Winning at Connectivity Chess in the Edge Ecosystem

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Here's a quick thought experiment: visualize the edge connectivity landscape as a chess board. Maybe 5G providers are our rooks, MSOs and other broadband providers are bishops, edge data center operators are knights and hyperscalers get to be the royalty, just for sake of argument. Pawns will represent our infrastructure assets: fiber, cable, towers, and data centers.

What are the most critical pieces of knowledge we need to win a game?

First, we have to know where all the pieces are on the board. It wouldn't make sense to even start the game otherwise. Second, it's critical to know how those pieces function. (Players who don't know bishops move diagonally any number of squares and knights operate in an "L" shape won't get far.) Lastly, understanding how those pieces can work together to achieve a common goal is the strategy needed to win. Which pieces can work together to corner a king (or hyperscaler)?

It's a simple, imperfect metaphor, but the lessons translate: connectivity players need that same depth of knowledge in order to win, and a thorough understanding of the ecosystem of players at the edge—the most proximate to the end user consumer—is critical. No piece is an island.

The edge ecosystem

In the connectivity industry, we know that coordination between the key entities is vital in serving up the best possible solution for the end user. Because capital intensity is a pervasive challenge, infrastructure sharing among towers, data centers and spectrum is in full force, including roaming

agreements, network sharing and other arrangements. MSOs are tapping into 5G provider networks to get their wireless solutions off the ground while they build out their own 5G infrastructure strategy, which means more choice and a faster network for consumers. As STL Partners states, "5G and edge computing are two inextricably linked technologies: they are both poised to significantly improve the performance of applications and enable huge amounts of data to be processed in real-time."

Of course, it's more nuanced than these various players working together in harmony. The complicated relationship status between the providers in the edge ecosystem is certainly one of competing priorities. In fact, the burgeoning edge is trying to orchestrate three distinct ecosystems, including mobile providers (4G and 5G), the cloud and the broadband community. It's "co-opetition" to a tee—and that's probably how it needs to stay for the success of global networks as they cooperatively work to implement next-gen technologies and meet rising end-user expectations. 5G, cloud and broadband providers need to coexist, but they each have different priorities and needs in terms of location of edge, peering fabric changes and timing.

5G has good "zero-to-60 ratings" coming out of the box and will have a major impact on where the new edge will be built. 5G providers are thinking about how they create a compelling customer experience for their wireless services. Meanwhile, broadband providers—the other big constituents in the edge ecosystem—are introducing their competing 5G services to couple with last-mile reach, which is going to lead to a very interesting battle over the next two to five years. Their priorities center on how their existing content and IP networks are physically structured and located in their peering fabric, with their competitive advantage deriving from a combination of fixed assets plus new spectrum assets. Meanwhile, content providers such as Facebook, Netflix and Google present yet another set of competing priorities, and edge data center operators have their own agenda to partner with 5G and broadband providers.

Despite the very different goals and biases of these distinct market segments, alliances are proving essential. The entire system, however, of visualizing and going to market with network infrastructure is riddled with inefficiencies and broken processes, and unfortunately, the increasing number of cooks in the kitchen simply exacerbates the problem. It is precisely this point that creates arguably the biggest challenge—and opportunity.

To achieve an effective edge ecosystem and the best customer experience for the end user, two components are necessary.

Know your place

Each player must embrace location truth and know their place within the entire ecosystem. Due to the global nature and therefore the sheer size of the connectivity puzzle, these companies are in the middle of a dance with large-scale and immediate financial ramifications. All involved need a clear view of their place on the playing board, who they can most effectively collaborate with, where to build and which infrastructure is already built, among other data. Explicit in the very definition of "the edge," location is at the core of this entire ecosystem and critical to each provider's strategy—but it's deeper than location alone. All four entities also must have seamless communication flow among each other to make the ecosystem function.

Enable the ecosystem

Now, take it a step further: enable the ecosystem to work in real-time via APIs and streamlined workflows. If providers have a laser focus on their own assets (fiber, data center, cable, and towers) with blinders up to the details around competitors and prospects within their footprint and enablement of their assets, they're missing critical opportunities to position for success. In addition to understanding all location-centric components of their footprint, providers must digitize and automate the go-to-market process to enable seamless, real-time use. With all the back and forth between players in this ecosystem, from hyperscalers to service providers to network operators, each party has a responsibility to either keep up the necessary location- and API-centric network or become obsolete. In addition to understanding their place in the bigger picture with location intelligence, it's equally important to have seamless communication with the other parts of the ecosystem, to ensure they're collectively providing the customer with a holistic, best-in-class service. Therefore, the reach and accessibility of the API stack—with a modern, foolproof, automated process for network planning, identification, prioritization, and pricing—is key.

APIs have many practical applications. For instance, if an MSP wants to know where all the network providers are within its footprint, that company needs to be able to leverage an API-enabled platform to pull up a list of available buildings quickly and seamlessly. That MSP can bulk query in real time, and network providers can send building list data among each other and then effectively advertise their lists to partners. Network provider APIs can ensure optimal network buying decisions based on product availability and cost, and APIs also help customers price their products to win while maximizing profit margin.

Today, this system is broken, from both angles. Location data is scattered, siloed and incomplete, and network buying and selling is far from streamlined. When it comes to network planning, providers don't understand market potential, the competitive landscape, and other critical factors. They're also failing to identify their total addressable market and communicate with partners to participate in as many opportunities as possible. Many sales teams don't have the ability to quickly prioritize opportunities, and CPQ (Configure, Price, Quote) is all over the board, so to speak.

However, the well-orchestrated chess match is possible—and necessary to build out the edge ecosystem. For all players who can visualize the ecosystem in real time, understand their place in it and effectively monetize it, it's checkmate.