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FirstNet Brings New Opportunities for Rural Operators

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Key Points:

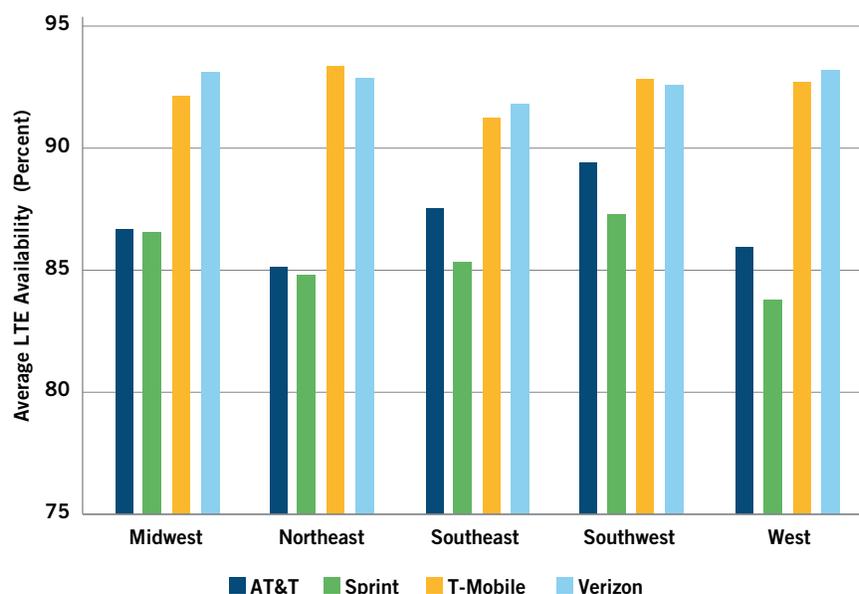
- FirstNet will enable rural wireless operators to evolve their business model with AT&T to a co-locate/backhaul structure versus just a roaming relationship, which opens the door to new long-term recurring revenue opportunities.
- In order to meet the FirstNet coverage mandate AT&T will be deploying over 1,000 new towers, many of which will be in rural America. Rural operators have an opportunity to participate in this build.
- ILECs with fiber networks are well-positioned to provide backhaul services for AT&T's expanded coverage footprint.
- Given AT&T's efforts to drive costs out of its business, margins on new commercial agreements rural operators sign with AT&T could be under pressure.
- In the near-term, the competitive threat for rural wireless operators stemming from AT&T's FirstNet build should be minimal. However, that could change over the long term if AT&T has success with FirstNet, and/or if it builds out its distribution presence in rural markets.

FirstNet Background

Last year, AT&T was awarded the FirstNet contract to build and manage a nationwide public safety network. The FirstNet program was borne out of Congress in response to the incidents of 9/11, and the lack of interoperability between the numerous public safety networks. Under the terms of the award, AT&T was given 20MHz of 700MHz spectrum (FirstNet spectrum) to be used (primarily) for public safety subscribers and \$6.5B in funding which will be paid according to a network build plan. AT&T is also required to use rural network operators for 15 percent of the network coverage.

After AT&T was awarded the FirstNet contract, states had the option of opting in or out of the FirstNet program. This process took over a year to complete as opportunistic companies – Rivada Networks in particular – were pitching the idea that states should opt-out of FirstNet and use a third party to build their own statewide network. Promises of new revenue streams and greater control over their network had some states interested, but in the end all 50 governors decided to opt-in to the FirstNet program.

EXHIBIT 1: U.S. Operators' Average LTE Availability by Regions



Source: OpenSignal

Note: In the Northeast, Southeast, Southwest and West, T-Mobile and Verizon were statistically tied in LTE availability

New Revenue Opportunities

The agreement between AT&T and FirstNet is confidential, and very little is being shared concerning the build plan. However, it's likely that AT&T will partner with rural operators for fiber backhaul, tower leasing, site acquisition, and perhaps some construction related work. In some instances, this will change the way rural wireless operators work with AT&T.

Today, AT&T has roaming agreements with a number of rural wireless operators, and it stands to reason that they will want to build out coverage to replace these roaming agreements. Also, as shown in exhibit 1, the company's 4G coverage lags the competition. AT&T will need to address this to meet the FirstNet coverage requirements. (See Exhibit 1.)

In terms of replacing lost roaming revenue, rural wireless operators need to convince AT&T that it's better for it to lease space on existing towers (owned by the rural

operators), versus building its own. The same argument applies to fiber agreements for wireless backhaul.

A shift to an infrastructure model versus just roaming agreements should provide a more reliable and predictable revenue stream for local wireless operators.

In regard to AT&T expanding its rural coverage footprint, ILECs with fiber networks are well-positioned to see an increase in wireless backhaul revenue. AT&T has talked about deploying over 1,000 new macro sites, many of which will be in rural America. And given that the company has critical network milestones that need to be met, it seems likely that it will partner with existing rural broadband providers

for network backhaul. AT&T has a lot of work to do in rural America to meet the FirstNet requirements – and to have a network footprint that will enable it to acquire first responder customers – as such, deploying new fiber where alternatives exist would create a bottleneck the company can ill afford.

