

**INFORMATION TECHNOLOGY  
 STANDARD ADMINISTRATIVE PROCEDURES**

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**SAP No. 29.01.04.W1.01**

**Information Resources - Accessibility of Electronic and Information Resources**

Approved: April 14<sup>th</sup>, 2010

*Supplements System Regulation 29.01.04*

**1. PURPOSE AND SCOPE**

This procedure is intended to provide a plan by which West Texas A&M University, University contractors and others involved in the creation, maintenance or procurement of electronic and information resources (EIR) for the University may achieve compliance with [Section 508](#) of the Federal Rehabilitation Act (29 U.S.C. 794d), [Texas Government Code Chapter 2054](#), Subchapter M, and the standards and specifications set forth by Texas Administrative Code Title 1, Chapter 206, Subchapter C, §§206.70 ([TAC 206](#)) and Texas Administrative Code Title 1, Chapter 213, Subchapter C, §§213.30 – 213.41 ([TAC 213](#)).

Adherence to this procedure will provide reasonable confidence that all users will be able to successfully access information and services that are available through EIR using assistive technologies or when accessibility is built-in to applications or information technologies. Exceptions to accessibility policies do not eliminate a University department’s responsibility to provide access to information for users with disabilities but instead, allows an exception to the standard means of access described in this procedure.

**2. APPLICABILITY**

The table below outlines the classifications of EIR covered by this procedure. Any EIR that is incidental to the performance of a contract may not be covered by this rule. However, EIR that is used in service delivery, or in the performance of a contract that is likely to involve interaction with both internal and external University EIR users is covered under this rule.

	<b>Internal</b>	<b>External</b>
<b>Content</b>	Applies	Applies
<b>Applications</b>	Applies	Applies
<b>Computer Hardware</b>	Applies	Does Not Apply
<b>Building Maintenance and Monitoring Equipment</b>	Does Not Apply	Does Not Apply
<b>Telecommunications Equipment</b>	Applies	Applies if used to provide University information or services

Office Equipment	Applies	Does Not Apply
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### 3. COMPLIANCE EXCEPTIONS

If after careful evaluation of all available resources and options, a University department determines that compliance with any provision of the accessibility procedure imposes a significant difficulty or expense, the department may request an exception by completing and submitting the EIR Accessibility Exception Request Form found at this link:

[http://www.wtamu.edu/webres/File/About/Accessibility/WT\\_Form\\_EIR\\_Accessibility\\_Exception\\_Request\\_20100414.pdf](http://www.wtamu.edu/webres/File/About/Accessibility/WT_Form_EIR_Accessibility_Exception_Request_20100414.pdf).

#### Exception Request Process

- A. Determine need for exception:
  - Significant difficulty – No department staff or contractor available qualified to complete the project in an accessible manner.
  - Cost prohibitive – Include cost analysis of cost to achieve accessibility compared with the cost of creating or purchasing an inaccessible resource. This analysis should include the cost of providing and maintaining alternative access.
- B. Complete exception request form and submit to the Office of Information Technology for initial review and forwarding to the University President.
- C. The University President or designee evaluates request to determine if the exception should be approved.
- D. The president approves or denies the request. The president’s decision may not be appealed.
- E. If the exception is approved, an alternative method of access must be provided. (Examples are provided in the next section.)
- F. Approved exceptions will be assigned an expiration date, not to exceed one year, at which time the department must resubmit an exception request or have become compliant.
- G. All processed exception requests will be retained in the Office of Information Technology following established retention of State records policies.

When an exception has been approved, users with disabilities must still be able to access the content or functionality of the inaccessible resource. This may be accomplished by providing one or more of the following alternative methods of access.

