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Jay Rosencrans



RINGER

APRIL 2020



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Taryn, HR Manager
with Jim Prather
at KTGO

NCC Happenings



Dean,
Operations
Manager, and
Jen, CFO,
visited the
Ray High School
Math Class



Taryn, Dean, Terry and Tony
brought the VR Googles to
a High School Career Fair



Student
enjoys new
technology
during the
Career Fair



Taryn at Ray Chamber Christmas Open House

Netflix's United States library alone holds more than 6,000 titles, and delivering this much content across the country depends on a reliable, high-speed internet connection. If you live in North Dakota, chances are the show or movie you are currently watching was brought to you by one of the 14 broadband providers that are owners of Dakota Carrier Network (DCN) and members of the Broadband Association of North Dakota (BAND).

Netflix has evolved from a subscription-based DVD-by-mail service into the most influential video streaming service in the world, with the number of global subscribers increasing from just 4 million in 2005 to nearly 150 million in 2019. In order to keep up with its rapidly growing viewer base, Netflix has had to make drastic changes to the way it operates.

In the early years of its streaming services, Netflix owned and operated all of its own servers—but these servers simply could not keep up with the breakneck speed at which demand was growing. In order to deliver more content at faster speeds and lower costs, Netflix launched a content delivery network (CDN) called Open Connect in 2011. A CDN takes content from an original source and copies it onto servers located all over the world. To establish this network, Netflix has reached out to internet service providers around the globe and provided them with Open Connect appliances to install in their data centers. These small, rack-mountable boxes contain the Netflix content library, downloaded from the original Netflix servers. Now, every time you log in to Netflix, the app scans for a nearby Open Connect box. The content you request will be delivered by the Open Connect box nearest you, so your movie or episode can play at the push of a button.

Netflix has Open Connect appliances in close to 1,000 locations around the world—in cities as large as New York, London, and Tokyo, as remote as the Amazon rainforest, and right here in North Dakota. "Netflix reached out to DCN in 2014, when they noticed that the majority of subscribers in North Dakota were coming to Netflix through the DCN network," said Seth Arndorfer, CEO of DCN. "As a result of that, we have worked with Netflix to place a copy of the entire Netflix library in DCN's data center in Bismarck as well as in Fargo."

Before Open Connect, when you selected a movie from Netflix on your television in North Dakota, the app would need to request that content from Netflix's main server in Chicago. "Think of it as a highway system, and the amount of time that it would take to get from Hettinger, North Dakota to Chicago," Seth said. "Then, factor in the amount of traffic you would have to compete with to get there."

On the information superhighway that is the internet, the farther away a piece of content is located, the more traffic you must compete with to reach it and the longer it will take to load—a phenomenon known as latency. When it comes to streaming, latency means more buffering, low video quality, and a subpar experience for the viewer. "Latency is a very important term in our industry. We want to have low latency in all applications," Seth said. "That's why we work with Netflix and other content providers to get the content as close to the customer's eyes as possible, so that the end user experience is as simultaneous as possible."

Now, instead of travelling all the way to Chicago and back, your request is sent across the state to the Open Connect box in either DCN's Fargo or Bismarck data centers. From there, the content travels along NCC's fiber and appears on your screen within milliseconds. As more households complement their traditional TV viewing with streaming services, the decision to partner with Netflix on the Open Connect Network reflects DCN's ongoing commitment to evolve along with the needs of North Dakotans. "That's really what DCN does," Seth said. "We make investments in North Dakota that are highly technical and complex, but for an end user, it simplifies their life."

Through this relationship with Netflix, the owners of DCN—North Dakota's rural broadband service providers—and BAND members are able to deliver content to North Dakota homes at a higher quality and faster speed than ever before, so you don't have to wait for your next episode of Friends to start.



The National Do-Not-Call Registry has been established to offer you a choice about receiving telemarketing calls at home. Registering will stop most telemarketing calls, but it will not stop calls from certain non-profit and political organizations, and calls from organizations with which you have established a business relationship.

Consumers can register their residential and wireless telephone numbers, on the National Do-Not-Call Registry by telephone or by Internet at no cost. The number will be on the list the day after registration; however, telemarketers have up to 31 days to remove the number from their call lists. If you received an unwanted call after your number was on the National Registry for 31 days, report it to the FTC. You may register up to three numbers at one time if registering on the Internet. If registering via telephone, you can register only one number at a time and you must call from the telephone number you are registering. A number can be removed from the Do-Not-Call Registry at anytime.

To register or remove a number from the Do-Not-Call Registry call 1.888.382.1222, for TTY call 1.866.290.4236 or register on the Internet at www.donotcall.gov. Additional information can be obtained at www.donotcall.gov.

Businesses:

Federal law requires any person making telephone solicitations to residential telephone subscribers to comply with the federal Do-Not-Call rules and regulations set forth in 47 C.F.R. § 64.1200 and 16 C.F.R. Part 310, including the requirements of the national Do-Not-Call (DNC) Registry.

ATTENTION NCC Fiber Customers!

