networkMaryland™ Advisory Group Meeting

January 19, 2010

Annapolis, MD

Meeting Agenda

- Welcome & Introductions
- New Business
- State of the Network
- Status of Project
- Other Business

Welcome

- Introductions
- Gregory Urban: Deputy State CIO - Operations
- Guests/Visitors

New Business

- Meeting Minutes Approval
    - October 2009

- Announcements
    - Personnel

New Business

- New Network Management Contract
  - Released October 21st using CATS II
  - Contract will be through May 2014
  - Proposals received
  - NOC Tours completed
  - Oral Presentations this week (1/18 – 1/22)
  - Expected award 3/1/2010
  - Slightly larger scope (includes elements of maryland.gov)
  - Cost Model geared towards more Operations & Maintenance at a fixed price.

New Business

- New Service - *Redundant ISP Connection*
  - Two connections to networkMaryland for ISP
  - Connections may be in different locations
  - Secondary connection only used when primary connection fails
  - Charges
    - Second ISP port (port charge per rate table)
    - $100/month for redundant service

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Operational Subscribers

- **73 Operational Subscribers**

- **Circuit Breakdown**
  - 77 ISP Circuits (+3)
  - 81 SwGI Circuits (+1)
  - 1404 Layer 2 Circuits (+10)
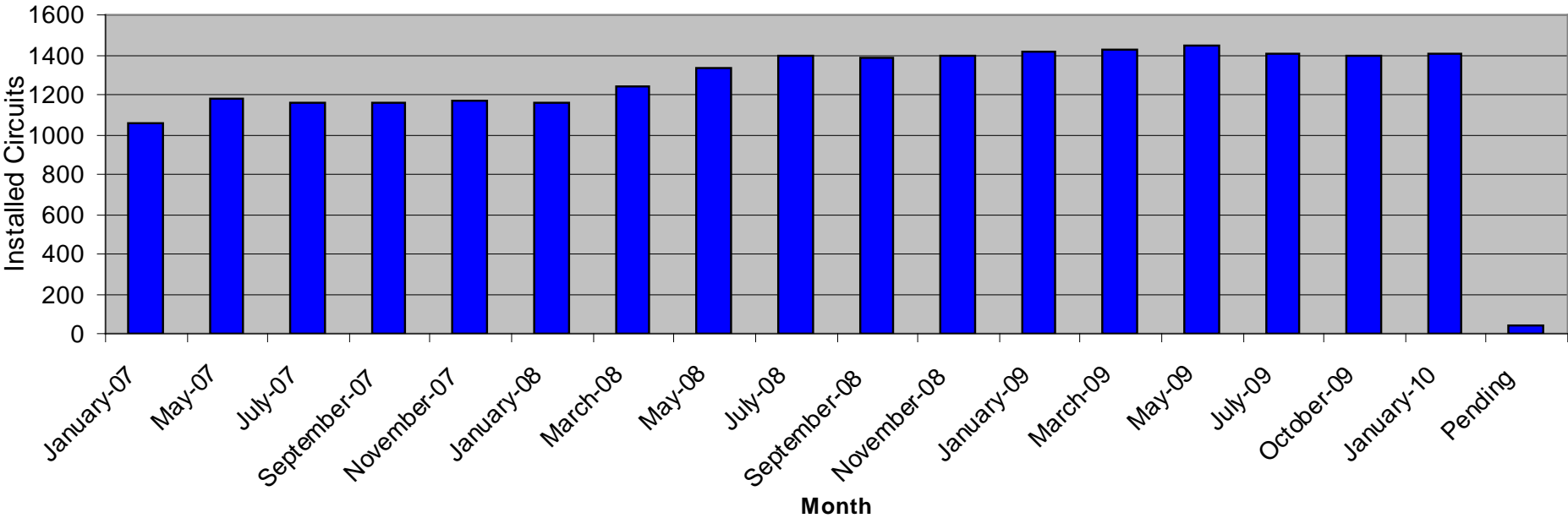 - 11 VPN Subscriber Connections (NC)

