Inside Towers

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761 Foot Washington, D.C. Tower Looks Great and Pays Tribute

About five miles north of the Washington Monument in Washington, D.C. sites the Hughes Memorial Tower. This 761 foot tower pays homage to John S. Hughes, who joined the D.C. police in 1942. In 1978, Hughes was an assistant chief in charge of the department's Technical Services Bureau. As the name implies, the unit used technology to support the police department's core crime-fighting mission. "Timeliness of police response equates to a fully integrated network of radio, telephone, teletype and computer systems," Hughes wrote in the department's annual report that year. What better way to honor the man by naming a massive tower after him? The tower was completed in 1989 and named after Hughes, who died in 1995. It largely replaced the shorter, red-and-white tower that sits behind it, which is still used by federal agencies. The Hughes Memorial Tower is owned by the District and overseen by the city's Office of Unified Communications. It handles voice and wireless communications for public safety agencies: police, fire, EMS and the like. The tower was designed by Henry "Hank" McGinnis, a Texas engineer who cut his teeth building electric transmission line towers. In regard to its looks, John Terhar, Director of Engineering at Channel 50 (who leases space on the tower) said, "You have to admit, it is a gorgeous tower. It's awesome." Channel 50's signal is broadcast via Verizon lines across town to Georgia Avenue, where some 45 kilowatts of power go up a hollow metal tube to the very top of the tower and are magically transformed into a million watts of broadcasting power — "which gives us a hellacious signal, all the way out to West Virginia," John said. "It's amazing how many people can pick us up."

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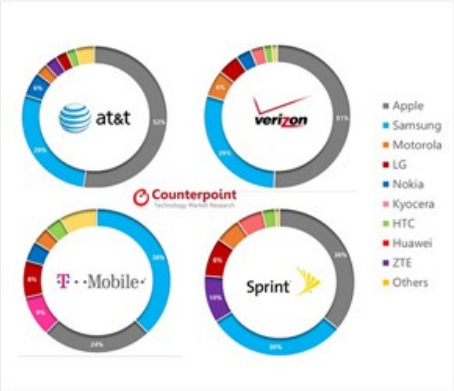
CAPITAL TELECOM

Industry Analyst Jeff Kagan: VoLTE & HD Voice Explained

With Sprint Spark, AT&T, Verizon and T-Mobile all having announced their first VoLTE markets with HD Voice, some people are scratching their heads. What's Voice over LTE? What's HD Voice? Industry analyst Jeff Kagan weighs in with his explanations. "VoLTE is Voice over LTE and is the next generation of wireless voice services carried over wireless data networks. Currently voice is not carried over data networks. VoLTE would let the data network carry voice. This digital voice should be much higher quality. VoLTE will let HD Voice occur which is much higher quality voice calls. There is really nothing the average customer will have to do in order to take advantage of the upcoming

VoLTE services, except make sure their handset is VoLTE capable. If not they will not be able to use VoLTE in voice conversations. There are very few VoLTE capable phones today, but I expect that to change quickly." VoLTE is the next generation for wireless voice. Rather than wireless networks having to operate a voice and a data network, going forward they will just have to operate one data network that would handle everything from voice to data. "If you pull the camera back and take a longer term historical perspective you will see that wireless has been changing many times over the last few decades. Starting with analog voice to digital to data networks and now to higher speed data networks letting us do so many things we never could before. Things like watch live television, downloading movies or listening to live radio. VoLTE is part of a series of improvements in the wireless world," said Kagan.

T-Mobile Overtakes Sprint as the Third Largest Smartphone Buyer



T-Mobile's "uncarrier" way of thinking is undoubtedly helping the brand and its shareholders. Along with MetroPCS (T-Mobile's prepaid brand) they have surpassed Sprint MVNOs as the third largest carrier in the United States in terms of smartphone volumes purchased in the first quarter, according to a recent Counterpoint research report. According to the report, this puts T-Mobile close behind AT&T in terms of smartphones. Counterpoint's Neil Shah, a former analyst with Strategy Analytics, wrote in a post that T-Mobile's "uncarrier" strategy "is surely working for the carrier, attracting a wave of new smartphone subscribers." In the first quarter, T-Mobile launched a program to pay off the Early Termination Fees of customers who switch to T-Mobile and traded in their phones, which could have boosted the carrier's numbers. Sprint said it had retail smartphone sales of just under 5 million in the first quarter, while T-Mobile said it sold a record 6.9 million smartphones in the quarter.

A Fast-Evolving Technology Helps AT&T in DirecTV Deal

You don't go into negotiations with $67 billion to spend on acquiring DirectTV and not have a plan. One of the benefits to AT&T acquiring DirecTV isn't a new technology at all; it's a fixed wireless local loop. Essentially, the technology allows customers to get home phone and broadband data service through a wireless connection to the nearest cell tower instead of through a wire connected to the house. Antennas on homes will allow higher transmission speeds. As the networks themselves improve, so will the speeds available to the home. At a technology conference this week, AT&T Chief Financial Officer John Stephens also mentioned the wireless loop technology and said the DirecTV deal would help make possible the additional investments required for the broadband expansion. "And then, quite frankly, we will look at other technology opportunities, ones I know about today or ones that may come up in the coming years as things continue to develop," Stephens said. While AT&T singled out rural areas in its wireless local loop statements this week, the technology works in urban areas as well, where it could expand availability and increase competition.

