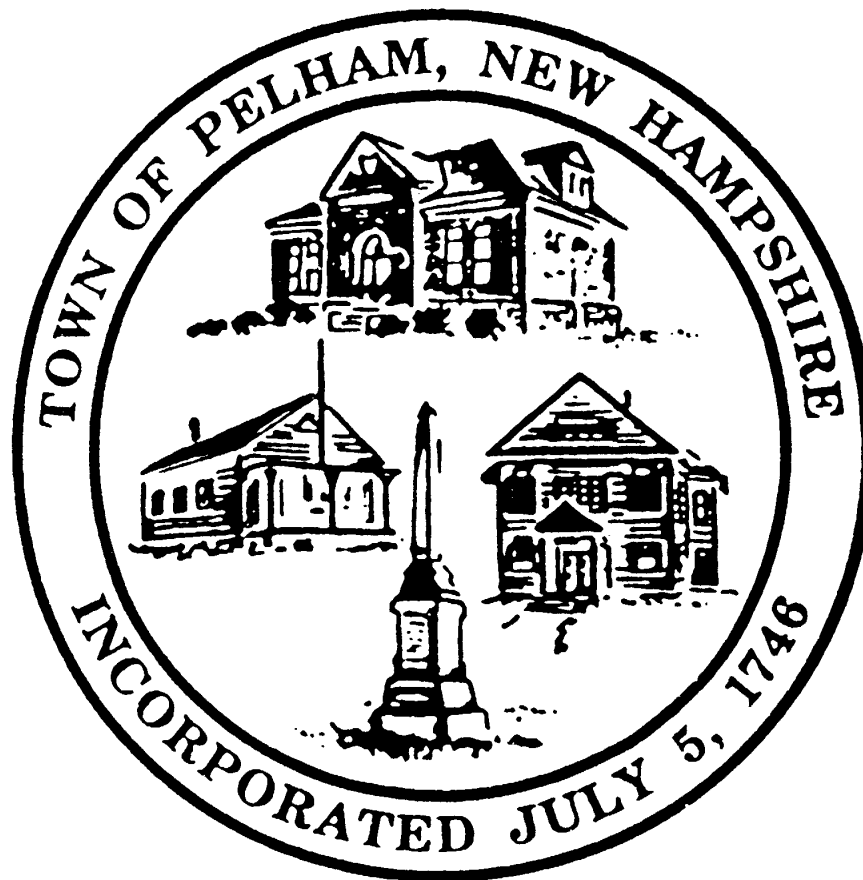


**TOWN OF PELHAM
NEW HAMPSHIRE**



Technology Plan

Adopted - November 14, 2006

Table of Contents

Executive Summary	3
Introduction.....	4
Short Term Goals.....	4
Long Range Goals.....	4
Major Applications	5
Athena.....	5
Exchange.....	5
IMC.....	5
Muni Smart	5
Pelhamweb.com.....	6
RecTrac.....	6
Vision.....	6
Standardization	7
Physical Space	7
MDF Rack Systems	7
Fiber and Data Patch Panels	8
LAN Data Wiring	8
Intra-Building Data Wiring.....	9
Ethernet Switches.....	10
Routers	10
Servers.....	11
Backup and Recovery	12
PC Hardware.....	13
PC Software	15
Published Documentation – PDF Format	16
Email	16
Virus Protection	17
Printers	18
Internet Access, DNS & SSL Certificates	18
SSLVPN Access	20
Firewalls.....	20
Support Considerations.....	21
Appendix A – Typical Server Config, Pricing and Quote	22
Appendix B – Typical PC Config, Pricing and Quote.....	23
Appendix C – 2006 Inventory.....	24
Appendix D – 2007 and Beyond.....	25
Appendix E – 2007 Plan	26
Appendix F – 2002-2006 Accomplishments	27

Executive Summary

In 2006, the 3 Year Technology Refresh Plan that began in 2002 was completed as initially presented. Goals and objectives of moving from an uncoordinated approach of piecemeal systems to one of standardization, interoperability, security and trusted system backups, has been achieved. The Return on Investment (ROI) for residents has allowed us to achieve lower operating cost, higher employee productivity and more efficient access to electronic records and systems.

The goals of developing this plan include:

- Guidance for the IT infrastructure
- Development of short term goals
- Development of long term goals
- Continued deployment of standards for all technology areas
- Gaining an understanding of the support requirements for implementation
- A plan of action for implementation

Highlights of 2007-2010 Technology Plan

- 2007 – RecTrac, 2 File Server Upgrades & misc. server software upgrades
- 2008 – MB PC refresh & MB network gear
- 2009 – Police & Fire PC refresh & network gear
- 2010 – Library, Sr. Center, Transfer & Highway PC refresh & network gear

The results of adopting a technology plan will provide the Town with a 3-4 year action plan that will facilitate organized planning and implementation of technology - ultimately delivering solid cost effective Total Cost of Ownership (TCO) and ROI.

The results of this plan were best articulated by Fire Fighter Greg Atwood:

-----Original Message-----

From: ffatwood@pelhamfire.com [<mailto:ffatwood@pelhamfire.com>]

Sent: Sunday, August 13, 2006 8:44 PM

To: danevich@pelhamweb.com

Subject: RE: User account Pelham

Over all the system you guys built is working fantastic, in fact it is one of the best systems I have seen. I don't think there has been any down time that wasn't scheduled. My thoughts are, if it isn't broke don't fix it.

Thanks - Greg

Thanks Greg, we appreciate your feedback!

Introduction

This plan was created with the Short and Long term goals identified below.

Short Term Goals

The short term goals presented here are an overview of what we would like to achieve over the next 3 years. There are several short term goals of this plan that include:

- Implement RecTrac application software for Park and Rec Department in 2007
- Migrate Fire to existing MS Exchange server
- Implement MS Exchange for Police
- Replace centralized tape backup system
- Implement What's Up Professional for centralized system monitoring and management
- Implement next generation desktop, server and email operating systems
- Upgrade Library and Fire Department file server to meet minimum application requirements
- Wireless Technologies at Library and Municipal Building

Long Range Goals

The long range goals identified here represent areas of technology that will be explored in more depth at a later point in time. The goals were gathered through discussions with staff employees. This list is not intended to be all inclusive, but to capture some of the thoughts around long range planning.

Long term goals include:

- Better integration and connectivity with PTV
- Web based streaming video via PTV
- Enhanced security via DVR, SSL, encryption, and physical systems
- Better integration with the School System
- Integration with facilities management systems
- Introduction of better IT technologies at the Fire Department, Highway and Transfer Stations
- Better connectivity with the Senior Center, Highway and Transfer Station
- Better connectivity within our parks for enhanced security
- Voice over IP (VoIP)

Major Applications

The Town utilizes several major applications to perform Town functions. Each application was chosen over time by each respective department function based on interoperability with state agencies, government regulations and features required to perform Town functions. IT's role with respect to these applications is not to select, program, fix or provided detailed support, but instead provide supplemental onsite support for each respective vendor as required. For that reason, vendor specific supplemental support contracts are highly recommended and required.

Athena

This specialized software package is used by the Library to manage the book collection. It has been in use for > 5 years and has worked well. In the past 2 years, we have upgraded Athena to include a web based portal that allows residents to search the book collection, reserve books, and do online renewals. Athena and the Athena Web Server currently run on file servers FS1 and FS2 respectively, on a separate physical network, and is included in the nightly centralized backup system. The application currently is running on a file server that does not meet minimum hardware requirements. The 2007 Technology Plan incorporates an upgrade to meet minimum hardware requirements. Athena support has been excellent with fast response times when support calls are placed.

Exchange

In 2006 we implement MS Exchange for email and a calendaring. Current users include employees in the Municipal Building, Sr. Center, Highway, Library and Transfer Station as well as elected officials when requested. Police and Fire integration is planned. Exchange is currently running on file server FS5. Nightly backups are included in the centralized backup system.

IMC

This specialized software package is the primary system used by Police and Fire for recording all incident calls. As residents call Police Dispatch, caller data is entered into IMC and units are dispatched. This system is considered a very high priority application with respect to IT support via 7 x 24 x 365 on call support provided by IMC support, and secondary onsite support via pager by Rockport Technologies, Jim Greenwood and Victor Danevich. IMC utilizes a specialized database that requires RAID 5 disk drive hardware and runs on the Police and Fire Department file servers respectively and is included in the nightly backup system. The Police server currently meets these minimum requirements, but the Fire Department server does not. The 2007 Technology Plan incorporates an upgrade to meet minimum hardware requirements. IMC support has been excellent with fast response times when support calls are placed.

Muni Smart

This specialized software package is the primary software for the Finance, Town Clerk and Planning Offices. This software package was implemented in 2005 as a replacement to an old DOS based BMSI. Muni Smart utilizes a specialized database and currently runs on file server FS3. Nightly backups are included in the centralized backup system. Muni Smart support has been excellent with fast response times when support calls are placed.