Subscriber Provisioning

- 42 circuits are currently in the subscriber's testing/implementation phase

- 43 new circuits have been provisioned since the last meeting

- 30 circuits have been accepted by the subscriber since the last meeting

Installed Circuits

Executive Branch

Executive Branch
networkMaryland Subscribers as of January 19, 2010

Treasurer	Internet
	SwGI
	Layer 2

Comptroller	Internet
	SwGI
	Layer 2

Governor's Office	Internet
	SwGI
	Layer 2

Attorney General	Internet	*
	SwGI	
	Layer 2	*

Secretary of State	Internet
	SwGI
	Layer 2

Aging	Internet
	SwGI **
	Layer 2

Agriculture	Internet
	SwGI
	Layer 2

Budget & Management	Internet
	SwGI
	Layer 2

Business & Economic Development	Internet
	SwGI
	Layer 2

Education	Internet
	SwGI
	Layer 2	*

Environment	Internet
	SwGI
	Layer 2

General Services	Internet
	SwGI
	Layer 2	*

Health & Mental Hygiene	Internet
	SwGI
	Layer 2

Housing & Community Development	Internet
	SwGI
	Layer 2

Human Resources	Internet
	SwGI
	Layer 2	*

Information Technology	Internet
	SwGI
	Layer 2

Juvenile Services	Internet
	SwGI
	Layer 2	*

Labor, Licensing & Regulation	Internet
	SwGI
	Layer 2	*

Natural Resources	Internet
	SwGI
	Layer 2	*

Planning	Internet	*
	SwGI	*
	Layer 2	

Public Safety Correctional Services	Internet	*
	SwGI	
	Layer 2	

State Police	Internet
	SwGI
	Layer 2	*

Transportation	Internet
	SwGI
	Layer 2

Veteran's Affairs	Internet
	SwGI
	Layer 2

Legend:

Agency is Not Receiving networkMaryland Service - A Cost Savings exists if networkMaryland provides service
Agency Expressed Interest in Receiving networkMaryland Service
Agency is in Process of Receiving networkMaryland Service (JCR submitted)
Agency is Receiving networkMaryland Service
Size of Agency is small and does not realize a significant cost savings by connecting to networkMaryland or the service is not required

* networkMaryland Provisioning has been completed, Department is is process of migrating to service
** Agency is receiving networkMaryland service through parent, primary agency
★ - denotes a change in service since the last Advisory Group Meeting

Non-Executive Branch

Non-Executive Branch
networkMaryland Subscribers as of January 19, 2010

Non-State Customers

Non-State entities\Counties\Municipalities
networkMaryland Subscribers as of January 19, 2010

Baltimore City	Internet
	SwGI
	Layer 2

Charles County Government	Internet	✳
	SwGI	
	Layer 2	

University System of Maryland	Internet
	SwGI
	Layer 2

Frederick County Government	Internet
	SwGI
	Layer 2

Baltimore City State's Attorney Office	Internet
	SwGI
	Layer 2

Carroll County Gov't	Internet
	SwGI
	Layer 2

Maryland School for the Deaf	Internet
	SwGI
	Layer 2

Montgomery County Government	Internet
	SwGI
	Layer 2

Baltimore City Community College	Internet
	SwGI
	Layer 2

Caroline County Gov't	Internet
	SwGI
	Layer 2

Alleghany County Board of Education	Internet
	SwGI
	Layer 2

Prince Georges County Government	Internet
	SwGI
	Layer 2

Baltimore County Government	Internet
	SwGI
	Layer 2 ✳

Ocean City Gov't	Internet
	SwGI
	Layer 2

Anne Arundel County Government	Internet
	SwGI
	Layer 2

Howard County Government	Internet
	SwGI
	Layer 2

MD Public TV (MPT)	Internet
	SwGI
	Layer 2

Garrett County Public Schools	Internet
	SwGI
	Layer 2

City of Annapolis Gov't	Internet
	SwGI
	Layer 2

Harford County Gov't	Internet
	SwGI
	Layer 2

Legend:

