

Software Standards

DESKTOP VIRUS PROTECTION

Approved Products:

- Network Associates McAfee Virus Scan

Summary:

All District of Columbia workstations will use McAfee Virus Scan software to protect the District Wide Area Network (DCWAN) from malicious code. New computers should have the Virus Scan software installed and configured prior to being deployed.

Rationale:

Network Associates McAfee Virus Scan was selected for its robust management capabilities when partnered with the McAfee Event Policy Orchestrator; it also has a proven track record within the virus protection arena. OCTO will implement the product in such a manner that new versions and virus signature updates will automatically be deployed to desktop PCs. Further, OCTO will be able to push new virus signatures to the desktop in response to new and highly destructive viruses.

Legacy Products:

All workstations will be upgraded or switched to the most current version of Network Associates McAfee Virus Scan software. OCTO purchased an enterprise license for McAfee that entitles all District agencies to use the product.

Implementation Strategy:

McAfee virus protection software will be rolled out to the District of Columbia in phases to ensure the integrity of all assets and data. If appropriate, OCTO will use the Event Policy Orchestrator application to push the Virus Scan client out to desktop PCs..

Projected Life:

McAfee is expected to be the desktop virus software product of choice for the foreseeable future. As new versions become available, OCTO will review the product and time upgrades accordingly.

OFFICE AUTOMATION

Approved Products:

- Office XP Standard
- Office XP Professional

Summary:

All new purchases will be Office XP Standard. If a user requires Microsoft Access, the agency can purchase Office XP Professional.

This standard applies to office automation only. OCTO has not approved Office as an application development platform. The District supports the use of Excel and Word macros; however, it has not sanctioned complete applications using Access. OCTO is evaluating the best solution for low-end application development. The use of Access as that platform is not recommended until the evaluation has been completed.

Office is not recommended for high-end publishing. Other products offer a more robust environment for the development of such items as professional looking marketing material. These standards are defined elsewhere in the architecture guide.

Rationale:

Microsoft is the major player in office automation products . Office XP Standard provides the basic functionality for office automation users including Excel, Word, PowerPoint, and Outlook. Most users do not require Access, the Microsoft personal database platform. If a user needs Access, OCTO recommends purchasing Office XP Professional. The only difference between Professional and Standard is the inclusion of Access in Professional.

Office XP is the latest version of the office automation product from Microsoft and is preferred over Office 2000. However, there are subtle differences between the two versions and some users may require training. In addition, Office is sometimes a requirement for other applications to function properly. It is the responsibility of the agency to verify Office XP is supported by those applications.

Legacy Products:

All new office automation purchases should be Office XP. However, users should not upgrade from Office 2000 to Office XP. There is not enough difference between the products to warrant full scale upgrades, further, there are no file format differences between Office XP and Office 2000. With the exception of Access, the two products interoperate.

Users of Office 97 should review their requirements before upgrading. Office 97 users may share documents with Office XP or Office 2000 users if the XP or 2000 users save their documents in Office 97 format. However, the process is error prone and may cause problems and prompt calls to support. Users that remain on Office 97 but are connected to the OCTO Exchange email service should upgrade their Outlook 97 client to Outlook 98.

Users of a non-Microsoft office automation product should upgrade immediately to Office XP.

Implementation Strategy:

Office XP will be deployed on all new PCs immediately. Sunsetting of older versions of Office will normally occur as the PC reaches its three -year lifespan and is replaced by a new machine.

Projected Life:

Office is typically on an 18- month lifecycle and therefore Office XP is expected to be the most current version well into 2003. OCTO supports the existing version of Office and one earlier version; therefore Office 2000 and Office XP will be fully supported in 2003. OCTO recommends a six-month delay in the deployment of a new version to allow for the

product to become stable and for third party vendors to certify the product. After that time, OCTO recommends sunsetting older versions, typically through the sunset of the PC itself.

DESKTOP OPERATING SYSTEM (OS)

Approved Products:

- Windows XP Professional
- Windows 2000 Professional

Summary:

Windows XP Professional is the preferred operating system for all new PC purchases. However, there may be situations in which the user's environment will not allow for a migration to Windows XP. If hardware or software issues prevent the installation of Windows XP Professional, users can continue to order Windows 2000.

The District has standardized on Intel based personal computers. Apple computers can only be purchased upon approval by OCTO.

Rationale:

Windows XP Professional is an enterprise level desktop operating system with the manageability, security, and reliability features required by business users. The product is available on the majority of business class PCs, both notebooks and desktops. Further, Windows XP Professional is certified with a large array of hardware and third party software.

Windows XP Professional is the newest desktop operating system available from Microsoft. Vendors are expected to focus all new hardware and software development on Windows XP.

Windows XP provides enhancements over the existing Windows 2000 standard, including:

- Enhanced plug-and-play and Universal Serial Bus (USB) support
- Enhanced reliability with features such as device driver rollback, system restore utility, and the Automated System Recovery utility
- Improved wireless security features including support for 802.1x
- Improved virus security through the implementation of software restriction policies
- "Follow me" functionality through new roving technology, such as Intellimirror
- Easier installation of a new PC through new system utilities, such as the Files and Transfer Settings Wizard

The majority of PC vendors are bundling Windows XP with all new purchases. There is typically no additional cost for Windows XP installation over Windows 2000. Further, vendors will begin to sunset Windows 2000 both from the standpoint of device drivers and support.

Legacy Products:

Existing PCs will be upgraded on a case-by-case basis. Older versions of Windows will sunset when they are replaced. OCTO recommends a three-year lifecycle for desktop and notebook purchases. Any PC within the District that has a consumer version of Windows will be required to upgrade to a suitable business version immediately. Since there are many considerations involved in Windows upgrades, each upgrade must be evaluated individually. The following versions fall under the category of consumer versions:

- Windows ME
- Windows XP Home

Windows 95 PCs have reached the end of their projected life of three years. Agencies should review any PC running Windows 98 and Windows 98 SE and, if they have reached the end of their lifecycle, replace them.

Implementation Strategy:

Only new PCs will be required to order Windows XP Professional. Upgrades are not required and in fact are discouraged.

Projected Life:

The strategy established for desktop operating systems takes into account the following considerations:

- Desktop operating system upgrades are not recommended and will only be done on a case-by case basis. Agencies should assume an operating system will have a longevity of three years—OCTO's recommended sunset for the PC hardware.
- OCTO favors supporting only the most current and one older version of the approved operating system. To support more versions than this will increase support costs and the complexity of the District's environment. All new purchases should be of the most current operating system. OCTO's strategy is to fully support the current version and the previous version, and sunset older versions through new PC purchases.
- Every attempt will be made to have only operating systems that are supported by Microsoft. Users should plan to sunset PCs around the cancellation of support agreements with Microsoft.

The following is the status of the various operating systems:

Windows 95: Windows 95 should be quickly sunset. Besides being more than two generations old, Microsoft will cease support for the product in November 2002.

Windows 98/Windows 98 SE: Windows 98 should be in the early sunset phase, with complete sunset occurring in the next 12 months. No new purchases of Windows 98 PCs should be made.

Windows NT 3.x: Windows NT 3.x should be quickly sunset. Microsoft support for this product has already been dropped.