The Air Castle of the South: WSM Nashville

To all those people who think towers are ugly and an eye sore, take a look at the WSM broadcasting tower in Nashville, Tennessee, also known as the "Air Castle of the South." This tower is the 3rd out of 4 of its kind; its unique diamond-shaped antenna is one of the city's best-known landmarks. Operating at 650 kHz, its clear channel signal can reach much of North America and various countries, especially late at night. It now bears the distinction of being one of only three AM clear channel stations in eastern North America to broadcast music, instead of employing other formats such as talk or news. The station is most known as the home of The Grand Ole Opry, the world's longest running radio program. As a tribute to the sta-

tion's centrality in country music history, the diamond antenna design was incorporated into the new Country Music Hall of Fame and Museum's design in 2001. The tower is listed as a National Engineering Landmark and was listed on the National Register of Historic Places on March 15, 2011.

Tower Ticker

SYMBOL	TIME & PRICE		CHG & % CHG		DAY'S LOW & HIGH		VOLUME
AMT	04:00pm EDT	89.00	↑0.59	↑0.60%	88.57	89.30	1,156,060
CCI	04:00pm EDT	76.42	↑0.42	↑0.63%	75.80	76.70	1,028,795
SBAC	04:00pm EDT	100.39	↓0.21	↓0.21%	100.09	101.21	1,232,173
TMUS	04:01pm EDT	34.32	↑0.36	↑1.06%	33.95	34.34	2,790,673
VZ	04:00pm EDT	49.62	↓0.12	↓0.28%	49.43	50.01	11,411,808
S	04:01pm EDT	9.23	↓0.01	↓0.11%	9.15	9.34	10,047,910
T	04:00pm EDT	35.21	↓0.11	↓0.31%	35.10	35.40	20,664,439

CiG Wireless Corp. Announces First Quarter 2014 Results

CiG Wireless Corp. recently announced its earnings for the three months ending on March 31, 2014. Revenue for the three months ended March 31, 2014 was approximately $1.6 million compared to approximately $0.5 million in the same period of the prior year. The increase in revenues of over $1.0 million, or 200%, was attributable to the acquisition of 100 towers and the construction of three towers during 2013 and the first quarter of 2014. The addition of 100 towers to the company's portfolio was accomplished through the acquisition of 38 constructed towers from Liberty Towers, LLC in August 2013, the acquisition of 49 constructed towers from Southern Tower Antenna Rental, LLC completed in multiple transactions, the acquisition of 12 constructed towers from PTA, FLA, Inc. completed in multiple transactions and the acquisition of one constructed tower from Fidelity Towers, Inc. As of March 31, 2014, the company owned 170 wireless communication towers and had a geographical presence in 23 states. Approximately 93% of the company's revenues were derived from site rental revenues of the company's communication towers. The company started the process of relocating its corporate headquarters to Florida. This process is expected to be completed during the third quarter of 2014.

SBA Chairman Offloads Roughly $7.5 Million in Stock

While many of us were getting ready for the holiday weekend, SBA Communications Chairmen Steven E. Bernstein sold 75,000 shares of SBA stock at an average price of $100.68 per share, totaling $7,551,000. Following the completion of the sale, the chairman now directly owns 8,932 shares in the company, valued at approximately $899,274. The transaction was disclosed in a legal filing with the Securities & Exchange Commission Shares of SBA Communications (NASDAQ:SBAC) traded

down 0.88% on Friday, hitting $100.60. The stock had a trading volume of 975,439 shares. SBA Communications has a 52 week low of $70.55 and a 52 week high of $101.90. The stock's 50-day moving average is $93.67 and its 200-day moving average is $91.5. The company's market cap is $12.958 billion.

