Digital Accessibility Guidelines

Croatian Academic and Research Network – CARNET
in cooperation with the Centre for Research, Education and Applied Knowledge UP2DATE
with review and amendments by the Croatian Union of Associations of Persons with Disabilities – SOIH and Croatian Blind Union
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Content

Foreword

In accordance with the Act on the Accessibility of Websites and Mobile Applications of Public Sector Bodies of the Republic of Croatia (official gazette "Narodne novine" no. 17/19), in effect as of 23 September 2019, and in accordance with the Directive (EU) 2016/2012 of the European Parliament and Council of 26 October 2016 on the accessibility of the websites and mobile applications of public sector bodies (Official Journal L 327, 2.12.2016, page 1), websites and applications need to be developed so that the design, functions and the content itself are accessible by all users, including persons with disabilities, many of whom use assistive technologies, in the scope in which the technology used to create it allows.

CARNET ensures the compliance of its websites and applications with the aforementioned Act by application of these Digital Accessibility Guidelines.

Digital Accessibility Guidelines are a new version of the document titled Digital Accessibility Standards, the first version of which was drafted in January 2017, made in cooperation of CARNET and the Centre for Research, Education and Application of New Knowledge UP2DATE. CARNET has systematically updated and improved the document through experience acquired through the use of these guidelines, user feedback and application of the W3C WAI[1] standard. With the support of the Central Office for the Development of the Digital Society, the document was reviewed and approved by the Croatian Blind Union and the Croatian Union of Associations of Persons with Disabilities – SOIH.

Whereas the majority of the Digital Accessibility Guidelines are recommendations, CARNET stipulates Chapter 7 as a necessary minimum for ensuring accessibility of websites and software solutions for mobile devices in public procurement procedures which the CARNET carries out, and within the framework of which websites and/or program solutions are developed. Guidelines contained in Item 7.1 are mandatory requirements which must be met. Item 7.2 contains additional recommendations, the implementation of which is preferable whenever possible.

CARNET places the Digital Accessibility Guidelines at the disposal of all public institutions of the Republic of Croatia that wish to use them in order to adjust their existing web pages and applications or develop new guidelines in accordance with the digital accessibility principles.

Version 1.1 of Digital Accessibility Guidelines is a working form of the document which CARNET continually revises and amends.

[1] Standards and guidelines of the Web Accessibility Initiative (WAI) for providing accessibility developed by the World Wide Web Consortium (W3C): Web Content Accessibility Guidelines (WCAG) 2.1 and Rich Internet Applications (WAI – ARIA) 1.1

Digital accessibility

In this document, the term “digital accessibility” shall mean the availability of online content and applications, original[2] applications for mobile devices and desktop computers, e-books and content in learning management systems and other digital content and it does not pertain to spatial or any other not mentioned form of accessibility.

[2] Original or native application is an application developed for a specific mobile device or a platform, such as a smartphone or a tablet, and is installed directly on the device.

1. Introduction

The studies have shown that between 10% and 20% of the population suffers from some form of disability[3] pertaining to the impaired hearing or vision, cognitive impairment and motor dysfunction. Each of these categories requires certain adjustments in the development and design of digital content, and in most cases such adjustments are beneficial to all users, not just the persons with disabilities.

A large number of digital content users, which also happen to be persons with disabilities use assistive technology. Assistive technologies are, including hardware and software, those technologies which are intended for persons with different forms of disabilities, which help them overcome their motor, sensory and cognitive limitations, and assist them in independent performance of everyday tasks in physical and virtual space.

For instance, blind users use screen readers – pieces of software which convert texts from the computer screen to Braille line or read the text in a computer-generated voice using voice synthesiser. Most frequently used screen readers are *Jaws for Windows, Nvda, Orca* i *Voice Over*[4]. Visually impaired persons can use special software to increase the size of the content on the computer screen and the person with speech impairment can use text-to-speech devices. There are specially shapes keyboards and mice for persons with impaired hand motor movements.

In order for these users to be able to use the aforementioned assistive technology, it is necessary to ensure that certain prerequisites are met with regard to the availability of digital content. For the web digital content, these prerequisites include HTML features which should be valid for all pages because they belong to the general digital availability section. They are of use to the persons with disabilities, and do not interfere with the persons without disabilities.

Accessibility of the content pertains to the removal of barriers which prevent access and use of digital content to these persons i.e. degree to which the persons with disabilities can use digital content, web sites and applications.[5]

When the content is prepared and made in accordance with the accessibility guidelines, all users have equal quality access to information and functions of such digital content.

