

# **Municipal Telecommunications Strategy**

**January 2, 2003**

The purpose of this City Council Retreat topic is to discuss strategic alternatives for the future operation of the municipal Telecommunications Utility.

## **HISTORY**

In January 1996, Council authorized a feasibility study for a municipal telecommunications infrastructure. The study included a community needs assessment, technology analysis, financial analysis, market penetration analysis, ownership and operations options and build-out alternatives. The study also identified public goals, benefits and risks associated with developing a municipal telecommunications system. In general, the study established a need for advanced telecommunications in Longmont, identified possible technological solutions and provided options for the City to consider.

In November 1996, Council approved construction of the initial phase (7 miles) of the backbone ring connecting the Civic Center, Service Center, Public Works and three electric substations. Construction of the second phase (10 miles) was to be considered when funding became available. In January 1997, Council authorized the establishment of the Telecommunications Utility with the following business strategy and objectives:

### **Business strategy**

- Own and operate a municipal fiber optic backbone
- Seek a private partner for building and operating a citywide broadband network
- Low risk/no risk for City
- Enterprise fund
- Capitalize on synergies with electric utility (construction, right-of-way, operations)

### **Business Objectives**

- Increase economic vitality (business retention and economic development)
- Create an environment for competition and choice of providers and services
- Enhance community services (education, health care, government, etc.)
- Improve government and utility communications
- Reduce City operations costs
- Protect City rights-of-way
- Strategically position electric utility for expected competition (platform for advanced electric services and introduction of new services)

Telecommunications Utility operations and administration was funded by a loan from the Electric Fund, which has since been repaid.

In April 1997, Platte River Power Authority offered to fund construction of the entire 17-mile backbone ring (about \$1.1 million). In return, Platte River would receive dedicated access to 12 fibers and interconnection with its own fiber network for electric system data acquisition and

control at the city's five electric substations. Council subsequently approved construction of the second phase of the backbone ring.

Construction was completed in December 1997 and the backbone ring was placed into operation in January 1998. Nine miles of fiber spurs from the backbone ring have since been installed to connect almost all municipal and school district facilities.

In 1996 and 1997, before and after construction of the fiber backbone ring, the City met with many potential telecom service providers. The intent was to find a private company that would 1) develop a broadband network and provide services directly to consumers without any City involvement, or 2) develop a broadband network in conjunction with the City. The City met with the following companies, some of them numerous times. All of them turned down the City's proposal to participate in building a City-wide broadband network.

Alta Telecom, AT&T, Cabletron, Comcast Cable, Design Home Automation, ECAP, E3SI, Hewlett Packard, ICS, Inacom, INS, ISP Alliance, MCI, McLeodUSA, Midcom, NORTEL, Pioneer Holdings, SpectraNet I, Sprint PCS, TCG, TCI, TRWest, TVCN.Net, Utilicom Networks, US West and Wilde Construction.

Several telecom companies did express interest in collaborating with the City to a lesser or greater degree in extending services from the backbone ring to serve specific markets (commercial), to deliver specific services utilizing the backbone ring (data/Internet), or to piggyback specific technologies onto the backbone ring in order to provide services (wireless). A few companies proposed City-wide networks that more or less matched the City's objectives. Those companies included:

Adesta Communications, Advanced Telecom Group, ICG, Mesa Networks, MFS Network Technologies, NanoSpace, Seren Innovations, Tess and TouchAmerica.

In April 2000, the City reached an agreement with Adesta Communications to fund construction of a citywide broadband network and provide advanced telephony services, high-speed data services, Internet services and digital cable television services. The Adesta agreement provided the City significant revenues and services with minimal financial investment or risk. Adesta began network construction in November 2000, stopped construction in April 2001 due to lack of funding, and filed bankruptcy in November 2001.

Between mid-2001 and early 2002, two of the service providers (ICG and Yipes) with fiber lease agreements also filed bankruptcy, either terminating or restructuring the lease agreements and significantly reducing Utility revenues.

## **STATUS OF CITY OWNED TELECOM FACILITIES**

The City of Longmont Telecommunications Utility owns and operates a 17-mile fiber optic backbone ring with 144 fibers and nine miles of fiber spurs from the ring (about 3,000 miles of optical fiber). There are 402 miles of fiber in use by the City (12 fibers reserved) and Platte River Power Authority (12 fibers reserved) for internal voice and data. Most City facilities, including electric substations, have links to the fiber network.

The audited net asset value of the fiber network was \$1.1 million at year-end 2001, with an estimated replacement value of \$3.2 million. The Telecommunications Fund has no debt with estimated 2002 year-end reserves of \$205,000.

Estimated 2003 revenues from fiber leases, collocation and bandwidth agreements are estimated at \$84,200. Customers generating revenue to the utility include Yipes Enterprise Services, Longmont United Hospital, Boulder County and the City.

An assessment of current and projected revenues and expenses, assuming no changes in operations, indicates that the Telecommunications Utility can continue to operate without a deficit for approximately 30 months.

## **ISSUES**

### **Is there demand for improved broadband services in Longmont?**

Although evolved in some degree, the community needs and benefits identified by the 1996 Telecommunications Feasibility Study, which formed the basis for establishing a municipal telecommunications utility, still exist today. Increasing demand for high speed residential data services is being mitigated somewhat by the recent rollout of DSL and cable modem services, but high speed services remain uneconomical for most small and medium-sized businesses.

Currently, most residents have access to cable modems and about 25 percent have access to DSL. However, with the growth of high technology businesses and technologically savvy citizens in Longmont over the last few years, the deployment of DSL and cable modems years after this technology was available in other communities has left many residents frustrated.

High speed services to businesses are available from Qwest, ICG, Yipes, Mesa Networks, and WiCom, as well as several providers that use Qwest local loops. ICG and Yipes provide services over fiber to the business. Mesa Networks and WiCom provide services over a wireless network. AT&T-Comcast does not market cable modem service as a business service.

Just five years ago, no one could have imagined how they could possibly fill up a 1 GB disk drive. Today, the smallest readily available drives are 20 GB and the industry is rapidly moving towards 200 GB products. Digital pictures and video are pushing for exponential increases in storage capacity and bandwidth.

Although both DSL and cable modem services are “broadband” as defined by the U.S. government, they are rapidly becoming inadequate due to their technological limitations and today’s increasing bandwidth demand. Typical DSL speeds are 256 Kbs to 512 Kbs, depending on the distance from the central office. Typical cable modem speeds vary between 400 Kbs and 2 Mbs. Actual speeds experienced by a user depends on the number of users at any one time. In comparison, today’s broadband services delivered through a fiber system to the home or business are typically delivered at 10 Mbs to 100 Mbs speeds, with theoretical limitations estimated at nearly 1 million times higher.

New loop qualification standards proposed by Qwest may make DSL service available to more homes and businesses further from the central office or remote terminal, but the speed of the service is also reduced under these new standards. Cable modem service is still expanding throughout the city, but as more people subscribe, the bandwidth available to each user is more constrained. For many businesses and telecommuters, DSL and cable modems at best meet the bandwidth demands of a few years ago. To meet their current needs, 10 Mbs to 1,000 Mbs services would need to be available at reasonable prices.

### **Will Longmont get a full, multi-service broadband network?**

Incumbent service providers have recently stepped up to provide data services to residents with DSL and cable modem technologies, maximizing the use of their copper twisted pair and coaxial cable infrastructures. However, beyond continuing to leverage their existing infrastructures with these technologies, no plans have been announced to deploy anything with greater capability.

In spite of increasing demand for bandwidth in both the commercial and residential sectors, it is unlikely that private industry will build a full multi-service fiber based broadband network in Longmont anytime in the near future – especially considering the current state of the telecom industry. However, it’s really not a matter of if, but when, such a system will be deployed. Given enough time, private industry will eventually begin to serve the increasing broadband demands of Longmont. This will likely occur after new systems are deployed in larger, more profitable metropolitan areas and may take many years. One of the main issues facing communities is the lost opportunities while waiting for incumbent providers to upgrade facilities.

In some respects, the situation with telecommunications service in Longmont today is analogous to the situation with electric service in the early 1900’s. Citizens were not satisfied with electric service availability, pricing and quality, prompting the City to create a municipal electric utility to act in the public interest.

Today, more than 450 municipal utilities across the country are providing some form of telecommunications service to their respective communities because private company service was unavailable, limited, of poor quality or too expensive.

Community-owned utilities also have different goals than their private counterparts. Where the private sector may determine that return on investment is too low to enter (or expand in) a market, a municipal government may invest in infrastructure at cost-of-service rates for economic, educational, social and quality of life purposes. The community still wins if the end result of municipal telecommunications investment is that it motivates existing and new providers to expand services, improve quality and reduce prices.

While there is certainly financial risk in Longmont moving forward with a municipal telecommunications infrastructure, consideration should also be given to the risks of not expanding the municipal telecommunications system. The risks are tied directly to the objectives stated in the feasibility study, specifically: a) commercial and residential telecommunications needs (service availability, pricing, quality) may not be adequately addressed; b) economic vitality (business attraction/retention) may diminish; and c) municipal needs may have to be met with lower service levels and/or higher cost.

Another consideration is potential new revenue to the City general fund. Currently, data services like DSL and cable modem are not used in calculating the Telephone Utility Tax and the Cable Television Franchise Fee collected by the City. Revenues from an expanded municipal telecommunications system, however, could provide additional revenues to the general fund.

A complete fiber to the home system in Longmont could cost \$35 to \$50 million. The payback period on this capital investment would depend on the “take rate” of the services offered. Many residential customers with access to DSL or cable modems may be content with these services for several years. In addition, if incumbent service providers respond by improving services and lowering prices, as has occurred in other areas, initial take rates could be further dampened.

If the City of Longmont were to construct a full, multi-service capable broadband network, there are two distinctly different business models that could be pursued: 1) a wholesale model, and 2) a retail model. In a wholesale model, the City would only provide the connectivity, or “roadways,” that private entities would use to deliver services to customers. The private entities would own the central office and head-end equipment necessary to provide their services. In a retail business model, the City would own and operate the entire system as a service provider competing directly with other service providers. A complete feasibility study would be required if either model is seriously considered.

### **Is fiber to the home the right technology?**

Except for fiber, all rival technologies are currently working at the outer limits of their technological capacity due to fundamental physical barriers. The ultimate limit on capacity for fiber is several hundred thousand times higher than that of the coax used in cable TV systems. While wireless may provide a quicker and cheaper way to roll out services initially than wired infrastructure, it will remain a shared and limited spectrum. Basically, more wireless users will drive the need for fiber to be built closer to the end user to support the wireless access points.

“The future does in fact belong to fiber-based high-performance broadband,” according to Paul E. Green, Jr. (Paving the Last Mile With Glass, IEEE Spectrum, December, 2002.) “Both computers and the common carriers’ systems run at multiple tens of gigabits per second. Dial-up modems carry, at best, 50 Kb/s – nowhere near enough to support the innovative new services on which the future prosperity of both the telecom and computer industries depends. DSL and cable modems, both of which run below 1 Mb/s downstream (to the subscriber) and considerably less than that upstream when fully subscribed, are a step in the right direction, but not much more.

Today’s broadband languishes with not enough compelling applications and too few users because of inadequate data rates.”

Green argues that fiber to the home is the broadband technology of choice for several reasons. He concludes: “The only questions are: how far off is it, and to whom will it belong?”

Several communities originally planning hybrid fiber-coax systems just a few years ago have now redesigned for fiber to the home due to the improved economics for such a system.

No one can predict exactly what new technology may be just around the corner. Although there may be additional incremental gains squeezed out of alternate technologies as short-term solutions for higher bandwidth demand, it seems clear that fiber is currently the best “future proof” solution.

