

GOPIIONEER

SPECIAL EDITION
FEBRUARY 2023



FASTEST CHANGING
INDUSTRY
IN THE WORLD

Letters^{from} **LEADERS**

Blake Callaham - General Manager

I hope everyone had an awesome Holiday season and filled up on turkey, dressing and your favorite dessert. There is nothing better than snacking on seasoned Chex Mix, spicy pretzels, peanut brittle in preparation for the amazing turkey-ham combo with various side dishes in the presence of family and friends. Along with the extravagant once a year food, comes another great opportunity for technology companies. During the Christmas season, many new devices are purchased and, if you remember, here at Pioneer "Connecting What Matters" is what we do. This is an exciting time as we get to play a part in all our members experiences, and we consider it a success when everything functions without even being noticed. At Pioneer, we have an amazing technology team that forecast network growth and innovates or evolves our network to deliver a "positive and memorable customer experience" even when you connect to new devices to your network.

Speaking of innovation, let's take a quick trip down memory lane. The Pioneer family was created in 1953 to help connect Western Oklahoma to the world through an audio device known as the telephone. This grew to a total of 76 exchanges throughout Western Oklahoma by 1994. A new innovation opportunity was realized in the late 90s known as the internet, and we were proudly an early adopter of the infamous dial-up technology. I can recall taking a career tech course at Great Plains Technology Center in Tillman County and our instructor, Mr. Dunham, had purchased a phone book type catalog that included all the registered websites. I can't imagine what that book might look like today. If I remember correctly, I had my first introduction to spam during this computer technology class. While connected to dial-up internet, I was delivered an ad to win a new *Callaway Big Bertha Driver* by entering a telephone number... needless to say, never received a call for the new driver.

As technology evolved, the need for more throughput followed, giving birth to DSL. This copper-based technology created a positive experience for many users that still exist today with enhancements exceeding 100 Mbps download speeds in some instances. Eventually, the longevity of copper was realized and that gave way to fiber technology.

Fiber is one of the most significant technology innovations of the 21st century due to its future-proof possibilities. There are multiple technologies built on the foundation of fiber and that is our future. Pioneer understood the value of fiber in the early 2000s and began investing in our networks where feasible. Since 2016, we have escalated that initial investment and buried over 6,000 miles of fiber in 6 short years. We believe innovation and fiber will provide the foundation to evolve our products and services for the next 70 years just as we have since 1953. We believe in "Connecting What Matters" and our network investments in fiber can be considered our testimony.



Welcome to GoPioneer!

Our mission is to help the communities of Pioneer learn, evolve and move forward in the ever-changing world of technology.

We welcome feedback, story ideas, or any questions relating to this magazine, previous articles, or even your personal inquiries.

Baffled by your teen's obsession with emojis? Confused about why you get Wi-Fi in the garage but not in your bedroom? Let us know! This magazine is just as much yours as ours, and we are excited to help you become more adept in the tech world.

Contact Us



Editor

Madison McCollum
GoPioneerOK@ptci.com
888-782-2667

**Standard
Mail**

Pioneer Telephone
P.O. Box 539
Kingfisher, OK
73750

**Social
Media**

@GoPioneerOK

Topic of February 2023:

Time to Celebrate!

2023 is a special year here at Pioneer, so we're taking an entire issue to educate and celebrate the people that made the last seven decades possible, our Members and customers.

Inside this issue, we take you back to the beginning and explore some of the landmark moments that have made Pioneer, well, Pioneer! Our spreads give insight on the growth and change the telecommunications industry and fun tidbits people young and old can enjoy.

Thank you for celebrating 70 years with us!

WE'RE CELEBRATING 70 YEARS IN

TELECOMMUNICATIONS

THE FASTEST CHANGING INDUSTRY IN THE WORLD

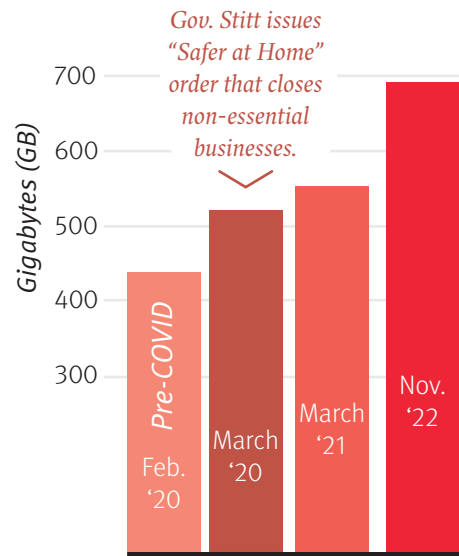
Telecommunications is a broad term that covers the electronic exchange of information over any significant distance. It includes voice, data packets, text, images, and video, but the *how* behind the delivery could be by satellite, copper lines, radio waves, or even fiber optic cables.

Telecommunications has been a vital industry since the invention of the telephone. In just a few decades this industry has gone from grainy-voice calls limited by how far a copper line would stretch, to a near constant back-and-forth of data that brings you instant messages. As humans, we crave connection and information. Thanks to the telecommunications industry, we have more access than ever to our loved ones, jobs, and knowledge. This industry has always been quick to grow and evolve, but the last three years has pushed the growth of telecommunications to astounding heights.

When COVID-19 hit in 2020, the world was unprepared. With governments across the globe issuing stay-at-home orders and shutting unessential industries, educators, CEOs, business owners, and more, had two choices: stop, or move home. The demand for broadband skyrocketed as companies scrambled to set up home offices and parents prepared to bring the classroom home. At Pioneer, we saw a significant amount of growth in data usage following the "Safer at Home" order that closed non-essential businesses in March of 2020. Since then, data usage has been steadily growing, even as businesses opened up and COVID restrictions relaxed.

COVID-19 demonstrated the critical importance of telecommunications infrastructure leading to not just growth in urban cities, but also more government funding and support on bringing rural infrastructure to rural areas like Oklahoma.

Average Usage per Pioneer Customer



1959

Pioneer Telephone
COOPERATIVE, INC.

1996

Pioneer Telephone
COOPERATIVE, INC.