- Alternative accessible document types (e.g., PDF, Word, Text, HTML)  
Create a second version of the document in a more accessible format.
- Braille  
A Braille version of the resource may be created to provide access for users who are visually impaired and who read Braille. This method should not be used alone to provide access for users with visual impairments and should usually be accompanied by large print versions.
- Teletypewriter (TTY)

- TTY services may be used to provide access to users with hearing impairments.
- Captioning  
Closed or open captions may be added to multimedia presentations for users with hearing or cognitive impairments.
  - Transcripts  
Transcripts may be used to provide access to audio and audio/visual presentations. These transcripts must include all dialog, and any meaningful information this is presented visually.
  - Text-to-speech (TTS) synthesis  
TTS may provide access for users with visual or cognitive impairments.
  - Recorded audio  
Providing a recording of print based information may provide access to users with visual or cognitive impairments, and can also provide access to some users with limited English proficiency.

Whenever choosing to create multiple versions of documents to provide accessibility for users, a plan should be developed for ensuring that these alternative versions are kept current with the standard version. Departments should consider the cost of creating and maintaining alternative versions when developing a request for an exception to the accessibility procedure.

As a preliminary means of assessing the commercial availability of EIR products and services that support accessibility, departments may use the Web-based “Buy Accessible Wizard” tool (<https://app.buyaccessible.gov/baw/>), provided by the General Services Administration (GSA). All information provided and obtained via the Buy Accessible Wizard tool is based upon vendor self-representation. In addition, Texas DIR (Department of Information Resources) contracted vendors are required to make accessibility information available for every product under DIR contract via completed VPATs (Voluntary Product Accessibility Templates), Buy Accessible Wizard reports or an equivalent. If the desired EIR product or service is not included in the GSA’s Buy Accessible Product and Services Directory and is not under a Texas DIR contract, departments must request a completed VPAT from the desired EIR product or service vendor. Departments then evaluate the vendor’s responses to determine if the product meets accessibility requirements.

As a general exception, this procedure does not require the installation of specific accessibility-related software or the attachment of an assistive technology device at a workstation of a University employee who does not have a disability.

#### **4. MULTIMEDIA (AUDIO/VIDEO) RESOURCES**

*1 TAC §206.70(a)(2) – Upon receiving a request for accommodation of a Web cast of an open meeting (as defined in the Open Meetings Act, Chapter 551, Texas Government Code) or of training/informational video productions which support the institution of higher education’s mission, each institution of higher education which receives such a request for accommodation shall provide an alternative form(s) of accommodation in accordance with §2054.456 and §2054.457, Texas Government Code.*

*1 TAC §213.32(2) – Upon receiving a request for accommodation of a Web cast of training/informational video productions which support the institution of higher education’s mission, each institution of higher education which receives such a request for accommodation shall provide an alternative form(s) of accommodation in accordance with §2054.456 and §2054.457, Texas Government Code.*

Upon request, University departments must make a reasonable effort to provide an alternative presentation of Web-delivered multimedia content. Exceptions due to significant difficulty or expense may only be granted by the University President via the EIR accessibility exception request process.

This section provides guidelines for providing alternative presentation formats for multimedia resources. Typical examples may include the following:

- Captioning of audio/video content (similar to movie subtitles, this could be for the benefit of users with impaired hearing)
- Audio descriptions of audio/video content (this could be for the benefit of users with impaired vision)
- Transcripts of audio/video content

Depending on the constituency accessing these resources, it may be beneficial to provide alternative presentations in more than one language.

## **Captioning**

The appearance of text captions should coincide in time with the corresponding video content. The captions should also contain information about audio content other than on-screen dialog (e.g., music, sound effects). The text captions should convey enough information that they allow users to understand what is happening without being able to hear the audio portion.

The following are resources which may be helpful when providing text captions for video content:

- The MAGpie software from the National Center for Accessible Media (NCAM) ([http://ncam.wgbh.org/invent\\_build/web\\_multimedia/tools-guidelines/magpie](http://ncam.wgbh.org/invent_build/web_multimedia/tools-guidelines/magpie))
- The “captioning key” guidelines from the Described and Captioned Media Program (DCMP) (<http://www.dcmp.org/captioningkey/>)

## **Audio Descriptions**

Audio descriptions are typically additional tracks of spoken narration describing things which can otherwise only be conveyed visually. This narration needs to describe key events to users who would not be able to understand by the presentation’s original audio track alone. A typical challenge in providing an audio description is to do so without interfering with existing dialog and without distracting too much from the action.