### **DISCUSSION POINTS**

The Telecommunications Utility is at a crossroads. Some of the original objectives for establishing the Utility have been achieved. The ultimate goal of a citywide broadband network - - and the associated economic, social and cultural benefits to the community -- has not been realized due to the loss of the Adesta Telecommunications Alliance.

Much has changed since Council established the Telecommunications Utility in 1997: the telecom industry is depressed and in turmoil nationwide; local and national economies are struggling; technology has evolved; and high speed data services are now available from other providers in some parts of the community. One thing has not changed: there continues to be

general consumer and business discontent with service choice, availability and quality of advanced telecom services from existing providers.

Given the current industry and economic environment, it may require several years for the City to obtain another private partner to complete development of a citywide broadband network as originally envisioned. It may also be very optimistic to assume that the City will be able to attract a new partner under terms and conditions similar to the Adesta agreement. Therefore, Council needs to determine a strategic course of action for the Telecommunications Utility.

Presented here are three basic options that could be considered for future operations of the Telecommunications Utility. Staff will be prepared to discuss these options in greater detail at the Retreat. Depending upon how Council directs staff to proceed, a more complete legal and financial analysis may be required.

- 1) **Dissolve the fund.** Sell or transfer ownership of Telecommunications Utility assets. The Electric Utility and Platte River Power Authority are potential candidates. Current customer service commitments would follow ownership.
- 2) **Attain fund solvency.** Without a significant increase in revenues or decrease in expenses, it is expected that utility fund reserves will be depleted in mid-2005. Staff will focus on a) reducing operating expenses, and b) increasing revenues from existing services (fiber leases, collocation, bandwidth) and customer-funded system expansion. The utility will continue to serve current customers with minimal investment in new municipal infrastructure. Staff will continue to pursue a private partner to expand infrastructure and introduce new services. This strategy may require a temporary waiver of utility franchise fee payments and/or short-term loans from other sources.
- 3) **Expand system and services to achieve community goals.** The Utility will proactively seek opportunities to expand infrastructure and services, add customers and grow revenues. This strategy will require investment in new infrastructure targeted to one or more specific customer markets.

## **DISCUSSION OUTCOMES**

- What additional information does Council need from staff?
- Which basic option should staff pursue?
- Are there modifications to the scope of the preferred option?
- What level of community involvement should staff pursue in implementing the selected option?

## **ATTACHMENTS**

A - Telecom fund estimates

B - Pros and cons of strategic options

C - Potential telecom fund scenarios

D - Municipal broadband systems

E - Media commentary

F - Public Power: Powering the 21<sup>st</sup> Century with Community Broadband Services

G - Article from Public Power Weekly, October 28, 2002

H – MuniToons: The Folly of Municipal Ownership of Broadband Facilities, a paper presented to the Palo Alto (CA) City Council by PacBell, September 9, 2002

**ATTACHMENT A  
TELECOM FUND ESTIMATES**

	<b>2003</b>	<b>2004</b>	<b>2005</b>
<b>Beginning Balance</b>	205,000	137,200	45,000
<b>Revenue<sup>1</sup></b>			
<b>City (IS &amp; Museum)</b>	7,500	7,500	7,500
<b>YIPES</b>	61,500	62,700	64,000
<b>LUH</b>	8,700	8,800	8,900
<b>Boulder</b>	6,500	8,800	8,900
<b>Cap. Reimburse. for 2002 exp.</b>	18,000	-	-
<b>Total</b>	102,200	87,800	89,300
<b>Operating Expense<sup>2</sup></b>	170,000	180,000	190,000
<b>Assume all Capital will be reimbursed</b>	-	-	-
<b>Net Income</b>	(67,800)	(92,200)	(100,700)
<b>Reserve Balance</b>	137,200	45,000	(55,700)

<sup>1</sup>Current and estimated leases.

<sup>2</sup>This amount is approximately \$100,000 less than the 2003 budgeted amount.  
It is a bare bones projection that reflects expected expenses if the Telecom Fund continues to operate as it does currently.

**ATTACHMENT B**  
**PROS AND CONS OF STRATEGIC OPTIONS**

<b>OPTIONS</b>	<b>PROS</b>	<b>CONS</b>
<p><b>1) Dissolve the Fund/Terminate Telecom Initiative</b></p>	<ul style="list-style-type: none"> <li>+ Avoid risk of new infrastructure investment and long-term network operations.</li> </ul>	<ul style="list-style-type: none"> <li>- Community may lose existing and potential new industry while waiting for the private sector to provide advanced telecom services.</li> <li>- Costs to fiber system users may increase; primary impact to General Fund (Information Services) and Electric Fund.</li> <li>- Minimal opportunity to increase city revenues.</li> <li>- Minimal opportunity to improve community telecom services.</li> <li>- Community benefits are indirect; network is limited primarily to internal use.</li> </ul>
<p><b>2) Attain Fund Solvency</b></p>	<ul style="list-style-type: none"> <li>+ Telecom Fund retains opportunity for future revenue.</li> <li>+ Low risk approach.</li> <li>+ Search for private partner can continue.</li> <li>+ Telecom Fund retains flexibility to take advantage of new opportunities when market conditions change</li> <li>+ Customer funded projects may bring additional benefits to community as a whole.</li> </ul>	<ul style="list-style-type: none"> <li>- Community may lose existing and potential new industry while waiting for advanced telecom services to be developed.</li> <li>- Little immediate opportunity to improve services to the community.</li> <li>- Minimal opportunity to develop new revenue streams.</li> <li>- Viability of Telecom Fund may be an ongoing challenge.</li> </ul>
<p><b>3) Expand System and Services to Achieve Community Goals</b></p>	<ul style="list-style-type: none"> <li>+ Will help retain existing industry and attract new industry to community.</li> <li>+ Customers will have access to advanced services in relatively short time frame.</li> <li>+ Customers and service providers may fund portions of system development.</li> <li>+ Telecom Fund will generate new revenue streams in relatively short time frame.</li> <li>+ City takes a proactive role in improving quality and level of services to community.</li> <li>+ Incumbent providers are likely to increase service levels and decrease prices.</li> </ul>	<ul style="list-style-type: none"> <li>- Telecom Fund investment in a specific project is at risk if project is not profitable.</li> <li>- Higher level of activity in delivering services increases exposure to legal challenges.</li> <li>- Repayment risk to financing entity.</li> </ul>

## **ATTACHMENT C**

### **POTENTIAL TELECOMMUNICATION FUND SCENARIOS**

#### **1) Dissolve the fund**

- A) Transfer Telecom assets to Electric Utility
  - Electric would assume responsibility for current service commitments.
  - Electric would maintain and manage fiber as critical power systems infrastructure.
  - Any short fall of revenues in meeting fiber system operating expenses may be met by an increase in fees to the General Fund.
  - Current .75 FTE shared Telecom/Electric staff reallocated to Electric.
  - 1 FTE Telecom position reassigned within Electric utility or eliminated and technical services out-sourced.
  
- B) Transfer Telecom assets to PRPA
  - Initiate discussions with PRPA concerning transfer of ownership, rights and responsibilities.
  - Fiber may be a zero dollar transfer.
  - City may receive some credit or payment for SONET and Ethernet systems.
  - City may retain access to current 12 fibers in use.
  - City would receive fiber license revenues minus PRPA operating expenses.
  - Current revenues may not cover operating expenses; city may need to pay difference.
  - Current .75 FTE in shared Telecom/Electric staff transferred to Electric budget.
  - 1 FTE Telecom position eliminated.
  - Non-infrastructure assets transferred to other city departments.

#### **2) Attain fund solvency**

With no change in revenues or operating expenses, Telecom fund reserves are projected to be depleted by mid-2005.

- A) Increase revenues
  - Pursue customer-funded extensions to existing facilities for bandwidth and fiber agreements.
  - Possible deployment of wireless system for additional revenue sources.
  - Pursue developer funded residential and commercial system expansions.
  - Possible pilot projects may extend bandwidth services utilizing existing infrastructure.
  
- B) Reduce operating expenses
  - Temporary waiver of franchise fee.

C) Funding sources

- Potential for generating additional revenue is minimal without some additional investment. A loan from another fund might be considered as a short term funding source.

**3) Expand system and services to achieve community goals**

A) Wholesale Business Model

(The City provides the customer connection to competing retail providers.)

- Services by third party providers as “retailers.”
- Multiple qualified service providers may compete for customers.
- Incumbents may have opportunity for access to network.
- Service offering may be limited to data and Internet services until subscriber numbers warrant the investment in voice and video service platforms.
- Retail services provider pays fees to Telecom on subscribed services.
- Legal exposure is reduced with Wholesale Model and Multiple Service Providers.

a) Incremental build

- \* Expand network and services in low investment, high return projects.
- \* Identify first projects of each type as pilots for proof of concept.
- \* Large commercial customers and business parks near existing fiber.
- \* New residential and commercial developments near fiber.
- \* Multi-tenant units and multi-dwelling units near fiber.
- \* Owner/developer/customer pays fiber and distribution electronics costs.
- \* Telecom invests in transport equipment.
- \* Pilot projects limited by capital funding sources.
- \* After proof of concept community may demand more aggressive deployment and support additional funding methods.
- \* City commitment to expanding system will attract new services and providers to network which will increase revenue per subscriber.
- \* Economic development may warrant funding for fiber business parks to retain/attract technology dependent, higher wage, businesses.
- \* As revenues and funding allow, projects expand to larger service areas.
- \* Utilizing existing cableways (poles and conduits) cost of passing customers is greatly reduced for some overbuild areas.
- \* Build areas selected by customer pre-commitment and cost recovery potential.
- \* Over time, revenues become sufficient to build remaining service areas.
- \* Price reductions by incumbents may result in a delayed project payback.

- \* Project examples
  1. Pilot of 100-Home Development
    - a. 50% take rate
    - b. \$25K in Telecom Project costs
    - c. Internet service only
    - d. \$6K-year revenue
    - e. 4-year cost recovery
  2. Pilot of Large Commercial Customer
    - a. \$5K in Telecom Project Costs
    - b. 100% (single customer project)
    - c. 5Mb internet service
    - d. \$6K-year revenue
    - e. 1-year cost recovery
  3. Pilot 4-Unit Multi-Tenant Commercial building
    - a. 50% take rate
    - b. 1Mb internet each
    - c. \$3500 Telecom project costs
    - d. \$2400-year revenue
    - e. 18-month cost recovery

b) Full system build

- \* Entire system build out is bond funded.
- \* All residents will soon have service available regardless of proximity to backbone.
- \* Anchor service provider may fund some of infrastructure.
- \* Economies of scale reduce construction and equipment costs.
- \* Network will achieve greater earnings with higher overall take rates and higher revenues per subscriber.
- \* Price reductions by incumbents may result in a delayed project payback.
- \* Project example
  1. 30,000 customers passed
    - a. 30% take rate
    - b. \$35M in network costs
    - c. \$3.5M-year revenue
    - d. \$1.5M-year operating expenses
    - e. 18-year cost recovery

B) Retail Business Model

(The City owns and operates the entire network including delivery of services to the end-user.)

