TeXLive Accessibility Conformance Report (International Edition) (Based upon VPAT® version 2.4)

T_EX Users Group

Version 2.4, August 2024

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Legal Disclaimer

Name of Product/Version

TEXLive 2024.

Report Date

August 2024.

Product Description

 T_EX Live is the reference distribution of T_EX and related software supported by T_EX Users Group, a membership-based not-for-profit organization dedicated to support, promotion and advocacy of T_EX typesetting system created by Donald Knuth and maintained by the international community of developers. As of 2024 T_EX Live contains more than 490 programs and more than 8000 software packages.

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Notes

TEXLive is a complex software suite, intended to the produce typeset products in various formats (PDF, HTML, DVI, XML to name a few). In all case it takes an *input code* written in a machine-readable form and translates it to an *output format*, suitable to publication in the traditional (hard copy) or electronic form.

This document covers only the software used to convert the input code to the output format. The creation of the input code is outside the scope of this document, since it is done by third party software. TEXLive software can accept as input text files created in any authoring tool. TEX Users group is aware about fully accessible authoring tools, and promotes them on its web pages and publications.

A separate issue is the accessibility of the *output documents* created with TEXLive software. The accessibility features of these documents depend on the settings in the input code and the packages used, and thus is not covered by this document. TEX Users Group strives to make the creation of full accessible documents using its tool as simple as possible, and to make the accessibility features the default settings of our software. This is an ongoing effort, involving many developers. TEX Users Group welcomes any help in this work. The current state of the effort can be found at https://tug.org/twg/accessibility/overview.html.

The tools provided by TeXLive are accompanied by technical documentation, both included in TeXLive itself, and separate: there are many books, courses and other materials about TeX. Many of the latter a fully accessible. The main documentation of TeXLive, supported by TeXLive team, is accessible as well. Most of the documentation for several thousand software packages in TeXLive is provided in PDF or text format. By requiring machine readable textual sources of all documentation provided by TeXLive packages, we ensure a certain level of accessibility for all documentation. However, the full audit of the documentation for all 8000+ packages created by many thousands of volunteers is not feasible at this time. TeX Users group supports the efforts of making all TeX documentation fully accessible.

Evaluation methods used

The testing was based on the general product knowledge.

Applicable standards and guidelines

Standard/Guideline	Included in the report
Web Content Accessibility Guidelines 2.0	Level A (Yes) Level AA (Yes) Level AAA (Yes)
Web Content Accessibility Guidelines 2.1	Level AA (Yes) Level AAA (Yes) Level AAA (Yes)
Revised Section 508 standards published January 18, 2017 and corrected January 22, 2018	Yes
EN 301 549 Accessibility requirements suitable for public procurement of ICT products and services in Europe, - V3.1.1 (2019-11)	Yes

Terms

The terms used in the Conformance Level information are defined as follows:

Supports: The functionality of the product has at least one method that meets the criterion without known defects or meets with equivalent facilitation.

Partially Supports: Some functionality of the product does not meet the criterion.

Does Not Support: The majority of product functionality does not meet the criterion.

Not Applicable: The criterion is not relevant to the product.

Not Evaluated: The product has not been evaluated against the criterion. This can be used only in WCAG 2.0 Level AAA.

WCAG 2.x Report

Tables 1 and 2 also document conformance with:

- EN 301 549: Chapter 9 Web, Sections 10.1-10.4 of Chapter 10 Non-Web documents, and Sections 11.1-11.4 and 11.8.2 of Chapter 11 Non-Web Software (open and closed functionality), and Sections 12.1.2 and 12.2.4 of Chapter 12 Documentation
- Revised Section 508: Chapter 5 501.1 Scope, 504.2 Content Creation or Editing, and Chapter 6 602.3 Electronic Support Documentation.

Note: When reporting on conformance with the WCAG 2.x Success Criteria, they are scoped for full pages, complete processes, and accessibility-supported ways of using technology as documented in the WCAG 2.0 Conformance Requirements.

Introduction

This section of the report describes the documentation for TEXLive.

There are several ways to define "the full documentation for TEX and friends software". In one meaning of these words it comprises all books on TEX, IATEX, ConTEXt and other systems included in TEXLive, all issues of the journals published by TEX Users Group and other users produced documentation. Of course it would be impossible to estimate the accessibility of all this documentation, comprising hundreds thousands of pages written over three decades.

Another way is to count only the documentation for the packages included in TeXLive. This includes documentation for 8000+ packages, which makes the full audit rather impractical.

In this document we discuss only the main manual for the system, available with the installation and at https://tug.org/texlive/doc/texlive-en/texlive-en.html. We note, however, that documentation for all TEXLive packages is available as source text files, and thus is highly accessible.

