

## Q2 2021

### Wireless Infrastructure Industry: Market Analysis Report

#### Inside the Tower Business

#### DISH Network: A Strategic Analysis

#### Industry Expert Perspectives

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All editorials are written by John Celentano unless otherwise specified.

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## In This Issue: The Best Business in the World!

Tower owners and operators, and their investors, believe "the tower business is the best business in the world." Think about the tower business model - build a tower with capacity for multiple tenants; keep maintenance low on a passive tower structure; sign new tenants to long-term leases that add to monthly revenues and profits. Build or buy more towers, then repeat. Sure, this is an oversimplification, but you get the idea. The tower business model is very attractive financially.

More importantly, towers are at the nexus of new 5G deployments worldwide. Most of the initial deployments involve low-band and mid-band frequencies to achieve wide area population coverage from macro cells on towers. This means demand for space on towers likely will remain at a high level over the next 5-7 years.

Our lead article, "Inside the Tower Business" looks at key aspects of the tower business model with comparisons between North American and international markets.

DISH Network is establishing itself as the fourth U.S. national mobile network operator. In the process, it is entering a mature wireless market and competing with big, deep-pocketed incumbent MNOs. Relying on a new Open RAN wireless network architecture and a differentiated business model, DISH is confident in its plans and prides itself in being the disruptor as it was when it entered the pay TV business.

"DISH Network: A Strategic Analysis" dives deep into the company's opportunities and challenges as it stands on the threshold of launching a greenfield 5G network.

We have updated our Wireless Infrastructure Index with current numbers along with notable Tower Transactions. We added some color on what goes into compiling the Index, and how to interpret it.

This issue also includes contributions from four knowledgeable, highly regarded individuals.

Michael DeMita of **Tower Capital Advisors**, in our M&A Advisory, talks about how the wireless infrastructure business has become a seller's market.

Analyst Colby Synesael of **Cowen** shares his views on trends and outlook for towers, small cells, and data centers in our Investor Perspective piece.

In the D.C. Watch section, Rodney Carter & Michael Long, telecom attorneys with **Husch Blackwell**, discuss the regulatory "tools" available in the Infrastructure Investment and Jobs Act.

A jam-packed issue, for sure! Enjoy the read. We welcome your feedback.

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## Inside the Tower Business

### Network Infrastructure Investment is on the Rise

The tower business is enjoying quite a run, maybe the best in many years.

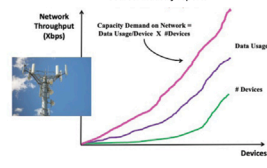
This sector of the wireless business is benefiting from a confluence of several growth drivers as the world is slowly coming out of the pandemic.

First, there is a demand for space on communications towers of all types for the foreseeable future. The main driver is the need for greater connectivity to support growing mobile data consumption particularly with 5G. The oft-cited Ericsson Mobility Report and the Cisco Annual Internet Report show numbers of devices, connection speeds and mobile data consumption all growing exponentially over the next three to five years.

More devices than ever are connecting to fixed and mobile wireless networks - smartphones, laptops, tablets, IoT sensors - used in various commercial and industrial applications, connected vehicles of all types, gaming and other applications. This combination of growing numbers of devices all with higher throughput is driving exponential traffic load growth on the wireless networks.

Figure 1: Wireless Network Investment Drivers

Source: Industry reports



To meet that demand, wireless technology is evolving with wide-spread 5G deployments involving high-speed data connections at 1 Gbps, low latency in single-digit milliseconds and high reliability for mission critical applications.

This means more demand for antenna space on towers and other support structures. That demand is reflected in the confident outlook among tower companies. For instance, the U.S. Big 3 towercos - American Tower, Crown Castle and SBA Communications - in Q2 2021 raised their full-year 2021 guidance for site leasing revenues. Adjusted EBITDA and Adjusted Funds from Operations (AFFO). Site leasing revenues are expected to increase by seven to eight percent over the 2020 levels, up nearly double the growth rates of recent years.

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## DISH Network: A Strategic Analysis



### DISH's Wireless Ambitions

DISH Network (NASDAQ: DISH) has embarked on an excellent adventure. The company is entering the wireless service provider business under the DISH Wireless name as the fourth national network in competition with the incumbent mobile network operators, Verizon, T-Mobile, and AT&T.

Led by its swashbuckling Chairman Charlie Ergen, DISH is following a similar playbook to when it entered the direct broadcast satellite pay TV business in 1996, under the EchoStar name. It quickly became recognized as a disruptor in the DBS business with aggressive pricing on consumer services while controlling its capital expenditures and operating costs.

DISH has had its sights on the wireless business for some time. Steadily building a spectrum portfolio, it has invested roughly \$21 billion directly and through subsidiaries in spectrum in low-, mid- and high-band frequencies.

The company considered buying its way into wireless by bid to purchase Sprint Nextel or Clearwire in 2013. It had plans to build a narrowband IoT network but shelved those when the T-Mobile/Sprint deal came about.

