DR: [00:00] I'm Danielle Royston, and this is Telco in 20. 2022 has been another amazing year. Back in January, I said I wanted this to be the year of more public cloud in telco, and my wish came true. All the things I've been talking about are totally happening. I've had conversations with a rockstar roster of podcast guests including Nathan Bell, Ferry Grijpink and Neil McRae. But don't forget how we flew out to the DISH Wireless Headquarters in Littleton, Colorado, to interview none other than Marc Rouanne.

This episode first aired on June 21st, and since then it's been listened to and watched on our YouTube channel thousands of times. So for 2022, we are showcasing it as the podcast of the year and bringing it to you again. In it we talk about DISH's new 5G network, its partnership with AWS and Marc's vision about monetizing his new 5G network with APIs. DISH recently launched the first set of network APIs just ahead of this year's AWS reinvent and Totogi was selected as a next gen software vendor that can be combined with DISH' APIs, Whoopee! So sit back, relax, and listen to Telco in 20's best of 2022.

Marc Rouanne is Chief Network Officer and EVP at DISH Wireless. High Marc, welcome to Telco in 20.

Marc: [01:36] Hello.

DR: [01:38] I'm so excited to talk to you. I mean, when I put together the Telco in 20 podcast, which focuses on the next 20 years, what you're doing at DISH is exactly what I was thinking. I can't think of a better guest for our podcast and so to start, I want to focus on your vision. DISH's approach with its 5G network and its work with AWS is going to change how networks are deployed in the future. You're taking new enabling technology, in this case, open RAN and AWS, and you're creating a new telco business model that makes what was formerly very complicated and super expensive now easier, faster, and less expensive. If successful, it will set the new standard in the industry on how to roll out networks. And so do you see DISH's network strategy as a totally innovative tech project that in 10 years we'll be saying, holy cow DISH set the standard

for the way networks are built? Because that's how I see this project.

Marc: [02:34] Yeah, actually it goes well beyond DISH. I think we are lucky to be consuming technology now that is available to us and it's completely new in the Telco environment. You mention it's the cloud, it's new types of software. You have to see that all the cloud guys have been investing very successfully for 15 years and for some reason the Telco never really tapped into that and now all of a sudden we can.

DR: [02:57] Yeah.

Marc: [02:58] And it's almost unfair because all of a sudden we inherit 15 years of massive investment and capabilities and the other thing that is coming to us where again, we are lucky, 5G was designed by the standardization people to be cloud native. So if you look deep into the 5G standards, you see everything for microservices, everything for data centric networks whereas 4G, 3G, were never designed for the cloud so it comes at the right time and we are surfing that. So yeah, it's brand new and very different.

DR: [03:28] And I think you touched on something there that I think is very important. There hasn't been another industry that's invested as much CapEx as the hyperscalers. Usually it's always been Telco, it's been the big CapEx people and now you're combining these two things together and you get to ride their investment as much as they're writing yours. So I think that's another great insight.

Marc: [03:49] And the big investment they have made as an ecosystem is around silicon and stacks, which the Telco never really did. So we were a bit starving in the Telco from a lack of very advanced silicon and software stacks and all of a sudden now this is coming to us so yeah, it's a new game.

DR: [04:07] And so there you're talking about Graviton 2 and 3.

Marc: [04:10] Graviton, but also Nvidia, Broadcom, Intel, Marvel, they're all investing in ways that we'd never seen before and this is pretty cool.

DR: [04:18] Yeah, it's super awesome. And so DISH is the first Telco to really use AWS in this novel way. If you could wave a magic wand and change one thing of the AWS platform, what would it be?

Marc: [04:31] So I think I've said it a few times. We looked at all the cloud and when we started with AWS, they were not Telco already, especially when it comes to networking, SLAs, all the different ways of transporting Telcos so we've done a lot of work with them and they are upgrading that platform for us to be Telco ready and Telco grade but suddenly if we had come when they were already Telco, that would've been easier for us.

DR: [04:56] Yeah, so you're forging new ground and it's a learning path and I think with that, there's going to be setbacks and delays. Things on paper look easier than when you actually do it, but I think when you look at the long arc of time, you guys will work through this and get to that Telco grade in the States.

Marc: [05:15] But it's true. There are a lot of things to do but on the other end, I've been a vendor for decades and my technical work here is much easier than it was before. And the reason is that I was carrying so much luggage and complexity for pulling old stuff into the current deployments. It was a nightmare. And I don't have that anymore. So yes, there are new grounds, but everything we do is much simpler.

