

# Looking Ahead: Broadband in 2019

Fiber, cable and wireless providers, along with electric cooperatives, have big plans for broadband in 2019.

By Sean Buckley / *Broadband Communities*

**L**ooking forward to 2019, **BROADBAND COMMUNITIES** reached out to top industry minds to see what will shape the broadband industry.

A few trends are already in motion: Tier 1 and rural telcos are transitioning from copper to fiber, and cable operators are poaching customers with DOCSIS 3.1 services in areas where telcos have not transitioned to fiber.

Wireline telcos and cable aren't the only players set to shake up broadband.

Wireless operators will advance 5G, a technology that will be delivered in mobile or fixed wireless home configurations. The industry will also be watching how electric cooperatives enhance rural broadband.

## TELCOS FURTHER FIBER INVESTMENTS

Driven by AT&T, CenturyLink and Verizon, fiber-to-the-home (FTTH) investments will continue to grow.

Fiber-based broadband, according to an RVA study commissioned by the Fiber Broadband Association, surpassed DSL in 2018 as the second most common type of home internet connection in North America, following cable.

RVA revealed that fiber now passes 39 million homes in the United States (1.6 million of them have multiple fiber passings) and connects 18.6 million homes, up 17 percent over 2017. A large

portion – 71 percent – of fiber-to-the-home builds are by large incumbents. The remaining 29 percent are from Tier 2 and 3 providers.

“One of the things we saw is that fiber is now second to cable modem coax, taking over the spot from DSL,” said Mike Render, president of RVA, during a webinar discussing the study's findings. “We expect the gap between coax and fiber to continue to narrow.”

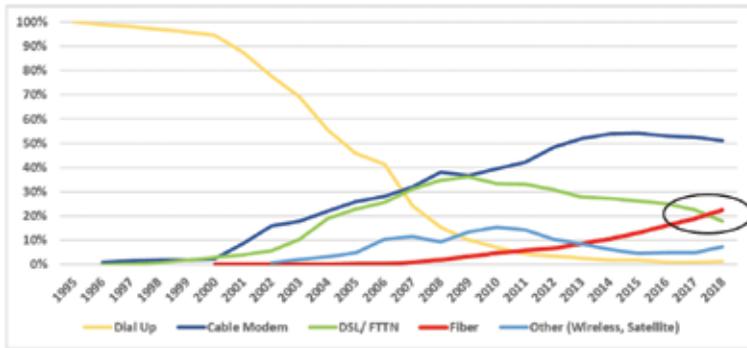
Although Verizon is still the largest U.S. fiber provider, with a total of 15 million homes passed (plus several million homes passed in territories it sold to other providers), AT&T remains the dominant current player in the U.S. FTTH market. In 2018, it added more than 3 million locations, now reaching more than 10 million locations across 84 metros. In December, AT&T launched FTTH internet in parts of 12 new metro areas.

AT&T will continue its fiber penetration, adding about 4 million more homes passed and densifying within its current footprint. AT&T finds that the longer it has fiber in a market, the higher its penetration. By mid-2019, AT&T plans to reach 14 million locations.

Teresa Mastrangelo, principal analyst for Broadbandtrends, contends AT&T's aggressive buildout is a catalyst in the North American market.

“The bulk of the FTTH growth was from AT&T, which announced it has 3 million subscribers,” Mastrangelo says. “AT&T is still

**Fiber Broadband Has Moved Into Second Place For Home Internet**  
**Broadband Type Market Share Based On RVA Consumer Research 2006-2018**  
**1995-2005 Based On Other Published Studies (With estimates between points)**



Cable is still the most widely used broadband type in the United States, but FTTH is now second.

the big driver of fiber-to-the-home growth because when you take it or Verizon out, there are just so many small ones that are not that impactful.”

As AT&T completes its FTTH build in 2019, Randall Stephenson, CEO and chairman of AT&T, told investors during the recent UBS 46th Annual Global Media & Communication Brokers Conference that capital spending will level off.

“Capital intensity in the business should decline over the next few years,” Stephenson said. “We [will have] built out 14 million homes with fiber [by mid-2019]. So, we really taper that off in the second half of the year.”

