

# Possibilities of accessibility support in the infocommunication

**Csilla Kvaszingerne Prantner–Tünde Lengyelné dr. Molnár**

Eszterházy Károly University

Mediainformatics Institute, Humaninformatics Department

# The accessibility of the web pages is important



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Web pages are the most effective devices for **disseminating information, facilitating the electronic fulfilment of administrative errands** along with reaching out to **persons with disabilities**

The obstacle-free accessibility of webpages are crucial aspects of info-communication.



*Our presentation focuses on webpage accessibility. We would like to highlight selected regulations and standards indispensable for free accessibility to the respective webpages.*

# The concept of info-communication accessibility and the provision of obstacle free access to webpages

The obstacle free accessibility of webpages **mostly implies equal opportunity in accessing the given content.**

An **obstacle free webpage** allows **everyone to use it** regardless of :

- potential disability,
- illness,
- availability of browsing device quality,
- or the level of familiarity with informatics.



# Provision of obstacle free accessibility to webpages performing public service

For websites maintained by governmental organizations or service providers easy use and obstacle free access are essential. This is not only reasonable, but warranted by several pieces of legislation.

- 1. Equal opportunity law:** Act XXVI/1998 on the rights and equal opportunity of disabled persons calls attention to the free accessibility of the built-in environment and the significance of accessibility to information deemed to be of public interest.
- 2. Riga declaration** (2006): The Riga Declaration calls for full accessibility to governmental webpages according to W3C standards.
- 3. European Parliament Resolution** (2002): Accordingly webpages fulfilling public service functions must be made obstacle free and accessible while meeting the WCAG 2.0, WAI, and ATAG web standards.
- 4. Agreement on the rights of persons living with disability and the related Optional Protocol** (2006): It stipulates that for organisations performing governmental and public service tasks provision of obstacle free access is mandatory.

# Groups targeted for obstacle free access

Next I will point out disadvantaged groups most frequently encountering difficulties during computer use.

Persons living with disability	Technologically disadvantaged	Special target groups
1 Blind users 2 Vision impaired 3 Colour blind and colour vision deficiency 4 Hearing impaired, physically disabled 5 People with epilepsy 6 People with intellectual disability 7 Speech impaired	1 Unusual screen size 2 Obsolete browser 3 Weak hardware	1 Children 2 The elderly 3 People with low education levels 4 People speaking foreign languages or representing different cultures


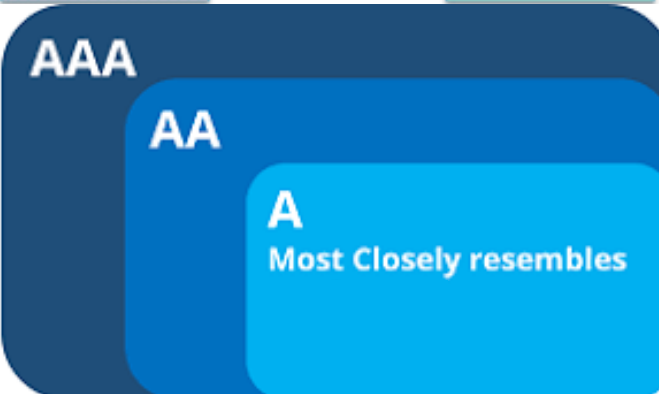
(Abonyi-Tóth-Pataki-Mátételki, 2011)

Furthermore, any one, without the limitations listed above can find him or herself in a temporary “disability” situation.



# Web Content Accessibility Guidelines – WCAG 2.0

The WCAG 2.0 document includes **basic principles**, **guidelines** and **performance criteria** that applications and webpages have to meet and observe in order to qualify as accessible.

Principles	Guidelines	Level A	Level AA	Level AAA
1. Perceivable	1.1 Text Alternatives 1.2 Time-based Media 1.3 Adaptable 1.4 Distinguishable			
2. Operable	2.1 Keyboard Accessible 2.2 Enough Time 2.3 Seizures 2.4 Navigable			
3. Understandable	3.1 Readable 3.2 Predictable 3.3 Input Assistance			
4. Robust	4.1 Compatible			

The document distinguishes three levels of accessibility: including A, AA, and AAA.

Where A represents the lowest level, or the minimum requirements to qualify as an obstacle free webpage.

