

networkMaryland™ Advisory Group
September 18, 2007
Chesapeake College



Attendees:

Advisory Group

Pat Wallace
Sidney Drake
Norwin Malmberg
Ron Brothers
John Gallagher
Chuck Bristow
Barb Pivec
Paul Thorn
John Gallagher
Ron Ward
Dick Aldridge
Dean Zarriello

Guest

Patrick Mitchell
Jason Ross
John Robinson
Ed Quattrone
Chuck Hutzal
Dan Vestal
Paul Lennon
Jerry Ryznar
Robert Bowman

DBM

Ellis Kitchen
Greg Urban
Tim Kwong
Cheryl Lincoln
Joanne Rusk

Welcome & Introductions

Greg Urban called meeting to order at 10:07 a.m.

Greg introduced himself, Ellis Kitchen, Tim Kwong, Cheryl Lincoln and Joanne Rusk.

The visitors introduced themselves.

A motion was made by Chuck Bristow and seconded by Norwin Malmberg to accept the Minutes from the July 17, 2007 meeting.

Ellis Kitchen noted that:

- There had been an OC 48 fiber cable cut on 9/17 but that subscribers weren't aware of it since no services were impacted;
- There was a MEMA demonstration at Camp Fretterd recently at which the networkMaryland team provided consulting/engineering services;
- At the end of July, the Network Management & Support Services RFP was put on the street with an October 2, 2007 due date.

Ellis introduced Patrick Mitchell, the General Manager of the Maryland Broadband Cooperative and gave a short history of that organization which focuses on rural initiatives and is a non-profit cooperative.

Patrick Mitchell gave a detailed description of the Co-op which was founded on July 1, 2006, the product of SB753 under Governor Ehrlich, who provided \$10m in start-up funds, for the purpose of persuading industry to invest in rural Maryland initiatives in a timely fashion. It is a non-profit organization. DBED provides the funding to the Co-op as a grant.

- Much has been completed in the first year: Wallops Island to Salisbury has been completed, as has Salisbury to Talbot. Bay Bridge is being wrapped up real soon (96 strands of fiber on each bridge). Currently building in Cecil County and working with WL Gore –9 miles of fiber to Elkton. Work is beginning in Southern Maryland at the 301 Bridge.
- There will be a ceremony on October 9, 2007 at 10:30 a.m. at Hemingways Restaurant at the Bay Bridge to celebrate completion of work on the Bridge which will provide access between Anne Arundel County and Virginia.
- Senator Milkuski obtained an additional \$4m and Governor O'Malley was able to provide an additional \$6m in the second round of funding.
- The Virginia Mid-Atlantic Broadband Cooperative is working their way towards us to tie into the Maryland Broadband Co-op.
- The Maryland Broadband Cooperative will meet with the Virginia Co-op at the end of the month (Virginia is approximately 3 years ahead of Maryland) to determine if rates for Maryland are similar to those of Virginia.
- Organizations recently joining the Co-op: Dorchester County, Worcester County, Easton Utilities, Caroline County, Bay Country Communications.
- The total cost of the project to date is \$12m.

- The Maryland Broadband Co-op does not compete with networkMaryland™ for customers. “Schools, medical facilities, etc. will go where they get the best deal. We are providing an alternative way of providing service on the Eastern Shore. We are currently working with UMATS and State Highway. We are NOT a last mile provider.”
- networkMaryland™ should expand significantly because of the Maryland Broadband Co-op.
- The Co-op is not a State agency and only sells to clients what they will actually use. The same rates apply to everyone.
- The Maryland Broadband Co-op should have their first annual membership meeting by the end of the year. Anticipate the election of an 11-person Board of Directors (the Board currently has 5).

State of the Network

Operational Customers

- There are 70 subscribers as of today, including
 - 77 ISP circuits, an increase of two since the last meeting
 - 85 SwGI circuits, which represents a change of two,
 - 1155 layer 2 circuits, which is a dip in numbers; it was 1180; some Legacy sites have been turned down; some offices have been closed. However, there are many new WAN requests.
 - 10 VPN connections (no change)

Executive Branch

There have been changes to this group of users, as denoted by red asteriks

Non Executive Branch

There have been changes to this group of users, denoted by red asteriks provided on handouts.

Non-State Customers

This is where the most growth is expected.

Operations

- Internal Operations & Support
 - Cheryl Lincoln successfully worked on trade-ins of legacy network equipment for reduced pricing on new equipment after doing a detailed inventory of existing equipment
 - HVAC maintenance and compressor replacement at UMCP takes place 9/19/07.
 - Supporting various maintenance tasks related to the backbone migration from ATM to MPLS involves equipment maintenance.
- DNS servers: software setup is currently underway and testing is necessary.
- Upgraded Archive’s L2 connection between the Hall of Records on Rowe Boulevard and their data center at UMBC from 100 Mbps to 200 Mbps
- Purchased Kiwi Syslog software for firewall logging.
- Consulting Services Engagements

Supported MEMA on their network requirements for their WebEOC Application.

The WebEOC Statewide exercise was held 8/1/07, which simulated a flu pandemic.

Towson University hosted MEMAs EMA application.