Pelhamweb.com

Pelhamweb.com is now hosted at the Municipal Building and currently runs on file server FS6. While it does not utilize a database, maximum system availability is required as it is the primary website for the Town of Pelham. Nightly backups are included in the centralized backup system.

RecTrac

RecTrack is being proposed for the Park and Rec Department. Currently they utilize a very labor intense way of registering, tracking, scheduling and reporting of P&R programs. The Park and Rec Dept. looked at several different applications and did an onsite review with several local Towns, including Nashua, and they are all using RecTrac.

This is a planned implementation for 2007.

Vision

This specialized software package is the primary application for the Assessor. It contains all the property valuations. The system was upgraded in 2006 from version 4.x to version 6.x as part of the revaluation. The online portion of vision is hosted by Vision at their facilities. The Town provides a monthly upload to Vision, and they make it available on their website. Vision utilizes a specialized database and currently runs on file server FS4. Nightly backups are included in the centralized backup system. Vision support has been excellent with fast response times when support calls are placed.

Standardization

A standardized approach to technology ensures system interoperability, increases employee productivity and ultimately lowers the Total Cost of Ownership (TCO).

Since the adoption of standards, the Town has been able to:

- Ensure system interoperability
- Ensure investment protection of assets
- Ensure future technology purchases are compatible with the overall architecture
- Lower overall TCO
- Track Return-On-Investment (ROI)
- Provide purchasing guidance to Department Heads
- Leverage economy of scale purchasing power

The sections below detail minimum standards for each technology area. Where appropriate, technically acceptable alternatives have been included for consideration.

Physical Space

Requirement: To provide adequate space to properly operate networking, server and phone equipment. Requirements include secured room, limited access, appropriately sized electrical, network, HVAC and fire suppression.

Current Configuration: Most IT systems are currently located in the Municipal Building Main Distribution Frame (MDF). Other systems are located in an Intermediate Distribution Frame (IDF) as needed to provide network connectivity.

These IDF locations include:

- Police Department
- Library
- Fire Station

Proposed Configuration: There is adequate space for all current systems and no new space is anticipated at this time. If a centralized Fire station is built in the future, space needs would be determined during the construction planning process.

HVAC requirements are currently 'ok' but we are keeping a watchful eye on cooling capacity at the Municipal Building and Library. If we add any significant amount of equipment to the Municipal Building MDF, we will need to upgrade the current dedicated roof mounted AC unit to a larger size.

MDF Rack Systems

Requirement: To provide a organized mounting system for rack mounted equipment.

Current Configuration:

Town Hall currently uses:

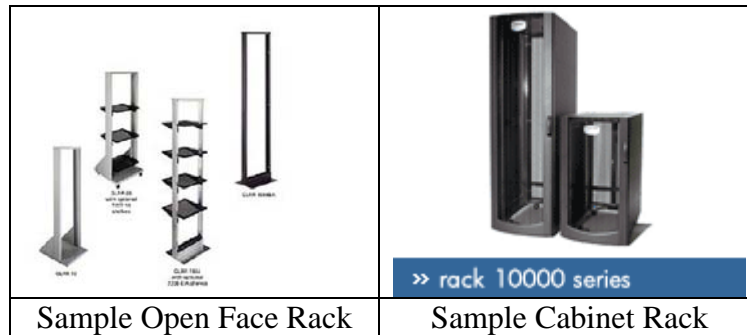
- 3 donated 42U racks for servers. No changes planned.
- 2 open face 42U racks for communications gear. No changes planned.

Library currently uses:

- 1 open face 42 rack for communications gear. No changes planned.

Fire Station currently uses:

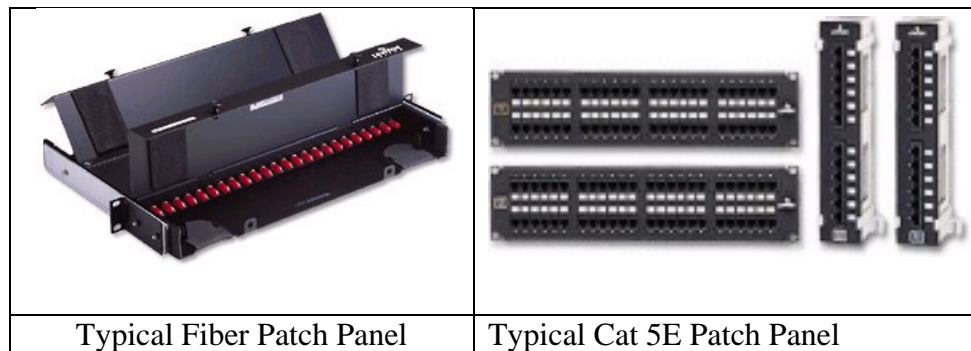
- 1 open face 20U rack for communications gear. No changes planned.



Fiber and Data Patch Panels

Requirement: To terminate intra-building fiber runs within SC type connectors and Cat 5E data wiring runs with RJ11 type connectors in a rack mount systems.

Current Configuration: No changes planned.

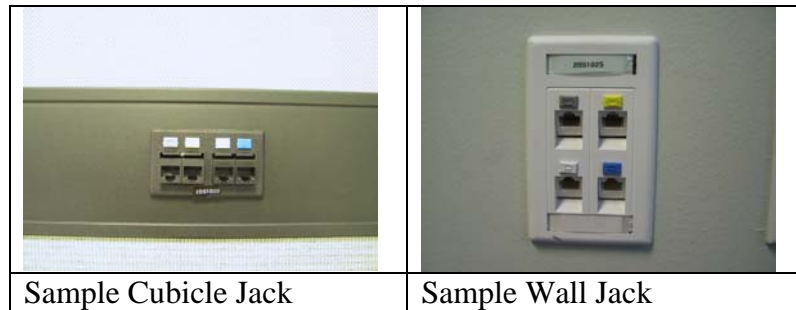


LAN Data Wiring

Requirement: The physical wiring used to connect PCs, printers, switches, hubs and routers. Category 5E type wiring is considered the industry standard 100Mbps wiring and has had wide spread adoption. For any new installations, such as a new Fire Station, we will utilize newer Cat 6 for 1000 Mbps connectivity. Cat 7 and 8 standards are on the horizon, but will have no material impact on the municipal buildings within the next 5-7 years.

Current Configuration: The current wiring utilizes a standardized Cat 6 cabling system. No changes are planned for the existing Cat 5E installation at the MB, Police Station, Fire Department or Library.

Proposed Configuration: All new installations will use Cat 5E wiring for standard 100 Mbps Ethernet access. Cat 3 patch cables rated for 10Mbps operation will be replaced when the connected PC has a 100Mbps Network Interface Card (NIC).



Intra-Building Data Wiring

Requirement: The desire to connect all the buildings together to create a private municipal network that will facilitate the centralization of servers and services for all employees. This will permit all Town employees access to email, calendaring, Muni Smart, Planning, Assessor, etc. as required by function/role.

Current Configuration: No changes are planned to the existing 62.5/125 multi-mode fiber infrastructure for existing buildings.

Proposed Configuration: We are looking at a longer term goal of extending fiber connectivity to other Town owned buildings including:

- Senior Center
- Town Hall Annex or PTV if not relocated to MB
- All Public Schools

Upon implementation of intra-building connectivity, the Town will be able to:

- Extend the existing private-use municipal network
- Isolate public-use PCs from the municipal network
- Centrally authenticate users
- Centrally save files and documents
- Share applications such as Muni Smart, Planning, and Vision Appraisal, etc.
- Consolidate network access points to one location
- Consolidate server backups to one system
- Centrally manage virus protection software

-
- Achieve long term goal of consolidated voice, data, video, DVR and facility management functions.

Fiber connectivity between the new municipal buildings should be made during any construction phase, with later links to the other buildings. This facilitates the building of the municipal network.

Fiber specification:

- 62.5/125 micron multi-mode fiber
- Terminations: SC Connector
- No splices
- Individual segments between buildings as noted in Appendix C, no home runs from remote building to MB MDF
- Outdoor rating for outdoor applications
- Indoor rating for indoor connectivity between MDF and IDF locations
- Rodent protection – optional
- Armored – optional
- All Dielectric – optional
- Self Supported – optional
- Ribbon – optional
- Loose Tube – optional
- Individual runs must be less than 1640.4 feet (500 meters)

Ethernet Switches

Requirement: The device that all PCs, printers, routers and other switches connect to – to form a Local Area Network (LAN). Ethernet switches provide port isolation in the event of network problems by blocking the problematic port while allowing all other ports to continue normal operation. While less of an issue with small pockets of connected PCs, as the network comes together, the ability to automatically isolate problem ports is critical.

Current Configuration: 4 Cisco Catalyst 5000 ethernet switches that provide 10/100 mbps connectivity. These were acquired from a company who was going out of business. They are about 14 years old, but despite the age, they are considered a ‘work horse’ and are very reliable. Spare parts are near non-existent or need to be obtained second hand via eBay.