Windows NT 4.x: Windows NT 4.x should be in early sunset phase with complete sunset occurring in the next 12 months. No new purchases of Windows NT 4.x PCs should be made.

Windows 2000 Professional: Windows 2000 Professional is the existing standard and is expected to be supported by Microsoft until well beyond 2003. New PCs are expected to be available with Windows 2000 Professional at least through March 2003.

Please note that when a new PC is ordered with one of these operating systems, legacy hardware and applications may not work on the new system. The hardware, software, and networking environments of a PC must be tested and integrated to work with a new operating system. Windows XP Professional has been shown to be difficult, especially in environments with a broad range of hardware/software and with older technology PCs. It is imperative that agencies certify their IT environment before switching operating systems. The agency should plan for hardware and software upgrades whenever a new operating system is installed.

EMAIL/CALENDAR CLIENT

Approved Products:

- Outlook XP
- Outlook 2000
- Outlook 98
- Outlook Web Access

Summary:

The District supports Outlook XP, Outlook 2000, and Outlook 98 email clients for users of Exchange 5.5 backend services (the current version of Exchange). The District also supports Outlook Web Access with Exchange 5.5 for users that occasionally access email while out of the office.

DC will implement Exchange 2000 in 2003. When Exchange 2000 is deployed the preferred email client will be Outlook Web Access. Outlook XP and Outlook 2000 will be supported for notebook users that must have offline access to email.

Rationale:

The District is moving to a complete Exchange email system. Use of Outlook and Exchange, in tandem takes advantage of their synergies and provides the user with the greatest functionality. Outlook is bundled with Microsoft Office, another District standard, and is therefore available at no extra cost. Outlook integrates with the various Office products and provides a seamless product suite.

Outlook Web Access—a browser-based email client—will become the standard email client when Exchange 2000 is implemented in 2003. A series of third-party software products will make the functionality of Outlook Web Access approach that of the full Outlook client. Most users will not observe any reduction in functionality. The District will support Outlook XP for those few users who require the additional functionality only available in a full client.

The reasons for the future deployment of Outlook Web Access are as follows:

1. It is web-based, so there is no need to visit the desktop to install it. Any user with Internet Explorer V5.0 or higher will receive the full functionality of Outlook Web Access.
2. Outlook Web Access is much more WAN friendly than Outlook and will work well with Exchange 2000. Outlook Web Access provides good performance but doesn't need expensive bandwidth upgrades that would be required with the full Outlook client. The District's current SMDS/frame relay network is unable to support the full Outlook client for all email users. Besides providing enhanced security and a full 24/7 operations staff, the email servers will be engineered for full redundancy. A failure of a server or even an entire data center will not cause an email outage.
3. The switch to Outlook Web Access places us on the front edge of Microsoft's stated direction – a complete browser based email client.
4. By establishing the browser version of Outlook as our standard, OCTO and the agencies will not need to support multiple email clients. Not all users have Microsoft Office or, if they do, many are running older versions of Office and therefore older versions of Outlook.
5. Deployment of the browser email client allows users to access their email anywhere and with full functionality. The browser-based client works as well across the Internet as on the DC-WAN network.

Legacy Products:

Users should continue to use their existing email client until they are converted to Exchange 2000. When converted they will have the option of Outlook Web Access (standard offering) or Outlook XP/2000 (deployed on a case by case basis). Even after users are converted and are using Outlook Web Access they may decide to continue to use the full Outlook client for other reasons. However, few users will find this necessary, because the browser version will support email, calendar, contact management, notes, and tasks.

Implementation Strategy:

The typical user that has been converted to Exchange 2000 can immediately access email through Outlook Web Access. It will be the responsibility of the agency to install Outlook 2000 or Outlook XP for users that require the full Outlook client.

Projected Life:

No future upgrades of the email client are expected once Outlook Web Express has been installed. Users are encouraged to stay current with their version of the browser to maintain the highest level of functionality. OCTO will support Outlook 2000 and Outlook XP until Microsoft releases a new version of Outlook. A new release will probably not be available until 2004, at which time OCTO will review the new product and make recommendations on the deployment.

EMAIL PRIVACY

Approved Products:

- PGP Mail V7

Summary:

Certain users require enhanced security and privacy for their email. The District does not provide encryption as a standard service for email. When email is sent across the Internet, it can be intercepted and read. Further, the "From:" field in an email message is easily manipulated and does not provide a true validation of who sent an email.

PGP Mail is the recommended product for users who require additional email security. The product supports encryption and electronic signatures through the use of private/public key technology.

PGP Mail is not recommended for all users. In addition, at this time OCTO does not provide key storage. Refer to PGP Mail documentation on key management options.

Rationale:

PGP is the market leader in mail encryption. The product has a plug-in for Outlook, the standard email client in use at the District. The product is easy to install and use. It does not demand high-cost key (certificate) management infrastructure, such as PKI.

Legacy Products:

Users of other email privacy software should convert to PGP Mail V7 immediately.

Implementation Strategy:

It is the responsibility of the agency to install PGP Mail.

Projected Life:

PGP Mail is currently considered an interim standard until OCTO has an opportunity to fully evaluate the requirements of District users.

FILE ENCRYPTION

Approved Products:

- PGP V7

Summary:

General file encryption is not sanctioned by OCTO. However, users who have sensitive information on their PCs have the option of purchasing PGP for file encryption. PGP should only be used for individual file encryption.

OCTO does not sanction the encryption of an entire hard drive or partition. Encryption could prevent a PC technician from accessing the hard drive to diagnose a problem. However, encryption is allowed in very rare cases, in particular if very sensitive data is residing on a notebook. For these situations, PGP Disk V7 is the recommended product.

Windows XP allows a user to encrypt files under certain conditions. The feature is fairly lightweight; therefore PGP is recommended.

Rationale:

PGP has been selected as the encryption standard for email, files, and disks. PGP allows the District to have a single vendor for all PC encryption needs.

Legacy Products:

Users need not replace existing encryption products. However, OCTO recommends PGP be installed as PCs are replaced.

Implementation Strategy:

The agency will be responsible for the purchase and implementation of PGP.

Projected Life:

PGP is expected to be the PC encryption standard for the foreseeable future.

PERSONAL FAX

Approved Products:

- WinFax Pro V10.0
- Microsoft Fax

Summary:

Microsoft Fax is integrated with all current Windows operating systems and is recommended for the majority of simple inbound and outbound fax transmissions. For more robust fax requirements, the District recommends WinFax Pro V10.0. WinFax Pro should be purchased for users that require more control over their faxes, including the ability to create a single fax from multiple sources.

Rationale:

Since most District users send and receive faxes only occasionally, Microsoft Fax provides the most cost effective (free of charge) option. WinFax Pro was selected to satisfy more robust requirements because of its features and modest price. Also, Symantec, the maker of WinFax Pro, is a stable and well-known PC software company.

Legacy Products:

Users of other fax software need not replace their products at this time.

Implementation Strategy:

New PC purchases should only use Microsoft Fax or WinFax Pro V10.0.

Projected Life:

The District will support the version of Microsoft Fax that is bundled with the Windows Operating System currently supported by the District. WinFax Pro will continue to be the supported upper tier product for the future. OCTO will probably endorse new versions of the product as they are released.

