networkMaryland™ Advisory Group
May 20, 2008
45 Calvert Street
Annapolis, Maryland

Attendees:

Advisory Group

Sidney Drake
Ron Brothers
Pat Wallace
Ron Ward
Mike Springfield
John Gallagher
Inna Young

Guest

Ed Quattrone
Greg Faries
Pete Chakales
Jason Ross

DBM

Greg Urban
Tim Kwong
Gary Moulton
Cheryl Lincoln
Tia Johnson

Welcome & Introductions
- Greg Urban called the meeting to order at 10:10 a.m.
- Guests introduced themselves: Ed Quattrone (Verizon), Greg Faries (PTG), Pete Chakales (PTG),
- Minutes from last minutes approved as written.

State of the Network (Tim Kwong)

Operational Customers
- 76 Operational Subscribers (+2)

Circuit Breakdown
- 83 ISP Circuits (+1)
- 87 SwGI Circuits (-2)
  - Decrease due to reprovisioning.
- 1329 Layer 2 Circuits (+84)
- 10 VPN Connections (+0)

Subscriber Provisioning
- 29 circuits are currently in the subscriber's testing/implementation phase
- 66 new circuits have been provisioned since the last meeting
- 101 circuits have been accepted by the subscriber since the last meeting
  - This large number is due to the transitioning to the new contract.

Growth Chart
- Amount of "Pending" circuits reduced due to the new contract.

Executive Branch
- Red asterisks indicate changes since the last Advisory group meeting.
- The changes in the Governor's office is due to the fact that the State House is being renovated.

Non Executive Branch
- We have activity from the Judiciary, State Board of Elections, Department of Assessments and Taxation and Office of the Public Defender.
- Most of the changes are related to the recent turn ups of Multiservice Centers.

Non-State Customers
- The Women's Infants and Children's program, a division of DHMH, recently turned up their L2 connection to their data center in Beltsville from Baltimore.
- The College of Southern Maryland migrated from their ATM onto Ethernet
  - Q: There are only 13 counties listed. Are there any initiatives going on with the other counties?
  - A: Yes, a lot of counties have shown an interest in networkMaryland™. We are still in discussions with them; there

are also some MOUs that need to be finalized.
- Q: Does it look like you'll be able to bring them online like with SwGI or one of the services in the next fiscal year?
- A: (Greg Urban): One of our goals in the next fiscal year is to get a better presence in some of the emergency operations centers, which is specifically driven by some of the projects that we have going on. One of these projects is CHART video. CHART would like to distribute its video outside of MDOT, which currently they have to do by extending the MDOT network into some non-MDOT locations. They want to get away from that. SwGI service would be the one that they would get CHART video to non-MDOT customers. To bring the counties on you have to give them a reason to come on board. Some of the content on SwGI would be the reason to bring county emergency operation centers online.

New Subscribers & Services
- *MDA (Dept. of Agriculture)*: Transitioned to Internet service in late March.
  - They were the last Executive Branch Agency that migrated onto networkMaryland™. In the past they used a leased line connection for their internet.
- *MDOT(MTA) & MSDE*: Ethernet Everywhere service active at Gaithersburg & Baltimore
- *MSP:* Turned up 64 networkMaryland™ connections, migrating off of DPSCS's backbone
- *Denton MSC*: Started provisioning new on-net circuits (pending fiber repair in Denton)
  - There are a few fiber repairs that needs to be done in the general area.
    - Fiber between the MSC and the Hub was cut during some construction. The County worker doing the construction says he will permanently repair the fiber once construction is complete.
  - Agencies like DAT and SBE will be taking advantage of this MSC.
- *Salisbury MSC*: Started provisioning new on-net circuits
  - We are waiting to begin connecting them.

Operations
- *Operational Improvements*
  - ATM Switches: Retirement of Ericsson TNX-1100 ATM switches at two PoPs: 29 St. John St-Annapolis & LaPlata
    - The MSC are still using ATM Switches, but they are in the process of being phased out.
- *Consulting Services Engagements*
  - DPSCS: turned up four networkMaryland™ on-net connections. Completed in April.
  - WCC: migrated HQ connections from a leased line to fiber. Completed in March.

- Migrated from a leased DS-3 to a direct fiber connection to our PoP at 6 St. Paul.
  - MSP: migrate off of DPSCS's WAN. Completed in May.
    - 64 connections were migrated.
  - MSLA: assistance on WAN design. Completed in April.
    - They will have connections between their Lanham and HQ in Montgomery Park.

