

Change May Flow From Possible New Mobile Network Operators

[dc digitalcolony.com/press/change-may-flow-possible-new-mobile-network-operators](https://digitalcolony.com/press/change-may-flow-possible-new-mobile-network-operators)

Multiple-input, multiple-output (MIMO) and machine-to-machine communications stand ready to change the wireless infrastructure business in response to wireless communications carrier requirements.

December 20, 2018 – by Don Bishiop, AGL Magazine –The delivery of infrastructure today is a more complex effort than it was in the 1990s or the early part of the 2000s, according to Marc Ganzi, CEO of Digital Bridge. Compared with today’s business focus, wireless infrastructure companies used to think more about where wireless carriers wanted tower sites and how the tower companies could efficiently deploy their balance sheets to help carriers extend their networks, he said. Digital Bridge develops, owns and manages tower and rooftop antenna sites, data centers, fiber-optic cable routes and backhaul, cloud storage, small cells, distributed antenna system (DAS) networks, and Wi-Fi wireless local area networks.

In the past, Ganzi said, separate companies handled the wireless infrastructure segments of towers, DAS and fiber. For the future, Ganzi expects 5G wireless communications infrastructure requirements to transform the wireless carriers and how they spend capital.

“I challenge everyone to not think so much of being in the tower business, but to think of being in the bandwidth delivery business.” — Marc Ganzi, CEO of Digital Bridge

Preparing for 5G

“We are spending a lot of time thinking about how networks are converging, how we can be helpful and, most importantly, preparing a fairly substantial spend to make 5G work,” Ganzi said. “The industrialization of the network is really important to understand. You have to think about the network in multiple dimensions.”

In Ganzi’s view, the first dimension involves multiple input, multiple output (MIMO) communications, which at least uses multiple transmitting and receiving antennas for a given base station, and sometimes multiple transmitters and receivers that each have multiple antennas to transmit and receive more than one data signal simultaneously over the same radio channel. The effect minimizes errors and optimizes data speed.

“With MIMO, you immediately change the dynamic of how infrastructure is built because now you’re relying on small cells, Wi-Fi, macro sites, backhaul and edge data centers, and then ultimately, the backside of a cloud-based radio access network (C-RAN) with base station hotels or carrier hotels,” Ganzi said.

Machine-to-Machine Connections

“A second dimension addresses 5G’s potential not only for connecting 7 billion human beings on this planet, but also it is about connecting 7 trillion devices,” Ganzi said. “No longer are we building networks for people-to-people connections. We’re talking about machine-to-machine connections. Those machine-to-machine connections are going exponentially far faster than anyone can comprehend. As we think about where we’re going to be in 2030, with 7 trillion devices connected via wireless networks, that’s an exciting place to be.”

Hierarchy of Objectives

Ganzi said customers have a hierarchy of objectives, including quick, capital-efficient deployment that solves legacy lease issues while bringing down the total cost of bandwidth delivery over time. He said wireless infrastructure providers have profited greatly as deployment partners with carriers, but a fundamental shift to lighter, smaller infrastructure is mostly likely to be more rent-efficient. Trying to help customers optimize their operating expense is important, Ganzi said, along with understanding how to deliver many solutions quickly.

Future Customers

“Regarding the customers of the future, I wonder how far Charlie Ergen will go with the Dish Network internet-of-things (IoT) network,” Ganzi said. This year, Ergen, the company chairman, announced Dish Network’s plans to deploy a nationwide, narrowband IoT wireless network. “How do cable TV companies get into the business of wireless communications?” he asked. “Do the cable companies eventually own a network?”

If the No. 3 and No. 4 national wireless carriers, T-Mobile US and Sprint, merge as they have said they intend to do, Ganzi said the cable TV companies may end up entering the business as a fourth national wireless communications carrier. “We have to think a lot about what they will need for infrastructure,” he said.

