

Statewide High Speed Network

networkMaryland™ Advisory Group Meeting
January 15, 2008
Annapolis, MD





Meeting Agenda



- Welcome & Introductions
- State of the Network
- Status of Project
- Pricing Model Discussion
- Other Business



Welcome



- Introductions
- Gregory Urban – Director, networkMaryland™
- Guests/Visitors
- Meeting Minutes Approval
 - November 2007



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Operational Customers



- 73 Subscribers today
- Circuit Breakdown
 - 80 ISP Circuits
 - 87 SwGI Circuits
 - 1158 Layer 2 Circuits
 - 10 VPN Connections



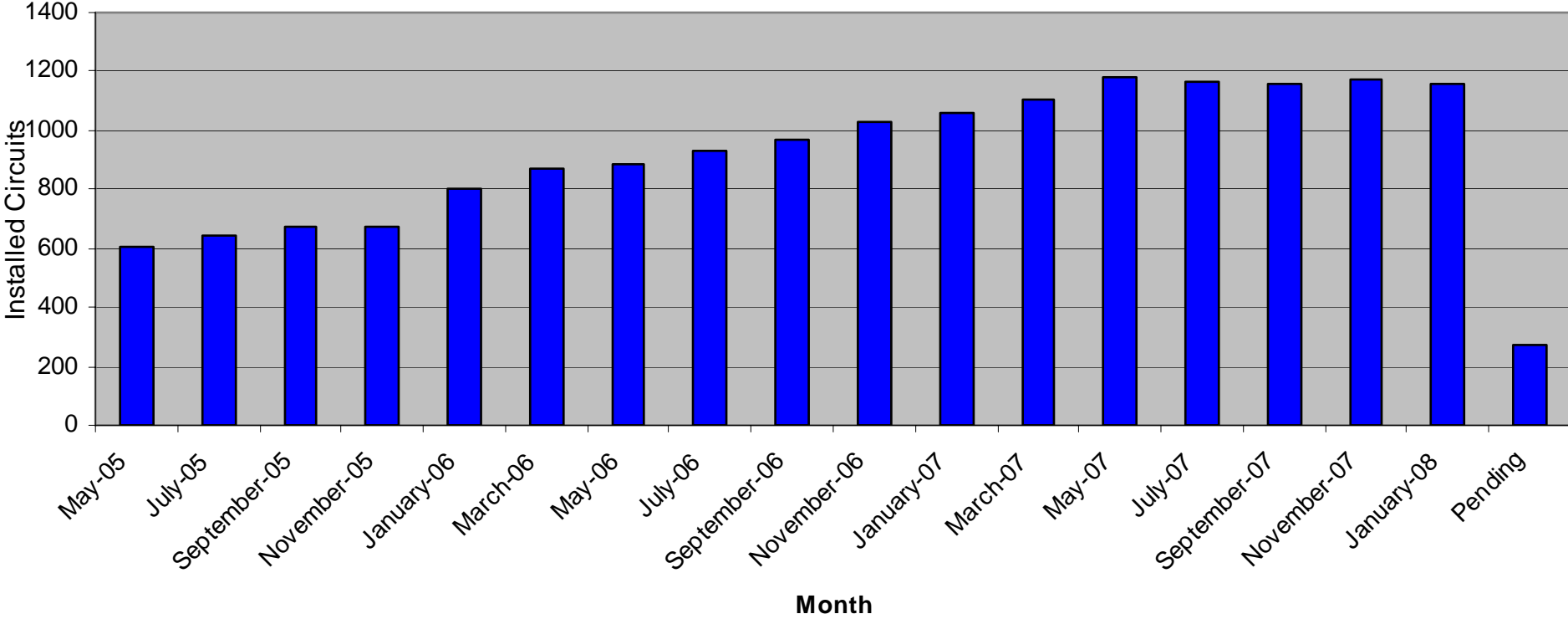
Customer Provisioning



- 80 circuits are currently in the customer's testing/implementation phase
- 59 new circuits have been provisioned since the last meeting
- 29 circuits have been accepted by the customer since the last meeting