On its wireless plans, Ergen commented, "Given the assets we've been accumulating, I don't think it's hard to see we're moving in a different direction from simply pay-TV, which is a market that's becoming increasingly saturated."

In 2019, DISH entered an agreement as part of the Sprint/T-Mobile merger in which DISH would acquire Sprint's prepaid wireless businesses, including Boost Mobile and Virgin Mobile. As part of that agreement, DISH would purchase for \$3.6 billion a portion of Sprint's 800 MHz spectrum core services in that band are decommissioned. Besides access to 800 MHz spectrum, DISH would acquire infrastructure assets from both T-Mobile and Sprint when T-Mobile decommissions Sprint cell sites it does not need.

In turn, DISH offers a competitive balance in the U.S. wireless market and replaces Sprint as the fourth national MNO. Interestingly, the Department of Justice has acknowledged that it may not have approved the T-Mobile/Sprint merger if the DISH component of the deal was not included.

Once the DOJ approved the merger, DISH committed to "deploy a facilities-based 5G broadband network capable of serving 70 percent of the U.S. population by June 2023." To help meet those deadlines, DISH asked the FCC to modify its spectrum license activation dates in line with this timeline. This deal was fortuitous for DISH since the company faced looming deadlines where it raised losing some spectrum licenses if it did not put them into play.

On July 1, 2020, DISH purchased Boost Mobile for \$1.4 billion. This purchase provided DISH with a ready-made billion-dollar quarterly revenue stream and nearly 10 million Boost Mobile-branded prepaid subscribers. DISH Wireless was established as a mobile virtual network operator (MVNO) on the T-Mobile network through 2027.

DISH stated intentions to augment the prepaid business with its own branded postpaid 5G services delivered on its facilities-based network.

The company is moving quickly and keeping capex at minimal levels as it builds the nation's mobile-branded prepaid subscriber base. Open RAN 5G broadband network. There's a lot on the line for DISH. It must prove its mettle as a successful wireless service provider starting from scratch using nascent 5G network technology.

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## Wireless Infrastructure Ecosystem

### Infrastructure Elements

The primary purpose of physical infrastructure is to support and enable wireless communications.

Wireless infrastructure comprises:

- tower sites and small cells for locating radios and antennas close to mobile devices and user equipment;
- distributed antenna systems (DAS) for distributing RF signals both inside buildings and around campus environments;
- fiber optic cables for connecting remote radio units (RRUs) and baseband units (BBUs), the RAN to the core including radio unit (RU) with distributing units (DU) and centralized units (CU) in Open RAN architecture; and for interconnecting data centers;
- data centers and multi-access edge computing that support the internet with cloud computing and data storage; and
- land that supports all types of physical structures.

Ancillary infrastructure elements include site DC power and batteries, backup power systems (diesel generators, solar, wind, uninterruptible power systems), equipment huts and shelters, and site security systems.

### Valuing Infrastructure

The Wireless Infrastructure Value Index is composed of the stock prices of the top 13 North American-based companies and real estate investment trusts (REITs) in the wireless infrastructure business. Several of these companies own and operate wireless infrastructure outside of North America.

The table highlights the mix of infrastructure assets that these companies own and operate.

### Wireless Infrastructure Ecosystem At-A-Glance

Company	Towers	Fiber	Small Cells	DAS	Data Centers	Land	Other
American Tower	X				X	X	
Brookfield Infrastructure Partners	X	X			X	X	
CoreSite Realty					X		X
Crown Castle	X	X	X	X	X	X	
Cyrus One					X		X
DigitalBridge Group	X	X	X	X	X	X	
Digital Realty Trust					X		
Equinix					X		
Iron Mountain					X		
Lumen Technologies	X				X		
SBA Communications	X		X	X	X	X	
Switch Inc.					X		
Uniti Group	X	X					

These 13 companies make their money by offering their infrastructure assets on a shared, leased basis to wireless service providers and mobile network operators along with a host of commercial, industrial, and government tenants.

**List Update:** This list is not static. It will be updated in each quarterly as mergers and acquisitions are enacted, and as asset purchases or divestitures take place.  
**Removals:** Data center operator QTS Realty Trust (NYSE: QTS) was acquired by BlackRock and taken private.  
**Additions:** Lumen Technology's recent acquisition of CenturyLink, divested legacy copper-wireline telephone operations to focus on fiber cable and data center business.

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## Wireless Infrastructure Transactions

Wireless infrastructure deals and transactions take place continually. While it is difficult to track all of them, many of which are private, we highlight notable transactions announced since the beginning of Q2 2021 to date.

