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2018

The Magazine
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Management



MORE
BANDWIDTH!

PAGE

18



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Broadband Upgrades Meet Climbing Bandwidth Demand

By Joan Engebretson

Ever-increasing broadband speed requirements are an ongoing reality of the telecom business, and with end-users finding more and more ways to consume bandwidth, network upgrades also remain an ongoing reality. What technology choices are rural broadband companies making when upgrading their networks, and why? We talked with several NTCA members to find out.

COVER GRAPHIC: SALVATORE FERRO

MORE BANDWIDTH!

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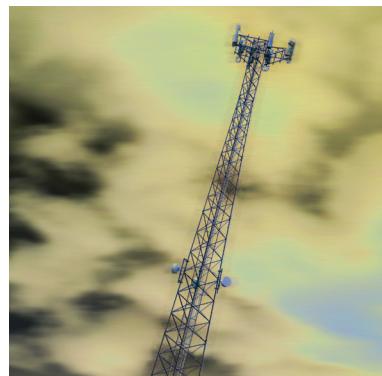
Check Out
NTCA's
NEW
Website!
www.ntca.org

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Will Backhaul Go Bust?

By Masha Zager

In 2018, on the eve of another huge wireless network buildup, the cellular industry is undergoing enormous changes. Some of these changes will increase backhaul revenues for telcos, and others will erode those revenues. The net result is still far from clear—and likely will vary depending on the geographic markets that telcos serve.



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RTIME Wrapup: Austin Highlights Innovation

Our annual recap of the NTCA Rural Telecom Industry Meeting & Expo (RTIME) includes highlights and photos from keynote speakers, educational sessions and special events. Find out what you missed in Austin, Texas, and—if you attended—revisit the moments that made RTIME so memorable.





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NTCA represents more than 800 small, rural, locally owned and operated broadband companies in the United States and abroad, as well as state and regional telephone associations and companies that are the suppliers of products and services to the small and rural broadband industry. Our readers are the managers, directors, attorneys and key employees of these broadband companies as well as consultants, government officials and telecommunications experts.

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Rural Broadband: Tempest or Tranquility?

By Christian Hamaker, Editor

As I write this column, it's early March, and the winds outside my office window are howling. The month has, as they say, come in like a lion—and not just because another Nor'easter is blowing through the region.

Policy changes are on the way. A big Universal Service Fund (USF) order, due any day now, will distribute \$500 million to rural broadband companies, addressing, in part, longtime shortfalls in the high-cost USF budget. It won't solve long-term funding issues for the independent-telecom sector, but it constitutes measurable progress.

Another sign of that progress is an infrastructure package from the Trump administration, but the details of how that funding will address rural broadband remain to be seen. We're watching and waiting for further light to be shed on how infrastructure funds might make their way to the independent broadband sector.

And then there's the president's signing of a rural call-completion bill that serves notice to least-cost routers that accountability is coming for their failure to complete calls to rural America.

Along with those policy changes come technology changes at rural broadband companies. As Joan Engebretson reports on p. 18 ("Broadband Upgrades Meet Climbing Bandwidth Demand"), rural telcos keep increasing their bandwidth to meet customer demand and to accommodate the technical requirements of content providers like Netflix—not to mention bandwidth-thirsty telehealth and distance-learning applications.

Backhaul of wireless traffic—another revenue source for NTCA members—also is shifting. As Masha Zager reports on p. 24 ("Will Backhaul Go Bust?"), the cellular industry is undergoing major changes, some of which will affect back-haul revenues for rural broadband providers. Learn if your company's backhaul revenues might be in jeopardy of eroding.

We also look back in this issue at the industry's premier event, the 2018 NTCA Rural Telecom Industry Meeting and Expo (p. 28), where more than 100 companies—including 37 new exhibitors—showed off the latest technologies and services for rural broadband. That's also where we handed out the NTCA Excellence Awards, honoring six outstanding managers, directors, key employees and associate members. And a Heroism Award was given to one brave soul! Check out all the winners on p. 30.

Even with so much happening at your companies and in our industry, broadband demand never lets up. And neither can those who provide that service, regardless of the occasional tempest. By the time you receive this issue, March will be behind us—"like a lamb" if the old saying holds true. After the whirlwind of the last several weeks, that should be just fine.





EVALUATE EVOLVE ENHANCE

Your Network Operations Centre

Having a Network Operations Centre (NOC) that meets or exceeds industry standards and best practices will allow a communication service provider (CSP) to realize the full value of their network, enabling them to be more efficient, agile and adaptable.

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SaskTel 
International

By Christian Hamaker

Is a Day Off Good for Your Mental Health?

"Workers often say they are taking a mental-health day with a wink and nudge, as it is commonly understood that they will be catching up on housework or going to the beach," wrote Francesca Fontana in the Wall Street Journal. But "more companies are trying to destigmatize mental illness and encourage workers to use mental-health days for their original intent."

One in five U.S. adults has a mental-health condition, according to the National Alliance on Mental Illness. Large companies such as Ernst & Young, American Express Co. and Prudential Financial have initiatives aimed at helping their employees recognize mental health problems (their own or co-workers') and to get any help they might need.

"The policies don't just reflect employer benevolence," Fontana wrote. "Major depressive disorder[s] alone cost companies \$78 billion in lost productivity in 2010 because of employees showing up to work while struggling with the illness." ● **Source:** wsj.com



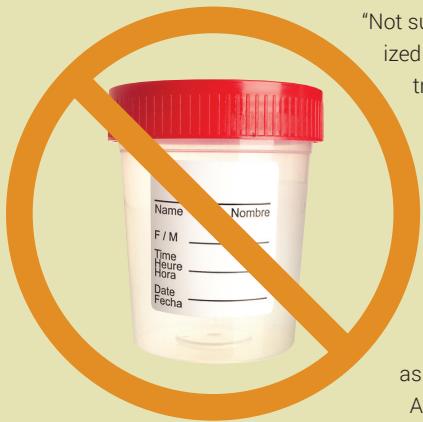
More Companies Learn to Just Say No to Drug Testing

Fewer companies are giving drug tests to their employees. Why?

"Not surprisingly, companies in states where marijuana has been legalized—whether for recreational or medicinal use—are leading this trend," wrote Gene Marks. A recent survey of 609 Colorado employers showed that two-thirds of them currently conduct drug tests of their employees, but that's down from 77% a year earlier. And large companies like AutoNation, Inc. and the Denver Post have changed their policies.

"Circumstances have changed," Marks wrote. "The tight economy is making it hard to find and retain good people, and drug testing further limits an employer's options. ... Another factor is the rising costs of doing drug tests—which can be as much as \$30 to \$50 a pop."

Additionally, recent studies show that Americans' attitudes toward certain drugs have grown more tolerant, "particularly when compared to previous generations," Marks wrote. ● **Source:** washingtonpost.com



Trustworthiness Forms Over Time. Or Does It?

Evidence is mounting that people make snap judgements, often in milliseconds, about a person's trustworthiness. Things that make people think you're more trustworthy include:

Whether you look like someone else trustworthy whom the observer already knows.

A wider distance between your eyes and eyebrows.

A happy expression—relaxed eyebrows, the mouth turned upward.

● **Source:** wsj.com

Who's Left Behind by Today's Economy?

The U.S. economy continues to grow, but so does economic inequality, according to data from the Economic Innovation Group. Among its findings:

! Only 1 in 4 new jobs

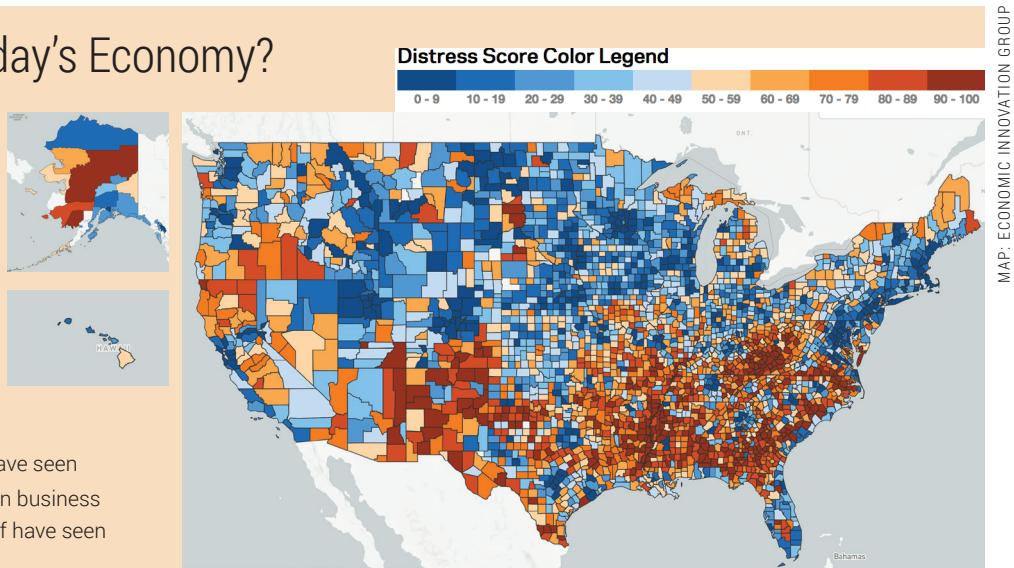
are created in areas that aren't among the country's best-off places.

! 52% of employment growth

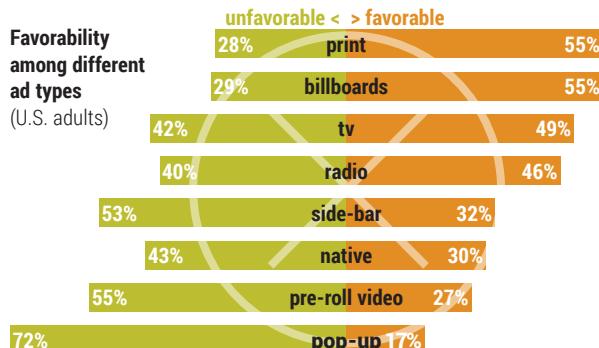
from 2011–2015 was in prosperous areas of the country.