In the tables below the success criteria apply to Web and Electronic Docs paragraphs of VPAT.

Table 1: Success Criteria, Level A

2 Crite	ria	1 Conformance Level
1.1.1	Non-text Content	Supports
1.2.1	Audio-only and Video only (Prerecorded)	Not Applicable
1.2.2	Captions Prerecorded	Not Applicable
1.2.3	Audio Description or Media Alternative (Prerecorded)	Not Applicable
1.3.1	Info and Relationships	Supports
1.3.2	Meaningful Sequence	Supports
1.3.3	Sensory Characteristics	Not Applicable
1.4.1	Use of Color	Supports
1.4.2	Audio Control	Not Applicable
2.1.1	Keyboard	Supports
2.1.2	No Keyboard Trap	Supports
2.1.4	Character Key Shortcuts (2.1 only)	Supports
2.2.1	Timing Adjustable	Supports
2.2.2	Pause, Stop, Hide	Supports
2.3.1	Three Flashes or Below Threshold	Supports
2.4.1	Bypass Blocks	Not Applicable
2.4.2	Page Titled	Supports
2.4.3	Focus Order	Supports
2.4.4	Link Purpose (In Context)	Supports
2.5.1	Pointer Gestures (2.1 only)	Supports
2.5.2	Pointer Cancellation (2.1 only)	Supports
2.5.3	Label in Name (2.1 only)	Supports
2.5.4	Motion Actuation (2.1 only)	Supports
3.1.1	Language of Page	Supports
3.2.1	On Focus	Supports
3.2.2	On Input	Supports
3.3.1	Error Identification	Supports
3.3.2	Labels or Instructions	Supports
4.1.1	Parsing	Supports
4.1.2	Name, Role, Value	Supports

Table 2: Success Criteria, Level AA

2 Criter	ia	1 Conformance Level
1.2.4	Captions (Live)	Not Applicable
1.2.5	Audio Description (Prerecorded)	Not Applicable
1.3.4	Orientation (2.1 only)	Supports
1.3.5	Identify Input Purpose (2.1 only)	Supports
1.4.3	Contrast (Minimum)	Supports
1.4.4	Resize text	Supports
1.4.5	Images of Text	Supports
1.4.10	Reflow (2.1 only)	Supports
1.4.11	Non-text Contrast (2.1 only)	Supports
1.4.12	Text Spacing (2.1 only)	Supports
1.4.13	Content on Hover or Focus (2.1 only)	Supports
2.4.5	Multiple Ways	Supports
2.4.6	Headings and Labels	Supports
2.4.7	Focus Visible	Supports
3.1.2	Language of Parts	Supports
3.2.3	Consistent Navigation	Supports
3.2.4	Consistent Identification	Supports
3.3.3	Error Suggestion	Not Applicable
3.3.4	Error Prevention (Legal, Financial, Data)	Not Applicable
4.1.3	Status Messages (2.1 only)	Supports

Table 3: Success Criteria, Level AAA

2 Criter	ia	1 Conformance Level
1.2.6	Sign Language (Prerecorded)	Not Applicable
1.2.7	Extended Audio Description (Prerecorded)	Not Applicable
1.2.8	Media Alternative (Prerecorded)	Not Applicable
1.2.9	Audio-only (Live)	Not Applicable
1.3.6	Identify Purpose (2.1 only)	Supports
1.4.6	Contrast (Enhanced)	Supports
1.4.7	Low or No Background Audio	Supports
1.4.8	Visual Presentation	Supports
1.4.9	Images of Text (No Exception)	Supports ¹
2.1.3	Keyboard (No Exception)	Supports
2.2.3	No Timing	Supports
2.2.4	Interruptions	Supports
2.2.5	Re-authenticating	Not Applicable
2.2.6	Timeouts (2.1 only)	Not Applicable
2.3.2	Three Flashes	Supports
2.3.3	Animation from Interactions (2.1 only)	Supports
2.4.8	Location	Supports
2.4.9	Link Purpose (Link Only)	Supports
2.4.10	Section Headings	Supports
2.5.5	Target Size (2.1 only)	Supports
2.5.6	Concurrent Input Mechanisms (2.1 only)	Supports
3.1.3	Unusual Words	Does Not Support
3.1.4	Abbreviations	Does Not Support
3.1.5	Reading Level	Does Not Support
3.1.6	Pronunciation	Not Applicable
3.2.5	Change on Request	Supports
3.3.5	Help	Does Not Support
3.3.6	Error Prevention (All)	Not Applicable

Note: Neither Revised Section 508 Report nor EN 301 549 Report require AAA level compliance.