1992



2003



2014

WE'RE CELEBRATING

70
YEARS

When Pioneer Telephone was established in 1953, no one could have known how much it would grow.

For Senator Roy Boecher, Pioneer Telephone was a way to fill a need. Rural Oklahomans were being left behind by providers like Southwestern Bell and General Telephone because the overbuild costs for telephone service in rural Oklahoma wouldn't bring in the profits they saw in urban cities.

Pulling on neighbors and legislators, Roy encouraged them to create a universal telephone service that wouldn't be based on profit, but on need. People were leaving rural Oklahoma in droves following the Dust Bowl and Great Depression and a cooperative telephone company was what they needed to reinvigorate life in Western Oklahoma.

With this passion in their hearts, Oklahoma's first Telephone Cooperative was born.

1953

THE BEGINNING

Pioneer becomes Oklahoma's first Telephone Cooperative with four part-time employees and a \$50,000 investment to bring rural residents telephone service. Governed by Cimarron Electric Board of Directors, Pioneer Telephone Cooperative established four exchanges in Loyal, Omega, Oakwood & Fay and had a total of 450 subscribers..

Senator Roy Boecher becomes Pioneer Telephone Cooperative's first General Manager.

Explore the timeline on the following spreads to learn more about Pioneer's biggest moments.

On a scale of 1 to 10, how would you rate your technology skill?

A six or seven.

What is your favorite thing to do when you have free time?

I like to attend church, spend time with my family, and support my grandchildren in their many activities, whether it be academic, athletic, or musical.

What are your feelings on technology?

I feel that it's useful because it connects you with the world.

BABY BOOMER
1946-1964 BORN 1960

KANDY

RETAIL SALES REPRESENTATIVE
28 years at Pioneer



On a scale of 1 to 10, how would you rate your technology skill?

Oh, heck... 9.73.

What is your favorite thing to do when you have free time?

I would have to say it's either reading a book or playing video games.

What are your feelings on technology?

I think it has improved our lives in many ways. I understand that the older generation doesn't see it that way and they think it's complicated our lives, but I would have to disagree. I am definitely a techy person and I strive to make my home as much of a smart home as I can.

GENERATION X
1965-1979 BORN 1977

MIKE

WEB SPECIALIST
12 years at Pioneer



PIONEER'S HIGHLIGHT MOMENTS

Johnnie Ruhl, Roy's son-in-law, becomes second General Manager.

1975

100 Year Flood devastates Pioneer Headquarters campus.

2007

1959

Pioneer holds its first Annual Meeting and becomes independent from Cimarron Electric.

By this time, Pioneer had 15 exchanges and had chosen Kingfisher as its headquarters.

1994

Richard Ruhl, Johnnie's son, becomes the third General Manager.

2022

Blake Callaham becomes General Manager.

Blake was chosen by the Board of Trustees after a year long search through internal applicants. He is the first non-family member to lead Pioneer.

On a scale of 1 to 10, how would you rate your technology skill?

I feel I'm a six to a seven. I think I'm a little bit better just because I work at Pioneer.

What is your favorite thing to do when you have free time?

I don't have a lot of free time, but when I do I'm always with my husband and my daughter. We like to go out and eat. If it was just me, I would bake and maybe watch a Netflix documentary.

What are your feelings on technology?

This is a tough one. Technology is a part of our everyday life. I don't know how we would get along without technology, now. I feel like it's pretty necessary in the world we live in.

On a scale of 1 to 10, how would you rate your technology skill?

Probably a 9. I'm not an expert, but I can do most tech things and those I can't, I can figure out with Google.

What is your favorite thing to do when you have free time?

Write or play games with my bestie, who lives in Las Vegas, or spend time cuddling my dogs.

What are your feelings on technology?

It's vital to who humans are and who they will be. Technology can be dangerous, sure, but it's also amazing! It's given voices and resources to people they might not have at home or even in their own country, and helped connect family and friends that are miles or countries away. I love technology.

MILLENNIAL
1980-1994 BORN 1986

BLAIR

RETAIL OFFICE ADMINISTRATOR
7 years at Pioneer



GENERATION Z
1995-2009 BORN 1996

MADISON

GOPIioneer EDITOR
3 years at Pioneer



FILLING A NEED - BRINGING

Prior to one-party upgrades, residents sharing the same copper line would be on a 'party line', which hosted two to 20 parties. In most systems each party had a particular mix of short and long rings to differentiate what calls were directed to their home. However, anyone could pick up, making eavesdropping a common practice.

Pioneer places first fiber optic system in service (Hennessey to Waukomis).

1986

Pioneer Cellular expands outside of Enid to Northwest and Eastern, OK.

1990

1975

ENTER THE TELEPHONE

Pioneer completes the one-party upgrade program for all their subscribers—approximately 21,470 customers.

This fiber optic system helped carry voice data (telephone calls) from Kingfisher to Hennessey and Waukomis.

1987

Pioneer Paging on-line and operational with coverage of 10,000 square miles.

When did you get your first cell phone? And what brand or model was it?

2001. It was a Nokia 5125, a candy bar type phone.

Do you still have a landline? If not, when did you get rid of it?

I don't. I got rid of it in 2014.

What is your daily average screen time?

Because of the demands of my job, my screen time is over eight hours a day. I'm looking at the computer my whole shift. If I didn't count work, it would maybe be four hours.

When did you get your first cell phone? And what brand or model was it?

I would have to say it was probably 1995-1996, I was 19. It was a real basic Motorola flip phone that had the orange numbers on it. I had a pager before that.

Do you still have a landline? If not, when did you get rid of it?

I would say we got rid of it eight to 10 years ago. I realized we were using our cell phones for everything and I thought, 'why do we need it?'

What is your daily average screen time?

My phone screen time usually ranges around three to four hours. I also spend eight hours a day at work on my phone or on the computer. If you average that out, we're talking about 11 hours a day with both combined.

I try not to spend a lot of time on my phone when I'm at home. I think a big part of that is because I spend so much time on the computer at work.

KANDY

BABY BOOMER

MIKE

GENERATION X

G TELEPHONE SERVICE TO WESTERN OK

3G technology made it possible for people to send texts, make higher quality calls, send images, and even browse the web.

