Standard ID:	**PL-PCOS-001**
Title:	**PC Operating Systems**
Domain:	**Platform**
Discipline:	**Software**
Date Updated: Revision no.: Original date:	**7/25/2011** **5** **07/07/2004**

I.   Authority, Applicability and Purpose

A. **Authority:** Title 29, Chapter 90C provides broad statutory authority to the Department of Technology and Information to implement statewide and interagency technology solutions, policy, standards, and guidelines for the State of Delaware's technology infrastructure. "Technology" means computing and telecommunications systems, their supporting infrastructure and interconnectivity used to acquire, transport, process, analyze, store, and disseminate information or data electronically. The term "technology" includes systems and equipment associated with e-government and Internet initiatives.

B. **Applicability:** Applies to all State of Delaware communications and computing resources. DTI is an Executive Branch Agency and has no authority over the customers in Legislative and Judicial Branches, as well as School Districts, and other Federal and Local Government entities that use these resources. However, all users, including these entities, must agree to abide by all policies, standards promulgated by DTI as a condition of funding, access, and continued use of these resources.

C. **Purpose:** The end-user client platform (PC) is the largest segment in the IT market, and the maintenance, repair and safeguarding of client machines is the highest cost of that segment. This standard will address the operating system(s) of this huge investment in an attempt to reduce unnecessary costs.

II.   Scope

A. **Audience:** This document is intended for Systems Administrators, Network Administrators, Computer Auditors, and PC Support personnel. This document is not intended for use by non-IT personnel.

These standards are adopted by the Department of Technology and Information (DTI), through the Technology and Architecture Standards Committee (TASC), and are applicable to all Information Technology use throughout the State of Delaware. Any questions or comments should be directed to dti_tasc@state.de.us.

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B. **Machines:** This standard will cover all desktops, notebooks (laptops), media centers and tablet PCs owned and operated by the State. It will cover all PCs and notebooks, tablets and media centers owned and operated by contractors who connect behind our firewall. This standard does not cover non-State-owned home PCs or non-State-owned PCs connected through the Internet.

C. **Areas Covered:** Only operating systems are covered by this standard, not browsers or utilities.

D. **Environments:** Desktops, notebooks (laptops), media centers, and tablet PCs are covered by this standard, not servers, cellular phones, PDAs, or embedded systems.

III. Process

A. **Adoption:** These standards have been adopted by the Department of Technology and Information (DTI) through the Technology and Architecture Standards Committee (TASC) and are applicable to all Information Technology use throughout the State of Delaware.

B. **Revision:** Technology is constantly evolving; therefore, the standards will need to be regularly reviewed. It is the intent of TASC to review each standard annually. TASC is open to suggestions and comments from knowledgeable individuals within the State, although we ask that they be channeled through your Information Resource Manager (IRM).

C. **Contractors:** Contractors or other third parties are required to comply with these standards when proposing technology solutions to DTI or other State entities. Failure to do so could result in rejection by the Delaware Technology Investment Council. For further guidance, or to seek review of a component that is not rated below, contact the TASC at dti_tasc@state.de.us.

D. **Implementation responsibility:** DTI and/or the organization's technical staff will implement this standard during the course of normal business activities, including business case review, architectural review, project execution and the design, development, or support of systems.

E. **Enforcement:** DTI will enforce this standard during the course of normal business activities, including business case and architectural review of proposed projects and during the design, development, or support of systems. This standard may also be enforced by others during the course of their normal business activities, including audits and design reviews.

F. **Contact us:** Any questions or comments should be directed to dti_tasc@state.de.us.

IV. Definitions/Declarations

A. Definitions

1. **Desktop -** Any computing device engineered to remain stationary that contains a hard drive, memory, and CPU (the monitor and keyboard are usually separate pieces from the PC case) and expansion slots. The intent of the device is to be used by one person at a time, or perhaps one person and a print service.

2. **Notebook (laptop) -** Any computer engineered for portability that contains a hard drive, memory, and CPU (the monitor and keyboard are usually connected to the PC case) and usually does not have expansion slots. The intent of the device is to be used by one person at a time.

3. **Tablet PC -** Any computer that can be classified as a notebook, but its Operating System is built expressly for the tablet architecture. Usually integrates handwriting recognition more tightly to its functionality. An example of a Tablet PC would be an HP Tablet PC.

4. **Media Center -** Generally designed for sound and video manipulation. Its primary intent is not business data. This machine is usually designed for multimedia (for example Microsoft® Windows® XP Media Center Edition). An example of a Media Center is an HP Media Center.

5. **Operating System -** Software that coordinates various activities of the computer (e.g., memory management, and shared libraries) and mediates between application software and computer hardware (print services, for example). Two examples of Operating Systems are Microsoft's Windows XP, and SuSE Linux.

6. **Browser -** A program with a graphical user interface for displaying HTML files used to navigate the World Wide Web. For example, Internet Explorer or Firefox.

7. **Utility** - A program to carry out a routine function; For example, virus checkers like MacAfee.

8. **Server -** A hardware device on a network that manages resources such as printers, files and applications. The intent of this hardware device is to provide benefit to more than one person at a time.

9. **Embedded -** An embedded system is some combination of computer hardware and software, either fixed in capability or programmable, that is specifically designed for a particular kind of application device. Industrial machines, automobiles, medical equipment, cameras, household appliances, airplanes, vending machines, and toys are among the possible hosts of an embedded system. Embedded systems that are programmable are provided with a programming interface, and embedded systems programming is a specialized occupation.

10. **Mobile Device -** A type of short-wave analog or digital telecommunication device in which a subscriber has a wireless connection from a mobile phone or PDA or phone with PDA to a relatively nearby transmitter. The transmitter's span of coverage is called a cell. They usually have an embedded operating system (as opposed to a portable telephone). An example of a PDA would be the Blackberry.