Installed Circuits





Executive Branch

Executive Branch networkMaryland Subscribers as of January 9, 2008

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 *
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	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 in 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 09, 2008

Office of People's Council Internet SwGI Layer 2	Judiciary Internet SwGI Layer 2 *	MD General Assembly Internet SwGI Layer 2	Office of Legislative Auditors Internet SwGI Layer 2	State Lottery Internet SwGI Layer 2 *
State Board of Elections Internet SwGI Layer 2 *	Maryland State Archives Internet SwGI Layer 2 *	Department of Assessment and Taxation Internet SwGI Layer 2 *	MIEMMS Internet SwGI Layer 2	Subsequent Injury Fund Internet SwGI Layer 2 *
Commission of Human Relations Internet * SwGI Layer 2	Office for Children Internet SwGI Layer 2	Office of Public Defender Internet SwGI Layer 2 *	Dept. of Rehabilitative Services Internet ** SwGI** Layer 2	Dept. of Military Internet SwGI Layer 2
Workers' Compensation Commission Internet * SwGI * Layer 2 *	State Retirement Agency Internet SwGI Layer 2	Maryland State Retirement Plan Internet SwGI Layer 2	MD Auto Insurance Fund Internet SwGI Layer 2	State Board of Contract Appeals Internet SwGI Layer 2
MD Higher Education Commission Internet SwGI Layer 2	College Savings Plans of Maryland Internet * SwGI * Layer 2 *	Office of Crime Control & Prevention Internet SwGI Layer 2	Maryland Emergency Management Agency Internet SwGI Layer 2	MD Stadium Authority Internet SwGI Layer 2
Public Service Commission Internet SwGI Layer 2	Office of Admin Hearings Internet SwGI Layer 2	MD Insurance Administration Internet SwGI Layer 2	Office of State Prosecutor Internet SwGI Layer 2	Canal Place Authority Internet SwGI Layer 2

Legend:

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*	Register of Wills	Internet *
		SwGI
		Layer 2

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Non-State Customers

Non-State entities\Counties\Municipalities networkMaryland Subscribers as of January 09, 2008

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

Allegheny County Board of Education	Internet
	SwGI
	Layer 2

Prince Georges County Government	Internet
	SwGI
	Layer 2

College of Southern MD	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 Gov't	Internet
	SwGI
	Layer 2

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

MD Environmental Service	Internet
	SwGI
	Layer 2

Washington County Public Network (WCPN)	Internet
	SwGI
	Layer 2

NCRnet	Internet
	SwGI
	Layer 2

Women, Children & Infants Program(WIC)	Internet
	SwGI
	Layer 2



Operations



- New Subscribers and Services
 - *Maryland Public Television*: Three DS3 circuits to extend broadcast from Hagerstown to Oakland
 - *DBED*: Preparation for move to World Trade Center
 - *OAG*: Upgrading Internet service.
 - *MDOT & MSDE*: Ethernet Everywhere service pilots at Cresaptown, Gaithersburg & Baltimore
 - *Register of Wills*: Centralization of Servers at ADC
 - *DPSCS*: Fiber build-out at MRDCC (Maryland Reception, Diagnostic and Classification Center) in Baltimore



Operations



- Consulting Services Engagements
 - DPSCS: turn up networkMaryland on-net connections
 - OPD: turn up networkMaryland on-net connections
 - WCC: migrate HQ connections from a leased line to fiber
 - MSP: migrate from DPSCS's WAN
 - SBE: set up a syslog server for security logging
 - MSLA: network integration with their key partner

- Working with agencies to update WAN architecture
 - MSP
 - DPSCS
 - MDOT
 - JUD/JIS



Operations



- Operations Improvements
 - *DNS servers*: Installation at POPs completed. Operation manual and procedures being written
 - *ATM Switches*: Upgrading Ericsson TNX-1100 ATM switches to most recent code revision.
 - *Firewall Logging*: Implementation of SYSLOG server for firewall logging completed
 - *DC Power Plant Maintenance*: New contract for 6 St. Paul and UMCP awarded to incumbent
 - *MPLS Provisioning Tool*: Evaluating MPLS circuit provisioning and management tool



