The Effects of Streaming Services on Your Network

2017 WTA SPRING MEETING

- Jimmy Todd
- CEO/General Manager, Nex-Tech

Established as Rural Telephone Service Company, Inc. in 1951:

- A Cooperative Telephone Company in northwest, north central Kansas
- First company to offer competitive services in a larger incumbent carrier's service area
- Early adopter of fiber-optic technology
- Our facilities-based service area covers 9,300 square miles
- Growth was achieved through meeting the needs of our customers by offering advanced telecommunications services, now offering IT and business services across the Midwest region

2016, working with a group of like-minded independent telecom companies: EATEL, SilverStar, Smithville & Chickasaw

- Knowing that the potential for a Communications Act update is inevitable in the near future
- Understanding that USF reform is driving support down
- Began sharing a message to gain support for an issue that impacts any rural broadband service provider

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here for you

Data Consumption Growth

- January 2015 – Data on our network was under 1.3 PB
  - PB = Petabyte

    = 1,000 Terabytes (TB)

    = 1,000,000 Gigabytes (GB)

    = 1,000,000,000 Megabytes (MB)

Data Consumption Growth

- January 2016 – Data on our network exceeded 2.5 PB
  - 192%, Year-over-year change in data usage
  - Subscriber change was 4.7% increase

Data Consumption Growth

- January 2017 – Data on our network exceeded 4.5 PB
  - 180%, Year-over-year change in data usage
  - Subscriber change was 0.6% increase

  - This was a new record for data on our network
  - This was a jump by 13% in a single month; most likely this was fueled by new data consuming Christmas gifts

Data Consumption Growth

- January 2017 – Data on our network exceeded 4.5 PB

- January 2016 – Data on our network exceeded 2.5 PB

- January 2015 – Data on our network under 1.3 PB

What Lead to the Data Growth?

- January 2015   < 1.3 PB
  - Netflix represented almost 600 TB
  - This represented 46% of the data on our network
  - Our network had exceeded the Petabyte range for the first time in November 2014

  - General Web traffic was over 400 TB

What Lead to the Data Growth?

- January 2016   > 2.5 PB
  - Netflix represented over 1 PB
  - This equated to greater than 41% of the data on our network

