



## **Voluntary Product Accessibility Template (VPAT)**

Section 508: Electronic and Information Technology Accessibility Standards

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EMC Retrospect MANDATORY PRODUCT ACCESSIBILITY FEATURES CHECKLIST

June 2006

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## Introduction

This document contains a checklist for product/functional groups to use for their compatibility testing concerning the government regulation implementing Section 508 of the Rehabilitation Act which went into effect June 21, 2001.

### ***Who does section 508 apply to:***

Section 508 applies to “normal operation”, which excludes initial setup (such as driver setup, application setup), initial configuration, maintenance (such as Desktop management), diagnostic, repair tasks, and adding or replacing parts.

### ***Standard Product Assessment:***

- Initial Distribution: Through either core team's marketing or documentation manager.
- Intermediate Distribution: Core teams provide roster to either marketing or documentation manager. Core teams provide roster to either marketing or documentation manager.
- Final Distribution: Checklist is turned in to either marketing or documentation manager.
- Schedule: Completed checklist due 60 days prior to product pack out
- Contacts: Core team's marketing and documentation manager.

### ***Background:***

In 1998, Congress amended the Rehabilitation Act and strengthened provisions covering access to information in the Federal sector. As amended, section 508 of the Rehabilitation Act requires access to the Federal government's electronic and information technology. The law covers all types of electronic and information technology in the Federal sector and is not limited to assistive technologies used by people with disabilities. It applies to all Federal agencies when they develop, procure, maintain, or use such technology. Federal agencies must ensure that this technology is accessible to employees and the public to the extent it does not pose an "undue burden.