Zoning and Moaning

NY Fire Department Cell Tower Negotiations at a Standstill

Negotiations between the Pine Island Fire District and AT&T regarding a plan to erect a 150-foot monopole at the district's firehouse on County Route 1 are "at a standstill." Commissioners told about 20 Pine Island residents during their regular meeting on May 15 that AT&T has rejected a proposal they crafted during a three-hour executive session on April 23. The Fire District's proposal "was rejected by AT&T and, at this point, I think that the best course of action is for us to wait and meet with our attorney," Commissioner Larry Kernath said. "So, right now, I think that the cell tower project is on hold until AT&T reaches out to us. I guess that is the best way to put it." Although commissioners would not elaborate on what, specifically, the telecom giant is balking at, one apparent point of contention is the Fire District's insistence that the conditions and requirements it imposes on AT&T and its tower contractor, New Cingular Wireless, will remain applicable regardless of who owns and maintains the tower. New Cingular Wireless approached the Pine Island Fire District last year with a proposal to erect a 150-foot cell phone tower in a fenced complex it will lease at the firehouse. They signed a two-year lease with the district last May. The lease agreement would generate anywhere from $24,000 to $96,000 a year in rental income for the district, which borrowed $3 million in a 30-year bond in 2008 to build its firehouse. However, commissioners have denied that the revenue is needed to pay the bond. "Not at all," Chairman Ken Gurda said. "The project for the new firehouse was 14 years in the making." Gurda said the bond will be paid off, as planned and approved by Pine Island voters, with revenues generated by the district's tax levy. But the proposal "absolutely has to do with raising money" for new emergency communications equipment, Kernath said, noting AT&T will subsidize expensive technology upgrades as part of the tower project that the district otherwise would have to invest in eventually at its own expense.

Proposed Cell Tower at Connecticut Hunting Club Met with Opposition

Despite poor cell and data coverage towards the northern part of Darien County, Connecticut, local residents made their opinions on a cell tower known in a recent meeting. An informational meeting hosted by AT&T Thursday night drew about 50 local residents, many of whom voiced their displeasure with a proposed 120-foot-high cell "silo" at Ox Ridge Hunt Club. One resident, Jenny Schwartz, didn't mince any words when it came to voicing her opinion. "I'm very concerned with the impact on property values. That property (The Ox Ridge Hunt Club) is a draw; it's one of those things that distinguishes Darien. I think you'll deface it, I think you'll ruin it and I think you'll kill the neighborhood." AT&T representatives, however, said tower was necessary because of increasing network use. They said data, not voice, was where the greatest need was due to ever-increasing use, and that service will begin to decline if a tower isn't erected. Regardless that there is hard data backing up the fact that demand is increasing, some residents don't want to hear it. "This is not a necessity," David Upson said. "This is not required to live. You do not need the ability to make a phone call... going from the top of Darien to the bottom of Darien ... It doesn't make sense to me. I want to understand who was really asking for this, why are you projecting a gap when no one is complaining about a gap... Are people coming to you and saying they can't use your service?" A consultant for AT&T

said that if they wait until the network falls apart, it'll be too late to respond. No official applications are expected to be submitted to the Connecticut Sitting Council before the end of June.

Guilford, Connecticut Residents Oppose AT&T Tower Proposal

AT&T's 170 foot cell tower proposal near a quiet field doesn't sit well with residents across New Haven County. "I never get tired of looking out at this field any time of the year," said Jean Pantalone, 68, gesturing to where sheep roam the field. "That's what attracted me to this house" said Pantalone, a local resident. That's why residents are arguing that a proposal from AT&T to build a 170 foot tower could disturb the pastoral nature of the neighborhood. The proposal was first brought to the attention of neighbors during a meeting on the plan at the Guilford Community Center nearly three weeks ago. Representatives said they explored other sites in Guilford, but according to a letter from an attorney representing AT&T, "there are no known alternative tower sites that would meet technical requirements and/or are available for lease or acquisition for construction of a tower site." Though residents were asked to hold questions until the end of the meeting, those in attendance grew more impatient through each phase of the presentation, frequently interrupting with questions. At one point late in the meeting, one person stood up and asked for those against the proposal to raise their hands, which prompted an almost immediate reaction against the proposal from nearly everyone in the room. A cell tower proposal in the nearby town of North Branford was recently rejected due to local resident opposition. A major distinction between the situations in North Branford and Guilford, however, is that North Branford's cell tower would have been built on town property, which allows the town to have final say on whether it is built. Because AT&T's plan in Guilford is on private property, AT&T only needs approval from the Connecticut Siting Council. This means that the town has no jurisdiction over AT&T's plan, First Selectman Joseph Mazza said. It will be interesting to see how this story plays out. Unfortunately, there are a lot of people who want access to the newest technology, but don't understand that wireless signals have a limited range. Sooner or later cell towers will be looked at like the utility poles that line the roadside.

Tower Safety

RF Safety Training is an Important Step

The FCC is required by the National Environmental Policy Act of 1969 to evaluate the effect of emissions from FCC-regulated transmitters on the environment. However, it's important for the wireless industry and rooftop workers to be aware of RF emissions. To ensure the safety of workers, the FCC mandated the RF Radiation Exposure Regulations for all communications sites in 2000. According to NARDA, "In an occupational environment informed workers must understand and follow well-defined safety procedures. Consequently, restricted areas are smaller. Your sites can be classified Controlled when you have developed and implemented a comprehensive safety program." Nowadays, being able to identify any areas and equipment that carry potential hazards is easier than ever. Training courses are offered to provide workers with RF safety expertise. LBA University was created to offer the first course in RF safety. "It's been very successful and we've trained several thousand people in the last year or so and gotten an excellent reputation and that group is rolling right along," said Lawrence Behr, CEO of LBA Group. It's important to be aware of RF safety measures, not only to follow the rules of the FCC, but also to keep you and your employees safe.