Full system build

- \* Entire system with central office and head-end is bond funded.
- \* All residents will have service available regardless of proximity to backbone.
- \* All advanced communication services will be available early on.
- \* Economies of scale reduce construction and equipment costs.
- \* City will achieve greatest earnings with highest overall take rates and retain all subscriber charges.
- \* Price reductions by incumbents may result in a delayed project payback.
- \* Greatest level of legal exposure.
- \* Project example
  1. 30,000 customers passed
    - a. 40% take rate
    - b. \$50M in network costs
    - c. \$14.5M-year revenue
    - d. \$8M-year operating expenses
    - e. 8-year cost recovery

## **ATTACHMENT D MUNICIPAL BROADBAND SYSTEMS**

“Broadband” refers to an advanced communications system in which a wide band of frequencies is available to transmit information through a single portal. It includes video, voice and data services such as Internet access, high-speed data, cable television, telephone and related services. A survey of American Public Power Association (APPA) members in 2001 identified approximately 450 municipal public power systems that provide some type of broadband service to their community. The type of broadband service and the number of municipal utilities providing that service are listed below:

- Fiber leasing 122
- Internet service provider 107
- Cable television 91
- Cable modem 59
- Long distance telephone 25
- Local telephone 29
- Broadband resale 84
- Municipal data network 163

Many non-public power communities not included in the list above have also installed fiber to the home broadband infrastructure and provide broadband services either as a municipal enterprise or in association with private enterprise. Some examples include:

- Colorado City and Rye, CO
- Guthrie Center, Huxley, Cambridge and Slater, IA
- Almena, KS
- Morris, Alberta and Chokio, MN
- Woodburn, OR
- Kamas, UT

Selected examples of municipal utilities with telecommunications services:

### **HomeTown Utilicom**

Kutztown, PA

Customer base: 2,233

<http://www.hometownutilicom.org>

Municipal services: Electric, Cable TV, Internet, Telephone

The Borough of Kutztown, through municipally owned Hometown Utilicom, began offering services on its FTTH system in July 2002. The utility allocated \$4.6 million for the fiber optic communications system including the network operating center and TV headend, as well as an automatic meter reading system. The utility is providing television services and partnering with private industry for Internet and telephone services. The electric utility provided a portion of the funding for support of internal needs and AMR development, with the bulk of the funding from Municipal General Obligation Bonds.

### **Taunton Municipal Lighting Plant**

Taunton, Massachusetts

Customer base: 32,861

<http://www.tmlp.com>

Municipal services: Electric, Internet, Fiber Leasing

Taunton Municipal Lighting Plant is testing a fiber to the home system. The utility has a \$1.5 million budget for its test project funded from Electric fund reserves. The municipality wishes to diversify electric utility service offerings.

### **Bristol Virginia Utilities**

Bristol, Virginia

Customer base: 15,384

<http://www.bvub.com>

Municipal services: Electric, Water, FTTH, Internet, Fiber Leasing

The utility uses its fiber system to provide broadband commercial and residential Internet services, residential cable TV service, and plans to provide commercial and residential telephone services.

### **Grant County, Washington**

Customer base: 40,803

<http://www.grantcounty-wa.com>

Public services: Electric, Water, FTTH, Broadband, Fiber Leasing

The county Public Utility District has installed over 7,000 fiber miles and is building out an "open access" fiber-to-the-home system that will make advanced telecommunications services available at 1 Gbps to homes and businesses. The system currently serves over 3,000 customers and should complete construction in 2006. The PUD sells wholesale services to retail service providers who sell directly to the residents. The PUD has allocated \$20 million per year for the six-year construction project, to be covered by a loan from Electric reserves and Electric revenues.

### **LaGrange Utilities**

LaGrange, Georgia

Customer base: 12,010

<http://www.lagrange-ga.org/utilities/>

Municipal services: Electricity, Natural Gas, Water, Sewer, Cable TV, Cable Modem, Local Telephone, Long Distance Telephone, Internet, Broadband, Fiber Leasing

The city levies no local taxes, instead generating income from delivering water, electric and telecommunications services to residents. The city has won several awards for the telecommunications strategy, some of which include: 2000 Intelligent City of the Year, 2000 Georgia City of Excellence, 2000 Government Technology Leadership Award from Government Technology Magazine.

### **Tacoma Public Utilities**

Tacoma, Washington

Customer base: 147,819

<http://www.ci.tacoma.wa.us/tpu/default.htm>

Municipal services: Electric, Water, Rail, Broadband, Cable TV, Cable Modem, Internet  
Tacoma City Light built the two-way Click! network to meet its own telecommunications needs and to offer cable TV and high-speed Internet access to residents. The utility expanded into wholesale and retail services to help offset construction costs of updating a municipal telecommunications system. Click! Network provides a wholesale service to Internet Service Providers (ISPs) called ISP Advantage.

### **City of Thomasville Utilities**

Thomasville, Georgia

Customer base: 13,863

<http://www.rose.net>

Municipal services: Water, Sewer, Electric, Gas, Internet, Cable TV, Cable Modem, Broadband, Fiber Leasing

Community Network Services (CNS), a division of Thomasville Utilities, offers cable television (CNS Television), Internet access (rose.net) and telephone service using a fiber optic network. Analog and digital cable packages are available through CNS Television. Dial-up and high-speed cable modem Internet services are available through rose.net.

### **Burbank Water and Power**

Burbank, California

Customer base: 51,701

Municipal services: Water, Sewer, Electric, Fiber Leasing, Wholesale and Retail Communications Services

The electric utility and the community, including portions of I-Net for the City of Burbank and Burbank Unified School District use the fiber optic network. The utility plans to provide retail communications services at a rate sufficient to generate revenues to pay for the system without long term subsidies by electric or water customers, and wholesale facilities to communication companies and service providers to encourage a competitive market for communication services.

### **City of Palo Alto Utilities**

Palo Alto, California

Customer Base: 27,750

<http://www.cpau.com>

Municipal services: Water, Sewer, Electric, Natural Gas, Fiber Leasing

Palo Alto is conducting a FTTH (Internet and telephone) trial with 70 homes as part of a proposal to build a city-wide FTTH system that would offer retail voice, video and data services to businesses and residents as well as wholesale services to service providers.

### **Ashland Fiber Network**

Ashland, Oregon

Customer base: 9,386

<http://www.ashlandfiber.net>

Municipal services: Water, Sewer, Electric, CATV, Internet, Data, Cable modem, FTTH  
Ashland Fiber Network, a division of City of Ashland Electric Department, operates a video head-end and data center to provide cable TV, Internet and data services. Cable modem or fiber can deliver Internet and data to the customer. The fiber network, which currently serves about 2,500 cable TV customers and 2,300 cable modem customers, is still under construction. The most recent funding for the project was a \$2.5M commercial bank loan.

### **Cedar Falls Utilities**

Cedar Falls, Iowa

Customer base: 16,057

<http://cfunet.net>

Municipal services: Water, Electric, Gas, CATV, Internet, Fiber To The Business

The Cedar Falls Municipal Telecommunications Utility was established in 1994. It uses a hybrid fiber coax infrastructure to provide residential cable TV, Internet and e-mail services, and commercial point-to-point data services.

### **Spanish Fork Community Network**

Spanish Fork, Utah

Customer base: 6,877

<http://www.spanishfork.org>

Municipal services: Electric, CATV, Internet

The network is under construction using hybrid fiber coax technology to provide residential cable television and Internet services. Planned future City utilization of the network includes meter reading, library catalog access and traffic signal synchronization.

### **Provo City Power**

Provo City, Utah

Customer base: 31,126

<http://www.provo.org>

Municipal services: Electricity, CATV, Telephone, Internet, Video-On-Demand, Wireless Internet, Regional Local Calling

Provo City Power funded construction of multiple fiber rings to support municipal utilities and other internal city needs. A pilot FTTH project is nearing completion of construction. The pilot serves 400 residents with fiber to the home using active-ethernet technology to deliver advanced telephone service, cable TV, 10 Mbs internet, video-on-demand and wide area local dialing. The \$3M pilot is funded from electric utility reserves with the proposed full city wide build-out funded by a telecom utility revenue bond.

## **ATTACHMENT E MEDIA COMMENTARY**

### **Paving the Last Mile With Glass**

#### **If U.S. phone companies don't lay fiber, the cable industry will eat their lunch**

By Paul E. Green Jr.

IEEE SPECTRUM, December, 2002

To the too-casual observer, the last thing the local telephone companies need to worry about is installing optical fiber in their subscriber loops—the infamous "last mile" connections between their facilities and the subscribers' homes and offices. After all, where are the compelling new applications that require capabilities beyond today's copper-based broadband, slowly emerging in the form of cable modems and digital subscriber lines (DSLs)?

Consider the key facts. Each year, the local phone companies (more properly known as ILECs, for incumbent local exchange carriers) replace 3-4 percent of their copper twisted-pair subscriber lines because of physical deterioration. They also add 1.5 million lines annually to newly built homes. But by largely ignoring the opportunity to use fiber for these installations, they are putting their very survival at risk.

The future does in fact belong to fiber-based high-performance broadband (plus wireless for lower bit rates and shorter distances), and if the telephone companies don't provide it, the cable companies will drive them to the wall.

#### **Tackling the bottleneck**

But, given the current lack of compelling applications, how can I be so sure that fiber last-mile connections are inevitable? First of all, because the last mile is an unnatural bottleneck between the high-speed communications going on within our computers, on the one hand, and the high-speed networks available for interconnecting those computers, on the other. It is the proverbial weak link, and it simply can't persist indefinitely.

Both computers and the common carriers' systems run at multiple tens of gigabits per second. Dial-up modems carry, at best, 50 kb/s—nowhere near enough to support the innovative new services on which the future prosperity of both the telecom and computer industries depends. DSLs and cable modems, both of which run below 1 Mb/s downstream (to the subscriber) and considerably less than that upstream when fully subscribed, are a step in the right direction, but not much more. Today's broadband languishes with not enough compelling applications and too few users because of inadequate data rates.

To get back on the road to prosperity, the communications and computer industries must offer such services as video on demand, music on demand, videoconferencing, distance learning, interactive game playing, multimedia Web searches, and the like -- to say nothing of unforeseen new services enabled by data rates measured in the gigabits per second, and all with snappy responsiveness.

Interesting, you may say, but why the urgency? Not only because fiber to the home is already happening, but especially because the cable giants are gearing up to do battle for the minds, hearts, and one-stop voice, video, and data-access business of residential and small business customers. And these tough competitors are likely to be a much more serious threat to the large ILECs than anything they have previously encountered.

In their aggressive long-range game, cable companies are wiring as many homes as possible, first with TV and then with cable-modem service. Then they can easily add telephone service, connecting to the public-switched telephone network via the ILECs' central offices. Before long, thanks to the high bandwidth of coaxial cable, they will also begin pushing high-definition television on the shorter links, strengthening their position as the home portal of choice. It's hard to see how the ILECs will be able to match these offerings with their copper twisted pairs.

### **The reasons for fiber**

There are a number of other reasons for preferring fiber access over copper. First of all, the lifetime costs of the all-glass solution are less than those of any copper-based solution, since the others include hot, costly finite-lifetime electronics with backup power sources distributed throughout the service area. Second, glass is transparent with respect to legacy or future bit rates and formats—in other words, as more advanced broadband formats and systems become available, the fiber need not be replaced. Third, fiber's low attenuation translates not only into lower-power transmitters and less sensitive receivers, but also into much more convenient design rules for their installation. With DSL or cable, constraints on segment lengths, cable types, variable attenuator settings, and so on are much tighter and add to complexity and cost.

Fourth, fiber is largely unencumbered by the many inherited regulatory restrictions that apply to copper, especially the countless twisted pairs of 24-gauge wire that constitute the crown jewels of the ILECs. A new turn of the crank that allows all players to innovate with this new medium without carrying along all the historical regulatory baggage would relieve the carriers of their traditional dependence on expensive armies of lawyers and lobbyists as the price of business survival. This will be particularly so with respect to the relatively less-regulated cable industry.

Fifth, the passive nature of fiber—and the fact that the electronics is only at the ends—means that provisioning and reprovisioning are accomplished much more quickly than with systems embodying electronics along the right of way.

