

Utah's Experiment With Utopia

Under Utah law, Municipalities Must Wholesale Their Bandwidth

By Lawrence Kingsley ■ *President, Telepublishing Reports*

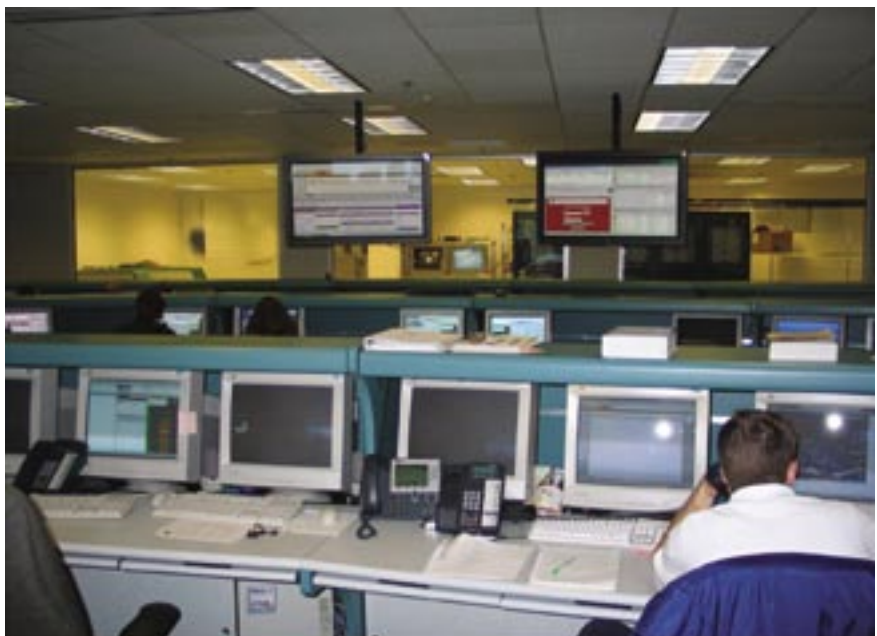
Utopia, the Utah Telecommunication Open Infrastructure Agency, is a consortium of 14 Utah cities whose fiber optic network will pass every home and business within their borders. Utopia is believed to be the largest fiber optic deployment in the U.S. While not as large as similar developments in Japan and Korea, it is certainly world-class. David Shaw, General Counsel of Utopia, expects to have 50,000 subscribers at the end of the first year of service and 140,000 subscribers within three years. Utopia has financed the build with \$85 million in municipal bonds.

Utopia began building its network in August and plans to start marketing in January. The consortium, in effect, is the holding company that “owns” the system.

Dynamic City (Lindon, Utah) operates and implements the network on behalf of Utopia. Shaw uses the analogy of landlord and tenant—Utopia is the landlord that expects to have multiple tenants on the network. The tenants will offer competing (or complementary) content and services to end-users.

In this way Utopia separates the infrastructure from the content's ownership. In contrast to the vertical integration of the Regional Bell Operating Companies (RBOCs), Utopia recenters competition from the networks themselves to the network “tenants.”

Utopia had little choice after the Utah Legislature passed the Utah Municipal



Utopia's Network Operations Center, managed by Dynamic City.

Cable Television and Public Telecommunications Services Act in 2001. This legislation mandated that municipal networks could offer wholesale, but not retail services, in order to prevent direct competition with private companies. Utopia, which had yet to be launched, was not the object of this legislation, according to Shaw, but rather the nearby city of Provo.

Provo had purchased Provo Cable, and AT&T Broadband, later sold to Comcast, was up in arms.

As result of the legislation that followed, Utopia charges its service providers, who, in turn, will bill the subscribers. Utopia incurs \$900-1,500 in

capital costs per subscriber, according to Shaw. By comparison, cable companies have paid \$2,500-3,500 per subscriber. Leonard G. Ray, VP of Atlantic Engineering Group and next year's President of the FTTH Counsel, says that the RBOCs traditionally have paid \$1,800-2,500 for a copper access line.

Shaw says he expects the typical cost of triple play video, voice, and IP services to be in the vicinity of what the subscriber would pay a cable company for a similar service. The advantage of Utopia is the vastly superior speed and transmission quality it offers compared to typical cable systems.

The video “packages” from which

Utopia subscribers can choose have not yet been determined, but they will be provided through a headend whose use Utopia has leased from Provo.

So far, only two network “tenants” have been announced, AT&T and MSTAR, one of Utah’s largest internet providers and one with home-grown roots. Both AT&T and MSTAR are expected to offer video as well as other competing services.

To date, what AT&T has announced for Utopia is CallVantage, Worldnet portal and Internet access, and Web hosting. CallVantage, costing \$29.99/month, is a VoIP package for unlimited local and domestic long-distance calling. AT&T routes the call over its proprietary network so that the call is not “subjected the vicissitudes of the public network,” in the words of Bob Nersesian, AT&T corporate communications manager.

