

Leveraging the Regulatory Data Into Tomorrow's Environments

2017 SPRING MEETING MARCH 12-15 HILTON HEAD SC

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Sponsored by the Associate Member Committee

Discussion Participants

- Matt Gilbert (Moderator)
 - Mapcom Systems
- Eric Cramer
 - Wilkes Communications, Inc.
- David Schornack
 - Arvig
- French Scott
 - FairPoint Communications

An Associate Member's Perspective

- Seeing two generalizable reactions
 - Companies that accept the new regulatory data requirements
 - Companies that accept and then look for the silver lining
- Today you are going to hear from 3 companies that have found a silver lining



ERIC CRAMER – PRESIDENT & CEO WTA March 2017

TOPICS TO BE COVERED



RATE OF RETURN AND FCC REFORM ORDER







WILKES COMMUNICATIONS

RATE OF RETURN and REFORM IMPACTS

- ROR Dropping from 11.25% to 9.75%
- Operating Expense Caps
- Capital Expenditure Caps
- Competitive Overlap
- CAF ICC and Safety Net





2016 - 2021





EXISTING CHANGES MADE IN 2010

- CAF ICC Phase Down over 20 years all switched access minutes billed were capped and phased down 5% per year
 - \$730k in 2016, \$640K in 2017, \$572k in 2018, \$530K in 2019, \$485K in 2020
 - Reduction of (\$245K) per year in 2020 will keep reducing
- SAFETY NET ADDITIVE Phase Down
 - \$728K in 2015, \$584K in 2016, \$310K in 2017, \$0 in 2018
 - Reduction of (\$728K) per year by 2018 compared to 2015





- CAPITAL EXPENDITURE LIMITS Limit of Maximum of \$4M per year or less beginning - 7/1/2016
 - Limits are based on allowable plant in service replacement
 - Some allowance made for carry over in next year
- OPERATING EXPENSE CAPS Already have a Corporate Operations CAP - now limit on other expenses beginning - 7/1/2016





- RATE OF RETURN Dropping from 11.25% per year to 9.75% phased down over 5 years beginning 7/1/2016
 - 11.25% to 11.00% effective 7/1/2016 (-.25%)
 - 11.00% to 10.75% effective 7/1/2017 (-.25%)
 - 10.75% to 10.50% effective 7/1/2018 (-.25%)
 - 10.50% to 10.25% effective 7/1/2019 (-.25%)
 - 10.25% to 10.00% effective 7/1/2020 (-.25%)
 - 10.00% to 9.75% effective 7/1/2021 (-.25%)

Total reduction of (-1.5%) of return or (-15.38%) of support





- **COMPETITIVE OVERLAP SUPPORT REDUCTION** Eliminates support in a census block that has a wireline competitor serving 85% with 10/1 - phased down over 5 years - beginning 7/1/2017
 - Have option to disaggregate support in one of four methods
 - Disaggregate by Density
 - % support repurposed from density of subscribers in non overlapped vs overlapped
 - Disaggregate by Square Miles Served
 - % support repurposed from of % of square miles service area in nonoverlapped vs overlapped





IMPACT TO WILKES TMC SUPPORT - \$8,602,697 2016 - Total Support - \$8,255,942 - (\$346,755) Reduction 2017 - Total Support - \$7,020,238 - (\$1,235,704) Reduction 2018 - Total Support - \$5,779,486 - (\$1,240,752) Reduction 2019 - Total Support - \$5,128,714 - (\$650,772) Reduction 2020 - Total Support - \$4,774,929 - (\$353,785) Reduction 2021 - Total Support - \$4,123,976 - (\$650,953) Reduction

Total Impact at the end of 5 years - (\$4,478,721) per year Loss of (\$16,532,897) over the period compared to current





GROWTH STRATEGIES 2016 - 2021





TOPICS TO BE COVERED







BROADBAND DEPLOYMENT

- CHALLENGES
- ROR Reform
 - ROR from 11.25% to 9.75%
 - Caps in Capital Investment
 - Competitive Overlap
 - Disaggregation of ICLS
- Need for scale
- Awareness and adoption
- Access to Capital
- Spectrum

• NEEDS

- Statewide Cooperative Model - TMCs to BMCs
- Right of Ways
- Funding
 - CAF Phase III
 - Grants
 - State Broadband Fund
- Contribution Reform
- Public Private Partnerships
 PPPs





BROADBAND DEPLOYMENT

- VALUABLE INFORATION FOR BUILDING BUSINESS CASES
 - Structures Passed
 - Route Miles
 - 911 Addresses
 - Density
 - Expected Take Rates
 - Forecasting
 - End User Billed Revenue vs Support

- Funding
 - CAF Phase I and II
 - CAF BLS
 - Infrastructure Grants for Unserved/Underserved
 - Partner with Munis / EMCs
- Buildout Obligations
- Data Only Broadband Impacts
- Adoption





BROADBAND DEPLOYMENT

- VALUABLE INFORATION FOR BUILDING BUSINESS CASES
- Mapping
 - Competitors Cable / WISPs
 - Coverage
 - Speeds
 - Technology
 - Overlap
- Access to Backhaul / Connectivity
- Dark Fiber Availability

