

Prince George's Intergovernmental Network Community Coordinating Committee



PGINCCC ANNUAL REPORT 2020

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Rushern L. Baker, III
County Executive

THE PRINCE GEORGE'S COUNTY GOVERNMENT

OFFICE OF THE COUNTY EXECUTIVE

September 28, 2012



Rushern L. Baker, III
County Executive

Dear I-Net Stakeholder:

I am extremely pleased to congratulate the members of the Prince George's County I-NET Committee for the publication of its Third Annual Report. Further, I am proud of your accomplishments in developing and maintaining a cost effective and secure fiber optics network. The I-NET allows the County to partner with participating municipalities and other governmental institutions for resource sharing opportunities.

The successful collaboration of the initial participating municipalities and the Prince George's County Government to implement a communications system that serves the diverse needs of all the participating community users has been an effective model of intergovernmental cooperation. The nationally recognized governance structure is an effective, inclusive, and unique intergovernmental model of achievement.

Previous I-Net accomplishments include the 2008 Community Broadband Network of the Year by NATOA, the national association representing local government jurisdictions and overseeing communication and cable television franchises. In 2010, I-NET competed for and received One Maryland Broadband Network Stimulus Grant worth more than \$10 million in construction value. This funding is currently supporting the Inter-County Broadband Network (ICBN) project and will enable the remaining non-member municipalities to connect to the I-NET.

During the past year, the I-NET Committee connected the Prince George's Aviation owned by Department of Public Works and Transportation (DPW&T), implemented PIEMatrix platform for Project Management and Tracking, and migrated all DPW&T cable modem sites onto VPN connection through I-NET. I-NET is on time to complete all upgrades, designs and overlays as set forth in the 2012 objectives.

On behalf of the citizens of Prince George's County, I congratulate each participating municipality, local elected official, and staff representative for their leadership in making I-NET an even greater resource.

Sincerely,

Rushern L. Baker, III
County Executive

14741 Governor Oden Bowie Drive, Upper Marlboro, Maryland 20772
(301) 952-4131 ■ TDD (301) 985-3894



Prince George's County Intergovernmental Network Community Coordinating Committee

September, 2012

Dear Stakeholder:

The Prince George's County Intergovernmental Network (I-Net) was conceived as a partnership between Prince George's County and 15 municipalities to interconnect government and educational facilities for data, video, and voice communications. In the ten years since the first connection, the I-Net has become an invaluable tool for local governments in not only day-to-day business operations but during emergencies when a cohesive regional response is critical.

The governance of the I-Net won the NATOA 2008 Community Broadband Network of the Year Award and the committee structure continues to serve as a model for other upcoming I-Nets in the region and nationally. This unique structure encourages input and voting from all member communities, no matter how small, on all committees--including the Executive Committee.

As we begin our twelfth year, we are excited at the prospect of the future and many opportunities for our members in resource sharing, new technologies and economies of scale benefits. Current services offered to participating members include public safety software and access to governmental databases, e-mail, high speed internet, access to county and state traffic cameras, video conferencing, and state-of-the-art GIS mapping, among many others. New projects are in the development stage.

Federal monies acquired through a broadband stimulus grant will provide an opportunity to further the goal of reaching one hundred percent participation by Prince George's County and Municipal partners including libraries, schools, fire houses and municipal buildings. The Inter-County Broadband Network (ICBN) is an exciting project that will connect Prince George's County Government and Municipalities to other counties and municipalities and the State of Maryland.

Prince George's County I-Net continues to be a technical and governance leader in maximizing resources and thereby saving tax dollars while streamlining the business processes of local governments.

Sincerely,

Mark Turner
I-Net Executive Committee Co-Chair

Suellen Ferguson
I-Net Executive Committee Co-Chair

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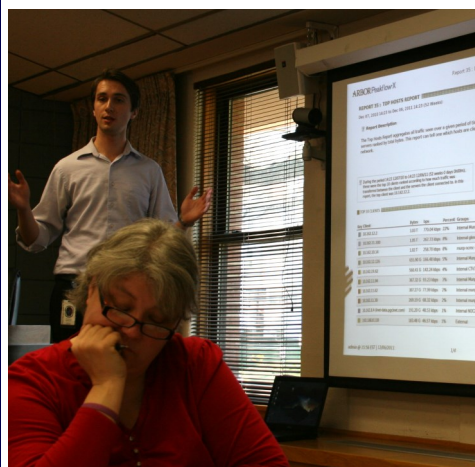
I-Net Overview

HISTORY

In the mid 1990s, Prince George's County and participating municipalities entered into a Cable Franchise Agreement with Jones Communications of Maryland, Inc. In 1998 Comcast completed the acquisition of Jones Communications thus assuming responsibility for completing the requirements as defined in the Franchise Agreement with Jones Communications.

The Cable Franchise Agreement required construction of an I-Net infrastructure and connectivity to 174 sites. Construction of the network began by the fourth quarter of 1999 and followed a fairly aggressive completion schedule. Within two years of the starting date, 25 percent was completed. Completion of the network occurred nearly three years later in 2002.

The functional purpose of the network is to connect authorized users, including specific governmental, educational, and public facilities, in accordance with the Cable Franchise Agreement. Connectivity via the network offers participating governments a communication vehicle to reduce costs for services otherwise provided through commercially leased lines (e.g., Dial-Up, DSL (Digital Subscriber Line), ISDN (Integrated Services Digital Network), etc.).



Mission Statement

The Prince George's County Intergovernmental Network (referred to as I-Net) is a secure, reliable and scalable fiber optic network connecting anchor institutions as partners in building successful communities and local economies. The I-Net provides a common framework for government, education and public safety to leverage shared resources for information and data sharing and regional interoperability. The goal is to expand participation through collaboration ensuring long term value and sustainability.

I-NET OVERVIEW



PARTICIPATING MUNICIPALITIES

The goal of the Prince George's County Institutional Network Community Coordinating Committee is to have all Prince George's County municipalities participating. Measures toward this goal have been taken and municipalities not currently participating are encouraged to find out more about becoming a member by contacting the project manager, Shivani Gandhi, at sgandhi@co.pg.md.us

In addition to Prince George's County, the current participating municipalities include*:

- Berwyn Heights
- Bowie
- Brentwood
- College Park
- Colmar Manor
- Cottage City
- District Heights
- Edmonston
- Glenarden
- Greenbelt
- Landover Hills
- Mt. Rainier
- New Carrollton
- North Brentwood
- University Park

* Forest Heights has been approved for future membership.

WWW.PGINCCC.NET:

GATEWAY TO I-NET SERVICES

PGINCCC maintains a comprehensive website that serves as the gateway to information about the I-Net, its members and to many different Prince George's County databases specifically designed for use by I-Net members.



CURRENT I-NET SERVICES

The I-Net provides these core services to 15 municipalities in Prince George's County:

Internet connectivity

The 200 Megabits per second symmetrical, redundant, load balanced Internet connections through networkMaryland™ and Cogent are monitored for connectivity and any potential threats to our network participants.