Audio description tracks may also need to read any text which appears in the video portion (e.g., on-screen credits, newspaper headlines, billboards). Try to avoid using the phrase “we see” in audio descriptions.

The “description key” guidelines from the Described and Captioned Media Program (DCMP) (<http://www.dcmp.org/ai/descriptionkey/>) may be helpful in determining what information to include in an audio description.

Not all audio content needs an audio description. A keynote address at a graduation ceremony may need little or no supplemental narration.

## **Transcripts**

A transcript of multimedia content should contain all dialog as well as descriptions of any non-spoken content. Preparing a transcript should incorporate guidelines from captioning *and* audio descriptions.

While providing a transcript may be logistically less complicated than providing captioning and/or audio descriptions, a transcript may provide a less than equivalent alternative presentation if *all* of the information conveyed within the original presentation is not included.

## **Televisions**

*1 TAC §213.32(1) – Television tuners, including tuner cards for use in computers, shall be equipped with secondary audio program playback circuitry.*

University televisions and television tuner cards for computers must support secondary audio program playback (i.e., for audio descriptions). This is also a requirement of the Television Decoder Circuitry Act of 1990 (Public Law 101-431) for all televisions with screens at least 13-inches in size. The University should therefore only purchase televisions with screens greater than or equal to 13-inches.

## **5. SELF-CONTAINED PRODUCTS AND OFFICE EQUIPMENT**

This section addresses accessibility requirements for office equipment and products that meet the definition of EIR. The definition of EIR is found in 1 TAC §206.1(10) and 1 TAC §213.1(6).

### **Self-Contained Products**

*1 TAC §213.33(1) - 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.*

Self-contained, closed products are defined as products that generally have embedded software and are commonly designed in such a fashion that a user cannot easily attach or install assistive technology. These products include, but are not limited to, kiosks and information transaction machines, copiers, printers, calculators, fax machines, and other similar products. This procedure requires that self-contained products which do not readily permit the installation of

industry standard assistive technology by end-users must be natively accessible and comply with the following standards.

### **Timed Response**

*1 TAC §213.33(2) - When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.*

Users must be prompted and allowed to request additional time to complete information transactions requiring a timed response. When the user requests additional response time, the system must grant additional time.

### **Touch Screens and Contact-Sensitive Controls**

*1 TAC §213.33(3) - Where a product utilizes touch screens or contact-sensitive controls, an input method shall be provided that complies with Telecommunications products in §213.31(11)(A) – (D) of this subchapter.*

This provision does not prohibit the use of touch screens and contact-sensitive controls, but requires a redundant set of controls that can be used by persons who have access problems with touch screens. The following accessibility requirements apply to product input controls (mechanically operated controls or keys, such as telephone keypads and computer keyboards), but do not apply to touch screen technology.

*1 TAC §213.31(11) – Products which have mechanically operated controls or keys, shall comply with the following:*

*(A) Controls and keys shall be tactilely discernible without activating the controls or keys.*

The controls and keys on a product must be designed and manufactured so that a user may locate and identify them by means of touch alone, without activating them. Keyboards should have navigational bumps on the keys (e.g., the F and J keys on a standard keyboard, or the 5 key on a numeric pad).

*(B) Controls and keys 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. (22.2 N) maximum.*

Mechanically operated controls must be usable with one hand, without particular motions (twisting of the wrist, tight grasping, pinching) or considerable exertion (more than five pounds of force).

*(C) 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.*

To prevent users from making unintended keystrokes, products with key repeat features must allow a two-second delay before repeating a key being held down, and must also allow up to two seconds between each repetition of a key being held down.

*(D) The status of all locking or toggle controls or keys shall be visually discernible, and discernible either through touch or sound.*

Special keys such as the “caps lock” and “scroll lock” keys should be visually discernible, and should alert the user tactilely or with an audible indication that the function has been engaged.