! The country's most distressed communities have seen **no net gains in employment** or in business establishments since 2000, and more than half have seen net losses in both areas.

"This isn't a Republican or Democrat problem," wrote Kim Hart. "At every level of government, both parties represent distressed areas." ● [Source: axios.com](#)



'Down With Pop-Up Ads!' Say Under-35s—and Others



If you want younger eyeballs on your website, don't feed them pop-up ads.

As writer Sara Fischer pointed out, consumers age 34 and younger would pay approximately \$35 to have social-media ads eliminated, according to a Morning Consult survey.

So it comes as no surprise to see the public embracing ad blockers, which are now used by more than 25% of U.S. internet users, according to eMarketer.

The most likely users of those ad blockers? Millennials, men, streamers, researchers and heavy downloaders.

● [Source: axios.com](#)

U.S. Households Get Smarter

More than 40% of U.S. broadband households plan to buy a smart-home product before the end of 2018, and 27% have "high purchase intentions," according to a Parks Associates survey.

● [Source: Parks Associates](#)

U.S. broadband households will purchase nearly
55 MILLION smart home devices this year.

THE FASTEST—AND SLOWEST—BROADBAND SPEEDS IN AMERICA

D
Rhode Island is the fastest state, with an average broadband speed of 36.69 Mbps.

M
Montana is the slowest, at 10.94 Mbps.

The fastest place in America is Washington, Va., which offers a 210.19 Mbps. download speed.

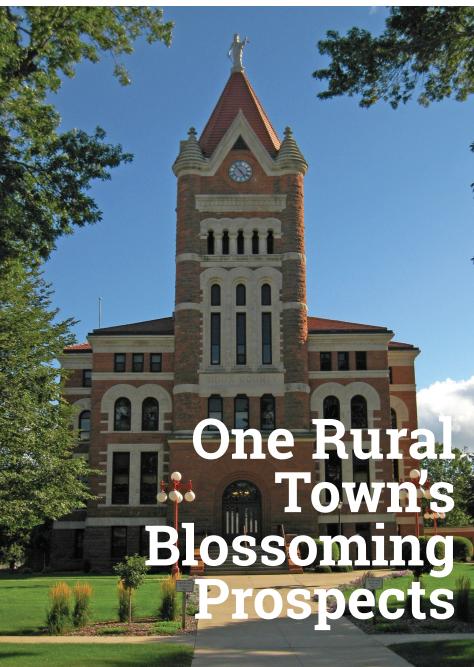
The slowest place in America is North Slope Borough, Alaska, which offers a 0.28 Mbps download speed.

Speeds in Pennsylvania are double those in Ohio.

Impressive download speeds can also be found in Kansas, Oklahoma, Texas, and...

● [Source: cable.co.uk](#)

continued



One Rural Town's Blossoming Prospects

Orange City's distinctive county courthouse.

PHOTO: WIKIMEDIA COMMONS

Orange City—the county seat of Sioux County, Iowa—is not dying. On the contrary, it's thriving, with a 98% high-school graduation rate and 2% unemployment rate.

How did it buck the trend of rural population decline—and the economic impact that goes with that?

Writing in the New Yorker, Larissa MacFarquhar said that although the brightest rural kids are often encouraged—even pushed—to leave their home towns for more opportunities elsewhere, Orange City never pushed. When kids went off to school, they sometimes were drawn back. Now, a group of town businessmen who have known one another for years has formed the core of a group of entrepreneurs—a medical-equipment CEO, a hospital CEO and a pizza restaurant chief administrative officer among them—that embraces change and growth.

While Orange City isn't an "ideal place for a business" because of its low unemployment rate—it can be hard to find workers—these locals know the advantages that rural life brings. While rural communities hope for a large corporation or manufacturer to move to their town and give it an economic jolt, these entrepreneurs have shown that sometimes the best new businesses come from those that already know the community. ● **Source:** [newyorker.com](#)

COMINGS & GOINGS

Travis Ballou is the new general manager (GM) at Grand Mound Cooperative Telephone Association (Grand Mound, Iowa). He remains GM at Wyoming Mutual Telephone Co. (Wyoming, Iowa).



Jim Smart, GM at Bloomer Telephone (Bloomer, Wis.), has retired. Kent Klima (photo above) is the new GM at Bloomer.



Rob Johnstone is the interim CEO of the Range Cos. in Montana and Wyoming, replacing Mike Dolezal.

Bob Kraut is the new GM at Filer Mutual Telephone (Filer, Idaho) following Steve Cowger's retirement last December. Kraut previously was the chief financial officer at the company.

Bill Colston III replaced his father, Bill Colston, Jr., as GM of Riviera Telephone Co. (Riviera, Texas).

Embracing Technological Change Could Be Key to Keeping Your Job

Nearly 1 million occupations will disappear by 2026, and 1.4 million Americans will lose their jobs to technological change, according to a report by the World Economic Forum and Boston Consulting.

"Without new skills, 41% [of the 1.4 million] will have either minuscule or no chance of doing other work. Women may be disproportionately affected." Those that do find work using their current skills should expect to make \$8,600 less per year. ● **Source:** [axios.com](#)

Four Types of BAD BOSSES

"Employees join companies but leave managers." So said Brigitte Hyacinth, author of "The Future of Leadership." She cites four types of bosses that make employees leave a company.

● **Source:** [linkedin.com](#)



MARIONETTE

This boss plays it safe, never challenging company authority.



KING KONG

A manager who throws his weight around rather than building relationships.



SUPERMAN

This manager acts like the CEO, taking all the credit as employee morale disintegrates.



TASKMASTER

Obsessed by the bottom line, this boss micromanages employees and turns the workplace into a fearful environment.

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@CullenHMcCarty

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#buildbroadbandwithus



@senatorhassan

My bipartisan bill with @SenCapito will help close the urban-rural divide and create a national standard for determining whether rural areas have similar access to wireless and broadband services.



@connectiowa

OPINION: Real deal for rural #broadband expansion in Wisconsin. State Senator @VinehoutK explains why a new bill is the answer for her state.



@connectednation

Nebraska Senator introduces a bill that would create Rural Broadband Study Task Force to help enhance broadband telecommunications service to rural areas of the state.



@RepJoeKennedy

From rebuilding our crumbling roads and bridges to strengthening our schools to expanding access to broadband, a substantive, equitable #infrastructure investment could unite a historically partisan Congress.



@SenJohnHoeven

Met w/ #NorthDakota health care providers as well as reps of @ND_RuralHealth & @ruralhealth to get update on #ruralhealth issues in ND.



@coruralhealth

Thank you to @SenBennetCO and @SenCoryGardner (pictured) for meeting with @coruralhealth and @TweetsByWHA staff.
#NRHAPolicy2018
#ruralhealth! #rebuildrural
#advocacy



@farmcredit

"Our farmers are collecting data for every seed plant they can process. All are located in rural areas & #broadband infrastructure isn't keeping up." This is exactly why we must #RebuildRural! Internet access is critical for today's producers.



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By Shirley Bloomfield



Shirley Bloomfield is chief executive officer of NTCA—The Rural Broadband Association. She can be reached at sbloomfield@ntca.org. You can also follow her blog at ntca.org/ceoblog.

Turning Up the Heat on Rural Broadband

W

e didn't know it was possible, but policymakers have turned up the heat on rural broadband in 2018. The year has brought congressional hearings, new pieces of legislation, pertinent FCC actions and infrastructure proposals. After years of advocacy about the importance of rural broadband, policymakers are heeding our calls for action by offering infrastructure proposals that include elements aiming to address rural broadband challenges. These proposals remain works in progress and nothing is certain, but know that we will continue to work with the administration, the FCC and Congress to promote the most effective use of any dedicated funding on behalf of our members.

First Congressional Hearing of 2018

NTCA staff and members testified at a record number of congressional hearings in 2017. At the end of January, I was grateful to be given another opportunity to testify at a U.S. House hearing. It was an honor to advocate for rural communities and laud the work NTCA member companies have already done during the discussion, "Closing the Digital Divide: Broadband Infrastructure Solutions." It was also gratifying to hear both witnesses and policymakers acknowledge that 5G won't solve our nation's rural broadband challenges and for each witness to agree that dedicated rural broadband funding is necessary to make progress. You can catch some advocacy video highlights on NTCA's YouTube page!



A New Online Face: NTCA 2.0

After 20 months of work, thousands of documents scoured and hundreds of hours spent polishing and testing, NTCA was thrilled to launch the association's brand-new website early this year! The website redesign was done with you in mind, and it has launched us into the future with mobile-responsive designs, improved e-commerce capabilities and a renewed focus on sharing the many innovations your companies are delivering to rural America. If you haven't had a chance to explore the new website yet, go check it out at www.ntca.org!

Chairman Pai's Rural Broadband Proposal

The year got off to a fabulous start with FCC Chairman Ajit Pai's announcement of a \$500 million rural broadband proposal including items to address Universal Service Fund (USF) shortfalls and some issues NTCA previously raised in a petition for reconsideration on budget sufficiency issues. This action is extremely critical and timely given that the high-cost USF is foundational to any effort to promote and sustain rural broadband, as it enables the business case for network investment and the delivery of quality services at affordable rates for millions of rural Americans. While this is another step in the journey, it's a step in the right direction, and we will continue to engage with you, our members, and the hundreds of members of Congress who have made universal service a national priority for rural America.



@shirleybloomfield
A huge thanks to @SenJohnThune and @amyklobuchar for years of effort to ensure calls are actually completed to rural consumers.

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serve*
*powered by
innovation*



West Carolina Tel



years of

Innovation and
Member Service

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A FEW QUESTIONS

By Christian Hamaker

Eric Gewiss

Director of Marketing
Silver Star Communications
(Freedom, Wyo.)



