



Open Access Success Stories and Best Practice

Presented by

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We have been here before

- ▶ When did citizens and business people first pester town leaders for newfangled technology?
- ▶ 1400 (as in six hundred years ago)
- ▶ The first Main Street technology was the town clock
- ▶ “[we]....sorely feel the need for this.....[If we had this] more merchants would come to the fairs, the citizens would be very consoled, cheerful and happy, and would live a more orderly life, and the town would gain in decoration.”



Broadband is the road, not one of the trucks

- ▶ Shared community infrastructure is common
 - ▶ Canals, railroads, water, sewer
 - ▶ Roads are shared -- would it make sense for Fedex and UPS to build private roads?
 - ▶ Airports are shared -- community infrastructure for public and private benefit
 - ▶ It would not make sense to build an airport for each airline
- ▶ Phone systems and electric systems were first build by local government



nDanville

Attribute	Description
Governance	nDanville is part of the City of Danville Utilities Department.
Funding	Combination of loans and revenue to fund the construction of the network. Revenue from key institutions like the City and County schools have been a significant factor. Network now makes contributions to the City general fund and is able to expand using its own funds.
Business Model	nDanville is an open access, open services network. All services provided to residents and businesses are offered by private sector providers.
Management	Daytime operations are managed by the City, and nights and weekends support is outsourced. Some outside plant maintenance is performed by City utility crews, and some work is outsourced.
Technology	Active Ethernet fiber network, providing 100 Meg and Gig symmetric connection as standard. Gigabit and 10Gigabit connections are also available. nDanville has provides access to more than twenty-five local, regional, and national service providers.

Eastern Shore Broadband

Attribute	Description
Governance	The Eastern Shore of Virginia Broadband Authority (ESVBA) is a regional authority owned by the counties of Accomack and Northampton.
Funding	The U.S. Navy and NASA provided some seed funds for construction of the backbone. The Commonwealth of Virginia also provided additional start-up funds.
Business Model	The network is being operated as an open access network with an initial focus on business and institutional customers.
Management	The Authority has one full time project manager and two part time staff providing administrative and some technical support. Network operations and outside plant maintenance will be outsourced to qualified private sector firms.
Technology	The ESVBA network uses active Ethernet and provides symmetric 100 megabit, Gigabit, 10Gigabit, and DWDM connections. The Authority is also actively working with some wireless broadband providers to get fiber to some tower locations to improve access to broadband wireless services in the region.

The Wired Road

Attribute	Description
Governance	The Wired Road Broadband Authority is a regional authority set up under Virginia law. It is owned by the counties of Grayson and Carroll and the City of Galax.
Funding	Initial funding from a mix of local government funds, a grant from the Virginia DHCD and a substantial contribution from the Carroll County Public Schools. The Wired Road has since raised almost \$4 million in local funding and grants to fund additional fiber to businesses and fiber to the home.
Business Model	The Wired Road uses an open access, open services model, with all services to homes and businesses provided by private sector providers. Two wholesale providers and three retail providers are currently competing for services.
Management	The Wired Road outsources network management/operations and outside plant maintenance and repairs.
Technology	Active Ethernet, with fully integrated fiber and wireless open services architecture. 100 meg standard fiber connection. Wireless connections are typically 3, 5, 10 megabits.

Palm Coast, FL

Attribute	Description
Governance	Palm Coast FiberNET is owned by the City of Palm Coast.
Funding	City enterprise funds were used to pay for the initial \$2.5 million in fiber construction, equipment, and the colocation facility.
Business Model	FiberNET is operated as an open access network. Providers pay a monthly fee per customer, based on connection size. The City network has acquired several large customers, including Level3, and expects to be in the black at the end of year one.
Management	The City IT Department manages network operations, and private sector contractors are used for outside plant maintenance and construction work.
Technology	FiberNet is an active Ethernet network that provides symmetric 100 megabit, Gigabit, and 10Gigabit connections as standard. DWDM circuits can be provided upon request.

Best Practice

- ▶ Staffing decisions are the single biggest potential for success (or problems)
 - ▶ The first hire can make or break the network
- ▶ Important to attract and retain good service providers
 - ▶ The right pricing and business contracts are needed
 - ▶ Important to know how to talk to providers
 - ▶ Need the right technical information at the right time
- ▶ Consistent, ongoing marketing and awareness needed
 - ▶ Service providers sell to their own customers
 - ▶ Network has to market availability

More Best Practice

- ▶ **Funding and Financial Management**
 - ▶ Over reliance on grants rarely turns out well
 - ▶ Create a budget and manage it
- ▶ **Take rate targets drive the business plan**
 - ▶ Set take rates early and track progress
 - ▶ Make adjustments in pricing and marketing to stay on track
- ▶ **Budget for adding more customers**
 - ▶ Drops to new customers cost money
 - ▶ Have to have a budget and strategy to fund new connections

Network Design Goals

- ▶ Universal Access--ubiquitous access to the same bandwidth and services, regardless of location. Rural areas have network equality with cities
- ▶ Symmetric Bandwidth--needed to support business services at the office and home-based jobs and businesses
- ▶ Affordability--Prices should be comparable to the rest of the world
- ▶ Fiber and Wireless--mobility and high bandwidth services
- ▶ Public/Private Partnerships--telecom requires gov't and business collaboration
- ▶ Competitive network--many providers, many services creates competition and ensures affordability
- ▶ Unlimited bandwidth--whatever is needed to support businesses
- ▶ Open--fair and equal treatment of all services and all providers

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Text

- ▶ Design Nine, Inc.

- ▶ www.designnine.com

- ▶ Papers, handouts, and other information on community broadband issues

- ▶ Community technology news and information

- ▶ www.designnine.com/news/