### **Biometric Controls and Identification**

*1 TAC §213.33(4) - 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.*

Biometric controls provide a high level of security. However, user identification and security controls for self-contained products may not solely depend upon fingerprint scans, retina scans, voice recognition, or other biological means of identification or activation. When a system/product needs to be accessed by a person with a disability and that disability prohibits the use of a specific biometric feature, a non-biometric alternative must be provided that does not compromise security. This can often be done through the implementation of passwords.

### **Audio Output**

*1 TAC §213.33(5) - 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.*

If a product provides an audio output signal, it must meet specific requirements that allow for private listening. The use of a standard headphone jack to access an audio output signal is an example of a product specification that addresses the requirement for an industry standard connector. Input controls must allow the user to interrupt, pause, and restart information delivered through the product's audio signal.

### **Volume Control**

*1 TAC §213.33(6) - 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. 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.*

When a product has voice output and it will be used in a public area, such as a building's lobby, shopping center, or mall, it must have incremental volume control for the user to increase voice output above the ambient level. Users must be able to incrementally adjust the speaker volume of the product's voice output up to at least 65 decibels when using the product in public areas. When the public area has a background noise level of 45 decibels or greater, the user must be able to adjust the product's volume to a gain of 20 decibels above the background noise level. User-adjusted volume controls must automatically reset to the default setting after every use to protect the hearing of subsequent users.

## **Color Coding**

*1 TAC §213.33(7) - Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.*

Color should never be the only method of imparting information or meaning to a user, or indicating an option for the operation of product controls. For all product features that use color-coding, an alternate means of identification that does not rely on color must be provided and must be accessible without attaching assistive technology to the product. For example, the "Stop" button on a copy machine should not only be colored red, but also be labeled with the text "Stop".

## **Color and Contrast Settings**

*1 TAC §213.33(8) - 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.*

A variety of color and contrast levels should be provided when a product allows the user to change contrast or color settings. The product should allow color adjustments to the foreground and background. At a minimum, the product should include the selection of the eight primary colors for both the foreground and background. If the product does not feature adjustable color or contrast settings, then the standard does not apply.

## **Flashing and Blinking Objects**

*1 TAC §213.33(9) - Products shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.*

If a product includes one or more visual display screens, it should be designed so that flicker on the screens is nonexistent, or very slow (e.g., one flicker per second), or very fast (at least fifty-five flickers per second). It is best to avoid products that flash or blink. This provision is intended to prevent triggering seizures in people with photo-sensitive epilepsy.

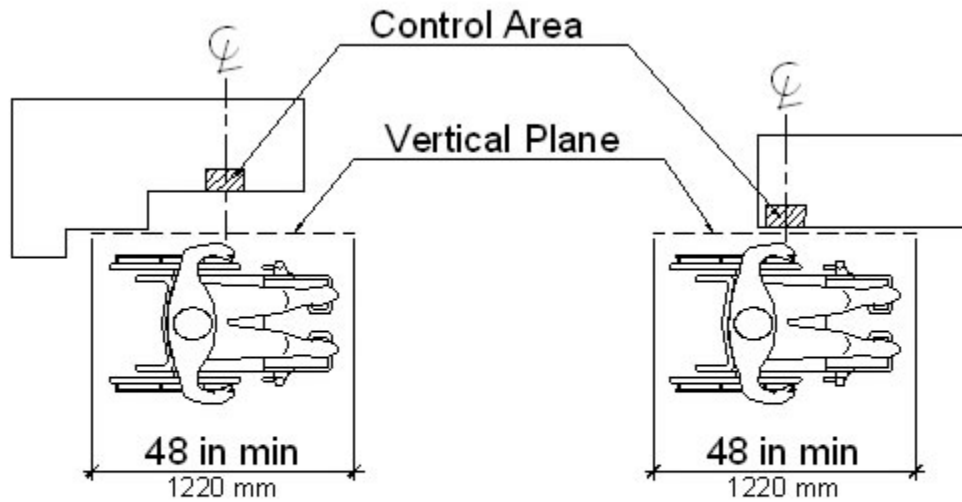
## **Position of Operable Controls for Fixed Freestanding Products**

These provisions apply to the physical characteristics of large office equipment including reach ranges and the general physical accessibility of controls and features. Examples of these products include, but are not limited to copiers, information kiosks, freestanding printers, transaction machines, and other products that are located in a fixed, designated area. Operable controls are defined as components of a product that require physical contact for normal operation. Operable controls include, but are not limited to mechanically operated controls, input and output trays, card slots, keyboards, or keypads.