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[3] According to the report of the World Health Organisation from 2011 titled World Report on Disability (WRD), more than a billion people (15% of the world population) have a certain form of disability. The report is entirely available at http://www.who.int/disabilities/world_report/2011/en/

[4] According to the date of the Croatian Blind Union

[5] Definition of the European Commission from 2005: e-accessibility of overcoming of obstacles and difficulties encountered by the person when they try to access products and services based on information and communication technologies.

Guidelines given bellow must be followed in order to ensure accessibility of digital content and applications.

2. Basic features of accessible digital content and applications

When planning the development of accessible digital content, care should be taken with regard to mutually interacting factors, which enable creating an environment which is accessible and simple to use for persons with disabilities and other users.

2.1. Factors which impact digital accessibility:

- Meaning and form of digital content, direct information (text, image, sound)
- Original applications, web browsers and audio/video media players and other programs and tools used by the digital content users
- Assistive technology (screen readers, specially designed keyboards, scanning programmes, etc.)
- User knowledge and experience in the use of digital content
- Persons who develop and design online and offline digital content and original applications
- Programmes and tools for the development of multimedia presentations, websites and original applications
- Programmes and tools for evaluating accessibility of original applications, websites (HTML and CSS validators, etc.)

The following guidelines which pertain to the platform and content must be met in order to ensure digital accessibility.

2.2. Guidelines with regard to the platform

Major operating systems (Windows 10 and Windows 10 Mobile, Mac OS and iOS, Linux, Android) incorporate several assistive technologies which enable persons with disabilities to use these systems and/or are used for communication between system applications and peripheral assistive equipment, i.e. assistive system. Their connection depends on the operating system and programming language being used, and each of the aforementioned platforms supports, along with their specific, the following basic guidelines:

- Option to skip navigation is provided, skip to main content.
- Option to easily change the font size without the loss of surrounding text (content) must be provided
- Standard HTML form elements were used in order for the platform to be able to provide easy and logical movement on the page, enabling text autocorrect function and all other assistive solutions
- Icons are large enough and spaced so that the persons with motor impairment can use them[6]

[6] Follow the guidelines for each platform. Described in more detail in Item 7.1, page 14 hereof.

- Website and application responsiveness is ensured – automatic adjustment of content design to different sizes of devices or browsers used to access the content.

2.3. Guidelines related to the content which must be appropriately prepared for screen readers on all platforms for which they have been developed, in accordance with the content accessibility guidelines of each platform:

- Use of nested titles, i.e. *heading* elements (means consistent, recognisable and clearly marked ensuring of title and subtitle levels and this pertains to organisation and layout of the content i.e. ensuring easier navigation through the content for end users)
- Good text and image contrast on the web sites compared to the page background and contract change option
- Appropriate textual description (alt attribute, *the alternative text attribute*) of images and composed images (for example, graphs)
- Not using text in the form of image files on web sites
- Transcription of video material and an option to turn on the subtitles
- Clearly marked flashing elements which can cause impediments in persons with sensory integration disorders and other neurological disorders.

Digital content accessibility features according to individual groups of users are to follow bellow.

3. Digital accessibility for visually impaired persons

Visual impairments are blindness and visual impairments. Accessibility to persons who are unable to differentiate colours is ensured in a manner similar to ensuring accessibility to blind or visually impaired persons.

3.1 General guidelines

3.1.1. Blindness: When the content requires visual mode, it is necessary to ensure at least one additional mode which does not require use of eyesight.

3.1.2. Visual impairment: When the content requires visual mode, it is necessary to ensure at least one additional mode which increases necessary visual filed, at least one additional mode which decreases necessary visual field and at least one mode which enable the user to control the contrast.

3.1.3. Colour vision deficiency: When the content requires visual mode, it is necessary to ensure at least one mode which does not require the user to be able to distinguish colours.

3.2 Specific guidelines

- Keyboard shortcuts are defined for the majority of functions (access the menus, text selection, etc.) and every programme element (confirmation window, text editing field, etc) can be accessed by keyboard, and the interaction with the element through keyboard is

enabled (confirmation of user windows, key activation, etc.). Standard keyboard combinations are used for all operating systems, including accessibility shortcuts[7].

