Applying the Skip Navigation Links in the Context of the Websites' Accessibility of Central Public Administration Bodies in the Žilina Region[1]

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Abstract: *The study focuses in its main aim on seeking yet undetected or undefined deficits in relation to applying the skip navigation mechanism on the websites of the central public administration bodies in the Žilina Region in the context of improving the websites accessibility and it consists of two separate parts. The first part presents a basic introduction to the questions of skip navigation links, with the key attention paid to the following three main areas: applying of skip navigation links, visual hiding of skip navigation links, and web browsers' bug related to skip navigation links. The second part of the study concentrates on the basis of analysis of applying the skip navigation links on the websites of the central public administration bodies in the Žilina Region on the processes focused on detection of potential deficits and gaps in the websites' accessibility or related possible non-compliance with the legislation in force.*

Key Words: *Websites; Websites' Accessibility; Skip Navigation Links; Public Administration; Central Public Administration Bodies; Compliance with Legislation in Force; the Žilina Region; Analysis.*

Introduction

The on-line form of presentation and communication of the public administration authorities via Internet belongs not only to the most effective forms of communications – in relation to the territorial impact of the communicated information, but also to the most problematic – in the context of technical realization due to a number of specific standards required by handicapped web users with various forms of disabilities. In the following study the author focuses on the questions of applying the skip navigation links as key elements by building the websites.

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[1] This study was created within the institutional project of the Faculty of Law of Trnava University in Trnava No. 10/2013 "Websites' Accessibility in Public Administration", in the Slovak original "Prístupnosť webových stránok vo verejnej správe".

While sighted web users use their eyes as a built-in skip navigation mechanism which enables them to bypass several links with only one click or to move directly to the link they want to reach with the mouse, for users with some forms of visual or motor disabilities means bypassing the navigation links or direct browsing the website a very serious technical problem. Importance and wide-social interest in solving this problem is reflected also in the adopted related legislation which is in the Slovak Republic represented by the latest Ministerial Decree of the Ministry of Finance of the Slovak Republic No. 55/2014 Coll. of Standards for Information Systems of Public Administration issued on March 4th, 2014, and effective from March 15th, 2014.[2]

The aim of the study is to analyze applying the skip navigation links on the websites of the central public administration bodies in the Žilina Region. In the context of the research questions we define the main hypothesis as follows: *Homepages of the central public administration bodies in the Žilina Region apply technically correctly the skip navigation links mechanism*.

Skip navigation links

The following part of the study familiarizes the readers with the main questions of applying of skip navigation links, visual hiding of skip navigation links, and web browsers' bug related to skip navigation links.

Applying of skip navigation links

The idea of applying the skip navigation links is simple: they serve to provide a link at the top of the webpage which jumps the user down to an anchor or target at the beginning of the main content. For the most part it seems to be easy, though there is more than one way to accomplish the goal. From the technical view the process of creating the skip navigation link could be explained through a HTML code as it is shown in the following example:[3]

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[2] See *Výnos Ministerstva financií Slovenskej republiky č. 55/2014 Z.z. o štandardoch pre informačné systémy verejnej správy zo 4. marca 2014* [Ministerial Decree of the Ministry of Finance of the Slovak Republic No. 55/2014 Coll. of Standards for Information Systems of Public Administration issued on March 4th, 2014].

[3] "Skip Navigation" Links. In: *WebAIM: Web Accessibility in Mind* [online]. 2013-10-25 [cit. 2015-12-01]. Available at: http://webaim.org/techniques/skipnav/; and KOPRLOVÁ, J. Applying the Skip Navigation Links in the Context of the Websites' Accessibility of Central State Administration Bodies in the Slovak Republic. *Societas et iurisprudentia* [online].

➕ HTML code:

```
<body>
<a href="#main-content">Skip to Main Content</a>
...
<main id="main-content">
  <h1>Heading</h1>
  <p>This is the first paragraph.</p>.
```

Visual hiding of skip navigation links

By building the website the most required form of applying the skip navigation mechanism is to make it invisible. For hiding the skip links there are several techniques to be applied. Two parallel conditions should be necessarily taken into account in this process: the first one means the requirement of visual hiding of the skip links content, and the second one represents the requirement of accessibility of the skip links content for screen readers. Nowadays, the best known and most often used CSS code *"visibility: hidden;/display: none;"* satisfies the only first one from the two above-mentioned conditions and so it cannot be recommended in relation to its non-visibility and inaccessibility for screen readers. An effective solution of this problem, satisfying the both conditions, offer the following HTML and CSS codes:[4]

➕ HTML code:

```
<div class="hidden">This text is hidden.</div>;
```

➕ CSS code:

```
.hidden {
  position: absolute;
  left: -10000px;
  top: auto;
  width: 1px;
  height: 1px;
```

2014, roč. 2, č. 2, pp. 134-135 [cit. 2015-12-01]. ISSN 1339-5467. Available at: http://sei.iuridica.truni.sk/archive/2014/02/SOCIETAS-ET-IURISPRUDENTIA-2014-02.pdf.

[4] CSS in Action: Invisible Content Just for Screen Reader Users. In: *WebAIM: Web Accessibility in Mind* [online]. 2014-12-11 [cit. 2015-12-01]. Available at: http://webaim.org/techniques/css/invisiblecontent/; and KOPRLOVÁ, J. Applying the Skip Navigation Links in the Context of the Websites' Accessibility of Central State Administration Bodies in the Slovak Republic. *Societas et iurisprudentia* [online]. 2014, roč. 2, č. 2, p. 135 [cit. 2015-12-01]. ISSN 1339-5467. Available at: http://sei.iuridica.truni.sk/archive/2014/02/SOCIETAS-ET-IURISPRUDENTIA-2014-02.pdf.

```
overflow: hidden;
}.
```

By generally recommended requirement to make the skip navigation links invisible until they receive keyboard focus, the following HTML and CSS codes should be applied:[5]

- HTML code:

```
<div id="hidden"><a href="#main-content">Skip to Main Content
</a></div>;
```

- CSS code:

```
#hidden a {
  position: absolute;
  left: -10000px;
  top: auto;
  width: 1px;
  height: 1px;
  overflow: hidden;
}
#hidden a:focus {
  position: static;
  width: auto;
  height: auto;
}.
```

This means a very useful solution which could be preferred above all for sighted keyboard users those cannot use a mouse.