NCC is obligated to provide access to 911 service on a landline telephone voice service during a power outage. NCC installed a battery backup when your services were switched over to fiber optics. More information can be found on our website at nccray.com/terms-conditions. Instruction manuals for proper care and use of your battery can be obtained by contacting NCC at 568-3331 or emailing ncc@nccray.com.

2020 NCC Director Election

Board of Directors Nominations Deadline!

The 2020 NCC Director election nominations are open for the following seats:

District #3

– Wildrose, McGregor, Noonan, Alamo

District #7

– Crosby

If you or someone you know is interested in becoming a Director for District 3 or 7, please refer to the NCC Bylaws located on the NCC website (nccray.com). Completed petition forms must be returned to NCC by **Friday, May 1st**.

SAVE THE DATE

Tuesday, June 16th!

NCC's upcoming Annual Meeting of members is Tuesday, June 16th in Ray. Members of all ages are invited to enjoy an evening of food, entertainment, prizes and a business meeting of members.

NCC Employee News

Telecom Training & Safety Award!

Blane Zeleny was awarded with his Apprenticeship designation at the annual Telecom Training & Safety (TT&S) conference in Bismarck earlier last month. Join us in congratulating and thanking him for his hard work and dedication to his career and NCC.



Blane Zeleny
Communications
Specialist



Lorena Lambrecht
BAND President

BAND President



Lorena Lambrecht, NCC Director from District #6 (Tioga) was elected at the conclusion of the Broadband Association of North Dakota's (BAND) business meeting in early December and took office on the first of the year.

BAND is the statewide association that represents members of North Dakota's independent telecommunications industry. Lorena has served on the NCC Board of Directors since 2007 and the BAND Board of Directors since December 2011.

Grant Awarded



NCC and the Broadband Association of North Dakota (BAND) join together to award the Ray Fire Department with the Rural Development Finance Corporation (RDFC) grant of \$2,000. Pictured is Angela Schepp, Business Development Manager at NCC and Kory Olson, representing the Ray Fire Department.



Should you drop your landline?

Let our experts help talk you through the decision. Call 568-3331 today!

New Listings

CROSBY

Tasheena Greaves 965-4823

RAY

Jett Trucking Inc 568-5797

MARMON

Linex of Williston 826-2000

Notes

- **Thank you** to all of the students who submitted applications for the NCC scholarships! Winners will be announced on the NCC Facebook page and a future newsletter.
- **Happy Easter!** The NCC office will be closed on Friday, April 10th. Outages or troubles can be reported by calling the office number 568-3331 for our after hours support.
- **Call Before You Dig!**
If you plan to begin any project that involves digging (patios, fences, trees) remember to first call 811. Every digging job requires a call to 811 to have underground utility lines marked. In some cases, lines are buried close to the surface and could easily be damaged by even shallow digging, resulting in service interruptions to your neighborhood. When you call, simply tell the operator where you're planning to dig and what type of work you'll be doing. The affected local utilities will send a locator to your property, free of charge. As one of your local service providers, NCC thanks you in advance for your cooperation!



Under the Telecommunications Act of 1996, "universal service" means basic telephone service that is available to all consumers.

Universal service is voice grade access to the telecommunications network, including local usage, touch-tone calling, single-party service, access to emergency 911 service, access to operator service, and discounted services to qualifying low-income consumers. All of these services are available from Northwest Communications Cooperative in these areas: Alamo, Bowbells, Columbus, Crosby, Epping, Flaxton, Grenora, Lignite, Marmon, McGregor, Noonan, Powers Lake, Ray, Round Prairie, Tioga, and Wildrose.

Monthly charges for these universal services are:

Basic local resident service:	\$22.46 - \$24.50
(Charges vary depending on extended area service (EAS) to designated service areas)	
Touch-tone Service	No additional charge
Single Party Service	No additional charge
Access to emergency service:	No additional charge
(Local government assesses a tax to pay for special equipment)	
Access to operator services:	No additional charge
(Charges for services vary and are determined by the long distance carrier you have chosen that provides your operator service.)	
Access to directory assistance:	No additional charge
(Toll blocking to prevent long distance calls from your phone, determined by the long distance carrier that provides the service.)	

Low-income Programs:

Lifeline (low-income) monthly discount	
Telephone Only Subscriber	\$7.25/mo. discount
Telephone/Internet or Internet Only	\$9.25/mo. discount
(Toll blocking to prevent long distance calls from your phone, available at no charge to qualifying low-income consumers)	

Fixed Federal, State and Local Prescribed Charges:

Federal Subscriber Line Charge:	
Residential & Single-Line Business	\$6.50
Multi Line Business	\$9.20
Federal Universal Service Charge:	
Single User Residential	\$1.38
Single User Business	\$2.01
Multi Line Business	\$2.59
ISDN	\$4.98
Access Recovery Charge:	
Single Line Business	\$1.50
Multi Line Business	\$3.00
Telecommunications Relay Service	\$0.04
911 -Emergency Services	\$1.50 - \$2.00

If you have Universal Services questions, please call NCC 568-3331.

Report Trouble: 611

Email: ncc@nccray.com

Ph: 701-568-3331 or 800-245-5884

Directory Assistance: 411

Call Before You Dig: 811

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Business Hours: M-F 8am to 5pm.
NCC Message Center will take calls outside of these hours.

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