WEB BROWSER

Approved Products:

- Internet Explorer 6.0 with 128-bit encryption enabled

Summary:

Internet Explorer 6.0 is the browser standard for all new Windows PCs. Note that other devices, such as PDAs, may have embedded browsers. This standard does not address these devices or non-Windows platforms.

Note that other features embedded within Internet Explorer, such as the email client, are not supported. The intent of this recommendation is to establish a standard for web browsing.

Rationale:

Internet Explorer commands the majority (upwards of 95 percent¹) of the browser marketplace. The District is heavily a Microsoft shop, having standardized on Microsoft Exchange, Microsoft Windows 2000, and Microsoft Internet Information Server. By including Internet Explorer in the standards list the District leverages one vendor for all these services with the added advantage of an integrated solution for desktop services.

The supported versions of the web browsers are based upon the need to be *fully* HTML 4.0 compliant and compatible with the District's email direction of using Outlook Web Access. Many of the applications being deployed in the District use features only available in HTML 4.0. Fairly current versions of the browser are required to get the most out of these applications. Internet Explorer V5.0 is needed to fully leverage Outlook Web Access. Since the browser is free-of-charge, the recommendation is for all new machines to have V6.0 installed.

The 128-bit encryption recommendation provides District users with the highest security option.

Legacy Products:

Users of non-Microsoft browsers should immediately upgrade to Internet Explorer. If for whatever reason the user requires a non-Microsoft browser, such as the need to access an application that requires a different browser, the user is encouraged to install Internet Explorer and the non-Microsoft version.

Users of Internet Explorer pre-V5.0 should upgrade immediately. Since there is no cost for Internet Explorer, users can visit the Microsoft web site (<http://www.microsoft.com>) to download the upgrade. It is recommended that the user install the latest version, but users should verify that their PCs have the minimum system requirements before proceeding.

Implementation Strategy:

It is the responsibility of the individual agencies to upgrade their browsers.

Projected Life:

New versions of Internet Explorer are released on a regular basis. Since the product is free-of-charge, users can and should consider staying current. However, OCTO advises that users wait at least three months after a product is released before installing it. This delay will allow sufficient time for the product to be field tested and for any bugs to be addressed.

OCTO will notify the agencies if for any reason it determines that the installation of a new version of the browser is problematic

¹ This statistic includes AOL and assumes that the embedded AOL version is based upon the standard Internet Explorer platform. a product is released before installation. This will allow a sufficient time for the product to be field-tested and any bugs addressed. If for any reason OCTO determines that the installation of a new version of the browser is problematic they will notify the agencies.

MEDIA PLAYER -- DESKTOP

Approved Products:

- ❑ Microsoft Windows Media Player V8

Summary:

Microsoft Windows Media Player is recommended for both video and audio playback.

Rationale:

Microsoft Windows Media Player is a full-function media player that comes bundled with new PC operating systems. The District has standardized on Media Player for its web infrastructure.

Legacy Products:

Users do not have to replace existing versions or other media player products. However, to get the complete functionality users may require upgrade to V8.

Implementation Strategy:

Users will be responsible for installing Microsoft Windows Media Player. The product is free and can be downloaded directly from the Microsoft website.

Projected Life:

Microsoft Windows Media Player is expected to remain the standard for the foreseeable future. New releases are issued approximately every 12 to 18 months. However, users are not encouraged to install upgrades unless they require the functionality of the new version.

PDA (PERSONAL DIGITAL/DATA ASSISTANTS)

Approved Products:

- Palm (to include Handspring and Sony)
- Windows CE (Compaq)
- RIM 950 and 957

Summary:

Personal Digital Assistants provide calendaring, to-do lists, contacts, and other personal management functions in a handheld device. The District has sanctioned both the Palm (from Palm, Handspring and Sony) and Windows CE devices (from Compaq) as standards. HotSync Manager (Palm) and ActiveSync (Windows CE) software are sanctioned to synchronize the devices with a user's PC.

The RIM devices are also supported as both a PDA and a wireless email device.

OCTO has not sanctioned any of these devices for use with wireless applications. Additional research is required before a decision can be made on which device(s) will be accepted.

Not all agencies have approved the purchase of these devices for their employees. However, many users purchase these devices themselves and want to use them at work. These users must adhere to District PDA standards if the device is connected to a District workstation or notebook computer.

Since these are consumer devices and the models change often, OCTO has not standardized on any particular model with the exception of the RIM device.

Rationale:

Palm and Windows CE combined dominate the PDA marketplace. Compaq was chosen as the vendor for Windows CE because of its large share of this market and the reputation it has garnered.

Even though PDAs are consumer devices, the connectivity to the user's desktop can cause issues and require support. Standardization of the device and the connectivity software will help reduce problems. However, OCTO will not support the device or its connectivity software.

Legacy Products:

Users may continue to use their existing PDA devices standalone (not connected to their District workstation).

Implementation Strategy:

Users will be responsible for purchasing and installing these devices.

Projected Life of Products:

These are consumer products and therefore the vendors, models, and software change on a regular basis. OCTO is expecting to continue supporting the afore-mentioned vendors, but the market continues to change and may therefore dictate new vendor selection.

FORMS GENERATION

Approved Products:

- Liquid Office
- Jet Form
- OmniForms

Summary:

In a large enterprise environment, it's increasingly important and cost effective to reduce the number of paper forms. Electronic form products allow an organization to migrate forms and processes away from paper to an electronic medium—hence the term eForms.

OCTO supports a handful of form management applications. Each product offers certain advantages and disadvantages; therefore for optimal leverage OCTO has standardized on a few products. The following guideline will help the user determine which form management solution to use. Agencies are encouraged to call OCTO for assistance.

- Liquid Office utilizes a number of industry standard formats for documents and related processes. For example, the principal document formats are Adobe PDF and XML, with JavaScript employed to control the background processing and validation. For those interested in eGovernment issues, Liquid Office also complies with the W3c standards for web accessibility. This product comes in an enterprise and workgroup version.
- Jet Form Central allows users to print electronic forms, checks and shipping documents regardless of the application software that produces their data. Jet Form can "forms-enable" ERP, financial, health care, or other line-of-business applications and generate professional-quality, laser printed documents. Jet Form imports information from databases, generates forms, and permits copies to flow from purchasing, to accounting and receiving automatically.
- OmniForm replaces standard paper forms with compliant electronic forms that can be stored, filled-in, and distributed from users' desktops, laptops, or networks.

Rationale:

OCTO has selected these products for the following reasons:

- The District has an enormous need to reduce effort spent on managing paper documents.
- These products come from reputable companies recognized as leaders in their fields.
- They are a cost effective..

The products selected:

- Allow for production of standardized forms
- Allow for conversion of paper documents/forms into electronic format
- Support multiple formats such as PDF and XML
- Are multi-purpose
- Promote ease of use

Legacy Products:

Users of older form management applications should contact OCTO for assistance in instituting a sequencing plan for upgrades.

Implementation Strategy:

OCTO has deployed these products to varying degrees throughout the District .Users responsible for the installation and support of document management services should contact OCTO for assistance.

Projected Life:

It is expected that these products will remain the standard until 2006 - 2008. OCTO will evaluate new versions as they become available and perform upgrades to the central (data center) servers. OCTO will attempt to stay on either the most current or one level back version of each of these operating systems.