DR: [05:39] Right. Well, software is much simpler, moves much more quickly than hardware and so that's my next question. I'm a software girl, and so we've seen a lot of vendors on the software side in Telco claim or say that they're cloud native. I mean, you're actually trying to deploy it on the public cloud. And so as you put together the software, you need to deliver this kind of new network,

what do you need from the software players to help you complete your vision?

Marc: [06:04] So again, because we were starting new, we put very strong requirements on being cloud native and we told everyone before we launch, which is now you have to be cloud native and I was a bit skeptical, but they did it and they did it faster than I expected. Now, we may see over time that we still have some bugs to correct in our learnings, but I must say I have been impressed by all the software vendors because again, the cloud market is mature. So for them it's easy to have engineers that understand cloud native.

DR: [06:33] Yeah.

Marc: [06:33] It's easy to understand what is a stakeless machine, what are the CNI they need to use? All this is actually at scale. So they have done it pretty well. I think most of them understood that they had to rewrite their software, start from scratch and not try to carry over the old stuff and that was a bit of debate we're having at the beginning. Are they going to bring us the old stuff and making look like cloud native? But I would say most of them didn't do that, so refresh.

DR: [06:59] Right.

Marc: [07:00] Yeah.

DR: [07:00] Well that's really hard for a software vendor because you have your legacy estate and your customers where they are, which in Telco is mostly on-prem.

Marc: [07:07] Yeah.

DR: [07:07] And then also developing the software that you need that's cloud ready, not just like you said, cloud reported. That's a lot of investment and so for the smaller vendors, they might struggle. Bigger vendors might be able to have the R&D capacity to pull that off. So that's interesting as you deal with that. That kind of brings me to

cost. What do you see as the cost savings of building your network in IT systems on an AWS stack versus the old school approach of VMware and Oracle? Do you expect these truly cloud native solutions to be 10%, 50%, 90% of the cost that you saw previously?

Marc: [07:44] So I'll talk about price later, but first, the cost of running a software that is cloud native, of upgrading a software, of maintaining it is much cheaper than the cost of having legacy. Now, this is cost, of course there is a tension of price. Do you have people like AWS that have a price that is too high or that is not what you want or somebody else as an ISV? So there is a tension of procurement and customer, but if you forget that, the baseline is much cheaper and it's cheaper not only in terms of the cost of what we buy like IT or computers, but also the Op Ex that we have to put in is very different. And then it's a play of the ecosystem who has the negotiating power and so forth. So far we've been in a good place because as a trendsetter, everybody's trying to-

DR: [08:32] Wants to be a part of it.

Marc: [08:32] ... Yeah, they want to be part of it. They have given us good deals, but of course we'll see how the market evolves and they may be places where, for example, for very massive compute, we have to source back into our own private capabilities when the scale is there so we are open to that as well. I mean, there is a tension that is going to be created between price and cost.

DR: [08:50] Right. I think that the price should be coming dramatically down. Again, speaking with my CEO of Totogi hat on, just on charging versus on-prem, not having to pre-provision the capacity and the failover.

Marc: [09:02] Absolutely.

DR: [09:03] And being able to do that dynamically and elastically with AWS is huge. It just changes the economics for people. Software that previously was only available to the world's largest Telcos, now you can go a lot further

down market to tier 2 and tier 3 can now afford it and I think that's going to change the landscape in Telco. I'm super excited about that.

Marc: [09:24] And it's also the investment cycle. You can invest later when you have revenues and when you have traffic and you make fewer mistakes because if you invest too early, you are on the very early generation, the bleedy edge of technology or silicon, whereas we can just wait and take it when it's ready.

DR: [09:40] Yeah, when it's ready.

Marc: [09:40] Yep.

DR: [09:41] Yep. Now switching a little bit to the enterprise market. AWS has become the dominant public cloud vendor and US IT companies inside those groups, but still we see Telcos building their own private clouds with their proprietary APIs. Are you excited to compete with open APIs in an open stack versus your competitors that are still walking in with the private cloud and proprietary APIs?

Marc: [10:05] Yeah, I very simple principle. I always want to publish our APIs and capabilities and the more of our competitors that adopt it, the bigger the mass market, the better the economics for everyone. So I want everybody to join open APIs, I want everybody to publish and I will continue to publish everything we do because again, you want to belong to the mass market.

DR: [10:25] Yeah. Well I think the interesting thing here is enterprises, your customers have already selected AWS. It is 50% market share and probably in the United States it's pretty strong. And so when those teams are comfortable with AWS and already using it, I think, since you're coming to the table with open APIs and AWS, it just makes that work so much more easily.

Marc: [10:47] Absolutely.

DR: [10:47] And they don't have to learn everyone's different network and our APIs are published and again, those IT people, they just want to use something that's easy to use. Finally, your VP of enterprise sales, I'm like, give me AWS twice on Sunday. This is amazing.