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St. Mary's County Gov't	Internet
	SwGI
	Layer 2

CAPWIN	Internet
	SwGI
	Layer 2

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City of Laurel Gov't	Internet
	SwGI
	Layer 2

Washington County (BWA)	Internet
	SwGI
	Layer 2

College of Southern MD	Internet
	SwGI
	Layer 2

Washington County Public Network (WCPN)	Internet
	SwGI
	Layer 2

New Provisioning Activity

- Virtual Private Routed Network (VPRN)
    - Private Layer 3 (IP) routed network
    - Allows "many to many" connections
    - QoS will be supported
    - SwGI was the "template" configuration
    - DoIT is the first customer
    - DORS deployment is in planning
    - Other potential customers are considering this option

RFP Section 2.9.1			
	Severity 1	**Severity 2**	**Severity 3**
Number of Cases relating to "outages"	4	17	7
Begin Diagnosis (5 min, 5 min, 5 min)	100%	88%	86%
Notification to State (10 min, 10 min, 10 min)	100%	100%	100%
Onsite Support with Parts (4 hours, 4 hours, NBD)	100%	100%	100%
1st Escalation to NetMD (2 hours, 4 hours, NBD)	100%	100%	100%
2nd Escalation to NetMD (2 hours, 4 hours, NBD) after 1st	100%	100%	100%
3rd Escalation to NetMD (2 hours, 4 hours, NBD) after 2nd	100%	100%	100%
Resolution Notification (10 min, 10 min, 10 min)	100%	100%	100%
RFP Section 2.9.2			
95% of service affecting outages repaired prior to 1st escalation	100.0%		
98% of service affecting outages repaired prior to 2nd escalation	100.0%		
RFP Section 2.9.3			
ISP 99.9% available	100.00%		
SWGI 99.9% available	100.00%		
L2 Services 99.9% available	100.00%		

RFP Section 2.9.1			
	Severity 1	**Severity 2**	**Severity 3**
Number of Cases relating to "outages"	1	26	9
Begin Diagnosis (5 min, 5 min, 5 min)	100%	96%	100%
Notification to State (10 min, 10 min, 10 min)	100%	100%	100%
Onsite Support with Parts (4 hours, 4 hours, NBD)	100%	0%	100%
1st Escalation to NetMD (2 hours, 4 hours, NBD)	100%	96%	100%
2nd Escalation to NetMD (2 hours, 4 hours, NBD) after 1st	100%	100%	100%
3rd Escalation to NetMD (2 hours, 4 hours, NBD) after 2nd	100%	100%	100%
Resolution Notification (10 min, 10 min, 10 min)	100%	100%	100%
RFP Section 2.9.2			
95% of service affecting outages repaired prior to 1st escalation	97.2%		
98% of service affecting outages repaired prior to 2nd escalation	97.2%		
RFP Section 2.9.3			
ISP 99.9% available	100.00%		
SWGI 99.9% available	100.00%		
L2 Services 99.9% available	100.00%		

Performance Standard & Service Levels – December, 2009

RFP Section 2.9.1			
	Severity 1	Severity 2	Severity 3
Number of Cases relating to "outages"	1	16	6
Begin Diagnosis (5 min, 5 min, 5 min)	100%	100%	100%
Notification to State (10 min, 10 min, 10 min)	100%	100%	100%
Onsite Support with Parts (4 hours, 4 hours, NBD)	100%	100%	100%
1st Escalation to NetMD (2 hours, 4 hours, NBD)	100%	94%	100%
2nd Escalation to NetMD (2 hours, 4 hours, NBD) after 1st	100%	88%	100%
3rd Escalation to NetMD (2 hours, 4 hours, NBD) after 2nd	100%	94%	100%
Resolution Notification (10 min, 10 min, 10 min)	100%	100%	100%
RFP Section 2.9.2			
95% of service affecting outages repaired prior to 1st escalation	100.0%		
99% of service affecting outages repaired prior to 2nd escalation	95.7%		
RFP Section 2.9.3			
ISP 99.9% available	100.00%		
SWGI 99.9% available	100.00%		
L2 Services 99.9% available	100.00%		