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- **Status of Project**
- Financial Review
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Project Status



- Migration from ATM to Native IP
 - Completed UMCP/Annapolis/Baltimore Core
 - Completed Western Maryland
 - Completed design for Southern Maryland
 - Creating design for MSCs
 - Evaluating software tool to replace Service on Data for circuit provisioning and management



Project Status



- Migration from ATM to Native IP Schedule
 - Phase I : AMAN - *Completed*
 - Phase II: UMCP/Annapolis/Baltimore core – *Completed*
 - Phase III: Western Maryland – *Completed*
 - Phase IV: Southern Maryland – February '08
 - Phase V: MultiService Centers – June '08



Project Status



- Catonsville MSC
 - Catonsville MSC completed
- Salisbury MSC
 - Initially connect to network via leased line
 - PMP approved
 - DS3 clear channel circuit (to Easton) completed
 - No ATM will be deployed at this POP
 - Expected completion March 2008



Project Status



- Towson POP
 - Will connect to the backbone via the UMBC POP
 - All fiber splicing completed
 - Equipment ready for deployment
 - Completion expected in January
 - No ATM will be deployed at this POP



Project Status



- Denton MAN
 - Connects subscribers to the Eastern Shore microwave backbone
 - All equipment installed
 - Moving our presence in the County Data Center to the building's telecommunications room
 - Preparing WAN request forms for subscribers to assist in transition from off-net leased services to on-net circuits