T

Tell us about your background with Silver Star, and how telecom needs in Wyoming might differ from those in other states.

I have been with Silver Star for just over three years now. While I did have a two-year stint in wireless phone sales, my career has been in marketing roles across several different industries, primarily high-tech and manufacturing. Products and services change, but skills in developing marketing strategies are relatively consistent.

Compared to other states, I wouldn't say that telecom needs are different in Wyoming, but I believe the challenges can be greater. In western Wyoming, delivering services over steep hills and around 14,000-foot mountain ranges, deep valleys, and through creeks and rivers is certainly more of a challenge than in flatland areas, but that's what we face in our serving areas. We've done a good job of overcoming those obstacles, but they are challenging nonetheless.

That said, one of Wyoming's greatest assets is its oil and mineral resources. It isn't any secret that mining revenues have plummeted over the past few years, so our state is looking at ways of diversifying the Wyoming economy. Going from mining coal to attracting new businesses requires significant invest-

ments in broadband infrastructure. I'd say expanding our broadband networks is more urgent than some other states.

Describe a recent campaign recruiting new customers and retaining current customers, and how effective it was.

We have had great success with our promotional campaigns, but strengthening the brand through one-to-one relationships is what drives retention.

One such retention campaign was called "We're Right Next Door." We ran print ads, radio, social media and digital advertising. One of the primary tactics was utilizing three billboards with designs that combined the images of our sales/service people with the headline "We're Right Next Door."

Customers began recognizing our retail people in public places, which helped connect the brand with real people. It really helped in reiterating that our service is local and also helped strengthen those one-to-one relationships both inside and outside of Silver Star.

An advertisement for Silver Star Communications. The top half features the slogan "We're right next door." in a large, white, sans-serif font. Below the slogan is a photograph of two women, one in a black shirt and one in a blue shirt, standing in front of a wooden wall with various items hanging on it. A green text box below the photo contains the text: "Improving quality of life, giving back to the community, and providing more than 100 local jobs are only a few ways Silver Star strives to be a good neighbor. Stop by our Jackson location in the Kmart Plaza to see what we have to offer." At the bottom of the ad, there is contact information: "Wireless Phone | 4G LTE Internet | Voice Smart Controls and Security Solutions", the phone number "307.734.9040", and social media links for Facebook and Twitter. The Silver Star logo is in the bottom right corner.

FAST AND FURIOUS:

- » **Best tip for buying a cowboy hat:**
Get two. Felt for winter, straw for summer..
- » **Fill in the blank: If you like ____ then you'll love Wyoming.**
Fly fishing (and the outdoors).
- » **My favorite national park is:**
Hart Mountain Antelope Refuge in southeastern Oregon. It's not really a park but it is a national refuge—and it's a treasure.
- » **BBQ sauce preference: tangy or spicy?**
Definitely spicy!
- » **Before 2018 ends, I really want to ____.**
Fly fish in four new rivers in Wyoming or Idaho. Oh—and lose a few pounds.

What's an upcoming Silver Star initiative, marketing or otherwise, that rural telcos might learn from?

One of the initiatives that is still taking shape is a "thank you for your business" campaign to drive retention and loyalty. While I'm not sure what it looks like yet, I'll be happy to report back after it's executed.

We can all get laser-focused on new sales and increased revenue, but let's not forget who brought us to the dance—our existing customers. Pay attention to their comments, feedback and concerns. ●

YOU CAN KNOW



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- **KNOW** what you are paying for
- **KNOW** you have an insurance partner who understands your needs
- **KNOW** you are being taken care of by a company focused solely on your industry
- **KNOW** how to manage your risks

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MORE
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● BY JOAN ENGBRETSON

Broadband Upgrades Meet Climbing Bandwidth Demand

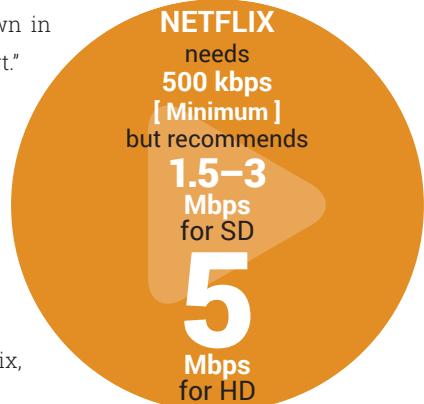
Ever-increasing broadband speed requirements are an ongoing reality of the telecom business, and with end-users finding more and more ways to consume bandwidth, network upgrades also remain an ongoing reality. What technology choices are rural broadband companies making when upgrading their networks, and why? We talked with several NTCA members to find out.

Bandwidth Demand Keeps Climbing

Service providers are seeing considerably more customers opt for higher broadband speeds than they did just one year ago, as shown in NTCA's annual "Broadband/Internet Availability Survey Report." In the 2015 report, the most popular speed among member customers, chosen by 31.2% of them, was 10–25 Mbps. Just 7.7% of customers subscribed to services at speeds above 25 Mbps. In 2016, 24% of customers were subscribing to 10–25 Mbps service, and those choosing speeds above 25 Mbps had jumped to 17%.

Various applications are driving bandwidth growth, but one of the most important factors is streaming video from Netflix, YouTube and others.

Netflix requires a minimum downstream speed of 500 kbps, but recommends at least 1.5 Mbps or 3 Mbps for standard definition video and 5 Mbps for high-definition (HD) video. As Melissa Lease—marketing director for Mount Horeb Telephone Co. (Mount Horeb, Wis.)—noted, however, "If a user has less than 3 Mbps and they are streaming a video, it may buffer or reload several times" and "if multiple users are in the home and one person is watching Netflix and another is using Facebook, the photos and videos may not load because they are maxing out their bandwidth."



NETFLIX
needs
500 kbps
[Minimum]
but recommends
1.5–3
Mbps
for SD
5
Mbps
for HD



MORE BANDWIDTH



Other applications that consume a large amount of bandwidth include telehealth and distance learning. "For a customer using either we would recommend our 65/5 Mbps or 125/10 Mbps service," explained Lease.

Agriculture as Well

Another increasingly popular application is precision agriculture—and as that technology advances, it requires ever-increasing bandwidth, observed Ron Hinds, chief executive officer (CEO) GRM Networks (dba Grand River Mutual Telephone Corp.; Princeton, Mo.). The latest generation of the technology requires as much as 200 Mbps downstream, he noted.

Broadband speeds have become so important that customers who can't get downstream speeds above 3 Mbps have had to turn away buyers for their farms, noted Jim Lyon, executive vice president and general manager for Hurdland, Mo.-based Mark Twain Rural Telephone Co. The company's service territory has only four people per square mile, making the cost to upgrade service especially challenging. But the company is moving ahead with a fiber-to-the-home deployment that will support speeds up to 1 Gbps, thanks to funding it will receive through the Universal Service Fund program based on new parameters aimed at ensuring that more Americans have access to broadband.



"As precision agriculture technology advances, it requires ever-increasing bandwidth."

•
Ron Hinds
GRM Networks



"Broadband speeds have become so important that customers who can't get downstream speeds above 3 Mbps have had to turn away buyers for their farms."

•
Jim Lyon
Executive Vice President and General Manager, Mark Twain Rural Telephone Co.



GRM Networks promotes its broadband offerings during the Great Northwest Days 2018 celebration.

Certain incumbent carriers, depending upon their relative deployment of broadband at speeds of 10 Mbps downstream and 1 Mbps upstream, were offered USF support based upon a cost model known as the Alternative Connect America Cost Model (A-CAM) to cover some of the costs of deploying higher speeds of broadband to a specified number of locations within 10 years.

In some cases, companies are choosing to meet the FCC speed requirements by replacing long copper wire runs with fiber to a neighborhood node, with service delivered over copper from the node to the home. Other telcos are bringing fiber all the way to the home, thereby supporting

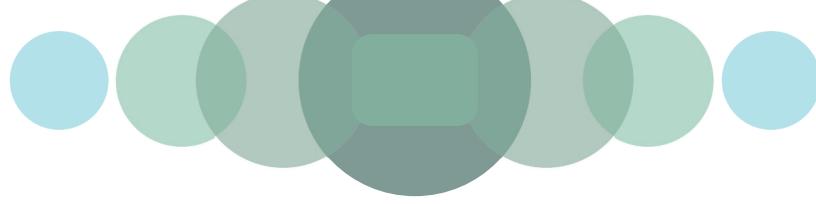
even higher speeds and simplifying future upgrades, but at a higher deployment cost.

Technology Decisions

Mount Horeb Telephone has begun deploying fiber to the home (FTTH), thanks to the USF funding. According to Mount Horeb General Manager John Klarer, the A-CAM funding will cover about 75% of project costs, with the company making up the difference. USF funding was essential to the company's ability to undertake the deployment, Klarer observed.

While Mount Horeb previously offered speeds of 15–20 Mbps downstream to some customers in its local service territory, other customers received speeds

GRM Networks is helping to advance precision agriculture technology, which requires ever-increasing bandwidth—as much as 200 Mbps downstream.



below the speed threshold. The company had previously deployed fiber to about 15 network nodes, with the speed each customer can get dependent on the customer's distance from the node.

Mount Horeb is leveraging the USF money to replace the copper connecting customers to the fiber nodes or to other points in the network so that fiber will underlie their entire connection. The company is offering download speeds of 10–125 Mbps over the upgraded network infrastructure.

Many people are choosing 65 Mbps service, but the company also has "quite a few" people on 125 Mbps service, according to Lease. Customers choosing the higher speed may work from home, have multiple users online simultaneously and stream HD video.

Mount Horeb was not eligible for A-CAM funding in more populous villages within its service area because people there could get 10/1 Mbps speeds over the existing infrastructure, but the company decided to deploy FTTH to those customers as well, covering the entire cost itself.