Web browsers' bug related to skip navigation links

The recommended above-mentioned skip navigation links related solutions are working effective in most web browsers, but nowadays there still exists one bug which lowers the efficiency of their applying through disrupting the logical order by browsing or reading the webpage links. This makes the webpage browsing with keyboard distortable or even non-effective. An appropriate solution for healing this bug offers the HTML code as follows:[6]

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[5] CSS in Action: Invisible Content Just for Screen Reader Users. In: *WebAIM: Web Accessibility in Mind* [online]. 2014-12-11 [cit. 2015-12-01]. Available at: http://webaim.org/techniques/css/invisiblecontent/.

[6] Skip Navigation Links (Updated 6/19/2009). In: *JimThatcher.com* [online]. 2014-09-16 [cit. 2015-12-01]. Available at: http://www.jimthatcher.com/skipnav.htm; and KOPRLO-

HTML code:
```
<body>
<a href="#main-content">Skip to Main Content</a>
...
<main id="main-content" tabindex="-1">
  <h1>Heading</h1>
  <p>This is the first paragraph.</p>.
```

Analysis of applying the skip navigation links on the websites of the central public administration bodies in the Žilina Region

Our analysis of applying the skip navigation links on the websites of the central public administration bodies in the Žilina Region has been legislatively based on the Ministerial Decree of the Ministry of Finance of the Slovak Republic No. 55/2014 Coll. of Standards for Information Systems of Public Administration issued on March 4th, 2014, and effective from March 15th, 2014, with the main attention laid on the § 14 Websites' Accessibility (in the Slovak original "§ 14 Prístupnosť webových stránok"), including related appendix Guideline 13. Providing Clear Navigation Mechanisms (in the Slovak original "Pravidlo 13. Poskytovanie prehľadného mechanizmu navigácie").[7]

Our analysis was realized in the early December 2015 by applying web browser Internet Explorer 11 (with style sheets and active elements turned off). Complete sample was represented by all websites of all the central public administration bodies in the Žilina Region, while research

VÁ, J. Applying the Skip Navigation Links in the Context of the Websites' Accessibility of Central State Administration Bodies in the Slovak Republic. *Societas et iurisprudentia* [online]. 2014, roč. 2, č. 2, pp. 136-137 [cit. 2015-12-01]. ISSN 1339-5467. Available at: http://sei.iuridica.truni.sk/archive/2014/02/SOCIETAS-ET-IURISPRUDENTIA-2014-02.pdf.

[7] Compare with KOPRLA, M. and J. KOPRLOVÁ. Analýza prístupnosti webových stránok vybraných webových sídiel verejnej správy z pohľadu administratívno-správneho členenia Slovenskej republiky. *Societas et res publica* [online]. 2013, roč. 2, č. 1, pp. 93-160 [cit. 2015-09-01]. ISSN 1338-6530. Available at: http://serp.fsv.ucm.sk/archive/2013/01/SOCIETAS-ET-RES-PUBLICA-2013-01.pdf; and with KOPRLA, M. Prístupnosť webových stránok ako významný faktor zvyšovania konkurencieschopnosti. In: K. ĎURKOVÁ, A. BOBOVNICKÝ and A. ZAUŠKOVÁ, eds. *Inovácie a vedomostná spoločnosť/digitálny marketing – udržateľný rast a návrat investícií* [CD-ROM]. 1. vyd. Trnava: Univerzita sv. Cyrila a Metoda v Trnave, Fakulta masmediálnej komunikácie, 2012, pp. 49-63. ISBN 978-80-8105-454-9.

sample was defined by all homepages of all the central public administration bodies in the Žilina Region, namely of:[8]

- Central public administration body of Tvrdošín (http://www.tvrdosin.sk/);
- Central public administration body of Žilina (http://www.zilina.sk/);
- Central public administration body of Bytča (http://www.bytca.sk/);
- Central public administration body of Čadca (http://www.mestocadca.sk/);
- Central public administration body of Dolný Kubín (http://www.dolnykubin.sk/);
- Central public administration body of Kysucké Nové Mesto (http://www.kysuckenovemesto.sk/);
- Central public administration body of Liptovský Mikuláš (http://www.mikulas.sk/);
- Central public administration body of Martin (http://www.martin.sk/);
- Central public administration body of Námestovo (http://www.namestovo.sk/);
- Central public administration body of Ružomberok (http://www.ruzomberok.sk/);
- Central public administration body of Turčianske Teplice (http://www.turciansketeplice.sk/).

Central public administration body of Tvrdošín

Next figure displays homepage of the central public administration body of Tvrdošín, with style sheets and active elements turned off. There is no skip link applied.
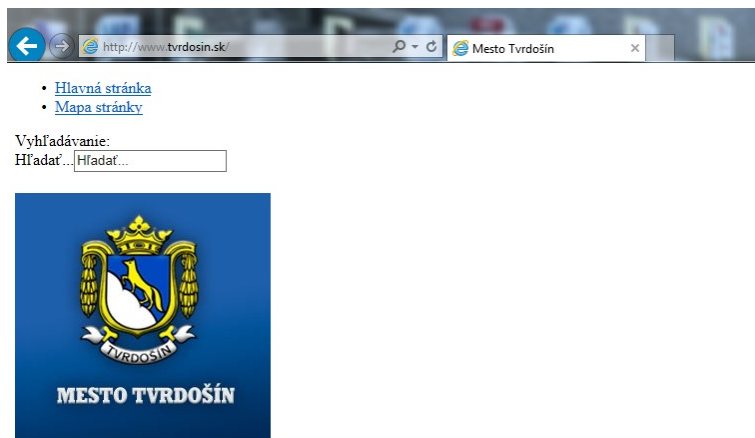
Analyzing the homepage of the central public administration body of Tvrdošín in context of using the skip navigation links following key findings could be detected:[9]

- Number of links before the main content: 49 links;
- Number of skip links: 0 links.

