Let's Talk Tech Podcast #5 transcript – Inseparable: Home value and ultra-fast Internet

Preview: **Michael Render:** *"*One of the things we find with fiber users and Gigabit users over fiber is that they are very concerned about speed, but they are also very concerned about reliability. In our surveys, we ask, for example, how many times do consumers have to reboot their modems? How many times do they have to call customer service? The results are dramatically different for those who are on fiber-based connections and Gigabit over fiber connections.*"*

Introduction: **Stacey Kirkland**: Hello, and welcome to *Let's Talk Tech*, a monthly podcast that explores the latest emerging technologies, the people behind them, and how these trends will affect the way we work, live, and play. I'm Stacey Kirkland of C Spire, and in today's episode, show host Dave Miller interviews Michael Render, principal, founder, and president of Tulsa-based RVA LLC, one of the leading Fiber to the Home research firms in North America. Join them as they discuss the latest broadband Internet trends and developments and how changing consumer behavior and technology use is driving the growing demand for ultra-fast Gigabit speeds in homes and neighborhoods across the country. Learn why fiber-based services, which provide more reliability and faster speeds, have rapidly become the most important considerations for consumers shopping for new homes.

Dave Miller: Welcome to the C Spire *Let's Talk Tech* podcast. I'm Dave Miller, show host, and today we're discussing how changing consumer behavior and the use of technology is driving the growing demand for ultra-fast gigabit speed Internet access in homes and neighborhoods across the US. Joining us today, via phone, to talk about these trends and other consumer insights is Michael Render, principal, founder, and president of Tulsa-based RVA LLC, one of the leading Fiber to the Home research analysts in North America. The company's research products are used by some of the leading Fiber to the Home advocacy and education organizations in the world, including the Fiber to the Home Council Americas. In addition to its expertise in consumer broadband, RVA is also one of the leading U.S. researchers in the consumer energy field. The company also focuses on equipment and manufactured products, packaged consumer goods, banking, and high-tech financial services, as well as public and private educational entities, serving a range of companies from start-ups to Fortune 100 corporations. Welcome to the program, Michael.

Michael Render: Thanks very much, Dave. Happy to be here.

Dave Miller: We're really excited to have you on the show today. I know you've just recently published some research on the North America consumer broadband market. One of the big takeaways from that review and forecast is that Gigabit Internet access has moved out of the niche category and is rapidly becoming part of the mainstream consumer consciousness. In fact, your research shows that 83 Internet access providers in the U.S. are now offering Gigabit-speed Internet access service in the $50 to $150 a month range, and new subscribers are signing up at an annualized growth rate of about 480 percent each year. Can you share some of the topline findings and insights from that study with our audience?

Michael Render: Sure. Every year we conduct research about consumers and telecom service providers, particularly those that are moving into fiber-based access to consumers. And through that process, we looked at about 1,000 Internet service providers in the U.S. that are capable of moving to Fiber to the Home. We found that more and more of those are actually moving to fiber, and particularly to Gigabit service. We identified in our latest report that the number has risen to about 83 ISPs, as you mentioned, that are offering Gigabit speeds to consumers.   These are the providers who are really doing it and are serious about it. [They] have relatively inexpensive prices for Gigabit service.

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There are some others that say, "Yes, we can offer Gigabit, if someone is willing to pay us enough." But these are the providers who are really at the forefront of this movement. As a result of that, we are seeing those offer the service at prices, as you mentioned, ranging from $50 to $150 a month and there are more and more people that are signing up for Gigabit because of that reality. We've also tracked pretty strong growth overall in this sector from about 40,000 to 180,000 users in just a year. That's a 480 percent growth rate. So obviously consumers are pretty excited about the availability of ultra-fast Internet access. We've also found that there's another group of people who sign up with a Gigabit provider and perhaps subscribe to a lower tier initially, but they're anticipating moving to Gigabit speeds in the near term. It's a pretty exciting to see what's happening with this market in the U.S.

Dave Miller: Absolutely, very exciting. One thing that I wanted to touch on is Google's much-publicized experiment with Gigabit-speed Internet. In a lot of circles, their effort in this space is really credited with shaking up what we all know was a one-stagnant U.S. consumer broadband market. These observers say that the experiment has actually served as a catalyst for faster broadband connections across the U.S. In your view, how much did Google's initiative with ultra-fast Internet access in Kansas City, and now in other parts of the country, influence this trend?