Pictometry aerial photographs

I-Net's Pictometry provides I-Net participants with aerial photographs of Prince George's County. Each pixel on these images is referenced to a unique GPS coordinate; therefore, measurements including distance, area, height, and elevation can be made directly upon the Pictometry images. Through a client program called Electronic Field Study, I-Net participants can access over 2 Terabytes of these images and overlaid GIS (Geographic Information System) data directly from their office computer. Pictometry images are stored in a warehouse server located on the I-Net and maintained by the I-Net team. New images are taken in March of each year and are available on the I-Net's Pictometry server in July. For 2012, three years of images are available to participants: 2009, 2010, and 2011.

Popular uses for Pictometry include: code enforcement, permit compliance, and preliminary site surveys. I-Net Technical staff is available for Pictometry installation and on-site training on the Pictometry user interface.

County permit data access

All County-issued work permits in the e-Permits database are searchable by ZIP code and municipal code. Municipal code enforcement officers can search this database for permits that have been issued by the County, and compare them to corresponding municipal permits. This allows officers to effectively enforce code, and potentially regain lost revenue.

Video conferencing

A central video conferencing server allows any municipality with video conferencing equipment to set up multi-location video conference sessions. Participants connected via the I-Net can experience the highest quality video supported by their endpoint device without bandwidth limitations imposed by the underlying network. This technology can be used for coordination in a disaster scenario or to save time and money on travel for meetings.

ACCOMPLISHMENTS

Network threat detection and mitigation

Multiple servers and services actively detect any threats on the network and automatically alert I-Net engineers to remediate these issues.

Layer 2 data hauling

Libraries, Prince George's County Public Schools and the University System of Maryland all use the I-Net backbone to seamlessly and rapidly transfer data between their facilities located around the county. This eliminates the cost of renting multiple network connections to multiple buildings and delivers speeds over 100 times faster than a commercial Internet connection.

On-site and remote support and troubleshooting

The Prince George's County Service Desk is available 24x7 for all desktop-related issues. I-Net engineers and technicians are available by appointment to come on-site to assist with any connectivity issues or I-Net services.

24 x 7 I-Net incident management

I-Net engineers are on call 24x7 to resolve any I-Net related emergencies including fiber cuts and connection losses.

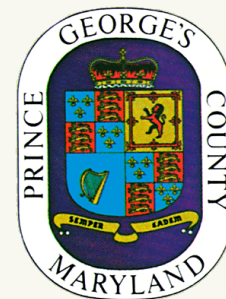
PRINCE GEORGE'S COUNTY GOVERNMENT

I-Net/NetworkMD Connection

networkMaryland™

Powered by networkMaryland™

networkMaryland™ is the statewide high-speed network for public sector use. The network was created from an initiative to utilize resource shared fiber optic cable assets throughout the state to provide affordable, high-speed bandwidth to all areas of the state and to provide a cost savings to the citizens of the State of Maryland. networkMaryland™ provides Wide Area Network (WAN) connectivity for all public entities in the State to improve the economy of scale by coordinating joint network build-outs, consolidation of services and by providing the necessary information for proper network growth.



I-Net and its participants utilize a 100Mbps internet circuit and 100Mbps Statewide Intranet (SWIGI) to access and achieve the following:

- Access email and other critical services for daily use
- Access 3rd party backup applications
- Access disaster recovery sites
- Data Replication
- Granicus Video Streaming
- NCR Video Conferencing
- Access applications offered by the State of Maryland such as Public Safety Dashboard, METERS, CAPWIN and other Public Safety applications
- Prince George's County TRIP, State of Maryland CHART, NCRnet and I-Net video sharing

I-Net/County Network MPLS and 10Gbps Backbone

I-Net will work with Prince George's County Office of Information Technology (OIT) Network Infrastructure group to upgrade to Multi-Protocol Label Switching (MPLS). I-Net backbone is ready for MPLS and can move that direction at any time with direction from Network Services.

As the I-Net increases the number of edge devices, hosted applications, and data backhaul services connected to the network, overall backbone bandwidth usage has dramatically increased. The amount of bandwidth utilization has doubled in one year of service.

In the next three years, additional sites from the Federal Stimulus (ICBN) project will create additional I-Net data traffic. These driving forces require the I-Net to be proactive and upgrade to a 10Gbps Ethernet backbone to provide sufficient backbone bandwidth capability for years to come. An upgrade of network electronics will allow the current fiber optic backbone infrastructure in Prince George's County to support 10Gbps of data transport for future growth.

I-Net National Capitol Region Network Connectivity

In 2007 I-Net completed connectivity with NCRnet. Its purpose is to build and improve interoperability among Emergency Support Functions in the National Capital Region. The NCRnet will provide critical communication architecture to jurisdictions in the Region by interconnecting existing I-Nets and supplementing with additional fiber where I-Nets don't exist. In 2008 I-Net upgraded the NCR Cisco firewall to a more powerful Cisco ASA firewall, which provides more fiber connectivity for future projects within the NCR backbone. In 2009 I-Net added a second Cisco ASA firewall and two (2) Cisco 3750 switches. This provided an opening for planning and lighting the last remaining link to the City of Alexandria in the near future. In 2010 I-Net connected NCRNet to DCNET/UCC providing a link to

ACCOMPLISHMENTS

Washington, DC. In 2012 I-Net will make another NCRNet connection across the Woodrow Wilson Bridge linking Maryland to Virginia. I-Net has plans to further connect NCRNet to Anne Arundel County again acting as Regional anchor for the NCRNet initiative.

Net Motion Wireless Secure VPN

The Prince George's County I-Net is providing mobile connections for municipal police departments to reach public safety resources. I-Net was tasked with finding a new solution that will work with carrier neutral cellular air cards. With the help of Prince George's County OITC Network Services, NetMotion Wireless was chosen as the premier solution to connect police officers to the new Tiburon Computer Aided Dispatch (CAD) system over the I-Net.

Clients will authenticate to the NetMotion Mobility server using their in-car computers known as Mobile Data Consoles (MDCs). This secure connectivity will allow officers to access many public safety applications offered by the State, Local and Federal Governments.

I-Net and Network Services have demonstrated that cooperation and collaboration provides outstanding opportunities to consistently improve county-wide public safety.

Prince George's County I-Net & DPW&T Traffic Camera Migration

I-Net engineers have completed all phases of the DPW&T traffic camera migration to the I-Net network. Currently all traffic camera fiber sites have been successfully migrated and new sites continue to be added on the network. With the configuration and setup of a secure multipoint Generic Route Encapsulation (GRE) VPN tunnel we have also completed the migration of the DPW&T VPN traffic camera sites running off of Comcast cable modems in the field to route through the INET network. In the future working with the TRIP staff the traffic camera video wall will provide camera feeds directly to authorized I-Net participants.