DESKTOP PUBLISHING

Approved Products:

- Adobe Acrobat 5
- Adobe Pagemaker 7
- Quark QuarkXpress V5

Summary:

Desktop publishing packages should be used to create professional-quality publications. The District selected a range of products to satisfy a range of requirements.

- **Adobe Acrobat 5** is recommended for publications that must be viewed online by a large audience. The PDF standard is almost universal with a free viewer downloadable from the Adobe website.
- **Adobe Pagemaker 7** is recommended for the production of professional-quality publications.
- **Quark QuarkXpress V5** was approved as an alternative to PageMaker. QuarkXpress has similar functionality to PageMaker and has been one of the standards in the past. However, the District prefers Adobe products and will eventually sunset Quark.

For day-to-day document creation Microsoft Word is the recommended standard.

Rationale:

The recommended products were selected for the following reasons:

- The products are consistent with the existing standards as defined in 2001.
- The products are from respected vendors with large market share in the publishing areas.
- The products each address a specific user base and set of requirements.
- The products are used by District vendors and therefore provide interoperability and the ability to easily transfer files.

Legacy Products:

Users are not required to upgrade to one of these vendors. However, users should select a replacement products from one of the listed standards when their PCs are sunset. Adobe products will become the standard when Quark is sunset.

Implementation Strategy:

The agency is responsible for the purchase and installation of the product.

Projected Life:

Adobe products will continue to be the standard into the foreseeable future. The sunset of Quark has not yet been established.

PROJECT MANAGEMENT

Approved Products:

- Microsoft Project 2002

Summary:

OCTO recommends Microsoft Project 2002 for the management of small to mid-size projects. The product provides all the fundamental functions required to track and manage projects. Microsoft Project 2002 is a general project management tool. Users that require vertical or specific project management tools, such as those used in construction, should consider alternative software.

Rationale:

Microsoft Project 2002 was chosen over other alternatives for the following reasons:

- Microsoft Project is the current standard in use in the District. If the District maintains the existing product line, it avoids the cost and inconvenience associated with retraining personnel and the conversion of existing project plans.
- Microsoft Project has a large share of the project management software market. Project managers—including project management contractors hired by the District government—are already familiar with the product.

Legacy Products:

Previous versions of Microsoft Project do not need to be upgraded to Microsoft Project 2002 unless the user requires new features only available in the latest product. Users of other project management tools also do not need immediately to upgrade to Microsoft Project. Non-Microsoft products will be replaced over time as the PCs on which they are installed are sunset.

Implementation Strategy:

Agencies must plan their own upgrades and implementations of project management software.

Projected Life of Product:

Microsoft Project will continue to be the standard for the foreseeable future. Microsoft has this product on an approximately 18- month refresh cycle. Users can expect Microsoft Project 2002 to be the current version well into 2003.

SERVER OPERATING SYSTEM (OS) – FILE/PRINT

Approved Products:

- Windows 2000 Server
- Windows 2000 Advanced Server

Summary:

OCTO recommends Windows 2000 Server and Advanced Server platforms for file and print servers. Most agencies deploy Windows 2000 Server rather than Advanced Server. Windows 2000 Advanced Server, with its additional scalability and clustering features, will mainly be deployed in the centralized OCTO data centers.

Rationale:

- Microsoft Windows 2000 Server and Advanced Server provide a robust environment for file and print services at a reasonable cost.
- Microsoft has surpassed Netware as the dominant server platform. In addition, the District has other Microsoft server platforms, such as IIS, Exchange, and Active Directory.
- By including Windows 2000 for file and print services, the District can leverage the base operating system support infrastructure and staff across all of these platforms.

Legacy Products:

Windows NT Server versions prior to V4.0 should be immediately upgraded to Windows 2000 Server or Advanced Server. Users of Windows NT Server V4.0 should upgrade to Windows 2000 Server or Advanced Server in 2003. Detailed planning is required for Netware users. Agencies utilizing Netware should contact OCTO at (202) 727-2727 for assistance.

Implementation Strategy:

All new file and print server operation systems implemented in the District government will be Windows 2000 Server or Advanced Server.

SERVER ANTIVIRUS

Approved Products:

- McAfee NetShield for NT (for Windows NT/2000 servers)
- Sybari Antigen (for Exchange servers)
- Trend Micro (for Sun Solaris)

Summary:

These virus protection software products are recommended for various server platforms.

Antivirus software must be installed on all servers regardless of their use and location. The software must be kept up to date both with current versions and the newest virus signature files.

Rationale:

McAfee was chosen for the Windows platform to be consistent with the desktop virus protection standard. In addition, McAfee is a leader in anti-virus protection and customarily releases new virus definitions immediately after the release of a new virus.

Sybari was chosen for Exchange servers because of problems experienced by OCTO with McAfee on this platform.

Trend Micro was selected for Solaris to provide a second anti-virus vendor on servers that provide front end email routing and Internet access. Its use increases the District's ability to detect new viruses.

Legacy Products:

Agencies should immediately replace their existing products with the correct OCTO standard.

Implementation Strategy:

Users will be responsible for purchasing and installing anti-virus software on their servers.

Projected Life:

These products are expected to remain the District standard for the foreseeable future.

ENTERPRISE APPLICATION INTEGRATION (EAI)

Approved Products:

- SeeBeyond e*Gate
- SeeBeyond e*Insight

Summary:

Enterprise Application Integration software is middleware that helps integrate disparate systems. The software performs numerous functions, from translation to routing to delivery. EAI software eliminates the need to develop individual interfaces between applications, using a “broker” to manage the flow of information. EAI also allows these interfaces to be developed with user-friendly tools rather than more difficult standard programming languages, such as COBOL.

The District has standardized on SeeBeyond for enterprise-level integration. SeeBeyond should be used when there is a need for high-volume and reliable integration between many disparate systems. The benefits of EAI are only realized when the number and complexity of the interfaces is relatively high. Therefore, not all interfaces should be built using SeeBeyond. Contact OCTO for assistance in designing the optimal solution for a particular interface need.

Rationale:

An estimated one-third of the development effort of any new application is devoted to interfaces. EAI helps to reduce this figure, especially when there will be a serious of application changes that will require continual redevelopment of interfaces.

SeeBeyond was originally selected for the Administrative Services Modernization Program (ASMP), but was also purchased for general use in the District. The ASMP effort will eventually replace many back-office applications. Many of these applications will need to have interfaces. Use of an EAI product will help to reduce ASMP costs and the complexity of the final system.

Legacy Products:

The majority of interfaces between District applications were built using standard development processes and languages, such as COBOL. If these interfaces are functioning well their replacement is not recommended. However, if a new interface is required or an existing interface requires a significant rewrite, the developer should consider using SeeBeyond.

Implementation Strategy:

SeeBeyond is being deployed in conjunction with the ASMP initiative. General use of SeeBeyond will be available in February 2003.

Projected Life:

SeeBeyond is expected to be the EAI product of choice for the foreseeable future.