Pioneer Cellular launches Blackberry® smartphones.

Apple gave AT&T exclusive rights when they first launched the iPhone in 2007. It would be exclusive until 2011, when Apple made it available to Verizon.

Pioneer Cellular launches 100% availability of VoLTE data.

2009

2020

2007

Pioneer Cellular launches 100% availability of 3G CDMA EVDO wireless data.

2014

Pioneer Cellular launches iPhone.

When did you get your first cell phone? And what brand or model was it?

I got my first one when I was 15. My mom said it was so I could let her know when I was done with basketball practice so she could come pick me up. It was a Nokia....I thought it was so amazing.

Do you still have a landline? If not, when did you get rid of it?

We got rid of it in 2016. I feel like we kept it a bit longer than we needed to because my husband, Ronnie, works out of town days, weeks, and months on end, so we kept it as a safety precaution in case something went wrong with the cell phone.

What is your daily average screen time?

I estimate I'm awake for 17 hours a day. If I'm awake, I'm in front of some kind of screen whether it's my phone, my computer at work, or even the television. So that's probably around 15 hours a day.

Blair's iPhone reported four hours of screen time.

When did you get your first cell phone? And what brand or model was it?

Super young. I think I was around 10. It was a gray flip phone with a blue and yellow smiley face snap-on cover. My parents got it for me so they could call me to gather up my siblings from the after school program.

Do you still have a landline? If not, when did you get rid of it?

No. My parents kept one around the house till I was about 13, if that, and I've never had one in my own home.

What is your daily average screen time?

Oh, boy...well with work, I would argue I'm around a screen almost 16 hours a day, not counting sleep or drive time. My phone says I'm at 8 hours, 36 minutes... that's down 8% from last week! Wahoo! Hahaha.

BLAIR
MILLENNIAL

MADISON
GEN. Z

TAKING YOU FORWARD: PIONEER BRI

PROGRESSING TO THE INTERNET

The internet didn't come to life over night. The birth of the internet is considered Jan. 1, 1983, when the ARPANET (Advanced Research Projects Agency Network) switched from the Network Control Protocol to Transmission Control Protocol and Internet Protocol. For those of us who don't speak techno-mumbo-jumbo, basically this was the day all computers learned to speak the same language. However, the internet dates back to the 1960s, when Dr. Leonard Kleinrock published a paper on packet-switching technology at MIT. It had been a slow build from there, but one that Pioneer management saw coming early on.

The first branch of public internet worked best on a system that was both digital and linked by fiber optic cables. Though most of the neighborhoods would rely on copper to deliver data to their homes or businesses, data would have to travel over networks and from computer to computer— often over large distances.

Pioneer's first internet customers in 1993 used BrightNet, Pioneer's Internet service carrier, which

used a "dial up" protocol over dedicated lines. This was a costly and **slow** service. However, in 1999, Pioneer took a great leap forward and launched its Digital Subscriber Line (DSL). This enhanced data speeds and helped more customers than ever connect to the world-wide-web. Using the offices in Kingfisher, Mooreland, and Newcastle, Pioneer was able to provide 85% of its landline customers with internet access by October 1, 2001. Just a year later, General Manager Richard Ruhl announced that all customers in all Pioneer exchanges would have access to DSL internet. This was **HUGE** for rural Oklahoma!

Pioneer has been making strides in the internet sector for almost two decades now. As of 2023, Pioneer provides internet services in 79 towns for over 35,000 internet customers and Members and we are planning to go even further. It's Pioneer's goal to provide all our territories with fiber-optic internet by 2027.

When did you first use the internet?

Around 1989. I worked at United Supermarket and we got new registers like you see today. It was a big deal.

When did you get a computer in your house?

2000.

What do you primarily use the internet for?

Work, of course, and then streaming TV, staying connected with family, online scheduling, banking... I mean almost everything.

When did you first use the internet?

It would have had to been AOL time, maybe even a little bit before that. I would say late 90s, '96-'97, back when Yahoo was the big search engine.

When did you get a computer in your house?

Probably 2002 or so. I think my first one actually was a laptop, one of those big, bulky ones.

What do you primarily use the internet for?

If you're talking about personal use, I would say it's probably just to Google things, like definitions and so on and so forth. But if you're talking about all day long, I would say it's a combination of social media and Google Analytics for the website.