Inter-County Broadband Network (ICBN)

In September 2010, the state of Maryland received a \$115.3 million broadband stimulus award (Broadband Technology Opportunities Program) from the Department of Commerce under the American Recovery and Reinvestment Act. When the network is completed in August 2013, the County will have new fiber connections to 139 public schools, libraries, and government sites, all of which will be interconnected with the County's existing fiber institutional network (I-Net), and to the other ICBN jurisdictions. The Office of Information Technology (OIT) has been working closely with the County's regional partners and the State of Maryland to get the network deployed as quickly and cost-effectively as possible. OIT has also introduced numerous engineering improvements, including increasing the use of survivable ring architecture and adding resilient connections to the County's and the State of Maryland's public safety communications towers, which will also serve as hub sites for the new network.



ACCOMPLISHMENTS

Work has been proceeding at a breakneck pace since the day the grant was announced in September 2010. The County has worked with the broader ICBN team to ensure that engineering and construction contractors have taken full advantage of the mild weather this past winter. As a result, the project is ahead of schedule. The project is scheduled for substantial completion of outside construction in mid-September 2012. Because the County attentively cleared potential roadblocks and exercised strong leadership, it will be the first county to complete ICBN construction. We are building as much as 138 miles of ICBN fiber to connect a total of 139 County sites.

The ICBN project extends the County's leadership in delivering broadband to its public schools. Only a few school districts in the entire United States can match the broadband bandwidth delivered to PGCCPS facilities by the OIT Network Infrastructure Group. Prince George's County has long been a leader in this area, and the ICBN program will allow it to expand these next-generation services to 89 more schools.

Teamwork, System Compatibility, and Advance Planning Avoids 5 Hour Outage

I-Net Shows its Flexibility

Part of the process of upgrading the I-Net backbone serving municipalities to 10 Gig in preparation to carry County Government traffic involved replacing equipment at Comcast facilities to a newer generation of Cisco products. These upgrades generally took about 5 hours for each of the core nodes, and were scheduled for 10:00PM-3:00AM in order to minimize disruption to business activities.

The Hyattsville node posed unique problems because both PGCC and Bowie State University relied on this node to communicate with the College Park campus of the University System of Maryland for their primary connections to the Internet.

To make matters worse, the 10:00PM-3:00AM window also happens to be "Prime Time" for Internet usage in college dormitories such as those at Bowie State, the fall semester was in full swing, and the backup connections were not expected to be sufficient to carry the projected traffic.

University System engineers working closely with County I-Net engineer and school system engineers came up with a plan. By establishing a new interconnection between university system equipment and school system equipment at College Park, and another new interconnection between school system equipment and county equipment at Ritchie Road, the higher education traffic could cross the Hyattsville facility on the school system equipment and thus avoid an outage while the county equipment was upgraded at Hyattsville.

With close coordination and teamwork, in the days leading up the Hyattsville upgrade, the required interconnects were put in place, configured, and tested. 64 hours before the planned upgrade, the college and university traffic was successfully rerouted onto the temporary bypass, completely avoiding the equipment to be upgraded later in the week.

Teamwork, compatible systems, and planning were all necessary to accommodate the unusual traffic demands of a special class of I-Net constituent. The success of this project demonstrated that I-Net embodies all of these important traits.

ACCOMPLISHMENTS

PRINCE GEORGE'S COUNTY MEMORIAL LIBRARY



Between 2003 and 2005 the PGCMLS turned up I-Net access from its eighteen branches to its servers and its Sailor Internet service connection located in the data center at the Largo Government Center.

These eighteen branches now host 558 public access desktop computers, over 300 staff desktop computers, servers and peripheral devices.

Before converting to the I-Net, the PGCMLS connected its branches using point-to-point connections. This provided an aggregate of 4.5Mbps at an annual cost exceeding \$100,000. Over the course of a year the PGCMLS experienced about 100 outages lasting up to a week.

Since 2006, the PGCMLS has had no system-wide I-Net failures. Network outages have rarely occurred and have always been promptly resolved.

I-Net/Office of Information Technology (OIT) staff have provided the PGCMLS prompt, courteous, and valuable advice and assistance for growing and maintaining its network.

Transparent LAN (Local Area Network) Service. At an aggregate of 10Mbps this would provide a tenth of the bandwidth it now gets through the I-Net and it would cost the PGCMLS \$228,000 annually.

In FY 2012:

- The newly renovated Spauldings Branch Library opened to the public in October 2011 with an additional 28 public access desktops. The existing I-Net connection handled this additional load without a blip.
- ICBN fiber cables were run to PGCMLS Branches at Hillcrest Heights, Bladensburg, New Carrollton, Fairmount Heights, Mount Rainier, and Hyattsville
- PGCMLS and the Department of Public Works started a pilot project to install pavement temperature probes at PGCMLS branches. The Library's I-Net connections will relay the temperature data to the TRIP Center for updating its publicly accessible map of current road conditions.

PGCMLS continues to expand the services it offers to the public from its catalog, from its web sites, and from its subscription databases accessible to its customers from either their connections at home or from the Library's public access computers. Its customers also see and enjoy the Library's summer reading programs, children's story times, and the availability of public meeting spaces and quiet study rooms.

Its customers still check out books and look for answers from librarians at information desks.

Each of these services in one way another depends on the reliable and efficient access to the County's I-Net.

ACCOMPLISHMENTS

PRINCE GEORGE'S COUNTY PUBLIC SCHOOLS



Prince George's County Public Schools (PGCPS) was one of the earliest adopters of I-Net as a result of its ability to leverage pre-existing fiber in the early phases of I-Net construction.

The school system's pilot backbone configuration served as a test platform and model for the subsequent OIT backbone configuration, which now serves a wide variety of I-Net users.

In addition, the school system's pilot was expanded into a full production I-Net based backbone configuration, which today runs parallel to the OIT backbone network. Operating parallel networks in the I-Net backbone allows better security, traffic management, redundancy, and fault tolerance.

The two backbone networks are interconnected at various points across the county, which allows traffic to be routed together or independently as appropriate. This also fosters sharing of resources between the school system and other institutions served by I-Net.

I-Net allows PGCPS to provide higher speed connections to the classroom at a lower cost of operation. While the school system remains dynamic, nearly all middle and high schools, and administrative buildings are served by I-Net fibers at 1 gigabit speed. The initial 57 buildings have now been expanded to about 60 buildings.

The school system saves about \$650 per month in areas where it can eliminate a T-1 connection, and the savings are close to \$900 when a 10Mbps connection is avoided. In addition, 100Mbps represents savings of about \$1,350 per month, and a 1 Gig connection would save about \$2,260 per month.

PGCPS looks forward to continuing an active roll in I-Net projects and committees.



PRINCE GEORGE'S COMMUNITY COLLEGE

Today, Prince George's Community College receives world class speed and connectivity to Internet resources via the I-Net. The I-Net provides a fiber optic pathway to College Park, Maryland, for Prince George's Community College and Bowie State University.

College Park is the home of the University System of Maryland Research and Education Network (MDREN). MDREN provides advanced telecommunications services to institutions throughout the University System of Maryland and beyond to other colleges and universities throughout the state.

Prince George's Community College, through its connection and association with MDREN, receives the following services:

- Commodity Internet
- Access to Internet 2
- Video Conferencing and Scheduling

The College has access to the MDREN network at all of its extension centers located throughout Prince George's County. Prince George's County Public Schools (PGCPS) also receives connectivity to the Academy of Health Sciences located at Prince George's Community College via the I-Net. Students attending the academy are connected wirelessly to resources within the PGCPS Network.