INTERNET CONTENT MANAGEMENT

Approved Products:

- ❑ Peripherals Plus Technology Dynamic Site Framework (DSF)

Summary:

DSF is the District's standard framework tool for all Internet, intranet, and extranet websites. The product provides content management and portal capability including the ability to run applications within the framework. DSF uses a WYSIWYG (what you see is what you get) editing capability, reducing the need for HTML developers to deliver content to a site. OCTO has developed various templates for use by agencies to provide a standard look-and-feel and navigation. DSF provides a workflow and approval process that automates publishing of content.

Rationale:

DSF was chosen for numerous reasons:

- ❑ It will reduce and may eliminate the need to use HTML developers to publish new content. Content development may be done primarily by the Public Information Officer or other approved agency person. The product has the potential to reduce costs and streamline the publishing process.
- ❑ Content approval will be automated. When content is published for review the appropriate approvers will be notified, usually via email. DSF supports multiple levels of approval.
- ❑ Since the system is completely template based, it is almost impossible for users to use the wrong layout, color scheme, or font. Further, if a layout, color scheme, or font change is required a single change can be made to the template, which will propagate to all affected pages.
- ❑ DSF has many built-in web applications, such as a calendar and a news reading room, making the deployment of these services quick and easy.

DSF was evaluated against numerous other products but was selected because of its easy implementation and low cost.

Legacy Products:

The existing www.dc.gov website is expected to migrate to DSF by 2005. Any new initiatives will be deployed using DSF.

Implementation Strategy:

DSF is available for use by any agency. The content creator accesses the system through Internet Explorer; therefore there is no requirement for software installation.

Projected Life:

DSF is expected to be the standard content management product for the foreseeable future.

DIRECTORY SERVICES

Approved Products:

- ❑ Microsoft Active Directory (Windows 2000)

Summary:

A directory service is a repository of names, profile information, and machine addresses for every user and resource on the network. A directory is used to manage user accounts and access rights. It returns certain attributes of the user, such as an email address and phone number. However, the directory can contain any information about the user or device. Directories are flexible in their design.

Microsoft Active Directory (AD) is the standard for directory services. Initially OCTO will deploy AD for email authentication and as a white pages directory (to include user name, email address, and phone number). In the future the directory will be enhanced with additional attributes and will become the central authentication engine for applications and network services.

OCTO will deploy a centralized AD and will develop a base framework and operations document. Agencies will be able to manage and customize their components in the directory provided they adhere to general OCTO standards. Users should contact OCTO before proceeding with an Active Directory deployment to ensure they are in compliance with the standards.

The selection of AD is currently sanctioned only for internal users. The use of the directory for external users, such as Internet users, has not been considered in the design. OCTO is in the process of developing a strategy for the deployment of a directory for non-District employees.

Rationale:

The decision to deploy AD as the directory server for the District was driven by the deployment of Windows 2000 Server and Exchange 2000. AD is required for the deployment of Windows 2000 and Exchange 2000. AD is also Lightweight Directory Access Protocol (LDAP) compliant and therefore provides an open interface capability.

The framework developed by OCTO does allow for a higher-level directory, if required in the future. In addition, since AD is standards compliant (LDAP), OCTO has the option of migrating to a different directory product with minimal effort. The use of AD does not lock the District into any product or service.

Legacy Products:

Users of other directory services should contact OCTO. The ultimate goal is to develop a single District-wide directory where users and resources can be stored with their key attributes.

Implementation Strategy:

AD will first be deployed in support of the Exchange email rollout. During this deployment basic information about the user, such as phone number and physical location, will also be populated in the directory. The AD will be centrally located but agencies will be able to manage their own users and accounts.

Projected Life:

Because of the dependency with Windows 2000 and Exchange 2000, Active Directory will continue to be a standard while these services are supported by the District.

EMAIL SERVER

Approved Products:

- ❑ Exchange 2000

Summary:

The District has standardized on Exchange 2000 for email and calendaring. The typical client will be Outlook Web Access or the full Outlook client. Post Office Protocol (POP) will also be supported for certain users who require a lightweight and/or Internet ready client. Internet Message Access Protocol (IMAP) will be supported on a case-by-case basis.

Exchange has not been sanctioned as the collaboration platform, such as instant messaging and conferencing. For general file sharing, standard Windows server file and print services are recommended over Exchange shared folders.

Rationale:

Exchange provides the features required by the District including the flexibility to handle many different clients and access methods. The full Outlook client with Exchange provides the user with full email, scheduling, task management, and collaboration (shared folders). Exchange also supports open standard access, including POP and IMAP, where a true Internet based email service is required. The web client delivers a robust email client requiring little setup and installation support.

OCTO evaluated many possible solutions but chose Exchange for the following reasons:

- ❑ Since the District is already heavily invested in Microsoft products, the deployment of Exchange allowed for leveraging of purchases, support, and services.
- ❑ Exchange has a dominant market share for enterprise-level email and calendaring services.
- ❑ Exchange is very cost competitive with products that provide similar functionality.
- ❑ Exchange fully supported the District's email and calendaring requirements and provides a platform for the future, including collaboration.

Legacy Products:

OCTO is currently deploying Exchange District-wide. Each agency will be provided with an individualized plan for deployment and a scheduled time. The deployment will begin in early 2003 and will extend through 2004. If the agency currently has an email server installed, OCTO will develop the migration plan to move them to Exchange.

Implementation Strategy:

OCTO has selected the web browser version of Outlook to reduce rollout costs. Full deployment can be achieved by simply having Internet Explorer 5.5 or greater installed. If the agency requires other client access, such as the full Outlook client, OCTO will provide engineering support but the agency will be responsible for actual deployment and setup.

Projected Life:

Exchange is expected to be the standard email server platform for the foreseeable future. As new versions of Exchange become available, OCTO will determine the migration path and timing. With the use of the web client the expectation is that future releases of Exchange will not require significant implementation support.

WEB SERVER

Approved Products:

- ❑ Microsoft Internet Information Server 5.0

Summary:

Microsoft IIS 5.0 is the sanctioned standard for all web server requirements including Internet, intranet, and extranet applications. The product provides:

- ❑ Infrastructure to store and deliver HTML pages
- ❑ Scripting services for dynamic content and simple business logic
- ❑ Application platform for robust application logic

The sanctioned application development platform for web applications is COM+ (either with or without MTS services) on an IIS server. A complete description of the web infrastructure used in the District is included elsewhere in this document.

OCTO does not sanction the user of Apache or personal web servers even for development purposes. The OCTO web configuration includes development, quality control, and production servers. These servers should be used for all web requirements.

Rationale:

Microsoft IIS is the legacy web server in the District. The product was originally chosen because it was easy to implement and inexpensive. Microsoft's IIS commands a large percentage of the web server marketplace and is expected to maintain this market share.

Legacy Products:

If there are any non-IIS servers the owners should contact OCTO immediately. Depending upon the situation the non-IIS server may be migrated to IIS. There are certain vendors and applications that do not support IIS, and therefore Apache may be a requirement. However, the use of Apache must be reviewed and approved on a case-by-case basis. OCTO designed and deployed an extensive environment using IIS technology; as a result, other technologies will not enjoy the same performance and redundancy as IIS.

Implementation Strategy:

OCTO currently has a fully deployed IIS environment capable of supporting Internet, intranet, and extranet services.

Projected Life:

The District's investment in IIS technology suggests the current standard will remain for the foreseeable future. The version of IIS will follow the version of the base Windows Server operating system. At this time Windows 2000 Server is the standard. Windows.Net will be evaluated when available from Microsoft.