Another company that qualified for A-CAM funding for part of its service territory and chose to accept it is Perham, Minn.-based Arvig (Perham). The company, which is one of the largest A-CAM recipients, already had deployed FTTH in some areas, but will be deploying fiber-to-the-node to most customers for its funded projects.

"We're increasing the speed of the fiber to the node and the capability of the node," explained Arvig Director of Network Operations Andy Klinnert. The equipment deployed previously could support speeds of 5 or 6 Mbps downstream, but most customers will be able to get speeds of 25 Mbps downstream and 3 Mbps upstream after the upgrade.

"A small percentage will only get 10/1," Klinnert said.

Deploying FTTH throughout the project area would have been too costly, Klinnert noted. But the company will deploy FTTH to serve customers who are more than one mile from a node and therefore would not be able to get 10/1 Mbps speeds.

Like Mount Horeb, Arvig will pay for a portion of deployment costs for its project. Also like Mount Horeb, Arvig plans to deploy FTTH at its own cost to villages that were not eligible for A-CAM funding.

The 25/3 Mbps speed tier is a popular one where it is available, Klinnert says. Where the company has deployed FTTH, 25%–30% of customers are selecting the top speed of 100 Mbps downstream.



As Coon Valley upgrades customers to FTTH, they will be able to get speeds of up to 1 Gbps downstream. The minimum speed the company will offer is 25 Mbps downstream.





MORE BANDWIDTH

More Projects

Customers of Coon Valley Cooperative Telephone Association (Menlo, Iowa) will see a huge jump in speeds available to them as the result of another USF-supported upgrade currently underway.

The maximum speed Coon Valley customers could previously access was 3–6 Mbps downstream, and as Coon Valley General Manager Jim Nelson explained, the company was seeing customers upgrade to 6 Mbps service—a trend he attributed to the popularity of streaming video offerings from Netflix, YouTube and others.

As Coon Valley upgrades customers to FTTH, they will be able to get speeds of up to 1 Gbps downstream. The minimum speed the company will offer is 25 Mbps downstream.

Despite the higher cost of FTTH, the company chose the technology over FTTN for its deployment because "bandwidth demand is just going to continue to grow," Nelson said. To help fund the deployment, the company took out a loan from the Rural Utilities Service, which will cover some of the costs.

Another company leveraging USF support, Twin Valley has deployed

FTTH in some areas, while in others it delivers service over fiber-fed copper loops. The company is now upgrading the copper loops to fiber—a project the company expects to fund from cash reserves over a three- to four-year period, according to Twin Valley President and Chief Executive Officer Ben Foster.

"[Customers] want to know their internet bandwidth is not ever going to be an issue."

•
Ben Foster

Ben Foster, President and Chief Executive Officer, Twin Valley Telephone

The Gigabit Decision

FTTH infrastructure can support speeds up to 1 Gbps downstream or higher, and some service providers are offering gigabit service, even though few residential applications require such high bandwidth at this time.

Twin Valley's most popular service provides 100 Mbps downstream. But



Twin Valley Telephone has deployed FTTH in some areas, while in others it delivers service over fiber-fed copper loops. An upgrade of copper loops to fiber will take three to four years, according to Twin Valley President and Chief Executive Officer Ben Foster.

7% are taking gigabit service.

"A lot of them just want to know that their internet bandwidth is not ever going to be an issue for them," Foster said.

Not all service providers with FTTH networks are offering gigabit service at this time, however.

"We can do a gigabit, but no one has requested it" and offering it would require the company to "invest a bit more in central office equipment," said Klarer of Mount Horeb.

Hinds of GRM Networks raised a different issue. As a member-owned cooperative, the company typically tries not to offer services to certain members that are not available to everyone.

The company is rethinking that approach, however. About half of customers currently are served over FTTH infrastructure, and the company is upgrading a large percentage of the remainder, thanks to USF funding. Accordingly, the company soon plans to launch service at speeds up to 1 Gbps in FTTH areas.

Clearly NTCA members are carefully weighing investment decisions with an eye toward offering the highest possible speeds, based on the unique needs of their communities. ●

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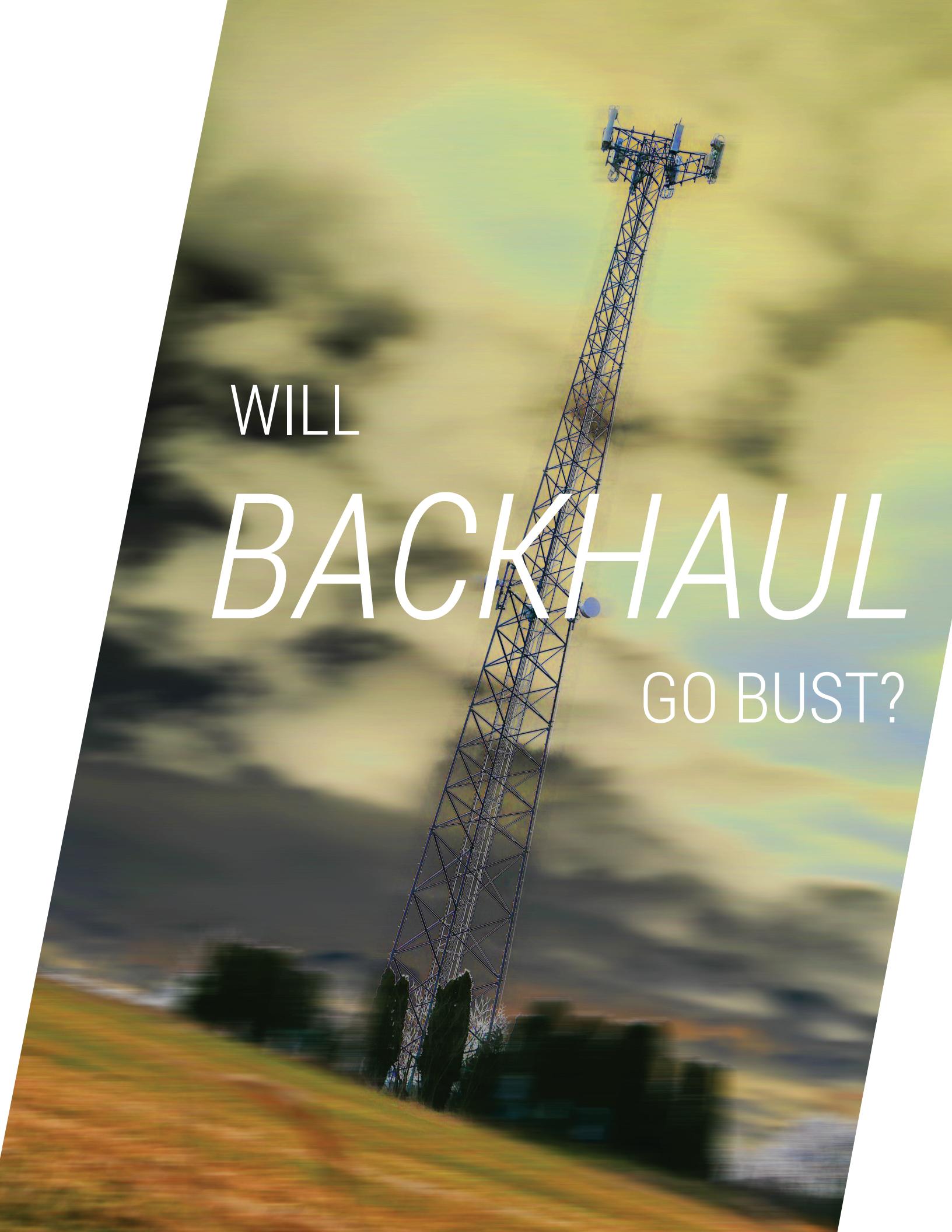
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"There is no end in sight to the bandwidth requirements of mobile users, especially when you look at the internet of things, connected cars, agriculture, transportation, government, smart meters—I don't see any end to the growth of bandwidth. It will mean more capacity to sites, as well as more sites."

Kevin McGuire
CEO, Enhanced Telecommunications Corp.

● BY MASHA ZAGER

The explosion of wireless data traffic has provided a reliable source of revenue for the rural telcos that carry the data over wirelines from cell towers back to the internet. Though cellular carriers don't comprise the entire market for backhaul (broadcasters, public safety agencies and other entities use cell towers as well), they account for the bulk of the demand. Thus, cellular carriers' business strategies will directly affect the fortunes of telcos—and possibly spur them to rethink their own business strategies.

In 2018, on the eve of another huge wireless network build-out, the cellular industry is undergoing enormous changes. Some of these changes will increase backhaul revenues for telcos, and others will erode those revenues. The net result is still far from clear—and likely will vary depending on the geographic markets that telcos serve.

On the Plus Side

Pushing revenues upward are the same forces that have done so for several decades: Consumers want more wireless capacity, and they want better wireless coverage. In the short term, in most areas that rural telcos serve, revenue increases based on capacity needs will likely be small. For example, Derrick Bulawa, chief executive officer (CEO) of BEK Communications (Steele, N.D.), said, "We have one subscriber per three square miles"—not enough to drive carriers to buy larger, more expensive circuits—"so the issue here is covering the guy when he goes over the hill."

Similarly, Eric Cramer, CEO of Wilkes Communications (Wilkesboro, N.C.), said the moderate bandwidth increases he's seeing "are not going to result in significant changes in what we bill." Until there are massive increases in traffic, requiring 10 Gbps or 40 Gbps circuits, bandwidth growth can be accommodated under the existing cost structure.

In the long run, however, these kinds of massive bandwidth increases will occur. Kevin McGuire, chief operating officer of Enhanced Telecommunications Corp. (ETC) in Sunman, Ind., pointed out, "There is no end in sight to the bandwidth requirements of mobile users, especially when you look at the internet of things, connected cars, agriculture, transportation, government, smart meters—I don't see any end to the growth of bandwidth. It will mean more capacity to sites, as well as more sites."