Proposed Configuration: Upgrade over time to newer 10/100/1000 mbps ethernet switches. All new desktop and servers are now capable of 1000 mbps, but our infrastructure is only capable of 10/100 so we run at a slower speed.

Routers

Requirement: This function is currently handled on the firewall. No further requirements are planned at this time.

Current Configuration: As a stand-by, the Town currently has one Route Switch Module (RSM) in one of the Catalyst 5000 switches.

Proposed Configuration: No changes planned.

Servers

Requirement: To provide centralized authentication, file/print and application sharing services to all employees.

Current Configuration: The Town currently has 12 servers, 11 of which are running Microsoft 2003 Active Directory and are proactively monitored and maintained for all patches via HP Insight Manager. While it may seem like a lot of systems, we are required by state guidelines and/or law to physically separate certain functions. To that effect, we have 4 physical networks that include the MB, Police, Fire and Library. The Police and Fire Departments are required to be physically isolated from any other network as directed by the State of NH. The Library, via the Patriot Act, strongly suggests physical isolation of any of its devices from any other network. All remaining users leverage the Municipal Building network that includes MB users, Sr. Center, Highway, Transfer and remote users.

Further separation is also required due to incompatible databases. Muni Smart and Vision for example cannot run on the same server since the two different databases are incompatible. To that effect, the list below represents our current production servers.

- FS1 – Library dedicated server for Athena, file, print, authentication
- FS2 – Library dedicated web server for Athena
- FS3 – Muni Smart dedicated server, file, print server for MB users
- FS4 – Vision (assessor) dedicated server
- FS5 – Exchange (email) dedicated server
- FS6 – Pelhamweb.com dedicated internet web server
- PMB_PDC – DNS, DHCP, Antivirus and main authentication server
- PMB_BDC – Intranet web server, IT ticket system
- PPD – Police dedicate server IMC, SPOTS, file, print, authentication
- PFD – Fire dedicated server for IMC, file, print, authentication
- BACKUP – Veritas dedicate backup server, HP Insight Manager, Syslog
- PD-UNIX – old Police Records, will be decommissioned in time

Note: We attribute very high system availability to the use of HP enterprise servers that are managed with HP Insight Manager. This tool is critical to monitoring and maintaining system health and allows us to proactively maintain software drivers and hardware components with its pre-failure warranty. To that effect, servers under HP Insight Management have been 100% available other than planned outage maintenance windows. HP Insight Manager is provided for free with HP systems.

Proposed Configuration: The Library and Fire Department servers were purchased in a somewhat emergency state in late 2002 when both servers showed signs of imminent failure. At that point, we obtained two entry level servers to minimize cost. Both servers have served the Town well and continue to do so, but they do not meet the minimum requirements for hosting their respective applications. Fire for example, via voter approval in 2005, implemented IMC which strongly recommends a RAID 5 configuration for database protection. The current system for both Fire and the Library are a single disk with minimal memory. When support calls are placed with IMC or Athena support, we usually get a gentle reminder that our servers don't meet minimum requirements. Both servers will be redeployed. The Library server will be redeployed to upgrade the existing Athena Web Server and the Fire server will be redeployed to replace a system currently on loan that that host Pelhamweb.com.

Minimum Server Specifications:

- Located in a physically secured location, such as the MB MDF
- Rack mounted
- OS: MS AD 2003
- Part of the MS AD trusted domain for user authentication and access control
- RAID 5 drive protection
- Dual Ethernet 10/100/1000 Mbps capable
- Centrally manageable
- UPS connected and UPS OS aware
- Tied in with tape backup system

Centrally locating the servers into a physically secure room like the MDF prevents unauthorized system access and/or theft. Within the MDF, rack mounting the servers allows more equipment to be mounted within the same space, coordinates airflow for cooling, and improves accessibility when all systems are mounted in the same place.

See Appendix A for a typical HP DL 385 configuration, pricing and quote as of 10/29/2006.

Backup and Recovery

Requirement: To be able to restore an application and/or data to a known good state that may include the previous day, week end, month end, quarter end, or year end. A secondary requirement is to introduce an offsite storage procedure to provide restore protection in the event of a major disruption at the municipal building.

Current Configuration: One Sony AIT DLT tape system with Veritas backup software. This tape system has a magazine with 8 tapes, 7 which are for data, and 1 for a head cleaning tape. This system facilitates unattended 7 day per week backups with verification. Tapes are rotated weekly on a 3 week rotation. Tapes outside of the system are stored in a fire proof safe for disaster recovery. This system is in operation 365 days a year, 11+ hours per day, backing up approximately 200 Gb of data unattended. Daily backup reports are mailed from the system that ensures backups occur daily.

Proposed Configuration: The current system has served the Town extremely well and has been called into service to restore accidentally deleted files multiple times. It's comforting to know that

we have good solid backups occurring nightly which is vastly different prior to implementing this system in 2003.

In 2007, we are proposing to upgrade the Veritas backup software from version 9.x to version 10.x. Our maintenance ran out in 2003 and we have been using the same version since. The newer version improves performance, security and incorporates new features.

The backup unit is starting to show signs of end-of-life. Given the amount of use this device gets and the mechanical nature of the tape drive, we are getting more frequent errors. If this device fails, we are in a situation where it must be replaced immediately.

PC Hardware

Requirement: To provide a cost effective PC capable of running the minimum standard software including the operating system, word processor, spreadsheet, email, virus software and specific department applications. Consideration is given to managing technology to a 3-4 year refresh cycle. When PCs are not upgraded and controlled within a 3 year technology window, support cost rise dramatically per PC as incompatibilities increase with newly acquired applications and/or other systems. A secondary benefit of managing PCs to a 3-4 year technology window, it is possible to implement a no-upgrade policy where users are issued a PC and no hardware or software upgrades are made for the life of the PC (within practical reason).

Current Configuration: All desktop systems are now running a standardized version of MS XP SP2 and MS Office as a result of the 2003 Technology Plan implementation.

Proposed Configuration: Through a competitive bidding process, the Town awarded a contract to Dell Computers for desktop systems. They offer NH GSA pricing and cost effective entry level business units capable of meeting our needs.

We plan and continue to purchase cost effective entry level systems. While many non-commercial systems are being aggressively marketed for \$299 or less for a complete home use system, our typical expenditure has remained flat at about \$1000 per system. A system advertised for \$299 typically does not include MS XP Professional, a 3 year parts warranty, MS Office, antivirus software, MS AD CAL licensing, sufficient RAM, or sufficient disk to meet our needs.

Since the adoption of a PC hardware standard, the Town has been able to:

- Leverage 3 year warranties to minimize operational costs
- Leverage a single vendor for economy of scale in pricing and support
- Ensure system interoperability
- Ensure support for duration of the products life-cycle
- Ensure an individual system fits within the overall network architecture
- Ensure investment protection by not acquiring obsolete technology
- Provide department heads with guidelines for anticipated pricing, configuration, a sizing

Recommended PC workstation hardware standards Town employee and Public Access (first PC purchases using this standard are planned for 2008):

- Case: Small form factor
- CPU: Dual Core Processor, 3.0 Ghz or higher
- Memory: 1GB
- Disk: 40GB or greater (SATA)
- Network: Integrated 10/100/1000 Mbps NIC
- Monitor: 17" Color Flat Panel
- Video: Integrated
- Mouse: Included
- Keyboard: Included
- DVD/CD-RW: 24x or greater
- Floppy: Not required (1.44MB/3.5")
- Sound: Integrated
- Speakers: Integrated business speaker
- HW Support: Dell Gold Status, Onsite next business day
- Target Price: ~ \$1000 for hardware (HW plus SW target price ~\$1100)

Minimum Portable PC hardware standards Town employee:

- CPU: Dual Core Processor, 2.5 Ghz or higher
- Memory: 1GB
- Disk: 40GB or greater
- Network: Integrated 10/100/100 Mbps NIC
- Wireless: Integrated
- Monitor: Integrated SXGA+ 15.1 inch
- Pointing: Integrated
- Keyboard: Integrated
- DVD/CD-RW: 24x or greater
- Floppy: Not required (1.44MB/3.5")
- Sound: Integrated
- Case: Nylon
- HW Support: Dell Gold Status, Onsite next business day
- Target Price: ~ \$1800 for hardware (HW plus SW target price ~\$1900)

Within the Technology Assessment Report, 73 workstation PCs were identified as in continual daily use by an employee and/or provided by the Town as a Public Access PC. With the cost of a standard business PC around \$1000 per unit, the Town should again consider adopting a 3 year technology refresh policy to proactively manage the installed base of PCs. Keeping the PCs within a 3 year technology window will dramatically reduce support costs, increase end-user productivity, and permit the Town to take advantage of cost effective technology.