INTERNET CONTENT FILTERING

Approved Products:

- ❑ Websense

Summary:

Websense is a content filter that prevents access to websites deemed inappropriate in a business environment, such as pornography and racial sites. Websense is the standard product to provide Internet access restrictions. The product will be deployed at the central OCTO entry points to the ISPs.

Rationale:

Websense was selected because of its cost effectiveness and overall functionality.

Legacy Products:

There are no legacy content filter products in use in the District.

Implementation Strategy:

Websense has been deployed for a small number of agencies that requested content filtering immediately. OCTO will deploy Websense for additional agencies over the next few months. The use of content filtering requires that:

- ❑ Users are first notified of the installation of a content filter and are advised of the reasons for the installation
- ❑ Users are presented with an acceptable use policy for Internet browsing. This policy states that Internet access is for business purposes only and specifically states that certain sites, such as pornography, are forbidden.
- ❑ There is a procedure in place for users to gain access to blocked sites. Certain users, such as police officers in the vice area, may need to access sites that have been blocked.

Projected Life:

Websense is expected to be the standard for the foreseeable future.

SERVER OPERATING SYSTEM – APPLICATION AND DATABASE

Approved Products:

- Windows 2000 Server
- Windows 2000 Advanced Server
- Sun Solaris 8
- AIX 5.1
- OS/390 2.10

Summary:

In a multi-tiered environment the business logic (application) runs on a logically separate tier than the database and the user interface. The application server runs the business logic (programs), which are written in many possible languages including Visual Basic and Java.

OCTO supports a handful of operating systems for the application tier. Each operating system provides certain advantages and disadvantages and therefore for optimal leverage OCTO has standardized on different operating systems for different tasks. The following guideline will help the user to determine which operating system to use for a particular initiative. Due to the complexity of this selection, agencies are encouraged to call OCTO for assistance.

- Windows 2000 Server: is recommended for departmental applications with up to a few hundred users.
- Windows 2000 Advanced Server supports more physical processors than Windows 2000 Server and therefore can support many more users. The decision to deploy Advanced Server will be driven by the hardware configuration required by the application.
- Sun Solaris 8 is the operating system of choice for newly developed enterprise size applications. The operating system runs on a large array of hardware configurations from very small to very large servers. The expectation is that agencies will deploy Solaris servers only at one of the two OCTO supported data centers.
- AIX 5.1 is a secondary option for Unix. OCTO will target new applications on Solaris but will consider AIX if justifiable.
- OS/390 2.10 (Multiple Virtual Storage) is the legacy operating system within the District. OS/390 should also be considered for enterprise-level applications requiring extremely high scalability and reliability. Even though OS/390 is an officially supported operating system, OCTO expects few new applications will be built on it. The decision to deploy new applications on this platform will be reviewed on a case-by-case basis.

Windows 2000 Data Center Server is not supported at this time.

Rationale:

OCTO selected these platforms for the following reasons:

- The District has the smallest number of operating systems that meet their requirements
- The operating systems come from reputable vendors with longevity and excellent support
- The options provide the agencies with a cost effective solution

OCTO attempted to standardize on a single version of UNIX. However, the decision was made to support both Solaris and AIX to provide the District with a larger selection of third party software. Further, the selection of two UNIX vendors is expected to reduce overall costs by providing competition.

The selected operating systems meet these requirements:

- Windows 2000 Server and Advanced Server: Excellent small to mid-size servers based upon inexpensive Intel hardware. Since Windows has a huge offering of off-the-shelf products it is ideal for agencies that wish to purchase rather than build applications. Contractors skilled in Windows 2000 are abundant and reasonably priced.

- ❑ Solaris 8: Sun has a dominate market share for UNIX servers and therefore most vendors provide versions of their software to run on Solaris. There is also a legacy installation of Solaris servers at OCTO and many agencies.
- ❑ AIX 5.1: AIX is an enterprise-level UNIX operating system from IBM. AIX has a significant share of enterprise UNIX, shared with Sun Solaris and HP HP/UX. AIX was chosen over other variations because the District was already heavily invested in IBM hardware and software and because the price-performance of the platform was exceptional.
- ❑ OS/390 2.10: OS/390 is the legacy operating system of the District. It provides extensive scalability and performance for a multitude of workloads, from batch to online. OS/390 will be considered for new applications on a case-by-case basis. There are few third party software vendors developing applications for this platform.

Legacy Products:

Users on pre-Windows 2000 Server platforms should contact OCTO for assistance in developing a migration plan. Windows 2000 Server has changed the way users are managed (via Active Directory). Agencies must adhere to the Active Directory standards developed by OCTO to successfully integrate with the District's overall directory strategy.

Users on other variations of UNIX should also contact OCTO for guidance. Migration from one variation of UNIX to another may be simple or very problematic. Migration plans and the possibility of remaining on the legacy system must be evaluated on a case-by-case basis.

OCTO is currently on OS/390 2.6. A migration plan to OS/390 2.10 and eventually to Z/OS 1.1 is being developed. OCTO expects complete migration to Z/OS will be completed in Fiscal Year 2004.

All other operating systems installed in the District should be evaluated for immediate conversion to one of the approved platforms. Contact OCTO for migration planning assistance.

Implementation Strategy:

OCTO has deployed Windows 2000 Server, Solaris, AIX, and OS/390 platforms at both OCTO data centers. Users will be responsible for the installation and support of any servers located within their agencies.

Projected Life:

It is expected that these operating systems will remain the standard until 2006 - 2008. As new versions become available, OCTO will evaluate their need and perform upgrades to the central (data center) servers. OCTO will attempt to stay on either the most current version or one level back of each of these operating systems.

OS/390 (Z/OS) will not be the target for new development. OCTO has no plans to migrate applications off the mainframe before 2005. As applications require significant rework or replacement they will be targeted for non-mainframe platforms.

RELATIONAL DATABASE MANAGEMENT SYSTEMS

Approved Products:

- ❑ DB2/MVS V7
- ❑ SQL Server 2000
- ❑ Oracle 9i

Summary:

Each database product should be considered for different workloads. In general, the following guidelines should be used when selecting a database platform:

- DB2/MVS is the highest performing relational database supported by OCTO. For extremely high-volume applications, DB2 is the preferred platform. However, Oracle/UNIX approaches the scalability of DB2/MVS and is a viable product for most users.
- Oracle is supported on both UNIX and Windows platforms. For large-scale centralized applications Oracle/UNIX is the preferred relational database. At the agency level, the use of Oracle instead of SQL Server is dependent upon other factors, including the current install base.
- SQL Server is recommended for most agency level applications. In addition, since the OCTO recommended web platform is Microsoft-centric, SQL Server is used for most Internet based applications.

Due to the complex nature of this selection, agencies are asked to discuss their database selection with OCTO before implementation.

