

How Quick Service Restaurant & Other Distributed Enterprise IT Directors Solve 3G/4G Fixed Wireless Connectivity Problems:

Accel Network's New Cellular Broadband Antenna

A [Business Phone News](#) conversation with [Jonathan Forest](#), Vice President of [Accel Networks](#), about how their new [Maestro cellular broadband antenna](#) system is gaining traction with CIOs and IT directors of many quick service restaurant chains and other similar multi-location retail businesses.

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DB: So let's get right to the problems that QSR ("quick service restaurant") IT directors have. They want to power the broadband needs of their retail stores with affordable 3G or 4G fixed wireless, but they're getting killed by connectivity problems.

Question #1. Please describe the nature and prevalence of the connectivity problems.

JF: Yes. Specifically we see in our market that broadband is certainly the desire of many of the QSR and retail customer since it's a lower cost option, and it really fits their needs; however, broadband, DSL and cable isn't really prevalent in all locations, and we see consistently approximately 10% to 20% of the market not being covered for these customers, and that's where we fit in.

[Accel](#) provides a high-grade, premium wireless solution that provides broadband type of service at these 10% to 20% locations, and that's with 3G.

With 4G coming out, and we're launching that next month, 4G speeds will, in many ways, surpass DSL. So, the 4G solution that customers will be experiencing will be right on par, or superior to what they are experiencing, and we fully expect the wireless services to continue expanding.

DB: Question #2. Can you describe how does Accel's proprietary fixed wireless Maestro antenna address the problem?

JF: Yes. I would be glad to. If you had to boil it down, Accel provides the cleanest wireless signal. What does that mean? What it really means is that we're trying to minimize the carrier noise, and optimize the signal. The result is better performance.

2:11 Accel comes from this perspective, the wireless perspective. We do not come at this from a landline perspective. This is crucial, and the reason is that in landline technologies, the transport, DSL, cable, T1, it's a commodity. No matter whether provider A or provider B is offering the solution, the same result is going to happen. DSL, the same distance from the CO (phone company "central office"), it's all the same, and with wireless it couldn't be any different.

So it's crucial that a provider is focused on the wireless aspect and not treating it like a commodity. For example, what does [Maestro](#) do? Maestro is a proprietary antenna that takes into account getting the strongest signal, but it has special filters to minimize non-carrier noise.



A lot of people believe that when you are providing a wireless service to a specific location, the problem is the strength of the signal. That is part of the problem, but the majority of the problem is getting a clean signal, so minimizing any non-carrier noise is crucial. Accel's Maestro antenna focuses on minimizing that noise and maximizing the signal.

The result is a high performance link, higher speeds than anyone else can provide in wireless, lower latency, lower packet loss, higher availability and broader coverage. The reality is that when you provide a clean link, the tower and the modem don't have to work as hard. They don't have to work as hard, more bits get through the pipe. That's what Accel does.

DB: Question # 3. I understand that Maestro is more than just a physical antenna. How does the Maestro system solution address more than just connectivity issues?

4:02 JF: That's a great question. There are other antennas on the market; however, the Maestro is really a fully integrated solution with our modem. What does that mean? We have full visibility to all the RF, or radio frequency, all the wireless components.

I mentioned earlier that wireless is not a commodity whereas landline is a commodity, and that's crucial because in the wireline world many people look at managing a link as being an up/down status. They send an IP ping and it's a matter of the link being up and down, the landline link.

Wireless, you can certainly send that same IP ping and get up/down status, but if you're down why are you down? Or if you're getting the ping response, you don't know if you're degraded. Wireless can be up, down or degraded.

We look at all that visibility, and our Maestro system allows us to get that visibility to all the RF metrics so we can determine if it's working or not. An optimal condition if it's working, and a suboptimal condition or if it's even down, and we get that visibility to understand well, do we have to re-optimize the antenna? Has the RF environment changed? Or do we have to do some troubleshooting to remediate the site?

The antenna is not just getting a signal, but it's a management solution that allows us to manage the overall RF experience of our customers so the performance is better, but also the trouble resolution time is diminished.

DB: Question #4. While Maestro is a problem solver for IT directors with connectivity issues, the Maestro system is also a problem preventer for any IT director such that any organization using a 3G/4G fixed cellular broadband solution is going to want to consider Accel's Maestro system, right?

JF: Absolutely. When you look at Maestro, and you look at our solution, again what we do is we make wireless work better than anybody else. It's a problem preventer in that we are providing connectivity solutions for fill-in for primary connectivity, but it's also a problem solver in the same capacity, but we also can expand it to the backup network.