- Demographics
 - Households vs Occupied
 - Businesses
 - Age
 - Population
 - Median Income
- USAC Anchor Institution Data Base
 - Schools, Colleges, Universities
 - Hospitals, Towns, PSAPs





PUBLIC PRIVATE PARTNERSHIP MODEL

1. We would design and engineer the network

2. We would then work out a budget to build a backbone network including remote sites

3. We would require grant funding of a minimum of 30% to 50% the capital build over a defined numbers of years for the backbone based on the designed cost

4. We would need to secure a 7 year contract for the anchor business beginning with the County Government Telecom Services at a minimum – (Voice / Broadband subject to a competitive proposal and winning the service)

5. We would like to establish a project team of stakeholders in conjunction with the county manager and define a project plan for the county and the associated municipalities

6. We would establish a marketing plan and conduct market research for demand





PUBLIC PRIVATE PARTNERSHIP MODEL

7. We can own all or part of the fiber - 80/20, 50/50, 20/80

8. We would light and own all of the electronics – would require co-locations and or land

9. We would service the network with our technicians

10. We would provide all of the billing and back office functions including opening local retail locations, hiring local people, providing local customer service and tech support supported in part in Wilkes

11. Once the backbone is built we would then determine based on the market demand studies where to begin building taps off of the backbone to service FTTH subscribers.

12. We would require an expected take of at least one service of a preferred 40% along any route

13. Long term fiber IRU tied to a % of gross revenue after target take rate





THANK YOU!







» Arvig is the largest independent telephone company in Minnesota, and the 17th largest in the nation

» Started in 1950, Arvig now owns and operates 16 phone companies and manages another, serving about 70,000 customers with 700+ employees and is an ESOP company

» Phone, internet, cable TV, fiber, transport, security, managed IT services, construction, wiring, website development, advertising, fire alarms

» More than 55,000 telephone accounts, 24,000 television accounts, and 44,000 Internet accounts

» Service provider to more than 125 schools





» 2,600 lit buildings, more than 10 data centers

» More than 9,000 square miles of service area, 10,000 miles of fiber, and more than 27,000 miles of total facility

» Strategic plan is to continue building our fiber network and be known as a top transport and broadband company in the Midwest

» Arvig does business in Minnesota, North Dakota, South Dakota, Wisconsin, Iowa, Nebraska, Montana, Wyoming













> FIBER MAP

arvig Do Business Arvig provides telecommunication services to more than 70 communities in more 48 counties in Minnesota (out of 87)

*s*arvig

888.992.7844 | arvigbusiness.com



Over-riding issues / concerns

» How do we maximize the current investment we have made over the past 65 years under the changing regulatory environment?

» We need to drive the revenue per customer up

» Once area of creating issues for Arvig is understanding what services we could provide and where we could provide them

» We have had some inefficiencies in collecting and utilizing map data

» In just the last 10 years we have acquired nine companies, most of which just had "analog" maps (drawings, print outs, penciled maps, etc.)

» When a customer calls, customer service could not immediately tell the calling customer what exact services Arvig could provide to them without having a plant person doing some investigation

» One of the companies we acquired in this time frame, Melrose Telephone, was already utilizing Mapcom which allowed us to see the potential for other companies



Desired outcomes & mapping system

» After full integration and implementation, we will be able to have detailed plant design with approximate costs with a layout/diagram which will allow us to provide accurate, timely quotes and increase efficiency internally

» A new mapping system will help Arvig serve our customers better, too, with having valuable data at our finger tips while on a call or visiting with a customer

» With the ability to see what type of speed and platform each customer or potential customer is capable of receiving, we can properly assess the needs and options for the customer

» Help with Broadband deployment

- -Structures passed current customers or possible new customers
- -Route miles
- -911 Addresses
- -Forecasting costs



Maximize efficiency

» Arvig chose Mapcom to develop a company-wide mapping system

» By producing a list of potential customers, our marketing and sales teams can work together to strategize the best way of being able to serve these sites, making our teams more productive

» We can utilize all of this data by tying it to our CRM system that will help the sales team work through potential opportunities, allowing our sales staff to go after the most opportunistic customers

» Management will have the visibility of the progress for each list or individual lead

» We would have a better understanding of potential capital costs required to deliver the service

» We are using Mapcom to help us determine potential buildout costs for ACAM



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The list is populated in an Excel and we can then upload that into our CRM for Lead and Opportunity tracking, also giving management visibility to production







Utilizing a CRM and the Mapcom data we can produce real-time reports and progress



» Top business issues Arvig wants to solve:

- Improve sales estimate process
- Automate presales process to managing the anchor sales
- Qualify new vs. existing customers for target sales
- Utilize consumer data for Sales and Marketing
- Bring data to all departments
- Increase sales productivity
- Maximize profitability
- Increase revenue per customer
- Make it easier to keep ACAM project on budget





- » Serviceability:
 - Ability for user to type in address and determine what speed/platform is available, and if the customer has service already or not
 - Arvig middle-man will translate serviceability per structure
 - Store the information of opportunities within the CRM system
 - Provide a better experience for our customers





Summary

» As a result of meeting our ACAM requirements, Arvig has lots of opportunities to increase revenue per current customer

» We can identify and sell to more current non-customers

» ACAM gives Arvig a huge PR/marketing opportunity





Thank you!