BACKHAUL

Today, new towers are being built in rural areas to provide increased coverage. Carriers are continuing to densify their networks everywhere, though rural densification won't reach the levels expected in urban areas. Larry Thompson, CEO of Vantage Point Solutions, an engineering and consulting firm in Mitchell, S.D., said that in rural areas, the next generation of wireless, or 5G, will be implemented in lower spectrum bands, which carry signals farther than higher spectrum bands. "We'll continue to see a progression where the towers get closer, but they won't be within 300 feet of every customer, as they will be in urban areas," he said.

The Downside

Wireless carriers, pushing back against what they view as ever-increasing backhaul costs, are developing a number of strategies to reduce those costs—which, of course, is not good news for those selling backhaul.

Some of these strategies are technological. New technologies such as C-RAN (for cloud or centralized radio access network) enable a group of nearby towers to share the same backhaul circuit. "Carriers can run fiber from a tower that has backhaul to half a dozen subtending towers," Thompson said. Thus, when a carrier adds towers in an area to improve coverage, it can essentially daisy-chain the new towers to an existing one to avoid increasing backhaul costs.

"We'll continue to see a progression where the towers get closer, but they won't be within 300 feet of every customer, as they will be in urban areas."

Larry Thompson
CEO, Vantage Point Solutions

companies or even other local exchange carriers. In some cases, telcos have been competitively constrained by the access prices set by the National Exchange Carrier Association, which may be above market rates. For this reason, bidding on backhaul in competitive local exchange carrier areas may be more appealing. McGuire said, "Outside our ILEC area, we have the pricing flexibility to do what we can to win the business."

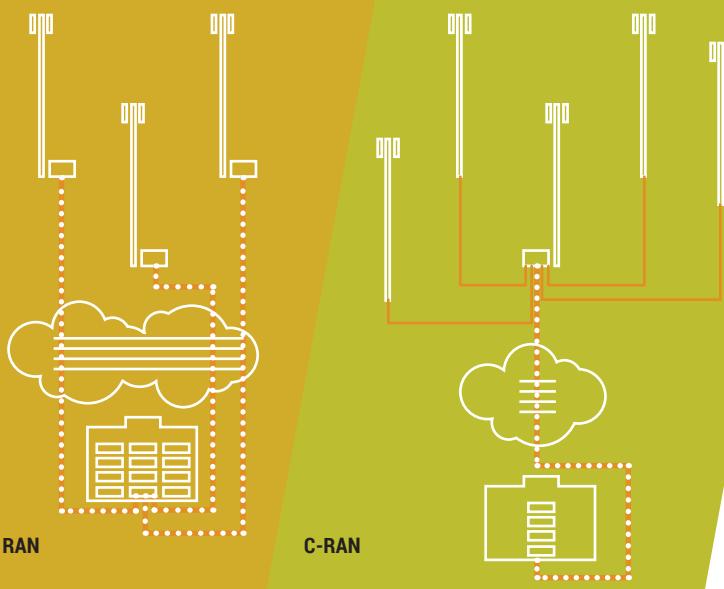
If a new tower is built in an area close to other potential customers, telcos said there is likely to be competition to serve it because the winning backhaul provider can use the same fiber to pick up these other customers. By contrast, a tower sitting alone "in the middle of nowhere" won't be as appealing to competitors—but it also won't be very profitable because constructing fiber to reach it is expensive.

When wireless carriers don't receive a bid they find acceptable, they are now more likely to build their own backhaul infrastructure. Jimmy Todd, CEO of Nex-Tech in Lenora, Kan., said, "It's a balancing act—you don't want someone building in your backyard, but at the same time, you have to cover your costs. ... If you ask too much in aid to construction, they'll use microwave or their own dark fiber."

A Third Way

Some carriers choose a third option: leasing dark fiber, often to tie the new tower into an existing capacity site. (Verizon, for example, has said it is pursuing a multipronged strategy of buying capacity, building and buying fiber, and leasing dark fiber, all depending on local market conditions and on its other potential uses for owned fiber.) For telcos willing to enter into dark fiber leases—and not all are—the revenue from such leases may compensate for some of the loss of backhaul revenue. McGuire said most requests for quotes in his area now ask bidders to propose alternative bids for capacity and dark fiber; ETC has won some bids as a capacity provider and others as a dark fiber provider. "There's a crossover point," he said. "If the capacity needs at the site are low, you can make more money on a fiber lease, but if they need a gigabit, you're making less money."

Carriers also try to save money by contracting for backhaul at hundreds or thousands of cell sites at a time. This means individual telcos rarely have a chance to see—let alone bid on—carrier RFPs anymore. In states with cooperative middle-mile fiber networks, such as Kansas Fiber



Other strategies involve business practices. Carriers are trying to lower prices by encouraging competition for their backhaul business—and in some cases, even providing the competition themselves. Several telco executives reported seeing more competitive responses to carrier requests for proposals, including from regional fiber providers, cable

"Points of presence (POPs) for mobile networks have gotten a whole lot closer. If the POPs for circuits are within our switch, we lose half the backhaul opportunity because we're providing only local loops and not transport."

Eric Cramer
CEO, Wilkes Communications

Network in Kansas and Spirit Communications in the Carolinas and Georgia, the RFPs are usually funneled through those networks, which alert their member telcos to nearby backhaul opportunities. The middle-mile networks handle the contracting process and often the service-level management during the contract term. Rural telcos that do not belong to such networks are unlikely to win any new backhaul bids, several telco managers said.

Finally, backhaul revenues are eroding for reasons that have little to do with carrier decisions but simply reflect network evolution. A prime example is the shift from time-division multiplexing to packet-based technologies. As DS-1 and DS-3 circuits are replaced by Ethernet, a less expensive technology, bandwidth prices are falling dramatically. This price decrease largely offsets the increase in bandwidth capacity.

Further, as networks are built out, wireless data doesn't need to be backhauled quite so far anymore. "Points of presence (POPs) for mobile networks have gotten a whole lot closer," Cramer said. "If the POPs for circuits are within our switch, we lose half the backhaul opportunity because we're providing only local loops and not transport."

The Net Result

Given these countervailing forces, what is the future for wireless backhaul revenue? The answer will differ for each telco. Cramer is pessimistic, saying the erosion of backhaul revenue has already begun and will continue. He sees this shift as part of a larger threat to telco viability caused by both policy changes and economic realities, and he advises telcos to proactively seek efficiencies of scale through mergers and collaboration.

McGuire is optimistic, trusting that the growth in demand for wireless data will create new opportunities for backhaul revenues, though most of the opportunities for ETC are outside its traditional service area. "I'm very bullish on the future of backhaul as it pertains to our business," he said.

Todd expects Nex-Tech's backhaul revenue to hold steady, with little or no growth, but believes the revenue stream should be stable enough to help compensate for any decline in wireline revenues.

Bulawa, who similarly foresees little or no growth in BEK's area, offered an explanation for the disparity among these forecasts: Backhaul

revenue growth will depend largely on the maturity of the wireless market in an area. As he summed up the situation, "Where they've substantially built out, that revenue goes down, and where they're still building, revenues will go up." ●

Masha Zager is a freelance writer. Contact her at mashazager@bridgewater.com.



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RTIME Maps the Rural-Telco Customer Experience

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The NTCA Rural Telecom Industry Meeting and Expo (RTIME), held February 25–28,

2018, in Austin, Texas, brought together nearly 2,000 attendees and more than 100 exhibitors to share stories of what's working for rural broadband companies and to show where the industry is heading.

From packed educational sessions and keynote addresses to special events highlighting the culture and entertainment of Austin, RTIME was an enriching experience that pointed the way to a bright industry future.



opportunities, and U.S. Department of Agriculture Assistant to the Secretary for Rural Development Anne Hazlett shared her organization's priorities: infrastructure, partnerships and innovation.



Policymakers at the Podium

During the opening general session, NTCA President John Klatt reviewed highlights from the preceding year before introducing NTCA Chief Executive Officer (CEO) Shirley Bloomfield, who shared the efforts the association has made in the policy area in the past year. With work still to be done in that realm, Bloomfield brought FCC Commissioner Brendan Carr to the stage for an update on outstanding broadband items at the commission. NTCA Senior Vice President of Industry Affairs and Business Development Michael Romano led a panel discussion on smart-home

Digital, Data

Keynote speaker Anirban Basu, chief executive officer at Sage Policy Group in Baltimore, Md., explained to RTIME attendees how data supports the economy—with a focus on successes and challenges for rural economies. The NTCA Marketing Committee highlighted how to map the customer experience, while the Associate Member Advisory Committee discussed consumer preferences and customer service trends.



More Exhibitors, More Connections

More than 100 exhibitors—including 37 new exhibitors—showed off the latest in rural broadband services and products at RTIME. New this year, Expo Plus allowed broadband-company general managers to make appointments with exhibitors for one-on-one demonstrations and discussions. The feedback on Expo Plus was so positive that plans are already underway to continue the program next year.

Standing-Room-Only Sessions

Concurrent RTIME sessions were broken into two tracks—the Telco Track and Director Track—that were well attended. A packed house greeted “The Internet of Everything” with John McDonald, CEO of Clear Object, as he showed how everyday devices are becoming smarter—with the power to create and destroy businesses.

Future Trends, Through the Eyes of Experts

Cybersecurity expert Marcus Sachs walked attendees through different types of cyber threats, and Dr. James Oliver at Iowa State University showed how augmented reality can be used to help the future workforce. NTCA used the latest technology to highlight what was happening at RTIME—for both attendees who couldn’t be everywhere at once, and for those rural-broadband fans who couldn’t attend RTIME—through NTCA Live, an online platform that streamed RTIME highlights across the internet.

Special Events

Add the NTCA Rural Broadband PAC Annual Awards breakfast, tours of Waco and the Magnolia Market, the Foundation for Rural Service golf outing and fun-filled evening at Austin’s Rattle Inn, and the Smart Rural Community Grant and Showcase Award recipients—not to mention the approval of amendments to NTCA’s bylaws—and you have a good sense of all that went into the RTIME experience.