An annual 1/3rd replacement schedule should be implemented that spaces out purchases over a 3 year period based on department groupings. For example, the 73 PCs could be broken down into the following groupings. In Year 1, 22 workstation PCs would be replaced in the municipal building. In

Year 2, the 28 workstations that make up the MB Police Station and Fire Station could be replaced. In Year 3, the Library, Sr. Center and Transfer Station would be replaced. By the completion of Year 3, all Town owned PC workstations would be replaced, and the cycle would start again in Year 4.

Year	Total Number of PCs	Departments Refreshed
Year1 (2008)	22	MB Town Hall (22)
Year 2 (2009)	28	MB Police Station (24) & Fire Station (4)
Year 3 (2010)	23	MB Library (18), Sr. Center (3), Transfer Station (1) & Highway (1)
	Total: 73 PCs	

PC Software

Requirement: To provide a minimum standard software suite that facilitates interoperability of files sharing. Minimum software must include an Operating System with MS Active Directory server based authentication and virus protection. Maintaining consistent versions on all PCs facilitates file exchange amongst employees, state agencies, and residents.

Current Configuration: All Town owned systems are currently running MS XP SP2, Office and Norton Antivirus.

Proposed Configuration: To establish a minimum set of software that will be provided to all employees. This minimum set of software should include a standard OS, Office Automation software, Virus protection and a standardized email client.

It should be noted that all systems are currently standardized. Any future purchases would implement these new standards, and not intended for upgrading older systems. The first replacement PC's are planned for purchase in 2008.

Since the adoption of a PC software standard, the Town has been able to:

- Introduce an OS based authentication mechanism
- Enable employees to exchange email, attachments, schedule meetings and resources
- Enable employees to create the Adobe PDF versions of published documents
- Ensure adequate virus protection is in place for all Town owned PCs
- Provide department heads with guidelines on what to expect for a standard software load

Minimum software standards Town employee PC:

- Operating System: MS WinXP SP2 or MS Vista (to be released in 2007)
- Office: MS Office or MS Office Professional where required
- Web Browser: MS Internet Explorer (free)
- Email: MS Outlook (full client)
- Virus Protection: Norton AntiVirus (part of Corporate Edition)

-
- PDF Create/Write: Adobe Acrobat
 - PDF Reader: Adobe Acrobat Reader (free)

Minimum software standards Public Access:

- Operating System: MS WinXP SP2 or MS Vista (to be released in 2007)
- Web Browser: MS Internet Explorer (free)
- Virus Protection: Norton AntiVirus (part of Corporate Edition)
- PDF Reader: Adobe Acrobat Reader (free)

With consideration that this plan will be implemented in the months to come, a strong recommendation is made to continue to utilize Microsoft products as the base platform with the foundation Windows XP or Vista Operating System. The intent of this recommendation is not for old system upgrades, but for all new system purchases. Given time and a predetermined schedule to replace PC systems, it is reasonable to expect a consistent platform within 3 years or less if a more aggressive replacement schedule is adopted.

Published Documentation – PDF Format

Requirement: To adopt a single file format for official Town published documentation.

Current Configuration: The Town currently owns Adobe Acrobat to generate PDF files.

Adoption of this document standard, the Town has been able to:

- Publish all publicly released documents in one defined format
- Ensure all residents, state agencies and other organization can read released documents
- Work towards creating a searchable PDF library of released documents
- Minimize file storage size
- Ensure long term readability of file formats

Email

Requirement: To facilitate communications and file sharing between Town employees, state agencies, and residents. Email is currently the most often used method of file sharing and electronic document distribution. Email is considered the heaviest used application by employees.

Secondary email application requirements include:

- A group calendaring function to efficiently schedule people and conference rooms
- Centralized email distribution list management
- Secure web access to an individuals mailbox
- Standardized departmental aliases

Current Configuration: MS Exchange was implemented in the Municipal Building in 2006. This new system provides centralized and secure email for employees at the Municipal Building, Library, Sr. Center, Highway, Transfer and elected officials when requested.

Since implementing the MS Exchange solution, the Town has been able to:

-
- Extend email capabilities to employees, elected officials, boards, etc. using a consistent email address scheme
 - Eliminate the dependency on the internet to communicate amongst employees
 - Introduce calendaring features to coordinate meetings, conference rooms, and resources
 - Increase productivity as a result of standardization on an email package
 - Introduce Town wide management of inbound/outbound email and content
 - Leverage application integration with MS Word, Excel, and other MS products
 - Introduce feature rich web based email access
 - Create Town Department based email address boxes with a forwarding capability

MS Exchange is feature rich, cost effective and a tightly integrated application in use by most businesses. The exchange server is accessed through MS Outlook or through a web browser.

The Police Department currently uses a POP3 based email system. The intent is to migrate the Police Department users to their own MS Exchange server. Separation from the MB shared system is required by State guidelines.

The Fire Department currently uses a privately operated POP3 based email system. We anticipate merging the Fire Department onto the MB shared Exchange server in late 2006 or early 2007.

Proposed Configuration: The Fire Department plans to merge onto the existing MS Exchange server in 2007.

The Police are required to maintain a physically isolated network. To this extent, we plan to implement a dedicated exchange server in the Police Department in 2007.

Virus Protection

Requirement: To protect the Town from the adverse effect of being infected with a PC computer virus. The OS and Virus protection software drive minimum hardware requirements for CPU and RAM.

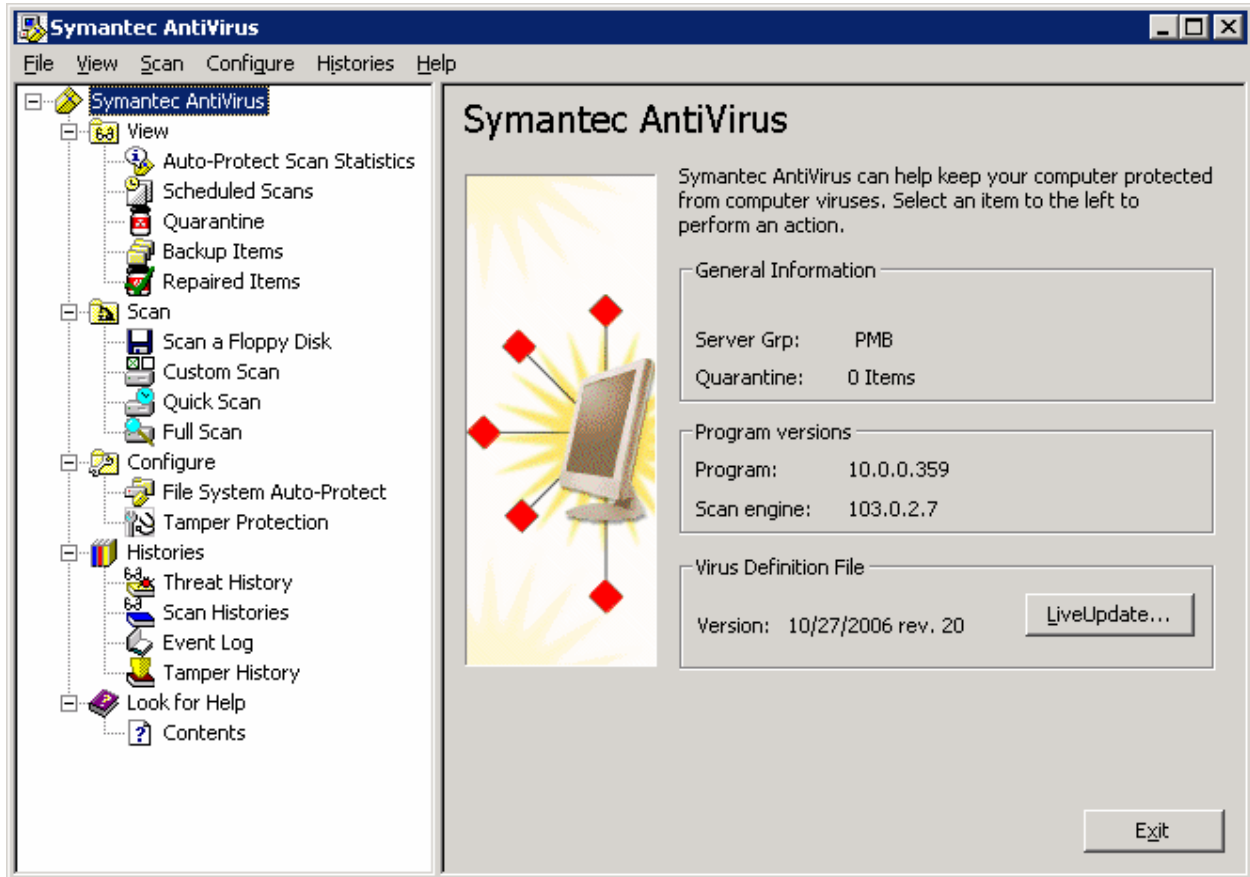
Current Configuration: Norton AntiVirus Corporate Edition is loaded and proactively maintained on the server with automatic updates to each desktop.