- Images and composed images (for example graphs and diagrams) have an appropriate textual and/or sound description which should be brief, with most important information at the beginning of the description. Explanation of the image function is more important, if such functionality exists (for example the image represents or serves as a link to the e-mail address), where the content follows after the function.
- Optimal use of desktop screen readers is ensured (Jaws for Windows, NVDA or equivalent) and mobile platforms (TalkBack, Voice Over or equivalent), and in cases in which the screen reader does not recognize the elements and/or conveys the information incorrectly, the piece of information is also conveyed by sound record (for example, mathematical equations)
- Standard file formats are used which the screen readers can easily interpret (PDF, TXT, EPUB, HTML, Word)
- Websites/applications are developed so that they allow simple change in font size and simple navigation without loss of surrounding text when increasing the font.
- Websites/applications can easily switch the font type to a font appropriate for persons with dyslexia by a click/touch
- Text is considered to have good contrast to the whole page background and background of all textual frames and option of contrast change.
- Elements in images have good contrast with regard to the image background, and the entire image has good contrast compared to the page background.
- Text is not displayed in the form of an image
- Navigation menus have only first navigation level visible, while the menu sublevels are initially hidden or minimized.
- Dropdown navigation menus do not have large number of navigation sublevels or large number of links in one level.
- There is no empty space between menus and submenus in order to prevent the menu from “disappearing” if the pointer is not moved quickly enough from the menu to a submenu.
- Navigation using *tab/shift+tab* keys is ensured because the screen reader moves sequentially through the dialog screens.
- Focus (position of the pointer on the screen) must be visible to and readable by the screen reader. Currently inactive elements must not be able to obtain focus.
- Use of *drag and drop* elements is avoided
- Special text blocks and other elements which are not constantly displayed are opened and closed by a touch (click) of the mouse (not by moving the pointer to a button) or are displayed all time.
- If special colours are used to highlight the texts which needs to be emphasises or to mark links, additional marking such as underlines are also used

[7] Windows keyboard shortcuts for accessibility: https://support.microsoft.com/en-us/help/13810
Mac accessibility keyboard shortcuts: https://support.apple.com/en-us/HT204434

- Links are descriptive, the provide information on the content behind them (expressions such as “more”, “here” and similar should be avoided)
- Opening links in the same window
- Video records have audio and/or textual description. Screen readers do not recognize subtitles, therefor audio text transcript is required
- Audio tracks from audio and video material are recorded in stereo sound. If they are recorded in mono sound, mono track must be transmitted equally in both stereo channels.
- Buttons on video content have an audio and/or textual description in Croatian and they clearly mark the start button, the stop button and the way/button which the user can use to return to the previous text or to jump to the next text after the video material
- Dynamic content can be paused i.e. started at will, and therefore it is not dependant on the screen reader speed
- Instead of the text leading to previous and next pages, which is designated in the HTML code as <list> </list>, title is places above such navigation list, which is implemented in the code as <head> </head>, due to quicker and more visible navigation
- If visual check and confirmation (Eng. *captcha*) is used at the website, an alternative auditive check is also used
- Mobile device applications provide an option to choose a method for storing content between the device memory and external (card) memory
- Information of downloaded or of content as of yet not downloaded can be seen by the title of the content, and not only when the content is being opened.

3.3 Accessibility of HTML documents with vision impairment

Adherence with the HTML documents accessibility rules for blind and visually impaired person includes the following items:

- Structural elements from HTML5 standard (*header, footer, nav, section, article, aside*) should be used as main webpage elements instead of *div* elements, so that screen readers could recognize the meaning of an individual element
- A title within the HTML element *title* (which is located within *head* element) should be set for each page
- *h1, h2, h3, h4, h5* i *h6* should be used for titles, and *p* elements for text passages
- *strong* i *em* elements (instead of *b* and *i* elements) should be used to highlight smaller text sections
- tables (*table* element) should be used only for presenting tabular data, and not for visual layout of page elements
- Tables should contain table title in the *caption* element, and column titles should be defined using the *th* element
- Simple, legible *sans serif* fonts should be used for the text, such as Arial, Verdana and similar
- All text should be justified left
- Font size should be 12 pt
- It is necessary to enable use of font appropriate for dyslexic persons

3.4 Accessibility of word documents for visually impaired persons

Simple, readable fonts without *serifs* should be used for the text, such as Arial, Verdana and similar. All text should be justified left.
Font size should correspond to 12 pt size in printed materials.

3.5 Accessibility of PDF documents for visually impaired persons

It is necessary to ensure optimal accessibility of PDF files. Recommendation is to create PDF files by exporting original file with accessibility options selected.
For example, in Microsoft Office Word 2016 the relevant options are "*Best for electronic distribution and accessibility",* i.e. "*Optimise for: Standard (publishing online and printing*)" and "*Document structure tags for accessibility*".
PDF documents created by scanning printed documents are not accessible, therefore this method of creating PDF documents should be avoided.

4. Digital accessibility for persons with hearing impairment and speech-language and vocal disorders

Hearing impairments are deafness and hearing loss, and speech-language and vocal disorders are those in which speech communication is difficult or missing due to organic and functional damage. Accessibility to persons with speech-language and vocal disorders is ensured in a manner similar to the manner for ensuring digital accessibility for deaf persons or persons with hearing loss.