The College will move into a new Data Center that is connected to the I-Net and MDREN in 2012. The connectivity with that I-Net and MDREN will be used to springboard technologies such as VOIP and video conferencing with other entities and agencies within Prince George's County and the state of Maryland.

I-Net provides the transport capability so that the College stands out among its peer community colleges by ensuring connectivity that is equal to larger universities. The College has a thousand percent more capacity than it had just a few years ago while keeping the access costs relatively flat. Those costs remaining flat give the College the opportunity to invest in better Internet security and redundancy. The College has employed a very sophisticated integrated threat detection and management system from Fortinet for security, and has deployed a backup connection to MDREN for increased reliability. In essence, I-Net and MDREN have been a winning partnership for Prince George's Community College.



ACCOMPLISHMENTS

MARYLAND RESEARCH AND EDUCATION NETWORK (MDREN)



University System of Maryland

MDREN provides advanced network services to education, research, and public service institution throughout the State of Maryland and connections to regional and national resources.

Several initiatives include partnerships to provide new advanced services for Maryland.

United States Unified Community Anchor Network (U.S. UCAN)

MDREN has become one of fourteen affiliates of US UCAN in partnership with networkMaryland and the Mid Atlantic Xroads. US UCAN is a new national project dedicated to connecting community anchor institutions, including public libraries, schools, community colleges, research parks, public safety and health care institutions with advanced broadband capabilities. Utilizing the Internet2 Network and in collaboration with regional research and education networks across the country, U.S. UCAN will enable these anchor institutions to serve their communities with telemedicine, distance learning and other life-changing applications.

NJVID - New Jersey's Digital Video Repository

NJVID is a project funded by a grant from the Institute of Museum and Library Services comprising a statewide digital video portal and central storage repository. It provides a common online platform for presenting, accessing, hosting and archiving institutions' licensed and locally-produced videos that educate and enlighten viewers in support of online teaching and learning.

NJedge will be available this fall for demand within MDREN.

Premium Video Service

MDREN now provides video bridging service as part of its core services offering. We are exploring enhanced Premium Video services that will provide the following services:

- Secured video bridging
- Hi-Definition / Immersion
- Streaming / Video Storage and Archiving
- Pre-Certified connectivity for Government, Commercial, International partnerships
- MDREN Vendor product training
- Discussion / Desktop video bridge

Proposal for the creation of a “High Impact Economic Development Activity”

We have requested certification of a 501 (c) 3 corporation named Collaborative Solutions Maryland as a High Impact Economic Development Activity from the USM Chancellor.

ACCOMPLISHMENTS

We intend to create this 501 (c) 3 corporation for the advancement of next generation network services for the use of Maryland educational and public service organizations. The corporation will be dedicated to advancing education, research, economic development and public service by assisting in the exchange of information and services among its members by means of high-speed digital communication techniques; assisting its members in gaining access to scientific and educational resources; supporting collaborative instruction, research, economic development and public service; facilitating access to regional and national networks and other national resources; and generally supporting the education, service and research mission of the corporation's members.



PRINCE GEORGE'S COUNTY POLICE AVIATION UNIT

Prince George's County Police Aviation Unit provides air support to investigative and patrol units throughout the National Capital Region. Based in their facilities at the College Park Airport, Police Aviation staff were troubled by a DSL connection that would lose service when the Green Line metro train would pass next to their building.

Through collaboration between I-Net, Department of Public Works and Transportation TRIP Center (DPW&T TRIP), Prince George's County Police, and the Office of Information Technology (OIT), the Police Aviation office was connected back to Largo Government Center (LGC) with a much more stable connection. An existing I-Net connection at Paint Branch Parkway and River Road had been extended by DPW&T TRIP to the traffic intersection outside of the Metro Garage. A donated pair of fiber from DPW&T TRIP connected a wireless bridge on the traffic signal pole to I-Net. Another wireless bridge at Police Aviation picked up the signal, closed the connection and provided connectivity to LGC via the I-Net.

Police Aviation can now access county resources, check weather forecasts, and determine flight status issues using a faster and more reliable connection. OIT has reduced its costs by eliminating the cost of a DSL connection to Police Aviation.

This is the first collaboration between I-Net participants to share fiber resources that are created when extensions are built off of the I-Net. The pair of fiber that was donated by DPW&T TRIP allowed OIT to engineer a solution that cost hundreds of dollars instead of the thousands of dollars needed for a dedicated fiber build.



ACCOMPLISHMENTS

CITY OF BOWIE



On April 19, 2010, the headquarters for the City of Bowie government moved to a new City Hall near Bowie Town Center. The City of Bowie was incorporated in April 1916. Exactly 94 years later, the City government will begin a new chapter in its history by commencing operations at its new building, located at 15901 Excalibur Road.

The three-level building houses the Bowie Police Department and most administrative offices of the City government. It includes a larger City Council Chambers and conference rooms for public and government use. The main level is visually appealing with a sundial in front of the building and an attractive lobby that provides easy access to the services most needed by City residents. These include Animal Control, Code Compliance, and Recreation windows in the lobby. The Finance Department window where water and other payments are accepted is just a short walk from the lobby.

The Bowie Police Department, with its current force of 57 officers, is located on the lowest level of the building. This new building was constructed to LEED silver energy efficiency standards.

The new City Hall has a connection to the Prince George's County I-Net with the old building serving as a hot site and the core for all city I-net connections. Each floor of the new building incorporates state-of-the-art technology including floor-specific network rooms all tied into a main server room in the Information Technology wing. The City's use of VOIP has greatly expanded with this technology used the new City Hall.

UNIVERSITY PARK POLICE

ACCOMPLISHMENTS

Recently, the University Park Police Department was able to assist the University of Maryland Police Department (UMPD) by sharing images taken with cameras operating over the I-Net. UMPD College Park have a different vendor for their automated enforcement, however our agencies were able to share this information to help close this investigation.

Over the years our camera location has assisted in both traffic and criminal investigations as well. In this case, this



certainly validates the extreme importance of intersection safety through the use of automated enforcement. Without our footage, this would have been a case of relying on the validity of witness statements and of course there will always be conflicting statements in any investigation. As you can see from the video, there was no physical evidence such as skid marks, or even fixed objects that were struck. The investigator has to rely on eyewitness accounts that will vary from each person you talk to. After watching the video, vehicles that were in the intersection did not remain on the scene but chose to drive away, thus the investigator did not have the luxury of their eyewitness account which was very important.

The operator of the striking vehicle willfully disregarded the safety of the motorist at the intersection by his intentional violations of the motor vehicle laws pertaining to illegal lane change; causing an illegal turn and failing to yield the right of way. Our system captured that. So the question remains would our automated enforcement have prevented this accident. The answer is no because there will always be motorist that will disregard the law. However in this case the camera location did in fact detect a motorist who violated the law causing what could have been a fatal accident. Fortunately the officer was wearing his safety equipment and survived the crash.