GENERAL REQUIREMENTS																											
EITAS #	TEST FEATURES	PRODUCTS TO BE TESTED								OPERATING SYSTEMS									COMMENTS								
		Desktop	Work Station	Portables	Thin Client	Displays	Projectors	Kiosk	O/S	HandHeld	Win2000/NT/XP			Win98/Me			Win CE			Other O/S			Hardware				
											Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail		N/A	Pass	Fail	N/A	Pass	Fail	N/A	
<b>Section 1194.21 Software Applications and Operating Systems</b>																											
1194.21a	<b>Keyboard Navigation</b>	x	x	x		x	x	x	x	x																	
Sw	• Navigate inside of software and from application to application only using standard navigation keys such as the Tab key, Alt key, Shift tab, Control tab and the arrow keys.	x	x	x		x	x	x	x	x	X																
Sw	• If required, can <i>Microsoft Mousekeys</i> be used for keyboard navigation?	x	x	x					x	x		X															
1194.21b	<b>Software Shall Not Disturb or Disable Windows Standard Accessibility Features:</b>	x	x	x					x	x	x																
Sw	• Test software with standard Microsoft accessibility icons. Such as; Sticky keys, filter keys, toggle keys, soundsentry, showsounds Magnifier, Narrator, On-Screen keyboard, Utility Manager	x	x	x					x	x	x	X															List items not narrated.
1194.21c	<b>On-Screen and Programmically Focus Tracking</b>	x	x	x					x	x	x																
Sw	• <b>For On-Screen Focus:</b> Unplug the mouse. Using the keyboard, navigate through the software, especially menus, dialogs, forms and property boxes. Verify the visual focus is clearly visible and easy to identify when you tab or arrow to the next object.	x	x	x					x	x	x	O															Nav bar only accessible using "CTRL1" - Unable to switch to advanced mode.
Sw	• <b>For Programmatically exposed Focus:</b> Run <i>Magnifier</i> . As you navigate through the software, verify Magnifier tracks the focus indicator and displays it in the Magnifier window.	x	x	x					x	x	x	X															Advanced mode.
1194.21d	<b>Provide semantic information about user interface objects.</b>	x	x	x					x	x	x																
Sw	• Run <i>Inspect Objects</i> . As you position the mouse over objects, verify that the name, role, and state fields are available. • If any fields are blank or have incorrect information, this rule is not met. • <i>Inspect Objects</i> is part of the MS Platform SDK and can be ordered: <a href="http://msdn.microsoft.com/library/default.asp?url=/library/en-us/msaa/msaacgd_62yb.asp">http://msdn.microsoft.com/library/default.asp?url=/library/en-us/msaa/msaacgd_62yb.asp</a> • Displays, at a minimum, text content, text input caret location, and text attributes.	x	x	x					x	x	x	O															XP - Name field in menu header blank. - All name fields in menu pull down are blank.
1194.21e	<b>Constant Icon Meaning</b>	x	x	x					x	x	x																
Sw	Consistently maintain control/meaning of icon's/bitmap within applications.	x		x					x	x	x	X															
1194.21f	<b>Provide text through standard system API which supports interaction with assistive technology</b>	x	x	x					x	x	x																
Sw	• Run <i>Inspect Objects</i> . As you position the mouse over objects, verify that the name, role, and state fields are available. • If any fields are blank or have incorrect information, this checkpoint is not met. • <i>Inspect Objects</i> is part of the MS Platform SDK and can be ordered: <a href="http://msdn.microsoft.com/library/default.asp?url=/library/en-us/msaa/msaacgd_62yb.asp">http://msdn.microsoft.com/library/default.asp?url=/library/en-us/msaa/msaacgd_62yb.asp</a>	x	x	x					x	x	x	O															XP - Name field in menu header blank. - All name fields in menu pull down are blank.
1194.21g	<b>Adhere to Window's High Contrast Schemes and Setting</b>	x	x	x					x	x	x																
Sw	• Choose a high contrast scheme from the Appearance Tab under Start-Settings-Display and check for adherence to the displayed example.	x	x	x					x	x	x	X															Unable to see focus in nav bar in white.
1194.21h	<b>Provide accessible alternatives to significant audio and video</b>	x	x	x					x	x	x																
Sw	• Test the portion of the software which provides audio and video output. Verify the information in the audio is available as text transcript or captions with the audio.	x	x	x					x	x	x		X														
Sw	• Test the portion of the software which provides audio and video output. Verify the information in the video is accessible with a text or audio description of the video.	x	x	x					x	x	x		X														
1194.21i	<b>Software Color Coding</b>	x	x	x					x	x	x																
Fw/Sw/El	• Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. (e.g. Dual-Color LED with same blink rate for two different states)	x	x	x					x	x	x	X															
Mc	• Does any of the keyboard key legends convey information by color alone?	x	x	x					x	x	x																
1194.21j	<b>Color and Contrast settings</b>	x	x	x					x	x	x																