### Notable Transactions Q2 2021 to Date

Source: Company and Industry Reports

DATE	BUYER	SELLER	INFRASTRUCTURE PLAY	DEAL VALUE	DEAL STRUCTURE
May 6	Diamond Communications/ Scutor Capital	Melody Wireless Infrastructure	2,300 sites in 50 U.S. states	\$1,625 B	Stock Purchase Agreement
May 17	Digital Colony	Landmark Dividend	Landmark Infrastructure assets	~\$972 M	Stock Purchase
May 21	Liberty Global/ Digital Colony	AltEdge Data Centers JV	European edge data centers	N/A	N/A
June 2	SBA Communications	Airtel Tanzania	1,400 towers	\$175 M	Cash
June 28	Bai Communications	Mobiletix	300 towers, 10,000 small cells, 220 venues	N/A	N/A
June 6	Brookfield Infrastructure Partners/Alcatel	Telia Company	4,700 towers in Finland and Norway	\$852 M	Cash
July 9	Celtnet	Cyroworld Polaris Group	7,000 towers & telecom sites, 7,000 base stations, 1,300 fiber-optic links	~US\$1.9 B	Cash
July 26	Stonepeak	Lumen Technologies	Fiber and undersea cable assets, 18 data centers	\$2.7 B	Cash
July 26	DigitalBridge Group	PCWV	a data center (Hong Kong, 1 mainland China, 1 Malaysia)	\$750 M	Cash
Aug 4	Lumen Technologies	Apollo Global Management	CenturyLink ILEC operations in 20 states	\$7.5 B, incl \$1.4 B of debt	Cash

### Transaction Details

**NEW YORK, NY and SHORT HILLS, NJ, May 5, 2021** Diamond Communications, one of the largest privately-owned tower companies in the U.S., and Scutor Capital Management, announced that investment funds affiliated with Scutor Real Estate and Diamond have entered into a definitive Stock Purchase Agreement worth \$1.625 billion with investment funds managed by Melody Capital Management to acquire Melody Wireless Infrastructure, a private U.S. REIT that owns a portfolio of approximately 2,300 leased wireless communication sites. These sites include a combination of rooftop installations, communication towers and ground leases under communication towers located throughout all 50 U.S. states. The acquisition significantly enhances Diamond's U.S. footprint of owned and managed wireless collocation properties nationwide.

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## M&A Advisory

### 2021: It's a Seller's Market for Wireless Infrastructure

By Michael DeMita, CEO,  
Tower Capital Advisors

When I first discussed acquiring wireless lease assets and infrastructure in 2000, my partners at the time and I adopted a saying to convince ourselves of the security of the business: "The last bid that will be paid when the world ends will likely be a cell phone bill."

Today, that concept seems to have been replaced by a growing number of institutional investors, big and small, seeking safe harbor and returns in an environment where few alternatives present themselves.

After 21 years in the business of acquiring, divesting and/or advising on the sale of the various forms of wireless infrastructure tenanted by the top telecom facilities-based mobile network operators, I can suggest that 2021 represents a high-water mark for both valuations and mergers and acquisitions activity.

From a buyer's perspective, cash flows of many types of alternate commercial real estate investments are under serious pressure (think retail, hospitality, office, and apartments). MNO rooftop installations as well as carrier and non-carrier owner stand-alone towers are almost exclusively installed on property subject to a long-term lease with a third-party property owner. The sale of a wireless lease, when structured as a fee-simple purchase or a long-term easement, may allow the seller to enjoy capital gains tax treatment and provide a buyer with a REIT-qualified asset. Check with your tax advisor.

Capital has been flooding into wireless infrastructure M&A and for individual lease and tower acquisitions. Between the security provided by investment-grade tenant credit, counterparties paying the rent and the essential nature of their broadband equipment, it is not all uncommon to see these revenue streams whether via tower acquisitions or structured as perpetual easements for single leases. Inside capitalization rates well below those of the very properties on which they reside.

From a seller's perspective, combined with the above-described capital influx and the cold-calling tsunami that typically comes with it, other events are concurring to drive prices and selling activity to unprecedented levels.

Since the pandemic, many property owners that lease space to the tower companies or MNOs are experiencing reduced revenue from their tenants and are looking for ways to cash out. At the same time, they are fearful of the current administration's tax proposals. If adopted, these proposals raise the capital gain tax rates for the highest earners, call for ending the ability to "step up" the cost basis for real-estate when it is inherited, and eliminate Section 1031 exchanges.

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Moreover, property owners face the prospect of more inflation that can lead to higher costs of capital for buyers and potentially higher prices down the road. These circumstances together have driven sellers to market their assets just when they need cash.

By way of example, our firm has seen sizable increases in (and closed on) higher than normal sales of individual leases with mixed-use office building owners, hotel owners and individual estates.

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### Intelligence Briefing - early November

- A subscriber-exclusive, 1-hour interactive briefing call by John Celentano, highlighting new developments and updating key market metrics since the Q2 2021 issue release
- An opportunity for direct dialogue and to ask your most pressing questions.
- Check your email for the scheduled briefing date announcement.

### Q3 2021 Issue - early December

- New, in-depth analysis of the fiber business and its critical role in wireless applications, not available from any other source.
- Insights from contributing Industry Experts.
- Updated Wireless Infrastructure Index data and recent transactions.
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