volatility in June 2013, public tower stocks are trading at 88 percent of their 52-week highs as of June 28, 2013. On average, public tower stocks have seen their valuation grow by 32 percent since last year's report and by more than 58 percent since Jan. 1, 2012. As of June 28, 2013, public tower companies traded at an average of 19.4x 2013 estimated EBITDA (see Figures 5 and 6).

American Tower, Crown Castle International and SBA Communications have "buy" or "overweight" ratings of 87 percent, 73 percent and 89 percent from stock analysts, respectively.

#### Wireless capex

Capital expenditures by wireless carriers continue to drive growth for shared wireless infrastructure companies. Both public and private tower companies as well as the general market are consistently watching wireless car-

riers for any signal of decreased capex spending. Publicly traded wireless operators are projecting capex in excess of \$25 billion during 2013, which will largely support the carriers' continued 4G network build out and anticipated upgrades to LTE-Advanced. As a result, tower companies, both public and private, continue to receive an increase in the number of amendments and modifications to their sites, especially in urban and suburban markets where carriers are focused on building their

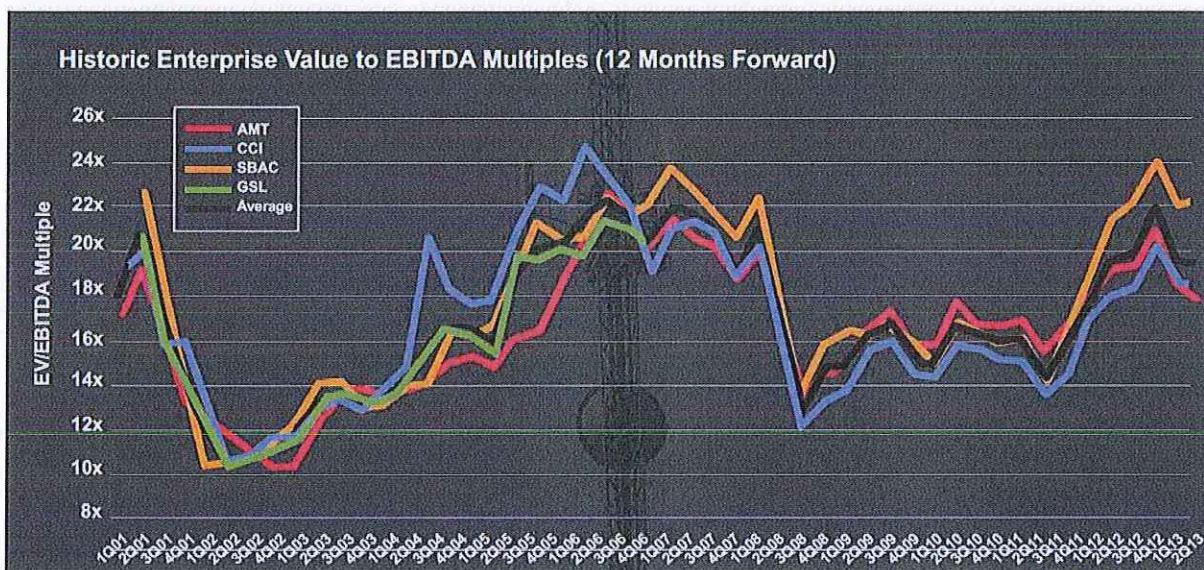


Figure 4. The historical enterprise value to EBITDA (12 months forward) shows how the multiples for the public tower companies have fluctuated during the past decade. Companies represented are American Tower (NYSE: AMT), Crown Castle International (NYSE: CCI), SBA Communications (NASDAQ: SBAC) and defunct Global Signal (NYSE: GSL).

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Company	Stock Price 6/28/2013	% of 52-Week High		Equity Value	Enterprise Value	Enterprise Value/ Revenue			
		2013E Revenue	2014E Revenue			2013E EBITDA	2014E EBITDA		
American Tower	\$73.17	86%		\$29,052	\$37,569	11.4x	10.4x	17.8x	16.1x
Crown Castle	\$72.39	89%		\$21,966	\$31,955	11.0x	10.5x	18.3x	17.1x
SBA Communications	\$74.12	90%		\$11,733	\$16,974	13.5x	12.7x	22.1x	20.1x
TOWER AVERAGE		88%				12.0x	11.2x	19.4x	17.8x
CIG Wireless	\$3.59	72%		\$72	\$81	5.3x	2.1x	NA	NA

Sources: Consensus estimates and company reports

Figure 5. Tower stock prices have grown by more than 58 percent since the beginning of 2012. As of June 28, 2013, shares of publicly traded tower companies were, on average, trading at 88 percent of their 52-week highs and 19.4x 2013E EBITDA.