EITAS #	TEST FEATURES	PRODUCTS TO BE TESTED								OPERATING SYSTEMS												COMMENTS				
										Win2000/NT/XP			Win98/Me			Win CE			Other O/S				Hardware			
										Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A		Pass	Fail	N/A	
<b>Test Group</b>	<=Test Group Responsibility Abbreviations: Sw - Software Functional Area    Mc - Mechanical Functional Test EL - Electrical Functional Test    Fw - Firmware Functional Test CT - Compatibility Test            NTR - No Test Required	Desktop	Work Station	Portables	Thin Client	Displays	Projectors	Kiosk	O/S	Handheld	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	
Sw	• If an application allows the user to adjust the color and contrast setting, a variety of color selections capable of producing a range of contrast levels shall be provided.	x	x	x		x	x	x	x	x			X			X										
1194.21k	<b>Software Blinking or Flashing - NOT between greater than 2Hz and less than 55Hz. (e.g. not &gt; 2Hz and &lt; 55Hz)</b>	x	x	x		x	x	x	x	x																
Fw/Sw/EL	• Verify that software does NOT blink or flash text, objects, or other elements between >2Hz and <55Hz.	x	x	x		x	x	x	x	x																
1194.21l	<b>Electronic Forms</b>	x	x	x				x	x	x																
Sw	• Electronic forms must be accessible by keyboard or by use of assistive technology. Such as, can all tick boxes inside a software application be checked by using keyboard only?	x	x	x				x	x	x	X					X										
1194.23k.1	<b>Provide keys which are tactilely discernible without activating them.</b>	x	x	x	x	x	x	x	x	x																
Mc	• All individual keys must be located and distinguished from adjacent keys by touch without activation.	x	x	x	x	x	x	x		x																
Mc	• All systems that utilize a mouse touch pad or touch sensitive controls must have a work around.	x	x	x	x	x	x	x		x																
1194.23k.2	<b>Mechanical operated controls shall be accessible to a person with limited dexterity</b>	x	x	x	x	x	x	x		x																
Mc	• All keys which are required on a regular basis for normal operation shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls and keys shall be 5 lbs or less.	x	x	x	x	x	x	x		x																
Fw/Mc/EL	• Also applies to One-Handed Power-Off for system lock-up (Provide short procedure)	x	x	x	x					x																
Mc	• Also applies to One-Handed Lid Release Latch (e.g. Portable Computer Lid)			x																						
Mc	• Also applies to One Handed Battery Swap (Provide short procedure)			x																						
Mc	• Also applies to One-Handed Multibay Swap (Provide short procedure)	x	x	x																						
Mc	• List location of all externally accessible drives (e.g. floppy drive located on front of PC)	x	x	x																						
Mc	• List location of external speaker/head phone jack.	x	x	x						x																
Mc	• List location of Mechanical Volume Control	x	x	x						x																
1194.23k.3	<b>Key Repeat Rate</b>	x	x	x				x	x	x																
Sw	• If key repeat is supported, the delay before repeat shall be adjustable to at least 2 seconds. In Windows 2000 the adjustment key repeat rate is located in the keyboard icon in the Control Panel.	x	x	x				x	x	x	X					X										
1194.23k.4	<b>Toggle LED Indication</b>	x	x	x	x	x	x	x	x	x																
Sw	• Provides auditory (Microsoft ShowSounds) and visual feedback (LED) of all toggle key state?	x	x	x	x	x	x	x	x	x			X			X										
<b>Section 1194.24 Video and Multimedia Products</b>																										
1194.24a	<b>Multimedia - Displays</b>			x		x		x	x																	
EL	• All analog television displays 13 inches and larger, and computer equipment that includes analog television receiver or display circuitry shall be equipped with closed caption decoder circuitry.			x		x		x																		
1194.24b	<b>Multimedia - Television Tuner Cards</b>	x	x	x		x		x	x	x																
Sw	• If television tuner cards become standard, ensure that television tuner cards are equipped with a secondary audio playback circuitry and a closed caption decoder, or software closed caption decoder - as is done in the InterVideo WinDVD software.	x	x	x		x		x	x	x			X			X										