  - Google Web (includes YouTube) was just under 500 TB
  - General Web traffic just under 240 TB
  - Akamai traffic was over 220 TB
  - Facebook traffic was over 100 TB
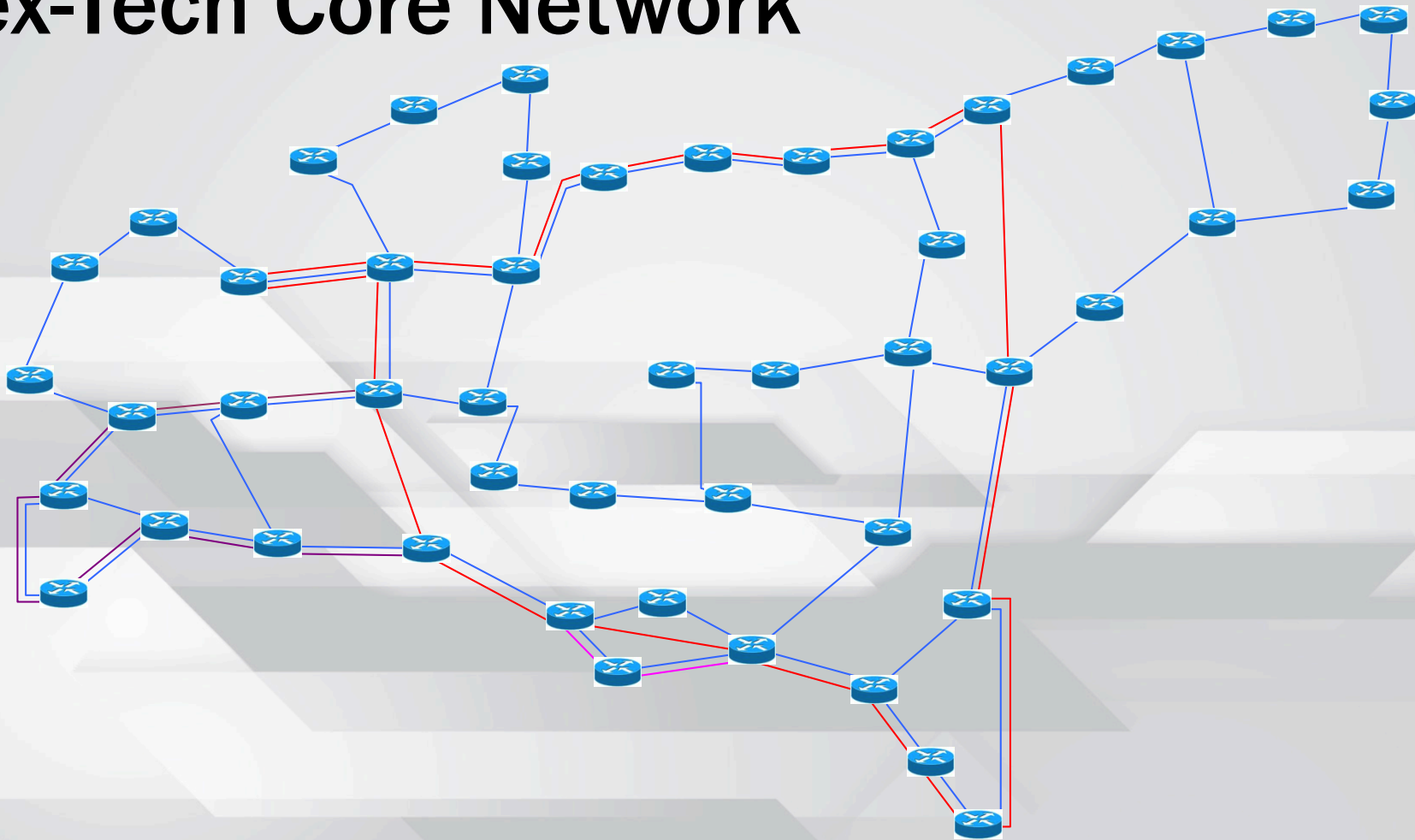 - Apple was just under 100 TB

What Lead to the Data Growth?

- January 2017   > 4.5 PB
  - Netflix alone was almost 1.7 PB
  - This represents greater than 37% of the data on our network which is originating from this one entity
  - Growth of data from Netflix alone has tripled since January 2015

  - Google Web was over 900 TB
  - General Web traffic just under 750 TB
  - Akamai traffic was over 350 TB
  - Facebook traffic was just under 175 TB

Nex-Tech Core Network

So, why might we all be concerned?

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Upgrades are Necessary, but...

- There is a huge cost to make the upgrades necessary to meet consumer demand.
- The OTT video service providers are having the greatest impact on our networks, but they are delivering their products and services to our customers on our network without any cost for access to these customers.

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Upgrades are Necessary, but...

- In rural America, the subscriber base does not have the scale to make this work without these Over-the-Top entities paying for the use of our network.

EATEL Data from 2016

- Utilizing a Sandvine Data Sample and applying known subscriber information, EATEL was able to determine that OTT service providers were making $8 million providing subscription services over their network.
    - Netflix, Amazon Video, Apple Music, and SoundCloud all were making in excessive of $1 million.
    - Since this analysis, some of the subscription rates have increased which means their revenues have increased.

ADVOCACY

- We have met with Members of Congress and staff holding key positions in the:
  - Senate Commerce Committee
  - Senate Rural Broadband Caucus
  - House Energy & Commerce Committee
    - Telecommunications Subcommittee
  - House Rural Broadband Caucus

ADVOCACY

- We have meetings scheduled with personnel in the:
  - Trump Administration, White House
  - FCC
  - FTC

Growing Support

- We see this as being different from USF support that is critical for rural networks, but we have stayed focused on this being a usage-based mechanism.

Growing Support

- We have been taking feedback from MOC's and crafting language which we hope to offer up as the Rural Broadband Network Preservation Act of 2017.

Growing Support

- We have met with associations that represent rural broadband providers:
    - NTCA
    - RWA
    - ACA
    - US Telecom