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[8] See *Zákon č. 575/2001 Z.z. o organizácii činnosti vlády a organizácii ústrednej štátnej správy v platnom znení* [Act No. 575/2001 Coll. on Organization of the Activities of the Government and Organization of the Central Public Administration, as amended].

[9] Source code of the central public administration body website of *Tvrdošín* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.tvrdosin.sk/.

Figure 1 Website (with style sheets and active elements turned off) of the Central Public Administration Body of Tvrdošín
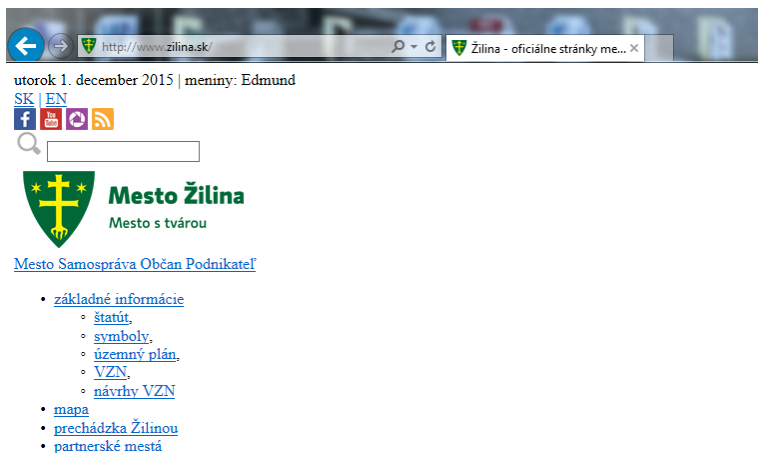

Source: Website (with style sheets and active elements turned off) of the central public administration body of *Tvrdošín* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.tvrdosin.sk/.

According to the presented results we can conclude that there is no skip navigation mechanism applied on the analyzed homepage of the central public administration body of Tvrdošín. In relation to this finding we can recommend to add the skip navigation links in accordance with the model examples shown in the previous part of the study named "Skip navigation links".

Central public administration body of Žilina

Next figure displays homepage of the central public administration body of Žilina, with style sheets and active elements turned off. There is no skip link applied.

Analyzing the homepage of the central public administration body of Žilina in context of using the skip navigation links following key findings could be detected:[10]

- Number of links before the main content: 185 links;
- Number of skip links: 0 links.

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[10] Source code of the central public administration body website of *Žilina* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.zilina.sk/.

Figure 2 Website (with style sheets and active elements turned off) of the Central Public Administration Body of Žilina

Source: Website (with style sheets and active elements turned off) of the central public administration body of *Žilina* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.zilina.sk/.

According to the presented results we can conclude that there is no skip navigation mechanism applied on the analyzed homepage of the central public administration body of Žilina. In relation to this finding we can recommend to add the skip navigation links in accordance with the model examples shown in the previous part of the study named "Skip navigation links".

Central public administration body of Bytča

Next figure displays homepage of the central public administration body of Bytča, with style sheets and active elements turned off. The analyzed skip link is marked by red rectangle.

Analyzing the homepage of the central public administration body of Bytča in context of using the skip navigation links following key findings could be detected:[11]

- Number of links before the main content: 89 links;
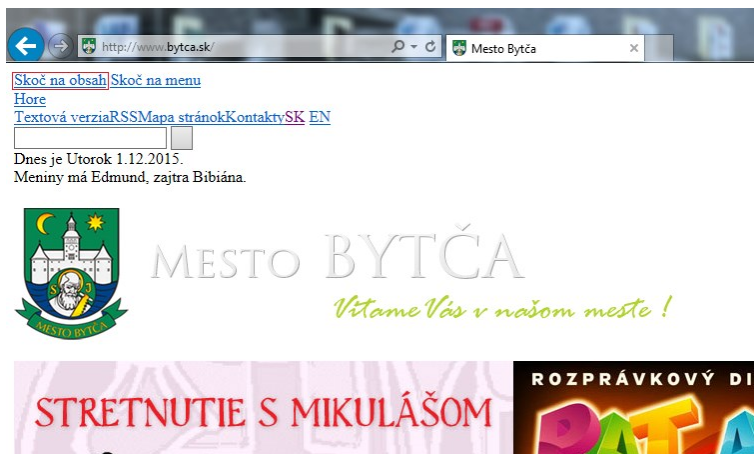- Number of skip links: 2 links;

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[11] Source code of the central public administration body website of *Bytča* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.bytca.sk/.

