VPAT™

Voluntary Product Accessibility Template®

Version 1.3

The purpose of the **Voluntary Product Accessibility Template, or VPAT™**, is to assist Federal contracting officials and other buyers in making preliminary assessments regarding the availability of commercial "Electronic and Information Technology" products and services with features that support accessibility. It is assumed and recommended that offerers will provide additional contact information to facilitate more detailed inquiries.

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.

Date: 7 July 2014
Name of Product: Beckman Coulter MoFlo XDP with Summit software 5.x
Contact for more Information (name/phone/email): Andrew Lister / (206)549-8708 / alister@beckman.com

Summary Table

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Criteria	Supporting Features	Remarks and explanations
Section 1194.21 Software Applications and Operating	Supports with Exceptions	A fundamental component of flow

Systems		cytometry is high-order multiparametric data display, up to 1,000,000 events and 20 independent parameters, or more. This is incapable of practical reduction to a purely text based description.
Section 1194.22 Web-based Internet Information and Applications	Not Applicable	Not a web-based application
Section 1194.23 Telecommunications Products	Not Applicable	Not a telecommunications product. Answers for k(1) to k(4) provided in support of other sections cross referencing.
Section 1194.24 Video and Multi-media Products	Not Applicable	Not a video / multi-media product
Section 1194.25 Self-Contained, Closed Products	Supports with Exceptions	While many functions are amenable to adaptation to variously disabled persons, certain visual functions are so fundamental to flow cytometry that they cannot be satisfactorily worked around, even with the addition of separate assistive technology.
Section 1194.26 Desktop and	Supports with	The desktop

| Portable Computers | Exceptions | Summit workstation supports the requirements.

Exceptions may be encountered with the separate built-in processor and non-haptic touch-screen. |
|---|---|---|
| Section 1194.31 Functional Performance Criteria | Supports with Exceptions | Refer to remark above regarding self-contained, closed products. |
| Section 1194.41 Information, Documentation and Support | Supports | Additional formats of user guides are available on demand to instrument purchasers/ operators |

Section 1194.21 Software Applications and Operating Systems – Detail

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Criteria	Supporting Features	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	Supports	Summit software on the instrument workstation uses all standard

discerned textually.		Microsoft Windows features such as keyboard shortcuts for commands and menu items.
(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.	Supports	Summit software supports all standard Microsoft Windows Accessibility features.
(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.	Supports	Summit software shows current focus by highlighting current window, editable text, Menus and sub-menus, etc. These features are exposed via standard built-in MS Windows assistive technology features.
(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	Supports with exceptions	See previous answer for supporting features.

image represents a program element, the information conveyed by the image must also be available in text.		Single and dual parameter histograms (for example, dot plots and contour plots) are critical display methods for flow cytometric data display, and are not reducible to text descriptions.

Regions of interest, used to define sort populations and analysis subsets similarly cannot be meaningfully rendered into human-intelligible textual descriptions. |
| (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. | Supports | Summit software uses graphics consistently on controls |
| (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. | Supports | Summit software employs normal MS Windows text manipulation tools whenever appropriate, and includes the minimum information |

		required.
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supports	Summit software does not over-ride system-wide visual display settings adjustable by the user in MS Windows.
(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Not applicable	There are no animations in Summit software.
(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.	Supports	Summit software makes extensive use of color to encode information but the operator can adjust colors or use alternate display and gating techniques to exhibit the same data subsets.
(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.	Supports	Summit software provides a full color selection palette including shades of grey for identification of specific data subsets.
(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink	Supports	Summit software does not use flashing

frequency greater than 2 Hz and lower than 55 Hz.		cursors or other graphical elements within the prohibited range of frequencies.
(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.	Not applicable	Summit software does not utilize forms.