CallVantage currently can be purchased at Circuit City, Best Buy, and Amazon.com, typically to add an extra home or office line through a DSL or cable modem. But on fiber it is expected to be a replacement for traditional phone service. As described on the AT&T Web site, CallVantage has features similar to those of other VoIP providers, including:

- **Call Logs**, to track incoming and outgoing calls.
- **Do Not Disturb**, to receive calls only when wanted.
- **Locate Me**, which rings up to five phones all at once, or sequentially.
- **Voicemail**, to listen to messages from any phone or PC and to forward calls to anyone on the Web.
- **Simple Reach Number**, which enables the customer to add up to nine additional telephone numbers, each with a different area code. The number can be a local call for out-of-town friends, family, or key customers. The cost for each Simple Reach number is \$4.99/month.
- **Personal Conferencing**, to set up meetings with up to nine additional callers.

- **International Call Blocking/Shut Off**, to block or unblock outbound international calls where a per-minute fee would be assessed.

- **Use of Aliases**, that display a personalized or preferred name (for example, “Mom” instead of “Smith, Jane”). Where available, caller ID can apply

to international as well as to domestic calls.

Dynamic City Executive Vice President Joel Sybrowsky is seeking other content and service providers. He would like to have applications in telemedicine, distance learning, telework, video on demand, and emergency services

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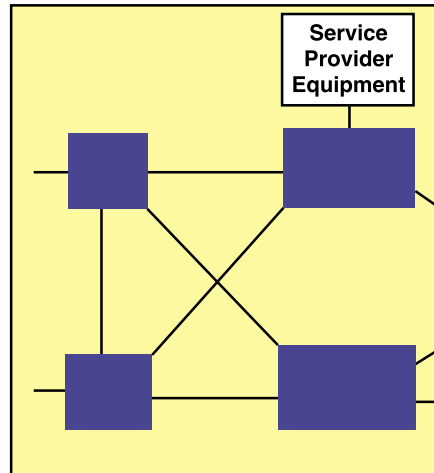
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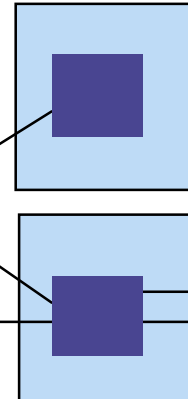
Technology

MetroNet POP



Community Hub

10,000 to 30,000 Households



- Reliability & Performance
- Available Rack and Floor Space
- Connectivity
- Security
- Environmental Controls
- Scalability



- Solid pre-cast reinforced concrete
- 7' x 19' x 9' interior dimensions (20% utilized)
- 3070 Door/Frame
- Two 2-ton Air Conditioning Units
- 5kW heat strip and integral blowers
- Remote Monitoring/Control
 - Environmental
 - Security parameters
- Video surveillance
- Back-up generator



- Integrated Maintenance platform
- Robust monitoring
- NEB Level 3 Compliant
- 170 Gbps non blocking switch fabric
- 4,096 VLANs based on port and protocol
- Hot Swappable
- LSR and LER MPLS support Hardware
- MPLS traffic engineering
- RSVP-TE and LDP distribution/signaling
- Wire Speed RMON



- Separate and Secure Compartments
- Electronics
- Fiber and Splice Management
- Air Conditioner & Power Transfer
- 45" spare rack space
- Dual Air Conditioners
- 8+ hours of Battery backup and Generator hook-up

(enhanced 911, accident reporting, and identification of criminal suspects).

Even small startups might benefit. Sybrowsky says Dynamic City offers a combination of custom and off-the-shelf tools to manage an open network. It is easy, he states, for service providers to plug into these tools.

Analysis

Dynamic City has applied for a patent on the separation of network ownership and network services. However,

