

Q&A with Charlie Vogt, CEO of DZS

Reigniting a Focus on North American Broadband, 5G Wireless and Cable Opportunities

Charlie Vogt, a telecom veteran who has led a mix of voice, video and optical vendors, took the reins of DZS in August. He aims to solidify the company's position in fiber to the home (FTTH), 5G, smart homes, connected building/city solutions and software-defined networking.

Charlie Vogt, who previously served as CEO at four companies in the optical, video and next-gen voice space, has taken on his latest challenge: transforming DZS into a major competitor in the U.S. access market. In October, he made several new appointments to the company's executive leadership, technology and operations teams. He set the goal for the company to increase its wireline and wireless customer base and accelerate FTTH, 5G, smart homes, connected building/city solutions and software-defined networking. It's clear that the access network industry has consolidated over the past two decades. DZS itself led part of that consolidation, purchasing KEYMILE in early 2019.

Drawing on the experience it gained providing solutions to various Tier-1 Asian and European providers, such as LGU+, Korea Telecom, SK Broadband, Rakuten Mobile, Etisalat and Telefonica, DZS is turning its focus to new markets in North America and Latin America and accelerating its operations in Europe, the Middle East and Africa. With the introduction of its RDOF Amplify! program, designed to sponsor and assist Rural Digital Opportunity Fund (RDOF) recipients, DZS



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aims to help rural telcos and electric cooperatives navigate one of the FCC's largest broadband funding programs. **BROADBAND COMMUNITIES** had the opportunity to speak with Vogt shortly

after he took the helm as CEO about how he is positioning DZS. Following are highlights of the conversation.

BROADBAND COMMUNITIES:

To start, let's talk about how you are positioning DZS in the competitive U.S. last-mile access space.

CHARLIE VOGT: Having spent nearly my entire career in access, you go through peaks and valleys. Access is fun again. When you look at the application demands being placed on the network today, fiber has become a friendly word. The amount of emphasis we're seeing from the fixed wireline and mobile operators and the fiber overbuilders shows it is an exciting time.

There has been so much consolidation of the access market, which has fostered an opportunity for companies such as DZS to reemerge. DZS is laser-focused on three pillars: mobile edge and backhaul transport, fiber-to-the-premises and connected home, which includes optical line terminals (OLTs), optical network terminals (ONTs) and Wi-Fi devices. Those are at the core of what makes us special in the last mile. Our product set has fostered a competitive edge over the last decade, especially with the DASAN portion of DZS competing heavily in markets such as South Korea, Malaysia and Indonesia against Huawei and ZTE.

When you look at some of the notable incumbents we work with, such as KT, LGU and KDDI, it is impressive. Now, it's about how we bring this technology and engineering talent – especially given that we're moving the company's headquarters to Dallas – into North American and European Tier-1 and Tier-2 provider networks. We feel like we're in a good place to do that.

BBC: *In recent years, DZS focused more on Asia. What is your plan to further penetrate U.S. Tier-1 and Tier-2 opportunities?*

CV: The FCC's RDOF auction is making headlines – at least in the United States – and we're all over it. RDOF has been the focus of a lot of headlines recently because the

amount of federal support is large and there's a spotlight on providing necessary fiber access technologies in rural markets. Our mobile-edge and optical-transport products position us well in the Tier-1 mobile operator segment. I think the company is in the best position that it has been in a decade.

BBC: *Speaking of RDOF, electric cooperatives likely will have a large presence in the bidding process. Do you see this segment driving more broadband in rural areas that large carriers traditionally have ignored?*

CV: A lot of people associate RDOF with Tier-2 and Tier-3 rural operators, but Charter is also a recipient. We have been saying for a long time that the utilities and co-ops are an interesting complement and partner to some of the Tier 2s and Tier 3s, especially as utilities and smaller telcos see an opportunity to support consumers in their respective markets. From the funding aspects, the skill set aspects and opportunity aspects, there are a lot of synergies with the utility companies, the rural telcos, and the local state and government entities coming together to bring high-speed fiber access to consumers.

BBC: *How is RDOF different from other FCC programs, and how will DZS's RDOF Amplify! program help providers navigate the RDOF process?*

CV: There are now specific bandwidth requirements for downstream and upstream. The qualifications set by the FCC for funding are different than they were in the past. You are dealing with the largest service providers that are looking for RDOF funding to better serve customers in rural areas of their territories. We were talking to Charter recently, which is in a position to be a recipient and serve some of the underserved rural markets.

A lot of Tier-3 providers, state and local governments and utility companies have the wherewithal to deliver fiber services to consumers and businesses, but they don't have the know-how. DZS's RDOF

Amplify! platform is designed to provide a plethora of financial modeling and network modeling to help providers move from the application phase to award qualification. A lot of smaller operators don't have the resources to do some of these functions. It was our goal to make sure the industry understands that we have a unique opportunity to combine the things we're already doing with providers to a broader group of end users. It gives us an opportunity to better understand what the utilities, service providers and state and local governments are trying to achieve.

BBC: *As you settled into the CEO role at DZS, you recently enhanced your leadership, technology and sales teams. Will these moves help DZS's mission to build 5G and fiber access momentum?*

CV: Over the last 20 years, what I have learned is that a company's success depends entirely on its people. You must bring in people who have knowledge and the right background, and who fit the culture we're trying to create. I was telling the team recently that I feel like this is the best team I have ever had.