After AT&T wraps its program, Render said, fiber deployment may experience a slight slowing.

“We do expect that growth will moderate a little bit in the next couple of years,” Render said. “We think it will go down a little bit primarily because AT&T is a big player and is getting close to finishing the build they committed to the FCC.”

Render added, “AT&T will continue to build, and it’s possible they could continue to build in a big way because the results have been good with this build so far.”

Other providers, such as CenturyLink, are also pivoting toward fiber. After acquiring Level 3, CenturyLink increased its on-net building reach by nearly 75 percent to approximately 100,000 buildings, giving it a broader set of capabilities to advance its consumer and business broadband reach.

Neel Dev, chief financial officer of CenturyLink, told investors at the UBS Conference its fiber-based service expansion will focus on areas where it has a likelihood of strong customer adoption.

“I think our approach is going to be very, very success based,” Dev said. “So, we’re doing a lot of work around which neighborhood it makes sense to build given the nature of our plan [and] the competitive landscape in that neighborhood.”

But large providers aren’t alone in driving future FTTH growth. RVA said that 1,000 smaller providers were responsible for the 29 percent of the fiber build not accounted for by the four major Tier 1 providers.

“The other 1,000, as we sometimes call them, are important in terms of the money they are investing in the United States and North America [for] fiber-to-the-home,” Render said.

**TELCOs TO TRAIL CABLE’S BROADBAND LEAD**

The battle between cable operators and telcos for new subscribers will continue. Analysts agree cable operators will maintain a lead.

If recent history is any indicator, during the third quarter of 2018, cable operators again outpaced telcos in net broadband additions.

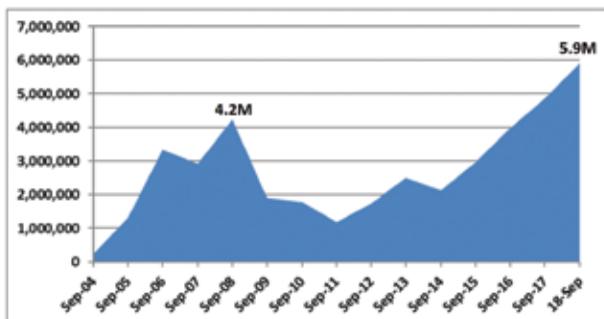
Leichtman Research Group (LRG) revealed in its third-quarter broadband report that cable operators added 730,000 subscribers, up from 540,000 in 2017. Comcast added 363,000 broadband subscribers in the third quarter – the most net adds in a third quarter since 2008.

The top telcos collectively lost 150,000 subscribers, down slightly from a net loss of about 155,000 a year ago. AT&T and CenturyLink lost another 26,000 and 60,000 subscribers, respectively, and Verizon added only 2,000 new Fios subscribers.

Bruce Leichtman, president and principal analyst of LRG, expects cable to exceed telcos in adding broadband subscribers.

“We have seen telcos with nine quarters of net negatives. They are

**2018 Annual U.S. Fiber Broadband Deployment Far Surpasses Past Records**  
**Annual Homes Marketed (All Years Ending Q3)**  
**RVA Provider Study 2018**



RVA research found that 5.9 million homes were newly marketed for fiber services in 2018.

The DSL subscriber base is dwindling as subscribers migrate to either FTTH services or DOCSIS 3.1-based cable offerings, which are now widely available.

small negatives, but they are negatives, so there's nothing to imply that that would change," Leichtman says.

Offering 1 Gbps speeds via DOCSIS 3.1 will drive growth for cable companies, according to Leichtman, as will bundling services.

"As much as people talk about cord cutting, three-fourths of all households still get a pay TV service," Leichtman says. "When there's video in the bundle, that's an advantage cable can exploit."

Taking it a step further, Mastrangelo says the DSL subscriber base is dwindling as subscribers migrate to either available FTTH services or higher-speed DOCSIS 3.1-based cable offerings.

"What I see is a substitution effect occurring," Mastrangelo says. "People are swapping DSL for fiber from those operators that offer fiber. We're seeing a transition to cable simply because there are better speeds available with DOCSIS 3.1 being ubiquitously built out."