4G networks and securing additional capacity. Tower companies are also beginning to develop new coverage and capacity sites again as carriers' initial deployment of LTE nears completion in the core population centers.

► Verizon launched its first 4G LTE markets in December 2010, and on June 27, 2013, it announced its 4G LTE build out, covering more than 298 million pops in more than 500 markets or 99 percent of its existing network footprint, is substantially complete. In its first-quarter 2013 results, the wireless carrier announced it had spent approximately \$2 billion on

wireless capital expenditures or 55 percent of the company's first-quarter capex total. Verizon's wireless capex dollars largely went to enhance its current network and to complete the expansion of its LTE technology throughout its entire 3G footprint.

► AT&T also announced in its first-quarter results that the company plans to spend nearly \$21 billion on capital expenditures during 2013. As of March 31, AT&T had already spent nearly \$2.2 billion or 53 percent of its total capex on wireless-related capital expenditures. AT&T's wireless capex dollars are being used for network

capacity and expansion and for the company's 4G LTE deployments. The carrier has used these capex dollars to cover more than 292 million pops with its 4G network, which includes a mix of both LTE and HSPA+ services.

► T-Mobile announced that its migration of MetroPCS customers onto its 4G HSPA+ and LTE network is ahead of schedule. During the first quarter of 2013, the company spent \$1.1 billion in capital expenses and said that it had launched 4G LTE in seven major metropolitan areas. T-Mobile expects to cover approximately 200 million pops with 4G

## Composite Value

Public Tower Companies' Composite Value Compared with S&amp;P 500



Figure 6. The value of shares in public tower companies has significantly rebounded since the most recent recession, which hit bottom during the fourth quarter of 2008. As of June 28, 2013, the value of public tower stocks has completely rebounded and significantly exceeded pricing from mid-2008 prior to the credit crunch.



### Carriers' Network Upgrade Timeline

	LTE Spectrum Choice	2012	2013	2014
AT&T	<ul style="list-style-type: none"> <li>• 700 MHz Lower B &amp; C</li> <li>• AWS</li> <li>• WCS</li> <li>• 700 MHz D &amp; E</li> </ul>		LTE build ahead of schedule with 292 million people covered in more than 200 markets. Focus on completing LTE rollout by the end of 2013.	
Sprint	<ul style="list-style-type: none"> <li>• 800 MHz</li> <li>• G-Block</li> </ul>		Plan to deploy LTE-Advanced over owned 800 MHz in 4Q 13. LTE also over G-Block and likely bidder for H-Block.	
Clearwire	<ul style="list-style-type: none"> <li>• BRS/EBS</li> </ul>		Deploying LTE network with \$600 million. Milestones include 2,000 sites by June 2013, 5,000 sites by the end of 2013 and 8,000 sites by the end of 2014.	
T-Mobile USA	<ul style="list-style-type: none"> <li>• AWS</li> <li>• PCS</li> </ul>		Deploying LTE service in 2013 with \$4 billion investment in its network. Moving HSPA+ to PCS and launching LTE on AWS.	
Verizon Wireless	<ul style="list-style-type: none"> <li>• 700 MHz Upper C</li> <li>• AWS</li> </ul>		Nationwide LTE buildout substantially complete with its network covering 298 million people in 500+ markets.	
C Spire Wireless	<ul style="list-style-type: none"> <li>• PCS</li> </ul>		Launched LTE over PCS in October 2012 covering 1.2 million people with plans to cover another 1.2 million in 2014 in Alabama, Florida and Mississippi by the end of 2013.	
Leap Wireless	<ul style="list-style-type: none"> <li>• AWS</li> </ul>		Cover 21 million pops with LTE as of Q1 2013, anticipate buildout costs of \$100 million in 2013 to continue its LTE buildout.	
U.S. Cellular	<ul style="list-style-type: none"> <li>• 700 MHz Lower B &amp; C</li> <li>• 700 MHz Lower A</li> </ul>		Over 58 percent of customers have access to 4G LTE and 87 percent will have access by the end of 2013.	

Figure 7. The Big Four and other large wireless carriers are rapidly deploying their 4G LTE networks. Many of the carriers are expected to have a complete nationwide 4G network footprint by the end of 2013.

LTE by the end of 2013. The company's most significant focus and progress has been on its \$4 billion network modernization and 4G evolution effort, which will improve the carrier's voice and data as well as push them toward LTE.