Since the implementation of Norton AntiVirus Corporate Edition, the Town has been able to:

- Centrally manage virus definitions on all PCs
- Be immediately notified when any Town owned PC becomes infected
- Push new virus definitions to all PCs within minutes of release
- Centrally quarantine virus's to a server and remove them from an infected PC
- Centrally manage a virus scanning policy with the ability to lock it down
- Intercept virus infected email before infecting end-users
- Track virus infection history

For stand alone PC's not connected to the MB network, a freeware virus software package has been installed. These systems include: Highway, Transfer and Sr. Center.

Proposed Configuration: No changes planned.



Printers

Requirement: To provide professional high quality documentation for work groups, and quality documentation for employees requiring a dedicated local printer.

Current Configuration: All printers are now connected to the network and all printers are accessible to employees. This includes at least 1 black and white and 1 color laser printer. The preferred standard is entry level network connect printers from HP.

Proposed Configuration: Continued standardization on HP business printers.

Internet Access, DNS & SSL Certificates

Requirement:

Internet Access: To facilitate communications via email and web based services. The Town is highly dependant on an operational internet connection for email and web access as part of its daily operational usage.

Domain Name System (DNS): New in 2006, we transferred Pelhamweb.com from a private registration to the Town of Pelham as a business account. PelhamPolice.com and PelhamFire.com will be transferred from private registrations to the Town of Pelham.

Secure Socket Layer (SSL) Certificates: New in 2006, when we implemented the SSLVPN system and MS Outlook Web Access (OWA) for web based email, we were required to register 2 SSL certificates to ensure encryption and provide verification of the websites. The SSL certificates can be viewed when accessing <https://mail.pelhamweb.com> and <https://sslvpn.pelhamweb.com>.

Current Configuration: The Town currently connects through Comcast/Adelphia's extreme broadband service. This provides a max download speed 16 mpbs and 3 mbps upload. There are 5 static IP addresses currently in use that provide services to Town employees and residents.

Static IP addresses in use:

- 24.75.245.10 mb10.pelhamweb.com (municipal building firewall)
- 24.75.245.11 athena.pelhamweb.com
- 24.75.245.12 sslvpn.pelhamweb.com
- 24.75.245.13 mail.pelhamweb.com
- 24.75.245.14 www.pelhamweb.com

While our current franchise agreement with Comcast/Adelphia provides free cable TV access to all Town buildings, it does not provide free broadband nor static IP addresses. Instead, the Town must pay for these services.

Internet Points of Presence:

- Connection 1: Municipal Building, Police, Fire, Library
- Connection 2: Sr. Center
- Connection 3: Highway
- Connection 4: Transfer Station

Both DNS and the SSL certificates are registered with Network Solutions in the name of the Town of Pelham NH. Annual costs for the DNS registration and SSL certificates is about \$129 per service item.

Proposed Configuration: There are no plans to change the internet service provider at this time, but we will be keeping an eye on alternative services. Many companies are now offering a "triple play" package of voice, video and data for incentive pricing. Another alternative is curbside fiber. If either of these two alternatives to Comcast/Adelphia present themselves, we will review them for applicability.

PVMP is in need of a broadband connection for the summer camp and DVR security. We are exploring alternatives now on how to provide connectivity at the lowest cost possible.

DNS Changes: Transfer PelhamPolice.com and PelhamFire.com to the Town of Pelham business account.

SSL Certificates: Register Pelhamweb.com with an SSL certificate to enable encryption and other online services.

SSLVPN Access

Requirement: To provide secure connectivity between remote locations and systems located on the municipal network. Remote access may include employees accessing resources while on travel or from home, wireless devices, or VPN tunnels between the Town and suppliers.

Current Configuration: An SSLVPN solution was implemented in 2006. This system provides secure remote access to selective services on the Town's network. Users of this system include the BOS, BUDCOM and other elected or appointed officials when requested.

Proposed Configuration: The current SSLVPN can handle about 50 concurrent users and has sufficient capacity to add more users without the need for upgrading. We hope that this valuable resource is leveraged by more departments to improve communications and distribute information when secure communications is required.

Firewalls

Requirement: To protect the Town from unauthorized access, control and manage inbound/outbound traffic and to provide a variety of security functions including:

- Detailed security policy enforcement (who can do what when)
- Advanced logging of all activities
- Authentication of users as they connect to devices
- Facilitate network separation between departments and the internet and Town resources

Current Configuration: Multiple firewalls that provide granular to/from permit/deny control with verbose logging. Specific models, configurations, capabilities, techniques, methods and rules have been intentionally omitted from this plan. Please see the Town Administrator if you should require further information as it is considered 'sensitive.'

Proposed Configuration: No changes planned.

Support Considerations

The Town will continue to utilize our current PC Technology support contract to provide onsite troubleshooting capabilities. No additional support resources are anticipated as a result of the adoption of this technology plan. As a result of standardization of PC workstations and software, the overall TCO and ROI has been reduced through lower touch labor efforts, more current technology, improved virus protection, and remote system management.

Since we embarked on the 2003 Technology Refresh Plan, we have been able to maintain a 1 day per week support schedule with Rockport Technologies. While many functions can be done remotely, many still need onsite 'touch' labor such as fixing printers, hardware diagnostics and placing warranty calls, changing backup tapes, etc. When such a request is made by an employee, they are required to create a service request in the Ticket System. A complete report of *all* the activities can be provided upon request from the Ticket System

The SSLVPN system has been instrumental in allowing remote support of the network. Many preventative and break/fix issue can now be resolved remotely, 7 x 24 x 365 days out of the year from any internet connection. This one piece of technology has had the greatest impact on lowering support costs.

In 2007, we hope to implement What's Up Professional. This is a tool that will allow us to better manage, monitor and diagnose problems via the web and SSLVPN system.

Beyond hardware support, typical technology supplies such as printer paper, toner, ribbons, and general supplies would continue to be required, but as a result of the standardization of printers is adopted, fewer printer unique supplies have been required onsite.

Appendix A – Typical Server Config, Pricing and Quote

[Public Sector home](#) > [Servers](#) > [CONFIGURABLE - HP ProLiant Smart Buys](#) > [-Configurable- HP ProLiant DL385 - Smart Buys](#) > [-Configurable-HP ProLiant DL385 Server - Smart Buy](#)



Servers

-Configurable-HP ProLiant DL385 Server - Smart Buy



System price: \$5,310.01

Add To Cart >>

From: \$1,780.00

» [Business lease cost /month \\$171.99](#)

» [Shipping and tax details](#)

» [Product overview](#)

Current selection: STATE AND LOCAL PRICELIST

Change selection: [Select a contract and click the button to the right](#)

Customize your configuration:

Product

HP ProLiant DL385 Server

Processor

AMD® 265 Opteron™ 1.8GHz, Dual Core Processor [393829-L21]

2nd processor

No Item Selected

Memory

4GB REG PC3200 2x2GB Memory [379300-B21]

Microsoft Windows Operating Systems

No Item Selected

Novell Operating Systems (SuSE Linux)

No Item Selected

RedHat Linux Operating Systems

No Item Selected

VMware Operating Systems

No Item Selected

Storage controller

Integrated Smart Array 6i controller

RAID setting

RAID 5 drive set with online spare (requires matching 4 hard drives) [339780-B21]

Backplane conversion

DL380 G4 SCSI configuration kit - duplex mode [364471-B21]

1st hard drive

HP 72.8GB Pluggable Ultra320 SCSI 15,000 rpm (1") Universal Hard Drive [286778-B22]

2nd hard drive

HP 72.8GB Pluggable Ultra320 SCSI 15,000 rpm (1") Universal Hard Drive [286778-B22]

3rd hard drive

HP 72.8GB Pluggable Ultra320 SCSI 15,000 rpm (1") Universal Hard Drive [286778-B22]

4th hard drive

HP 72.8GB Pluggable Ultra320 SCSI 15,000 rpm (1") Universal Hard Drive [286778-B22]

5th hard drive

HP 72.8GB Pluggable Ultra320 SCSI 15,000 rpm (1") Universal Hard Drive [286778-B22]

6th hard drive

HP 72.8GB Pluggable Ultra320 SCSI 15,000 rpm (1") Universal Hard Drive [286778-B22]

Additional controllers & adapters No Item Selected**Storage controller upgrade** No Item Selected**Fibre channel host bus adapters** No Item Selected**Redundant power supply** Hot Plug Redundant Power Supply Module (NEMA) [355892-001]**Redundant fan options** No Item Selected**HP StorageWorks hot plug tape drive options** No Item Selected**Network card**