## CABLE ADVANCES WIRELESS PLAY

Cable providers may not have wireless networks, but they will gain influence as MVNOs (mobile virtual network operators). A recent Morgan Stanley report forecasts that Comcast, Charter and Altice USA will collectively add 1.6 million new mobile customers in 2019, a 70 percent year-over-year increase. MSOs are offering low-price wireless plans for new and existing subscribers as part of a bundle or stand-alone.

Comcast alone added 228,000 new wireless subscribers in October to end the quarter with 1 million total lines.

"To have another product like mobile that can attach and over the

long term add incremental profitability to the relationship is fantastic, and we think that's the plan," said Michael Cavanaugh, CFO of Comcast, during the UBS Conference.

Regardless of the approach, Morgan Stanley predicts that Altice USA and Charter will see mobile subscriber numbers rise quickly.

Altice USA, which is preparing to launch service via Sprint, will gain 64,000 net customer additions in 2019 and 136,000 in 2020.

The research firm expects Charter to add 488,000 new wireless customers in 2019. Charter reported it added 21,000 lines of service in its MVNO during its first quarter of selling its Spectrum Mobile service.

Thomas Rutledge, CEO of Charter, said it expects to attract and retain existing bundled customers the way the cable industry did with wireline voice.

"When you buy mobile from us, it's a substantial savings, and we generate EBITDA when we do that," Rutledge said. "We're finding that in areas of retention where there are customers [who] say, 'We can't afford the bundle anymore,' we can now save them so much money on their household mobile bill they can keep the bundle, and we'll add to our revenue."

## SECURING A 1 AND 10 GBPS FUTURE

Even though most of today's home equipment can't support gigabit speeds, providers aren't taking chances. Instead, they are future proofing their networks to support 1 and 10 Gbps capabilities.

Frontier, which offers 200 Mbps and 1 Gbps, is contemplating a 10 Gbps product, for example. Dan McCarthy, CEO of Frontier, told

investors during the UBS Conference that such speeds are obtainable.

"One of the things that we've been testing in certain markets is a 10 gig offer," McCarthy said. "The traditional customer probably isn't that interested in 10 gigabits, but [these speed capabilities] future proof the network."

Charter is also looking at opportunities to extend beyond 1 Gbps because the cable infrastructure lends itself to low-cost upgrades.

"We have 51 million [homes passed] where we can do 1 Gbps," said Charter CEO Rutledge during the UBS Conference. "We can go to 10 gigs relatively inexpensively, and I think we will, because I think the world will go to 10 gigs."

However, analysts don't expect an immediate need for 10 Gbps – or even for 1 Gbps.

Mastrangelo says the more likely speed jumps will be consumers going from 100 Mbps to 500 Mbps.

"We're not going to see a rush to 1 Gbps," Mastrangelo says. "The smart operators will incrementally increase their bandwidth so customers on 100 Mbps will go to 250 Mbps, and we might see some 500 Mbps packages."

## 5G: OPPORTUNITY OR THREAT?

Promising speeds of up to 1 Gbps, wireless operators will move forward with 5G deployments using millimeter-wave spectrum. Wireless operators will garner the majority of 5G revenues from business customers, followed by consumers, online apps and government agencies. Wireless industry association GSMA forecasts that 4G connections will continue to be viable through 2025.

Unsurprisingly, no two of the top operators are looking at 5G the same way.

Having laid a mobile 5G play foundation, AT&T plans to reach at least 19 cities in early 2019. It built its 5G network foundation with 5G Evolution (which is not, strictly speaking, 5G) and Long-Term Evolution-Licensed Assisted Access (LTE-LAA).

“It is a mobile-centric offering, and I’m a huge believer in mobility. Will there be fixed-line substitute applications here? Absolutely,” Stephenson said. “I do think the path Verizon is pursuing is going to be a really good service. That’s not our priority.”

Meanwhile, Verizon advocates a mobile and in-home broadband approach as a wireless competitor to cable outside its wireline markets. Following various trials, Verizon deployed 5G in four markets using proprietary, nonstandard technology, with plans to expand deployments in 2019.

Will providers that don’t have wireless networks see 5G as a threat to their wireline broadband market?