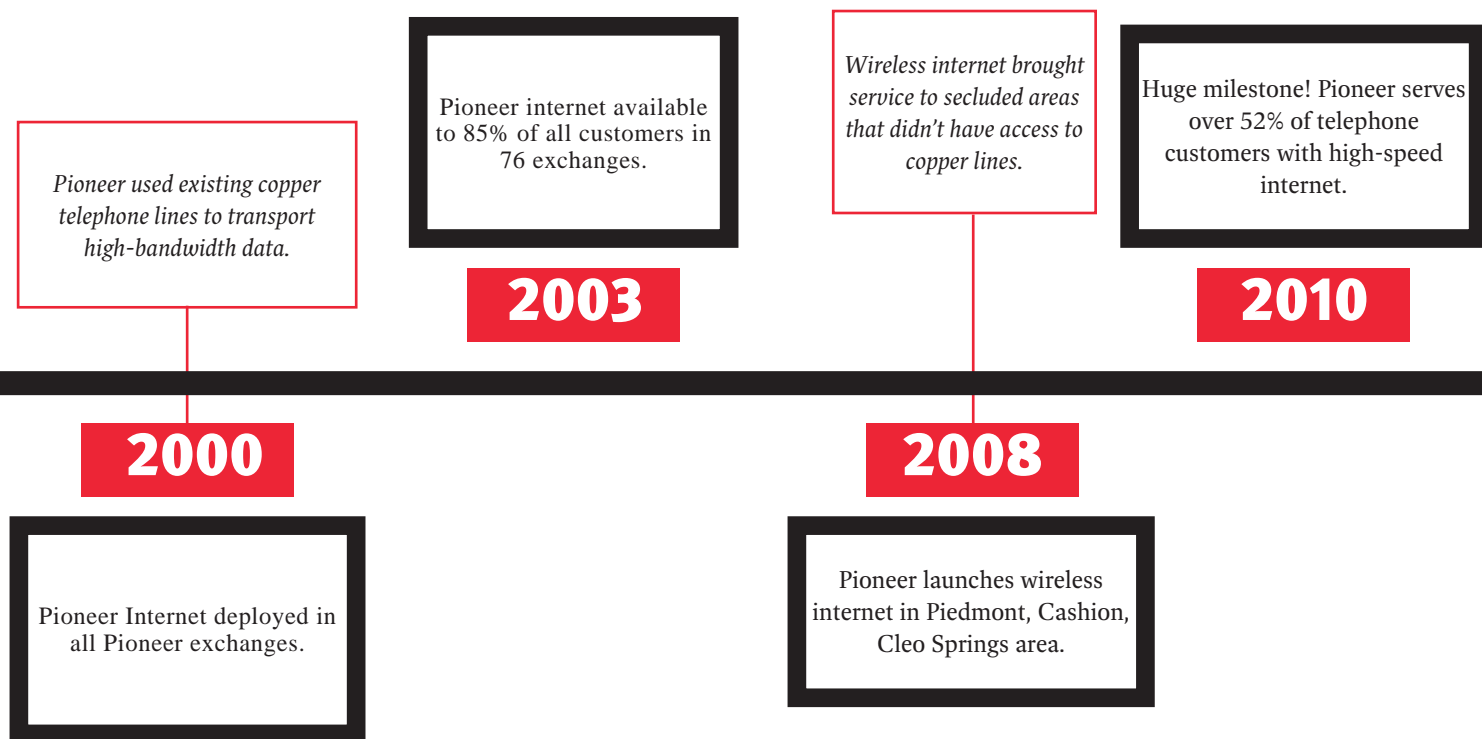
KANDY

BABY BOOMER

MIKE

GENERATION X

NGS INTERNET TO RURAL OKLAHOMA



When did you first use the internet?

I was in the fourth or fifth grade. We went into the computer lab at school. The teacher said, 'okay, you can get on the internet.' I was confused. Just what do you look at on the internet?

We had no concept, we had no idea. So I ended up looking up the **Spice Girls**. That's what it was like back then. We would also instant message chat on the internet with ICQ and AOL Instant Messenger. We didn't research anything like we do now, nothing like shopping.

When did you get a computer in your house?

I don't know exactly, but I know we had one when we got the internet in 1999. I was 13 years old.

What do you primarily use the internet for?

I feel like that's a tough one. I use the internet for everything. I use it for shopping, to pay bills, to research, entertainment—I use it for everything.

When did you first use the internet?

I don't know if I can even remember when, honestly. Probably second grade? I remember being mesmerized when I walked into the library and saw the big, Bondi Blue of the original iMac. We used them to take reading tests over books we read.

When did you get a computer in your house?

My parents probably had one forever, haha, but I remember getting a bulky desktop in my own room when I was in fifth grade. I felt like the coolest kid ever. My dad ran internet to it and I was able to watch shows like **Dragon Ball Z** in my room. Who would have thought?

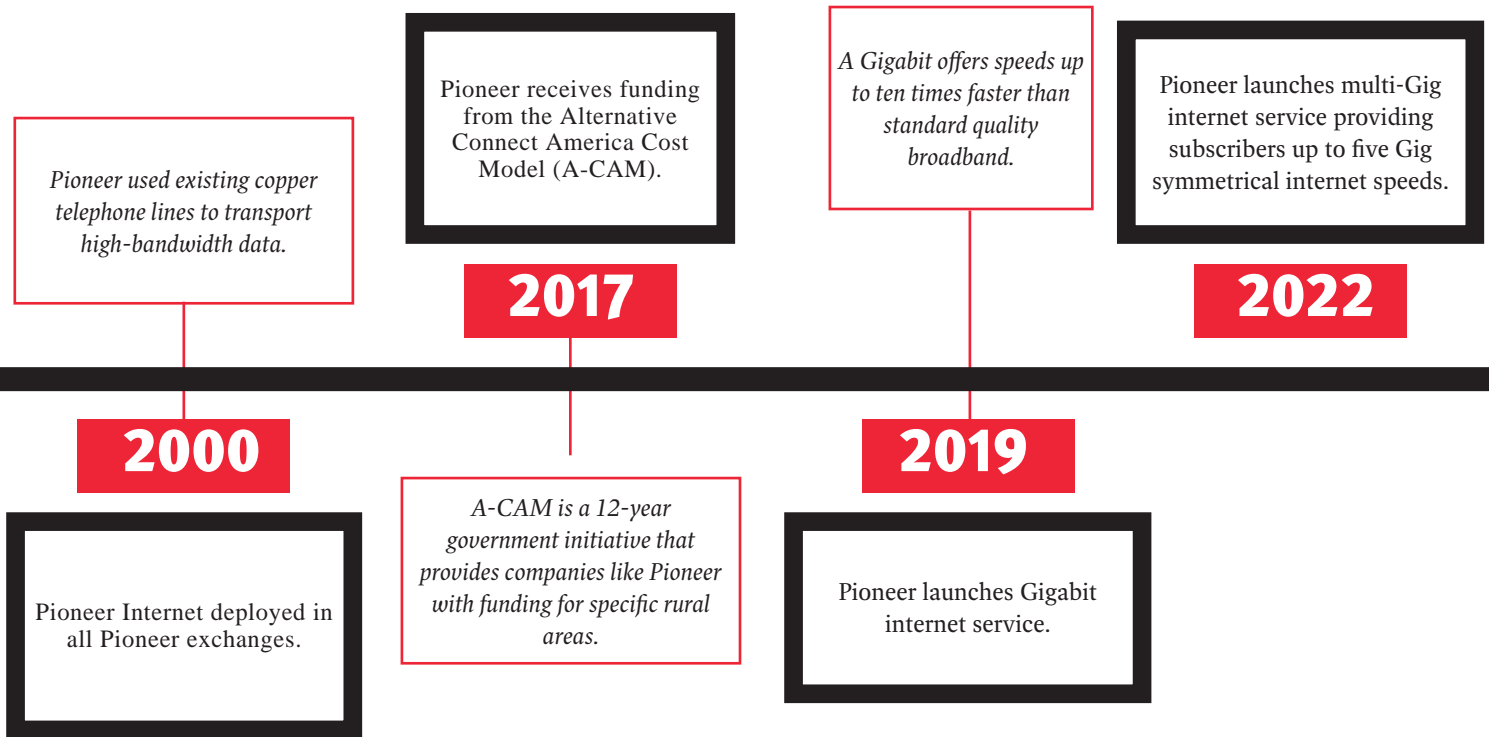
What do you primarily use the internet for?