It is now the responsibility of the court to determine what punishment is appropriate. However in this case ATS will allow the judge to see firsthand what actually occurred without any question. Again ATS has clearly made a difference in this case and for that we thank you for your continued service.

GOVERNANCE STRUCTURE



Prince George's County's I-Net is the first in the country to have a governing structure that includes oversight by all member governments. Governance is exercised through the I-Net Full Committee on which Prince George's County and each participating municipality are members. Each member government has one vote and decisions are made by majority vote. The I-Net Full Committee adopts an annual budget and assesses annual fees. Operational management of the I-Net is delegated to the I-Net Executive Committee on which voting members from the county and small, medium, and large-population municipalities serve along with non-voting advisory members from other public agencies* and the policy and technical workgroups.

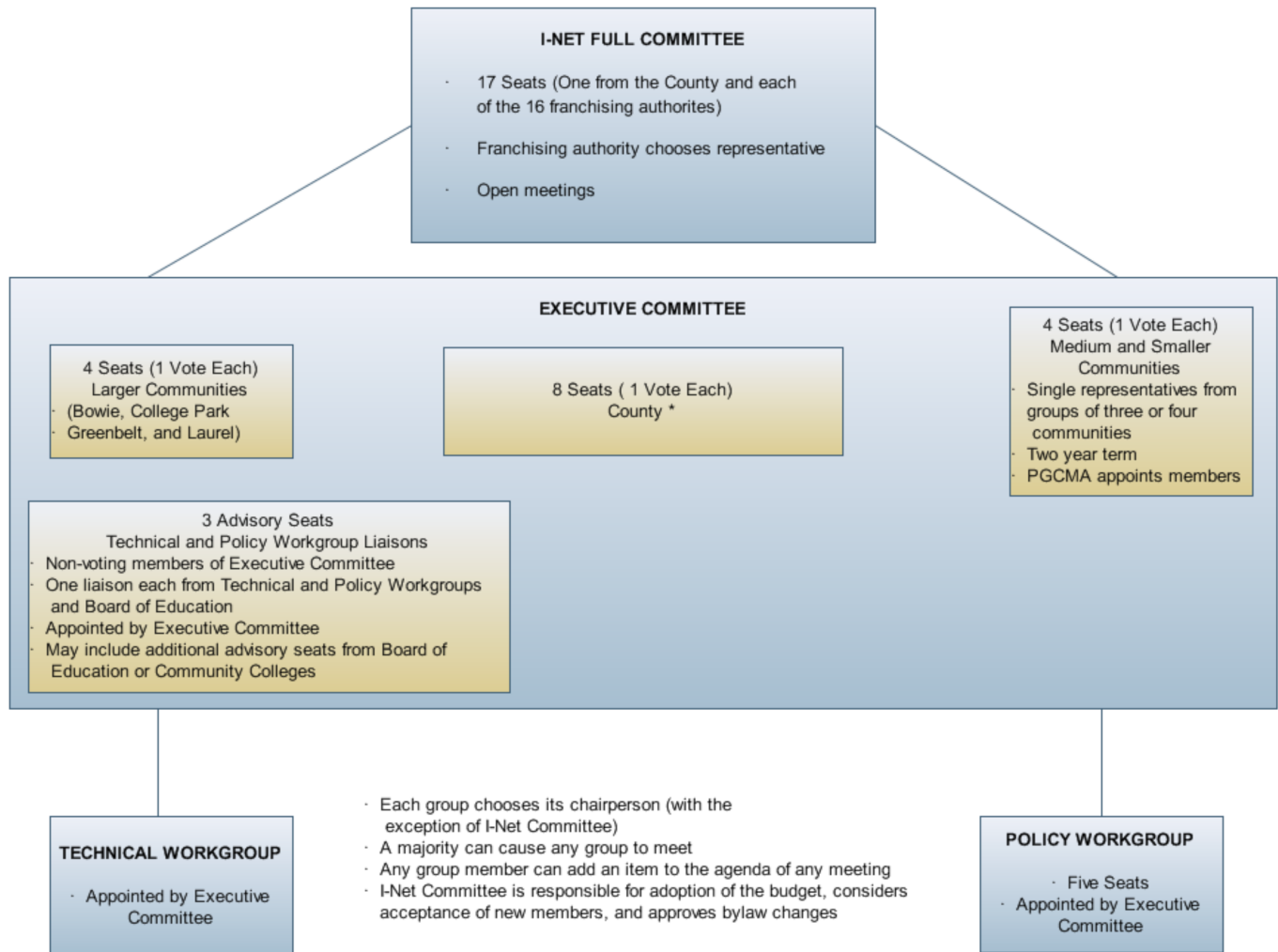
**listed on the chart on page 6*

BYLAWS

Bylaws were developed by a coalition of attorneys, cable administrators and technical experts from the participating communities. The bylaws were adopted via legislation by all participating communities. The legislation keeps the agreement in place beyond the term of any one elected official.

- ◆ Purpose & Powers
- ◆ Membership
- ◆ Governance Structure
- ◆ Committee Roles
- ◆ Funding

GOVERNANCE STRUCTURE



*** County Representatives to the Executive Committee include:** County Executive (or designee); Chair, Prince George's County Council (or designee); Director, Office of Information Technology Communications (or designee); Chair, Board of Education (or designee); President, Prince George's Community College (or designee); Chair, M-NCPPC (or designee); Chair, Library System (or designee); Director, Homeland Security (or designee)

GOVERNANCE STRUCTURE

I-NET FULL COMMITTEE

Representatives from the County government and each of the participating franchisers comprise the I-Net Full Committee. The Full Committee is responsible for the administration, maintenance and financing of the I-Net resource. Additionally, the committee's authority as stated in bylaws is as follows:

The I-Net Full Committee's power shall include authority to:

- Receive, manage and disburse that portion of each participating community's Capital Equipment Support Grant funds contributed to the I-Net Full Committee, and any other funds received by the I-Net Committee, for purposes of the joint construction, management, maintenance and financing of the I-Net.
- Manage and operate the I-Net.
- Provide technical assistance and advice to any member community or I-Net user on utilization of the Capital Equipment Support Grant and/or acquisition of hardware/software for use with the system.
- Monitor cable and telecommunications system upgrades and new construction.
- Advise member communities on cable franchise and I-Net matters.
- Recommend to member communities amendments to these bylaws.
- Provide information and guidance related to any violations of member communities' cable franchise or similar agreements.
- Appoint a Treasurer to receive, invest and disburse funds and to take other action as directed by the I-Net Committee for the joint construction, management, maintenance and financing of the I-Net.
- Take any action normally related to these purposes and powers.
- Adopt and monitor guidelines for the day-to-day operation and maintenance of the I-Net by Prince George's County.

EXECUTIVE COMMITTEE

The Executive Committee consists of sixteen *voting* members. Eight are appointed by Prince George's County; one each is appointed by the cities of Bowie, College Park, and Greenbelt; and four are appointed by the Prince George's County Municipal Association (PGCMA) representing the remaining communities.