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The highest recognition of individual achievement is the Excellence Awards Program, which pays tribute to individuals in eight categories annually at RTIME 2018.



This year's NTCA's **Associate Member Outstanding Achievement Award** went to **Steve Meltzer**, senior vice-president of JSI (Greenbelt, Md.). Meltzer's work on issues ranging from regulatory advocacy to toll cost studies over the last 40 years has greatly benefited rural telecommunications.

The recipient of NTCA's **Key Employee Award** was **Chris McNamara**, IT network manager at Nortex Communications (Muenster, Texas). Within Nortex McNamara is officially responsible for maintaining the company's network infrastructure that supports and sustains hundreds of homes, local businesses and government services. His nomination letter

described McNamara as the "cornerstone" of Nortex's business expansion initiative, where he has taken the lead in building relationships with new customers, expanding fiber-based broadband access for 14 local schools and being a true team player with everyone else on the Nortex team.



This year's **Management Innovation Award** went to **Michael East**, president and chief executive officer of South Central Communications (Kanab, Utah). He arrived at South Central Communications just over six years ago and quickly realized the company's potential to be a real industry leader by undertaking ambitious plans to expand services throughout his company's more than 10,000 miles of service territory within 23 different exchanges.

The **Heroism Award** went to **Tyler Graham**, a combination technician with GRM Networks (Princeton, Mo.). On November 27, 2016, Graham was taking a step out of his RV parked in his father and mother-in-law's driveway. The distinct smell of smoke filled the air as he stepped out of his vehicle and went into the house to investigate. While he noticed that the lights wouldn't work, the smoke grew more intense. He woke his father-in-law, and together they went outside and found heavy smoke rolling from the upstairs window. Graham sprang into action, and carried the three elderly women sleeping upstairs down to safety by wrapping them in blankets. While there was substantial damage to the house due to an attic electrical fire, Graham's actions saved the lives of five people that day.





The Director Lifetime Achievement Award

went to **Doug Ziegler**, currently a board member at Nex-Tech (Lenora, Kan.). An integral part of Nex-Tech since 1978, Ziegler has seen a company transformed from a hometown telephone service provider to an industry and technology leader. During his 40 years on the board, he has been consistently supportive of company initiatives,

seeing the company grow from 26 LEC exchanges providing simple phone service to 39 exchanges plus CLEC areas across the state providing a wide array of services to its customers. Ziegler has logged over 60,000 miles getting to and from more than 500 board and membership meetings over the course of those years.

This year's **Manager Lifetime Achievement Award** went to **Jimmy Blevins**, chief executive officer of Skyline Membership Corp. (West Jefferson, N.C.).

Beginning his career as a licensed professional engineer at Skyline in 1985, Blevins rose through the ranks of the company until he was promoted to CEO in 2008. Since then, he has led a "culture of change" at Skyline, always on the lookout for the next big thing and constantly seeking ways to transform his company and better serve his customers.



Nominations are accepted year-round for an NTCA Excellence Award. Submit your 2017 nominations today. For more information, visit www.ntca.org/excellence.



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By Mark Marion

Cowbells, Bagpipes and Influencing Change

A Q&A With Garrison Wynn



G

arrison Wynn, author of "The Real Truth About Success" and "The Cowbell Principle," is the closing keynote speaker for the 2018 NTCA Regional Conferences. We spoke with him from the road to learn about his early influences and his message of managing change.

Tell us a bit about your rural roots and how your gruntwork-to-great journey influences your work today.

I was born in Dublin, Ga. My first job was detasseling corn, which is just the worst—I will itch for the rest of my life. My next job was digging ditches (with a spade shovel) for the cable company. I was briefly promoted to using the Ditch Witch, but after hitting a water main and floating away a newly sodded yard, they determined my future was not running heavy equipment. After college I worked at a Fortune 500 company, starting with an entry level job and moving up to vice president by age 27—although that was mostly because my boss screwed up; I learned a lot about what not to do by watching that boss.

Through all of this, I saw the importance of influence—getting people to do what you want them to do. It all comes down to this: The number one thing all humans value is feeling valuable.

The Magnavox Odyssey offered another early learning experience. How did you get involved with that project?

Mark Marion is director of training and development at NTCA—The Rural Broadband Association. Contact him at mmarijan@ntca.org.

My dad worked for Magnavox and they developed the very first home video game console. He managed to bring home one of only four demo units in existence and, as any respectable fourth-grader would, I brought it to school for show and tell. We rolled in the TV cart, set it up, and these kids were freaked. A few lights bouncing around the screen, but no one had ever seen anything like it. My dad had 500 calls the next week: Where can I buy it? How much does it cost? Now, Magnavox developed this product to sell more TVs and, despite my father's objections, it wasn't really marketed toward kids—pretty short-sighted. Magnavox hired Hank Aaron to promote the product, and I toured around the country with him doing radio shows and demos at the age of 12.

Here's the big takeaway I still carry: When you are marketing something, your own thoughts and feelings are fantastic, but you must know what your customers actually value, or else nothing you do really matters.

That ties into your book, "The Real Truth About Success," where you suggest approaching life "talent first." How should people begin identifying the talent that sets them apart?

Start with these questions: What do other people say you do well? How much of that thing do you do? What do you do that you find easy? What do you do that is almost always successful?

For me the key to success is doing very little of what you do badly and doing a lot of what you do well. As a kid I ended up attending a sort of Junior Toastmasters. They told me to get up and talk, and I realized, well this is something I can do! A little later in life someone said, "You're pretty funny, you should do an open mic night." So, I did and ended up earning a living doing standup comedy. But success came not just from doing things I was good at, but also not doing all the other things I was bad at. I don't have math skills, and I'm not the world's most organized person, so I hire staff to do those things. That allows me to focus on my 'cowbells'—talking to people and explaining things.

You use that metaphor of "cowbells" to describe desirable talents?

Yes. In "The Cowbell Principle" we begin with the "Saturday Night Live" sketch where Christopher Walken demands more cowbell from Will Ferrell. The rest of the band thinks he is "over-cowbelling," but that's irrelevant when the man writing the check demands more cowbell.

You have to ask yourself: Are you doing something that is in demand? Are you doing something that is making people say,

Coming Up...



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PR & Marketing Conference

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Renaissance
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Pre-Retirement Planning Seminar

May 15-16, 2018

Bally's Las Vegas
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Foundation for Rural Service Youth Tour

June 2-6, 2018

Washington, DC

"We want that!" You also need to be aware of "bagpipes"—things you enjoy doing and might be particularly good at, but others do not find desirable. Just because you are good at something doesn't mean you should try to make a career of that.

This applies to companies as well: You see lots of companies fail by taking a product to market that no one wants. In the '80s they thought since they could make cars talk, they should do it. Cars don't talk today for a very good reason: No one wanted it! I used to have a condescending BMW that would tell me my door was not closed properly. The last thing I need is to get lip from my car.

Your presentation at the NTCA Regional Conferences this summer will focus on change management. What should we be looking forward to learning?

There are two aspects of change: 1) influencing others to change, and 2) accepting the change yourself. I'll be talking about exactly those two things. One key question is: Are you influential enough to make change happen? You know, there's an old saying, "You can't change people" and that is absolutely wrong! I have learned from some of the most influential people in business today about a few key things they do to manage change—things that turn out to be not so hard—and I look forward to sharing those with all of you at your Regional Conferences. ●



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CASE STUDY

VTX1 Cos.
Raymondville, TX



We all know everything is bigger in Texas, and with over 12,000 square miles of service territory that includes an ILEC, CLEC, fixed wireless and FTTH businesses, VTX1 Cos. have alleviated one Texas-sized challenge by going from nine different systems down to one with the eLation™ OSS solution from Innovative Systems.

According to VTX1 Chief Executive Officer Dave Osborn, the biggest problem with its previous solutions came when one vendor would do an update that didn't integrate with other systems, which seriously disrupted business flow at its companies. Osborn also said that the single database concept with eLation™ has knocked down silos, increasing efficiency and decreasing replication of back-office procedures.

Reduction in Training Time

Osborn is convinced that the uniformity of your business software reduces training time and creates an environment where staff can learn new skills, increasing their value for a company while adding to their own personal resume skillset. One example cited by Osborn is the employee who knows how to do a service order would be comfortable navigating the mapping module because the look and feel is the same.

Let Your Software Do the Heavy Lifting

For a growing company like VTX1, Osborn wants his staff to take advantage of technology to help them more efficiently serve the customer. Osborn feels this efficiency starts with letting your OSS software do more of the work that was done manually in the past. Osborn cites auto provisioning as one example of reducing staff touches on service orders.



"We were determined to create a culture of adaptation to modern day OSS practices, and the eLation™ solution has helped us to reach that goal."

Dave Osborn, CEO

eLation™ Tech App Empowers Company's Most Valuable Assets



"Innovative Systems has been a great partner in helping NCTC to streamline our back-office procedures. We appreciate its willingness to consider our ideas for OSS feature enhancements like the Tech App."

Nancy J. White, President/CEO

Tim Collins said, "With the Tech App, our technicians in the field can use their smartphones and tablets to provision and add services like faster internet speeds and HD and DVR right from the customer's home." Before, these types of changes required time-consuming communication with the central office department. Collins adds that customers are impressed with how quickly a technician can make changes to their service while on location without having to call in first and, sometimes, wait on hold to get the order completed.

Both Smith and Collins are confident the eLation™ Tech App has benefited both NCTC and its customers because technicians are now completing more tasks than they did before they had it.

Bob Smith, NCTC's director of engineering and operations, believes its service technicians are one of the company's most valuable assets. Smith said before deployment of the eLation™ Tech App, NCTC had no way to optimize and balance the daily workload requirements. With a lack of transparency into real-time completion of tasks and trouble tickets, the company felt it was missing opportunities to help more customers in a workday.