- Number of links before the first skip link: 0 links;
- Visual display of skip links: hidden;
- HTML code of skip links:

```
<a href="#content" class="pristupnost" title="Skoč na obsah">Skoč
na obsah</a>
<a href="#navi" class="pristupnost" title="Skoč na menu">Skoč na
menu</a>
[Missing selector id="navi"]
<div id="content" class="content_5">
  ...
</div>;
```

- CSS code of skip links:

```
.pristupnost {
  position: absolute;
  top: -1000px;
}
```

Figure 3 Website (with style sheets and active elements turned off) of the Central Public Administration Body of Bytča

Source: Website (with style sheets and active elements turned off) of the central public administration body of *Bytča* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.bytca.sk/.
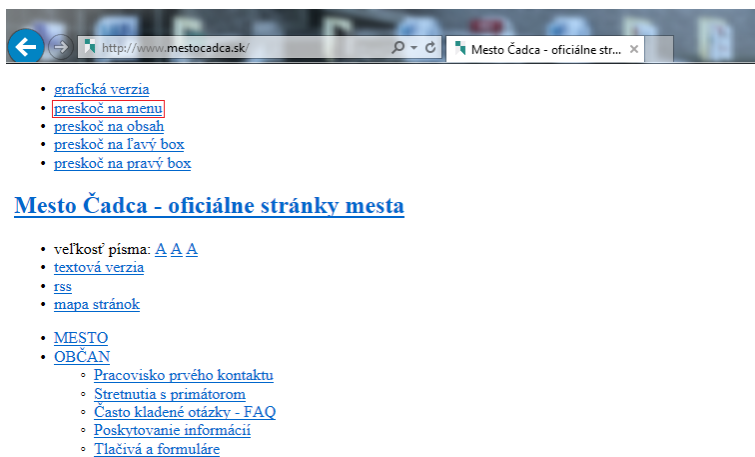
According to the presented results we can conclude that there is a skip navigation mechanism applied on the analyzed homepage of the central public administration body of Bytča which works technically correctly. In relation to our finding we can recommend to replace element

"*<div class="naviWrapper">*" with element "*<div class="naviWrapper" id= "navi">*", then to add the attribute *tabindex="-1"* to website's target elements and to replace CSS code "*top: -1000px;*" with CSS code in accordance with the model examples shown in the previous parts of the study named "Visual hiding of skip navigation links" and "Web browsers' bug related to skip navigation links", with the aim to eliminate the disrupted logical order by browsing or reading the webpage links that occurs by most of web browsers.

Central public administration body of Čadca

Next figure displays homepage of the central public administration body of Čadca, with style sheets and active elements turned off. The analyzed skip link is marked by red rectangle.

Figure 4 Website (with style sheets and active elements turned off) of the Central Public Administration Body of Čadca

Source: Website (with style sheets and active elements turned off) of the central public administration body of *Čadca* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.mestocadca.sk/.

Analyzing the homepage of the central public administration body of Čadca in context of using the skip navigation links following key findings could be detected:[12]

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[12] Source code of the central public administration body website of *Čadca* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.mestocadca.sk/.

- Number of links before the main content: 59 links;
- Number of skip links: 4 links;
- Number of links before the first skip link: 1 link;
- Visual display of skip links: hidden;
- HTML code of skip links:

```
<div class="hidden nav">
  <ul>
    ...
    <li>
      <a href="#navigation">preskoč na menu</a>
    </li>
    <li>
      <a href="#content-inner">preskoč na obsah</a>
    </li>
    <li>
      <a href="#left-column">preskoč na ľavý box</a>
    </li>
    <li>
      <a href="#right-column">preskoč na pravý box</a>
    </li>
  </ul>
</div>
<div id="navigation">
  ...
</div>
<div id="right-column">
  ...
</div>
<div id="content-inner">
  ...
</div>
<div id="left-column">
  ...
</div>;
```

- CSS code of skip links:

```
.hidden {
  display: none;
}.
```

According to the presented results we can conclude that there is a skip navigation mechanism applied on the analyzed homepage of the central public administration body of Čadca, but it works technically incorrectly. In relation to our finding we can recommend to move the applied skip navigation links to the top of the website, then to add the attribute *tabindex="-1"* to website's target elements and to replace CSS code *"display: none;"* with CSS code in accordance with the model examples shown in the previous parts of the study named "Visual hiding of skip navigation links" and "Web browsers' bug related to skip navigation links", with the aim, firstly, to make the skip navigation links content accessible/visible for screen readers and, secondly, to eliminate the disrupted logical order by browsing or reading the webpage links that occurs by most of web browsers.

Central public administration body of Dolný Kubín

Next figure displays homepage of the central public administration body of Dolný Kubín, with style sheets and active elements turned off. The analyzed skip link is marked by red rectangle.

Figure 5 Website (with style sheets and active elements turned off) of the Central Public Administration Body of Dolný Kubín

Source: Website (with style sheets and active elements turned off) of the central public administration body of *Dolný Kubín* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.dolnykubin.sk/.

Analyzing the homepage of the central public administration body of Dolný Kubín in context of using the skip navigation links following key findings could be detected:[13]

- Number of links before the main content: 40 links;
- Number of skip links: 5 links;
- Number of links before the first skip link: 0 links;
- Visual display of skip links: hidden;
- HTML code of skip links:

```
<div class="hidden-special">
  <a href="#m_0" title="Prechod na navigáciu vodorovná">Prechod na navigáciu vodorovná</a>
  <a href="#m_00" title="Prechod na navigáciu block menu">Prechod na navigáciu block menu</a>
  <a href="#m_197939" title="Prechod na navigáciu Hlavné menu">Prechod na navigáciu Hlavné menu</a>
  <a href="#m_205900" title="Prechod na navigáciu Hlavné menu 4">Prechod na navigáciu Hlavné menu 4</a>
  <a href="#m_198109" title="Prechod na navigáciu Hlavné menu 5">Prechod na navigáciu Hlavné menu 5</a>
</div>
<a name="m_0"></a>
[Missing selector name="m_00"]
<a name="m_197939"></a>
<a name="m_205900"></a>
<a name="m_198109"></a>;
```

- CSS code of skip links:

```
.hidden-special {
  height: 0;
  overflow: hidden;
  margin: 0;
  padding: 0;
  border: 0;
}.
```

According to the presented results we can conclude that there is a skip navigation mechanism applied on the analyzed homepage of the central public administration body of Dolný Kubín, but it works techni-

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[13] Source code of the central public administration body website of *Dolný Kubín* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.dolnykubin.sk/.

cally incorrectly. In relation to our finding we can recommend to replace element *"Prechod na navigáciu block menu"* with element *" Prejsť na obsah stránky"*, then to add the attribute *tabindex="-1"* to website's target elements and to replace CSS code *"height: 0;"* with CSS code in accordance with the model examples shown in the previous parts of the study named "Visual hiding of skip navigation links" and "Web browsers' bug related to skip navigation links", with the aim, firstly, to make the skip navigation links content accessible/visible for screen readers and, secondly, to eliminate the disrupted logical order by browsing or reading the webpage links that occurs by most of web browsers.