► *Sprint* continues to be focused on its Network Vision project, which consolidates network technologies while also reducing the overall number of sites the company uses. The company's LTE network, which launched in 2012, covered nearly 90 cities by the end of the first quarter of 2013. Sprint will launch an additional 170 cities covering more than 200 million people by year-end. Sprint's coverage and LTE build out will be further enhanced with Sprint's access to Clearwire's LTE network through

the purchase of the remaining shares of Clearwire. During the first quarter, Sprint spent nearly \$1.3 billion in wireless capex, which was 92 percent of the company's overall capex for the period.

► *Clearwire*, which first built out a WiMAX network in conjunction with Sprint, has begun its deployment of a TDD-LTE network with approximately 1,300 sites commissioned as of March 31, 2013. Clearwire has ambitions to have 2,000 sites commissioned by the end of June 2013. The company, which provides wholesale services for Sprint and Leap, expects to expand deployment of its LTE and VoLTE equipment to 5,000 base stations by the end of the year.

► *Leap* stated in its first quarter earnings announcement that it spent

\$26 million in capital expenditures so far in 2013. The company estimates it will spend between \$250 and \$300 million in capex for the full 2013 calendar year. Leap is using its capex dollars to maintain and develop its current operating footprint. The company currently provides 4G LTE coverage to approximately 21 million pops and anticipates covering an additional

10 million pops by the end of the year. At an estimated cost of less than \$10 per covered pop, Leap estimates it will cost approximately \$100 million to continue to build out its LTE network.

► *U.S. Cellular* during its first-quarter earnings announcement stated it anticipates spending \$735 million during 2013 on capex. It spent \$118 million

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during the first quarter. The company covers approximately 58 percent of its subscribers with 4G LTE and expects to expand LTE to 87 percent of its subscribers by the end of 2013.

► *C Spire*, a regional wireless operator in the South, began its LTE upgrade in the summer of 2012 and covered approximately 1.2 million pops in 20 markets by year-end 2012. The company plans to expand its LTE offerings to 500,000 people in Mississippi and an additional 700,000 people in Alabama and Florida throughout 2013.

Although several more spectrum owners have sold a significant amount or all of their wireless assets — SpectrumCo (made up of Comcast, Time Warner Cable and Bright House), Cox Communications, CenturyLink and many others — there is potential to see a new wireless entrant emerge. Dish Network, the most likely new entrant, has been busy making headlines in recent months. Dish successfully lobbied the FCC to allow the company to utilize its 40 megahertz of former satellite spectrum for terrestrial use (AWS-4). Most recently, Dish had been eyeing a potential acquisition of both Clearwire and Sprint, offers for which it subsequently withdrew after Sprint and Softbank, respectively, increased their offers for each wireless operator. Dish, with its various spectrum holdings, continues to exhibit an interest in becoming a major player in the wireless industry but has not yet acquired or developed such a platform.

**Overall, rapid growth of data use is forcing carriers to upgrade network capacity and start planning for the next generation of networks and its deployment timeline. Towers are the direct beneficiary of any build out. See Figure 7 for a timeline of select carriers' 4G network build out timelines.**

### Credit environment

With the U.S. economy improving, albeit at a slow and steady pace, public tower companies are continuing to receive robust access to the credit markets. Since June 2012, public tower

companies have secured \$3.13 billion in asset-backed securities, another \$5.45 billion in senior debt capital and \$1.75 billion in completed and announced credit facilities and term loans.

► *American Tower* secured \$1.8 billion through asset-backed securities, \$1 billion in senior unsecured debt and \$750 million in an unsecured term loan over the last 12 months in domestic issuances. In June 2012, American Tower received a \$750 million unsecured term loan with a rate of approximately 3.5 percent (LIBOR + 250 basis points) and maturing in five years. In January 2013, American Tower released \$1 billion in 3.5 percent senior unsecured notes due in January 2023. In March 2013, American Tower completed a \$1.8 billion offering of AAA-rated asset-backed securities priced between 1.55 and 3.07 percent and maturing in March 2043 and March 2048, respectively. Most recently, American Tower announced in June 2013 its intent to raise approximately \$1 billion in a new unsecured revolving credit facility to replace its current facility. American Tower utilized the proceeds to repay certain senior notes, replace credit facilities, fund acquisitions and for general corporate purposes.