### **Passivity is powerful**

Fiber is already being deployed in the last mile. A number of start-ups are installing so-called passive optical networks (PONs), mainly in new "green-field" housing developments, independent rural co-ops, and other markets apparently considered peripheral by the large incumbent local carriers. PONs are tree-like networks in which one fiber leaving the central office reaches up to, say, 32 residences by passively splitting the light by a factor of four, and then splitting each of these lines again by a factor of eight as they branch out to individual

homes. With this setup, PONs make it easy to provide one-stop shopping for an attractive triple play of services: voice phone lines, Ethernet, and video—either analog or digital.

But the availability of fiber in the last mile is likely to remain limited to small geographical regions until one or more ILECs commit to a massive replacement or augmentation of existing copper pairs with fiber, most likely in PON form. Many industry observers expect this to happen within three to five years.

For the next several years, the total number of fiber-to-the-home installations in the United States—which stood at about 22 500 as of July 2002, according to real "census" data from Renner Vanderslice and Associates (Tulsa, Okla.)—will remain minuscule compared with the number of DSLs (3.4 million) and cable modems (7.2 million).

This situation does not seem to alarm the incumbent carriers. They appear to be in a holding pattern, waiting for a slackening of regulatory oversight or for the cable companies to actually win away significant numbers of voice and broadband customers before doing anything about it. To me, it would seem a lot smarter to leverage fiber-based PONs to leapfrog the cable companies' copper-based forays into their voice-based present and broadband-based future.

Perhaps the highly visible losing battle of DSL against cable modems will prod them into action. Nationwide, cable modems have been winning consistently by a factor of between 2:1 and 3:1. And the true picture may be even bleaker than those numbers suggest. DSL seems to have made its greatest inroads so far among customers closest to the ILECs' facilities—that is, the ones that are relatively easy and cheap to connect. Therefore, sustaining even this inferior rate of penetration will prove increasingly difficult.

### **Cost is everything**

Meanwhile, the cost trend in fiber to the home is going in the right direction. The lifetime cost of a fiber hookup is already less than that of copper, but it does require a larger up-front expenditure. Much of this outlay goes for opto-electronic terminal equipment, so further penetration will depend on declines in prices for optical components. Fortunately, that's what's happening: for example, passive power splitters, which cost over US \$100 per port a year ago, now go for \$25 per port.

Equally favorable trends are evident in fiber-installation technology. Machines can now cut narrow grooves rapidly in the pavement along city streets to lay in small fiber bundles. Small trenching machines install plastic ducts 30-60 cm underground, and remotely controlled directional drilling robots extend the path of the duct under driveways, highways, and in one case, for 2 km under the Hudson River. Often, if these ducts do not already contain the fiber, it can be later blown in by compressed air, allowing for upgrades and rehabs without further excavation. It is even possible now to send a lineman up a utility pole to perform single or multiple splices, a process that was thinkable only in the laboratory not many years ago.

On average, the per-residence cost of a PON installation is estimated at \$2000 to \$2500. That is low enough for providers to create positive business cases for offering complete triple-play services for as little as \$70 to \$100 per month with a payback period of less than three to four years.

The future seems clear. The only questions are: how far off is it, and to whom will it belong?

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### **Why You Can Get The Best Deal On High-Speed Access In Glasgow, Kentucky**

By Ed Gubbins  
Telephony, December 9, 2002

In Glasgow, Ky., the man to see about broadband is Billy Ray. At \$24 a month for 1 Mb/s of symmetrical cable modem Internet service, his is one of the best deals in the country.

Ray is the affable superintendent of the Electric Plant Board, the municipally owned power utility for this small agricultural town of 14,000 located about 95 miles north of Nashville. The EPB began offering cable TV services in 1989 when criticisms about the local cable incumbent, Charter Communications, reached critical mass. "Pictures were fuzzy sometimes. You couldn't get a lot of channels. We were never pleased with the reception or quality of service," said John Berry, owner of a local PC retailer.

Because the EPB operated as a nonprofit entity (funded initially by utility bonds, later by revenues, but never by taxes, Ray said), it was able to undercut Charter's prices drastically; at \$18.95 a month, Ray boasts the country's cheapest cable. Charter lowered its prices in kind, but to its peril. By 2000, the EPB had taken 75% of Glasgow's cable market. Charter surrendered, sold its network to Ray and left town.

Today about 3000 of the EPB's 8000 cable customers subscribe to broadband. The competition, South Central Rural Telephone, recently began adding DSL to its local exchange offering, trying to eat at the EPB's market share by decrying cable's bandwidth-sharing architecture. But it won't be easy: SCRT's lowest tier of service, 128 kb/s, still costs about \$5 a month more than the EPB's 1 Mb/s offering. And SCRT's high end — 1.5 Mb/s for \$88.95 — is more than triple its competitor's price.

Given EPB's advantage, has the city left customers without choice? And without competition, what motivates the EPB to serve its customers well? "Every two weeks when the city council meets, if people are mad, they can vote to cut my head off," Ray said. "That works quite well."

Glasgow is just one of many small towns across America that have empowered the local government to offer broadband through its power utility after being ignored by private telecom firms that equate small towns with meager returns. More than 400 public power utilities in America have deployed some form of telecom service, according to Uptown Services, a Silicon Valley telecom consultancy. Of those, 29 offer local telephony, 93 offer cable television and 59 offer DSL or cable modem Internet service.

Even where private companies have shown little interest in providing broadband, they've nevertheless shown great interest in preventing municipalities from doing so, often by supporting legislation at the state level. According to the American Public Power Association, nine states have passed laws restricting municipalities from getting into the telecom business. In Utah, state law merely imposes strict regulation of municipal telecom services. In Nevada, only cities with more than 25,000 people are prohibited. And in Texas, all cities and their utilities are flat-out forbidden to offer telecom services of any kind, even those offered indirectly through a private firm.

In some states, these laws have been defeated. Florida's tax on municipal telecom was passed in 1997, only to be ruled unconstitutional by a circuit court in March 2002. Wisconsin, which has 23 municipal CLECs (four of which currently offer retail service), has evaded a few such bills in recent years. Another measure failed in Kentucky in 1998, but not for lack of support from the incumbent phone company, Ray said. "They hired all the best lobbyists in the state and generally gang-tackled [state legislators]."

Legal challenges to these laws are likely to reach the U.S. Supreme Court as early as next year. For many small-town citizens, the issue strikes at the heart of America's digital divide.

"In the Glasgows of the world, the 10,000 cities our size across the country, people are asking for services from the private sector, and the private sector is choosing not to deliver," Ray said. "So they say, 'Well, why don't we do it ourselves?' Then the phone company comes in and says, 'Hell no. I'm not going to do it, but you're not going to do it, either.' These people are just damned to suffer."

The people of Palo Alto, Calif., — a city of 61,000 in the heart of Silicon Valley — may not have much in common with folks in Glasgow, but when it comes to broadband, they share some sentiments with Billy Ray. Palo Alto's Utility Advisory Board is currently reviewing a plan to provide fiber-to-the-home (FTTH), delivering cable TV (at prices below those of incumbent AT&T Broadband), telephony (with the help of a Bell company or CLEC partner) and about 1 Mb/s of symmetrical broadband.

AT&T hasn't upgraded its network in Palo Alto and has stopped taking new orders, said Neil Shaw, president of telecom outsourcing consultants Uptown Services, which developed the business plan for the project. And Pacific Bell's DSL coverage is "spotty," he said. A spokesman

for Pac Bell's parent company, SBC Communications, said its DSL is available to 65% of its voice customers in Palo Alto — some 50,000 businesses and residents.

The FTTH proposal is projected to cost taxpayers nearly \$50 million and pay for itself in 10 to 15 years — a commitment that makes some city council members nervous. And the project's tentative pace (begun in 1998) conforms to the stereotype of government sloth. But public support of the plan has been vocal, especially among the participants in the city's initial trial of FTTH services.

Neil Bauman, CEO of Geek Cruises, a Palo Alto computer conference-hosting firm, was one of the 70 trial participants. Working out of his home, he found the city's FTTH service was more reliable than that of the phone and cable incumbents, and its customer support staff was more attentive. “It's truly unbelievable. More cities need to do this,” he said. “This is a good kick in the butt to some of these [telecom] companies.”

Pacific Bell has persistently criticized the plan, poking holes in its cost projections and demand surveys. In late September, Stacey Wagner, Pacific Bell's director of external affairs, presented a memorandum to city council members entitled “Muni-Toons: The Folly of Municipal Ownership of Broadband Facilities.” Authored by law firm Cole, Raywid & Braverman, the memo derided public telecom efforts (including Ray's) as impossible to sustain without ongoing “subsidies,” often in the form of tax reprieves.

It also contends, “There are serious questions regarding the fairness of having a municipality, which has regulatory authority over broadband systems, compete with the entities it regulates.” Cities own the rights-of-way broadband providers must use to build out their networks, and although rights-of-way are often regulated at the state level, these local conflicts of interest have already given rise to lawsuits and accusations between public and private cable competitors in Scottsboro, Ala., and Truckee, Calif.

Pac Bell has discussed possible public/private partnerships with Palo Alto as an alternative, but nothing tangible emerged from those talks. Still, the SBC spokesman insisted the company has no ulterior motive to thwart the FTTH project.

“We're not taking sides on this in any way, shape or form,” he said. “We're mainly there to provide guidance for the city council, to make sure they make the best decision for their community.”

In Bristol, Va. — a town on the Tennessee border with about 42,000 residents — conflict between cities and telecom providers escalated to the state senate and crashed into courtrooms. In 2001, the city filed suit against the state in federal court to overturn a state law barring municipalities from offering telecom services. When it succeeded, the state's attorney general,

along with the Virginia Telecommunications Industry Association, appealed. But during the appeal process, the state passed a new law that rendered the case moot.

The new law, which went into effect in July, allows public utilities to offer telecom services, but only if they impute into their cost structure the same taxes and fees private companies have to pay. This way, the cities' broadband prices would more closely match their private competitors' and an even playing field would be created.

It's a measure Ray can't fathom. "People create governments to do for them what the private sector will not or cannot do," Ray said. "The very idea of hobbling your government artificially by making it pay unnecessary fees makes no sense at all. I can only assume the people weren't heard there."

At press time, only Bristol and Danville, Va., — a town of 50,000 in the foothills of the Blue Ridge Mountains — had applied for certificates from the State Corporation Commission. While Bristol has its eye on a FTTH deployment that would deliver voice, data and cable TV service, Danville is merely looking to sell high-speed Internet service through local ISPs.

Bristol's leaders, like those of many towns, feel pressure to roll out broadband in order to attract and retain local businesses. Ironically, though, Sprint — which offers Bristol DSL as well as wireline and wireless services, and employs more than 700 people there — said the town's telecom initiative would discourage private investment in the area. "We're one of the largest taxpayers in Bristol, and here they are competing with one of their largest sources of revenue," said Tom Sokol, vice president of external affairs for Sprint's local telecom division in Virginia. "That to me is a little awkward."

Like many supporters of municipal broadband, Virginians admit they'd prefer to get these services from private companies rather than the government — if only those companies would step up to the plate. "In an ideal world, I'd want private enterprise to do this as opposed to the government," said Delegate Danny Marshall, one of the sponsors of Virginia's new law. "In rural areas, you need the government to get the ball rolling. Once it's up and running, the government should get out of it. Hopefully the private sector will pick the ball up and run with it."

Sprint provides DSL to about 5% of Bristol's residents, Sokol said, calling it "the main provider" of telecom services in town. Meanwhile, Charter Communications has ardently challenged Bristol's entry into the cable market, claiming the city failed to hold the necessary public hearings prior to creating another cable franchise and is giving its own municipal cable franchise unfair advantages.

The week before Thanksgiving, a judge granted Charter's request to issue a restraining order against the city, preventing it from launching service until Dec. 9, when the judge was scheduled to hear oral arguments on Charter's motion that the city be denied the right to launch service.