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Project Status

- Agreements
  - Continued discussions with UMATS to modify our existing agreement for Western LATA connectivity.

  - Working with consortium of counties (oneMaryland) on broadband infrastructure deployment.

  - Working on resource share agreements with MdBC and NWT

Project Status

- **Migration from ATM to Native IP**
  - Phase V: MultiService Centers: Estimated completion 11/2009
    - ***Completed***

  - Phase VI: Last Mile (FRASI Replacement)
    - Agencies that have migrated: MDA, MSDE(DORS), DLLR(DUI)
    - In progress: MSP

  - Phase VII: Direct ATM Connections
    - Completed: Montgomery County; DJS, MSP, DPSCS (ISP/SwGI)
    - In progress: DJS; DORS
    - In planning: DHR; MDOT; DHMH; WCC; DPSCS

Project Status

- Network Resiliency Initiative : Separate service delivery from core
  - Dedicated routers for upstream ISP connectivity (Completed)
  - Move Layer3 terminations off core routers
    - UMCP: In progress
    - Baltimore
    - Deliver L3 services at 6 Saint Paul as an MSC
    - Deliver L3 services at 301 W Preston as an MSC
    - Direct fiber connected buildings in Baltimore @ 6 Saint Paul
    - Direct fiber connected buildings in Baltimore @ 301 W Preston
    - Hagerstown
    - Easton

Project Status

- BMAN Upgrade
  - Phase III: Redesign of Core in Baltimore
  - Project has been suspended due to lack of resources.

- Deployment of multi-cast capabilities on SWGI
  - Distribute CHART video feeds to non-MDOT subscribers
  - Established access to CHART application via SWGI
  - Distribute Flash video over SWGI (unicast): *completed*
  - Awaiting code fix for Juniper software bug.

Project Status

- Frederick MAN
  - Build a diverse fiber path through Frederick
  - Frederick County is dual connected to networkMaryland at diverse POPs (UMCP and Hagerstown)

- Cambridge MAN
  - Meetings with Bay Country to establish timeline for fiber installations at State offices

- Initiate Eastern Shore Fiber Backbone project
  - Planning has not started

Project Status

- Glen Burnie MSC: Bring MSC on-net
  - Fiber build and resource sharing with MTA
  - Project will start in February and end in March

- Ethernet Everywhere Improvement
  - Preparing to lab test Overture 6000.
  - Potential for SONET local loop termination @ POP

- Redundant MSC Connections
  - Oakland: *Completed*
  - Prince Frederick/Leonardtown: microwave link completed. Integration to network expected in February

Fiber Projects

- ● Pikesville
  - – Working with MSP, DPSCS, Baltimore County, and Baltimore City Police to build fiber along Reisterstown Rd near Pikesville

- ● Hagerstown: Fiber to DPSCS complex:
  - – Looking for funding or partnership

- ● Fiber documentation and mapping project
  - – Annapolis fiber *completed*
  - – FiberGate fiber *completed*
  - – Level3 fiber will be completed as a separate project