► *Crown Castle* has issued over \$3 billion in senior notes over the last 12 months. In December 2012, Crown Castle issued \$1.0 billion in 3.85 percent senior secured notes due in 2023 as well as another \$500 million in 2.38 percent senior secured notes due in 2017. Most recently in February 2013, Crown Castle completed its offering of \$1.65 billion in 5.25 percent senior unsecured notes due in 2023. Crown Castle used the proceeds to repay certain notes, to fund recent acquisitions and for general corporate purposes.

► *SBA Communications* over the last 12 months has secured \$1.3 billion in senior unsecured debt and \$1.33 billion in asset-backed securities. In July 2012, SBA Communications priced \$800 million of 5.75 percent senior unsecured notes maturing in July 2020. Again, in September 2012, SBA Com-

munications priced \$500 million of 5.625 percent in senior unsecured notes due in October 2019. Most recently in April 2013, SBA Communications sold \$1.33 billion in asset-backed securities priced between 2.24 and 3.722 percent with maturity dates from 2043 to 2048. SBA Communications used a portion of the proceeds to fund acquisitions, repay existing revolving credit facilities and pay down existing term loans.

An improving economy and an attractive asset class — shared wireless infrastructure — have meant public tower companies are continuing to receive favorable interest rates and excellent credit ratings. Despite recent public concerns about increasing interest rates, public tower companies are continuing to take advantage of their access to the capital markets to issue new notes and repay older ones nearing maturity to extend maturity dates.

### The future

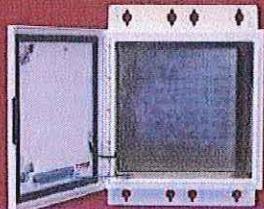
**Consumers continue to view wireless as an everyday necessity instead of a luxury or option. The tower market was and will continue to be a direct beneficiary of the wireless industry's strong staying power and as a result, the tower market has proven to be fairly insulated from macroeconomic issues.** The tower deal environment, although slightly sluggish the first few months of this year in terms of the volume of deals, could see some sizeable transactions come to market the last half of 2013. Similar to the past couple of years, tower owners considering selling some or all of their assets in 2013 have the benefit of being in a sellers' market because of the limited inventory on the market and the depth of the interested buyers. **The wireless industry, overall, continues to have the underlying characteristics of being a long-term winner as wireless voice, data and mobile video use do not show any signs of decline.**

**Trends continue to show a move toward everything wireless.** There is a robust market for companies developing products specifically for wireless users, including mobile apps

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Demographics show younger adults choose wireless over wireline with approximately 36 percent of households now being wireless-only. Wireless is an everyday part of life for the future of our country and does not seem to be going away, nor is it threatened to be replaced by any new modes of communication. We are quickly headed toward a day when many people will only access the Internet via mobile devices.

Although subscriber penetration is completely saturated with an over-102 percent penetration rate, minutes of use remain high and data as a percentage of revenue has been growing by approximately 20 percent at the two largest wireless operators over the last year.

Upcoming FCC auctions for AWS-2 and 600-MHz spectrum (Broadcast Incentive Auction) could see new entrants emerge into the wireless world, and these companies could be potential new tower tenants. Although during the past couple of years several companies with large spectrum positions or operating business have exited the business or have gone through bankruptcy restructurings — SpectrumCo, Cox Communications, Open Range and LightSquared — there are several prospective new tenants to keep an eye on, most notably Dish Network. Despite the industry losing a few tenants that were previously viewed as potential tower tenants, new and healthier ones have sprouted in their place.

It will be interesting to watch over the next several months to a year to see whether the increased use of small cells by the various wireless carriers continues to be primarily end-user driven and utilized by single customers or, in a fashion similar to the way the tower industry evolved, whether the carriers end up relinquishing control of these

facilities and small cells become more of a neutral-host business like towers. The tower industry as a business niche emerged in the mid-1990s as carriers realized they could save both time and money on the front end by having third parties invest their own time and money to develop sites while the carriers focused on network design, marketing and subscriber growth.

If it makes financial sense for both carriers and third-party owners, shared infrastructure will continue to become the rule, rather than the exception, as carriers respond to consumer demands. The macro cell site build out will continue to flourish while being complemented more and more by alternative sites, like femtocells, picocells and distributed antenna systems. Backhaul demand, whether via fiber-to-the-tower or microwave, will

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continue to increase significantly as wireless subscribers use mobile devices for more and more data-intensive applications, such as mobile video streaming and data services, rather than just voice. Overall, the shared wireless infrastructure business continues to be a robust and viable business niche, complementary to and providing mission-critical solutions for the wireless industry.

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