*1 TAC §213.33(10) Products which are freestanding, non-portable, and intended to be used in one location and which have operable controls shall comply with the following:*

- A. 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 next page.)*
- B. 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.*
- C. 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.*
- D. Operable controls shall not be more than 24 inches behind the reference plane. (See Figure 2 next page.)*

**Figure 1.**

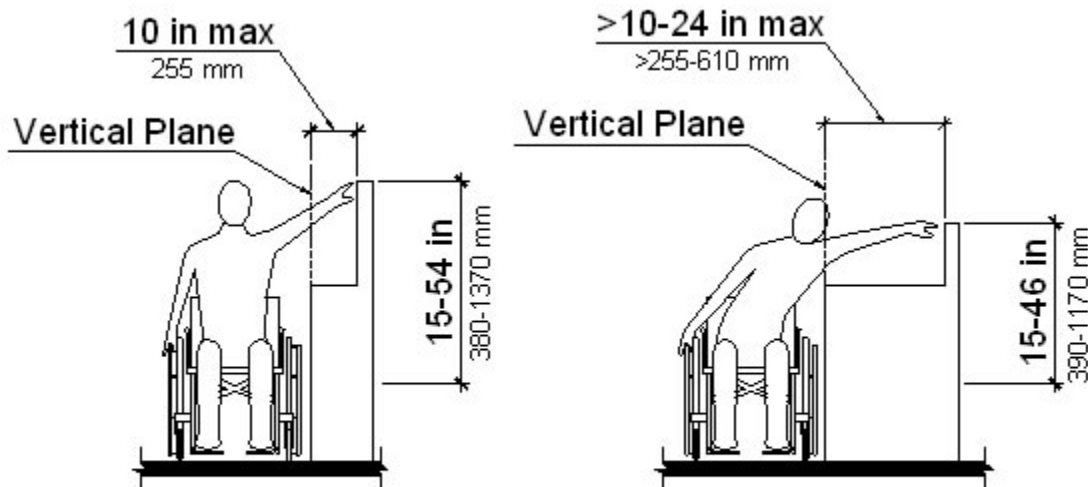


## Vertical Plane Relative to the Operable Control

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Figure one above illustrates two bird's-eye views of the Vertical Plane Relative to the Operable Control. In both views, the vertical plane is centered on the control area. In the first view, the vertical plane is set back from the control area by a protrusion on the device. In the second view, there are no protrusions on the device and the vertical plane is right up against the control area.

**Figure 2.**



## Height of Operable Control Relative to the Vertical Plane

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Figure two above illustrates two front views of Height of Operable Control Relative to the Vertical Plane. The first view illustrates a reach of no more than 10 inches deep with the control area between 15 and 54 inches. The second view illustrates a reach greater than 10 inches but not more than 24 inches deep with the control area between 15 and 46 inches.

## Desktop and Portable Computers

These provisions cover the keyboards, keypads, and other controls on desktop and laptop computers that need to be activated during the normal operation of the system. Examples of controls that are not located on a keyboard but are still covered include, but are not limited to on/off switches, reset buttons, unlocking controls for docking stations, and releases on items such as PCMCIA card slots and drives.

### Operable Controls, Keys, Touch Screens and Touch Operated Controls

*1 TAC §213.34(1) - All mechanically operated controls and keys shall comply with Telecommunications products in §213.31(11)(A) - (D) of this subchapter.*

*1 TAC §213.34(2) - If a product utilizes touch screens or touch-operated controls, an input method shall be provided that complies with Telecommunications products in §213.31(11)(A) - (D) of this subchapter.*

The above provision does not prohibit the use of touch screens and contact-sensitive controls, but requires a redundant set of controls that can be used by persons who have access problems with touch screens. The following accessibility requirements apply to product input controls, but do not apply to touch screen technology.