The respective levels are interdependent, thus in order to advance between them all criteria of the previous level and the next as well have to be fulfilled.

Consequently, in order to qualify on level AA all A and AA criteria have to be met, while advancement to the AAA level implies the fulfilment of all three previous requirements.

# The term “blind-friendly” is incorrect and an improper solution as well



„blind-friendly”



Webpages prepared as a result of government or EU supported projects are required to be obstacle free, that is meeting at least the A level of the WCAG criteria system.

## Incorrect naming and method, because:

- This arrangement cannot help blind people.
- Besides the blind several groups need support.
- The visually impaired category includes several groups, they use own css-style.
- The respective contents are not regularly updated.



# Examples of web accessibility...

Web accessibility in general is not visible, and the real difference is not in the display, but in the coding or the appropriate designation of the given content.

## Principle 1: Perceivable

„**Guideline 1.1 Text Alternatives:** Provide text alternatives for any non-text content so that it can be changed into other forms people need, such as large print, braille, speech, symbols or simpler language.”

How do blind people surf on the Internet?

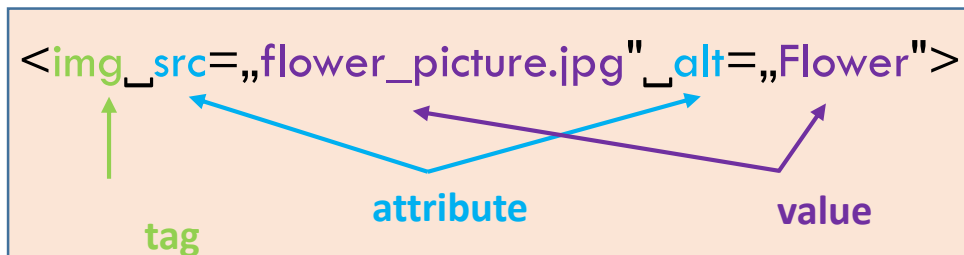


# Examples of web accessibility...

## Principle 1: Perceivable

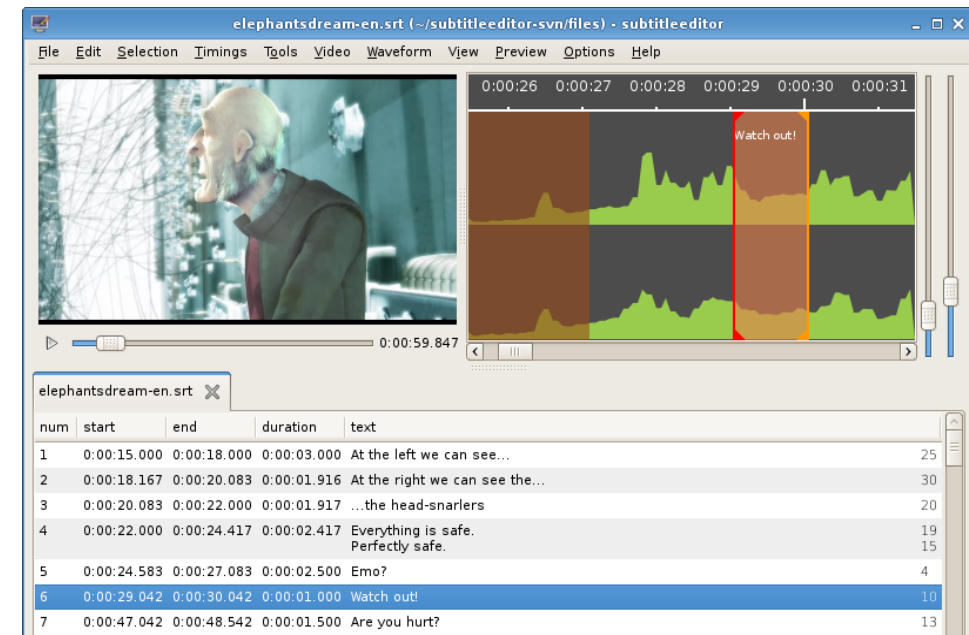
**„Guideline 1.1 Text Alternatives:** Provide text alternatives for any non-text content so that it can be changed into other forms people need, such as large print, braille, speech, symbols or simpler language.”

1. In case of pictures the given image is described in a few words by a developer-created text while the respective picture can be found by the Google Search system.