The Executive Committee has three additional advisory seats comprising non-voting members from the Technical and Policy Workgroups as well as the Board of Education (with the potential for additional seats from the Board of Education and/or Prince George's Community College).

GOVERNANCE STRUCTURE

The Executive Committee may appoint additional non-voting liaisons as it deems necessary. As stated in the bylaws, the Executive Committee shall have the authority to:

- Prepare the annual budget for the I-Net Full Committee, provided that budgeted expenditures shall not exceed an amount equal to any accumulated surplus plus annual funding for that year as approved at a meeting of the member communities, as provided in Section 8 of these bylaws.
- Authorize, within the approved budget limits, expenditures related to the joint construction, management, maintenance and financing of the I-Net.
- Set policy for the I-Net Committee.



- Perform tasks delegated by the Member Communities herein, including, but not limited to:
 - ◆ *Enter into binding contracts on behalf of the I-Net Committee.*
 - ◆ *Hire and dismiss employees and consultants.*
 - ◆ *Accept in-kind and other contributions on behalf of the I-Net Committee.*
 - ◆ *Request and utilize contributed services in the form of staff time or general administrative support from the member communities.*
 - ◆ *Respond to all other actions which the I-Net Committee may legally take.*
 - ◆ *Acquire and dispose of equipment, hardware and software used on the I-Net.*

GOVERNANCE STRUCTURE



EXECUTIVE COMMITTEE APPOINTED TASK FORCES

BUDGET TASK FORCE: Prepares the annual budget for the Executive Committee and provides periodic status reporting.

PROJECT INFORMATION TASK FORCE: Disseminates information to the public and to members through a variety of media including the I-Net website, brochures, services guide, videos, PowerPoint presentations, the

annual report, and quarterly E-Newsletter. Recommends potential award nomination opportunities to Executive Committee.

TECHNICAL COMMITTEE

It is the mission of the Technical Committee to support the work of, and render technical advice and recommendations to the I-Net Policy Committee. The committee recognizes its role as a corporate citizen within the local, state, national, and international communities. It remains sufficiently flexible not only to expand and enhance current advanced communications, video, print, and mail services, but also to pursue aggressive development of new services. The Technical Committee will work with the Policy Committee in fulfilling this mission.

The Technical Committee's primary function is to serve in an advisory capacity to both the Executive and I-Net Full Committees. In order to perform this role, the committee's duties will include but are not limited to:

- Detailed site visits, including Comcast Open Transport Network (OTN) sites as they relate to I-Net functionality.
- Review of detailed connectivity schematics and the development of standards relating to technical documentation including: cable labeling, facility planning, rack elevation drawings, and power design(s).
- Any and all technical review and documentation falls completely and solely under the Technical Committee's purview.
- Technical build-outs and documentation.
- Development of performance measurement standards.
- Maintenance of an inventory of all I-Net related equipment and their functionality.

GOVERNANCE STRUCTURE

- Review of new site locations on an as-needed basis.
- Coordination of equipment recommendations and purchases.
- Investigation and research of new technologies, functionalities and services as they become available to the enhancement of the I-Net.

TECHNICAL COMMITTEE APPOINTED TASK FORCES

SECURITY TASK FORCE: Responsible for the technical and physical security of the network, including conducting risk assessments and remediation.

EMERGENCY RESPONSE TASK FORCE: Provides immediate response and remediation to network issues.

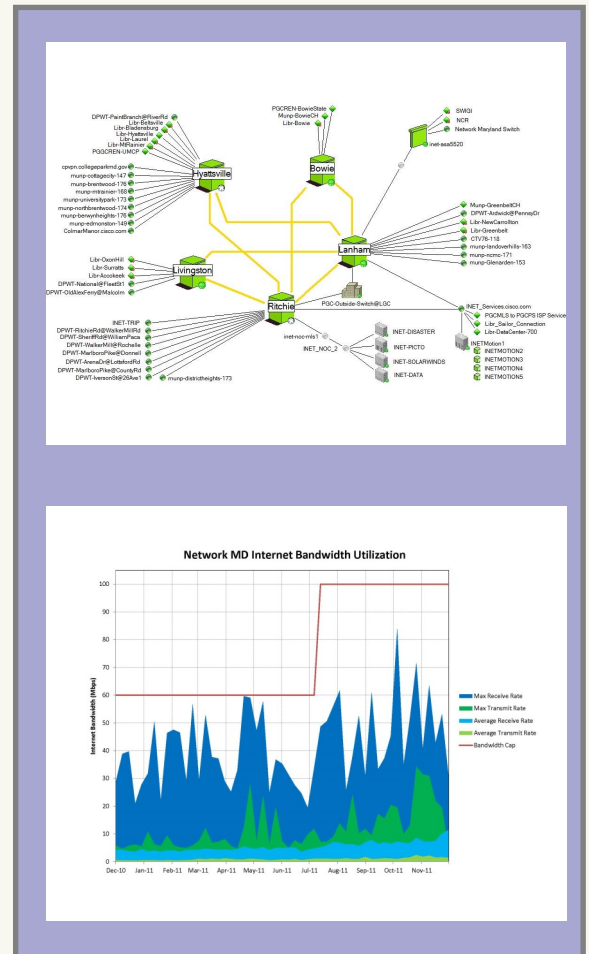
PUBLIC SAFETY TASK FORCE: Comprised of public safety officials from member agencies. Provides project recommendations to the Technical Committee.

POLICY COMMITTEE

It is the mission of the Policy Committee to support the work of and render advisory help to the I-Net Executive Committee. As part of this mission, the Policy Committee will provide long range planning; develop rules, regulations and procedures for the governance of the I-Net system; review the rules, regulations and procedures adopted by the Executive Committee on a periodic basis; recommend enforcement actions; review contract performance; and generally provide such other organizational support as is requested by the Executive Committee. The Policy Committee will work with the Technical Committee in fulfilling this mission.

The Policy Committee's primary function is to serve in an advisory capacity to both the Executive and I-Net Full Committees. In order to perform this role, the committee's duties will include but are not limited to:

- Review and revise rules, regulations and procedures as necessary, on at least an annual basis, and report to the Executive Committee.
- Suggest new rules, regulations and procedures and amendments to existing rules, etc. to the Executive Committee.



GOVERNANCE STRUCTURE

- Develop document submittal requirements and a document retention policy.
- Review new site requests, in conjunction with the Technical Committee; develop expedited procedure for standard requests, and make recommendations to the Executive Committee.
- Oversight of on-going contracts with service providers.
- Facilitate contracts between local governments and service providers.
- Prepare Requests for Proposal (RFP) for new contracts, review submissions, and make recommendations for award.



- Develop I-Net membership application policies.
- Engage in long range planning to enhance structure of network.
- Develop policy for failure to follow adopted procedure.
- Obtain the advice of outside professionals to support Policy Committee roles.
- Receive and review reports of possible I-Net violations.
- Develop policies for processing such as reports and recommendations of action to the Executive Committee.