4.1 General guideline

4.1.1. Deafness: When the content requires audio mode, it is necessary to ensure at least one extra mode which does not require use of hearing.

4.1.2. Hearing Impairment: When the content requires audio mode, it is necessary to ensure at least one extra mode which improves the clarity of speech and sound, at least one additional mode which reduced background noise, at least one additional mode which enables the user to control the volume and one additional mode which does not require the use of hearing (subtitles).

4.1.3. Speech-language and vocal disorders: When the content requires speech mode, it is necessary to provide at least one additional mode which does not require use of speech.

4.2 Specific guidelines

- Audio/video materials on web sites have appropriate subtitles, descriptions and/or transcripts
- When possible, audio/video materials have included or joined recording of the translation into Croatian Sign Language
- Text use simple and easy to understand language
- On websites which contain a lot of text images are inserted which are linked with the content in order to facilitate understanding of text to persons who originally use Croatian Sign Language

- Icons or other graphical content are used with the content which facilitate its understanding and designate its purpose.

5. Digital accessibility for person with motor disorders, chronic illnesses and multiple difficulties[8]

Motor disorders include damage to the locomotion system, central nervous system (with cerebral paralysis as a consequence), central nervous system or damage which is a consequence of chronic diseases of other systems. Fundamental characteristics or motor damage and/or disorders are different forms and degrees of body motion and posture disorders, reduced or disabled function of certain parts of the body (most frequently arms, legs and spine) or missing parts of the body.

5.1 General guidelines

When the content requires manual mode, it is necessary to provide at least one additional mode which does not require good control and fine motor coordination, at least one additional mode which does not require controlling more than one movement at the time and at least one additional mode which can be used with limited arm reach and strength.

5.2 Specific guidelines

- Icons on the website are large and sufficiently spaced from the text and from each other[4]
- Special text blocks and other elements which are not constantly displayed are opened and closed by touch (click) of the mouse (not moving the pointer over the button) or are constantly displayed
- Option to choose font size is not given as submenu activated by moving the pointer over the button, and is instead fixed part of the menu or is activated by click/touch
- No limited time for entering the data if not necessary (safety requirements etc.) and if there is a time limit, it is sufficiently long to allow the users who have difficulties with hand motor function to enter the data
- Standard HTML form elements were used in order for platform to be able to provide easy and logical movement on the page, enabling text autocorrect function and all other assistive solutions
- Use of the keyboard as an alternative means to complete tasks the performance of which is difficult for persons with motor dysfunction, such as joining/pairing terms or handling graphical presentation is enabled.
- Simultaneous use of two or more keyboard keys for a specific order is avoided.
- Option of automatic listing of content should be avoided (for example in the *slider* element for dynamic content) or an alternative option is offered alongside it.
- Voice commands are used [9]

[8] Persons with cerebral paralysis often suffer from other developmental impairments such as vision, hearing, speech impairments, perception impairments, epilepsy, reduced cognitive functions, behaviour and learning disorders and emotional disorders.

[9] This mode is provided by application of specific guidelines for accessibility of content from different platforms and manufacturers.

- Visual focus indicator[10] is used (marking showing to which part of the content/page the user is paying attention).

6. Digital accessibility for people with specific learning disabilities

Specific learning disabilities are disorders of reading (dyslexia, alexia), writing (dysgraphia, agraphia), calculation (dyscalculia, acalculia), specific disorder of the motor function development (dyspraxia), mixed learning disabilities, and other learning disabilities[11] into which some include short-term memory difficulties and perception difficulties.

6.1. Specific guidelines for persons with learning disabilities include the following requirements:

- Content of the website is clearly and consistently organised
- Textual part is divided into smaller blocks separated by blank space (large textual blocks are avoided)
- Language used in texts is simple and easy to understand
- Type of font can be changed to a font readable to people with dyslexia
- Audio and video materials can be muted and stopped at any moment after the playing of the audio and video material.
- Alternative ways of presenting information are available – for example, audio for texts, and textual descriptions for audio and video contents.

7. CARNET's requirements for ensuring digital accessibility[12] in public procurement procedures

CARNET identifies and lists the mandatory requirements for ensuring digital accessibility in the procedures of the public procurement of websites and software solutions it carries out, which bidders and contractors are required to meet, as well as additional recommendations whose implementation is not mandatory, but is desirable in order to provide equally good access to information and functionalities of digital contents and applications to all users.

7.1. Mandatory requirements for ensuring digital accessibility

For all persons with any form of disability (visual, hearing, speech, motor, cognitive, and neurological impairments), part of whom uses assistive technology, it is necessary to provide at least one additional work mode that enables the use of digital contents and applications in the same quality as for persons without disabilities and persons who do not need assistive technology.