*1 TAC §213.31(11) – Products which have mechanically operated controls or keys, shall comply with the following:*

*(A) Controls and keys shall be tactilely discernible without activating the controls or keys.*

The controls and keys on a product must be designed and manufactured so that a user may locate and identify them by means of touch alone, without activating them. Keyboards should have navigational bumps on the keys (e.g., the F and J keys on a standard keyboard, or the 5 key on a numeric pad).

*(B) Controls and keys 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. (22.2 N) maximum.*

Mechanically operated controls must be usable with one hand, without particular motions (twisting of the wrist, tight grasping, pinching) or considerable exertion (more than five pounds of force).

*(C) 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.*

To prevent users from making unintended keystrokes, products with key repeat features must allow a two-second delay before repeating a key being held down, and must also allow up to two seconds between each repetition of a key being held down.

*(D) The status of all locking or toggle controls or keys shall be visually discernible, and discernible either through touch or sound.*

Special keys such as the “caps lock” and “scroll lock” keys should be visually discernible, and should alert the user tactilely or with an audible indication that the function has been engaged.

### **Biometric Controls and Identification**

*1 TAC §213.34(3) - 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.*

If a system uses biometrics for identification (e.g., retinal scanning, voice recognition or fingerprint identification) or for system operation, the system must also provide a means of equivalent, alternative access independent of any particular biological feature (e.g., entering a password).

### **Computer Slots, Ports, and Connectors**

*1 TAC §213.34(4) - Where provided, at least one of each type of expansion slots, ports and connectors shall comply with publicly available industry standards.*

One or more of each kind of expansion slot, port, or connector on a computer must be designed according to an industry standard. An industry standard is a specification that is made available by the manufacturer to the public, so that third party and cross-manufacturer developers may build compatible connections. Some examples of industry standard expansion slots and connectors include: parallel ports, serial ports, PS/2 interfaces, SCSI interfaces, PCMCIA devices, USB interfaces, PCI slots, AGP, COM port, wireless RF and infrared connectors, and Bluetooth.

### **Computer Tuner Cards**

*1 TAC §213.32(1) - Television tuners, including tuner cards for use in computers, shall be equipped with secondary audio program playback circuitry.*

Tuner cards enable a computer to receive television broadcasts. The Secondary Audio Program (SAP) playback circuitry provides an industry standard audio channel for the playback of audio description of visual elements for video and multimedia content.

## **Product Information, Documentation and Technical Support**

Vendors of EIR covered under this procedure must provide users with access to all product information, documentation and support in alternate formats upon request at no additional charge. This includes user guides, installation guides for end-user installable devices, and customer support and technical support communications. Alternate formats or methods of communication can include Braille, cassette recordings, large print, electronic text, Internet postings, TTY access, and captioning and audio description for video materials.

***1 TAC §213.36(1)** - Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge.*

***1 TAC §213.36(2)** - 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.*

Departments should contact the University's Information Technology Service Center ([itsc@wtamu.edu](mailto:itsc@wtamu.edu)) for the requested alternate format product support documentation, or departments may contact their vendors directly. Where vendor provided alternate documentation is unavailable, departments should contact the Accessibility Coordinator ([accessibility@wtamu.edu](mailto:accessibility@wtamu.edu)) who will coordinate with the Director of Student Disability Services or the Equal Employment Opportunity Officer as needed to acquire or create the requested alternate documentation.

***1 TAC §213.36(3)** - Support services for products shall accommodate the communication needs of end-users with disabilities.*

The provision of technical support must accommodate the communication needs of individuals with disabilities within the functional performance criteria and accessibility standards outlined in the Functional Performance Criteria section of this procedure and other sections as applicable. For example, individuals who are deaf must have access to support through accessible telecommunications and through alternate means of support as needed when this support is otherwise available to any customer within the terms of use of a product. Likewise, individuals who are blind must have access to Web-based, telephone, and other support, without barriers to standard assistive technology or other accessible products used to access that support.