I-NET BUDGET

Prince George's I-Net (PGINCCC)
Fiscal Year 2013 Adopted Budget - Revenues
 (adopted 02/10/12)

Jurisdiction	Column 13	Column 14	Column 15	Column 16	Column 17	Column 18	Column 19	Column 20	Column 21
	Fiscal Year 2012				Fiscal Year 2013				
	Projected 1/3 of P.E.G.	Percent- age of Total	Adopted Budget (40.5% of 1/3 of P.E.G.)	Actual I-Net Billings (34% of 1/3 of P.E.G.)	Projected 1/3 of P.E.G.	Percent- age of Total	Adopted I-Net Billings (53% of 1/3 of P.E.G.)	54.0% Allocation to Operat- ing (General Fund)	46.0% Allocation to Capital (P.E.G. Funds)
Current Members:									
Berwyn Heights	5,760	0.32%	2,333	1,958	7,267	0.34%	3,852	2,080	1,772
Bowie	147,575	8.26%	59,768	50,176	184,518	8.72%	97,795	52,809	44,986
Bowie-legal fees reimb.									
Brentwood	4,984	0.28%	2,019	1,695	4,978	0.24%	2,638	1,425	1,214
College Park	55,644	3.12%	22,536	18,919	51,891	2.45%	27,502	14,851	12,651
Colmar Manor	1,102	0.06%	446	375	1,521	0.07%	806	435	371
Cottage City	1,670	0.09%	676	568	1,756	0.08%	931	503	428
District Heights	13,042	0.73%	5,282	4,434	16,282	0.77%	8,629	4,660	3,970
Edmonston	3,155	0.18%	1,278	1,073	1,533	0.07%	812	439	374
Glenarden	12,274	0.69%	4,971	4,173	14,732	0.70%	7,808	4,216	3,592
Greenbelt	53,256	2.98%	21,569	18,107	58,656	2.77%	31,088	16,787	14,300
Landover Hills	2,002	0.11%	811	681	2,822	0.13%	1,496	808	688
Mount Rainier	14,299	0.80%	5,791	4,862	18,766	0.89%	9,946	5,371	4,575
New Carrollton	24,543	1.37%	9,940	8,345	29,747	1.41%	15,766	8,514	7,252
North Brentwood	688	0.04%	279	234	759	0.04%	402	217	185
Prince George's County	1,383,744	77.49%	560,416	470,473	1,715,416	81.06%	909,171	490,952	418,219
University Park	4,640	0.26%	1,879	1,578	5,692	0.27%	3,017	1,629	1,388
New Members:									
Laurel	57,420	3.22%	23,255	0	N/A				
Hyattsville	N/A				N/A				
Forest Heights	N/A				N/A				
Addtl 9 municipalities	N/A				N/A				
Total Revenues	1,785,798	100.00%	723,248	587,649	2,116,336	100.00%	1,121,658	605,695	515,964

I-NET BUDGET

Prince George's I-Net (PGINCCC)
Fiscal Year 2013 Adopted Budget - Expenditures (Summary)
 (adopted 02/10/12)

Account Number	Account Description	Column 9	Column 10	Column 11	Column 12	Column 13	Column 14
		Fiscal Year 2012		Fiscal Year 2013			Projected Reserve Fund through FY13
		Adopted Budget	Projected Expendi-	Adopted Budget	Allocation to Operat- (General	Allocation to Capital (P.E.G.	
100	I-Net Management	242,802	218,700	218,200	218,200	0	0
200	I-Net Backbone	81,500	16,500	100,000	100,000	0	0
201	I-Net Backbone Up-	15,000	15,000	400,000	0	400,000	0
500	Service Desk	126,000	126,000	126,000	126,000	0	0
600	I-Net Services	50,000	50,000	55,000	55,000	0	0
602	Pictometry	0	0	15,000	0	15,000	0
603	Network Monitoring	92,000	92,000	18,500	18,500	0	0
604	Video Conferencing	0	0	0	0	0	0
605	Network Security	18,250	22,400	25,000	25,000	0	0
700	I-Net Projects	50,000	0	50,000	25,000	25,000	0
702	Backup Project	10,000	0	20,000	20,000	0	0
705	Public Safety	13,000	15,250	38,500	18,500	20,000	0
900	Reserve Fund	24,696	31,799	55,458	0	55,458	760,738
Total Expenditures		723,248	587,649	1,121,658	606,200	515,458	760,738
Allocation Percentage:					54.0%	46.0%	
(Operating and Capital)							

Prince George's I-Net (PGINCCC)
Fiscal Year 2013 Adopted Budget - Footnotes
(adopted 02/10/12)

REVENUES

1. Revenue projections for fiscal year 2013 include P.E.G. funds to be received from Comcast Cable and Verizon. Advance P.E.G. grants paid by Verizon to municipalities are not included in I-Net revenues as they will be deducted from future P.E.G. payments and the time periods cannot be reasonably estimated. Revenue reporting from all jurisdictions represents actual Comcast and Verizon P.E.G. grants received for the quarter ended September 30, 2011.
2. The FY2013 revenue budget is based on 53% of 1/3 of the P.E.G. funds received, to be billed in 1 installment (March 2013).
3. Budgeted I-Net billings for FY2013 have been allocated between OPERATING (54.0%) and CAPITAL (46.0%) based on the category of expenditures to be paid with the I-Net funds. Only CAPITAL costs may be paid using Comcast or Verizon P.E.G. funds. OPERATING costs should be budgeted and paid from your General Fund.
4. Listed below are the budgeted and actual I-Net billings for each fiscal year:
 - FY2008, budgeted 75% of 1/3 of P.E.G., actual billings 75%
 - FY2009, budgeted 75% of 1/3 of P.E.G., actual billings 52.5%
 - FY2010, budgeted 75% of 1/3 of P.E.G., actual billings 62.5%
 - FY2011, budgeted 60% of 1/3 of P.E.G., actual billings 45%
 - FY2012, budgeted 40.5% of 1/3 of P.E.G., actual billings 34%
 - FY2013, budgeted 53% of 1/3 of P.E.G.

EXPENDITURES

[Descriptions listed below cover expenditures in the FY2013 adopted budget.]

Account Numbers In FY2011, account numbers were added for each expenditure item. The suffix on the account number represents the category of expenditures (1 for hardware, 2 for software, 3 for maintenance, 4 for consulting fees and 5 for miscellaneous). Purchases of hardware (category 1) and software (category 2) are allocated to capital, while maintenance and licenses (category 3), consulting fees (category 4) and miscellaneous (category 5) are allocated to operating.

I-Net Management I-Net management includes high level expenses to manage the I-Net. It also includes expenditures for feasibility studies, training and audit.

I-Net Backbone Network infrastructure that interconnects various pieces of network, providing a path for exchange of information. I-Net backbone connects all I-Net locations together and is the most important architectural element for the I-Net.

I-Net Backbone Upgrades Any hardware or software upgrades to the backbone of the I-Net.

Service Desk Help desk for I-Net users, budgeted at 1 CSC technician FTE.

I-Net Services Add-on services provided to I-Net users on an ongoing basis Internet Services - providing Internet access to I-Net users

Pictometry - A third party product which provides detailed aerial photography for Prince George's County. Pictometry software allows a variety of measurements to be taken directly from the image, including height, distance and area as well as elevation and bearing.