[10] Same as [4]

[11] According to Annex 1 of the Ordinance on primary and secondary education of students with developmental disabilities NN 24/2/15: Orientation list of types of disabilities

[12] Accessibility of online contents and applications, original mobile and desktop applications, e-books and contents in learning management systems, and other digital contents

When providing accessibility, digital contents should be prepared for screen readers on all platforms for which they have been developed (Windows 10, Mac OS, iOS, Linux, Android), according to the content accessibility guidelines for each platform, while the following requirements must be met:

- the structure of the page is marked in a way that blind and visually impaired persons know when they are moving from one column, chapter or other content category to another
    - Elements from the HTML5 standard (*header*, *footer*, *nav*, *section*, *article*, *aside*) are used as the main page elements, instead of *div* elements, so that screen readers would recognise the meaning of an individual element
    - Each page has a *title* set inside the HTML element (located within the head element)
    - *h1*, *h2*, *h3*, *h4*, *h5* and *h6* elements are used for titles, and *p* elements for text passages
    - *strong* and *em* elements are used to emphasise smaller parts of the text (instead of *b* and *i* elements)
    - <head> </head> command is used for placing the title above the navigation list
    - *table* elements are used solely for the presentation of table data and not for achieving visual layout of elements on the page
    - tables contain the table title in the *caption* element, and column titles are defined using the *th* element.
    - Standard *HTML form elements* are used so that the platform would allow easy and logical navigation of the page, include the option for automatic correction of typing errors and any other assistive solutions

  and in cases where the screen reader does not recognise the element and/or incorrectly conveys the information, the information is also conveyed by audio (for example, mathematical formulas).
- Simple, legible, non-serif fonts are used for text
- All text is left-aligned
- it is possible to easily change the font size without losing the surrounding text (content)
- It is possible to easily change the font type to a font suitable for people with dyslexia
- The contrast of the text, text boxes and images on web pages against the background of the pages is good (strong) and there is an option to change the contrast
- Images and complex images (e.g. graphs and diagrams) have a suitable text name (*alt* attribute) in Croatian
- Images and complex images (e.g. graphs and diagrams) have a description in Croatian that contains the most important information about what the image shows. Explaining the function of the image is more important (if there is a functionality) and is at the beginning of the description (for example, the image represents a link to the e-mail address), followed by the content
- Text in the form of image files is not used
- When special colours are used for marking text that is highlighted or for marking links, additional markers such as underlining are used
- Links are descriptive, providing information about the content behind them
- Navigation through the digital content and its use is possible by using the keyboard only
- It must be possible to play, stop and replay audios and videos
- Audios and videos have a proper text title in Croatian
- Audios and videos have a textual description in Croatian that contains the most important information about what the audio or video shows
- Buttons on audios and videos have a short textual name in Croatian and clearly indicate the functionality of the button
- Audio and video recordings must be recorded or performed in stereo if it is a piece of music or the audio needs to convey the atmosphere. Audio recording of a speech can be recorded

in mono technique, making sure that the mono recording is sent equally in both stereo channels. When recording audio and video containing speech, sounds and/or music, care should be taken to ensure that other sounds do not disturb the audibility of the speech
- Flashing elements that can cause disturbances in people with sensory integration disorders and other neurological disorders are clearly marked
- The size of the icons on web pages, along with the space around them, which are activated by a click of the mouse or some other cursor, must be a minimum of 44 x 44 dp[13], and the distance between these clickable elements, as well as their distance from the text, should be no less than 8 dp
- The size of the icons in mobile applications, along with the space around them, that are activated by the touch of a finger, must be a minimum of 48 x 48 dp[9], and the distance between these clickable elements, as well as their distance from the text, should be no less than 8 dp.
- The menu and/or submenu is a fixed element that is activated by a click/tap, and not by hovering the cursor over it
- When *drag and drop* elements are used, there is also an alternative way of performing the action (for example, by double clicking on an element)
- There is no limited time for data entry, unless necessary.