Embedded NC7782 dual-port gigabit

Additional network card No Item Selected**Floppy drive** No Item Selected**CD-ROM/DVD** Slim Line CD-RW/DVD-ROM 24X Combo Drive Option Kit [331903-B21]**Server management** No Item Selected**Additional server management** No Item Selected**Warranty**3 years parts, labor and onsite service (3/3/3) standard warranty.
Certain restrictions and exclusions apply.**Recommended supplies and accessories***Any hardware options below will not be factory installed***Service, support and upgrades** No Item Selected**Installation service** No Item Selected**Software services** No Item Selected**Security assessment services** No Item Selected**HP StorageWorks external tape backup options** No Item Selected**HP StorageWorks tape media option** No Item Selected**ProLiant Essentials software** HP iLO Advanced Pack 1-Server License [263825-B21]
[Add \$278.00] HP Rapid Deployment Pack 1-Server License [267196-B21]
[Add \$112.00] HP Workload Management Pack 1 Server License
[303284-B21] [Add \$469.00] HP Server Migration Pack 1-Migration License [375345-B21]
[Add \$93.00]

HP Intelligent Networking Pack Windows 1-Server License
[372906-B21] [Add \$140.00]

HP Intelligent Networking Pack Linux 1-Server License
[397004-B21] [Add \$74.00]

HP Vulnerability and Patch Management Pack 1-Server License
[371645-B21] [Add \$112.00]

HP Virtual Machine Management Pack 1-Server License
[372214-B21] [Add \$469.00]

Additional Microsoft Client Access Licenses-5 CAL Pack

No Item Selected

Clustering software

No Item Selected

Monitors

No Item Selected

System price: \$5,310.01

Add To Cart >>



From: \$1,780.00

- » Business lease cost /month\$171.99
- » Shipping and tax details

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Appendix B – Typical PC Config, Pricing and Quote



Print this page Close

Dell recommends Windows® XP Professional

Print Summary



OptiPlex GX520

From ~~\$1,027~~

Now from

\$977

Lease for as low as **\$26/mo.** (48 pmts)¹



Afford the latest technology: [Estimate My Payments](#) | [Apply now!](#)

[Discount Details](#)

[Preliminary Ship Date: 11/6/2006](#)²

FREE Flat Panel Upgrade

With purchase of select desktops and workstations. Expires 11/01/06 11 pm CST.

[More Details](#)

FREE 3-5 Day Shipping & Handling

With select systems. Limited time offer.

[More Details](#)

Save 10% on Select Essential Products for Your PC

Includes networking, memory, all power and other accessories. Offer expires 11/01/06.

[More Details](#)

[My Selections](#) [All Options](#)

- **OptiPlex GX520**

Date	10/29/2006 10:38:01 AM Central Standard Time		
Catalog Number	4 Retail 04		
Catalog Number / Description	Product Code	SKU	Id
OptiPlex GX520 SFF with Int Broadcom® GbNIC: Intel® Pentium® D Processor 820 (2.80GHz, DC, 2X1M, 800MHz FSB)	528SD	[222-1952]	1
Operating System(s): Genuine Windows® XP Professional, SP2, with Media	XPP2EP	[464-2319]	11
Memory: 1.0GB DDR2 Non-ECC SDRAM,533MHz, (2DIMM)	1G2N52	[311-5021]	3
Boot Hard Drives: 80GB SATA 3.0Gb/s and 8MB DataBurst Cache™	80S2	[341-2247]	8
Removable Media Storage Devices: 8X DVD+/-RW, with with Roxio Creator Dell Edition	DRM8S	[313-3328]	16
Monitors: No Monitor	NMON	[320-3704]	5
File System: NTFS File System for all Operating Systems	NTFS	[420-3699]	2
Miscellaneous: Thank you for choosing Dell	01P520S	[464-5085]	82
Floppy: No Floppy Drive	NFD	[341-2290]	10

Speakers: No Speaker Option	NSPK	[313-1416]	18
Keyboards: Dell USB Keyboard, No Hot Keys, English, Black	EUSBK	[310-8010]	4
Mouse: Dell USB 2-Button Entry Mouse with Scroll, Black	USBEK	[310-8008]	12
Energy Star Setting: Energy Star Enable	ES	[310-4721]	25
Resource CD: No Resource CD	NORCD	[313-3673]	21
SERVICES & SUPPORT PLANS: 3 Year On-site Business Standard Plan	OBS3YTK	[461-3749][960-0412] [960-2692][960-4980] [982-5709][983-2207] [983-2217]	29
On-Site System Setup: No Onsite System Setup	NOINSTL	[900-9987]	32
Purchase Intent: Purchase is not intended for resale.	NOT4SEL	[462-4506]	138
Lead Free Motherboard: RoHS Compliant Lead Free Chassis and Motherboard	ROHS	[341-2663]	15
Audio Solutions: Integrated AC97 Audio	INTSND	[313-8170]	17
Mail- In Rebate: None	NONE	[464-5006]	81


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¹ Monthly payment based on 48-month Fair Market Value ("FMV") QuickLease and does not include taxes, fees, shipping and handling charges. Your monthly payment may vary, depending on your creditworthiness. QuickLease arranged by Dell Financial Services L.P. ("DFS"), an independent entity, to qualified Small Business customers. Minimum transaction size of \$500 required. At the end of the FMV QuickLease, you can: purchase the equipment for the then FMV, renew the lease or return the equipment to DFS. Please contact your DFS representative for further details. All terms subject to credit approval and availability, and are subject to change without notice.

² The Preliminary Ship Date represents the estimated time it takes to process your order and custom build your computer based on approved credit card purchase. The Preliminary Ship Date is not intended to provide you with an actual estimated ship date. Your estimated ship date may vary based upon the payment method you choose and other factors. You will receive your Estimated Ship Date in your e-mail confirmation. Customers using E-Check as their method of payment should add 3 days to their Preliminary Ship Date.

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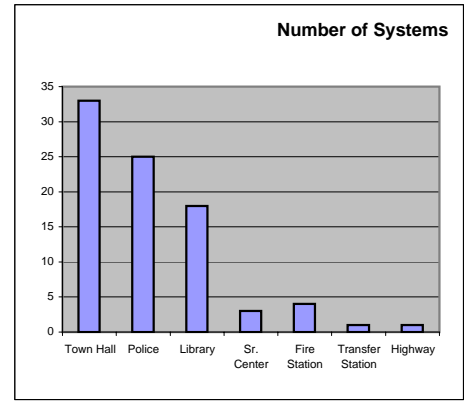
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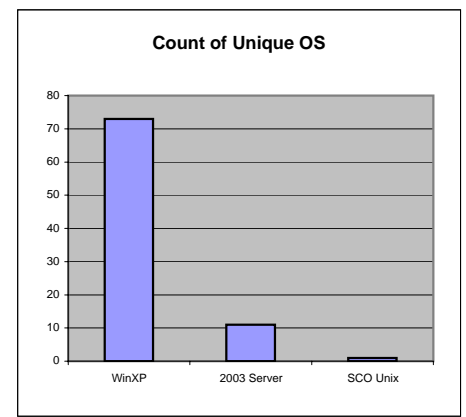
Appendix C – 2006 Inventory