According to Smith, NCTC submitted a feature enhancement request for consideration by Innovative Systems. The request was adopted, resulting in an application that resides on a technician's smartphone or tablet and contains the day's tasks and trouble tickets. The eLation Tech App gives service providers valuable real-time information on how techs are handling their daily workloads. NCTC's dispatch team can now see how each technician is progressing through the daily workload. This allows them to assign high-priority trouble tickets to the available technician more efficiently.

Tech App Provisioning Tool Is a Game Changer

NCTC's vision for several years has been to streamline the order process from order creation to order completion with the least amount of departmental interactions. The eLation Tech App has enabled operational efficiencies as a support to NCTC employees, which in turn has created greater satisfaction of its customers. NCTC I&R Supervisor

CASE STUDY

NCTC

Lafayette, TN



By Tracey G. Ratliff and Becky Kimble

Improving Our Wellness Beat With PositivePulse



ardy Telecommunications, Inc. (Lost River, W.Va.) General Manager Scott Sherman first started discussions in

2016 about launching a wellness program for our employees and their families. It was clear from those early conversations that he felt strongly about the importance of wellness in the workplace and believed it would be good for employees and good for the company. We were named co-coordinators of Hardy's program, and decided early on that we wanted to focus our efforts on an individual's complete wellness. With strong endorsement and positive encouragement of senior management, we hit the ground running in early 2017 and launched PositivePulse.

PositivePulse in Motion

With the mindset that our workplace wellness activities should embody a comprehensive approach, our PositivePulse initiatives kicked off in January 2017 during what we dubbed "Wellness Week." We focused on a specific wellness theme each day, and included fun activities and many communications throughout the day to encourage participation. Hardy purchased Fitbits for all participants to provide a method of tracking steps and participating in challenges during the week and throughout the year. Here's a summary of our daily wellness themes in our kickoff week.

- Monday: Let's Get Moving—Track 10,000 steps during the day.
- Tuesday: Think Positive—Share a smile with our co-workers and customers.
- Wednesday: Fiscally Fit—How did you spend your dollars today?
- Thursday: Stretching Day—Move, move, move!
- Friday: Junk-Food-Free Friday—Food = Fuel. It's healthy snack day at Hardy.

Tracey Ratliff is director of finances & support services and Becky Kimble is FTTH project coordinator for Hardy Telecommunications. Contact Ratliff at tgratliff@hardynet.com and Kimble at beckykimble@hardynet.com.



PositivePulse

We also picked a wellness-related focus for each month of the year. The themes often coincided with nationally recognized observations such as Distracted Driving Month in April and Alzheimer's & Brain Awareness Month in June. Participants in our program were given an additional four hours paid leave to get their annual checkup, including a biometric screening, and received a monthly credit toward any gym membership.

Our communication efforts have been direct and focused around each monthly theme. Hardy's internet techs may tell you that we are on the verge of filling our email server with emails to staff, but those messages are part of the program. Whether it is something funny to lighten the mood, an educational tip about creating a personal emergency fund or encouraging folks to get out of their chair to walk or stretch, participants get a message at least a couple of times each week that supports the month's wellness theme. "I don't have a lot of time to delve into wellness research, so I appreciate their informational email tidbits reminding me to focus on my physical, mental and financial health," Sherman recently said at an employee meeting.

Contact your NTCA member relations manager for more information on how your company can start a workplace wellness program. Visit www.ntca.org/MemberRelations for contact information.

Success Is in the Results

While our employees were skeptical at first, they quickly got on board and enjoyed the idea of achieving their own personal wellness goals. Over 70% of Hardy's employees participated the first year we rolled out the PositivePulse program. Altogether, participants lost over 100 pounds. Considering that West Virginians have the highest obesity rate in the nation per the Centers for Disease Control, the

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By Marilyn A. Blake

What to Do in the Workplace When There's a Tornado

A

ccording to the National Oceanic and Atmospheric Administration (NOAA), tornadoes generally last about 10 minutes, traveling distances of about 20 miles. Tornadoes occur mostly in the Midwest, and most often in the spring and summer.

Most deaths and injuries happen to people who are unaware or uninformed that the conditions for a tornado are present in their communities. It doesn't have to be that way. The National Weather Service's Storm Prediction Center (SPC) issues tornado watches when conditions are right for twisters in any part of the United States. If a tornado "watch" is issued for your area, it means that a tornado is "possible." If a tornado "warning" is issued, it means that a tornado has actually been spotted or is strongly indicated on radar, and it is time to go to a safe shelter immediately. Some communities have sirens that sound to alert the public of impending danger from a tornado. If damaging winds and hail are more likely than tornadoes, SPC issues severe thunderstorm watches for threatened areas. The SPC maps the weather watches, and text on its products page gives details about each watch as well as technical discussions of the weather factors leading to severe thunderstorms and tornadoes. You can check for activity by accessing www.noaa.gov.

While most people take time to determine the safest location to be when a tornado warning sounds at home, what about when they're at work? Don't put your employees or your family in more jeopardy by not having a plan. Devise a plan for your office and make sure everyone knows and understands it. Supervisors should inform employees on what steps to take when a tornado threatens while at work. It's important to have a drill for work and for home so that you are sure that everyone knows what to do in a tornado emergency.

Make a plan for your family and one for your employees. Make sure everyone in the family knows the name, address and phone number of the contact person.

Marilyn Blake is chief operating officer of Telcom Insurance Group.

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Follow these steps to prepare for a tornado:

- The Red Cross suggests assembling a disaster supplies kit, including a first aid kit, canned food and opener, battery powered weather radio, flashlight and extra batteries, necessary medicines, bottled water, sturdy shoes and work gloves, and written instructions on how to turn off electricity, gas and water if authorities advise such action.
- Keep a weather alert radio in the safety/security office at work so someone can be aware of storm and tornado watches and warnings. Make it someone's responsibility to monitor the conditions and follow your company policy for notification of others.
- Before tornado season, remind employees of a safe location once a warning has been issued. The area may be in the building's basement. If your building doesn't have a basement then a center hallway, bathroom or closet on the lowest floor where there are no windows are all good choices. Remember to keep this area uncluttered as you will likely only have a few minutes' notice of an impending tornado. If you are in a high-rise building and there's not enough time to make it safely to the lowest floor, go to a hallway in the center of the building.
- Listen to the radio for instructions or for the cancellation of the warning so that you know it is safe to come out.

Don't put your employees or your family in more jeopardy by not having a plan.



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TORNADO FACTS

Did You know...

- ▼ When a funnel forms over water, it's called a waterspout. When it forms over a desert, it's called a dustdevil. Neither are as strong as tornadoes.
- ▼ Tornadoes can occur in series (one after another) and more than one can form from the same cloud system. The worst series in history was on March 18, 1952, killing 689 in Missouri, Illinois and Indiana.
- ▼ Scientist don't all agree how tornadoes form and maintain (stay going).
- ▼ Usually, tornadoes form between 3 p.m. and 9 p.m.
- ▼ Tornadoes can be invisible, but skies are often described as a dark green/black color just before they arrive. Often, you'll see large hail.
- ▼ The sound of a tornado is usually described as a like a jet or a freight train.
- ▼ Scientists can't rate or know how strong a tornado is until after it's over.

During a Tornado

When a tornado warning is issued and a tornado siren sounds, everyone should seek shelter immediately! If you are at work get under a piece of sturdy furniture, such as a work bench or heavy table or desk, and hold on to it. Crouch down and use your arms to protect your head and neck. If outdoors, if possible get inside in a sturdy building. If shelter is not available, lie in a ditch or low-lying area or crouch near a strong building and far away from trees or cars. If you are in a car do not try to out-drive a tornado; tornadoes can change direction quickly and lift a car or truck in the air and destroy it. Avoid seeking shelter under bridges, which can create deadly traffic hazards while offering little protection against flying debris. Establish a company policy for outside employees so they know what to do in the field if a tornado is coming.

The following tips will help make the recovery effort easier, quicker and safer:

- Remain as calm as possible.
- Check for yourself and those around you for injuries.
- Check utility lines and appliances for damages.
- Check for leaks especially of fuels, gas and toxic materials.
- Use a flashlight, not candles, to shut off the main gas valve; have a professional turn it back on when it is safe to do so.
- Shut off electrical power at the control box.
- Observe any loose debris that could fall (if there is any damage to building/house).
- Take pictures of your damaged property for insurance claims.

When a tornado is coming, you have only a short amount of time to make life-or-death decisions. Advanced planning and quick response are the keys to surviving a tornado. ●

team was ecstatic with this weight loss. As program coordinators, we've also observed personal growth through this process, learning how to better take care of ourselves and our families.

What's Next?

