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UNDERSTANDING THE DEBATE OVER GOVERNMENT-OWNED BROADBAND NETWORKS:

Context, Lessons Learned, and a Way Forward for Policy Makers

Provo Case Study

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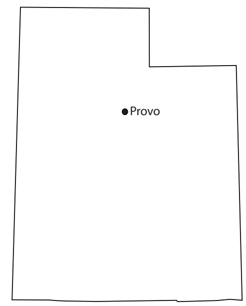
Provo, Utah

The GON in Provo, Utah, will forever be linked with Google, the company that purchased the municipal broadband network in 2013 for one dollar. Many now view the municipal broadband system in Provo as a failure that cost taxpayers about $60 million. After selling the system to Google, the city remains responsible for paying off nearly $40 million in debt over the next 12 years. In short, Provo joins the growing list of municipalities that have been forced to cut their losses, abandon their GON, and acknowledge their efforts to compete in the broadband sector did not live up to original expectations and ultimately proved costly to residents.

Provo, Utah At-A-Glance



City Population: 115,919 (2012)

Year of Network Launch: 2001

Current Status: Built and Sold

Number of subscribers: NA

Revenues: $570 K

Operating Expenses: $1.89 million

Note: Additional information on the Provo network is contained in Table 1 and in Appendix I.

Background

The roots of the FTTH municipal network that would eventually be deployed in Provo date back to 1998, when the city investigated whether and how it might construct a telecommunications system.[1] By 2001, the city successfully built a backbone network consisting of three fiber rings, which connected an array of municipal assets, including electric substations, city buildings, major traffic signals, and schools.[2] Thereafter, the city explored the feasibility of extending the network directly to residents and businesses.[3] Pressure from incumbent ISPs and state legislators, however, pushed city officials to shift their plan for the emerging GON to a wholesale model.[4]

In 2002, the city embarked on the second phase of building, a demonstration project that entailed the construction and operation of a wholesale FTTH network for 300 single-family houses and 30 apartment buildings.[5] The city partnered with retail providers to offer consumers television, telephone, and high-speed data services.[6] The City Council viewed this limited pilot as a success and voted to pursue the entire project in November 2003.[7] The next year, it agreed to issue $39.5 million in tax revenue bonds to finance the network, dubbed iProvo.[8] These funds would be used to build a fully fiber, open access network that would also be used for an array of internal purposes (e.g., control of traffic, electrical, and water systems; internal communication services).[9] The Council estimated that iProvo would be completed by 2006 and capable of generating a positive cash flow by 2008.[10]

The projected success of iProvo was tied directly to the ability of its primary ISP, HomeNet, to grow a robust subscriber base and generate revenues that could be used to cover the costs of building and maintaining the network. By 2005, less than a year after the network went live, HomeNet and iProvo began to run into trouble. In particular, HomeNet was only able to sign up 2,400 customers at its peak, and by 2005 it had lost one-third of them, dropping iProvo's subscribership to 1,600.[11] Consequently, HomeNet pulled out of its contract in July 2005[12] and filed for Chapter 11 bankruptcy protection.[13] This sent iProvo into a downward financial spiral where it was not gaining enough subscribers and revenues were down.[14] These troubles would only multiply over the next few years.

In 2006, low revenue and even lower subscriber rates forced iProvo to approach the city and request a loan of $1 million from its electricity reserve fund to cover costs for the next fiscal year.[15] The GON continued borrowing city funds throughout 2006 and 2007.[16] Subscriber and revenue growth, however, remained disappointing. In 2007, the network had initially expected it would be able to sign up an average of 60 subscribers per week; in reality, it was getting only 16.[17] By 2008, the year iProvo was supposed to be profitable, the network was on track to cost the city $2 million.[18]

It was becoming increasingly clear to the city that iProvo was unsustainable. The city was already investing millions of dollars annually to prop up the network[19] and was on track to lose more than $15 million in subsequent years if it continued to subsidize the GON.[20] As a result, the iProvo network was sold to a private company, Broadweave Networks, in May 2008 for $40.6 million.[21] As a condition of the sale, Broadweave agreed to pay off the $39.5 million bond that had been issued to build the GON.[22] But less than a year later, after merging with another company to form Veracity Networks,[23] the newly formed entity realized it could not build cash reserves, improve the network, or pay off lingering debt associated with the network.[24] Veracity asked the city to restructure the debt.[25] (To that point, Veracity had been drawing on a $6 million surety bond while it attempted to "save operating cash."[26]) In 2011, Veracity defaulted on its purchase agreement; control of the network reverted back to the city.[27] The city settled with Veracity and leased the network back to the company while it looked for a new buyer.[28] Also in 2011, the city "began charging $5.35 a month on residents' power bills to pay the bond payment."[29]