Internet bandwidth to both providers peaked at 80% throughout the exercise. MEMA was pleased with the results of the testing.

Assisting DPSCS in turning up the networkMaryland™ on-net connections.

Assisting the Office of Public Defender in turning up networkMaryland™ on-net connections.

Assisting WCC in migrating their connections at Headquarters from a leased line to fiber which will connect to 6 St. Paul.

Customer Provisioning

50 circuits are currently in customer's testing/implementation phase

13 new circuits have been provisioned since the last meeting

13 circuits have been accepted by customers since last meeting.

New Customers

Baltimore County Government – Towson POP is in progress

Washington County Government (Hagerstown)

MSDE – new connection from HQ to Gaithersburg

Caroline County – ISP and SwGI

Growth Chart

We are close to 1200 circuits but experienced a small dip in July.

Project Status

Number of installed circuits peaked in May; however, numbers have dropped a bit.

Barb Pivec asked how many customers could be served. Ellis replied that all State agencies utilize the network, therefore, it's complete. The network will never be static; agencies may change bandwidths.

Greg Urban said that Minutes and the Agenda will be put on the networkMaryland website.

- DWDM Ring (Partnership with USM, MDOT) project is completed.
Provisioned an additional wavelength for networkMaryland™.
- Elkton Sonet POP
Project completed in August
Now part of UPSR ring: Baltimore-JFK-Elkton
- Towson POP
Baltimore County completed fiber route to County Data Center
PMP is in development.
networkMaryland™ awaiting fiber allocation
No ATM will be deployed at this POP.
- Salisbury MSC

Initially connect to network via leased line

PMP is in development

DS3 clear channel circuit to Easton completed

No ATM will be deployed at this POP

- Denton MAN
 - Connects subscribers to the Eastern Shore microwave backbone
 - Install equipment in 7 buildings in Denton
 - Serve 17 agency connections
 - Connection to County Data Center established
 - Engineering design and overall layout completed
 - PMP and parts lists approved
 - Procurement completed and parts have arrived.
- Cambridge MAN
 - Resource share with Bay Country Communications
 - Install equipment in 7 buildings in Cambridge
 - Project Management Plan completed and approved
 - Procurement is in progress
 - Will serve 17 agency connections
 - Fiber installation by Bay Country Communications in progress.
- UMBC POP
 - Connects to backbone at UMCP and 6 St. Paul
 - Service State Archives connectivity between Annapolis and backup data center at UMBC
 - Fiber between UMBC and Catonsville MSC completed
 - Site surveyed and prep work completed at MSC
 - Potential termination point for microwave connection to Hagerstown.

networkMaryland™ Overview

There have been no changes.

Projects in Planning

- Western Maryland Microwave
 - Partnership with UMATS and Sailor.
 - High Speed microwave from UMBC to Hagerstown
 - Provide redundant path out of Hagerstown
 - Allows decommissioning of 3 inter-LATA circuits
- Washington County Connectivity - MOU with WCPN
 - networkMaryland will establish a POP in Hagerstown
 - WCPN will receive SwGI and tower access
 - networkMaryland will receive last mile access to subscribers
- Fiber Projects - Not much progress made.
 - Resource sharing agreement with Fibergate: Additional fiber in Montgomery and Prince George's Counties and to Fort Detrick.
 - Terms agreed upon and Legislative Policy Committee letter drafted.

Frederick MAN: Add an additional POP in Frederick and build a diverse fiber path to the city. Partnership with Frederick County government. Relies on Fibergate fiber.

Oakland MSC: Resource Share Agreement to bring fiber from Oakland to backbone. (Very little progress)

Other Initiatives

- Evaluating various last-mile access solutions
 - Ethernet over TDM
 - Reduce costs for sites not directly attached to backbone
 - Pilot project identified – Salisbury MSC
 - Hardware specifications to be finalized 9/21
 - Clear channel (non-ATM) access:
 - Provide greater than T1 bandwidth and support QoS
 - Support Ethernet handoff for non-MSA locations
 - Pilot project identified: MDTA Western LATA
 - Hardware specifications to be finalized 9/21
- Working with agencies to update WAN architecture
 - MSP; DPSCS; MDTA; JUD/JIS
- Migration from ATM on the backbone
 - Updating AMAN in September
 - Core UMCP and 6 St. Paul links in October
- Rate Structure – FY 2009
 - Utilizing input from ITAC survey performed earlier this year.
 - Reduction in overall subscriber costs and bandwidth rates
 - Better alignment of costs and subscriber fees
 - Installation charges
 - Port charges
 - Introduction of new products and services
 - Non-ATM access
 - Ethernet hand-off
 - 1.5 Mbps – 12 Mbps access
 - “Straw Man” cost model build being analyzed

Other Business

- Legislative and policy sub-committee
 - Greg Urban asked if this was necessary. Ellis sees no need for any legislation and Greg feels he has sufficient latitude to perform.
 - There has been no need as yet to defend the budget for networkMaryland™. The consensus was to keep a low profile.
 - networkMaryland™ has no dedicated legal staff.
- Sidney Drake noted that the school district in Southern Maryland had asked about the invoice process. Greg thought it might be twice a year.

Meeting Adjourned

Greg Urban adjourned the meeting at 11:40.