7.2. Additional recommendations for providing digital accessibility

When providing digital accessibility, it is recommended that the following requirements be met:

- When table views containing a larger amount of data are used in digital content, they are accompanied by a concise explanation in Croatian
- All elements that are not constantly displayed are opened and closed by tapping (clicking of a mouse) (not by hovering the cursor over the button)
- Navigation menus have only the first level of navigation visible, while menu sublevels are initially hidden or reduced
- Drop-down menus and/or submenus do not have a large number of navigation sublevels or a large number of links on a single level
- The use of *drag and drop* elements is avoided
- Images and complex images (e.g. graphs and diagrams) have a short sound name in Croatian, with a suitable textual name (alt attribute) and a description in Croatian
- Audios and videos have subtitles and/or transcript of the text in Croatian
- Audios and videos have a short audio name in Croatian, with a suitable textual name and description in Croatian
- Buttons on audios and videos have a short audio name in Croatian, with a textual name in Croatian
- Audios and videos and the music used in audios and videos must be pleasant, unobtrusive and appropriate for the content within which they are used
- Dynamic content (e.g. *slider*), except for audios and videos, can be stopped, i.e. arbitrarily played
- If the web page uses *captcha*, alternative auditory verification is also used
- Content-related images are inserted on web pages with a lot of text to facilitate the understanding of the text for people who originally use Croatian sign language

[13] dp = density-independent pixels, flexible units with equal dimensions on any screen. They provide a flexible way of adapting design on all platforms.

- The need to simultaneously use two or more keyboard keys for a given command is avoided
- The textual part is divided into smaller blocks separated by a blank space.

7.3. Digital accessibility statement

All content available online and the applications, original mobile and desktop applications, e-books and content in learning management systems, and other digital contents, including those procured by CARNET through public procurement, must have a prominently displayed digital accessibility statement[14].

7.3.1. Position and format of the digital accessibility statement

The link to the accessibility statement must be visibly displayed on the homepage of the website or accessible on every web page, such as in the static header or footer, for all digital contents available on the network. A standard URL can be used for the digital accessibility statement. For web and mobile applications, the digital accessibility statement must be accessible from the application itself, and it is recommended that it be published with other information on the application available when downloading the application[15].

The digital accessibility statement must be published in an accessible format.

7.3.2. Uploading the digital accessibility statement

The contractor shall write the statement on the accessibility of the online contents and applications that are subject to public procurements carried out by CARNET in accordance with the template from item 7.3.3. of this document and publish it in the manner indicated in item 7.3.1. of this document.

In the case of mobile applications published by CARNET itself on services for application download, the contractor shall write the digital accessibility statement and submit it to CARNET, and CARNET will publish it in the manner specified in item 7.3.1

7.3.3. Instruction for writing a digital accessibility statement

In terms of content, a template for writing the digital accessibility statement is determined for writing the statement and it is attached in Appendix 1 hereto. It needs to be filled out in its entirety.[16]

8. Instructions for the implementation of guidelines and information sources

[14] In accordance with the Act on the Accessibility of Websites and Software Solutions for Mobile Devices and Public Sector Bodies (official gazette of the Republic of Croatia "Narodne novine" no. 17/2019), which transposes the Directive (EU) 2016/2102 of the European Parliament and of the Council of 26 October 2016 on the accessibility of websites and mobile applications of public sector bodies (OJ L 327, 2 December 2016)

[15] In accordance with the third subparagraph of Article 7 paragraph 1 of Directive (EU) 2016/2102.

[16] Commission Implementing Decision (EU) 2018/1523 of 11 October 2018 establishing a model accessibility statement in accordance with Directive (EU) 2016/2102 of the European Parliament and of the Council on the accessibility of websites and mobile applications of public sector bodies.

The content should be appropriately prepared for screen readers on all platforms for which it is developed (Windows 10 and Windows 10 Mobile, Mac OS and iOS, Linux, Android), according to the guidelines for content accessibility of each platform.

8.1. Specific guidelines for platforms

Specific guidelines for content accessibility for various platform are available on the following pages:

8.1.1. Android - https://developer.android.com/guide/topics/ui/accessibility

8.1.2. Apple - https://developer.apple.com/accessibility/

8.1.3. Apple iOS - https://developer.apple.com/accessibility/ios/

8.1.4. Microsoft –

https://developer.microsoft.com/en-us/windows/accessible-apps

https://docs.microsoft.com/en-us/windows/uwp/accessibility/accessibility

https://docs.microsoft.com/en-us/windows/uwp/accessibility/accessibility-overview

8.2. W3C WAI guidelines

The World Wide Web Consortium (W3C) has developed standards and guidelines for providing accessibility of the web, network services and applications, including mobile webs, i.e. the use of applications on mobile devices and recommendations regarding the provision of access and use of the web and applications by using assistive technology.

The W3C Web Accessibility Initiative (WAI) standards and guidelines for providing accessibility include:

8.2.1. Web Content Accessibility Guidelines (WCAG) – refers to web pages and web applications, including content used on mobile devices. Available at: http://www.w3.org/TR/WCAG21

It is recommended that special attention be paid to WCAG chapters 3.2.3. (Consistent Navigation), WCAG 3.2.4. (Consistent Identification) and WCAG 1.4.3. (Contrast).

