

Open Service Provider Networks: Taking America's Communities Into the Digital Age

An answer to our broadband decline and to the need for fair telecom in a free-market economy

By Ben Gould ■ *Vice President and Chief Marketing Officer, DynamicCity, Inc.*

From the telegraph to the telephone to the cell phone; from commercial radio to the television set; from the personal computer to the Internet, America has paved the way toward bringing new forms of communication, entertainment, and education to the home and workplace. But America's current telecommunications business models are sending the nation into broadband decline relative to the rest of the world. While U.S. consumers and businesses are struggling with decisions about DSL, T1, or other slow, limiting, and expensive broadband mechanisms, our global competitors are leaving us by the wayside as they deploy affordable, very high capacity broadband service.

U.S. communities need to take notice and consider a new model for providing real, value-added broadband. I call it the Open Service Provider Networks™ model. These community-owned OSPNs can bring complete availability of true broadband connections, service provider independence, economic infusion, and life-enhancing services to residents and businesses.

Despite being the electronic communications pioneer, the United States has fallen woefully behind in global broadband competitiveness. By some measures, America has dropped as low as 20th in the world in proportion of premises served by broadband, down from as high as 4th a few years ago.

The oft-cited ITU WW Telecommunications Indicators Database lists the United States as 13th but Charles Ferguson of the Brookings Institute suggests a lower ranking.

What Is Broadband?

While a few communities get some level of "broadband service," there are misconceptions about what broadband really is. The Regional Bell Operating Companies as well as multi-service operators (cable companies) sell 256 Kbps to as high as 5 Mbps as broadband. Even as these speeds are touted, these are download speeds only and the top speed is rarely above 1.5 Mbps.

Newton's Telecom Dictionary, the de-facto standard in the telecom industry, defines "broadband" as a minimum of 45 Mbps. The FCC says it is 200 Kbps. Many of our international competitors understand what real broadband is, and they are finding ways to make it available to their businesses and citizens. For example, Japanese residents have access to Internet connections of 47 Mbps for only \$26 per month. That speed is not generally available in the United States for less than tens of thousands of dollars a month. On a monthly price per megabit, the United States averages around \$35 while Japan averages 90 cents.

But things are about to change for some communities in this country. Some innovative and dynamic communities, like those involved in Utah's UTOPIA project, have recognized the need for true broadband and are beginning to deliver connections of 100 Mbps of symmetrical (both download and upload capacity) bandwidth, to 1 Gbps and even more. On a price per megabit, UTOPIA citizens are receiving this capacity at prices as low as 89 cents per Mbps per month – comparable to Japan!

The U.S. failure to keep pace is due in large part to our upsetting the laws of

supply and demand – violating a basic tenant of a free market economy. Regional telecommunications operators are an offshoot of the original Bell System in America, an organization that was funded through a set of captive rate payers, captive rights of way, and guaranteed rates of return on capital. This system was necessary for us to become competitive on a global scale.

In 1984, Federal courts broke up the monopoly for the long distance market, but local "baby bells" were formed for local services and the monopolies continued on a regional level.

The resulting local communications services have suffered since due to stifled competition.

Impact on Local Communities

The effects of the broadband deficit on local communities are immense. Monopolistic service delivery is negatively impacting economic development opportunities by creating barriers to the attractiveness of communities.

What's more, many communities have limited or no access to broadband services, with cable and phone companies bypassing small towns because of expensive installments and maintenance costs.

This digital divide between Americans that have access to broadband services and those who don't is becoming increasingly important.

Forward-looking municipalities are seriously looking at alternatives that bring true broadband networks to their communities to improve the local tax base, retain and attract residents and business owners, and deliver cutting-edge services at significantly reduced cost.

Pitfalls of Private, Retail Service-Provider Infrastructure

Of course the threat of open, competitive, high-capacity network infrastructures has led regional Bell operating companies (RBOCs) and multiple service operators (MSOs) to vehemently oppose municipal fiber projects. The real problem is one of motivations. An incumbent provider is (and should be) motivated by returning shareholder value. When it comes to building infrastructure, the return for a shareholder is often low and long in coming. As a result, private industry rarely (if ever) funds infrastructure without some form of government involvement. That was exactly the situation when the legacy infrastructure we currently have was funded. The original Bell system was given, among other things, guaranteed rates of return and captive rate payers. It is unreasonable for us to think that baby Bells would be motivated by the public good when their shareholders are holding them to a different standard.

In other words, as a society we shouldn't expect private industry to fund an advanced communications network, because it is really infrastructure. We don't expect private industry to own and operate roads and highways, airports, water systems and other forms of infrastructure (although they occasionally do), so why should we expect it of the new information superhighway? These infrastructures have generally been left to local governments with subsidization from state and federal governments when it makes sense.