Central public administration body of Kysucké Nové Mesto

Next figure displays homepage of the central public administration body of Kysucké Nové Mesto, with style sheets and active elements turned off. The analyzed skip link is marked by red rectangle.

Analyzing the homepage of the central public administration body of Kysucké Nové Mesto in context of using the skip navigation links following key findings could be detected:[14]

- Number of links before the main content: 195 links;
- Number of skip links: 2 links;
- Number of links before the first skip link: 10 links;
- Visual display of skip links: hidden;
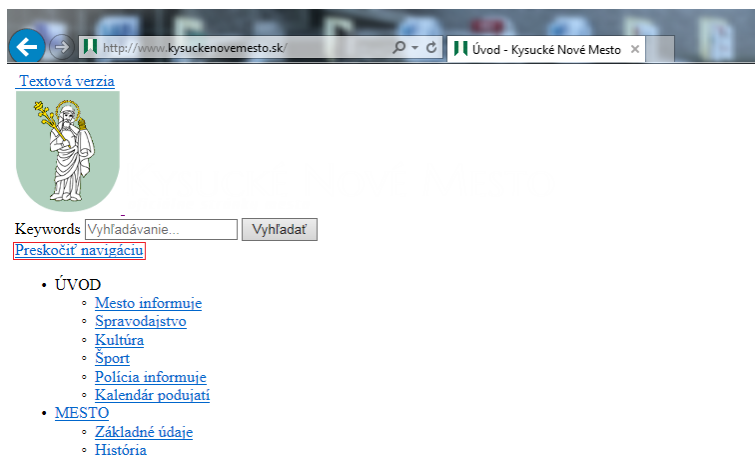- HTML code of skip links:
  ```
  <a href="#skipNavigation124" class="invisible">Preskočiť navi-
  gáciu</a>
  <a href="#skipNavigation3" class="invisible">Preskočiť navi-
  gáciu</a>
  <a name="skipNavigation124" id="skipNavigation124"
  class="invisible"> </a>
  <a name="skipNavigation3" id="skipNavigation3"
  class="invisible"> </a>;
  ```
- CSS code of skip links:
  ```
  .invisible {
    width: 0px;
    height: 0px;
  ```

---

[14] Source code of the central public administration body website of *Kysucké Nové Mesto* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.kysuckenovemesto.sk/.

```
        left: -1000px;
        top: -1000px;
        position: absolute;
        overflow: hidden;
        display: inline;
    }.
```

Figure 6 Website (with style sheets and active elements turned off) of the Central Public Administration Body of Kysucké Nové Mesto
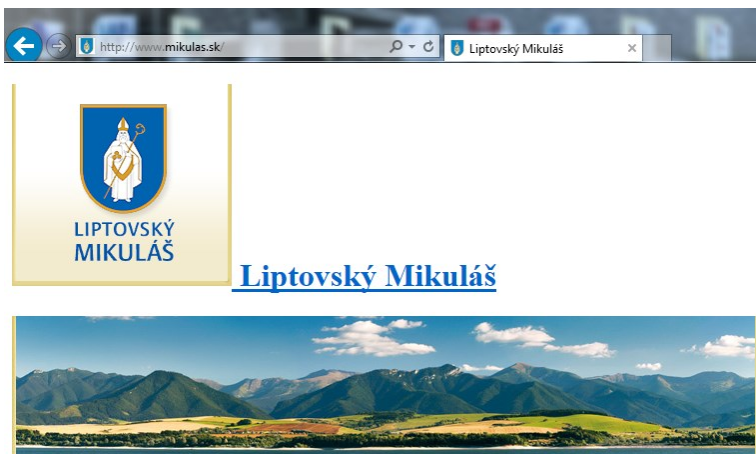

Source: Website (with style sheets and active elements turned off) of the central public administration body of *Kysucké Nové Mesto* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.kysuckenovemesto.sk/.

According to the presented results we can conclude that there is a skip navigation mechanism applied on the analyzed homepage of the central public administration body of Kysucké Nové Mesto, but it works technically incorrectly. In relation to our finding we can recommend to move the applied skip navigation link to the top of the website, then to add the attribute *tabindex="-1"* to website's target elements and to replace CSS code *"width: 0px; height: 0px; top: -1000px;"* with CSS code in accordance with the model examples shown in the previous parts of the study named "Visual hiding of skip navigation links" and "Web browsers' bug related to skip navigation links", with the aim, firstly, to make the skip navigation links content accessible/visible for screen readers and, secondly, to eliminate the disrupted logical order by browsing or reading the webpage links that occurs by most of web browsers.

Central public administration body of Liptovský Mikuláš

Next figure displays homepage of the central public administration body of Liptovský Mikuláš, with style sheets and active elements turned off. There is no skip link applied.

Figure 7 Website (with style sheets and active elements turned off) of the Central Public Administration Body of Liptovský Mikuláš

Source: Website (with style sheets and active elements turned off) of the central public administration body of *Liptovský Mikuláš* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.mikulas.sk/.

Analyzing the homepage of the central public administration body of Liptovský Mikuláš in context of using the skip navigation links following key findings could be detected:[15]

- Number of links before the main content: 147 links;
- Number of skip links: 0 links.