Network Overview

(October 2009)
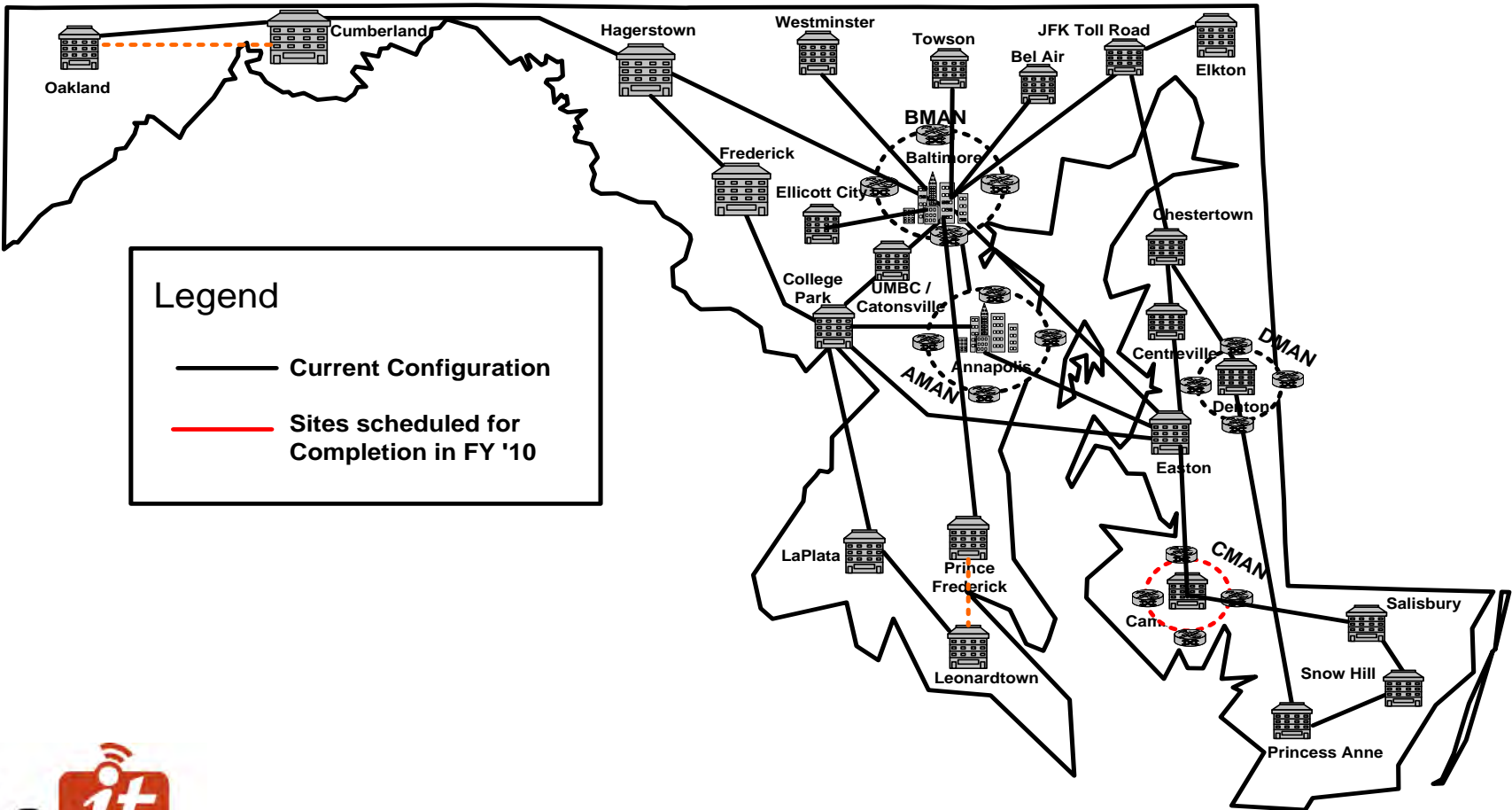
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Other Business

- networkMaryland^{TM} Engineering Committee meeting
  - February 8th, 2010, 1:30 PM @ UMBC Technology Center
  - Merged with UMATS engineering meeting

- Closing Questions or Comments

Meeting Adjourned