 $^{^1\}mathrm{Images}$ of GUI screens are used only when essential to the information being conveyed.

Revised Section 508 Report

Chapter 3: Functional Performance Criteria (FPC)

2 Criter	ia	1 Conformance Level
302.1	Without Vision	Supports
302.2	With Limited Vision	Supports
302.3	Without Perception of Color	Supports
302.4	Without Hearing	Supports
302.5	With Limited Hearing	Supports
302.6	Without Speech	Supports
302.7	With Limited Manipulation	Supports
302.8	With Limited Reach and Strength	Supports
302.9	With Limited Language, Cognitive, and	Does Not Support
	Learning Abilities	

Chapter 4: Hardware

Does Not Apply.

Chapter 5: Software

2 Criteria		1 Conformance Level
501.1	Scope—Incorporation of WCAG 2.0 AA	Supports ²
3 502 Inte	eroperability with Assistive Technology	
502.2.1	User Control of Accessibility Features	Supports
502.2.2	No Disruption of Accessibility Features	Supports
3 502.3 A	ccessibility Services	
502.3.1	Object Information	Supports
502.3.2	Modification of Object Information	Supports
502.3.3	Row, Column, and Headers	Not Applicable
502.3.4	Values	Supports
502.3.5	Modification of Values	Supports
502.3.6	Label Relationships	Not Applicable
502.3.7	Hierarchical Relationships	Not Applicable
502.3.8	Text	Supports
502.3.9	Modification of Text	Supports
502.3.10	List of Actions	Supports
502.3.11	Actions on Objects	Supports
502.3.12	Focus Cursor	Supports
502.3.13	Modification of Focus Cursor	Supports

²See Table 2: Success Criteria, Level AA

2 Criteria		1 Conformance Level
502.3.14	Event Notification	Supports
502.4	Platform Accessibility Features	Supports
3 503 App	lications	
503.2	User Preferences	Supports
503.3	Alternative User Interfaces	Supports
3 503.4 Us	ser Controls for Captions and Audio Descrip	tion
503.4.1	Caption Controls	Not Applicable
503.4.2	Audio Description Controls	Not Applicable
3 504 Auth	horing Tools	
504.2	Content Creation or Editing (if not authoring tool, enter "not applicable")	Not Applicable
504.2.1	Preservation of Information Provided for Accessibility in Format Conversion	Not Applicable
504.2.2	PDF Export	Not Applicable
504.3	Prompts	Not Applicable
504.4	Templates	Not Applicable

Chapter 6: Support Documentation and Services

2 Criteria		1 Conformance Level
3 602 S 602.2 602.3 602.4	Accessibility and Compatibility Features Electronic Support Documentation Alternate Formats for Non-Electronic Support	Supports Supports ³ Not Applicable
00-1-	Documentation	T. T. T. F. F. T.
3 603 S	Support Services	
603.2	Information on Accessibility and Compatibility Features	Not Applicable
603.3	Accommodation of Communication Needs	Not Applicable

³See WCAG 2.x Report

EN 301 549 Report

Chapter 4: Functional Performance Statements (FPS)

2 Criter	ia	1 Conformance Level
4.2.1	Usage without vision	Supports
4.2.2	Usage with limited vision	Supports
4.2.3	Usage without perception of colour	Supports
4.2.4	Usage without hearing	Supports
4.2.5	Usage with limited hearing	Supports
4.2.6	Usage with no or limited vocal capability	Supports
4.2.7	Usage with limited manipulation or strength	Supports
4.2.8	Usage with limited reach	Supports
4.2.9	Minimize photosensitive seizure triggers	Supports
4.2.10	Usage with limited cognition, language or	Does Not Support
	learning	
4.2.11	Privacy	Supports

Chapter 5: Generic Requirements

Note: EN 301 549 defines "closed functionality" as "functionality that is limited by characteristics that prevent a user from attaching, installing or using assistive technology". Since TEXLive utilities do not prevent users from attaching, installing or using assistive technology, most of requirements in this chapter are not applicable to them.