The same logic applies to the tower market. Conventional wisdom would suggest that AT&T will look to partner with companies that have tower assets in place versus building new towers. This is especially true in hard-to-reach locations.

Like all wireless operators, AT&T is laser focused on driving costs out of its business. One needs to look no further than the stock performance for some of its vendors to see how hard AT&T is grinding its partners on price. This is important because the new commercial agreements rural operators sign with AT&T may not be as “supplier friendly” as they once were.

Competitive Headwinds Facing AT&T

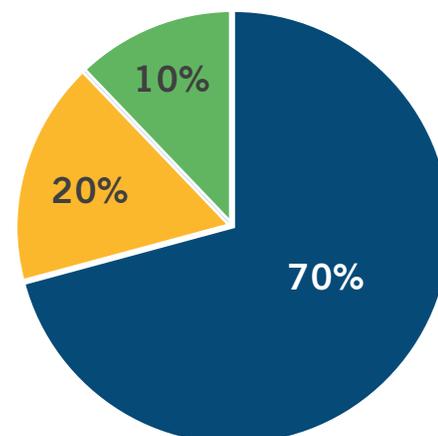
AT&T is hungry for growth opportunities, and they see the Land Mobile Radio (LMR) subscribers (approximately 11M users) and Verizon's LTE public safety subscribers, as fertile ground for expansion.

AT&T is under-indexed in the public safety market so the opportunity for growth exists. (See *Exhibit 2*.) However, these efforts will be met with stiff competition. Similar to FirstNet, Verizon has announced a dedicated network core for public safety users that will prioritize traffic, and provide improved security and enhanced service management controls. We also see an increased focus on first responder ads from Verizon as it looks to protect and grow its public safety user base.

Additionally, AT&T does not have all the necessary mission-critical communication services to begin penetrating the first responder market that is dominated by Motorola Solutions' LMR platform. (See *Exhibit 3*.) We estimate that it will be another year before AT&T will have mission-critical push-to-talk over LTE, and probably two years before it offers native proximity services (walkie-talkie type communication between users when there is not a wireless network available).

AT&T recently announced it has over 250K FirstNet connections, but it's unknown what percent of these are data modem connections, where average revenues are significantly lower than postpaid smartphones. According to comments made by AT&T, it has reduced its 2018 FirstNet build plan, and its main antenna supplier, CommScope, isn't seeing much upside from FirstNet. This begs the question, is AT&T meeting its FirstNet subscriber goals?

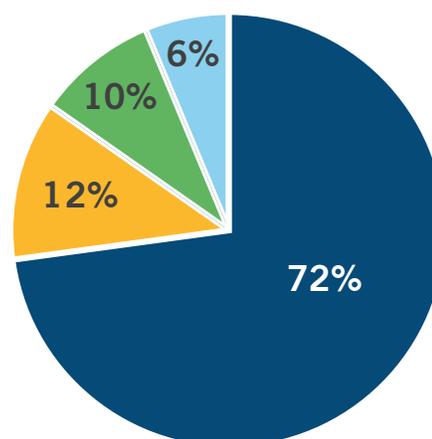
EXHIBIT 2: LTE Public Safety Market Share by Operator



■ Verizon ■ AT&T ■ Sprint/T-Mobile

Source: CoBank estimates based on industry analysis and surveys

EXHIBIT 3: LMR Public Safety Market Share by Vendor



■ Motorola Solutions ■ JVC Kenwood ■ Harris ■ Other

Source: CoBank estimates based on industry analysis and surveys

This is important to monitor because AT&T's FirstNet subscriber trends could have an impact on the competitive environment for rural operators.

Rural Operator Risk

For most rural wireless operators, Verizon is considered their biggest tier-one competitor, but that could change overtime if AT&T has success with FirstNet and begins to build out its distribution presence in new rural markets. As mentioned above, there are growth opportunities for AT&T in the public safety market, but FirstNet is more than just a public safety play (AT&T is not planning to invest \$40B just to gain share with first responders). It is using FirstNet as a pseudo Trojan horse in the hopes that it will also win business with families of public safety subscribers, and in the extended primary market (e.g., bus drivers, utility workers, security guards, etc.). This "land and expand" strategy could be a threat to rural wireless operators.

Also, if by owning more rural network assets and having an expanded footprint in rural markets, AT&T may decide it wants to build out its distribution presence in these

markets. This too would be a threat to rural wireless operators. None of this is going to happen overnight, but it's something to be aware of.

Summary

For the most part, FirstNet represents a near-term opportunity for rural operators. AT&T has network coverage milestones that it needs to hit in order to receive the \$6.5B in government funding. And given the time it takes to install fiber and build new towers, AT&T will likely partner with rural operators and utilize existing infrastructure. However, the long-term competitive threat of AT&T entering new markets cannot be ignored, especially given how desperate operators are for growth. FirstNet is a big part of any new market expansion, and AT&T faces an uphill battle in this regard. Motorola Solutions earns healthy margins on the products it sells to first responders, and if need be, it can reduce prices to protect its market share. Also, Verizon is on the offensive as it looks to preserve and grow its public safety business. This all makes for an increasingly competitive environment over the next few years. ■

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