Traditional wireline and cable operators will likely leverage 5G for backup circuits for business customers and continue to provide fiber-based backhaul services.

“So 5G will have an impact on some portion of the consumer business, but again, fiber is very competitive relative to 5G, and therefore our focus is on fiber even for consumers,” Dev said. “For the enterprise business, we think it will be net positive, so as some of our wholesale customers roll out 5G networks, hopefully we’ll benefit from that. 5G also has a mechanism for access.”

However, Dexter Goei, CEO of Altice USA, which is building out a dual FTTH and DOCSIS 3.1 network, dismisses 5G as a near-term threat.

“By and large, if you look at the material and timetables associated with 5G, it seems like this is something that’s far off. I think this is something that will be a slow burn, but we’ll be watching,” Goei said. “Outside of the time and capital outlay, the business plan from our standpoint looks shaky when they start launching a product in any breadth.”

## ELECTRIC COOPERATIVES FURTHER MOMENTUM

Traditionally offering electricity to rural areas, electric cooperatives will extend or partner with other providers to build broadband networks. Nearly

100 electric cooperatives are bringing broadband to rural homes, businesses and schools. Unlike Google Fiber, which struggled with pole access, electric cooperatives can leverage existing rights of way and existing easements to install fiber.

The timing could not be better. A 2018 National Rural Electric Cooperative Association study estimated that the dearth of broadband access for 6.3 million electric cooperative households resulted in more than \$68 billion in lost economic value.

Another factor will be the FCC’s Connect America Fund II (CAF-II) reverse auction. In August, 35 electric co-ops were awarded funding from the reverse auction, which allowed cooperatives to participate.

Seeing an opportunity to close the gap in a market that had few, if any, broadband service options, the Lake Region Electric Cooperative (LREC) in southern Oklahoma has been building a FTTH network that provides a triple-play service bundle.

In 2014, the cooperative began two pilot FTTH service projects. After the pilot met its financial and subscriber interest goals, LREC decided to expand the network. It organized its service area into 11 zones and is asking residents and businesses to sign up for service. It was also granted CAF-II funding to supplement its efforts.

Like Google Fiber with its Fiberhood program and TDS Telecom with its Fiberville campaign, LREC will expand its FTTH network to the zones in which a high number of members preregister. Currently serving 3,300 FTTH customers, the cooperative is seeing average take rates of 45 percent.

Hamid Vahdatipour, CEO of LREC, likens providing broadband to bringing electricity to rural areas.

“Broadband is the new necessity, just [as] electricity was in the 1930s,” Vahdatipour says. “Providing broadband to rural areas is not something a for-profit entity can justify, but electric co-ops are suited for this,

so it makes it a lot easier for us to start these kinds of projects.”

Interestingly, LREC has seen voice-only customers increase, bucking the traditional ILEC trend.

“What was surprising to me – and I did not think anybody had landlines anymore – but about 1 percent of our members have phone-only with us,” Vahdatipour says.

Today, the cooperative offers symmetrical speeds ranging from 50 to 100 Mbps. However, LREC could offer 1 and even 10 Gbps over the EPON network if a customer requests it.

In his webinar, Render said rural electric cooperatives represent a rapidly rising FTTH service segment.

“Rural electric cooperatives are probably the fastest-growing group,” Render said. “This group has determined that even though they operate in very rural areas with low density, the take rates are spectacular, and fiber helps them with demand control and hooking up distributed energy sources.”

Rural telco advocacy group NTCA says partnerships of electric and other utility cooperatives with existing telcos are gaining momentum because such partnerships help them access resources and knowledge.

Consider, for example, Illinois Fiber Connect, a partnership of Wabash Telephone Cooperative and EJ Water Cooperative. The service provider is bringing FTTH to residents around the Midwest, allowing businesses and consumers to access internet speeds up to 1 Gbps, as well as voice and video services.

“We talk a lot about partnerships, and it has been interesting watching two like-minded organizations in the same communities coming together,” says Shirley Bloomfield, CEO of NTCA. “We have a number of electric cooperatives that are working with our rural broadband company members to figure out how they take their joint resources and move further into some of these rural markets together.” ❖

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