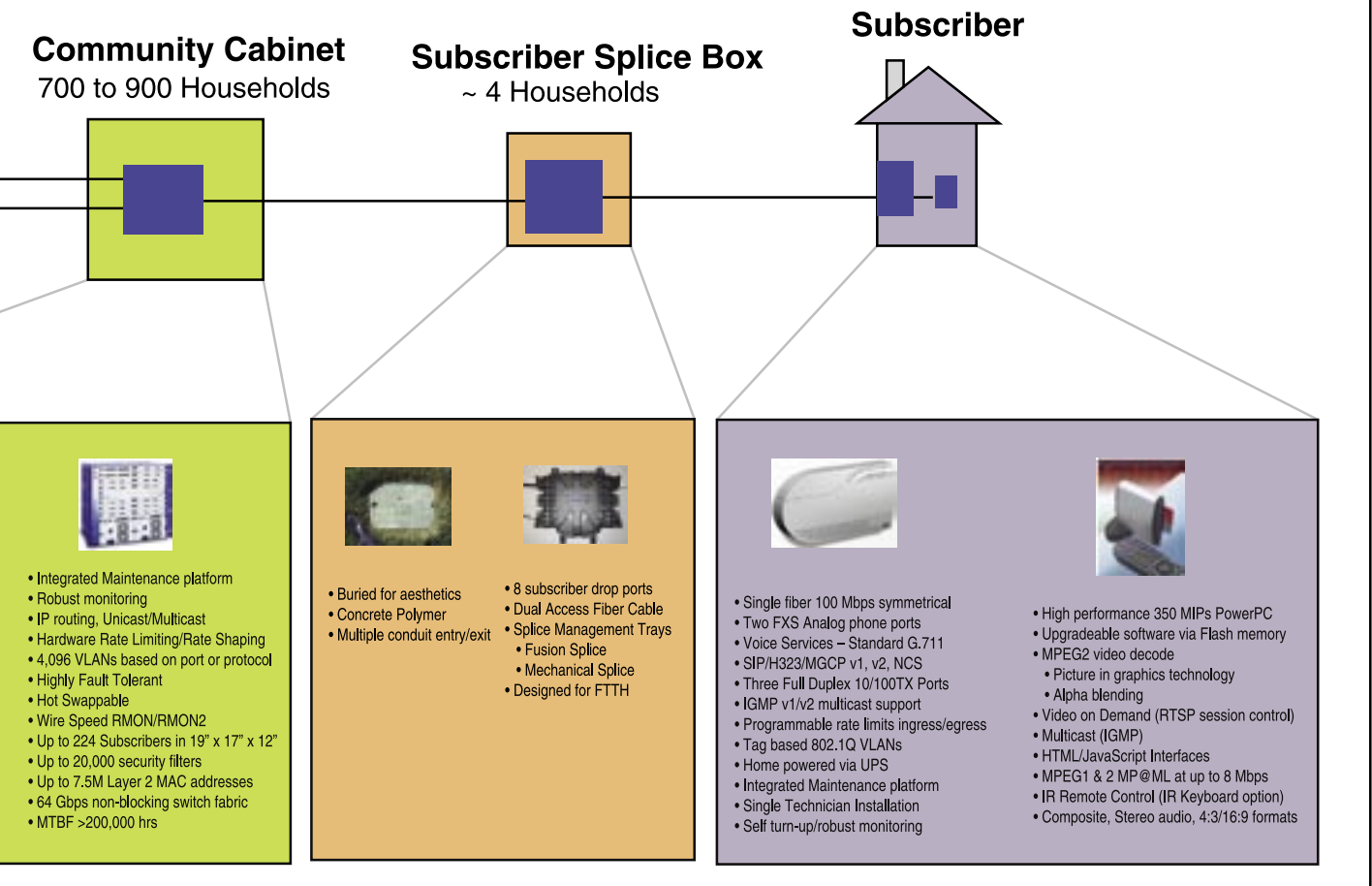
cable TV seems to offer the same model, with premium channels, pay-per-view, voice, and Internet connectivity.

Whether the service record of Dynamic City will be any different from that of cable TV remains to be seen. The history of cable is one that still sparks late-night jokes and studies by antitrust lawyers.

Once the franchise is granted, the cable company, as the jokes go, feels entitled to take liberties with service commitments while imposing monopoly

pricing on powerless customers. Shaw says Utopia, in contrast, will express a community point of view since his board is composed of members from each of the 14 municipalities. But if Cox, Time-Warner, and Comcast struggle with training and customer service, will complexities multiply in Utopia, where there are multiple tenants and not totally proven computer technology that underlies every aspect of the system? Or will the uniformity of the technology reduce costs and complaints?

Template



Provo, with its high percentage of technically-proficient residents and companies like Novell, is not a Utopia member. Provo has its own fiber optic project and is working with World Wide Packets (Veradale, Washington).

Risk is reduced when the cost is spread over 14 cities, but Provo officials suggest that he who travels with few companions travels faster.

Utopia has so far sidestepped potentially volatile issues like content filtering. MSTAR emphasizes content filter-

ing (exclusion of “harmful materials like pornography”) on its own Web site, but on the Utopia network the customer will have to turn on content filtering—the default setting will be “Off,” according to MSTAR CEO Jon Hansen.

All Utopia has said on this subject is that content filtering must be available at no additional cost to subscribers.

Embryonic or advanced, novel or reinvented, Utopia is likely to be a bellwether for other broadband deployments in the U.S.

Thomas More chose the name for the original Utopia from Greek words meaning “no where,” because an ideal society is no where to be found. But presented with fiber or other means of connecting to the Internet, Utah residents may feel that they have found a piece of the lost paradise. ♦

About The Author

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