Marc: [11:01] Yeah.

DR: [11:02] Yeah.

Marc: [11:02] I think you mentioned it. It's all about developers and the ease of consumption. So yeah, if there is a big developer ecosystem, we need to adopt everything out there.

DR: [11:10] Right. I mean, they're just going to beat that up, published doc, right? They just want to start coding-

Marc: [11:14] Yeah.

DR: [11:15] ... and start using and they don't want the hassle.

Marc: [11:17] Absolutely.

DR: [11:18] All right. So now switching a little bit to competition. The other disruptors we're seeing in Telco are the cable guys. Their advantage in the market is their cable plant, their in-ground cables already. And so when you think about your strength that you're bringing to the table with AWS's CapEx and infrastructure, is that helping you as much as the in-ground cables are helping the cable guys?

Marc: [11:38] Yeah, so we have a number of assets. First, we have the spectrum, right? So the spectrum allows you to have access to mobility and devices and data. It's a game about data. You need to have access to data and then you're smart. But yes, the fact that we can go through AWS, its ecosystem of developers, of millions of developers, but also the frame of all the data centers they have in the US, it's a big asset for us.

DR: [12:00] Yeah.

Marc: [12:00] In terms of SLA, redundancy, reliability, scalability so we are leveraging that. I mean addition, we like to do the things where we can differentiate so SLAs, software, but we never duplicate what people are better at. So cloud providers are good at cloud, we consume that.

DR: [12:18] Well. I think a really good example is 1&1 in Germany is also building a new 5G network, but they're building all their data centers. They plan to build at least four major data centers and then all these micro data centers and so I think what's really interesting what you said, you get to ride on the coattails of the most dominant public cloud vendor and I think that's a huge advantage for you guys.

Marc: [12:39] And any forward time, we are very successful. We have a lot of traffic. We will measure the need to in-source some of that-

DR: [12:46] Yeah.

Marc: [12:46] ... in our own compute.

DR: [12:46] Balance it.

Marc: [12:46] But right now there is no need for that. We much faster using the cloud the way it is.

DR: [12:50] Yeah. Oh, it's great. It's awesome. Now sort of pivoting and speaking of competition, I hear that you're big time into sailing. I read that in your spare time you're working on AI technology to give insights to teams during races and so I have to ask, are you using the public cloud for that? Please say yes.

Marc: [13:06] Yeah, yeah, absolutely. And again, it's all about data.

DR: [13:09] Yeah.

Marc: [13:10] And once you have the right data, you sail much faster.

DR: [13:13] Yeah.

Marc: [13:13] So yeah, it's the same story. Same fun.

DR: [13:16] Yeah, it's so awesome. Well Marc, this is such an amazing conversation. Thanks so much for coming on the podcast.

Marc: [13:22] Well thank you.

DR: [13:23] Awesome.

[13:24] Stick around because we're ending each podcast with a Telco in 20 takeaway. I have 20 seconds to tell you something you need to know.

[13:34] Disruptive innovation takes time and keeping up with new emerging technology comes with risk. Deciding to reinvent the way you build a wireless network can take up to a decade to prove out. If you're right, it's a huge win. If you're wrong, whoa, Nelly. And those who sit on the sidelines to watch won't have time to pivot once the new way becomes the defacto standard, leaving them scrambling to catch up. It's a tough call. It kind of reminds me of the mini computer market that got destroyed by the rollout of enterprise grade personal computers back in the early '90s. Systems that used to cost enterprises $50,000 were replaced by systems from Microsoft and IBM that cost $2,000. Companies like Deck and Silicon Graphics couldn't pivot in time and couldn't compete and now those companies no longer exist. My advice. Don't be caught in the old way of thinking, paralyzed by your belief that a new way can't or won't work.

Are we seeing innovation that big with DISH's most advanced cloud native 5G open RAN network? I think so. Just like I told Marc Rouanne, I think DISH's approach will set the standard for the way networks are built in Telco. I've been a supporter of this idea from the get go. A year ago I did an interview with Telecom TV's Ray Le Maistre on why I thought the dish deal with AWS would be a Telco cloud game changer. Catch that video on my Telco Dr.

YouTube channel, then head on over to my website at telcodr.com and subscribe to my totally awesome newsletter.

If you want to hear more of my thoughts about how I think DISH is going to be a huge winner in Telco, make sure to follow me on Twitter @TelcoDR and let's connect on LinkedIn. You can also give me a call or WhatsApp me @925TelcoDR. And of course, if you love this podcast and how could you not, we just talked to Marc Rouanne, then share it with your colleagues and your friends. Later, nerds.