The new hires complement the talented existing team. I felt we needed the right people on the technology side, the sales side and the supply-chain side. We brought in the former CTO from Ribbon, who has FCC compliance skills. We brought on Darrin Whitney from Ribbon, who served as that company's CIO, and we brought in Andrew Bender from VMware. Mike Martin joined us from Arris. The new team includes a lot of people who have a relevant access background and also a lot of experience scaling up companies. I think that is the combination we're looking for.

BBC: *For all its hyped promise, 5G will require a lot of fiber and related optical equipment to distribute wireless signals. What will DZS do to play in this field?*

CV: One thing that we educate our investors and others who follow

the company about is how new this mobile segment is to the company. DZS traditionally has been focused on fixed-wireline operators and enterprises. The mobile sector is a brand-new market segment for the company. We're laser-focused on the mobile segment, with our mobile edge and our mobile midhaul and backhaul transport products.

If you saw our recent win with Rakuten Mobile, which is one of the first Open RAN operators, we're playing a big role in its network architecture. We've had a great opportunity to talk about that success story and how we're helping Rakuten Mobile accelerate the evolution of its 4G network to 5G. It also helps us tell the story about how our indoor and outdoor temperature-hardened unit for fronthaul is very differentiated in the space. Our sales teams and technology teams are excited about not only the win and the early success but also the reception we're getting from every Tier-1 operator. The 5G opportunity could be the single biggest mover for the company over the next several years.

BBC: *As the optical transport market has consolidated in recent years, what is DZS doing to set itself apart to pursue 5G opportunities?*

CV: A lot of vendors have been doing backhaul transport for a long time. We were doing backhaul transport, but we were not marketing it very well. What's different is the fronthaul. It is not easy to do. We are pioneering a whole new way of aggregating tens of thousands of aggregation points into the core network and are able to route that in a way that's uniquely different than traditional backhaul. You have more aggregation devices when you have a larger optical transport backhaul platform. Also, integrating the functional elements is more complex than just the transport side.

BBC: *With high-speed broadband Wi-Fi as the foundation, smart-home and smart-building concepts are gaining momentum. How are you approaching this opportunity?*

CV: Smart homes, buildings and cities are a theme DZS is following closely. What's great about the technologies that we're delivering for traditional service providers is that a lot are the same core technologies applicable in a campus environment – whether it's an MDU or a hospitality vertical, health care or a smart-city vertical. We're seeing a big opportunity in the smart-building and smart-city realms. We have more than 100 different customer-premises equipment (CPE) devices, ranging from optical network terminals (ONTs) to a slew of smart Wi-Fi devices. We just introduced our new line of Wi-Fi 6 devices with auto-provisioning capabilities and security elements. Ultimately, these devices will all be managed in a software-defined orchestration environment. We see the enterprise market as a natural extension of our business.

The silver lining with COVID-19 is that a large part of the population is working from home and students are learning remotely. If 20 to 25 percent of people end up working from home permanently post-pandemic, AT&T, Verizon and Lumen's networks will continue to be taxed. For technology companies such as ours, this presents a great opportunity to help solve the problem.

BBC: *Software-defined networking has been hailed as crucial to help operators virtualize their last-mile networks. Where is the industry in terms of the virtualization concept? Is it still early?*

CV: Every technology company tends to gravitate toward whatever the buzzwords are that get the most headlines. We've seen software-defined networking, orchestration and artificial intelligence grab a lot of the headlines over the last two to three years. I think service providers and enterprise networks want to be able to manage all their network elements in a virtualized orchestration environment. The challenge is that the industry is trying to move into an environment

of open standards and pure interoperability across all the different network elements.

Disaggregating those network elements and having them managed by a specific software-defined orchestration platform is not easy. I think we're in the early innings. A closed network environment is easier to disaggregate and manage, but carriers and operators are trying to balance and build networks that are open, not closed. Open networks present opportunities and challenges. It's going to happen over time.

BBC: *Earlier you mentioned cable operators. Though it's clear they are trying to get more out of their existing coax, cable is doing fiber to the premises (FTTP) in greenfield markets. Are you seeing more FTTP movement in the cable market?*

CV: If you asked me two or three years ago, my answer would have been that only greenfield cable FTTP deployments make sense, although you have the extreme cases, such as Altice, which made an FTTP decision for dense markets. Since COVID-19 hit, a lot of questions have been raised about the business case for cable to deploy FTTP [in other than greenfield situations] that maybe a year ago did not make a lot of financial sense. When I talk to cable operators, they say they are seeing a significant number of new applicants for new service and a significant number of existing customers dial up higher-bandwidth services. This all has an opportunity for them to generate more revenue.

In the early innings of COVID-19, a lot of people were fearful that service providers would have to upgrade their networks without seeing a lot of revenue to offset the spend. Cable operators are seeing a significant amount of revenue complementing the investments they are going to make. I think you're going to see operators rethink the fiber-to-the-premises play. Cable operators will be more aggressive in delivering fiber to the premises in more cases than they would have before COVID-19. ❖