8.2.2. Accessible Rich Internet Applications (WAI - ARIA) – refers to dynamic content and advanced web applications, especially those that use Ajax, HTML, JavaScript, etc., with a focus on accessibility for users using assistive technology. Available at: http://www.w3.org/TR/wai-aria

8.2.3. Authoring Tool Accessibility Guidelines (ATAG) – refers to website design tools, content management systems, systems in which users add content, such as blogs, wiki, social networks, etc. Available at: http://www.w3.org/TR/ATAG20

8.2.4. User Agent Accessibility Guidelines (UAAG) – refers to tools (middleware) such as web browsers and media players, but also to assistive technology. Available at: http://www.w3.org/TR/UAAG20

8.2.5. Independent User Interface (IndieUI) – refers to the use of web applications on different devices and using different assistive technology. Working version available at: http://www.w3.org/TR/indie-ui-events

8.2.6. Mobile Accessibility Resources – refers to individual mobile platforms. Available at: https://www.w3.org/WAI/GL/mobile-a11y-tf/wiki/Mobile_Resources

8.2.7. Applying WCAG 2.1 to Non-Web Information and Communications Technologies (WCAG2ICT) – describes how WCAG guidelines can be applied to offline information and communication technology, especially documents and software. Available at: http://www.w3.org/TR/wcag2ict/

8.3. ETSI requirements for providing digital accessibility of ICT in public procurement

The European Telecommunications Standards Institute (ETSI) has set the requirements for the accessibility of ICT products in Europe, available at http://www.etsi.org/deliver/etsi_en/301500_301599/301549/01.01.02_60/en_301549v010102p.pdf

8.4. Digital accessibility validators

So-called validators are used for checking the digital accessibility of contents.

8.4.1. W3C WAI validators

W3C WAI provides a list of validators, guidelines for using the methodology and tools for digital accessibility verification, which are available at http://www.w3.org/WAI/eval/Overview.html

8.4.2. Other tools and checklists

Additional useful tools, tips, and digital accessibility checklists are available at the following websites:

- The A11Y Project – checklists of the accessibility of contents available online: http://a11yproject.com/checklist.html
- MDN accessibility documentation: https://developer.mozilla.org/en-US/docs/Web/Accessibility
- "HTML Codesniffer" bookmarklet for identifying accessibility issues: https://github.com/squizlabs/HTML_CodeSniffer
- Chrome's Accessibility Developer Tools extension: https://chrome.google.com/webstore/detail/accessibility-developer-t/fpkknkljclfencbdbgkenhalefipecmb?hl=en
- Colour Contrast Analyser: https://www.paciellogroup.com/resources/contrastanalyser/

APPENDIX 1: Template of the digital accessibility statement

Instructions

The text in italics must be deleted and/or modified as necessary.

All notes need to be deleted before the digital accessibility statement is published.

Users must be able to easily find the digital accessibility statement. The link to the accessibility statement must be visibly displayed on the homepage of the website or accessible on every web page, such as in the static header or footer, for all digital contents available on the network. A standard URL can be used for the digital accessibility statement. For web and mobile applications, the digital accessibility statement must be accessible from the application itself, and it is recommended that it be published with other information on the application available when downloading the application.

The Digital Accessibility Statement must be published in an accessible format.

PART 1

REQUIREMENTS FOR MANDATORY CONTENT

DIGITAL ACCESSIBILITY STATEMENT

The Croatian Academic and Research Network – CARNET is required to ensure the accessibility of its *web location(s) and mobile application(s)* in accordance with the Act on the Accessibility of Websites and Software Solutions for Mobile Devices of Public Sector Bodies of the Republic of Croatia.

This digital accessibility statement applies to [*insert the scope of the statement, e.g. websites/mobile applications (*[i]*) to which the statement refers*].

Compliance status[ii]

(a) [iii][*This*] [*these*] [*website(s)*] [*mobile application(s)*] [*is*] [*are*] completely compliant with [*xxx* [iv]].

(b) [v] [*This*] [*these*] [*website(s)*] [*mobile application(s)*] [*is*] [*are*] partially compliant[vi] with [*xxx* [vii]], due to [*non-compliances*] [*and/or*] [*exceptions*] listed below.

(c)[viii] [*This*] [*these*] [*website(s)*] [*mobile application(s)*] [*is* not] [*are* not] compliant with [*xxx* [ix]]. The [*non-compliances*] [*and/or*] [*exceptions*] are listed below.