Another potential new mobile network operator Ganzi identified as a future customer for wireless infrastructure could come from companies that Wall Street sometimes refers to in a group as FANG, using the first letters of their names: Facebook, Amazon, Netflix and Google.

“Probably the FANGs will not build their own wireless communications networks unless there are some changes made about net neutrality,” Ganzi said. “But chances are, maybe one of them will, or they build pieces of the network, or they joint venture with the cable TV companies to build a joint network. I am optimistic about traditional content providers and companies that deliver goods and services. It benefits them to have network elements, if they can control and own them.”

Referring once to the industrialization of the wireless network as the IoT, Ganzi said it would be logical that for Amazon to deliver a flawless experience, especially with drone delivery, Amazon will need some form of a wireless network with low latency and with computational functions and applications placed at the network edge.

Aggregation Points

“You will see carrier hotels, small-cell base station hotels or C-RAN hubs, whatever you want to call them, as aggregation points where content and wireless come together to reduce latency as low as 1 millisecond,” Ganzi said. “To achieve that, we have to be 1,000 percent faster than we are today. Some of these challenges are confounding from an engineering perspective, and I believe it means we will see new wireless carrier entrants.”

In Ganzi’s view, if T-Mobile US and Sprint merge, it will be positive for the wireless infrastructure industry. He said the best result would be the emergence of a fourth mobile network operator. But whether or not the companies merge, much work will need to be done to densify mobile networks.

Network Reinvestment

“Rationalizations of networks take about seven years, depending on how long the duration of the existing macro sites is with the company that’s acquiring the other company,” Ganzi said. “Between the third and sixth years after a merger, you see a reinvestment in the network. We’ve seen that happen time and time again. I am not concerned about the short-term implications of the merger. I am more interested in its by-product, and whether it encourages cable TV companies to invest, Dish Network to invest or the FANGs to invest. Whatever happens, the number of devices that will need to be connected over the next decade is a staggering figure. To accomplish that is going to require a lot more bandwidth and a lot more infrastructure. I challenge everyone to not think so much of being in the tower business, but to think of being in the bandwidth delivery business.”

People

Ganzi emphasized the importance of focusing on work flow to reduce cycle time. He said the need to complete projects more quickly applies to all businesses. For antenna site projects, he said bringing the customer experience down from a 180-day experience to a 90-day experience represents a remarkable achievement because it pulls sites into a quarter.

“It starts with people,” Ganzi said. “It’s harder and harder today to find good people to run these businesses just because of the sheer volume of activity and not really having a great safety net for training. How do we continue to train the next generation engineers? How do we train the next professionals in wireless infrastructure to really come on board and be effective on Day One? If you don’t have the right people, you can’t create alpha in investing.

Owning infrastructure assets is great. You can have the best leases; you can have the best cash flows. But people create alpha, not the assets.” In business terminology, alpha is the excess return on investment relative to a benchmark return.

Regulations

Although the wireless infrastructure business continuously faces a challenge from regulations, Ganzi said, the challenge brings opportunity. If it becomes easy to perform a site make-ready, to build a tower or to pull a building permit, wireless infrastructure specialists will become less useful to wireless carriers. He said wireless infrastructure specialists have the skills to perform the hard work and provide a strategic value-add to wireless carriers. A value-add becomes quantified as the difference between the revenue received for a product or service and the cost required to produce it.

Ganzi said the Wireless Industry Association, under its previous name PCIA, did a good job with regulation in bringing the wireless infrastructure industry and municipal governments together to offer the collocation of wireless equipment on existing sites as a matter of right. “How the industry responds and how the FCC responds will largely dictate how easy it will be or how difficult it will be to deploy next-generation networks,” he said.

Marc Ganzi spoke at the Connectivity Expo conducted by the Wireless Infrastructure Association in Charlotte, North Carolina, in May. The next Connectivity Expo is set for May 20–23, 2019, in Orlando, Florida.

To see story please follow link.