EITAS #	TEST FEATURES	PRODUCTS TO BE TESTED										OPERATING SYSTEMS												COMMENTS			
												Win2000/NT/XP			Win98/Me			Win CE			Other O/S				Hardware		
		Desktop	Work Station	Portables	Thin Client	Displays	Projectors	Kiosk	O/S	Handheld	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	Pass		Fail	N/A	
<b>Test Group</b>	<=Test Group Responsibility Abbreviations: Sw - Software Functional Area    Mc - Mechanical Functional Test EL - Electrical Functional Test    Fw - Firmware Functional Test CT - Compatibility Test            NTR - No Test Required																										
1194.24c	<b>Multimedia - Textual Information</b>																										
NTR	• Provides textual information (e.g. captions) for non-decorative visual multimedia elements?																										
1194.24d	<b>Multimedia - Audio Information</b>																										
NTR	• Provides audio description information for visual multimedia elements?																										
1194.24e	<b>Multimedia - User Selectable</b>																										
NTR	• Textual information and audio information are user selectable (unless permanent)?																										
<b>Section 1194.25 Self Contained, Closed Products</b>																											
1194.25a	<b>Assistive Technology for self-contained or closed products</b>																										
Sw	• Does not requiring an end-user to attach assistive technology to the product? (Personal headsets for private listening are not assistive technology.)																										
1194.25b	<b>Time Response</b>																										
Fw/Sw	• If a time response is imposed, allows the user enough time to select additional time?																										
1194.25c	<b>Touchscreens or Contact Sensitive Controls</b>																										
Sw	• For products that utilize touchscreens or contact sensitive controls, is an alternative input method provided that complies with 1194.23k.1-1194.23.k.4?																										
1194.25d	<b>Biometric Forms of User Identification</b>																										
Sw	• If biometrics is standard, is alternate login method provided?																										
1194.25e	<b>DVD, VCD, and Audio Files</b>																										
Sw	• When products provide auditory output, the audio signal shall be provided at a standard signal level through an industry standard connector that will allow for private listening. The product must provide that ability to interrupt, pause, and restart the audio at anytime.																										
1194.25f	<b>Voice Output</b>																										
Sw	• When products deliver voice output in a public area, incremental volume control shall be provided with output amplification up to a level of at least 65 dB.																										
Sw	• A function shall be provided to automatically reset the volume to default level after every use.																										
1194.25g	<b>Color Coding</b>																										
Sw	• Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.																										
Mc	• Do any of the keyboard key legends convey information by color alone?																										
1194.25h	<b>Color and Contrast settings</b>																										
Sw/Fw	• If an application allows the user to adjust the color and contrast setting, a variety of color selections capable of producing a range of contrast levels shall be provided.																										
1194.25i	<b>Screen Flicker and Blink - NOT between greater than 2Hz and less than 55Hz. (e.g. not &gt; 2Hz and &lt; 55Hz)</b>																										
Sw	• Verify that products not cause screen to flicker or blink between > 2Hz and < 55Hz																										
1194.25j	<b>Freestanding and Non-Portable Products</b>																										
Mc	• Products which are freestanding, non-portable, and intended to be used in one location and which have operable controls shall comply with 1194.25j.1-1194.25j.4																										
1194.25j.1	<b>Freestanding and Non-Portable Products - Position of Operable Controls</b>																										