Er, everything? Haha! But really, I use it to communicate with friends and family the most.

BLAIR
MILLENNIAL

MADISON
GEN. Z

CONNECTING WHAT MATTERS



What is the most important feature of the internet?

Knowledge is at your fingertips and you can keep families connected.

How many hours a day do you use the internet?

At least 12.

Does the internet scare you? Why or why not?

Yes and no. There are benefits to the internet, like what we've discussed, but people use the internet for the wrong reasons. They invade people's privacy, steal identities, cyberstalk...there's a lot of wrong ways to use the internet.

What do you think lies in the future for internet?

Oh my gosh, it's endless. Just look at all of the things that we can do now. I mean, you can use the internet and do a video conference with your doctor. You have classrooms on the internet, you research all kinds of things... the internet is endless as to where it's going to go from here.

KANDY

BABY BOOMER

What is the most important feature of the internet?

I think it would have to be a tie between email and social media. Just because social media keeps us connected with a lot of people, family, and friends that aren't close by.

How many hours a day do you use the internet?

My screen time tends to be different than my actual internet time. I would say probably about nine hours a day, that's including work. A lot of my screen time is really FaceTime because I'm my mom's go-to and she is not tech savvy in any way, so I get usually at least one phone call a day.

Does the internet scare you? Why or why not?

It scares me for my children. My kids, like most kids in this day and age, are connected. They have devices, they're on things like **Roblox** and **Minecraft** and watching shows on **YouTube Kids**. Although I've done my best to put up as many restrictions and parental controls as I can, I know I can't stop everything.

What do you think lies in the future for internet?

I think it's going to continue to be more involved in our lives. The internet's going to control everything. Everything is going to go through it. I think there'll be a day when paper, cash—things like that— will become obsolete.

MIKE

GENERATION X

ERS WITH FIBER INTERNET

FUTURE IS FIBER

Fiber optic cables have been used to link computers since 1975. Of course, the fiber optic cables from 'then' were no where near as sophisticated as what we have now, but it was vital to the growth of the internet. In the beginning, fiber-optic cables were used to connect other towns and counties together for phone calls, but the usage for fiber continued to grow. In 1996, the first fiber optic cable was buried in the Pacific Ocean, paving the way for international data exchange and setting the foundation for modern internet.

Pioneer recognized the need for quality, high-speed internet in rural Oklahoma long before fiber optic cables became attainable. As the technology and materials became commercialized and cheaper, Pioneer began exploring options to future-proof internet in their communities. The opportunity to begin providing fiber internet came in 2017, when the U.S. Government announced the Alternative Connect America Cost Model (A-CAM) project. A-CAM provides companies like Pioneer with funds to lay fiber-optic cable in rural

areas that would otherwise go without. However, A-CAM does not bring into consideration towns surrounded by rural areas, which is why Pioneer began adjusting their plans to include community-overbuild projects that began in 2019. This would require a hefty investment on Pioneer's behalf, but Pioneer wanted to ensure their communities would not be left behind in a time of urbanization.

Since 2017, Pioneer has been a recipient of the USDA Re-Connect grant and the FCC Rural Development Opportunity Fund (RDOF) auction. These projects help Pioneer build out additional fiber in high-cost locations and provide a life-changing service to our customers. Currently, Pioneer Telephone has invested over \$166 million in completed or approved fiber-to-the-home (FTTH) projects as of Jan. 4, 2022. We look forward to serving our customers and Members, new and old, as we aim to bring fiber to all our communities. *To learn more about the significance of fiber internet, visit page 12!*

What is the most important feature of the internet?

You can find out anything you want, good or bad.

How many hours a day do you use the internet?

I think it goes hand-in-hand with my screen time, so I would say about 15 hours. I feel like you're utilizing the internet a majority of the time you are using a screen.

Does the internet scare you? Why or why not?

It doesn't scare me. I think it could, but I do my best to be smart about it. If someone wants to steal my information, they're so much smarter than me and are going to do it. I can't sit and worry about it, so I just do my best to be safe.

What do you think lies in the future for internet?

I have no idea what lies in the future. I would have never imagined this point where we're at right now, so I can't even begin to imagine the future...I'm just glad I'm not the one deciding that.

What is the most important feature of the internet?

Its ability to connect people to each other and resources. Yes, we can connect to our family and friends, but you also have people in unsupportive environments able to ask questions they're afraid to ask or finding resources and people when they need them most.

How many hours a day do you use the internet?

Probably 24/7, haha. Even if I'm not actively on a screen, I'm listening to music, streaming TV, or even using my GPS... sometimes I even have something playing while I sleep.

Does the internet scare you? Why or why not?

Sometimes. I'm more terrified of what happens if we don't keep it accessible, free, and protected. Traditionally people in power want to limit information and make money...and the internet is a place I could see governments limiting to keep people in check.

What do you think lies in the future for internet?

Eventually the internet will run everything. Cloud data, cars, money—it'll make life more streamlined and fast tracked...something we humans always seem obsessed with for the sake of convenience.

BLAIR
MILLENNIAL

MADISON
GEN. Z

Oh, how things change.

INSIDE PIONEER



Pictured: Early Pioneer Telephone operators at their switchboards.

The switchboard was an essential component of the manual telephone exchange and was operated by switchboard operators.

Telephone owners would call the exchange and a switchboard operator would answer. The caller would give the operator the name of the person they wanted to call and the operator would plug an electrical (patch) cord into that person's socket on the switchboard, connecting the two. Long-distance calls required more work. The local exchange would have to patch the call to more distant exchanges, again, through a series of cables.