Rationale:

The selection of three separate relational database management products is based upon the following conditions:

- DB2/MVS is the legacy database platform, with many applications already developed on this platform. Its high performance, manageability, and current District knowledge base makes it an excellent choice for high-end requirements.
- Oracle 9i is an industry leading database for UNIX and Windows platforms. Oracle is also a favorite platform for third-party software developers. By including Oracle as a standard, the District has a huge array of off-the-shelf software available for its use. Further, the District already has a large install base of Oracle licenses.
- SQL Server 2000 is an excellent departmental database. Since it only runs on the Windows platform, the options to the agency are slightly more limited than with Oracle. However, if the agency does not currently have Oracle installed and is looking for a low to mid-range database platform, SQL Server is recommended. SQL Server is recommended over Oracle for web development projects..

Legacy Products:

Provided their existing database platform is under maintenance and support from the vendor, agencies need not convert to one of the three recommended databases. However, OCTO recommends other database platforms be sunset over time. OCTO is available to assist with analysis and advice.

Agencies should also not immediately upgrade to newer versions of DB2, Oracle, and SQL Server without first investigating the possible effects to their hardware requirements and compatibility with their existing applications. If their current version is out of maintenance, OCTO recommends the agency develop a plan to move to a supported version.

Implementation Strategy:

OCTO currently has all three database platforms installed and available for use.

Projected Life:

DB2, Oracle, and SQL Server are expected to remain the District's standard products for the foreseeable future. New versions typically are released every 12 to 18 months. OCTO will focus support and services on the most current version and one previous version of any relational database system.

DATABASE MODELING

Approved Products:

- Computer Associate AllFusion ERwin Data Modeler
- Microsoft Visio Professional
- Sybase PowerDesigner

Summary:

Database modeling tools are used by systems analysts and developers to visually view data, data attributes, and their relationships. ERwin Modeler is the standard database modeling tool for the District and has been since 2000. Besides developing the visuals of the data, ERwin can also be used to generate the physical database, stored procedures, and triggers for SQL Server, DB2, and Oracle. ERwin is an excellent middle of the road product for modeling databases and systems.

At the low end, Microsoft Visio Professional provides basic modeling tools using a couple of different methodologies and formats. The product does not provide a data repository nor can it generate the physical database, but for simple database designs the product provides the required function at a very low cost point.

At the other end of the spectrum, the Sybase PowerDesigner product provides a robust set of tools that allows for modeling of not only the database but also the overall business process and object schema. Users should consider the use of PowerDesigner for large and/or complex projects.

Rationale:

ERwin and PowerDesigner are considered two of the leading product suites. By providing three different products the user can choose the right tool for the complexity and size of a particular project.

Legacy Products:

Users should utilize one of the standard modeling tools on new development projects and migrate existing models to one of these tools over time.

Implementation Strategy:

Users will be responsible for the installation and support of the modeling software.

Projected Life:

These tools are expected to be the standard for the foreseeable future.

WEB HTML DEVELOPMENT

Approved Products:

- Microsoft FrontPage 2002
- Macromedia HomeSite 4.5

Summary:

For the creation of static web content, Microsoft FrontPage 2002 and Macromedia HomeSite 4.5 are the recommended products. These products provide WYSIWYG (what you see is what you get) HTML development capabilities. JavaScript and VBScript can also be incorporated into page development using these tools.

Neither of these tools should be considered the full development kit for transaction based web applications. Other tools will be needed to augment these products for a complete web development environment. These products are recommended for basic HTML and client-side scripting.

A content management product from Peripherals Plus Technologies, Inc (PPT) has been chosen for new static web development. However, conversion of the existing pages to the content management tool will extend into 2004. There will still be a requirement for FrontPage and HomeSite until the entire DC.GOV site has been converted.

Rationale:

These products were selected for the following reasons:

- OCTO has the most experience with these products.
- The products work well with the District's Web Standards Kit (WSK) and templates.
- The products are reasonably priced.
- The products have a large market share. It is easy to find developers that have used these products.

FrontPage is known to be very verbose when creating web pages – it adds many unneeded HTML statements. FrontPage does an excellent job developing pages that render well with Internet Explorer, but extra care must be taken to ensure users of Netscape can view the page correctly. HomeSite is therefore the preferred product, but the prevalence of FrontPage requires that it be part of the District's standard.

Legacy Products:

Previous versions of these products are still acceptable. However, OCTO will provide support only for the most current versions.

Implementation Strategy:

There is no need for an implementation strategy. Agencies are encouraged to purchase and install these products as needed.

Projected Life:

FrontPage and HomeSite will continue to be a standard for at least the next 24 months. However, as agency websites are migrated to our content management product from PPT, these tools will slowly become obsolete.

WEB REPORTING

Approved Products:

- ❑ WebTrends suite of products

Summary:

Webtrends is the standard tool to report on website activity. The product provides information on many website statistics including visitor activity, link analysis, and site errors.

Rationale:

WebTrends is a leader in website reporting and analysis. Further, the vendor provides a suite of products that allow the user to gain increasing details of their website usage.

Legacy Products:

Users of other products should contact OCTO for assistance in converting to WebTrends.

Implementation Strategy:

OCTO has installed WebTrends such that reports on all OCTO managed sites can be requested by the user.

Projected Life:

WebTrends is expected to be the standard for the foreseeable future.

PC UTILITIES

Approved Products:

- ❑ Symantec Norton Utilities 2002

Summary:

Norton Utilities provides a suite of utilities for the maintenance of a PC including:

- Registry check and problem correction
- Hard drive performance optimization
- Hard drive error detection and repair
- Recovery of deleted files
- Permanent and secure deletion of files

The typical user will not require Norton Utilities. Norton Utilities will usually be used by PC technicians to diagnose and correct issues with the desktop. However, OCTO recommends Norton Utilities for users that must permanently and securely delete files.

Rationale:

The maker of Norton Utilities, Symantec, is a leader in the PC utility market.

Legacy Products:

Users need not upgrade to Norton Utilities if they currently have other similar tools installed.

Implementation Strategy:

Norton Utilities will only be installed on a case by case basis.

Projected Life:

Norton Utilities is expected to be the standard for the foreseeable future. OCTO will adopt new releases from the vendor as they become available.

PC FILE COMPRESSION

Approved Products:

- ❑ WinZip V8.1

Summary:

WinZip is the recommended product for compressing individual files either to reduce disk usage or to improve performance when sending the file as an email attachment. WinZip provides a much more robust set of compression utilities than other products.

OCTO does not sanction the wholesale compression of entire hard drives. These file compression utilities are only recommended on an individual file level. Compression of an entire disk drive can have severe performance implications for the user. Also, if problems occur, PC technicians may be unable to access the compressed drive using their standard utilities.

Rationale:

WinZip is an easy-to-use utility that uses standard compression algorithms. WinZip-compressed files can be uncompressed using many other products.

Legacy Products:

There is no requirement to upgrade to WinZip from any other compression utility.

Implementation Strategy:

It is the responsibility of the user to purchase and install WinZip, as needed. Users are warned that there are many shareware compression utilities available for download from the Internet. These products are not free, even if there are evaluation copies available.

Projected Life:

WinZip is expected to be the standard for the foreseeable future.

REMOTE HOST APPLICATION

Approved Products:

- ❑ LANDesk Version 6.6.2

Summary:

OCTO has selected LANDesk 6.6.2 to assist with remote host desktop support. The product gives Help Desk operators control over Windows desktops, including keyboard and mouse input and system reboot, and allows them to see what's happening so an issue can be resolved more quickly.