Project Status (Greg Urban)
- Migration from ATM to Native IP
  - Phase I : AMAN - *Completed*
  - Phase II: UMCP/Annapolis/Baltimore core – *Completed*
  - Phase III: Western Maryland – *Completed*
  - Phase IV: Southern Maryland – *Completed*
    - The ATM presence in LaPlata has been removed and the customers have been moved to an Ethernet handoff. They are on the SONET backbone to College Park.
      - The Leonardtown PoP has been moved into the MSC migration phase. They are working on getting a fiber connection from LaPlata. That will be done by the end of this month (May). That will kick of the MSC migration phase. All the equipment has been received staged, and configured.
  - Phase V: MultiService Centers – September 2008
    - Design completed
  - Phase VI: Last Mile (FRASI Replacement) – t.b.d.
  - MPLS Provisioning Software
    - Dorado Redcell – We have procured the software and will install and configure it in June/July.
      - Once we get this in, all the L2 circuits can be moved over to MPLS circuits and at that point we can remove the ATM gear which we currently use.
- BMAN Upgrade
  - Create architecture consistent with AMAN
  - Phase I: Refresh edge switches - *Completed*
    - Replace Cisco 4006 with Cisco 3750 Metro
  - Phase II: Refresh distribution switches – *Completed*
    - Replace Cisco 7609 with Cisco ME3400
    - This was a very smooth transition.
    - This involved reconfiguring the way we terminate SwGI connections.
    - This is now much simpler to manage and understand.
    - We can do proper bandwidth policing on circuits.
    - This has given us a standard architecture in both Annapolis and Baltimore.
  - Phase III: Redesign of core – t.b.d.
    - Reduce dependency on 6 St. Paul

- Increase presence at 301 W. Preston for connectivity to core
  - Based on the way the fiber is laid out we can build a completely redundant PoP, and have 2 ingress and egress points of Baltimore and neither one would rely upon the other.
- World Trade Center
  - New PoP to be established initially to support DBED
  - Fiber connected to BMAN (6 St. Paul)
  - Building redundant fiber connection to building
- CHART Video
  - Working with CHART to distribute video feeds to non-MDOT subscribers
  - Requires multi-cast capabilities for SwGI
  - CHART would like us to help them with deployment of equipment and distributing their video using IP multi-cast across SwGI.
- Cambridge MAN (No status change)
  - Serve 17 agency connections
  - PMP completed and approved
  - Equipment has been received
  - Fiber installation in progress by Bay Country Communications
    - There were issues with the title Wetland fees stopping Bay Country's progress.
- Frederick MAN
  - Terminate fiber at the Frederick Health Department Bldg
  - Build a diverse fiber path to the city.
  - Dual connect Frederick to UMCP/Hagerstown
    - We are working on a resource share agreement with Fibergate.
    - The AGs have reviewed the documentation.
    - The documentation should be completed by the end of this month (May) and be in to the BPW by late June or early July.
    - The county has asked us to terminate the fiber at their Health Department building.

networkMaryland™ Overview
- The CMAN completion date changed to FY09.
- The Washington County MOU is going through the last stages of minor revisions. We will be able to get more involved in Hagerstown.
  - There is fiber currently running to the library. We are now contemplating how to allocate the resources.

Projects in Planning
- St. Mary's County
  - Receive one pair of fiber from Leonardtown MSC to US301 connecting to LaPlata via Level 3 fiber.
  - Construction connecting State & Metrocast fiber in progress.
    - We should finish this by the end of this month (May). The permitting took longer than expected.
- Fibergate Resource Sharing Agreement

- Additional fiber in Montgomery County, Prince George's County, and Fort Detrick area.
- Agreement reviewed by AGs and being revised.

Transition to PTG

- NOC Transition
  - Change Freeze commenced on Tuesday, May 13 at 12:01 AM
  - NOC hand-off occurred on Friday, May 16 at 12:01 AM
  - Transferred opened help desk tickets to PTG
    - There were only a small number of tickets to be transferred.
- New Help Desk / Operations Center contact information
  - New NOC phone number: 1-877-664-6963
    - We know own the 1-800 number.
  - New NOC e-mail: noc@networkmaryland.gov
- Current Activities
  - Transferring provisioning orders to PTG
  - CSC finishing up remaining tasks until May 31
    - There are about 20 request that needs closing
    - There are about 40 request that need to move over to PTG
  - New work orders to PTG should begin next week
    - We are going to more closely track the process of provisioning to get them done a little quicker.

Other Business

- Additional Services
  - Ethernet Everywhere
    - We are in the process of standardizing service deployment.
    - Ethernet Everywhere Service is ready for general availability in Baltimore & Western Maryland LATAs
      - We've ordered equipment that we are going to use to terminate the circuits and the Verizon circuits.
      - When we start getting demand in the other two LATAs we'll broach those as well.
  - FY2009 Pricing
    - Re-evaluating pricing based upon current circuit levels
    - Expecting prices to be reduced even more for higher bandwidth circuits (L2 and ISP)
      - We need to encourage more use of high bandwidth applications.

Closing Questions or Comments

- Q Could there be maybe a once a year, reporting on the number of calls and response times etc, from the NOC?
  - a We will publish the networkMaryland™ matrix as part of the DoIT stat. We'll have to make sure all the call center stats are in the count. By the next meeting we will try to have some of the financials as well, identifying how we did versus our plan. This year we are much closer to budget than we have been in previous years.

- Q   Do you anticipate that Ethernet Everywhere will impact the network from either a financial standpoint and/or a workload standpoint?
  - a   Financial is pretty flat. The one thing that will change is that i networkMaryland™ will be the customer of record on the circuit. That will give us a little bit more work on keeping track of circuits. There may be a few agencies putting in orders, so it may be a little spike in the process.
- networkMaryland™ Engineering Committee meeting
  - August 11th, 2008, 1:30 PM @ UMBC Technology Center
  - Merged with UMATS engineering meeting

Meeting adjourned

Greg Urban adjourned the meeting at 10:53 a.m.