Inaccessible content [x]

The content listed below is inaccessible due to the following reason(s):

(a) Non-compliance with the Act on the Accessibility of Websites and Software Solutions for Mobile Devices of Public Sector Bodies of the Republic of Croatia

[List the non-compliances of website(s)/mobile application(s), and/or describe which part(s) of the content/functions are still non-compliant[xi]].

(b) Disproportionate load

[List the inaccessible part(s)/content/functions to which the disproportionate load is provisionally applied within the meaning of Art. 8 of the Accessibility Act (1)

(c) The content is not within the scope of the Act on the Accessibility of Websites and Software Solutions for Mobile Devices of Public Sector Bodies of the Republic of Croatia

[List inaccessible part(s)/content/functions that are outside the scope of the Accessibility Act (1)].

[*If possible, provide accessible alternatives*].

Preparing this digital accessibility statement

This statement has been prepared on [*date* [xii]].

[*Specify the method used to prepare this statement: self-assessment, third-party assessment (e.g. a certificate obtained) and/or other appropriate assessment measure that guarantees the accuracy of the statement]*

[This statement was last revised on [*insert date of the last revision* [xiii]]].

Feedback and contact information

[*Describe and specify a link to a feedback mechanism that will be used to inform the public sector bodies and users of any omissions in compliance with the Act and to seek information and content not covered by the scope of the Accessibility Act (1)*].

[*Provide contact information for the relevant authority (authorities)/person(s) (as necessary) responsible for accessibility and for processing requests sent through the feedback mechanism*].

Inspection control

[*Describe and provide a link to the inspection control that will be used in case of unsatisfactory responses to any notification or request sent in accordance with Art. 12 of the Accessibility Act (1)*].

[*Provide contact data of the competent implementing authority*].

PART 2

OPTIONAL CONTENT

The following optional content can be added to the digital accessibility statement if appropriate:

(1) An explanation of the obligations of public sector bodies regarding digital accessibility, such as:

—The intention of the body to reach the accessibility level higher than the one stipulated by law,

—Corrective measures to be taken to resolve the issue of inaccessible content of websites and mobile applications, including the timeframe for implementing these measures;

(2) Formal approval (on the administrative or political level) of the digital accessibility statement;

(3) Date of publication of the website and/or mobile application;

(4) Date of last update of the website and/or mobile application after a significant revision of its content;

(5) Link to the assessment report, if available, and especially if the website or mobile application compliance status is marked as "(a) completely compliant";

(6) Additional telephone assistance for persons with disability and support to users of assistive technology;

(7) Any other content deemed appropriate.

Instructions

[i] *For mobile applications, provide data on the version and the date.*

[ii] *Select one of the options listed below, e.g. (a), (b), or (c) and delete the ones that do not apply.*

[iii] *Select (a) only if all requirements of the standard or technical specifications are met completely, without exceptions.*

[iv] *Insert a reference to the standards and/or technical specifications; or specify the national legislation (1) transposing the Directive (2) .*

[v] *Select (b) if most requirements of the standard or technical specifications are met, but with some exceptions.*

[vi] *This means that complete compliance has not been achieved yet and that measures have been taken to achieve complete compliance.*

[vii] *Insert reference to standards and/or technical specifications; or specify the national legislation (1) transposing the Directive. (2)*

[viii] *Select (c) if most of the requirements of the standard or technical specification are not met.*

[ix] *Insert a reference to standards and/or technical specifications; or specify the national legislation(1) transposing the Directive.* (2)

[x] *Can be deleted if not applicable.*

[xi] *Using non-technical terms, describe, as much as possible, how the content is not accessible, including references to applicable requirements of the relevant standards and/or technical specifications that have not been met;*

[xii] *Enter the date of the first preparation or subsequent updating of the accessibility statement after assessing the website/mobile application to which the statement refers. Conducting of an assessment after a significant revision of the website/mobile application is recommended.*

[xiii] *Regular checking of the accuracy of the claims in the accessibility statement is recommended at least once a year. If such a check is performed without a full assessment of the website/mobile application, regardless of whether or not such a check led to any changes to the accessibility statement, indicate the date of the most recent change.*

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(1) Act on the on Accessibility of Websites and Software Solutions for Mobile Devices of Public Sector Bodies of the Republic of Croatia, in force since 23 September 2019.

(2) Directive (EU) 2016/2102 of the European Parliament and of the Council of 26 October 2016 on the accessibility of websites and mobile applications of public sector bodies (OJ L 327, 2 December 2016, p. 1.)

(3) Commission Implementing Decision (EU) 2018/1523 of 11 October 2018 establishing a model accessibility statement in accordance with Directive (EU) 2016/2102 of the European Parliament and of the Council of 26 October 2016 on the accessibility of websites and mobile applications of public sector bodies (OJ L 256, 12 October 2018, p. 103).