2 Criteria		1 Conformance Level
3 5.1 Clos	sed functionality	
3 5.1.2 G	eneral	
5.1.2.1	Closed functionality	Not Applicable
5.1.2.2	Assistive technology	Not Applicable
3 5.1.3 N	on-visual access	
5.1.3.1	Audio output of visual information	Not Applicable
5.1.3.2	Auditory output delivery including speech	Not Applicable
5.1.3.3	Auditory output correlation	Not Applicable
5.1.3.4	Speech output user control	Not Applicable
5.1.3.5	Speech output automatic interruption	Not Applicable
5.1.3.6	Speech output for non-text content	Not Applicable
5.1.3.7	Speech output for video information	Not Applicable
5.1.3.8	Masked entry	Not Applicable
5.1.3.9	Private access to personal data	Not Applicable
5.1.3.10	Non-interfering audio output	Not Applicable
5.1.3.11	Private listening volume	Not Applicable

2 Criteria		1 Conformance Level
5.1.3.12 5.1.3.13 5.1.3.14 5.1.3.15 5.1.3.16	Speaker volume Volume reset Spoken languages Non-visual error identification Receipts, tickets, and transactional outputs	Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable
5.1.4 5.1.5 3 5.1.6 O _I 5.1.6.2	Functionality closed to text enlargement Visual output for auditory information peration without keyboard interface Input focus	Not Applicable Not Applicable Not Applicable
5.1.7 5.2 5.3 5.4	Access without speech Activation of accessibility features Biometrics Preservation of accessibility information during conversion	Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable
3 5.5 Oper 5.5.1 5.5.2 3 5.6 Lock	rable parts Means of operation Operable parts discernibility sing or toggle controls	Not Applicable Not Applicable
5.6.1 5.6.2 5.7 5.8 5.9	Tactile or auditory status Visual status Key repeat Double-strike key acceptance Simultaneous user actions	Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable

Chapter 6: ICT with Two-Way Voice Communication

Not Applicable.

Chapter 7: ICT with Video Capabilities

Not Applicable.

Chapter 8: Hardware

Not Applicable.

Chapter 9: Web

See WCAG 2.x Report.

Chapter 10: Non-Web Software

2 Criteria		1 Conformance Level
10.1.1.1	through 10.4.1.3	Supports ⁴
10.5	Caption positioning	Not Appicable
10.6	Audio description timing	Not Applicable

Chapter 11: Software

2 Criteria		1 Conformance Level		
11.1.1.1 through 11.4.1.3		Supports ⁵		
3 11.5 Inte	eroperability with assistive technology			
3 11.5.1 Closed functionality				
3 11.5.2 Accessibility services				
11.5.2.1	Platform accessibility service support for software that provides a user interface	$Supports^6$		
11.5.2.2	Platform accessibility service support for assistive technologies	Supports ⁷		
11.5.2.3	Use of accessibility services	Not Applicable		
11.5.2.4	Assistive technology	Not Applicable		
11.5.2.5	Object information	Not Applicable		
11.5.2.6	Row, column, and headers	Not Applicable		
11.5.2.7	Values	Not Applicable		
11.5.2.8	Label relationships	Not Applicable		
11.5.2.9	Parent-child relationships	Not Applicable		
11.5.2.10	Text	Supports		
11.5.2.11	List of available actions	Supports		
11.5.2.12	Execution of available actions	Supports		
11.5.2.13	Tracking of focus and selection attributes	Not Applicable		
11.5.2.14	Modification of focus and selection attributes	Not Applicable		
11.5.2.15	Change notification	Supports		
11.5.2.16	Modifications of states and properties	Supports		
11.5.2.17	Modifications of values and text	Supports		

⁴WCAG 2.x Report ⁵See WCAG 2.x Report ⁶See information in 11.5.2.5 through 11.5.2.17 ⁷See information in 11.5.2.5 through 11.5.2.17

2 Criteria		1 Conformance Level
3 11.6 Doc 11.6.1 11.6.2	Cumented accessibility usage User control of accessibility features No disruption of accessibility features	Not Applicable Supports
11.7	User preferences	Not Applicable
3 11.8 Aut	thoring tools	
11.8.2	Accessible content creation	Not Applicable
11.8.3	Preservation of accessibility information in transformations	Not Applicable
11.8.4	Repair assistance	Not Applicable
11.8.5	Templates	Not Applicable

Chapter 12: Documentation and Support Services

2 Criteria		1 Conformance Level	
3 12.1 F 12.1.1	Product documentation Accessibility and compatibility features	Not Applicable	
12.1.2	Accessible documentation	Supports ⁸	
3 12.2 Support Services			
12.2.2	Information on accessibility and compatibility features	Not Applicable	
12.2.3	Effective communication	Not Applicable	
12.2.4	Accessible documentation	Not Applicable	

Chapter 13: ICT Providing Relay or Emergency Service Access

Not Applicable.

⁸See WCAG 2.x Report

Legal Disclaimer

While all efforts were made to provide an accurate description of the software, TeX Users Group cannot make any guarantee, explicit of implied, of the accuracy of this report. This report is provided "As Is" and for information purposes only.