11. **Terminal Services** - Operating a remote computer as though you were sitting in front of it.

B. Declarations

A PC operating system:

1. Must adhere to the State's Software Policy.

V. Definitions of Ratings

Individual components within a Standard will be rated in one of the following categories.

COMPONENT RATING	USAGE NOTES
• **STANDARD** – DTI offers internal support and/or has arranged for external vendor support as well (where applicable). DTI believes the component is robust and can be expected to enjoy a useful life of 5+ years from the Effective Date.	These components can be used without explicit DTI approval for both **new projects** and **enhancement** of existing systems.
• **ACCEPTABLE** – DTI offers internal support and/or has arranged for external vendor support as well (where applicable). DTI believes the component is stable, but has a useful life [1] of less than 5 years from the Effective Date.	[1] *Note the useful life concern for the "Acceptable" rating.*
• **EMERGING** – DTI considers the component to be a likely candidate for future classification as STANDARD or ACCEPTABLE within the State pending further investigation.	These components must be explicitly approved by DTI for **new projects**. They can be used for **minor enhancement** and **system maintenance** without explicit DTI approval.
• **DECLINING** – Deprecated - DTI considers the component to be a likely candidate to have support discontinued in the near future. A deprecated element is one becoming invalid or obsolete.	
• **LIMITED SUPPORT** – DTI has limited or no internal support capability for the component or has no arrangement for vendor support for the product. Users must arrange for adequate overall support of the component through their own efforts.	
• **NOT SUPPORTED BY DTI** – DTI offers no internal support and has no arrangement for vendor support. Users must arrange for all support of the component through their own efforts.	
• **DISCONTINUE** – For reasons of overall risk, product support, high TCO, or other issues, the use of this technology is discouraged. All current instances of this technology should have a plan developed for its retirement. DTI expects to work aggressively with the users of such technologies to devise a collaborative plan.	
• **DISALLOWED** – DTI declares the component to be unacceptable for use and will actively intervene to disallow its use when discovered.	

A. **Applicability of Ratings** – The ratings and usage notes are intended to encourage technology decisions to move toward components that enjoy the full support of DTI. However, acknowledging that mass replacement of lower rated components is not feasible, DTI will allow continued maintenance, enhancement, and possibly limited new development using these components. In making such determinations, DTI may require that the requestor demonstrate that they have adequate support arrangements in place.

B. **Missing Components** – No conclusions should be inferred if a specific component is not listed. Instead, contact the TASC to obtain further information.

VI.   Component Assessments

A. The State of Delaware Policy and Standards pages: http://dti.delaware.gov/information/standards-policies.shtml must be consulted when setting up a PC with a new operating system and periodically thereafter to provide security and safety to the State's resources. Note: Microsoft's web site for operating system life cycles is:

http://support.microsoft.com/default.aspx?scid=fh%3Ben-us%3Blifecycle&LN=EN-US&x=3&y=16

Component	Rating	Comments
Windows OS		

Windows 7
    Professional
    Enterprise
    Ultimate
	Standard	Provided that backward-compatibility issues are resolved.

Windows XP Professional SP3	Acceptable	Provided that security measures are followed. Mainstream support expired in April 2009. Extended support will expire in April 2014. However, XPs ability to support applications will decrease, because of the 4GB RAM limit. 64 bit XP does not have this limitation.
Windows XP Tablet	Standard	For Tablet PCs

Windows VISTA SP2
    Business
    Enterprise
    Ultimate
	Standard	

Windows Media Center SP3	Limited Support	Must be standalone. Cannot be placed in the State's Domain.
Windows CE .NET 4.2	Declining	Mainstream Support has ended. Extended support expires on 7/9/2013.

Component	Rating	Comments
Thin Client (Windows)	Declining	This includes MSFT's .NET CE and XP Embedded when used in a Terminal Services mode.
Windows 2000	Disallowed	
Windows XP Home	Disallowed	
Windows VISTA Basic Premium	Disallowed	
Windows XP Professional	Disallowed	SP 1 and SP 2 and below
Windows NT	Disallowed	
Windows ME	Disallowed	
Windows 3.x	Disallowed	
DOS (including DR DOS)	Disallowed	
Windows 95	Disallowed	Essential Windows 2003 Server Security settings cannot be implemented if a Win 9x platform is connected to the core. No instance of Win 9x will be connected to the core. This excludes K-12 machines that are not connected to the State core.
Windows 98 & Windows 98 2nd Edition	Disallowed	Essential Windows 2003 Server Security settings cannot be implemented if a Win 9x platform is connected to the core. No instance of Win 9x will be connected to the core. This excludes K-12 machines that are not connected to the State core.
LINUX		
openSUSE (SUSE Linux Desktop)	Standard	Version 11.3 and above
SUSE Linux Enterprise Desktop (SLED)	Standard	Version 11 and above
Thin Client (Linux)	Standard	For use in Terminal Services
Red Hat Enterprise Linux Desktop	Standard	Version 6 and above
Ubuntu	Emerging	Version 10.04 and above
Ubuntu	Declining	9.04 and below

Component	Rating	Comments
LINUX continued		
Mandriva Linux Desktop	Disallowed	
Ubuntu	Disallowed	Prior to Version 7.05
openSUSE (SUSE Linux Desktop)	Disallowed	Version 11.2 and all previous versions
MAC		
MAC OS X	Standard	Version 10.6.x
MAC OS X	Emerging	Version 10.7.x
MAC OS X	Declining	Version 10.4 and 10.5
MAC OS	Disallow	Version 10.3 and Previous