Pictured: Pioneer Telephone Cooperative's first Annual Meeting.

Pioneer was ran by Cimarron Electric's board of Trustees until 1959, when Pioneer separated its meeting from Cimarron and held its own. The first meeting was held at Homier Field in Oklahoma Park in Kingfisher.



THEN



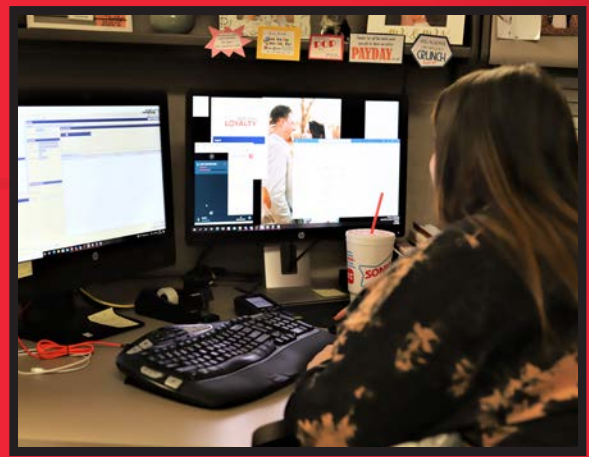
Pictured left to right: Pioneer's first Employees: Johnnie Ruhl, Truman Wood, Roy C. Boecher, and Melvin Thompson.

In the beginning, Pioneer Telephone had only **four part-time employees**. Each individual brought their own skill set that was vital to the growth and development of Pioneer Telephone's place in Oklahoma.



Pictured: Equipment cabinets in Pioneer Telephone's switch room.

Telephone operators were steadily replaced by automatic switching equipment. Pictured above are three of Pioneer's switching cabinets that handle landline services. A few decades ago, these cabinets would have needed twice the space to hold the first switching equipment that replaced switchboard operators.



Pictured: Katelyn Willcutt, Customer Experience Agent at her desk working.

Though switchboard operators were no longer relevant, the need for well-spoken and kind customer service individuals was— and still is— growing. In 2021, Pioneer introduced the Customer Experience Team. This team was hand selected from our top service areas, like our Broadband Resolution Center, in an intentional effort to create a positive customer experience. Our groups are now separated by knowledge and skill to more adequately pair the customer with the agent who is most appropriately skilled to handle their call.

NOW



Pictured: The HR department getting rowdy at Pioneer's 2022 Employee Meeting

Pioneer Telephone is now one of the biggest employers in western Oklahoma. We've grown from four part-time employees to over 530 employees. Right now, Pioneer employs these people from 29 of our beloved towns.

Though our employees are spread all over northwestern Oklahoma and Kansas, Pioneer brings all their employees together each November to celebrate, engage, and update all employees at the Annual Employee Meeting.

Pictured: Pioneer Telephone Cooperative's 69th Annual Meeting.

Pioneer's Annual Meetings have changed over time, with the most important switch being to an indoor and air conditioned space. Pioneer's Annual Meeting is traditionally hosted the first Tuesday in May.

Beginning in 2023, under the new leadership of General Manager Blake Callaham, Pioneer offices will close and join general membership down at the Kingfisher fairgrounds.

Change at Pioneer is constant, and we look forward to seeing not just our general Membership, but all our employee members as well!



Oh, how things change.

INTERNET

COPPER

Copper internet uses the copper cables originally created to host and carry voice for phone calls. With this existing infrastructure, copper became the most reliable and cost effective method for providing internet service.

Copper is reliable enough. It may be heavy, but copper has the highest electrical conductivity of all non-precious metals and has great tensile strength. This means it can resist breaking when it's bent or stretched. For the longest time, having a flexible, conductive metal was enough for internet usage, but as technology evolves and more jobs, entertainment, and resources rely on bandwidth, copper is being stretched to its limits.

Copper, theoretically, is limited to a 10 Gbps data exchange but realistically, it only provides speeds of about 300 Mbps to most internet users because of copper-based internet's limitations. These speeds were adequate for voice, but not for the growing use of data for things like gaming and working from home.

Copper-based internet speeds often fluctuate based on the distance from your provider's Central Office, how many people in your neighborhood share the same line of copper, and even the weather. While all signals get weaker over distances, copper signal degrades 94% over distances greater than 100 meters and it's susceptible to interference from power lines, lightening, electrical surges, and more.

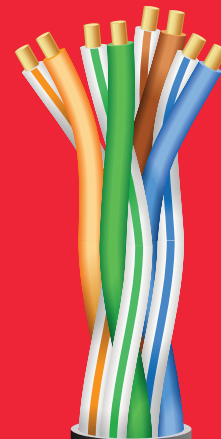
All-in-all, copper is decent for internet, but certainly not the best. Don't get me wrong; copper was fantastic when it was first utilized in the telecommunications industry. However, as is common in any field surrounding technology, things change, and that's okay! As our world grows, our needs do too, and copper simply can't handle the bandwidth and data that people need from day-to-day. This is why many telecommunication companies have started replacing copper internet with fiber internet.

THEN

USES ELECTRICITY
to transmit information

CAN TRAVEL UP TO
100 Meters @ 100 Mbps

SEMI-SECURE
Susceptible to tapping



NOW

USES PROTONS
to transmit information

CAN TRAVEL UP TO
40 KM+ @ 10,000 Mbps

SECURE
Almost impossible to tap



FIBER

Fiber optic has only been a media buzzword a handful of years, so I wouldn't be surprised if this is your first time hearing about it. However, fiber optics have been around since the mid-1800s, when scientists were curious about using light to transmit information. Today, fiber optics are used for many things, but transferring information for the internet is one of the most popular and, in my opinion, best ways to use it.

Fiber optic-based internet is the future of communication. Period. Residential homes and businesses alike benefit from the implementation of fiber internet because of the qualities it has over other internet types like DSL, satellite, or line-of-sight. Fiber uses light to carry data along a single filament of glass. Light is pulsed at one end and decoded at the other end using an optical receiver. The arrangement of these pulses carry digital information and, thanks to computers, give us web pages, voice calls, entertainment, and more.