#	Location	What	Department	Who	Manufacturer	OS	CPU	RAM	Where	Count
1	Town Hall	Server - PMB_PDC	All	All	Compaq	2003	P4	1Gb	Town Hall	33
2	Town Hall	Server - PMB_BDC	All	All	Compaq	2003	P4	1Gb	Police	25
3	Town Hall	Server - FS1 - Library	Library	Library	HP DL 320	2003	P4	1Gb	Library	18
4	Town Hall	Server - FS2 - Library web	Library	Library	Clone	2003	P4	256Mb	Sr. Center	3
5	Town Hall	Server - FS3 - Muni Smart	All	All	HP DL 380	2003	P4	1Gb	Fire Station	4
6	Town Hall	Server - FS4 - Vision	Tax	Tax	HP DL 380	2003	P4	2Gb	Transfer Station	1
7	Town Hall	Server - FS5 - Exchange	All	MB/Lib/Fire/Sr/Xfer/HW	HP DL 380	2003	P4	4Gb	Highway	1
8	Town Hall	Server - FS6 - Pelhamweb	Public	Public	Clone	2003	P4	1Gb		
9	Town Hall	Server - BACKUP	All	All	HP DL 320	2003	P4	2Gb		
10	Town Hall	Server - PFD - Fire	Fire Department	Fire	HP DL 320	2003	P4	1Gb		
11	Town Hall	Server - PPD - Police	Police Department	Police	HP DL 380	2003	P4	1Gb		
12	Police Station	Unix Server	Police Department	Runs Old Records DB	Clone	SCO Unix	486-100	256Mb		
13	Town Hall	PC Anywhere	All	Remote Support	Dell	XP SP2	P4	256Mb		
14	Town Hall	Laptop	Town Administrator	Tom	Dell	XP SP2	P4	256Mb		
15	Town Hall	Laptop	Town Admin Admin	Janet	Dell	XP SP2	P4	256Mb		
16	Town Hall	Workstation	Town Admin Sec	Marie	Dell	XP SP2	P4	256Mb		
17	Town Hall	Workstation	Treasurer	Charlene	Dell	XP SP2	P4	256Mb		
18	Town Hall	Workstation	Bookkeeper	Richard	Dell	XP SP2	P4	256Mb		
19	Town Hall	Workstation	Parks and Rec	Kathy	Dell	XP SP2	P4	256Mb		
20	Town Hall	Laptop	Parks and Rec	Darren	Dell	XP SP2	P4	256Mb		
21	Town Hall	Workstation	Town Clerk	Town Clerk #1	Dell	XP SP2	P4	256Mb		
22	Town Hall	Workstation	Town Clerk	Town Clerk #2	Dell	XP SP2	P4	256Mb		
23	Town Hall	Workstation	Town Clerk	Town Clerk #3	Dell	XP SP2	P4	256Mb		
24	Town Hall	Workstation	Town Clerk	Town Clerk #4	Dell	XP SP2	P4	256Mb		
25	Town Hall	Workstation	Town Clerk	Town Clerk #5 - Counter	Dell	XP SP2	P4	256Mb		
26	Town Hall	Workstation	Town Clerk	Town Clerk #6 - Counter	Dell	XP SP2	P4	256Mb		
27	Town Hall	Laptop	Planning	Jeff	Dell	XP SP2	P4	256Mb		
28	Town Hall	Workstation	Planning	Jen	Dell	XP SP2	P4	256Mb		
29	Town Hall	Workstation	Planning	Sandi	Dell	XP SP2	P4	256Mb		
30	Town Hall	Workstation	Planning	Counter	Dell	XP SP3	P4	256Mb		
31	Town Hall	Workstation	Planning	Code Enforcement	Dell	XP SP4	P4	256Mb		
32	Town Hall	Workstation	Planning	Inspectors	Dell	XP SP5	P4	256Mb		
33	Town Hall	Workstation	Assessor	Susan	Dell	XP SP2	P4	1Gb		
34	Town Hall	Workstation	Accessor - Public	Public #1	Dell	XP SP2	P4	256Mb		
35	Library	Workstation	Library	Director	Dell	XP SP2	P4	256Mb		
36	Library	Workstation	Library	Circulation #1	Dell	XP SP2	P4	256Mb		
37	Library	Workstation	Library	Circulation #2	Dell	XP SP2	P4	256Mb		
38	Library	Workstation	Library	Circulation #3	Dell	XP SP2	P4	256Mb		
39	Library	Workstation	Library	Technical Services #1	Dell	XP SP2	P4	256Mb		
40	Library	Workstation	Library	Technical Services #2	Dell	XP SP2	P4	256Mb		
41	Library	Workstation	Library	Childrens Circulation	Dell	XP SP2	P4	256Mb		
42	Library	Workstation	Library	Adult Public #1	Dell	XP SP2	P4	512Mb		
43	Library	Workstation	Library	Adult Public #2	Dell	XP SP2	P4	256Mb		
44	Library	Workstation	Library	Adult Public #3	Dell	XP SP2	P4	256Mb		
45	Library	Workstation	Library	Adult Public #4	Dell	XP SP2	P4	256Mb		
46	Library	Workstation	Library	Young Adult #1	Dell	XP SP2	P4	256Mb		
47	Library	Workstation	Library	Young Adult #2	Dell	XP SP2	P4	256Mb		
48	Library	Workstation	Library	Young Adult #3	Dell	XP SP2	P4	512Mb		
49	Library	Workstation	Library	Young Adult #4	Dell	XP SP2	P4	512Mb		
50	Library	Workstation	Library	Childrens Public #1	Dell	XP SP2	P4	512Mb		
51	Library	Workstation	Library	Childrens Public #2	Dell	XP SP2	P4	512Mb		
52	Library	Workstation	Library	Childrens Public #3	Dell	XP SP2	P4	512Mb		
53	Fire Station	Workstation	Fire Department	Chief	Dell	XP SP2	P4	256Mb		
54	Fire Station	Workstation	Fire Department	Secretary (Maureen)	Dell	XP SP2	P4	256Mb		
55	Fire Station	Workstation	Fire Department	Inspector	Dell	XP SP2	P4	256Mb		
56	Fire Station	Workstation	Fire Department	Staff	Dell	XP SP2	P4	256Mb		
57	Senior Center	Workstation	Senior Center	Sue	Dell	XP SP2	P4	512Mb		
58	Senior Center	Workstation	Senior Center	Public Use #1	Dell	XP SP2	P4	256Mb		
59	Senior Center	Workstation	Senior Center	Public Use #2	Dell	XP SP2	P4	256Mb		
60	Transfer Station	Workstation	Transfer Station	Bruce	Dell	XP SP2	P4	512Mb		

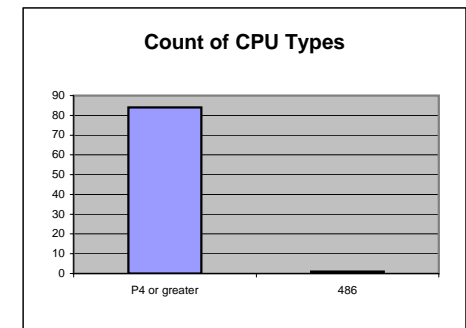
Total PC	85
-----------------	-----------



OS Type	Count
WinXP	73
2003 Server	11
SCO Unix	1
Total PC	85

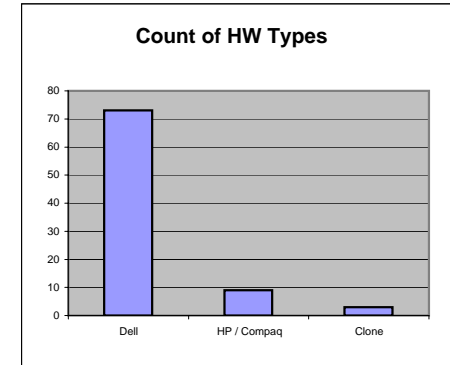


CPU Type	Count
P4 or greater	84
486	1
Total PC	85



61	Police Station	Workstation	Police Department	Evan	Dell	XP SP2	P4	256Mb
62	Police Station	Workstation	Police Department	Joe	Dell	XP SP2	P4	256Mb
63	Police Station	Workstation	Police Department	Gary	Dell	XP SP2	P4	256Mb
64	Police Station	Workstation	Police Department	Laurence	Dell	XP SP2	P4	256Mb
65	Police Station	Workstation	Police Department	Dispatch #1	Dell	XP SP2	P4	256Mb
66	Police Station	Workstation	Police Department	Dispatch #2	Dell	XP SP2	P3	256Mb
67	Police Station	Workstation	Police Department	Dispatch #3 - pager	Clone	XP SP2	P4	256Mb
68	Police Station	Workstation	Police Department	Records #1	Dell	XP SP2	P4	256Mb
69	Police Station	Workstation	Police Department	Records #2	Dell	XP SP2	P4	256Mb
70	Police Station	Workstation	Police Department	Detectives #1	Dell	XP SP2	P4	256Mb
71	Police Station	Workstation	Police Department	Detectives #2	Dell	XP SP2	P4	256Mb
72	Police Station	Workstation	Police Department	Detectives #3	Dell	XP SP2	P4	256Mb
73	Police Station	Workstation	Police Department	Sargenents #1	Dell	XP SP2	P4	256Mb
74	Police Station	Workstation	Police Department	Sargenents #2	Dell	XP SP2	P4	256Mb
75	Police Station	Workstation	Police Department	Sargenents #3	Dell	XP SP2	P4	256Mb
76	Police Station	Workstation	Police Department	Sargenents #4	Dell	XP SP2	P4	256Mb
77	Police Station	Workstation	Police Department	Patrol #1	Dell	XP SP2	P4	256Mb
78	Police Station	Workstation	Police Department	Patrol #2	Dell	XP SP2	P4	256Mb
79	Police Station	Workstation	Police Department	Patrol #3	Dell	XP SP2	P4	256Mb
80	Police Station	Workstation	Police Department	Patrol #4	Dell	XP SP2	P4	256Mb
81	Police Station	Workstation	Police Department	Booking	Dell	XP SP2	P4	256Mb
82	Police Station	Workstation	Police Department	Armory	Dell	XP SP2	P4	256Mb
83	Police Station	Workstation	Police Department	Evidence	Dell	XP SP2	P4	256Mb
84	Police Station	Workstation	Police Department	Community Service #1	Dell	XP SP2	P4	256Mb
85	Transfer Station	Workstation	Transfer Station	Don Foss	Dell	XP SP2	P4	512Mb

HW Type	Count
Dell	73
HP / Compaq	9
Clone	3
Total PC	85



Appendix D – 2007 and Beyond

If given the chance to think about what we may do in the future with respect to technology, the following items are things we are thinking about. Please keep in mind that none of these projects have funding, none are committed to, nor had any level of research or justification done to warrant an expenditure or effort. These are just ideas at this point in time.