We officially started Hardy's 2018 PositivePulse activities in the third week of January with another Wellness Week. We are off to a great start, with all participating employees from 2017 continuing their participation this year. To keep the program fresh and challenging, we are introducing new wellness themes

and activities. In February, Heart Health Month, we offered a blood pressure clinic and purchased blood pressure cuffs for each office so employees could continually monitor their numbers. A sleep challenge will be introduced later this year, and we will continue our communications to get employees thinking about all aspects that contribute to overall wellness—physical as well as fiscal. As a participating company in the NTCA Group Health Program's Wellness Connections plan, we believe our company-provided wellness program is comprehensive, and expect our overall results will be even more successful this year. ●



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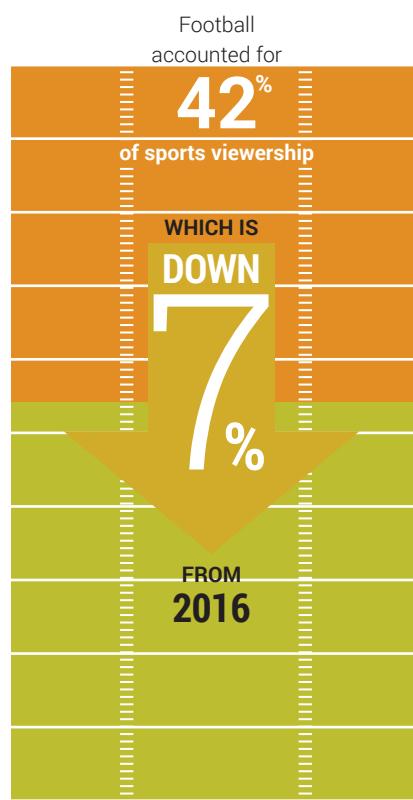
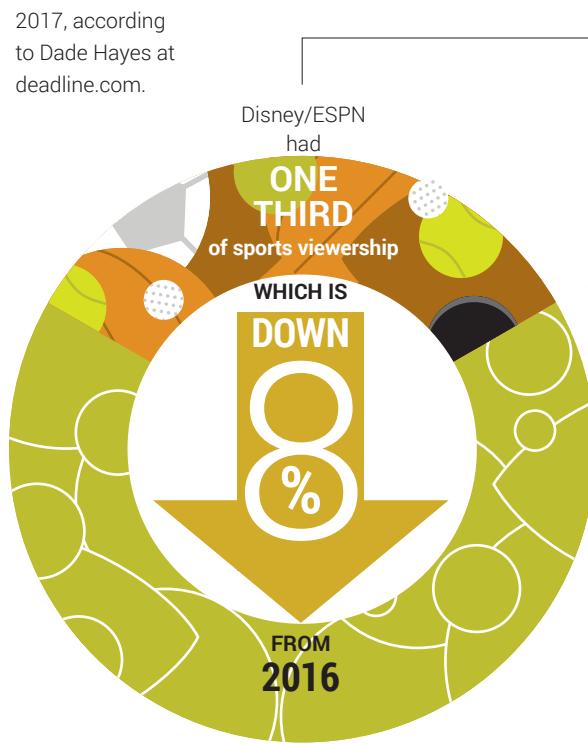
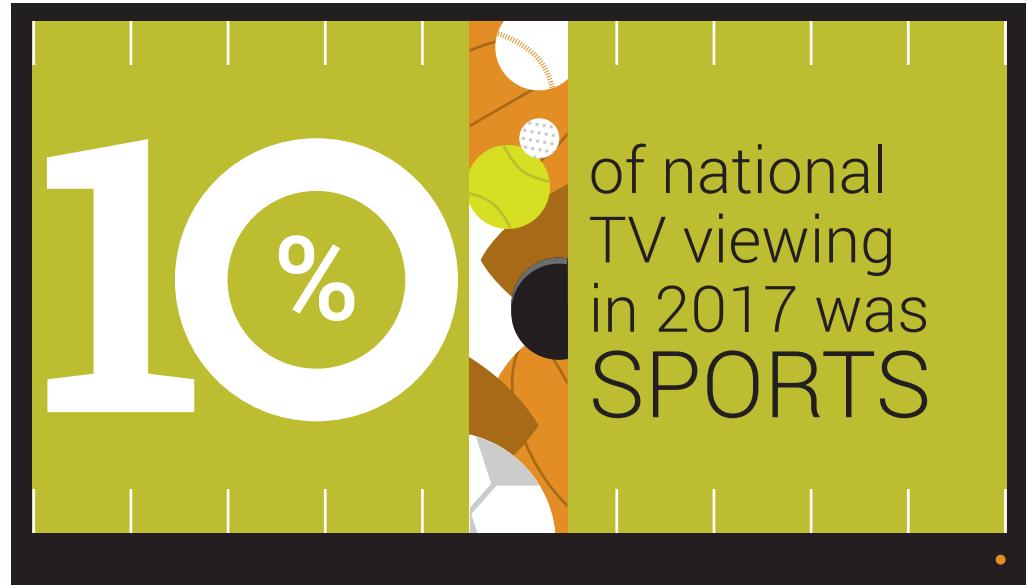
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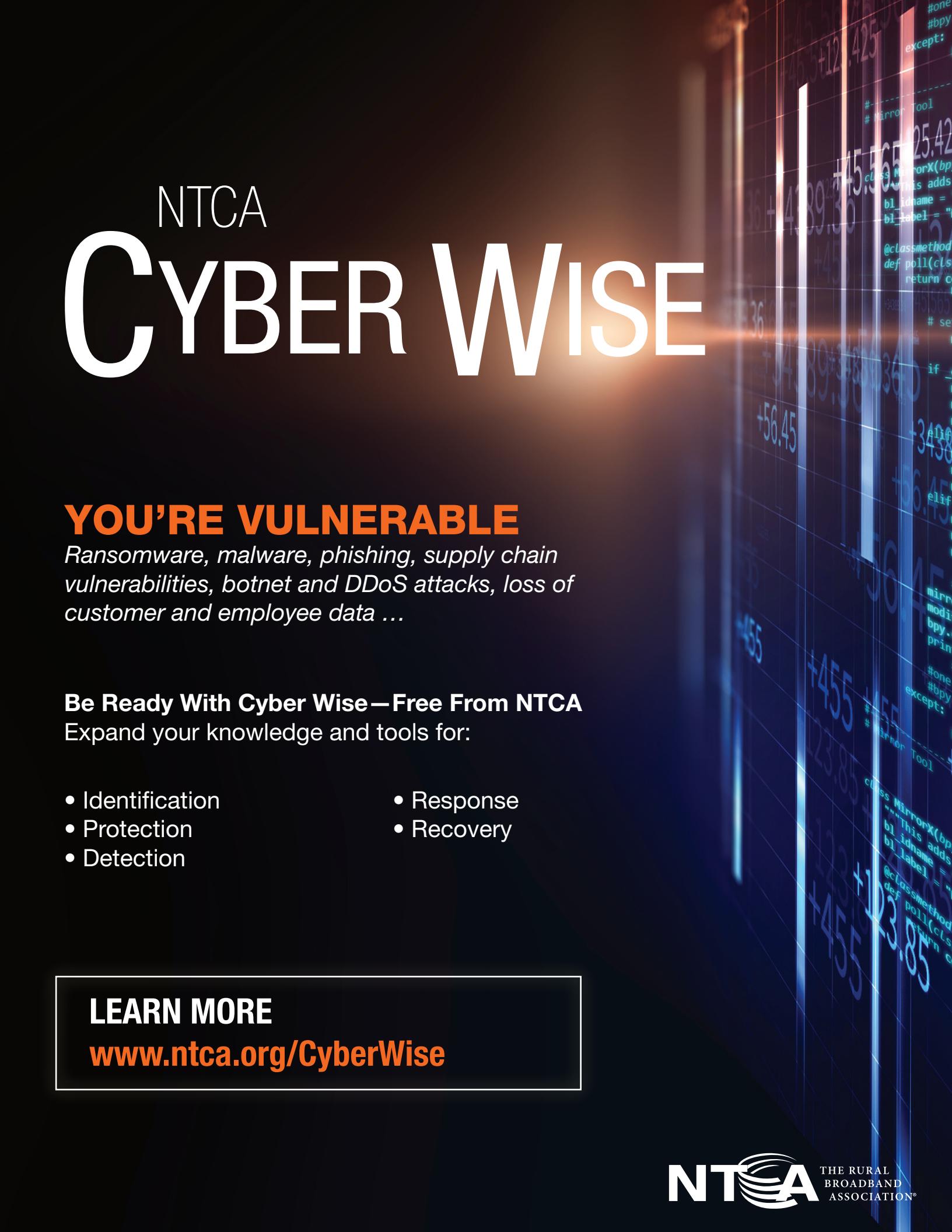
Are TV Sports on the Wane?

Live sporting events have been a big draw for TV viewers, but that appeal may be waning.

A Pivotal Research report shows that sports programming declined 6% between Christmas 2016 and Christmas 2017, according to Dade Hayes at deadline.com.



Christian Hamaker is editor of Rural Telecom. Contact him at chamaker@ntca.org.



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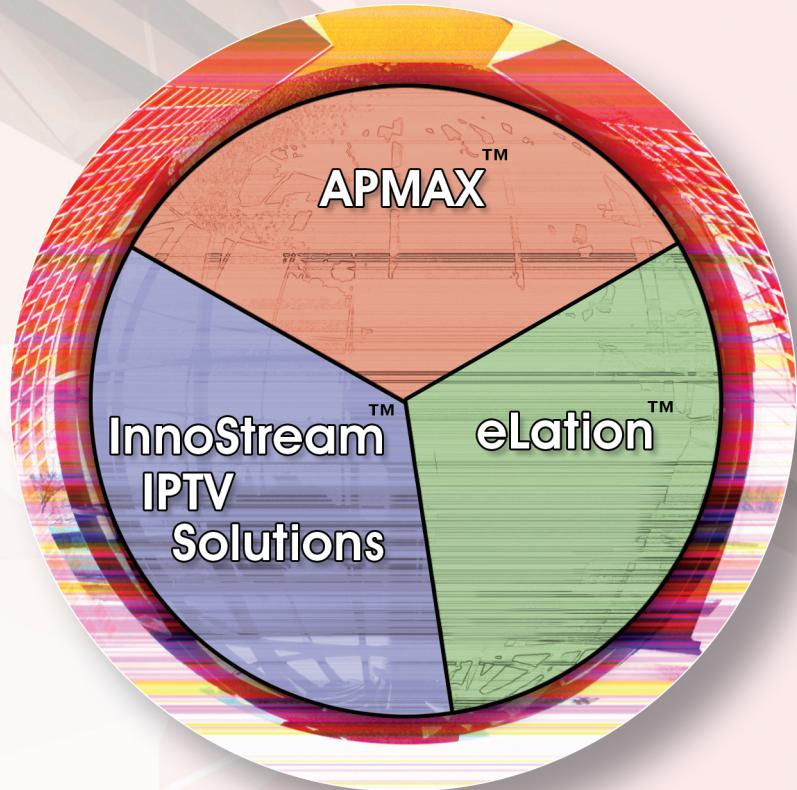
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