Network Monitoring - This service allows I-Net technical staff to monitor the network for slow or failed components. In case of outages or intrusion, I-Net technical staff is notified immediately.

Video Conferencing - provides real-time audio and video communication between 2 or more users on the I-Net.

Network Security - provides security to I-Net users by implementing firewalls, anti-virus software, anti-malware software, DLP (data loss prevention techniques), etc.

I-Net Projects These are the new ideas to improve the usefulness and security of the I-Net. Projects have definite beginning and ending dates. At the end of the implementation of a project, it may be added as a service to I-Net users.

Risk Assessment - a project to determine quantitative and/or qualitative value of risk to I-Net network from cyber attacks

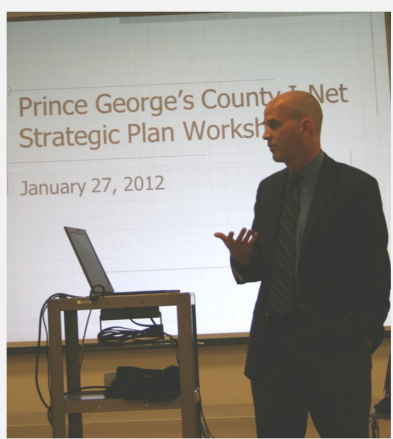
Backup Project - automated process for making copies of data, for use in restoring the original after a disaster or accidental loss of data

Public Safety - provides sharing of public safety data among police departments within the I-Net jurisdiction

Reserve Fund The reserve fund includes the reserve for the budgeted Public Safety Building (CCF) buildout that was not done in FY2008 (\$160,000), potentially earmarked for the Bowie OTN, as well as the surplus from each fiscal year. Surplus represents the excess of billed revenues over actual expenditures. To provide adequate reserves, approximately 5% of the expenditure budget is budgeted for surplus. For FY2011 and 2012, the budgeted surplus would cover the revenue budgeted from potential new members in the event they do not join for the respective fiscal year.

Undesignated Reserve Goal In order to cover a catastrophic event at a head end or other major equipment failure, we have established a goal of \$600,000 for our undesignated reserve. When the undesignated reserve balance equals or exceeds \$600,000, annual expenditure budgets will not include a budgeted reserve fund contribution unless there is a potential for lost revenue in case planned new members do not join on the budgeted timetable.

STRATEGIC PLAN SUMMARY



Since its inception in 1998, the Prince George's county Intergovernmental Network (I-Net) has succeeded technically, financially, and in its governance. As such, it is in a small group of high-achieving governmental networks. It was the recipient of the 2008 Community Broadband Network of the Year award from the National Association of Telecommunications Officers and Advisors (NATOA).

The network was conceived as a partnership between Prince George's County and 15 municipalities ("Participating Communities") to interconnect government and educational facilities for data, video, and voice communications. It was constructed as part of the franchise agreement between these municipalities and the cable operator and built in parallel with the cable operator's network upgrade, taking advantage of the construction's economies of scale.

The network interconnects most of the government buildings of Prince George's County and its municipalities, Prince George's Community College (PGCC), the Prince George's County Public Schools' (PGCPS) high schools and middle schools, the University of Maryland, Bowie State University, and key traffic intersections.

The Participating Communities and stakeholders connect their own electronics to the network, according to their own specific security and capacity requirements. They are able to upgrade or change their network connections independently of the cable operator.

The central ingredients of the network are the fiber optic strands, providing practically unlimited capacity (data speed), high security, and the capability to expand with future needs. The Participating Communities paid \$4.9 million for the fiber strands. The network now saves the Participating Communities at least \$3.4 million per year in commercial service charges. The yearly savings could grow beyond \$9 million per year as bandwidth needs grow.

The I-Net saves PGCPS and libraries from paying hundreds of dollars per location for separate Internet connections for each branch because it enables them to buy Internet in bulk. Because there are substantial economies of scale in buying Internet capacity, this arrangement provides much higher quality Internet and much lower costs. (In the current economic environment, there are lines of county residents at branch libraries every day waiting to use the Internet to search for jobs and training.) PGCC achieves similar savings and benefits.

Public Safety facilities use the I-Net extensively as well. With the I-Net, bandwidth-intensive resources such as the County's mapping and dispatching system and its emergency videoconferencing system can connect seamlessly and securely.

The I-Net is essentially an internal data "pipe" for authorized government facilities, connecting each facility securely—and with such high speed and reliability as to make it seem that all of the users are in one building.

The I-Net enables expensive central servers and technical staff to simultaneously serve dozens of buildings, eliminating staff and separate servers for this in each building. In this way, the I-Net also helps equitably distribute the resources across the government and school systems, with similar resources being available at any point in the County.

STRATEGIC PLAN SUMMARY

As the Participating Communities enter negotiations for franchise renewal, the I-Net must be a priority. The I-Net leadership should continue to encourage users to find new uses of the network and increase its value to the community. It should find cost-effective and flexible ways to add new locations, including considering a provider-independent model and wireless networking. It should work strategically; e.g., it should consider whether and how to serve many locations along a route when considering a new site. It should develop staff expertise to match the expertise that will be needed in the future to run the network. It should always try to find and take advantage of the economies of scale that the network can offer.

As part of the planning and visioning process, we engaged focus groups and identified 18 business objectives pertaining to the I-Net. Based on discussions with the I-Net Executive Committee and analysis of the objectives, objectives were organized under four goals:

1. Help the Participating Communities better achieve their goals
2. Ensure long-term I-Net sustainability and security
3. Maintain best practices and member awareness
4. Develop strategic means of network expansion

Potential I-Net initiatives should be aligned with these goals in order to be funded or supported by the I-Net leadership. Initiatives that are not aligned should not be given priority, if the leadership feels that initiatives that are not aligned are nevertheless worthy, the leadership should consider formally adapting the strategic plan to accommodate that perspective.

This plan is organized as follows:

- The Background of the I-Net, describing its history, its origin of governance, the financing and cost model, and the stakeholders.
- The Technical Description, explaining the technology and its features, the operations of networks within the I-Net, the respective roles of the network operators, and how the various portions are interconnected.
- The Administrative Description, explaining the governance structure, committees, and task forces.
- The Stakeholder Feedback and Needs, describing the focus group discussions and the 18 business objectives determined from them.
- The Cost Avoidance Analysis, estimating the yearly cost savings from the I-Net. Recommendations, including the strategic goals developed from the business objectives, an implementation roadmap, a recommended technical architecture, and guidance for franchise negotiations.

This plan also proposes a revised mission statement to “Provide opportunities for economies of scale and resource sharing among Authorized Users of the Prince George’s County I-Net over a secure fiber optics communication system during normal operations and at times of a major disaster.”



The Prince George's
County Intergovernmental
Network Community
Coordinating Committee
Annual Report was
compiled by the
Project Information
Task Force.

Members include:
Maryanne Anthony
Shivani Gandhi
Beverly Palau
Dr. Joe Rossmeier
Kathy Tavel
Dr. Beatrice Tignor
Tenisha Williams