According to the presented results we can conclude that there is no skip navigation mechanism applied on the analyzed homepage of the central public administration body of Liptovský Mikuláš. In relation to this finding we can recommend to add the skip navigation links in accordance with the model examples shown in the previous part of the study named "Skip navigation links".

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[15] Source code of the central public administration body website of *Liptovský Mikuláš* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.mikulas.sk/.

Central public administration body of Martin

Next figure displays homepage of the central public administration body of Martin, with style sheets and active elements turned off. The analyzed skip link is marked by red rectangle.

Figure 8 Website (with style sheets and active elements turned off) of the Central Public Administration Body of Martin

Source: Website (with style sheets and active elements turned off) of the central public administration body of *Martin* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.martin.sk/.

Analyzing the homepage of the central public administration body of Martin in context of using the skip navigation links following key findings could be detected:[16]

+ Number of links before the main content: 29 links;
+ Number of skip links: 3 links;
+ Number of links before the first skip link: 0 links;
+ Visual display of skip links: hidden/focusable;
+ HTML code of skip links:
   ```
   <div id="lista">
     ...
     <ul class="inline">
       <li class="skip">
   ```

---

[16] Source code of the central public administration body website of *Martin* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.martin.sk/.

```
        <a href="#navigace2">Tematická ponuka</a>
      </li>
      <li class="skip">
        <a href="#hlobsah">Hlavný obsah</a>
      </li>
      …
    </ul>
    …
  </div><!--/lista-->
  <a href="#zamenu2" class="cist noprint">Preskočiť ponuku
  a vybrané odkazy</a>
  <a name="navigace2" id="navigace2">
    <span class="cist"> </span>
  </a>
  <a name="zamenu2" id="zamenu2">
    <span class="cist"> </span>
  </a>
  <a name="hlobsah" id="hlobsah">
    <span class="cist"> </span>
  </a>;
```
CSS code of skip links:
```
  #lista ul li.skip {
    position: absolute;
    display: block;
    top: 0 !important;
    left: 0 !important;
    width: 9em;
    padding: 1px;
    border: 0;
  }
  #lista ul li.skip a {
    text-align: center;
    border: 0;
    position: absolute;
    width: 8em;
    left: 0;
    top: -500px;
    z-index: 0;
    padding: 0 2px;
  }
```

```
#lista ul li.skip a:focus,
#lista ul li.skip a:active {
  z-index: 10 !important;
  position: absolute !important;
  left: 10px;
  top: 5px;
}
.cist {
  position: absolute;
  left: -10000px;
  top: 0;
  height: 1px;
  width: 1px;
  overflow: hidden;
}.
```

According to the presented results we can conclude that there is a skip navigation mechanism applied on the analyzed homepage of the central public administration body of Martin which works technically correctly. In relation to our finding we can recommend to move the applied skip navigation links to the top of the website, then to add the attribute *tabindex="-1"* to website's target elements and to replace CSS code *"left: 0; top: -500px; top: 0;"* with CSS code in accordance with the model examples shown in the previous parts of the study named "Visual hiding of skip navigation links" and "Web browsers' bug related to skip navigation links", with the aim to eliminate the disrupted logical order by browsing or reading the webpage links that occurs by most of web browsers.

Central public administration body of Námestovo

Next figure displays homepage of the central public administration body of Námestovo, with style sheets and active elements turned off. There is no skip link applied.

Analyzing the homepage of the central public administration body of Námestovo in context of using the skip navigation links following key findings could be detected:[17]

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[17] Source code of the central public administration body website of *Námestovo* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.namestovo.sk/.

- Number of links before the main content: 167 links;
- Number of skip links: 0 links.

Figure 9 Website (with style sheets and active elements turned off) of the Central Public Administration Body of Námestovo

Source: Website (with style sheets and active elements turned off) of the central public administration body of *Námestovo* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.namestovo.sk/.

According to the presented results we can conclude that there is no skip navigation mechanism applied on the analyzed homepage of the central public administration body of Námestovo. In relation to this finding we can recommend to add the skip navigation links in accordance with the model examples shown in the previous part of the study named "Skip navigation links".

Central public administration body of Ružomberok

Next figure displays homepage of the central public administration body of Ružomberok, with style sheets and active elements turned off. The analyzed skip link is marked by red rectangle.

Analyzing the homepage of the central public administration body of Ružomberok in context of using the skip navigation links following key findings could be detected:[18]
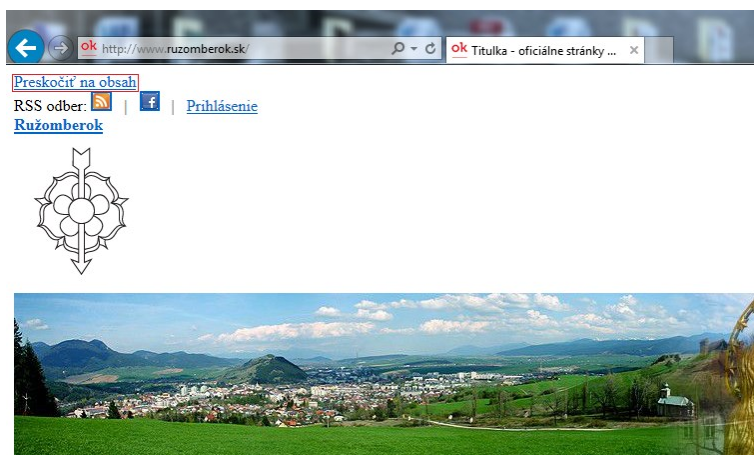
---

[18] Source code of the central public administration body website of *Ružomberok* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.ruzomberok.sk/.