Section 1194.22 Web-based Internet information and applications – Detail

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Criteria	Supporting Features	Remarks and explanations
(a) A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).		
(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.		
(c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.		
(d) Documents shall be organized so they are readable without		

requiring an associated style sheet.			
(e) Redundant text links shall be provided for each active region of a server-side image map.			
(f) Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.			
(g) Row and column headers shall be identified for data tables.			
(h) Markup shall be used to associate data cells and header cells for data tables that have two or more logical levels of row or column headers.			
(i) Frames shall be titled with text that facilitates frame identification and navigation			
(j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.			
(k) A text-only page, with equivalent information or functionality, shall be provided to make a web site comply with the provisions of this part, when compliance cannot be accomplished in any other way. The content of the text-only page shall be updated whenever the primary page changes.			
(l) When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by Assistive Technology.			
(m) When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content,			

the page must provide a link to a plug-in or applet that complies with §1194.21(a) through (l).		
(n) When electronic forms are designed to be completed on-line, 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.		
(o) A method shall be provided that permits users to skip repetitive navigation links.		
(p) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.		

Note to 1194.22: The Board interprets paragraphs (a) through (k) of this section as consistent with the following priority 1 Checkpoints of the Web Content Accessibility Guidelines 1.0 (WCAG 1.0) (May 5 1999) published by the Web Accessibility Initiative of the World Wide Web Consortium: Paragraph (a) - 1.1, (b) - 1.4, (c) - 2.1, (d) - 6.1, (e) - 1.2, (f) - 9.1, (g) - 5.1, (h) - 5.2, (i) - 12.1, (j) - 7.1, (k) - 11.4.

http://www.itic.org/Local Settings/Temporary Internet Files/OLK42/VPAT.html

Section 1194.23 Telecommunications Products

– Detail

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Criteria	Supporting Features	Remarks and explanations
(a) Telecommunications products or		

systems which provide a function allowing voice communication and which do not themselves provide a TTY functionality shall provide a standard non-acoustic connection point for TTYs. Microphones shall be capable of being turned on and off to allow the user to intermix speech with TTY use.			
(b) Telecommunications products which include voice communication functionality shall support all commonly used cross-manufacturer non-proprietary standard TTY signal protocols.			
(c) Voice mail, auto-attendant, and interactive voice response telecommunications systems shall be usable by TTY users with their TTYs.			
(d) Voice mail, messaging, auto-attendant, and interactive voice response telecommunications systems that require a response from a user within a time interval, shall give an alert when the time interval is about to run out, and shall provide sufficient time for the user to indicate more time is required.			
(e) Where provided, caller identification and similar telecommunications functions shall also be available for users of TTYs, and for users who cannot see displays.			
(f) For transmitted voice signals, telecommunications products shall provide a gain adjustable up to a minimum of 20 dB. For incremental volume control, at least one intermediate step of 12 dB of gain shall be provided.			
(g) If the telecommunications product allows a user to adjust the			

receive volume, a function shall be provided to automatically reset the volume to the default level after every use.		
(h) Where a telecommunications product delivers output by an audio transducer which is normally held up to the ear, a means for effective magnetic wireless coupling to hearing technologies shall be provided.		
(i) Interference to hearing technologies (including hearing aids, cochlear implants, and assistive listening devices) shall be reduced to the lowest possible level that allows a user of hearing technologies to utilize the telecommunications product.		
(j) Products that transmit or conduct information or communication, shall pass through cross-manufacturer, non-proprietary, industry-standard codes, translation protocols, formats or other information necessary to provide the information or communication in a usable format. Technologies which use encoding, signal compression, format transformation, or similar techniques shall not remove information needed for access or shall restore it upon delivery.		
(k)(1) Products which have mechanically operated controls or keys shall comply with the following: Controls and Keys shall be tactilely discernible without activating the controls or keys.	Supports with exceptions	All alignment controls are physically discernible. Instrument workstation supports standard Windows accessibility

		options.
		Embedded touchscreen does not have haptic capability that would enable tactile discernment of specific button areas.
(k)(2) Products which have mechanically operated controls or keys shall comply with the following: Controls and Keys shall be operable with one hand and shall not require tight grasping, pinching, twisting of the wrist. The force required to activate controls and keys shall be 5 lbs. (22.2N) maximum.	Supports	All controls meet requirement.
(k)(3) Products which have mechanically operated controls or keys shall comply with the following: If key repeat is supported, the delay before repeat shall be adjustable to at least 2 seconds. Key repeat rate shall be adjustable to 2 seconds per character.	Supports with exceptions	Instrument workstation supports standard Windows accessibility options, including user-adjustable repeat rate. Embedded touchscreen does not expose this level of control to the user.
(k)(4) Products which have mechanically operated controls or keys shall comply with the following: The status of all locking or toggle controls or keys shall be visually discernible, and discernible either through touch or sound.	Supports	Summit software runs on a standard MS Windows workstation which has visual

		indications when keys are locked or toggled.