Though this information doesn't quite travel at the full speed of light, fiber can send data much quicker than any of its counterparts. Unlike copper wires, which lose up to 94% of data over distance greater than 100 meters, ***fiber can send 100 Gbps signals for over 50 miles!*** That's over 800x as far as copper. Fiber is capable of sending larger data packets with some fancy-smancy-science-magic involving the intertwining of light, but we won't dig into that.

Because of how tough and flexible it is. Considering fiber is made of glass and no thicker than a strand of hair, it can seem crazy that it can be more resilient than copper, but it is remarkably tough! Fiber is lightweight, thin, and takes up much less space compared to its counter parts, making it a much better option...but the best part? We haven't even mastered it all. Currently, glass in fiber-optic cables slows down protons by about 31%, but the speed of transmission will go up as researchers develop the materials.

Fiber is your best bet when it comes to future-proofing your home or business internet, which is why Pioneer is so committed to bringing it to our territories!

1991

INVESTING IN THE FUTURE OF OKLAHOMA

Since Pioneer Telephone's beginning, investing in schools and the future of Oklahoma has been important. Investments initially came in the form of sponsorship at school events or programs, build-outs of copper internet lines, and much more. However, in 1991, Pioneer took their investment a step further with the announcement of their Scholarship Program.

THE SCHOLARSHIP PROGRAM

Pioneer's scholarship program is a yearly endeavor that we get excited about every summer. Pioneer awards 26 scholarships each year to deserving scholars in our territories. Pioneer considers all college juniors and seniors for the College Scholarship, which gives a total of \$2,000 over a school year, but they don't stop there. We also have a scholarship for students wanting to pursue a trade. The Technology Center Scholarship is awarded to any qualified applicants and provides \$1,000 for their chosen program. One of the most rewarding additions to this program came in 2020, when GoPioneer Magazine began featuring scholars and their journeys with Members and customers of the Cooperative!

Pioneer proudly announces its scholarships in Tele-Topics, online, and in the magazine every year in April.

I want patients to know that we're there to help them and see them on their journey. **We want to make sure they're getting the care they need.**

I've always had a drive to help people. I'm really hands on and I get really personal with people. **I want to try and make a difference with my life and impact others.**



Meghan Mitch
Radio Technology
November 2022



Tucker Neuenschwander
Biomedical Sciences
January 2023



**As of 2022,
Pioneer has awarded
365 scholarships.**

**THAT'S
\$1,118,927.27**

PROUDLY INVESTED IN THE FUTURE OF OKLAHOMA

OUR SCHOLARS ARE:
Teachers
Nurses
Doctors
Mechanics
IT Professionals
Radiology Technicians
Vets
Lawyers
Farmers
& More!

I realized that helping the elderly was more satisfying. **It's more life changing for them to get up out of their chair without their back hurting or hip hurting.**

I think my biggest goal is to just ***make a difference.***

I considered strategic communications and leaving the life of AG behind, but I didn't want to leave my roots. **Having agriculture in my family history makes it really important to me that I continue in my own way.**



Brady Bowles
Psychology
Physical Therapy
July 2022



Luzviminda McKinsey
Physical Therapy Assistant
September 2022



Emily Garrett
Agriculture Communications
February 2022

MEET OUR PIONEER SCHOLARS

For Senior Tucker Neuenschwander, aiming for medical school always seemed right.

"In middle school I ended up breaking my growth point in my hand and I had to get X-rays done. It was then I was like, 'oh, I want to do something in the medical field,'" Tucker said. "I was really wanting to do Radiology at first, but when I got here, I did more research on what was done in radiology. Then I decided I would probably want to go more the ER-route."

Tucker was scared to take the MCAT over the summer, but he's confident in his skill and is already looking into medical schools.

"I really like OSU more than OU. It just feels more like a giant family. At OU, it felt like a competition of who would be the best, but OSU reminded me of Okarche a bit," Tucker said. "It felt like home and a good family group I'd want to be a part of."

Connecting with people has been important to Tucker.

"I've always had a drive to help people. I'm really hands on and I get really personal with people," Tucker said. "I want to try and make a difference with my life and impact others. I want to help them live a healthier life style."

Tucker was pretty involved on campus. He's spent his time in various clubs on campus and in interamurals, but he found his position as Vice President for his fraternity, Sigma Nu, to be the most rewarding.

"I was Vice President for my fraternity, I rushed my freshman year, but I hadn't been planning on rushing when coming to college, especially here," Tucker said. "But I went there and ended up falling in love with that whole group of guys. We do a lot of community service stuff that's really fun."

Being involved on campus means Tucker is very fortunate to have the Pioneer scholarship to rely on.

"It takes a lot of worry about how to pay for school off. I'm not crazy worried about it, but it seems like it was always on the back of my mind," Tucker said. "I was always trying to figure out how I could make sure I furthered myself in my college education, so this really helps."

When he wasn't participating in his fraternity or a campus club, Tucker was working at IMMY labs.

"During COVID, it was kind of crazy, because we would do 10,000 vaccines a day and then we were doing 500 swabs, just here at UCO," Tucker said. "It was hectic but I really liked it. I got to build up communication skills with other people... I think that is one of the biggest things that came out of my work. Going into the medical field, I feel like this is a skill that will help me talk to anyone."

Tucker graduated in December of 2022. At the time of interviewing, he was waiting for his MCAT scores before applying for medical school.

Q&A

What was your favorite toy growing up?

Does a bike count as a toy? I was on that thing 24/7 riding around Okarche or going to friends' houses.

What is the best piece of advice you've ever received?

Although you have your hiccups in life, everything works out. There's always a purpose for why you're here.

When you're having a bad day, what do you do to make yourself feel better?

I go to the gym usually. But I'm a really big people-person, so having a house on campus is nice. Sometimes I go home and suddenly 20 guys show up. It just makes the day better.

Do you have any pets?

I have a dog. Her name is Gertie and she's a little Doxin. She's getting on her last days, but I love her so much. We adopted her when she was two and now she's 11 or 12.

If you could ask Gertie three questions, what would they be?