The Supreme Court may have the final say on the legal fight over municipal telecom, thanks to a case in the Show-Me State. Missouri passed a statute in 1997 forbidding cities from becoming telecom providers; the Missouri Municipal League, on behalf of the state's 63 municipal electric utilities, asked the FCC to intervene and declare the statute unlawful in light of the Telecom Act of 1996, which says that no state or local government “may prohibit...the ability of any entity to provide any interstate or intrastate telecommunications service.”

The FCC has long supported the idea of municipal utilities as catalysts of competition in local telecom markets. “[They] have the potential to become major competitors in the industry,” the commission said in one report, “...to bring the benefits of competition to all Americans, particularly those...in small rural communities.” But it was unable to help the MML because of an earlier precedent set in Texas.

When the city of Abilene, Texas, tried to challenge a similar statute in its state, a D.C. circuit court eventually ruled against the town. The entire legal argument rested on the ambiguous definition of a three-letter word: “any.” Sure, the Telecom Act says “any entity” can provide telecom service, the FCC argued. But does it really mean “any entity?”

It sounds like a thin semantic argument, but it points toward a larger principle: Does Congress really want the FCC telling states how to govern their cities? Since this opens up a whole can of state sovereignty issues, the Telecom Act should have been more explicit about its intentions on the subject, the FCC said. The D.C. circuit court agreed.

With that precedent set, the FCC had no choice but to deny the MML's request for help. In their ruling, former Chairman William Kennard and former Commissioner Gloria Tristani wrote, “We vote reluctantly to deny [the MML's] petition...Such a result, while legally required, is not the right result for consumers in Missouri.” They urged Congress to amend the act's language to give them more authority.

However, an appellate court in the 8th Circuit ruled in favor of the MML, contradicting the D.C. circuit's opinion on Abilene by insisting that “any” means, in fact, “any.” Now the defendants in the case — Southwestern Bell, the FCC and the Missouri attorney general — have until February to appeal to the Supreme Court. A spokesman for the Missouri attorney general said they intended to do just that.

The Supreme Court is typically respectful of states' rights, so it may sympathize with the attorney general, in which case it would be up to Congress to reword the Telecom Act if it wanted to protect municipalities.

If Southwestern Bell and the other defendants lose their case in the Supreme Court, private telecom firms still have another way to challenge the Billy Rays of the world: The Glasgow City Council meets every other Monday night.

### **Commentary: Government fiber-optic cable OK?**

Today's Business, January 1998

**The issue:** The Platte River Power Authority is in the process of installing a fiber-optic cable loop around the cities of Fort Collins, Loveland, Longmont and Estes Park.

This high-speed, high-capacity communications "pipeline" could encourage competition among companies that provide telephone service, cable television and Internet access.

However, it also gives city government the opportunity to provide even more services already supplied by private industries.

The question: Is it appropriate for local government to use their fiber-optic systems to provide such services as local phone connections, Internet access and cable TV, in direct competition with private companies?

#### **Opinion: Pro**

By Leona Stoecker  
Mayor of Longmont

Abraham Lincoln, when asked what activities are the proper domain of government, said: "The legitimate object of government is to do for a community of people whatever they need to have done, but cannot do at all in their separate and individual capacities."

Services such as fire and police protection and water, sewer and electricity are so important to the prosperity of all citizens that municipal government is considered to be the appropriate provider.

The fiber-optic or broadband networks necessary to deliver the benefits of the "information superhighway" increasingly fall into the same category.

#### **Some questions**

The question is whether private enterprise can provide advanced communications, entertainment and information services. The questions for Longmont – and the answers that evolved during a yearlong public analysis preceding the City Council's decision to build a municipally owned broadband network – were these:

- “When will private companies provide advanced service in Longmont?” Not for a long time.
- “Will such services be easily and equally available to everyone?” Probably not.
- “Will there be adequate competition to ensure a wide choice of services and reasonable rates?” Probably not.
- Will such systems be operated for the greatest benefit of the community, or will the expectation of the stockholders come first?” Probably not, and more than likely.

The fact is, private service providers are not terribly interested in building a ubiquitous broadband network in Longmont by themselves.

### **What’s really available?**

The local telephone company stated that decisions to deliver “services such as these will be based on population density, consumer demand ... and the most cost-efficient way to do business” – in other words, the bottom-line potential to quickly recover investment and make a profit.

Certainly, as existing service providers point out, some of the enhanced communications products and services our citizens desire are already available. The problem is with that little word, “some” – some of the services, some of the time, for some customers, in some parts of the city, and only on the provider’s terms and conditions.

Our vision in building a municipal broadband network infrastructure is to afford all members of the community an equal opportunity to grow economically, intellectually, culturally, socially and with diversity. We believe the benefits of a community-owned fiber-optic system will include:

1. **Economic Vitality.** The demand for advanced telecommunications services is a current business need. Longmont businesses identified improved communications as a critical key to maintaining or improving their competitiveness. A community fiber-optic network improves the city’s ability to retain existing businesses and attract new businesses. We expect our broadband network to be an economic engine that powers prosperity in coming years.
2. **Competition and choice.** Investing in infrastructure removes a barrier for potential competitors. By building a high-capacity fiber-optic system open to alternative service providers, the city expects to stimulate competition for communications, entertainment and information services that will expand the choices for consumers, improve service quality and control costs.
3. **Enhanced community services.** Connecting schools, homes and businesses to distance learning, library and teacher resources will expand learning opportunities. Connecting doctors, hospitals, clinics, businesses and homes will enable more effective medical services. Online

access to city government and social services will allow citizens to be more involved and more informed.

4. Protection of city rights of way. Building one infrastructure that everyone can use enables the city to protect rights of way and minimize disruption to businesses and citizens.

5. Advanced electric services. Consumers will soon have a choice of electric service providers. To prepare for competition, the municipally operated electric department can use the advanced communications capabilities of the city's fiber-optic system to provide automated control and management of the electric system, remote meter reading, real-time pricing, customized billing services and a variety of other new services and customer-support activities.

### **Building alliances**

Finally, our goal from the beginning has been to build a broadband infrastructure that positions the city to develop alliances with private service providers for shared access to consumers.

We believe this partnership approach provides the greatest benefit to the whole community.

It's a win-win approach that enables the city to develop enhanced government, social, education and cultural services while allowing private enterprise to develop and deliver competitive commercial services to business and residential customers.

### **Opinion: Con**

By Bonnie Pehl-Peterson

U S WEST Communications, Northern Colorado area manager

Local municipal power companies believe they can offer inexpensive access to the latest in telecommunications products and services by placing fiber-optic rings around the communities of Longmont, Loveland, Fort Collins and Estes Park.

It all sounds very promising – until you look at the facts.

State and local governments across the country are moving to “privatize” public services, mostly because elected officials realize that private industry does things faster, better and cheaper than the public sector. Plus, if they don't like the results, they can go to another vendor.

### **Can government do it better?**

Yet, some people here are convinced that government can provide better service than the telecommunications professionals like US West, AT&T and others who have been delivering service for more than a century.

That assumption is wrong. First of all, what some officials want to create here already exists.

The communities involved in this endeavor are currently being served by one of the most advanced telecommunications networks in the world. US West's embedded investment in the local network exceeds \$200 million. The investment in Loveland, Fort Collins and Longmont for 1996 and 1997 alone is more than \$38 million.

The network serving the area communities is every bit as robust as those networks serving Denver, Phoenix and Seattle. Today there are no advanced telecommunication services available in metro-Denver that are not available in Longmont, Loveland and Fort Collins. That's a fact.

The plans for these communities emphasize the construction of a fiber-optic backbone. A backbone such as this represents only about 10 percent of a truly comprehensive telecommunications network – whether for cable TV or telephone.

### **More taxes to come ...**

Connecting the proposed network with the rest of the world is a very complex task. To complete the job, a publicly funded telecommunications network will require spending millions of additional taxpayer dollars. That's quite a gamble, considering that the services government hopes to offer are now already available from several telecommunications providers.

Another concern: By entering into the phone business, local governments will actually drive away competitive bidding and stifle competition as they go after high-end users like hospitals and schools. It's a good example of the government "cherry-picking" its own community.

In addition because local governments enjoy privileges in the areas of taxes, ownership of rights of way, and a seemingly endless access to capital through taxes and public fees, new telecommunications players, with private money to spend, will likely go elsewhere.

Why? Because these cities will be seen as markets closed off to real competition. Ask yourself, would you want to enter a market where one provider can make the rules and use taxpayer money to compete? The answer is obvious.

US West has already designed and implemented one of the most efficient networks in the nation. Engineers and technicians numbering in the thousands are located throughout Colorado communities to maintain and update services in this complex business. More than 250 US West employees live, work and pay taxes in Fort Collins, Loveland and Longmont.

### **We're keeping up ...**

US West invests billions yearly to keep up with ever-changing technology. Millions more are spent on training just to help our employees stay abreast of technology. It's difficult to see how local government can provide what we do for a living without getting into the back pockets of taxpayers and reducing the choices for consumers.

Changes are taking place at a breathtaking pace. New technology is displacing or making use of existing technology. Technological innovations continue to make this industry complex and full of risk.

Competitive marketplaces are structured to deal with such complexities and risks. Governments are not.

If elected officials want to gamble in the face of these realities, the only losers in the end will be the taxpayers who will be asked to cover such risky bets and the consumers who may be required to use the government network.

It's too bad that the talent, energy and political effort that would go into building a government network couldn't be directed instead to changing policies and regulations that would permit US West and other private telecommunications providers to speed up their investments.

The present course, I'm afraid, will disappoint enthusiasts of government networks and further stifle private investment.

That's too bad, but that's usually the consequences when government decides to give up its role as referee and catalyst to become a player in the provision of services to the public.

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### **Country road, take me to the Internet superhighway, and fast High speed access reaches rural Washington via cable connections**

By Eli Sanders,  
Boston Globe Correspondent, December 25, 2002

EPHRATA, Wash. - On the lightly trafficked main street in this small, rural town, one store is advertising something local residents had never seen before: "Internet Connections at the Speed of Light."

The connections arrived due to an innovative program reminiscent of the public power projects that brought electricity too much of the West. With a nudge from federal, state, and local agencies, high speed Internet service providers are reaching rural areas via extra space on fiber-optic cables owned by public power providers. Bob Lahmann, a transmission account executive at the Bonneville Power Administration, said that bringing broadband to the hinterlands seemed like a natural for the federally chartered agency.

"Rural electrification was a major reason why we were created," he said. "It's almost a philosophical thing, but it seemed to fit right in with some of the core reasons Bonneville was created."

Washington's cities have had high speed Internet access for years, but it wasn't until August that the fast connections began to arrive in Ephrata, located in the heart of farm country, about 150 miles east of Seattle.

Although people living far from cities were slower than their urban counterparts to join the online era, the percentage of rural Americans now using the Internet almost equals the national average of 54 percent, according to a Commerce Department study released this year. Broadband access in rural areas can mean more than than just fast e-mail and online movies. It offers a chance for rural communities to surmount a major obstacle to growth - their distance from traditional centers of learning and commerce.

It can help businesses expand and give schools, health care providers and others fuller access to vital technologies.

Another Commerce Department report requested by 10 U.S. Senators, including Washington Democrat Patty Murray, pointed out that advanced telecommunications are becoming "essential" to the development of business, distance learning and telemedicine.

"The rate of deployment therefore has implications for the welfare of Americans and the economic development of our nation's communities," said the report released in 2000. "This is particularly true for those who live in the rural towns and countryside, who can especially benefit from high-speed, distance-defying connections."