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Section 1194.24 Video and Multi-media Products – Detail

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Criteria	Supporting Features	Remarks and explanations
a) All analog television displays 13 inches and larger, and computer equipment that includes analog television receiver or display circuitry, shall be equipped with caption decoder circuitry which appropriately receives, decodes, and displays closed captions from broadcast, cable, videotape, and DVD signals. As soon as practicable, but not later than July 1, 2002, widescreen digital television (DTV) displays measuring at least 7.8 inches vertically, DTV sets with conventional displays measuring at least 13 inches vertically, and stand-alone DTV tuners, whether or not		

they are marketed with display screens, and computer equipment that includes DTV receiver or display circuitry, shall be equipped with caption decoder circuitry which appropriately receives, decodes, and displays closed captions from broadcast, cable, videotape, and DVD signals.			
(b) Television tuners, including tuner cards for use in computers, shall be equipped with secondary audio program playback circuitry.			
(c) All training and informational video and multimedia productions which support the agency's mission, regardless of format, that contain speech or other audio information necessary for the comprehension of the content, shall be open or closed captioned.			
(d) All training and informational video and multimedia productions which support the agency's mission, regardless of format, that contain visual information necessary for the comprehension of the content, shall be audio described.			
(e) Display or presentation of alternate text presentation or audio			

descriptions shall be user-selectable unless permanent.		

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Section 1194.25 Self-Contained, Closed Products – Detail

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Criteria	Supporting Features	Remarks and explanations
(a) Self contained products shall be usable by people with disabilities without requiring an end-user to attach Assistive Technology to the product. Personal headsets for private listening are not Assistive Technology.	Supports with exceptions	The MoFlo XDP comprises optical components requiring mechanical alignment, and operated by dedicated software via a touchscreen connected to the built-in controller, with a separate workstation operating Summit software running under Microsoft Windows. Various functions may be inaccessible to persons with differing levels of disability. Certain of these elements may be supportable by changes in configuration, but there is no known way to make all functions accessible to certain types of disabled persons, particularly the blind.

(b) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.	Supports	Certain procedures are a combination of manual steps of a few minutes guided by software wizards. Countdown timers indicate time required before the next step is executed. There is no rapid interaction required.
(c) Where a product utilizes touchscreens or contact-sensitive controls, an input method shall be provided that complies with §1194.23 (k) (1) through (4).	Supports with exceptions	Refer to answers given at §1194.23 (k) (1) through (4).
(d) When biometric forms of user identification or control are used, an alternative form of identification or activation, which does not require the user to possess particular biological characteristics, shall also be provided.	Not applicable	No biometric forms of identification are used.
(e) 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 the ability to interrupt, pause, and restart the audio at anytime.	Not applicable	No auditory output is produced.
(f) 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	Not applicable	No voice output is produced.

65 dB. Where the ambient noise level of the environment is above 45 dB, a volume gain of at least 20 dB above the ambient level shall be user selectable. A function shall be provided to automatically reset the volume to the default level after every use.		
(g) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supports with exceptions	Summit software makes extensive use of color to encode information but the operator can adjust colors used or use alternate display and gating techniques to exhibit the same data subsets. Embedded touchscreen does not permit adjustments of display palette.
(h) When a product permits a user to adjust color and contrast settings, a range of color selections capable of producing a variety of contrast levels shall be provided.	Supports with exceptions	See previous answer
(i) Products shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.	Supports with exceptions	During data acquisition, displayed data is updated 10x per second, required to permit fine-tuning optical alignment. "Frame-to-frame" variations in the FIFO data buffer may cause some perceptible flicker in the live data display only. This is by design

		intent, consistent with operation of the instrument, and otherwise beyond the manufacturers control, as it is based upon the nature and rate of sample acquisition. All other screen display components meet the requirement.
(j) (1) Products which are freestanding, non-portable, and intended to be used in one location and which have operable controls shall comply with the following: 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 on products which are freestanding, non-portable, and intended to be used in one location and which have operable controls.	Not applicable	This is only a description of the reference plane, not a compliance criterion
(j)(2) Products which are freestanding, non-portable, and intended to be used in one location and which have operable controls shall comply with the following: Where any operable control is 10 inches or less behind the reference plane, the height shall be 54 inches	Supports	Certain instrument components are configurable or positionable at installation to meet operator requirements.