6:20 So whether you're doing a fill-in for the wired network to fill in the final 10% or 20% for wireless to give that same DSL and cable experience to all the locations, we also have the ability to provide an extremely robust backup network. Think about it, when you look at other competitors out there, they're providing services that really do not meet broadband speeds in a wireless world effectively.

Maestro allows the ability to give a really robust backup network even if the wireless is not used as a primary, so it helps prevent problems in the primary network going down to get the same status and same level of performance even in a backup situation, so it's extremely robust and gives a really bullet-proof functionality to anyone's network.

DB: Question #5. What solutions or other competitors does the Maestro system compete with? I imagine the obvious ones, AT&T and Sprint, Verizon. Who are the others that if they are about to pull the trigger with them, and they go to Google and they type in competitors of ..., who are these people that are going to want to be talking to you if they are about to do business with someone else?

JF: This is very crucial, and I am going to expand on this a little bit. As you mentioned, AT&T, Sprint and Verizon are the logical competitors out there. In fact, we work with some of them also because of our technology, but there are also companies in the aggregation space, the [IRGs](#) (Industry Retail Group), of the world, the [MegaPaths](#), [Hughes Network Systems](#) of the world.

All good companies in their own right, but they are dominated by the landline. They are dominated by, in Hughes' case by satellite. No one is specifically focused in the wireless world, and no one can really deliver the solution that we deliver because they're biased or their perspective which is from a different technology.

8:22 Accel only looks at it from a wireless perspective. So there are several technologies out there. The most basic is an AirCard solution that you plug into a router. That's not really an enterprise grade fixed solution, fixed location solution, fixed broadband solution. It's not. It's meant for mobility, and it's great for mobility.

What I would like to say is if you look at your Smartphone, and you look at the voice quality or the Internet quality you get from your cell phone, your Smartphone, it's not great because of the technology, it's great because of the mobility. The mobility aspect is the killer application. When you look at the voice call quality on the phone, it's not great, but since you have mobility that's what makes it great.

Same thing with the Internet access. If enterprises used the Smartphone technology as a fixed environment, they would be surprised at how poorly performing it is. In many ways that's what the AirCards give. They don't give visibility into the RF, they don't give the same kind of robustness of the link. It's not really a managed solution, and the result is it doesn't get the speed and it has high latency, it's inconsistent, You can't resolve any troubles, and you can't optimize the RF, all of these issues. It's good for what it's meant for, but it's not really good for the fixed environment.

There are other technologies, embedded modem technologies. In fact, we use an embedded modem, but people use the off the shelf antennas with those solutions that are a step up from the AirCard, but they still have their troubles because the service providers don't know how to do the proper installation. They still don't have the visibility. They unnecessarily go outside for an installation and jack up the cost, instead of our antenna which we can deploy inside with the exception of a metal roof, we could always deploy inside reducing the cost to the customer.

10:17 So let me just boil it down. There are four things that Accel does that differentiate us and makes us the premium provider unparalleled in this space.

1. We are able to get a specific carrier selection whether we use AT&T, Verizon or Sprint network, we can do that remotely. We look online to see who has coverage in a certain area, but what we do that is different than anybody else is we can look from the tower all the way to the remote site and determine the path that that cellular signal takes.

We can factor it into the algorithm the signal degradation. In other words take a link **budget** if you will. Even if that on-line looks and says yes, that location has a very strong signal, no one looks at the path to the remote site. They just look at it at zip code level. That's really insufficient.

Depending on if there is water along the way, metal buildings, if there are hills, trees, the curvature of the Earth; all this impacts the strength of the signal. We look at that. Nobody else does. So going in we know which carrier to use, so we have that advantage and that's just part of our service.

2. We have our own proprietary antenna system that we've been talking about, Maestro, so it gives us not only unprecedented RF signal quality that no one else can get, but it gives us unprecedented visibility into the RF and able to manage this link. No one else has that, and it's built specifically for our market.

There are other antennas out there, but they are more passive devices. They're not linked into a management system like ours is. They don't have the robustness of the filtering that ours does. It's very impressive, our antenna, and to go a little bit further, we have the same antenna whether it's inside or outside, the same antenna regardless of the carrier.

12:06 There are 500 discreet settings that our antenna has, and it's optimized automatically. A lot of people have concern with directional antennas because it takes this mounting required, but ours does it automatically so there's really no concern about the complication of the antenna because all you do is plug it in and it optimizes itself. There's no human intervention needed. It's really a remarkable piece of technology.

And, if the signal needs boosting, there's an internal, low-noise amplified or an LNA that is built into the antenna that can be turned on or off depending on the characteristics of the link. These are all the things that we do with our antenna that no one else has, and Accel has the proprietary technology on this antenna, and we're the only ones that use is. So that's point #2.