Like many problem GONs, Provo had a difficult time finding a buyer willing to purchase the network for the price of the assets, let alone the cost Provo paid to build the network. In April 2013, Provo finally found a buyer: the city sold the $40 million network to Google for one dollar.[30]

Cost and Financing

The FTTH GON in Provo was financed via a $39.5 million bond issue.[31] Beyond that, iProvo required about $2 million in subsidies from the city annually.[32] All told, additional taxpayer subsidization totaled $19.3 million.[33] The sale of the GON to Google does not remove the burden of debt from taxpayers. The city, and taxpayers by implication, are still responsible for the remaining debt on the original bond.[34] That works out to $3.3 million "in bond payments per year for the next 12 years."[35] In addition, the city of Provo will incur additional costs as a result of its deal with Google. It will have to not only retire the debt, but also "buy new equipment so it can operate city services independently from Google, and hire engineers to document the locations of all the fiber in the system."[36]

The Network

The iProvo network in the city of Provo is operational but not entirely complete. The backbone has been deployed throughout the city, but only one-third of homes are connected to the network.[37] Under the city's management, subscription rates were much lower than anticipated.[38] At its peak, iProvo had about 11,000 subscribers, but churn rates were high.[39]

Prior to its sale to Google, iProvo offered triple-play packages to subscribers through contracted private ISPs. As an example of the services it offered, in 2004 HomeNet, iProvo's original retailer, offered several bundled packages of Internet access (up to 10 Mbps), cable telephone, and VoIP service, which ranged in price from $89.99 to $124.99 per month.[40] The services and pricing changed numerous times over the years as the network changed hands between public and private entities. Via Google Fiber, Google will offer subscribers free 5 Mbps service for a $30 activation fee; 1 Gbps connections will retail for $70 per month.[41] Google has no plans to offer services to businesses at this point in time.[42] But it has committed to providing "free Gigabit Internet service to 25 local public institutions like schools, hospitals, and libraries."[43]

Community Impact

In 2004, then-Mayor of Provo Lewis K. Billings enumerated the many benefits he foresaw for the fledgling FTTH network being in his city. These included "advanced telemedicine services," "interactive distance learning," "remote meter reading," and numerous other "things I can't even comprehend that will be enabled by the immense capacity of our network."[44] Nearly a decade later, few, if any, of these goals have been realized as the Provo GON transitions to yet another owner. Some have touted the benefits of gigabit connectivity in the city's schools, but there is little evidence that the network itself has generated tangible gains in outcomes.[45] Moreover, much of the excitement around educational technology in Provo schools seems to have stemmed more from the introduction of iPads than anything else.[46]

Over the course of its turbulent history, iProvo has been described as an example of government overreach. Residents, journalists, and elected officials alike have been critical of the GON. The Utah Taxpayers Association has characterized Provo's investment as a waste of taxpayer money. Early on, the group questioned, "Why is the city gambling with taxpayer money on a speculative venture when many private companies and cities have failed while attempting the same thing? Shouldn't we as taxpayers be able to vote before risking $40 million of OUR money?"[47]

Former Provo Mayor George Stewart, the mentor of the mayor who was responsible for launching iProvo, has been critical of his protégé and the network he built.[48] After a heated exchange during a City Council meeting, Stewart concluded that, "if I had been here two years ago, I would not have proposed iProvo."[49] The current mayor of Provo, John Curtis, has also been critical of the GON. He has been quoted as saying, "If I could, I would get a plot in the city cemetery and bury it. iProvo is gone, it was sold. I would never like to utter iProvo again."[50]

Assessment

The sale of iProvo to Google offers several insights that should inform ongoing debates over the efficacy of pursuing a municipal broadband network.

First, the sale to Google does little to erase the legacy of this municipal system. By 2013, iProvo had become a distressed asset that represented a failed foray into a competitive marketplace by the city government. The total cost of the network, estimated at around $60 million, may far outweigh any benefits that had accrued to the city up to that point.

Second, the sale of iProvo to Google is not the end of the story. Although the city and its mayor succeeded in its goal of selling the failing GON, Google was able to extract a favorable deal that might end up benefiting the company more than the residents it will serve. Google has committed to investing in upgrading the existing infrastructure to support gigabit connections and building out the network to all homes,[51] but it did not assume the nearly $40 million in debt that the city had previously tried to transfer on to its original private purchaser, Broadweave.[52]

The recent deal with Google requires Provo to spend upwards of $1.7 million on an array of items related to the transfer of ownership to Google.[53] Moreover, with much uncertainty surrounding Google's actual motivations for its small-scale gigabit fiber deployments, Provo residents could find themselves in another ambitious broadband experiment.[54]

Endnotes

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