`_ = <SPACE>`

2. In case of video the textual version of the given video should be provided in a separate text file to be uploaded on YouTube along with the respective video. What are the benefits of such approach?



# What are the benefits of such approach according to the video?

- a. **The errors in the subtitles can be corrected** as the given lines are not printed on the video, but are contained by the attached text file.
- b. **The text can be translated into foreign languages** and attached to the given video.
- c. Due to the textual version **the words heard in the video can be searched**.
- d. Hearing impaired users **can read the text** as well.
- e. Non-disabled persons, sitting in a restaurant or on a public transport vehicle and **unable to hear the given content properly can read the textual version**.
- f. Non-disabled people at a quiet location, such as a library **can read the text of the video** even without an earphone.
- g. In case of foreign language texts the blind or visually impaired **can access a voiced version** of the Hungarian language equivalent.
- h. In case of foreign language texts non-disabled persons **can read the translation** as well.
- i. If the video and its subtitles are in a foreign language the given words **can be translated** after inserting the content of the text file in the Google Translator.
- j. If the given sound is of low quality and not well understandable **the texts can be made audible** by the screen reader.



# Structuring the given webpage

3. Structuring the given webpage: The beginning and end of the headlines, subtitles, and paragraphs in the given HTML documents should be exactly marked. Screen readers do not make the whole webpage audible, a click on a fast key reveals only the headlines, the titles, or the given links.

```
10 <header>
11   <h1>Akvarisztika</h1>
12   <p><em>Legyen jó helye halainak!</em></p>
13 </header>
14 <nav><p><strong>
15   <a href="index.html">Főoldal</a> |
16   <a href="galery.html">Galéria </a> |
17   <a href="links.html">Linkek </a> |
18   <a href="mailto:csilla@ektz.hu">E-mail</a><br />
19 </strong></p>
20 </nav>
21 <section>
22 <br />
23 <h1>Mit takar az a kifejezés, hogy akvarisztika?</h1>
24 <h2>A szó eredete</h2>
25 <p>Az akvárium szó a latin <em>aqua</em> (jelentése víz) és a <em>-rium</em> utótagból
26 </p>
27 <h2>A fogalom jelentése</h2>
28 <p>
29 Az <strong>akvarisztika</strong> vagy <strong>akvarofília</strong> egy mára tudományággá
30 </p>
```

<h1>

<h2>

<strong>





# Composing the texts of the links

4. Composing the texts of the links. Special care should be taken when composing the given texts since those words are read for the blind user and this can have an impact on the search engine hit list as well. The text should provide an exact description of the information to be revealed after clicking along with enabling access to as large a surface as possible.

**Wrong:** For the accesibility document download [here!](#)

**Good:** [The accesibility document download!](#)

5. A linked area should be large enough.



Wand tool



Foot mouse

**Wrong:**



**Good:**



# According to the electronic application forms

5. In case of electronic application forms care must be taken that not only the colour provides information as this can cause difficulty for persons with colour vision deficiency. Thus instead of colours the asterisk (\*) should be used when marking mandatory areas.

LIFEPAK® Defibrillator Software Solutions - Configuration Setup Tool

Configure Setup Options  
Select and expand categories in the left hand pane as needed to navigate through all setup options.

**LIFEPAK 15 - 3207410-007**

- General
- Manual Mode
- Energy Protocol
- AED Mode
- Energy Protocol
- CPR
- CPR Metronome
- Pacing
- Monitoring
  - Channels
    - Set 1
    - Set 2
    - Set 3
    - Set 4
    - Set 5
  - CO2
  - NI8P
  - 12-Lead
- Events
  - Custom Events
- Alarms

Setup / General  
Set up general device options

Code Summary: Long

Trend Summary: Off

Site Number: 000 \*

Device ID: LP154241 \*

Auto Log: On

Line Filter: 60Hz

Timeout Speed: 30 Seconds

< Back Finish > Cancel

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Colour blind and colour vision deficiency



# What are the advantages?

Website accessibility is simultaneous with several other objectives including

- mobile design,
- independent use regardless of device,
- multimodality,
- usability, and
- search optimization.

Research results prove that accessible webpages can be searched easier, have lower maintenance costs, and can be read by more users.



**Thank You for Your attention!**

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