Michael Render: Well, it has had a pretty big effect. Google wasn't actually the *first* to offer Gigabit service. Our research shows the first provider was actually a small company called Pixio back in 2008 in certain new housing additions in San Jose, California. Then a larger effort came along in 2011 in Chattanooga, Tennessee, a municipal Fiber to the Home deployment that went quickly Gigabit. They were the first entity that really started to shake up the world with moving to such a dramatically faster speed. Then, of course, what really got noticed, as you mentioned, was in 2012 when Google actually had a competition among cities for who could demonstrate that they were the best potential partner to experiment with ultra-fast Internet. So that attracted a lot of attention. Google ultimately selected Kansas City as their first partner. The Kansas City build is up and running, and from our research, is quite successful in terms of their sign up and the impacts, so that *did* continue to really amplify this whole trend. From there, other providers have gotten on board. Everybody from very small providers to large providers - C Spire in Mississippi and a host of others. It's been exciting to watch. And what's exciting about this, too, is that this is not just on the downlink side, many of these providers are providing symmetrical service— a Gigabit on the upside too. Or if not exactly symmetrical, very close to it. So, it's really a complete paradigm shift in what is being offered to the consumer.

Dave Miller: That's amazing. You mentioned symmetrical service. I think that's really incredible: 1,000 megabits per second up and 1,000 megabits per second down. I think that's really transformational in terms of what consumers could expect and even possibly contemplate using. That brings me to the next question: What insights could you share with our audience from your research on changing consumer behaviors on technology use and how that may be a critical factor in driving the growing demand for ultra-fast Gigabit speed Internet access in homes and neighborhoods?

Michael Render: Glad to shed some light on that area. The whole lifestyle of the American consumer has changed pretty dramatically in the last 10 to 15 years – to the point that now a *big* part of our home life is online-related. In our research, we survey about 2,500 consumers every year, and we find that they spend about six hours a day online. Some of that is multi-tasking- maybe watching TV as well -

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cooking, ironing or whatever, but six hours is pretty incredible. We also find that consumers already use about six connected devices in their home, not only televisions and computers, but also more and more refrigerators and washing machines and so forth are enabled on the Internet. They are very big-screen oriented. They still want to use big screens to do many of these tasks with a lot of bandwidth. They connect their mobile devices online when they're at home through their wired connection. More and more are using a second screen when they're watching TV. Of course, over-the-top video. What we call "over-the-top." It's not through a traditional paid TV provider, but getting streaming content over the Internet. Particularly with young people, that's gotten to be nearly 50 percent of people that get about half of their content over-the-top. So all these trends are demanding more and more broadband. Another one I haven't mentioned is work from home, people working more from home, especially when they are enabled by fast and reliable Internet. That's an important factor too. One of the things that we find with fiber users and Gigabit users over fiber is they are very concerned about speed, but they're also very concerned about reliability. We have tested, in many ways, the reliability of fiber connections, and we find that they are much more reliable. We ask, for example—even before we ask what kind of service they have either DSL or fiber or cable modem—how many times do they have to reboot their modems? How many times do they have to call customer service? The results are dramatically different for those who are on fiber-based connections and Gigabit-over-fiber connections. It's reliability, speed, and quality of experience. It's dramatically different for those on fiber-based services.

Dave Miller: In addition to changing consumer behavior and habits and usage that you've outlined so eloquently, another factor that's really spurred increased consumer interest and adoption is the dramatic reduction in the *cost* of installed Gigabit and faster fiber optic infrastructure, particularly over the last decade. Research indicates that pricing has dropped as much as 80 percent, as manufacturers have redesigned and optimized fiber optic cable products for lower-cost, larger-scale deployments. Even Wi-Fi routers—as you know—with the new AC standard are faster and they can serve more users. How have these innovations and advancements helped accelerate consumer interest and adoption of ultra-fast Internet access?

Michael Render: Well, it has certainly increased the pace at which fiber and Gigabit over fiber is being deployed. Now, it's really a no-brainer in a new development. It actually costs the same, or probably less, to put in fiber in a new development instead of putting in traditional copper-based services like a twisted copper pair, a traditional telephone line or a coaxial cable TV line. It's easier and more cost effective to put in fiber today. In addition to lower costs, benefits include expanded capability, reliability and overall quality. Even in existing neighborhoods, the cost has come down. It's still expensive, but there is such an importance now to having high-quality Internet, that it is actually influencing the price of homes. People are making decisions what community to live in, what housing development to live in, based on the quality of the Internet. In our research, we ask consumers what's important when they move to a new city. And from a list of about 20 different factors, fast, reliable Internet is No. 2 on the list. No. 1 is safe streets, but after that, it's fast Internet. Even more important than walkable communities, green communities and good parks and schools and other factors that could influence these types of consumer decisions. It's just such a part of our lifestyle today. Also, in terms of housing price, we have seen that people, if they had two homes to pick from with very similar features that they liked, they tend to say that they would spend about $5,000 more for a home with fiber optic Internet than they would for the exact house without these features. So, people are seeing that there is a big