EITAS #	TEST FEATURES	PRODUCTS TO BE TESTED								OPERATING SYSTEMS												COMMENTS				
										Win2000/NT/XP			Win98/Me			Win CE			Other O/S				Hardware			
		Desktop	Work Station	Portables	Thin Client	Displays	Projectors	Kiosk	O/S	Handheld	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail		N/A	Pass	Fail	N/A
Test Group	<=Test Group Responsibility Abbreviations: Sw - Software Functional Area    Mc - Mechanical Functional Test EL - Electrical Functional Test    Fw - Firmware Functional Test CT - Compatibility Test            NTR - No Test Required																									
Mc	• The position of any operable control shall be determined with respect to a vertical plane, which is 48 inches in length, centered on the operable control, and at the maximum protrusion of the product within the 48 inch length (see Figure 1).								x																	
1194.25j.2	<b>Freestanding and Non-Portable Products - Position of Operable Controls</b>								x																	
Mc	• Where any operable control is 10 inches or less behind the reference plane, the height shall be 54 inches maximum and 15 inches minimum above the floor.								x																	
1194.25j.3	<b>Freestanding and Non-Portable Products - Position of Operable Controls</b>								x																	
Mc	• Where any operable control is more than 10 inches and not more than 24 inches behind the reference plane, the height shall be 46 inches maximum and 15 inches minimum above the floor								x																	
1194.25j.4	<b>Freestanding and Non-Portable Products - Position of Operable Controls</b>								x																	
Mc	• Operable controls shall not be more than 24 inches behind the reference plane (see Figure 2).								x																	
<b>Section 1194.26 Desktop and Portable Computers</b>																										
1194.26a	<b>Mechanical Operated Controls</b>	x	x	x	x	x																				
Mc	• All mechanically operated controls and keys shall comply with 1194.23.k.1 through 1194.23.k.4	x	x	x	x	x																				
1194.26.b	<b>Touchscreens or Touch-Operated Controls</b>	x	x	x	x	x																				
Sw	• If a product utilizes touchscreens or touch-operated controls, an input method shall be provided that complies with 1194.23.k.1 through 1194.23.k.4	x	x	x	x	x																				
1194.26.c	<b>Biometric Forms of User Identification</b>	x	x	x	x																					
Sw	• If biometrics is standard, is alternate login method provided?	x	x	x	x																					
1194.26.d	<b>Ports, Jacks and Connectors</b>	x	x	x	x	x																				
EL	• All ports, jacks and connectors are industry standard and not proprietary.	x	x	x	x	x																				
<b>Section 1194.31 Functional Performance Criteria</b>																										
1194.31a	<b>Operation and Information Retrieval - User Vision</b>	x	x	x	x	x	x	x	x																	
CT	• At least one mode of operation and information retrieval that does not require user vision shall be provided.	x	x	x	x	x	x	x	x																	
Fw	• Does this system have the Power -On Password with Audio Notification?	x	x	x																						
CT	• Compatibility testing with JAWS	x	x	x																						
CT	• Compatibility testing with Windows-Eyes	x	x	x																						
CT	• Compatibility testing with Opera	x	x	x																						
CT	• Compatibility testing with IBM Home Page Reader	x	x	x																						
CT	• Compatibility testing with IBM Via Voice Professional edition	x	x	x																						
CT	• Compatibility testing with Naturally Speaking Professional Solution	x	x	x																						
1194.31b	<b>Operation and Information Retrieval - Visual Acuity Greater than 20/70</b>	x	x	x	x	x	x	x	x																	
CT	• At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently.	x	x	x	x	x	x	x	x																	

EITAS #	TEST FEATURES	PRODUCTS TO BE TESTED										OPERATING SYSTEMS												COMMENTS	
												Win2000/NT/XP			Win98/Me			Win CE			Other O/S				Hardware
		Desktop	Work Station	Portables	Thin Client	Displays	Projectors	Kiosk	O/S	Handheld	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	Pass		Fail
CT	• Compatibility testing with Zoom Test Xtra 7.0 Level 2	x	x	x																					
1194.31c	<b>Operation and Information Retrieval - User Hearing</b>	x	x	x	x	x	x	x	x	x															
CT	• At least one mode of operation and information retrieval that does not require user hearing shall be provided.	x	x	x	x	x	x	x	x	x															
CT	• All software should support Microsoft ShowSoulds if possible.	x	x	x																					
1194.31d	<b>Operation and Information Retrieval - Enhanced Auditory Fashion</b>	x	x	x	x	x	x	x	x	x															
CT	• Where audio information is important for the use of a product, at least one mode of operation and information retrieval shall be provided in an enhanced auditory fashion.	x	x	x	x	x	x	x	x	x															
CT	• Compatibility testing with JAWS	x	x	x																					
CT	• Compatibility testing with Windows-Eyes	x	x	x																					
CT	• Compatibility testing with Opera	x	x	x																					
CT	• Compatibility testing with IBM Home Page Reader	x	x	x																					
1194.31e	<b>Operation and Information Retrieval - User Speech</b>	x	x	x	x	x	x	x	x	x															
CT	• At least one mode of operation and information retrieval that does not require user speech shall be provided.	x	x	x	x	x	x	x	x	x															
CT	• No software shall be speech recognition only, always allow keyboard input.	x	x	x	x					x	x	x													
1194.31f	<b>Operation and Information Retrieval - Fine Motor Control</b>	x	x	x	x	x	x	x	x	x															
Fw/Mc/EL	• All keys which are required on a regular basis for normal operation shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls and keys shall be 5 lbs or less.	x	x	x	x	x	x	x	x	x															
Fw/Mc/EL	• Also applies to One-Handed Power-Off for system lock-up (List Short procedure)	x	x	x																					
Mc	• Also applies to One Handed Battery Swap			x																					
Mc	• Also applies to One-Handed Multibay Swap	x	x	x																					
Mc	• Also applies to One-Handed Lid Release Latch (e.g. Portable Computer)			x																					
Fw	• FN key acts as a Microsoft StickyKey. Verify that multiple key strokes (e.g. FN+F5 for speaker volume) can be activated using only one finger.			x																					
CT	• Does the display/panel have On-Screen Display (??On-Screen Keyboard Display??)									x															
CT	• Is the display/panel repositionable			x						x															
CT	• Compatibility testing with IBM Via Voice Professional edition	x	x	x																					
CT	• Compatibility testing with Naturally Speaking Professional Solution	x	x	x																					
CT	• Compatibility testing with Headmaster Plus	x	x	x																					
CT	• Compatibility testing with Tracker 2000	x	x	x																					
CT	• Compatibility testing with ScreenDoor 2000	x	x	x																					
CT	• Compatibility testing with WISP 2000	x	x	x																					