3. Due to thousands of installations we've done, we've developed best practices for how we do installations. We know where to do an installation, how to do them, and how to get the best RF signal as a result. Many people who have the bias from the landline world don't appreciate where the technology has to be installed. They may have some idea, but we have the excruciating amount of information about where the antennas need to be installed to optimize the performance.

4. And lastly, it's kind of somewhat repetitive, but we do have this proprietary management system linked to the antenna that gives a completely unique robust and broad view of the RF that no one else has, and no one else literally has the information that we have, let alone what to do with it.

Not only do we have more visibility than anyone else has, we know how to act on it. The result is that we can troubleshoot quicker, and we can verify links quicker. The result of all this that I talked about, and I will repeat it from before, we get faster speeds than anybody else, we get lower latency than anybody else, we get high availability than anybody else, lower packet loss, and broader coverage than anybody else because our antenna can get signal where other people can't.

14:13 So overall, this is what we mean by being highly differentiated in the telecommunications market, where there is no differentiation on the landline side. Accel is highly differentiated on the wireless side because frankly we offer superior services, and that's how we do it.

DB: Question #6. We talked a little bit about you work with the QSR, or quick service restaurant verticals. What are the other industries in the verticals that specifically should be looking at Maestro?

JF: Our sweet spot is retail. If you look at it, the oil and gas, we have petroleum; we have convenience stores, specialty retail, and general retail. In nature in financial verticals if you look at any company if you look at it is a distributed enterprise that's doing some type of point of sale or traditional business applications at a remote site. They have a lot of sites that have places that are hard to reach coverage, that's what we do.

We also deal with single site entrepreneur-type of companies, single site businesses, remote workers, etc. The reality is we work across the board in many different industries.

The common bond is a lot of times the preference typically is DSL and cable primarily because they're more familiar with it, and they use us when they can't get those because we are certainly a much lower cost option to T1 with performance equal, if not exceeding DSL and cable.

Over time we expect that our solution with 4G will be a preemptive solution. But by and large, again to answer your question, any distributed enterprise with business type of applications, point of sale applications, retail in general is in our sweet spot.

16:15 DB: Question #7. Can you share with us how strong and stable is Accel Networks?

JF: Yes. I would be glad to. Accel is a rapidly growing company. We've been around for the better part of 10 years. We've been selling actively for 5 or 6 years. We are growing nicely. We are a profitable company. We are adding resources to our team, so we are doing very well, and we've really had a tremendous response in the marketplace for our services.

Like I said before, when we started selling our solution we've been selling it as a fill-in when you can't get DSL, cable or backup, and a lot of people have decided to use our technology in lieu of DSL. I'll go one step further, many wireless providers out there that I mentioned before are pretty much limited to backup. They don't even offer their solution as a primary because the technology and their implementation is limited.

50% of our business is primary because our customers trust in what we do, and they experience what we do, and that just feeds back into the health of the company that our customers say great things about our solution that they can't do with any other wireless provider.

DB: So as a follow up to that, if a customer has tried an AT&T, Sprint or Verizon and some of your data card solutions and wasn't impressed, they don't need to give up on it because you really add the extra special sauce that makes that unworkable solution possibly work?

JF: I think that is right on the money. The reality is we like to say not all wireless is created equal, and that we are a highly differentiated solution. Just because wireless AirCard or another wireless solution doesn't work doesn't mean that a customer should give up on wireless.

18:08 We have SLAs that are consistent with broadband SLAs, and no one else has. We've had many large retail customers that have tried and failed with other wireless technologies two and three times, and they come to Accel and they have completely turned around 180 degrees. They love wireless. They love our solution. That's just because of what we deliver.

So absolutely, wireless has a place in every single network out there; every single distributor enterprise has a place for wireless. The customer just needs the right vendor.

DB: Today we've been speaking with Jonathan Forest, Vice President of Accel Networks, about how their new Maestro cellular broadband antenna system is gaining traction with CIOs and IT directors of many quick service restaurant chains and other similar multi-location retail businesses.

Jonathan, was there anything that we forgot to talk about today?

JF: I think this has been a great conversation. What I would like to say is it's a little more advanced thinking, but we are launching our 4G coming up, and we expect data rates to be exceeding T1 up and down, about 2 megs up and 6 megs down.

We really think this is going to be a paradigm shift in the telecommunications space. We look at this 4G platform to be putting quality of service for Voice over IP, so this is really a game changing moment in wireless and Accel. Accel's ability to get this high quality link will afford it to really be able to offer these value-wide services such as VoIP, because no other competitor will be able to deliver it like us. So we think Maestro is really an enabling technology for Accel that will offer our customers a lot of value in the future.

DB: Jonathan, thanks for talking with us today. We look forward to getting an update soon.

JF: Thank you so much Dan.

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