Project Status

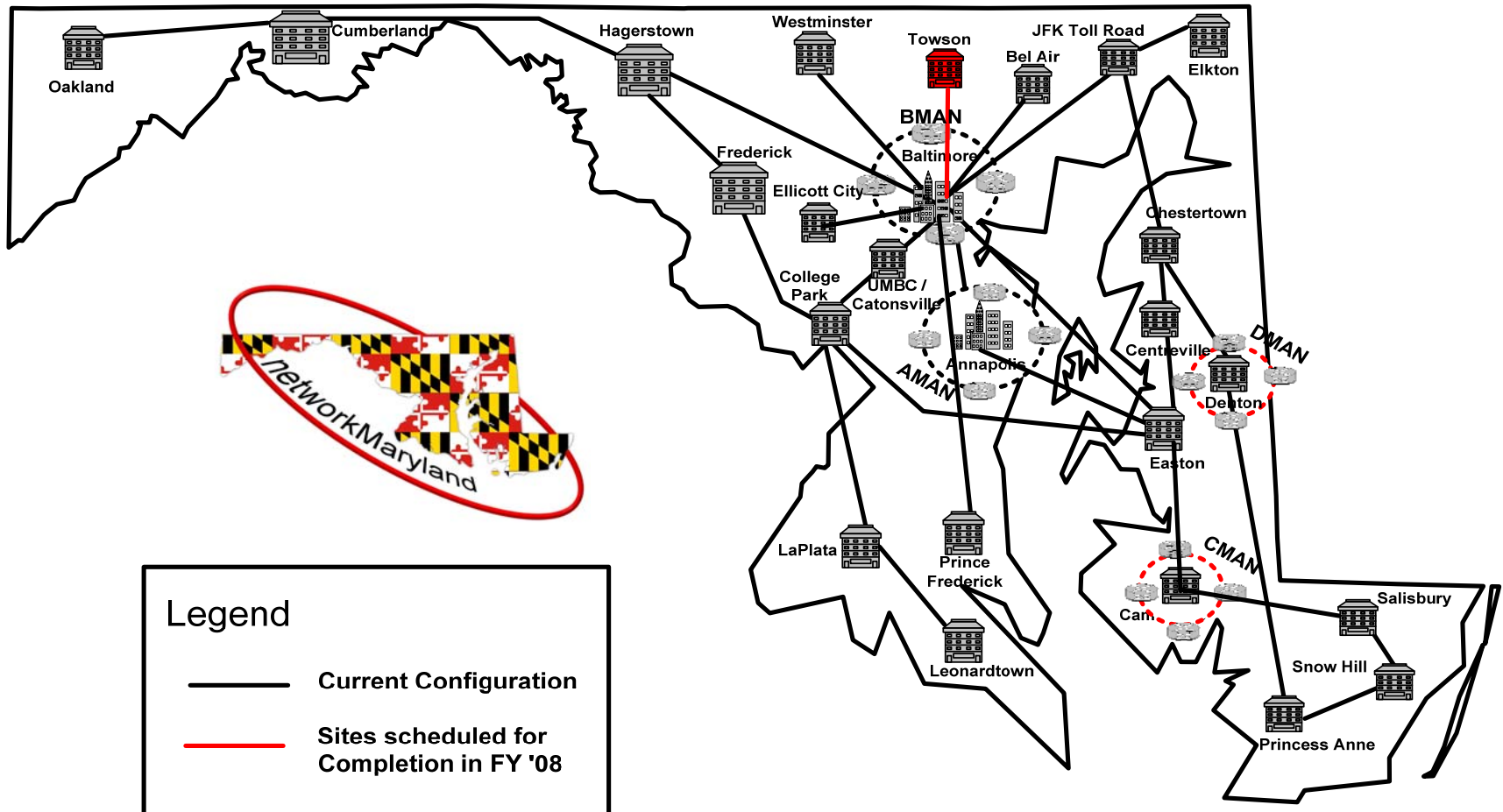


- Cambridge MAN
 - Resource Share with Bay Country Communications
 - Install equipment in 4 buildings in Cambridge
 - Serve 17 agency connections
 - PMP completed and approved
 - Equipment has been received
 - Fiber installation by Bay Country Communications in progress
 - No change since last AG meeting



Network Overview

(January 2008)



Legend

- Current Configuration
- Sites scheduled for Completion in FY '08



Projects in Planning



- **BMAN Upgrade**
 - Create architecture consistent with AMAN
 - Hardware refresh for edge switches
 - Replace Cisco 4006 with Cisco 3750 Metro
 - Allows for appropriate enforcement of subscriber usage
 - Hardware refresh of distribution switches
 - Replace Cisco 7609 with Cisco ME3400
 - Connect MAN buildings to both 6 St. Paul and 301 W. Preston
 - Redesign of core
 - Reduce dependency on 6 St. Paul
 - Increase presence at 301 W. Preston for connectivity to core



Projects in Planning



- Fiber Projects

- St. Mary's County: Receive one pair of fiber from Leonardtown MSC to US301 connecting to LaPlata and last mile subscriber access
- Resource sharing agreement with Fibergate: Additional fiber in Montgomery County, Prince George's County, and to Fort Detrick. Agreement drafted/LPC Letter posted.
- 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.



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Additional Services



- CIOs will report their priority for enterprise wide consolidated services at next ITAC (1/28)
- Discussions will revolve around
 - Email
 - Meeting Collaboration / Video Conferencing
 - Remote Access
 - Unified Messaging
 - VoIP



Additional Services



- Ethernet Everywhere
 - Product selection competed and procurement process has started
 - Three pilot sites are in progress
 - Circuit orders have been placed and are nearing completion
- VoIP
 - Met with Verizon to discuss PBX requirements for trunking
 - Look to engage DBM Telecom to re-energize project to trunk PBXs at MSCs (Westminster and Bel Air)



Rate Structure



- 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
 - Ethernet Everywhere
- Rate structure used to create agency budget allocations completed and posted on-line
 - www.networkmaryland.gov : FY2009 Rates



Other Business



- networkMaryland™ Engineering Committee meeting
 - February 11th, 2008, 1:30 PM @ UMBC Technology Center
 - Merged with UMATS engineering meeting
- Closing Questions or Comments



Thank You



- Meeting Adjourned