In Ephrata, the library now has a fast connection to the Internet. In another small eastern Washington town called Chelan, the local hospital is moving toward "tele-radiology" to cut down the man-hours the hospital spends driving its X-rays to a larger town for analysis.

"It really is changing the way the county communicates," said Sarah Morford, spokeswoman for the Grant County Public Utilities District, which is participating in the effort.

Still, broadband connections have been slow to reach the hinterlands, just as electricity and later, phone service, were slow to reach rural America. The high cost of laying the cable required to bring DSL or cable modem service to areas with widely dispersed populations had discouraged online entrepreneurs.

Promoters of BPA's fiber-optic cable-sharing program note that the agency originally was created in the 1930s, when private power companies were unwilling or unable to invest in bringing electricity to places like Ephrata. In the first five years of a fiber-optic expansion program begun in 1995, BPA laid nearly 2,000 miles of cable at a cost of \$127 million. The work is expected to continue for another 10 years.

A bill passed in 2000 by the state legislature allows local public power suppliers to use their extra cable space to private Internet service providers. Washington has 28 public utility districts that serve a total of 1.7 million citizens across the state. Of those 28 PUDs, 16 are leasing space on the BPA's fiber-optic cable system, all of which plan to deliver broadband service.

Not everyone agrees with this approach. In past years, Murray has had to fight off attempts in Congress to end BPA's program by conservatives who see government entrance into the Internet service industry as anathema to free-market ideals.

But opposition has been abating, and the White House Office of Science and Technology recently asked to meet with representatives of the Grant County PUD, which administers Ephrata's high speed connections. The Grant County PUD runs its "Zipp Network" - which now has about 3,400 users - by leasing out extra space on a fiber-optic network run partly on its own cables and partly on BPA's cables.

Washington has an advantage in grappling with the rural broadband issue because it has a large public power infrastructure that now can be used as the backbone for delivering high-speed Internet. But similar efforts are underway in other regions.

Rick White, president of the Palo Alto, Calif.-based lobbying group TechNet, said there are about 600 other rural Internet projects going on around the country. In other states, he said, municipalities and public utility districts use their borrowing power to construct broadband infrastructures for private companies to use.

White said the growing capabilities of wireless Internet soon may make the whole issue of laying cables to rural areas moot. But until then, he said, the Washington idea is worth watching. "What they've decided to do is make a public utility of the transport - in other words, the fiber and the cable - and then make that available to private players on a completely nondiscriminatory basis," he said. "I think that's a model that's turned out to be highly successful."

# ATTACHMENT H

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## MEMORANDUM

TO: LSI Seminar Participants

FROM: Jeremy H. Stern, Esq.  
William F. Bly, Esq.

DATE: September 9, 2002

RE: MuniToons: The Folly of Municipal Ownership of Broadband Facilities

### I. Background on Municipal Ownership of Cable and Telecommunications Systems

The roots of municipal ownership of cable systems trace back to the early days of the cable industry, when cable pioneers began laying down cable and charging a fee for television service that was otherwise provided for free from over-the-air broadcasters. In that era when satellite service had not yet been introduced, and “CATV” was just a fledgling industry, municipal ownership provided a means for delivering television signals to largely rural areas that had poor broadcast reception and insufficient subscriber density to attract investment from private cable companies.<sup>(1)</sup> Municipal ownership thus provided a means for delivering television service to homes that otherwise would have virtually no service at all.

Over the last twenty years, however, the industry has changed dramatically, with CATV evolving from a mere antenna service in rural America to a source of new networks and original programming available to rural and urban customers. The changes in the last decade alone have been even more stunning, with the launch of Direct-To-Home satellite service — one of the most highly successful consumer product launches ever, and with the creation of “broadband” cable providing advanced digital services, such as digital television, high-speed internet service, and telephony. In the midst of this transformation, Congress passed the Telecommunications Act of

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<sup>(1)</sup> A survey conducted by the National Civic Review reported that in 1981 twenty-eight municipally owned cable systems were in operation. Of these twenty-eight communities, seventeen had fewer than 2,500 residents and twelve had fewer than 1,000 residents. Carl R. Ramey, *The Cable Act and Municipal Ownership: A Growing First Amendment Confrontation*, 46 Fed Comm. L.J. 147, 156 (1993) (citing David W. MacKenna, *The Cabling of America: What About Municipal Ownership?*, Nat'l Civic Rev. 307, 310 (1981)).

1996, which opened the door to competition in the telecommunications industry and added fuel to the boom and bust cycle of the 1990s and early part of this century.

During the heyday of the Post-1996 Act boom cycle, municipalities began articulating new arguments for entering the telecommunications industry, and indeed many large urban municipalities entered the market.<sup>(2)</sup> They saw a new “gold rush” in telecommunications and wanted in on the action. Thus, many began to view municipal ownership as a potentially valuable source of additional revenue and a logical extension of municipal ownership of traditional utilities, such as water, gas and electric. They also believed that they could speed the delivery of new services to their residents by deploying necessary infrastructure themselves, rather than waiting for industry to do it for them, and inject new competition into the industry.<sup>(3)</sup>

Is there any basis for these new arguments for municipal ownership? Are they based on fact, or mere folly? As set forth below, the evidence from case studies of municipal ownership suggests the latter. Moreover, municipal ownership of cable facilities as a means for providing competition in the cable television industry raises serious fairness and First Amendment concerns. Is it fair for an industry regulator to compete against the entities it regulates? Is ownership by the government of an increasingly important vehicle for delivering media content consistent with the parameters and intent of the First Amendment? The answer to both of these questions is no.

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<sup>(2)</sup> In recent years, larger communities have gotten into the act, with municipal cable systems now in operation or under development in larger cities, including Gainesville, Florida and Tacoma, Washington. and in suburban/exurban locations like Braintree, Massachusetts and Newnan, Georgia. Jeffrey A. Eisenach, Ph.D. *Does Government Belong in the Telecom Business?*, page 7, **Progress on Point**, Release 8.1 (Progress and Freedom Foundation January 2001) (“Eisenach Report”). Municipal utilities are also beginning to provide telecommunications services, such as fiber leasing, local dial tone and long distance telephone service. As of 2000, 58 municipal utilities are leasing fiber. 18 are providing local telephone service, 10 are offering long distance service, 61 are offering ISP services, and 32 are providing high-speed data service. *Id*

<sup>(3)</sup> One study published in 1997 and updated in 1998 provided the following three reasons for municipal entry into the market: (1) fill in for lack of quality service at an acceptable rate from the incumbent provider; (2) provide an economic benefit to the community by generating revenue to fund other services, and/or providing an incentive for new business development and (3) provide a new source of revenue for the utility company. *Municipal Overbuilders: What Can You Do About Them*, CATA Brief, 1997-8, page 2 (November 1997, Revised as of October 21, 1998) (“CATA Brief”). Another study conducted by two professors at the University of Denver provided the following rationales for municipal entry into the telecommunications industry: (1) provide telecommunications infrastructure to enhance the municipalities electric power utility through demand side management; (2) provide additional revenue streams to replace revenues lost through the deregulation of the electric utility industry; (3) ensure that the community receives advanced telecommunication services; and (4) inject competition in the local telecommunications industries. Ronald J. Rizzuto and Michael O. Wirth. *Costs, Benefits, and Long-Term Sustainability of Municipal Cable Television Overbuilds*, page 1 (GSA Press. Denver, CO 1998) (“Denver Report”).

## **II. Can Municipalities Really Do More For Less? The Truth About the Alleged Benefits of Municipal Ownership.**

Those that argue in favor of municipal ownership of broadband facilities tend to view those systems as a logical extension of other municipally-owned utilities, such as gas, electric or water,<sup>(4)</sup> or as a source of new general fund revenues.<sup>(5)</sup> They also view telecommunications infrastructure in the same manner as traditional infrastructure such as roads and highways.<sup>(6)</sup> In so doing, these advocates often overlook many of the unique aspects of the business of providing broadband services. For example, providing cable television services does not merely involve stringing up a cable plant and turning on a switch and billing customers. The operator must determine what content to provide on its system (a task for which government is ill-suited) and then must negotiate sophisticated retransmission consent agreements with content providers in order to obtain content for the system. Large cable operators are able to promise content providers a large subscriber base, and thus have the ability to obtain more favorable carriage terms than municipally-owned systems. Moreover, large cable operators benefit significantly from economies of scale that allow them to spread administrative and operating costs over a larger revenue base.

In addition, municipalities that take customers away from the incumbent cable operators lose franchise fees (five percent of gross revenue) that the incumbent provides the City. And if the municipality ends up buying out the incumbent, which has happened in some locations,<sup>(7)</sup> the municipality loses significant public benefits provided by the incumbent, such as grants for Public, Educational and Governmental Access, I-Nets, and taxes. Furthermore, from a state tax perspective, municipal ownership has the effect of robbing Peter to pay Paul. Municipalization of telecommunications facilities removes private sector assets from the tax base, thereby impacting state funds available to county governments and school districts. Ultimately, the taxpayers are harmed by this.

Thus, there are significant disadvantages to municipal ownership of broadband systems. In fact, most studies of municipally-owned broadband facilities show that in most circumstances municipal ownership is a poor public policy and economic choice. Thus, even in situations where the municipality charges lower rates than the incumbent, it comes at the expense of the

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<sup>(4)</sup> See, e.g. Carlson, Steven C. "A Historical, Economic, and Legal Analysis of Municipal Ownership of the Information Highway". 25 Rutgers Computer & Tech. L.J. (1999).

<sup>(5)</sup> *Municipalization and Subsidized Utility Competition — The Taxpayers Perspective*, Cal-Tax Digest (California Taxpayer's Association, April 1997) ("Cal-Tax Report").

<sup>(6)</sup> Id.

<sup>(7)</sup> See. e.g. Rizzuto, Ronald J.. Municipal Telecommunication Overbuilds: The Track Record and New Incarnations, page 8 (University of Denver, February 28, 2002) (“Denver Report Update”).

financial health of the municipal utility or taxpayers, who must shoulder the burden of filling the gap between costs and revenues.

- **Denver Report**

In 1998 two professors from the University of Denver completed a case study of four municipally-owned cable systems.<sup>(8)</sup> This report concluded that municipal ownership of cable systems was generally not a good business decision. First, it concluded that none of the four systems that were analyzed were sustainable over the long run because each currently has, and has had cash flow gaps. In order to be sustainable each would have to either commit permanent subsidies for their cable operation or increase cash flow by increasing rates or subscribership, or by finding a new revenue stream.<sup>(9)</sup> Second, the study found that all but one of the systems (Cedar Falls) would have to upgrade its system to remain competitive with DBS in their core video business.<sup>(10)</sup> Third, the study found that the systems studied appeared to create rate savings for their customers, but that these savings were, in reality, an illusion:

They are an illusion because as noted earlier, the municipal cable system is not financially self-sustaining. These municipal power companies have had to subsidize operating expenses and capital expenditures, provide interest-free loans and levy taxes in order to keep cable rates low. If municipal power companies eliminated the subsidies by raising cable rates, the cable rate savings would be reduced substantially, particularly in Glasgow, Paragould and Cedar Falls.

In Negaunee, the elimination of subsidies would have only a small impact on cable rate savings. The hidden cost in Negaunee is deferred technological reinvestment. Instead of reinvesting to modernize the plant, Negaunee has kept cable rates low. As a consequence, Negaunee has only a 35-channel analog system with two premium channels. There is no pay-per-view, digital video or data/Internet access capability.<sup>(11)</sup>

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<sup>(8)</sup> Denver Report. *supra*. at note 3.

<sup>(9)</sup> Denver Report at 4.