Long Term Outlook

- Implement Microsoft Vista on all desktops; this is the next generation operating system replacing Windows XP
- Implement MS Office 2007 Professional
- Implement MS SharePoint for an all inclusive electronic document repository for Town documents
- Implement a Business Continuity Plan (Disaster Recovery) that would provide real-time offsite backups of critical systems leveraging existing network
- Implement network connectivity with the School System, Business Office, School Library and PTV access
- Continue to monitor technology developments with wireless broadband; there is a pressing need for remote location Digital Video Recording (DVR) capabilities to monitor remote locations via steaming video. Verizon is now offering cost effective digital wireless broadband services that will permit battery operated cameras with wireless transmission of video that can be tied in with Police Dispatch. Target areas -> Raymond Park, Muldoon Park and PVM to protect town assets from costly vandalism.
- Fire Department technology implementation for first responders pertinent to IT related technologies (exclusive of E911, tactical, or other emergency response systems); focus areas on further integration with IMC, in-truck broadband wireless with GPS capabilities
- Highway Department technology with respect to GIS asset mapping via the Planning Department and Nashua Regional Planning; focus areas on accurate road system mapping and monitoring
- PTV Department technology; focusing on digital media integration with steaming video, public service announcements and long term video archiving for historical record keeping
- Town Clerk Department; focus area on working with the State to provide residents with online systems for car registrations and other services provided
- Facility Integration; focus on better online integration with HVAC, security, and building controls that would enable cost efficient monitoring and management of all facilities
- Senior Center connectivity; focus on fiber connection from Sr. Center to MB via underground cable for voice, data and future DVR security system.
- Upgrading current 10/100 Cisco Catalyst 5000 ethernet switches to 10/100/1000 (giga bit capable) with Quality of Service (QoS) management capabilities
- Upgrading current phone system to Voice Over IP (VoIP). This is a longer term goal that would only be done if/when the ROI out ways the current systems cost. The key industry technology items to watch to when we should revisit this include ISP triple play service offerings of Voice/Video/Data and/or wider spread adoption of the technology that would reduce phone usage costs.

Appendix E – 2007 Plan

2007 Plan

- Implement Park and Recreation RecTrac software for managing registrations, reporting and scheduling
- Implement MS Exchange for Police (must be separate installation as required by State IT guidelines)
- Implement an email SPAM solution to reduce the amount of incoming SPAM email
- Replace/upgrade Fire Dept very low end fire server with a standard RAID 5 capable server to support IMC installation; we currently do not meet minimum requirements for IMC; server will be redeployed to host www.pelhamweb.com; current system was purchased 4 years ago with very minimum components to keep cost as low as possible; risk is database corruption without RAID 5
- Replace/upgrade Library very low end file server with a standard RAID 5 capable server to support Athena; Athena manages the Library's book collection. We currently do not meet minimum requirements. Server will be redeployed to athena.pelhamweb.com replacing a pieced together server that facilitates web based online access to Athena for searching the book collection, reserving books and doing online renewals. This system is heavily used by residents. Risk is db corruption with without RAID 5 and Athena web server failing.
- Replace backup tape system; current system is 4 years old, still working but showing signs of end of life (EOL). This system is in operation 365 days a year, 11+ hours per day, backing up approximately 200 Gb of data unattended. In short, the physical internal tape drive is hitting EOL as the tapes are recycled weekly and we are getting more frequent errors.
- Begin PTV integration with Municipal Building for online video streaming of public meetings via web (funding permitting)
- Implement in 2H07 MS Exchange upgrade (upgrade cost included in MS Maintenance)
- Migrate PelhamFire.com and PelhamPolice.com DNS registrations from private registrations to Town of Pelham
- Migrate Fire email system from private system to MB Exchange server
- Extend Municipal Building video camera coverage to critical areas not current under surveillance
- Continue to monitor computer room HVAC AC unit; may need to upgrade to control over heating problem; building steam pipes pass through overhead causing excessive heat; looking at a couple of low cost methods first such as installing simple insulation
- Continue to develop MB intranet with up-to-date IT infrastructure documentation
- Introduce internet broadband capacities at PVMP for remote DVR camera coverage to Police Dispatch
- Introduce public wireless access at Library and Municipal Building for residents
- Implement "What's Up Professional" to aid in remote monitoring and management of all IT systems. Many current management diagnostics can be done remotely via the newly implemented SSLVPN. What's Up Professional aids Rockport, Jim Greenwood and Victor in faster identification and isolation of network and application problems allowing us to resolve problems faster.
- Consolidate 3 separate MS AD forests into 1 to simplify end-user authentication and security.

Appendix F – 2002-2006 Accomplishments

2006 Accomplishments

- Completed 3 year technology refresh plan as approved by BOS, BUDCOM and voters
- Implemented MS Exchange server for email; now serves MB, Fire, Library, Transfer, Highway and Sr. Center
- Implemented Outlook Web Access (OWA) for web based email
- Implemented an SSLVPN for remote network connectivity; now server BOS, BUDCOM and remote employees with access to Munismart reports, Intranet and BOS online reference area
- Implemented Network Time Protocol (NTP) for accurate time synchronization with Police Spectracom NTP server (a stratum 1 official NTP precision server)
- Secured and locked down Library PC's
- Introduced low cost color printers in MB, Fire, and Library
- Implemented scan-to-email document capture features on Planning and Town Clerk copiers (critical function for quickly distributing paper correspondence electronically)
- Refreshed remaining Library PCs
- Refreshed Sr. Center PCs
- Refreshed Fire Station fire fighter PCs – used to do call response reports
- Refreshed Transfer Station PC
- Upgraded Power Distribution Units (PDU) in MB and Police computer rooms
- Replaced 8 year old APC Backup units (batteries won't hold a charge)
- BOS adopted Acceptable Internet Use Policy for all Town employees and those who utilize Town owned IT devices
- Migrated DNS registration for Pelhamweb.com to Town of Pelham from private resident registration
- Obtained and implemented SSL certificate for secure communications for OWA and SSLVPN; 128 bit encryption
- Implemented donated Nortel phone system at Sr. Center
- Implemented an outdoor video camera to monitor Dennis Lyon's Memorial Park; tied into existing Police Digital Video Recording (DVR) system
- Implemented an 8 camera video camera system at the Library to curtail theft and damage to Town buildings
- Police Department Car 54 project (primary funding via an awarded grant); Town pays for on-going broadband wireless data connectivity for up to 5 police cruisers; this enables the front line cruisers with SPOTS access in the car
- Police Department in-car Digital Video Recorder (DVR) system in 2 front line cruisers (primary funding via an awarded grant)
- Integrated with Vision Appraisal Technologies (the company) to provide residents with an online system for property assessments

2005 Accomplishments

- Refreshed Police file server to Microsoft 2003
- Refreshed 17 obsolete Police PC's, replacing Windows 98 systems

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- Refreshed 4 Fire Department PCs (front office) – main purpose for interoperability with Police Dispatch software
 - Work with Library Trustees to continue to extend life of existing systems until 2006
 - Replaced 2 failed printers at Library
 - All file servers are now MS 2003
 - MB, Police, Fire, and most Library systems have been upgraded to Windows XP SP2

2004 Accomplishments

- Refreshed all Municipal Building (MB) PC's to Windows XP and Office 2003
- Redeployed 3 systems to the Sr. Center, replacing Windows 95 systems
- Refreshed 5 systems in the Library, replacing Windows 95 systems
- Implemented CTC fractional T1 for reliable data communications, will be migrating to Adelphia
- Implemented firewalls for network protection
- Implemented multi-mode fiber between MB, Police, Fire and Library
- Implemented Veritas backup server that backs up server reliably
- Implemented HP LaserJet printer for Planning Department
- Replaced HP LaserJet printer for Assessor, old one died
- Established a designated computer room in the Municipal Building
- Established a designated computer room in the Police Station
- Implemented structured wiring within Municipal Building, Police Station and Library
- Implemented 5 Microsoft 2003 servers
 - Primary domain controller in MB
 - File/Print server in MB
 - Dedicated backup server in MB
 - Library server in MB
 - Fire Department server in MB
- Implemented updated PC Anywhere PC for external Vision and BMSI support
- Implemented three Cisco Cat 5000 10/100 switches for high performance networking

2003 Technology Plan

- Completed Town wide technology plan
- Established Technology Advisory Committee
- Established PC standards, RFP bidding process completed, awarded to Dell
- Presented to BUDCOM, agreed to split refresh over 3 year period
- Requested \$35k technology warrant for 2004 ballot

2002 Draft Technology Plan

- Completed town wide inventory
- Completed Town wide data security and technology assessment
- Establish PC standards