Working with Autodesk Inventor 2010 Family of Software and Section 508

Section 508 requires that federal agencies' electronic and information technology is accessible to people with disabilities. The Center for Information Technology Accommodation (CITA), in the U.S. General Services Administration's Office of Government-wide Policy, has been charged with the task of educating federal employees and building the infrastructure necessary to support Section 508 implementation.

With this white paper, Autodesk offers background information to help our customers understand the accessibility features of the Autodesk® Inventor® 2010 family of software, in the context of the Section 508 standards. This was done with the intent to enable agencies to be compliant with the Section 508 regulations.

The document contains subsets of the Electronic and Information Technology Accessibility Standards as published in 36 CFR Part 1194 and provides an analysis of the Autodesk Inventor 2010 family of software as compared to these standards.

For the purposes of this paper, "Inventor" refers to Autodesk Inventor 2010 software, Autodesk Inventor Routed Systems 2010 software, Autodesk Inventor Simulation 2010 software, Autodesk Inventor Tooling 2010 software, Autodesk Inventor Professional 2010 software, and Autodesk Inventor LT™ 2010 software.

The first table of the Template provides a summary view of the section 508 Standards. The subsequent tables provide more detailed views of each subsection.

There are three columns in each table. Column one of the Summary Table describes the subsections of subparts B and C of the Standards. The second column describes the supporting features of the product or refers you to the corresponding detailed table, "e.g., equivalent facilitation." The third column contains any additional remarks and explanations regarding the product. In the subsequent tables, the first column contains the lettered paragraphs of the subsections. The second column describes the supporting features of the product with regard to that paragraph. The third column contains any additional remarks and explanations regarding the product.

This document is not intended to be a certification of compliance. This template is based upon version 1.2 (5/6/2004) supplied by the U.S. Government.

More information on Section 508 can be found on the Government's website located at: http://www.section508.gov/.

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Table 1		
Summary Table		
Standards	**Status** **(Complete, Not Applicable, In progress)**	**Remarks and explanations**
Section 1194.21 Software Applications and Operating Systems	Completed	Details see Table2 below
Section 1194.22 Web-based Internet Information and Applications	Not Applicable	
Section 1194.23 Telecommunications Products	Not Applicable	
Section 1194.24 Video and Multi-media Products	Not Applicable	
Section 1194.25 Self-Contained, Closed Products	Not Applicable	
Section 1194.26 Desktop and Portable Computers	Not Applicable	
Section 1194.31 Functional Performance Criteria	Completed	Details see Table3 below
Section 1194.41 Information, Documentation and Support	Completed	Details see Table4 below

Table 2		
Section 1194.21 Software Applications and Operating Systems		
Criteria	**Compliance Status** **C = Compliant** **CM = Compliant with Modification** **UI = Under Investigation** **NA = Not applicable**	**Remarks and explanations**
(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.	C	All product functions can be executable through keyboard. Command Aliases enable the user to input keys that map to all commands and provide feedback next to the cursor. This functionality requires customization of the base product (mapping keys to every command).Inventor is compatible with the Windows On-Screen keyboard.
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	CM	Inventor cannot support High Contrast well (many context/icon/checkbox in the menu/dialog may not be displayed; Panel Bar in Ribbon UI cannot support High Contrast). AT Narrator works well on Classic UI, does not support XP-Ribbon UI well. The voice on Vista is smoother than on XP. AT Magnifier works well on Classic UI, does not support Ribbon UI well.

(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	C	The Windows API could be used to have full access to any on-screen activity (commands like SENDMESSAGE,GETWINDOW,GETDLGITEM, etc). The focus should be easily captured and right changed by clicking "Tab", Inventor has issues on some dialogs currently.
(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.	C	All Inventor icons have a tooltip (text) and can have a shortcut key. Icons in the toolbar also have an extended mode where icon plus text is shown. The Narrator can find identity, operation, state of toolbars, (context) menus, checkboxes, tabs and dropdown menus.
(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	C	Bitmap images and actions associated with them are consistent.
(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	C	TextBox object in the API has Text method for content, origin method for location and the kinds of attribute methods like color etc.
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	C	Inventor permits users to change color settings. It complies with 1194.21(j).

(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	C	Animations are available in multiple areas of the product (Studio, constraint animations, DS, Presentation, Help system). All these animations can be run step by step at the user's choice.
(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	CM	In 2D environment, selecting edges is distinguished by Color.
(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.	C	Inventor provides a wide variety of color selections. The user has the ability to customize the application window and other interface elements. Users can also use pre-defined named color styles.
(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	C	Inventor does not use flashing or blinking text.
(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	C	Microsoft Active Accessibility applications such as the Narrator, Magnifier and the On-screen keyboard can be used to access particulars of the components of a form/dialog box.

Table 3		
Section 1194.31 Functional Performance Criteria		
Criteria	**Compliance Status** **C = Compliant** **CM = Compliant with Modification** **UI = Under Investigation** **NA = Not applicable**	**Remarks and explanations**
(a) At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for Assistive Technology used by people who are blind or visually impaired shall be provided.	NA	
(b) 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, or support for Assistive Technology used by people who are visually impaired shall be provided.	CM	No audio is available in the product. Keyboard navigation is provided for all Menu commands. Also, Command Alias input allows the user to type in commands and other input. This text input can be enlarged through our product options. Microsoft Active Accessibility applications like the Narrator and the Magnifier can be used to access particulars of the components of a form/dialog box.
(c) At least one mode of operation and information retrieval that does not require user hearing shall be provided, or support for Assistive Technology used by people who are deaf or hard of hearing shall be provided.	C	Inventor does not require user hearing in order to operate the software.
(d) 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, or support for assistive hearing devices shall be provided.	C	Inventor does not require user hearing in order to operate the software.

(e) At least one mode of operation and information retrieval that does not require user speech shall be provided, or support for Assistive Technology used by people with disabilities shall be provided.	C	Inventor does not require user speech in order to operate the software.
(f) At least one mode of operation and information retrieval that does not require fine motor control or simultaneous actions and that is operable with limited reach and strength shall be provided.	C	Keyboard navigation is provided for all menu commands in Inventor. Also, a Command Alias Input allows the user to type in commands and other input. The ViewCube and SteeringWheels functionality allows manipulation of objects on the graphic screen with a single mouse button. Inventor also runs on tablet PCs.

Table 4

Section 1194.41 Information, Documentation and Support

Criteria	Compliance Status C = Compliant CM = Compliant with Modification UI = Under Investigation NA = Not applicable	Remarks and explanations
(a) Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge.	C	Support documentation is available within the product, as hardcopy, or as Adobe PDF.
(b) End-users shall have access to a description of the accessibility and compatibility features of products in alternate formats or alternate methods upon request, at no additional charge.	C	This document is posted on our website at http://www.autodesk.com . Search for "Section 508"
(c) Support services for products shall accommodate the communication needs of end-users with disabilities.	C	Support services options are available via webpage, e-mail, fax, or phone. Direct, inperson support is also available through resellers.