<sup>(10)</sup> *Id*

<sup>(11)</sup> *Id* at 5

• **Updated Denver Report**

Earlier this year, Dr. Rizzuto provided an update to the Denver Report in a PowerPoint presentation he submitted at the Great Lakes Cable Expo in Indianapolis on February 28, 2002. (12) Mr. Rizzuto divided his analysis into two categories: (1) Traditional Municipal Cable Telecommunications Overbuilds (13); and (2) New Types of Telecommunications Overbuilds. (14) With regard to the first category, Mr. Rizzuto concluded, among other things, that municipally owned telecommunications systems have generated “cable rate savings,” but that the rate savings are not sustainable and, as he concluded in his earlier report, in fact an “illusion”:

Municipal power companies are willing to incur on-going negative cash flow, escalating debt levels, and increasing community taxes, additional subsidies and/or reduced reinvestment in telecommunication technology in order to maintain the illusion of large cable rate savings.

Mr. Rizzuto further concluded that in situations where the municipality prices its services very low, the incumbent cable operator often ends up selling out to the municipality, (15) and that in moderate pricing situations the municipality generally does not generate enough revenue to maintain a state of the art system.

The new telecommunication overbuilds that Mr. Rizzuto analyzed had not been in operation long enough for Mr. Rizzuto to reach definitive conclusions about their profitability; however, Mr. Rizzuto was able to provide some general comments. First, Mr. Rizzuto commented that a “data only” model is not likely to be viable as a stand-alone business. Second, Mr. Rizzuto commented a municipal system providing multiple revenue systems “looks like a commercial overbuilder strategy” and that this strategy “is still a work in progress. Third, Mr. Rizzuto questioned whether a municipality will have the proper discipline to manage the business. e. g. to make business decisions rather than political decisions.

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(12) Denver Report Update. *supra*. footnote 6.

(13) “This category included four types of systems (1) video only (low pricing), (2) video and data (low pricing), (3) video only (moderate pricing), and (4) video and data (moderate pricing) Denver Report Update, *supra*, p 3.

(14) “This category included a case studies of three new systems: (1) Braintree, Massachusetts (data first, then video); (2) Glenwood Springs, Colorado (data only); (3) Coldwater, Michigan (video, data, voice and dial-up). Denver Report Update. *supra*, page 18.

(15) “Denver Report Update, page 16.

• **CATA Brief**

A study prepared by the Cable Telecommunications Association also analyzed several municipally-owned telecommunications systems and concluded that none had been successful.

No city has successfully operated its own system for more than five years without increased taxes or financial contributions from public funds. When municipal systems incur unanticipated expenses or fail to meet revenue expectations, the city has to make up the difference. Most often, this is accomplished by raising local taxes, issuing bonds obligating city revenues or, if the service is provided by a local utility, such as the power company, authorizing it to charge higher rates for its service in order to cover the cost of the cable service. The result is a “cable television tax” that is paid by everyone in the community whether they are customers of the municipal system, customers of the incumbent or competitive cable system, or aren’t cable customers at all)<sup>(16)</sup>

Along these lines, the CATA brief further quoted Barry Orton, a professor at the University of Wisconsin-Madison and consultant for many cities as stating, “Most cities, when push comes to shove, find (municipal ownership) is too much work and it’s too much money.”<sup>(17)</sup> Another city consultant, Al Powers of Carlisle, Iowa “warns cities to be aware of the risks of large, up-front costs, with no guarantee of recovery, before embarking on municipal ownership in competition with an incumbent operator.”<sup>(18)</sup>

• **California Tax Payers Association Study**

A study published by the California Tax Payers Association (“Cal-Tax”) also questioned the financial viability of municipal ownership. In particular, it cited a study conducted by Media Connections Group, a private consulting firm engaged by the City of Milpitas, California, which stated that the municipal network envisioned by the City “could not be operated successfully in a competitive environment by a commercial partner (of the City’s) unless very aggressive penetration levels are assumed for core telephone and/or cable services.”<sup>(19)</sup>

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<sup>(16)</sup> CATA Brief. *Supra*, at 3.

<sup>(17)</sup> *Id*

<sup>(18)</sup> *Id*.

<sup>(19)</sup> Cal-Tax Report, *supra*, page 13.

The Cal-Tax Report noted that lower costs of municipal power derive from subsidies, not more efficient operations. The subsidies provided to government-owned electric utilities include: (1) exemption from federal and state income taxes; (2) exemption from other taxes (included property, gross receipts and excise taxes); (3) the ability to secure tax-exempt debt structures; (4) access to low-interest government loans and loan guarantees; and (5) preferential access to low-price federal power.<sup>(20)</sup> Indeed, one study estimated that removal of the tax and interest subsidies would increase municipal power rates by 16 to 17 percent.<sup>(21)</sup> Tax payers are ultimately harmed because these subsidies cost money — their money.

- **CALNET**

CALNET was a state-owned telecommunications system designed by the State of California to connect state agencies and other public entities with modem telecommunications services while saving taxpayers money.<sup>(22)</sup> The State of California lost so much money on CALNET, however, that it privatized the system in 1998.<sup>(23)</sup> In 1997, Lee Kerscher, California's deputy director for telecommunications and networks stated to a reporter, "We've had continued financial losses associated with Calnet. Suffice it to say the legislature when establishing Calnet expected to achieve significant savings and those savings have not occurred."<sup>(24)</sup> The CTPA reported the following conclusions reached by a December 1996 strategic plan prepared by the California Department of Information Technology, which recommended divesting the state owned system. CALNET: (1) "Owning and operating telecommunications networks are neither core competencies nor core responsibilities of the state"; (2) "State-owned network infrastructures have proven costly and cannot keep pace with the rapid developments in telecommunications technology"; and (3) "The inability of CALNET to meet, at competitive cost, the service requirements of...state agencies."<sup>(25)</sup>

### **III. The Regulator as Competitor — Is this Fair?**

Aside from questions regarding the financial viability of municipal ownership, there are serious questions regarding the fairness of having a municipality, which has regulatory authority over broadband systems, compete with the entities it regulates. These concerns become even

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<sup>(20)</sup> Cal-Tax Report, pages 5-6.

<sup>(21)</sup> *Id.* (citing a 1994 study done by Putnam, Meyers & Bartlett. Inc. for the Edison Electric Institute.

<sup>(22)</sup> Eisenach Report, page 14.

<sup>(23)</sup> *Id.*

<sup>(24)</sup> Eisenach Report, page 14 (citing Arielle Emmen, "John Thomas Flynn's California Network Nightmare," Civic.com (April 1997) at [www.fcw.com/civic/articles/1997/CIVIC.040197\\_21.asp](http://www.fcw.com/civic/articles/1997/CIVIC.040197_21.asp))

<sup>(25)</sup> Cal-Tax Report at 14.

greater considering that many municipalities have offered artificially low rates at the expense of the taxpayers and the financial health of the municipal utilities, and that in those situations the incumbent cable operator has often sold out to the municipality.<sup>(26)</sup>

A. Overview of Municipal Regulatory Authority

A municipality has extensive regulatory authority over a cable television system.<sup>(27)</sup> For example, a municipality is entitled to require a cable operator to enter into a franchise agreement that specifies the terms and conditions under which the cable operator may access the public rights-of-way.<sup>(28)</sup> Franchise agreements may require the cable operator among other things, to pay franchise fees in an amount up to 5% of gross revenues; dedicate channels on their system for public, educational and governmental (“PEG”) access; make payments for PEG facilities and equipment; operate PEG studios; wire and serve public buildings and schools; post performance bonds; obtain insurance; provide detailed reports of its operations, and comply with customer service obligations. Cable operators may be fined for failing to comply with certain provisions of a franchise agreement, and serious breaches may be grounds for termination of the franchise, thereby terminating the operators’ right to own and operate the system. Cable operators also may be required to receive permission from a franchising authority to transfer the franchise — for example, upon a sale or merger — and must periodically renew their franchises.

A municipality has significantly less regulatory authority over non-cable telecommunications services; however, the municipality still has authority to require permits (or use of the rights-of-way, and may own the poles that are leased to the cable companies. Moreover, municipalities frequently argue that they have authority to regulate customer service for non-cable services, and in recent years it has been commonplace for local regulators to exceed their authority over telecommunications companies, by attempting to impose franchise like requirements on telecommunications companies that seek use of the public rights-of-way.<sup>(29)</sup>

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<sup>(26)</sup> Denver Report Update, pages 14-16,

<sup>(27)</sup> See Communications Act of 1934, as amended. 47 U.S.C. 541.549.

<sup>(28)</sup> *Id* at 541.

<sup>(29)</sup> One such situation was litigated in *City of Auburn v. Qwest Corp.*, 247 F.3d 966, *superceded on rehearing*, 260 F.3d 1160 19th Cir. 2001). *cert denied City of Tacoma v. Qwest Corp.*, 2002 U.S. LEXIS 232, 122 S. Ct. 809 (2002). In that case, Qwest challenged the requirements contained in telecommunications ordinances adopted by several Washington municipalities, including the Cities of Auburn, Olympia and Tacoma, on the grounds that they violated state and federal limitations on municipal franchising of telecommunications providers. In the ordinances, which are typical of those advanced by municipal consultants nationwide, the municipalities sought to require telecommunications providers to: file an application containing detailed information unrelated to the rights-of-way; negotiate certain terms of the franchise with the cities; undertake extensive reporting and approval processes for transfers of ownership and stock; provide the municipalities with network capacity and offer the municipalities favorable rates. The Ninth Circuit’s opinion provides the most authoritative statement to date regarding the

limitations on municipal telecommunications franchising. The court held that Section 253 of the Communications Act is a “virtually absolute” preemption on municipal franchise requirements. Section 253’s “purpose is clear—

**B. Anti-Competitive Implications of Municipal Ownership**

As any person involved in the franchising of cable systems knows, a municipality's regulatory authority is significant. The municipality may dramatically add to the cost of providing service, micromanage customer service, and threaten continued operation of a system by invoking breach proceedings and imposing unreasonable demands during transfer and renewal proceedings. Thus, when a municipality itself enters the broadband market, it has the power and strong incentive to disadvantage the incumbent and favor itself. The municipality also has the power to undercut the incumbent's rates at the expense of the municipality's tax payers or municipal utility. This can, and often has, led to the municipally-owned utility driving out the incumbent.<sup>30</sup> Consequently, municipal ownership raises serious due-process concerns.

At present, few courts have considered the implications of municipal ownership on a company's due process rights. The issue was considered, however, in at least one case - *Warner Cable Communications, Inc. v. City of Niceville*.<sup>31</sup> In that case, the court denied Warner Cable's due process claim on ripeness grounds, in that the company had not pointed to any tainted decisions that implicated its due process rights. The court did not, however, "foreclose the possibility that the City's dual role as Warner's regulator and competitor might, in particular circumstances give rise to a valid due process claim."<sup>32</sup> In fact, the court expressly noted that there might be some circumstances that would give rise to a valid claim:

If a dispute rises in which the City is called upon to be "complainant, jury, judge and "executioner," *Cruz v. Ferre*, 755 F.2d 1415, 1422 (11<sup>th</sup> Cir. 1985) (quoting *Cruz v. Ferre*, 571 F. Supp. 125, 133 (S.D. Fla. 1983)), there may exist an intolerably high risk of self-interested, unfair governmental action, particularly since the City's competitor in this case is a first amendment speaker. We recognized in *Cruz* that, because of the "potentially great impact upon first amendment rights, regulation of communicative activity must adhere to more narrowly drawn procedures than regulation of ordinary communicative activity."<sup>33</sup>

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certain aspects of telecommunications regulation are uniquely the province of the federal government and Congress has narrowly circumscribed the role of state and local governments in this arena." Accordingly, the court found that Section 253(c) "saves" only those municipal requirements that are "directly related to management of the rights-of-way."

<sup>(30)</sup> Denver Report Update, page 16.