- Number of links before the main content: 96 links;
- Number of skip links: 1 link;
- Number of links before the first skip link: 0 links;
- Visual display of skip links: hidden;
- HTML code of skip links:
  ```
  <div class="noVis">
    <a href="#vypis">Preskočiť na obsah</a>
  </div>
  <a name="vypis"></a>;
  ```
- CSS code of skip links:
  ```
  .noVis {
    display: none;
  }.
  ```

Figure 10 Website (with style sheets and active elements turned off) of the Central Public Administration Body of Ružomberok

Source: Website (with style sheets and active elements turned off) of the central public administration body of *Ružomberok* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.ruzomberok.sk/.
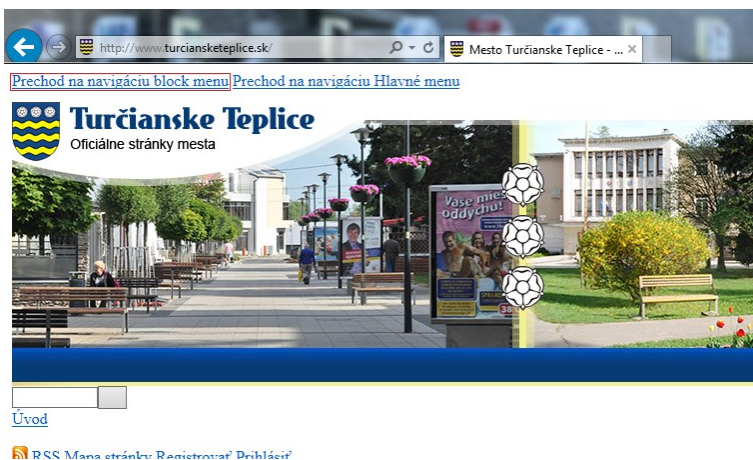
According to the presented results we can conclude that there is a skip navigation mechanism applied on the analyzed homepage of the central public administration body of Ružomberok, but it works technically incorrectly. In relation to our finding we can recommend to add the attribute *tabindex="-1"* to website's target element and to replace CSS code *"display: none;"* with CSS code in accordance with the model examples shown in the previous parts of the study named "Visual hiding of

skip navigation links" and "Web browsers' bug related to skip navigation links", with the aim, firstly, to make the skip navigation links content accessible/visible for screen readers and, secondly, to eliminate the disrupted logical order by browsing or reading the webpage links that occurs by most of web browsers.

Central public administration body of Turčianske Teplice

Next figure displays homepage of the central public administration body of Turčianske Teplice, with style sheets and active elements turned off. The analyzed skip link is marked by red rectangle.

Figure 11 Website (with style sheets and active elements turned off) of the Central Public Administration Body of Turčianske Teplice

Source: Website (with style sheets and active elements turned off) of the central public administration body of *Turčianske Teplice* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.turciansketeplice.sk/.

Analyzing the homepage of the central public administration body of Turčianske Teplice in context of using the skip navigation links following key findings could be detected:[19]

+ Number of links before the main content: 34 links;
+ Number of skip links: 2 links;
+ Number of links before the first skip link: 0 links;

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[19] Source code of the central public administration body website of *Turčianske Teplice* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.turciansketeplice.sk/.

- Visual display of skip links: hidden;
- HTML code of skip links:
  ```
  <div class="hidden-special">
    <a href="#m_00" title="Prechod na navigáciu block
  menu">Prechod na navigáciu block menu</a>
    <a href="#m_25767" title="Prechod na navigáciu Hlavné
  menu">Prechod na navigáciu Hlavné menu</a>
  </div>
  ```
  [*Missing selector name="m_00"*]
  ```
  <a name="m_25767"></a>;
  ```
- CSS code of skip links:
  ```
  .hidden-special {
    height: 0;
    overflow: hidden;
    margin: 0;
    padding: 0;
    border: 0;
  }.
  ```

According to the presented results we can conclude that there is a skip navigation mechanism applied on the analyzed homepage of the central public administration body of Turčianske Teplice, but it works technically incorrectly. In relation to our finding we can recommend to replace element *"Prechod na navigáciu block menu"* with element *"Prejsť na obsah stránky"*, then to add the attribute *tabindex="-1"* to website's target elements and to replace CSS code *"height: 0;"* with CSS code in accordance with the model examples shown in the previous parts of the study named "Visual hiding of skip navigation links" and "Web browsers' bug related to skip navigation links", with the aim, firstly, to make the skip navigation links content accessible/visible for screen readers and, secondly, to eliminate the disrupted logical order by browsing or reading the webpage links that occurs by most of web browsers.

Conclusion

In the study "Applying the Skip Navigation Links in the Context of the Websites' Accessibility of Central Public Administration Bodies in the Žilina Region" we have paid our attention in accordance with its main aim to seeking yet undetected or undefined deficits in relation to apply-

ing the skip navigation mechanism on the websites of the central public administration bodies in the Žilina Region in the context of improving the websites accessibility. In the context of our research questions we defined the main hypothesis as follows: *Homepages of the central public administration bodies in the Žilina Region apply technically correctly the skip navigation links mechanism*.

According to the results and key findings presented in previous parts of our study we can underline the following final conclusions (valid as of December 1st, 2015), divided in to three separate groups:

Homepages with the technically correctly working skip navigation mechanism – for this group we can recommend to add the attribute *tabindex="-1"* to website's target elements which relates namely to only two central public administration bodies:

- Central public administration body of Bytča;
- Central public administration body of Martin.

Homepages with the technically incorrectly working skip navigation mechanism – for this group we can recommend to add the attribute *tabindex="-1"* to website's target elements and to replace CSS code *"display: none;"* with CSS code in accordance with the exactly in our study presented model examples. These recommendations relate to exactly five central public administration bodies:

- Central public administration body of Čadca;
- Central public administration body of Dolný Kubín;
- Central public administration body of Kysucké Nové Mesto;
- Central public administration body of Ružomberok;
- Central public administration body of Turčianske Teplice.