LANDesk 6.6.2 is a systems management tool that includes:

- "Out-of-the-box" imaging solution
- Image Agnostic deploying third party images
- Remote Image Creation providing real time status of each machine via thumbnail
- PXE Services integrated with MS .NET
- Automated System Preparation (SYSPREP) Management
- Targeted Multicasting Image Deployment
- LANDesk Deployment Wizard

The following guideline will help the user to determine which operating system to use for a particular initiative. Due to the complexity of this selection, agencies are encouraged to call OCTO for assistance.

Rationale:

This product was selected because it:

- ❑ Distributes applications and files selectively or across an entire network
- ❑ Solves user problems remotely
- ❑ Transfers files to a remote computer. Updates drivers and support utilities on the fly to reduce user downtime.
- ❑ Supports users without deploying agents. Clients can enable temporary remote access and control by running the support application from a website.
- ❑ Gets detailed hardware and software inventory reports for network planning and software license compliance
- ❑ Keeps servers, desktops, and applications healthy and running
- ❑ Takes advantage of existing directories for management
- ❑ Manages the network through web components
- ❑ Is an OS Migration Tool
- ❑ Provides systems management through the intranet
- ❑ Automatically repairs broken applications
- ❑ Technical Specifications
- ❑ Provides the District and agencies with a cost effective solution.

Implementation Strategy:

OCTO deployed LANDesk to assist with the Seat management Project. OCTO is working on an implementation strategy that will encompass the entire District.

Projected Life:

It is expected that this tool will remain the standard until 2006 - 2008. As new versions become available, OCTO will evaluate needs and perform upgrades to the central (data center) servers. OCTO will attempt to have either the most current version or the previous version of each of these operating systems.

WEB APPLICATION DEVELOPMENT

Products:

- Visual Studio V6.0 (Visual Interdev 6.0)

Summary:

The District's web environment is Microsoft-centric, relying upon Microsoft's IIS, MTS, and SQL Server products. As such the District has sanctioned the Microsoft development framework for web application development. Specifically, server applications will rely upon ASP and COM+.

Visual Interdev and Visual Studio will provide the development environment for all web services and applications. These tools will be used to create COM+ objects and ASP code. Note that for straight HTML front end development and scripting a different set of products is recommended.

OCTO has created standards for web development. Contact OCTO for the most current version of these standards.

Rationale:

The selection of Visual Interdev and Visual Studio provides a single vendor solution for web development. These products interface directly with Microsoft's IIS services and therefore provide a synergistic development environment.

Legacy Products:

All new development should be performed using these tools. No redevelopment is required if previous development created COM+ objects and ASP code.

Implementation Strategy:

The user will be responsible for the installation of Visual Interdev and Visual Studio.

Projected Life:

These tools are expected to be the preferred development tools for the foreseeable future. The .Net versions of these products are being evaluated and will be sanctioned in 2003¹.

¹ The implications of .Net are being investigated in addition to the migration requirements to move the District to .Net.

HELP DESK APPLICATION

Approved Products:

- ❑ REMEDY Help Desk

Summary:

OCTO selected REMEDY Help Desk to assist with Help Desk problem management. Remedy is a cost-effective, adaptable problem/incident management application. The interface is easy to use and reduces training time with built-in procedure guidelines. Features include:

- Intelligent routing and assignments
- Enforcement of service level agreements
- Knowledge management capabilities
- Automated escalations/notifications

The following guideline will help the user to determine which operating system to use for a particular initiative. Due to the complexity of this selection, agencies are encouraged to call OCTO for assistance.

Rationale:

REMEDY supports either single-location or globally distributed help desks, or combines fragmented help desks into a consolidated service desk. The product:

- ❑ Simplifies and consolidates user requests initiated from multiple sources—web browser, email, or telephony integration—and checks the status of all requests, regardless of origin
- ❑ Automatically receives requests triggered by network and systems management
- ❑ Automatically routes requests to the right support area using built-in skills inventory matching
- ❑ Notifies, reminds, and escalates to the right people to ensure appropriate response and resolution
- ❑ Ties affected assets directly to the incident report
- ❑ Creates change tasks to improve the environment
- ❑ Captures and finds answers by searching experience and problem-solution knowledge bases

Implementation Strategy:

OCTO deployed REMEDY to assist with the District's Help Desk operation for select agencies and the Seat management Project. OCTO is working on an implementation strategy that will encompass the entire District.

Projected Life:

It is expected that this tool will remain the standard until 2006 - 2008. As new versions become available, OCTO will evaluate need and perform upgrades to the central (data center) servers. OCTO will attempt to stay current with the latest version or the previous version of each of these operating systems.

HIGH-END STATISTICAL ANALYSIS

Approved Products:

- SAS
- SPSS

Summary:

Statistical analysis packages provide analytical and reporting capabilities, such as frequency counts and cross-tabulation tables. These products also support high-end analysis, such as regression analysis. Statistical analysis products provide various reporting functions, including graphs and tables, to display the results.

SAS and SPSS are supported on both the OS/390 and PC platforms. Even though not currently implemented, users who require a non-S/390 server based solution should utilize SAS.

Excel is also supported for data analysis but the product does not provide the high-end analysis features in SAS. However, many users will find the capabilities of Excel sufficient for their needs.

Rationale:

SAS and SPSS are considered premiere statistical analysis products. These products are supported across platforms (mainframe, UNIX, Windows 2000 Server, PC) allowing users to select the platform that best meets their needs, and I provide similar functionality and language constructs across platforms. The products offer numerous add ons for better data access and analysis. For example, SAS provides an optional feature to access data directly from a DB2 database.

Legacy Products:

Users of other statistical analysis products need not immediately convert to SAS. SPSS will continue to be supported as a legacy application, but SAS is the preferred product for any new user.

Implementation Strategy:

PC users will be responsible for installation and support of the SAS product. The OS/390 version of SAS is available at both District data centers (ODC1 and ODC2).

Projected Life:

SAS will be the standard for the foreseeable future.

WIRELESS EMAIL

Approved Products:

- RIM models 950 and 957
- Cingular Corporate Email Service
- GoodLink Corporate Messaging Software

Summary:

RIM is the standard wireless email device for all users of the OCTO Exchange backbone. The OCTO provided service is Cingular Corporate Email Service. The GoodLink software is the standard wireless email application.

Users are advised that forwarding the DC email to another wireless email service is strictly forbidden. The RIM solution provides security and auditing not available in most other services. Forwarding of email to any account, whether wireless or not, poses severe security risks to the user.

Rationale:

The RIM/Cingular/GoodLink products were selected over other alternatives for the following reasons:

- Excellent price and features
- Good integration with the OCTO Exchange environment
- They support wireless email, scheduling, contacts, and notes
- Hardware, software, and services are all available from stable and well managed companies

Legacy Products:

Existing Arch Wireless devices will continue to be supported for peer-to-peer email. All new purchases should be the standard RIM device. Arch Wireless devices currently in use in the District will be sunset by December 31, 2003. All users should be migrated to RIM by that date.

Implementation Strategy:

A complete implementation plan, including information on the required process and forms to get service, is available from OCTO.

Projected Life:

The RIM solution is the expected wireless email vendor for the foreseeable future. Changes to specific models will be posted as they become available and are certified by OCTO for use.