Presentation Outline

French Scott – FairPoint Communications

FairPoint Overview Municipal Program Data Analysis & Mapping Adjacent Applications Tips for Getting Started

About FairPoint Communications

FairPoint provides advanced data, voice and video technologies to single and multi-site businesses, public and private institutions, consumers, wireless companies and wholesale re-sellers in 17 states. Leveraging an owned, fiber-based Ethernet network — with more than 21,000 route miles of fiber, including approximately 17,000 route miles of fiber in northern New England — FairPoint has the network coverage, scalable bandwidth and transport capacity to support enhanced applications, including the next generation of mobile and cloud-based communications, data center colocation services, and managed services.

Corporate Quick Facts

- 100+ years of combined telecommunications service, with 20+ years of experience in NNE
- ~\$860M in annual revenue
- ~2,500 employees (2,000 in NNE)
- Operations in 17 states
- Largest fully-owned and managed network in NNE; incumbent provider
- More than 21K total fiber route miles
- 2 on-net data centers
- Local presence and workforce
- 1,800+ towers served with fiber in NNE
- \$1M+ in annual charitable and civic contributions



FairPoint's Municipal Broadband Economic Development & Planning Program

Started 2 years ago to better engage municipalities and improve relationships

- » We seek to:
 - Understand community-specific needs
 - Build collaborative relationships share information and aspirations
 - Identify potential synergies
- » We share:
 - Company info and the services available
 - Pending or recently completed upgrade projects
 - Fiber and broadband infrastructure information with relevant analyses

» We ask them to:

- Clarify their objectives
- Know what assets and facilities exist
- Consider how they plan to fund and upgrades

Data Analysis & Mapping

» The Idea

- Map Form 477-like Data
- Google Earth Pro Free and Interactive
- » The Initial Maps and Analysis

"I had an idea, but I had no idea"

- » New Levels and Layers
 - Conversation went to new levels
 - Began adding additional overlays of information
 - Emphasized unique aspects or "story" for each community

"Mapping went from being supplemental... to essential...to focal"

Milestones

Some Early Successes and Key Discoveries

» Early Success Stories

» Key Discoveries

» New Opportunities

Example Broadband Eligibility

Eastport, ME – April 2016



25MB ■ 20MB ■ 15MB ■ 10MB ■ 7MB
 3MB ■ 1.5MB ■ 768K ■ DnQ ■ TBD



- Just 1% of homes & businesses qualified for speeds of 10 Mbps or more
- 76% qualified for a maximum of 3 Mbps & the rest qualified for even less

Example Broadband Eligibility

Eastport, ME – December 2016



25MB 20MB 15MB 10MB 7MB 3MB 1.5MB 768K DnQ **TBD**



Today:

- 80% of homes and businesses in town qualify for speeds of at least 10 Mbps
- 63% qualify for service at 20 Mbps or more
- CES & BBE speeds are not reflected

Example Infrastructure Map

Diverse Fiber Routes – Keene, NH



(Does not include most access fiber routes or recent fiber builds)

Example Infrastructure Map

Fiber, COs & RTs in Keene, NH



FairPoint Inter-office & Feeder Fiber (Does not include most access fiber routes or recent fiber builds)

Example Infrastructure Map

Downtown Keene, NH



(Does not include most access fiber routes or recent fiber builds)

Example Subscriber Analysis

Residential Broadband Subscribers – Bucksport, ME Feb 2017

This chart shows the distribution of FairPoint residential broadband subscribers by the maximum eligible speed and what percentage are fully-subscribed to their maximum.

Here, 88% of subscribers in town are "under-subscribed" – eligible for a higher speed than what was purchased. This undersubscription is greater at the higher speeds.

The availability of higher speeds is no guarantee of subscription.

60% 50% 40% 30% 20% 10% 0% 25MB 20MB 15MB 10MB 7M8 3MB 1.5MB 768K Fully Subscribed ØUnder Subscribed

Residential Subscriber Analysis

Adjacent Applications

Other Business Areas Where Mapping of Data Has Proven Beneficial

- » Customer/Prospect Mapping
- » Subscriber Analyses
- » Data Quality Improvement
- » Business Customer/Prospect & Service Mapping
- » In the Queue

"Mapping has become an extended part of any data analysis..."

Tips for Getting Started

» Start Small

» Starting Quick and Inexpensively

» Fill and Explore Your Sandbox

Contact Information

French Scott

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Silver Linings Found

- Wilkes Communications
 - Building Business Cases Public Private Partnerships
- Arvig Enterprises
 - Serviceability Mining Areas for New Opportunities
- FairPoint Communications
 - Supplementary → Essential → Focal

Questions Text 804-317-1354

2017 SPRING MEETING, MARCH 12-15 HILTON HEAD SC

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