EITAS #	TEST FEATURES	PRODUCTS TO BE TESTED								OPERATING SYSTEMS						COMMENTS						
										Win2000/NT/XP		Win98/Me		Win CE			Other O/S		Hardware			
Test Group	<=Test Group Responsibility Abbreviations: Sw - Software Functional Area    Mc - Mechanical Functional Test EL - Electrical Functional Test    Fw - Firmware Functional Test CT - Compatibility Test            NTR - No Test Required	Desktop	Work Station	Portables	Thin Client	Displays	Projectors	Kiosk	O/S	HandHeld	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A

**Tools:**

**Magnifier** is a Windows tool which allows you to magnify a portion of the screen which is then displayed in a separate magnifier window. Magnifier tracks the focus so it can automatically keep the active area in the magnifier window.

If you are running on Windows 98 or Windows 2000, you can load Magnifier by going to the Start menu and selecting Programs, Accessories, Accessibility, and then Magnifier.

When you start Magnifier, verify the following options are selected:

- Follow mouse cursor
- Follow keyboard focus
- Follow text editing
- Show magnifier

**Inspect Objects** is an application provided by Microsoft as part of the Software Development Kit (SDK) for Active Accessibility. Inspect can be used to validate the accessibility of software user interface elements which use Microsoft® Active Accessibility® or standard windows controls. It supports software written for the Windows 9x, Windows NT or Windows 2000 platforms. Inspect can be downloaded as part of the Microsoft SDK by going to <http://www.microsoft.com/enable/download/msaa/msaasdk.exe>. There is no charge to download and use the SDK.

Once the SDK has been installed, go to the Program Menu, select Microsoft Active Accessibility SDK and then Inspect Objects. When Inspect is loaded, it displays information about the properties of an object as you select the object with the keyboard or move the mouse over the object. If the software uses Windows standard controls, or if the controls are non-standard and MSAA has been implemented, Inspect will report the information. If the software uses custom controls which are not exposed through MSAA, the properties will be blank and the controls are not accessible. The following properties may be exposed by the application.

- Name - a string used to identify, find or announce an object (e.g., text on a button or tab, prompt on an entry field).
- Role - describes what kind of user interface element an object is (e.g., push button, radio button, check box, combo box, edit box, page tab).
- State - describes an object's current status (e.g., selected, focused, selectable, unavailable, checked, unchecked).
- Value - represents visual information contained by the object. For example, the value for a link is the URL for the link, an edit field may have default text, the current item in a combobox.
- Description - provides a textual description of the object.
- Help - provides information that tells the user about an object's function. This is typically used for balloon style information (e.g. ToolTips).
- KeyboardShortcut - describes a key or key combination that will activate a specified object.
- DefaultAction - describes the object's primary method of manipulation.