<sup>(31)</sup> 911 F.2d 634 (11<sup>th</sup> Cir. 1990).

<sup>(32)</sup> *Id.* at 642.

<sup>(33)</sup> *Id.*

Moreover, at least one court has considered the anti-competitive implications of a municipality tying provision of one service to another. For example, in *United States v. City of Stillwell*,<sup>34</sup> the court prohibited the City of Stillwell, Oklahoma from requiring purchase of electric service as a condition of receiving water or sewer service. The case arose out of a complaint filed by the United States, which alleged that the city was involved in an illegal tying of services. Ultimately, the city consented to entry of judgment without trial or adjudication. Pursuant to the judgment, the city was “enjoined and restrained from requiring any consumer of electric energy to purchase retail electric service. As a condition of receiving water or sewer service...”<sup>35</sup> The city was also ‘enjoined and restrained from denying, withholding, or delaying any service, license or permit, or otherwise threatening, discriminating or retaliating against any person that has not agreed to purchase or does not purchase electric service...unless (the) reason for such conduct is unrelated to such person’s choice of retail electric provider.’<sup>36</sup>

Another situation involving a City’s anti-competitive conduct arose in *USA Media Group v. Truckee Donner*.<sup>37</sup> That case involved a situation in which a cable company was hindered in upgrading its plant to provide high speed Internet access because the City of Truckee Donner made it difficult for the cable company to obtain access to the rights-of-way and enter into pole attachment agreements. Coincidentally, or maybe not so coincidentally, the city’s municipally-owned electric utility also had plans to provide high speed Internet access. At present, the case is still pending and motions for summary judgment are scheduled to be heard this fall. This case illustrates the potential for anti-competitive behavior that exists when the government owns and controls essential facilities.

Finally, numerous courts have held that a cable operator’s franchise may not be taken away, or not renewed, without affording the cable operator due process.<sup>38</sup> Under this case law, it would seem to be a violation of the incumbent’s due process rights if a municipality operates a competitive system in a manner that disadvantages the incumbent and thereby drives the incumbent to sell-out to the municipality.

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<sup>(34)</sup> 1998 U.S. Dist. LEXIS 18203 (E.D. OK November 5, 1998).

<sup>(35)</sup> *Id* at 3.

<sup>(36)</sup> *Id*

<sup>(37)</sup> Case No. 99-CV-2315 (E.D. Cal November 22, 1999).

<sup>(38)</sup> “See, e.g. *City of Issaquah v. Teleprompter Corp.*, 611 P.2d 741 (1980); *Teleprompter of Erie, Inc. v. City of Erie*, 537 F. Supp 6 (W.D. Pa. 1981); *Three Rivers Cablevision v. City of Pittsburgh*, 502 F. Supp 1118 (W.D. Pa. 1980)(same); *Birmingham Cable Communications, Inc v. City of Birmingham*, 1989 U.S. DISL LEXIS 7475 (N.D. Ala. 1989).

If a municipality does operate a system in an unfair manner that disadvantages the incumbent, one option for the incumbent, other than filing a due process claim or First Amendment Claim (as discussed below), is to seek a modification of its franchise under Section 625 of the Cable Act.<sup>39</sup> Under so-called “commercial impracticability provisions of Section 625, a cable operator is entitled to demand a reduction in its existing franchise obligations if circumstances change in an unexpected manner. Such an application resulted in litigation in Naperville, Illinois.<sup>40</sup> In that case, when Naperville issued a more favorable franchise to an overbuilder — Ameritech New Media — the federal district court ruled that the incumbent was allowed to suspend access studio support, franchise fees, and other franchise obligations. Significantly, once a modification request is filed, the operator can begin implementing the proposed modifications immediately.<sup>41</sup>

#### **IV. First Amendment Implications of Municipal Ownership**

Municipal ownership of broadband facilities implicates the First Amendment to the extent that the municipality acts in a manner that favors itself over the incumbent cable operator. Under well-settled law, a content-neutral government regulation that results in an incidental burden on First Amendment freedom must be within the constitutional power of the Government, further an important or substantial governmental interest, be unrelated to the suppression of free expression, and restrict no inure speech than is essential to the furtherance of that interest.<sup>42</sup>

Applying this standard, a court recently held that a franchising authority may not exercise its regulatory authority in an ad hoc manner that fails to restrict possible arbitrary conduct.<sup>43</sup> Similarly, another court has held that the First Amendment requires a city to set a content neutral, non-discriminatory fee for the cable television franchise and prevents use of the fee as a vehicle for selecting a preferred operator.<sup>44</sup> Still another court has held that a franchising authority may not impose a policy that has the effect of permitting only one company to operate a cable franchise in the franchise area.<sup>45</sup> Under this case law, a municipality would clearly

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<sup>(39)</sup> 47 U.S.C. 545

<sup>(40)</sup> See *Cable TV Fund 14-A. Ltd. v. City of Naperville*. 1997 WL 433628.24 (ND. Ill 1997)

<sup>(41)</sup> “See *Tribune United Cable of Montgomery County v. Montgomery County*, 784 F.2d 1227 (4th Cir. 1986; *Cablevision Systems Corp v. Town of East Hampton*, 862 F. Supp. 875, 887-88 (E.D.N.Y. 1994); and *Cable TV Fund 14-A Ltd.. v. City of Naperville*. 1997 WL 433628, 8-10 (N.D. Ill 1997).

<sup>(42)</sup> See *Charter Communications, Inc. v. County of Santa Cruz*, 133 F.Supp.2d 1184, 1217-18 (N.D.Cal. 2001), appeal docketed. No. 16975 (9<sup>th</sup> Cir. Oct. 11, 2001), citing *United States v. O'Brien*. 391 U.S. 367,377 (1968).

<sup>(43)</sup> *Id.*

<sup>(44)</sup> *Group W Cable, Inc. v. City of Santa Cruz*, 679 F. Supp. 977, 980 (N.D. Cal. 1988).

<sup>(45)</sup> “See *Preferred Communications v. City of Los Angeles*, 13 F.3d 1327 (9<sup>th</sup> Cir. 1994).

violate the First Amendment if it regulates the incumbent cable operator in a manner which favors itself over the incumbent operator. This is especially true if the favoritism reaches a level that it *de facto* drives the incumbent operator to sell-out to the municipality.

## V. Other Considerations

### A. Section 253 Implications

In general, a municipality derives all of its authority from the state in which it is located.<sup>46</sup> Some states, such as Texas, Virginia and Missouri, have prohibited municipal ownership of broadband systems. These prohibitions have been challenged by municipalities as a violation of Section 253(a) of the Telecommunications Act, 47 U.S.C. § 253(a), which provides that “No State or local statute or regulation, or other State or local legal requirement may prohibit or have the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service.” The courts are split on whether a municipality is an entity protected by this statutory prohibition.

- ***City of Abilene Texas v. FCC***<sup>47</sup> This case concerned the validity of a Texas statute that prohibited municipalities from providing telecommunications services. The case was originally brought before the FCC, which determined that Section 253(a) does not preempt the Texas statute. The case was then appealed to the D.C. Circuit, which affirmed the FCC ruling, stating that “Federal law may not be interpreted to reach into areas of State sovereignty unless the language of the federal law compels the intrusion.”<sup>48</sup> The court held that the term “any entity” did not necessarily include a municipality and therefore was insufficient to overturn the state statute.<sup>49</sup>

- ***Missouri Municipal League v. FCC***<sup>50</sup> This case invalidated a Missouri statute that prohibited the state’s local subdivisions from obtaining certificates necessary to provide telecommunications services or facilities directly or indirectly to the public. The case was initially brought before the FCC, which relied on the *Abilene* decision to uphold the state statute. The Eighth Circuit rejected the reasoning of the D.C. Circuit in *Abilene* and overturned the FCC decision: “we conclude that because municipalities fall within the ordinary definition of the term ‘entity’ and because Congress gave that term expansive

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<sup>(46)</sup> See e.g. *Sailors v. Board of Educ.*, 387 US. 105, 107-108 (1967).

<sup>(47)</sup> 164 F.3d 49(DC Cir. 1999).

<sup>(48)</sup> *Id* at 52

<sup>(49)</sup> *Id* at 53

<sup>(50)</sup> 2002 U.S. App. LEXIS 16382 (8th Cir. 2002).

scope by using the modifier ‘any,’ individual municipalities are encompassed within the term ‘any entity’ as used in § 253(a).<sup>51</sup>

- *City of Bristol, Virginia v. Earley*.<sup>52</sup> This case invalidated a Virginia statute that barred localities from competing with commercial providers of telecommunications services and equipment. In ruling that Section 253(a) preempted the state statute, the court specifically rejected the D.C Circuit’s holding in *Abilene*, and found that “the broad and unambiguous language of § 253(a) makes it clear that Congress did intend for cities to be “entities” within the meaning of the Telecommunications Act.”<sup>53</sup>

## **B. California’s Proposition 218**

A municipality that seeks to build and operate a telecommunications facility obviously must raise money to fund the project. Typical options for doing so include selling municipal bonds, and imposing taxes. In California, if the project is funded by imposing a tax, Proposition 218 would require approval by a two-thirds vote of the people.

The relevant portions of Proposition 218 prohibit local governments — including charter cities — from imposing, extending or increasing any general or special taxes, unless or until the taxes are submitted to a vote of the people. In the case of a general tax, only a simple majority is required.<sup>54</sup> In the case of a special tax, a two-thirds majority is required.<sup>55</sup> A special tax is one imposed for a specific governmental purpose.<sup>56</sup> Under this law, a tax levied for the purpose of funding a municipally-owned utility would constitute a special tax and require a two-thirds vote of the people.<sup>57</sup>

## **V. Conclusion**

Although many municipalities tout municipal ownership of broadband systems as a new and valuable potential source of revenue, the evidence shows that municipal ownership is rarely a good public policy or economic choice. In fact, any rate savings to the customer are generally offset by a number of countervailing factors, including higher taxes. As a result, municipal

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<sup>(51)</sup> *Id* at 17.

<sup>(52)</sup> 145 F. Supp. 2d 741 (W.D. VA 2001)

<sup>(53)</sup> *Id.* at 747.

<sup>(54)</sup> Cal. Const. art. XIII C, §2. subd. (b).

<sup>(55)</sup> Cal. Const. art. XIII C. § 2, subd. (d).

<sup>(56)</sup> See, e.g., *Rider v. County of San Diego*. 1 Cal. 4<sup>th</sup> 1 (1991) (sales tax imposed for the purpose of financing a jail and a court house was a special tax, because it was levied to fund a specific governmental project).

<sup>(57)</sup> *Id.*

ownership often merely shifts the costs of service from the customers using the service to taxpayers in general, creating only an illusion of savings. Moreover, municipal ownership tends to remove valuable private assets from the tax base, which impacts the state funds available to county governments and school districts. Municipal ownership also is subject to abuse that skews competition in the marketplace in adverse ways. Finally, if political pressures cause the municipality in its dual role as regulator and operator to favor itself over the incumbent, the incumbent may have a valid due process or First Amendment claim.

Thus, in reality, municipal ownership usually results in lower state and local revenues and higher taxes. For this reason, the trend generally has been toward privatization of the telecommunications industry.<sup>58</sup> Municipal ownership of telecommunication systems runs counter to this trend.

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<sup>(58)</sup> For example. “[i]n 1993, the United States privatized management of the Internet infrastructure. In 1997, it negotiated the World Trade Organization General Treaty on Telecommunications Services, which encourages privatization of government-operated telecommunications carriers in other nations. It has privatized communications satellites, and even created a new entity, the Internet Corporation for Assigned Names and Numbers (ICANN), to facilitate the privatization of domain name management on the Web.” See Eisenach Report, *supra*, page 1.