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difference in their emphasis on this benefit. So all this to say, ultra-fast Internet is very important, and the lower cost has made it very practical. We're seeing the trends towards the deployment of fiber and the trends towards, as you mentioned, Gigabit capability over fiber really accelerating in the past couple of years, and we think that'll continue.

Dave Miller: At its current stage, Gigabit Internet access isn't much different than the early stages of the iPhone. I remember when the first iPhone was introduced by Apple in 2007. The platform was launched, but there weren't a whole lot of apps on the first device – just enough to really illustrate the potential from using that type of technology. How quickly do you think that could change for Gigabit Internet home access? Is there some threshold that the market needs to reach, with a certain number of homes and businesses that have Gigabit connections, before that killer app, or the set of killer apps, are created, developed and deployed that will drive that massive growth and expansion that we saw with the smartphone revolution?

Michael Render: I don't know what the exact number is, but to some extent, those things will evolve, even with small numbers. Is it 2 million, 5 million users? I'm not exactly sure. But there are *so* many things that are possible with gigabit connections, and some of those are not any surprise. There are things available now, things that we use every day—websites—that will be much more robust, with more capability, more active video, more two-directional capability, high-definition capabilities— the ability to talk back and forth with doctors, or with college teachers. Many of these are things that we can already envision, but they're just not practical now. People have developed apps for shopping that you can, in a sense, try on different clothes and look at products from different angles, and those kinds of things using artificial reality. They've tried to commercialize some of those, but they're just not practical yet, because people are not willing to wait 60 seconds for things to load, and so forth. But those things *are* very practical with Gigabit networks, and they will be coming into play very soon. There are many other things—security—putting 12 different high-definition cameras around your home and having that upload to a secure location somewhere else. That's not practical on a low upload speed that most people get—one or two megabits on the upload side—with the standard DSL or cable connection, maybe four [megabits]. It's just not practical. But with a Gigabit connection, that *is* practical, to be able to have high-definition security all the time, or watch your pets while you're gone, or to be able to see what happened in some event. Beyond that, things we can't envision yet will come along. Things that might come along. Being able to 3D print things in your home easily. 4K, very high-definition, two-directional video that makes it much more practical. In the future, we'll not just be doing audio talks like this, but coming into two-directional conversations. Even robots—somewhat like an Avatar—we'll be able to inhabit a robot somewhere else. I'm 62 now. Before I pass away, will I be inhabiting a robot playing catch with my grandkids somewhere? There are so many things that are possible, that will become possible, that you and I have never even envisioned yet. As you indicated, this continues to move forward as more and more people use Gigabit Internet connections.

Dave Miller: I really appreciate your insights and the time you've spent with us on the program today. It sounds like, from your description, that we're much closer to this always-on, instant-access society that's been predicted now for the last decade or so, and certainly the Internet has played a big part in that trend. With the *commercial* internet now about 20-plus years old, we're getting to the point now where these kinds of innovations, this kind of speed, and these kinds of applications are what consumers expect. It's been fascinating delving into how Gigabit Internet access is gaining traction

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among consumers across the U.S. Again, we really appreciate your time. If you'd like to learn more about RVA LLC and their research efforts, go to www.RVALLC.com. To learn more about Fiber to the Home, go to www.ftthcounsel.org.   Thanks again, Michael, for coming on the program, and we'll look forward to catching up with you soon.

Michael Render: You bet. Thanks so much Dave.

Episode #6 Preview: **Stacey Kirkland**:   Thanks for listening to today's podcast. You can follow RVA LLC and their research efforts at RVALLC.com or the Fiber to the Home Council Americas at ftthcouncil.org. If you like the show, subscribe through Soundcloud, iTunes, Stitcher, or TuneIn. Join us next time as we talk with Chuck Martin, editor of the Internet of Things Daily and one of the world's foremost experts on the growing worldwide trend of connecting devices and services in homes and businesses to the Internet and consumers. Martin will discuss how the Internet of Things, forecasted to be even bigger than the smartphone and tablet revolutions combined, is all about creating and leveraging connections among people, technology, processes and data to create real value.