Why do you never come snuggle with me and it's always dad; what she thinks about when we're not home; and whether or not she can actually communicate with us.

I always feel like she has something to say...she just has an expressive face. I just know she wants to say something.



Tucker Neuenschwander

District 6: Okarche University of Central Oklahoma
Major: Biomedical Sciences

Q&A



Madilyn Wilson

District 9: Crescent Oklahoma State University
Major: Animal Science - Pre-vet

What would you do if you only had 24 hours to live?

Spend time with everybody that I'm close to. I'm not a very spontaneous person. So traveling across the world in 24 hours would not be me.

Which species would be the worst if all animals could talk?

Peacocks. They're just too flashy.

Do you think aliens really exist?

Yes and no. I feel like there's something just a little suspicious...all stories have to come from somewhere, people don't just make that kind of thing up. Someone had to see something at some point.

If you had to remove one color in the world, what would it be and why?

Red. I grew up a die-hard OSU fan. I didn't apply anywhere else.

Settle this debate: toilet paper over or under?

Under. It just feels wrong putting it over. It's easier to rip, too.

How long do you think you'd survive in a zombie apocalypse?

I feel like I could take care of myself for at least a couple of months. I grew up hunting and then we've reformed and raised livestock, so I feel like I'm pretty well prepared.

Junior Madilyn Wilson started at OSU positive that she was going to graduate with a degree in biosystems agricultural engineering.

"As I went through my classes, it just didn't feel like where I belonged. My whole world flipped upside down," Madilyn said.

Madilyn had spent her life bottle feeding calves and participating in show competitions in rural Oklahoma. She was "so sure" she wanted to work with animals, so she went back home for advice.

"I reached out to my old agricultural teacher and asked for advice. Based on that, I went out on a limb and applied for the early admissions program for OSU's vet school," Madilyn said. "I got accepted."

As an animal science major paying for her own school, Madilyn doesn't have a lot of free time. Any free time she has is spent home on the farm or with her sisters.

"This scholarship helped me out a lot financially. I was worried going into this semester because I wasn't sure how I would afford the rest of my undergrad degree as well as vet school. This took some of that weight off."

Madilyn works various jobs on campus. She's a student vet assistant at the OSU Large Animal Hospital and a Community Mentor in the residence halls, but she also runs her own business, **The Sassy Spur Co.**

"I make car air fresheners. I started in January of 2021 and I've sold them in boutiques here and in Crescent, and I do a lot

of craft shows," Madilyn said. "It's helped tremendously and is also a huge stress relief to sit down and focus on something that isn't school related."

Madilyn has spent her whole life in Crescent, so it isn't unusual to see her rotating back home. For her, staying close post graduation is important.

"Animal health is a big thing to me and I want to help the agricultural industry," Madilyn said, "I noticed that all the large animal veterinarians in my area are reaching retirement age, so this is just a way for me to continue to enjoy what I love and help improve herd health across Oklahoma."

Madilyn doesn't plan to open up a traditional vet hospital.

"I want to be able to do a mobile clinic. I want to go out and be readily available to those rural ranchers and farmers any time," Madilyn said.

As she looks to the future, all she can think about is helping Oklahoma do better.

"I want to be a backbone support and advocate for rural farmers and ranchers in Oklahoma," Madilyn said. "I feel like agriculture has a negative stigma to it, and I want to help change that narrative and better improve overall health of the herds."

Madilyn will graduate with her bachelors in 2024, but as an early admissions student, Madilyn will already be a year into her graduate work at Oklahoma State University College of Veterinary Medicine.



25+ YEARS ANNIVERSARIES

Joe & Kim McClain - Jet

Will Celebrate their 36th Wedding Anniversary February 25th.
They have four sons and six grandchildren.

Terry & Michele Savage - Blanchard

Will Celebrate their 40th Wedding Anniversary March 12th.
They have two sons, two daughters-in-law, and a grandson.

Richard & LaDonna Hedrick - Hennessey

Celebrated their 40th Wedding Anniversary February 5th.
They have two sons and three granddaughters.

Wayne & Mary Jo Cayot - Okeene

Celebrated their 50th Wedding Anniversary May 19th.
They have two children and six grandchildren.

David & Tammy Roberts - Woodward

Celebrated their 43rd Wedding Anniversary July 22nd.
They have a child, three grandchildren, and a daughter-in-law.

Charles & Donna Kreger - Longdale

Celebrated their 60th Wedding Anniversary August 4th.
They have a son, two daughters, six grandchildren, and four great-grandchildren.

Frank & ReNita Huebert - Fairview

Celebrated their 50th Wedding Anniversary August 11th.
They have three sons, three daughter-in-laws, 10 grandchildren, and two fosters.

Ray & Virginia Walker - Frederick

Celebrated their 67th Wedding Anniversary September 23rd.
They have a son, a daughter-in-law, and two grandchildren.

Jim & Joanne Coates - Weatherford

Celebrated their 53rd Wedding Anniversary November 15th.
They have three daughters, four sons, 16 grandchildren, and 19 great-grandchildren.

Joe & Beverly Conaway - Okeene

Celebrated their 60th Wedding Anniversary November 19th.
They have two daughters, eight grandchildren, and seven great-grandchildren.

Preston & Brook Hays - Blanchard

Celebrated their 25th Wedding Anniversary December 8th.
They have five children and four grandchildren.

Rick & Margaret Owens - Elgin

Celebrated their 42nd Wedding Anniversary December 28th.
They have two children.

Happy Anniversary from all of us at Pioneer!

Want your Anniversary published?

To have wedding anniversary announcements of 25 years or more, simply submit your anniversary information including town, wedding date, and number of children, grandchildren and great-grandchildren to GoPioneer Magazine at any of the following addresses:

Email:
Subject: GoPioneer Anniversaries
GoPioneerOK@ptci.com

Standard mail:
GoPioneer Anniversaries
Pioneer Telephone Cooperative
P.O. Box 539
Kingfisher, OK 73750

GoPioneer.com:
Find Anniversaries under
'GoPioneer Magazine' on
our website.

****IF SUBMITTING BY MAIL, PLEASE USE PRINT****