maximum and 15 inches minimum above the floor.		
(j)(3) Products which are freestanding, non-portable, and intended to be used in one location and which have operable controls shall comply with the following: 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.	Supports with exceptions	The majority of controls are easily accessible, even on more complex systems. The most complex instrument configurations may require some controls being positioned beyond reach of an operator in wheel chair.
(j)(4) Products which are freestanding, non-portable, and intended to be used in one location and which have operable controls shall comply with the following: Operable controls shall not be more than 24 inches behind the reference plane.	Supports with exceptions	See previous answer.

Section 1194.26 Desktop and Portable

Computers – Detail

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Criteria	Supporting Features	Remarks and explanations

(a) All mechanically operated controls and keys shall comply with §1194.23 (k) (1) through (4).	Supports	Refer to answers given at §1194.23 (k) (1) through (4).
(b) If a product utilizes touchscreens or touch-operated controls, an input method shall be provided that complies with §1194.23 (k) (1) through (4).	Supports with Exceptions	Refer to answers given at §1194.23 (k) (1) through (4). The Summit software workstation is separate from the embedded computer with touchscreen control. The touchscreen which provides separate operational controls is not equipped with haptic feedback technology for button detection. The touchscreen also lacks repeat rate adjustments.
(c) When biometric forms of user identification or control are used, an alternative form of identification or activation, which does not require the user to possess particular biological characteristics, shall also be provided.	Not applicable	No biometric forms of identification are used.
(d) Where provided, at least one of each type of expansion slots, ports and connectors shall comply with publicly available industry standards	Not applicable	The dedicated workstation is validated for data acquisition and instrument control in a specific configuration only. Addition of non-standard accessories may invalidate warranty and fitness for purpose.

Section 1194.31 Functional Performance

Criteria – Detail

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Criteria	Supporting Features	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.	Does not support	The essence of flow cytometry is high-order multi-parametric data display, with data acquisition rates potentially as fast as 100,000 events per second, and requiring real-time viewing of multiple performance parameters. It is completely impractical to attempt to reduce this to an entirely non-visual information stream.

Furthermore optical alignment and troubleshooting require a minimum level of visual acuity. There is no practical scope to make the system fully operable by a blind user, and consequently this has informed several other non-supported areas specifically relating to non-sighted individuals. |
| (b) At least one mode of | Supports with exceptions | The Summit workstation |

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.		operates under Microsoft Windows and supports all operating system assistive technology features.

The built-in touch screen is fixed resolution. |
(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	Supports	No auditory systems are present, or required. Level sensors leading to error conditions provide on-screen feedback to the operator.
(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.	Not applicable	No audio information is important for operation.
(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.	Supports	Normal operation does not require user speech.
(f) At least one mode of operation and information retrieval that does not require fine motor control	Does not support	The MoFlo XDP is a precision optical device that requires precise alignment while

		monitoring live data acquisition. This functionality is not well-adapted for people without fine motor control.
or simultaneous actions and that is operable with limited reach and strength shall be provided.		

Section 1194.41 Information, Documentation and Support – Detail

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Criteria	Supporting Features	Remarks and explanations
(a) Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge	Supports	On request, Beckman Coulter will provide alternately formatted Instructions for Use (IFU) to purchasers of the system.
(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.	Supports	Beckman Coulter will provide information regarding accessibility and compatibility upon request without additional charge.
(c) Support services for products shall accommodate the communication needs of end-users with disabilities.	Supports	Beckman Coulter provides access to support services via multiple channels, to accommodate end-users with disabilities.