Homepages with no skip navigation mechanism applied – for this group we can recommend to add skip navigation links, then to add target elements, to add the attribute *tabindex="-1"* to website's target elements and to avoid applying CSS code *"display: none;"* in accordance with the exactly in our study presented model examples. These recommendations relate namely to four central public administration bodies, which is more than one third of the central public administration bodies in the Žilina Region:

- Central public administration body of Tvrdošín;
- Central public administration body of Žilina;
- Central public administration body of Liptovský Mikuláš;

➕ Central public administration body of Námestovo.

Finally, as for verifying the set main hypothesis of the study we can conclude that the hypothesis is not valid, so we have to reject it, because from the 11 analyzed homepages of the central public administration bodies in the Žilina Region only 2 homepages were technically correctly working and were in compliance with legislation in force[20] (state valid as of December 1st, 2015).

References

"Skip Navigation" Links. In: *WebAIM: Web Accessibility in Mind* [online]. 2013-10-25 [cit. 2015-12-01]. Available at: http://webaim.org/techniques/skipnav/.

CSS in Action: Invisible Content Just for Screen Reader Users. In: *WebAIM: Web Accessibility in Mind* [online]. 2014-12-11 [cit. 2015-12-01]. Available at: http://webaim.org/techniques/css/invisiblecontent/.

KOPRLA, M. and J. KOPRLOVÁ. Analýza prístupnosti webových stránok vybraných webových sídiel verejnej správy z pohľadu administratívno-správneho členenia Slovenskej republiky. *Societas et res publica* [online]. 2013, roč. 2, č. 1, pp. 93-160 [cit. 2015-09-01]. ISSN 1338-6530. Available at: http://serp.fsv.ucm.sk/archive/2013/01/SOCIETAS-ET-RES-PUBLICA-2013-01.pdf.

KOPRLA, M. Prístupnosť webových stránok ako významný faktor zvyšovania konkurencieschopnosti. In: K. ĎURKOVÁ, A. BOBOVNICKÝ and A. ZAUŠKOVÁ, eds. *Inovácie a vedomostná spoločnosť/digitálny marketing – udržateľný rast a návrat investícií* [CD-ROM]. 1. vyd. Trnava: Univerzita sv. Cyrila a Metoda v Trnave, Fakulta masmediálnej komunikácie, 2012, pp. 49-63. ISBN 978-80-8105-454-9.

KOPRLOVÁ, J. Applying the Skip Navigation Links in the Context of the Websites' Accessibility of Central State Administration Bodies in the Slovak Republic. *Societas et iurisprudentia* [online]. 2014, roč. 2, č. 2, pp. 133-178 [cit. 2015-12-01]. ISSN 1339-5467. Available at: http://sei.iuridica.truni.sk/archive/2014/02/SOCIETAS-ET-IURISPRUDENTIA-2014-02.pdf.

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[20] See *Výnos Ministerstva financií Slovenskej republiky č. 55/2014 Z.z. o štandardoch pre informačné systémy verejnej správy zo 4. marca 2014* [Ministerial Decree of the Ministry of Finance of the Slovak Republic No. 55/2014 Coll. of Standards for Information Systems of Public Administration issued on March 4th, 2014].

Skip Navigation Links (Updated 6/19/2009). In: *JimThatcher.com* [online]. 2014-09-16 [cit. 2015-12-01]. Available at: http://www.jimthatcher.com/skipnav.htm.

Source code of the central public administration body website of *Tvrdošín* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.tvrdosin.sk/.

Source code of the central public administration body website of *Žilina* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.zilina.sk/.

Source code of the central public administration body website of *Bytča* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.bytca.sk/.

Source code of the central public administration body website of *Čadca* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.mestocadca.sk/.

Source code of the central public administration body website of *Dolný Kubín* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.dolnykubin.sk/.

Source code of the central public administration body website of *Kysucké Nové Mesto* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.kysuckenovemesto.sk/.

Source code of the central public administration body website of *Liptovský Mikuláš* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.mikulas.sk/.

Source code of the central public administration body website of *Martin* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.martin.sk/.

Source code of the central public administration body website of *Námestovo* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.namestovo.sk/.

Source code of the central public administration body website of *Ružomberok* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.ruzomberok.sk/.

Source code of the central public administration body website of *Turčianske Teplice* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.turciansketeplice.sk/.

Výnos Ministerstva financií Slovenskej republiky č. 55/2014 Z.z. o štandar-doch pre informačné systémy verejnej správy zo 4. marca 2014.

Website (with style sheets and active elements turned off) of the central public administration body of *Tvrdošín* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.tvrdosin.sk/.

Website (with style sheets and active elements turned off) of the central public administration body of *Žilina* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.zilina.sk/.

Website (with style sheets and active elements turned off) of the central public administration body of *Bytča* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.bytca.sk/.

Website (with style sheets and active elements turned off) of the central public administration body of *Čadca* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.mestocadca.sk/.

Website (with style sheets and active elements turned off) of the central public administration body of *Dolný Kubín* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.dolnykubin.sk/.

Website (with style sheets and active elements turned off) of the central public administration body of *Kysucké Nové Mesto* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.kysuckenovemesto.sk/.

Website (with style sheets and active elements turned off) of the central public administration body of *Liptovský Mikuláš* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.mikulas.sk/.

Website (with style sheets and active elements turned off) of the central public administration body of *Martin* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.martin.sk/.

Website (with style sheets and active elements turned off) of the central public administration body of *Námestovo* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.namestovo.sk/.

Website (with style sheets and active elements turned off) of the central public administration body of *Ružomberok* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.ruzomberok.sk/.

Website (with style sheets and active elements turned off) of the central public administration body of *Turčianske Teplice* [online]. 2015 [cit. 2015-12-01]. Available at: http://www.turciansketeplice.sk/.

Zákon č. 575/2001 Z.z. o organizácii činnosti vlády a organizácii ústrednej štátnej správy v platnom znení.

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