So what role should local government play in the broadband debate? The Bell companies argue that communities have no business being in the service delivery industry, as it is a conflict of interest. They argue that municipalities that own fiber deployments are not only their regulators but are their competitors as well.

"With so much money being invested for better services and more bandwidth into homes, cable and the Bells consider government efforts unfair to private businesses. 'The issue is (that the mu-

THE OSPN PRINCIPLES

Principle 1: Open and wholesale

The key ingredient is that the network ownership is separated from the private enterprises that provide content and retail services.

Principle 2: Carrier-class Quality of Service

There is the need to assure the highest levels of reliability and redundancy.

Principle 3: High, scalable bandwidth

Provides true broadband service.

Principle 4: Open and independent architecture

Standards-based solution to accommodate a broad range of service providers and the lowest possible cost per megabit.

nicipalities) control rights of way, and to regulate us at same time they're competing with us is a recipe for trouble,' said Dave Pacholczyk, an SBC spokesman," according to a recent CNET article (at http://news.zdnet.com/2100-1035_22-5471897.html).

It is no surprise that the incumbents are actively influencing state legislatures to outright ban the practice. Pennsylvania has perhaps the most odious anti-municipal law in this regard. It started when the Borough of Kutztown, with a population of 5,200, began a municipally led broadband project and Philadelphia soon followed. Verizon initiated action against the projects in the legislature.

"I cannot see justification for the legislation," said Frank P. Caruso, director of IT for the Borough of Kutztown. "This legislation delays advanced technology from reaching rural Pennsylvanians. Verizon has essentially bought time, again, and it accomplished its primary objective to thwart competition by stopping further municipal deployments."

The Open Provider Network

That brings us to OSPN. The OSPN model has been developed and implemented by DynamicCity, an Open Access Architect company expert in designing, financing, building and operating transformational fiber-to-the-home projects.

The OSPN starts with a principle-

based business model that places ownership of networks in the hands of cities while provisioning wholesale broadband service from competitive service carriers. Based on a clear set of principles, the OSPN business model avoids the problem of government competing with private enterprise; it fosters robust competition and innovation and introduces the laws of supply and demand into the delivery of advanced communications services. The principles are basic – and they work (see box above).

The OSPN overcomes the monopolistic forces of incumbent carriers by allowing a community to make its network infrastructure available to as many competing third-party service and content providers as possible. The outcome is not only greater consumer choice, but also breakthrough telecommunications services and true broadband capacity to consumers at significantly reduced cost. Superior video, voice, and data services, distance education, telemedicine, and video conferencing all become commonplace in the dynamic cities that provide an OSPN. These types of services are actively sought in communities across the country; their proliferation is inevitable.

From existing and prospective business and residential consumers to community governments, to service carriers and content providers and even real estate developers, OSPN offers tremendous

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advantages. The open and wholesale approach, combined with carrier class reliability, extremely high capacity, and an open architecture, deliver a municipal infrastructure model that is unparalleled (see box below).

The OSPN model is being evaluated in dozens of municipalities throughout the nation and is already at work in the largest municipal fiber network project in the country, UTOPIA, including 14 founding cities and 160,000 potential

subscribers throughout Utah.

Open access works! ♦

About the Author

Ben Gould can be reached at bgould@dynamiccity.com. Before joining Dynamic City, which aims to be the catalyst for the digital revitalization of metro markets across America, Gould was chief executive officer at Apollo Health, Inc., a manufacturer of medical devices.

What OSPN Stakeholders Get

Business & Residential Consumers

- True broadband –100Mbps to 1Gbps connections and beyond.
- Symmetrical service – faster data downloads and uploads.
- Competition – better service, lower cost, more choice.
- Higher quality video experience.
- New breakthrough services and content.
- Converged voice, video, and data services.

Communities

- More satisfied businesses and residents.
- A better infrastructure for economic growth and development (higher home values, better business environment).
- More empowered community involvement.
- Globally competitive community.
- New revenue source.
- Promotes competition.
- Ubiquitous coverage.
- A community at the cutting edge – a Dynamic City.

Carriers, Partners, Content Providers

- An economically compelling, open and level playing field in which to compete for share of consumer wallet
- A willing network partner with best possible infrastructure
- A network owner that won't compete
- New, untapped networks and regions that might otherwise be uneconomical to reach
- Minimized capital entry costs
- Critical mass of subscribers
- Success-based pricing model

Real Estate Developers

- Value-added broadband services to attract home-buyers
- Progressive new model to promote development in communities
- Boost land/home values
- Bundling/co-marketing opportunities for new fiber-ready homes
- Introduce concept of dynamic home
- Promote enhanced lifestyle and improved interaction with family/friends
- Differentiation for developers