

Comparison of Applying the Skip Navigation Links in the Context of the Websites' Accessibility of Self-governing Regions in the Slovak Republic between the Years 2014 and 2017

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Abstract: *The study focuses in its main aim on seeking of differences in deficits relating to applying the skip navigation mechanism on the websites of the self-governing regions in the Slovak Republic in the context of improving the websites accessibility between the years 2014 and 2017. 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 a temporal analysis of differences in applying the skip navigation links on the websites of the self-governing regions in the Slovak Republic 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; Self-governing Regions; Compliance with Legislation in Force; Analysis; Period between Years 2014 and 2017; the Slovak Republic.*

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 realisation 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.

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, 2014.¹

The aim of the study is to analyse the differences in applying the skip navigation links on the websites of the self-governing regions in the Slovak Republic between the years 2014 and 2017. In the context of the research questions we define the main hypothesis as follows: *Homepages of the self-governing regions in the Slovak Republic have applied the skip navigation links mechanism technically more correctly in year 2017 than in year 2014.*

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:²

¹ 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].

² "Skip Navigation" Links. In: *WebAIM: Web Accessibility in Mind* [online]. 2013-10-25 [cit. 2017-06-01]. 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 iurisprudencia* [online]. 2014, roč. 2, č. 2, pp. 134-135 [cit. 2017-06-01]. ISSN 1339-5467. Available at: <http://sei.iuridica.truni.sk/archive/2014/02/SOCIETAS-ET-IURISPRUDENTIA-2014-02.pdf>.

✚ HTML code:
<body>
Skip to Main Content
...
<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:³

✚ HTML code:
<div class="hidden">This text is hidden.</div>;
✚ CSS code:
.hidden {
position: absolute;
left: -10000px;
top: auto;
width: 1px;
height: 1px;
overflow: hidden;
}.

³ CSS in Action: Invisible Content Just for Screen Reader Users. In: *WebAIM: Web Accessibility in Mind* [online]. 2014-12-11 [cit. 2017-06-01]. 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 iurisprudencia* [online]. 2014, roč. 2, č. 2, p. 135 [cit. 2017-06-01]. ISSN 1339-5467. Available at: <http://sei.iuridica.truni.sk/archive/2014/02/SOCIETAS-ET-IURISPRUDENTIA-2014-02.pdf>.

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:⁴

✚ HTML code:
`<div id="hidden">Skip to Main Content
</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:⁵

⁴ CSS in Action: Invisible Content Just for Screen Reader Users. In: *WebAIM: Web Accessibility in Mind* [online]. 2014-12-11 [cit. 2017-06-01]. Available at: <http://webaim.org/techniques/css/invisiblecontent/>.

⁵ Skip Navigation Links (Updated 6/19/2009). In: *JimThatcher.com* [online]. 2014-09-16 [cit. 2017-06-01]. Available at: <http://www.jimthatcher.com/skipnav.htm>; 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 iurisprudencia* [online]. 2014, roč. 2, č. 2, pp. 136-137 [cit. 2017-06-01]. ISSN 1339-5467. Available at:

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

Analysis of differences in applying the skip navigation links on the websites of the self-governing regions in the Slovak Republic between the years 2014 and 2017








Our analysis of applying the skip navigation links on the websites of the self-governing regions in the Slovak Republic 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").⁶

Our analysis was realised in the early June 2017 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 self-governing regions in the Slovak Republic, while research sample was

<http://sei.iuridica.truni.sk/archive/2014/02/SOCIETAS-ET-IURISPRUDENTIA-2014-02.pdf>.

⁶ 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.

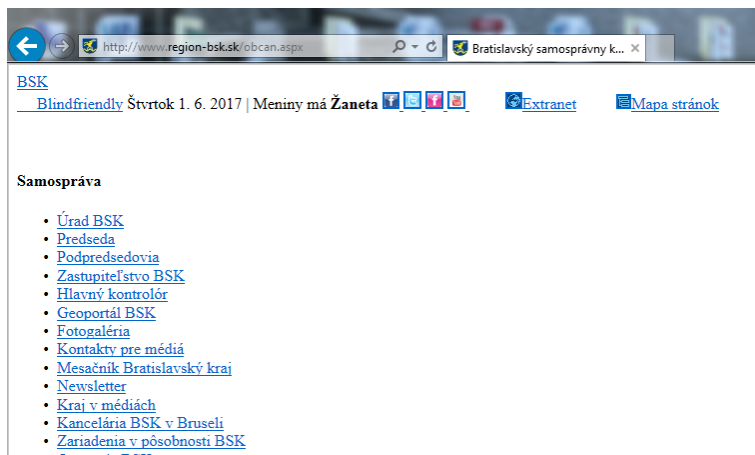
defined by all homepages of all the self-governing regions in the Slovak Republic, namely of:⁷

-  Bratislava Self-governing Region (<http://www.region-bsk.sk/>);
-  Trnava Self-governing Region (<https://www.trnava-vuc.sk/>);
-  Trenčín Self-governing Region (<https://www.tsk.sk/>);
-  Nitra Self-governing Region (<https://www.unsk.sk/>);
-  Žilina Self-governing Region (<http://www.regionzilina.sk/>);
-  Banská Bystrica Self-governing Region (<https://www.vucbb.sk/>);
-  Prešov Self-governing Region (<https://www.po-kraj.sk/sk/samo-sprava/>);
-  Košice Self-governing Region (<https://web.vucke.sk/>).

Bratislava Self-governing Region

Next figure displays homepage of the Bratislava Self-governing Region, with style sheets and active elements turned off. There is no skip link applied.

Figure 1 Website (with style sheets and active elements turned off) of the Bratislava Self-governing Region



Source: Website (with style sheets and active elements turned off) of the *Bratislava Self-governing Region* [online]. 2017 [cit. 2017-06-01]. Available at: <http://www.region-bsk.sk/>.

⁷ 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].

Analysing the homepage of the Bratislava Self-governing Region in context of using the skip navigation links following key findings could be detected:⁸

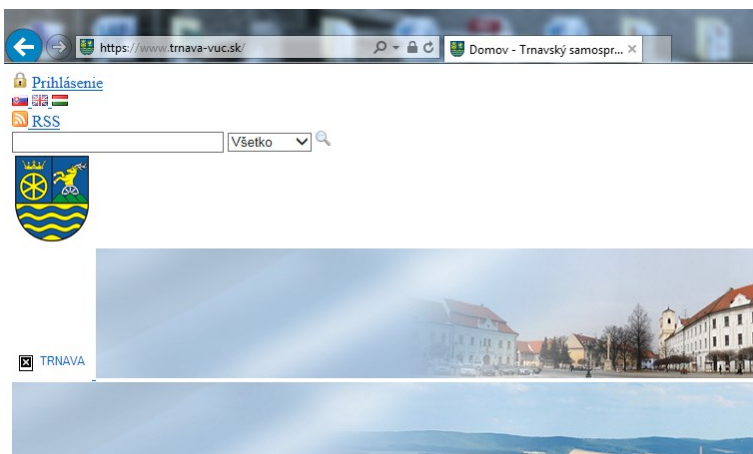
- ✚ Number of links before the main content: 2014: 76 links/2017: 88 links;
- ✚ Number of skip links: 2014: 0 links/2017: 0 links.

According to the presented results we can conclude that there is no skip navigation mechanism applied on the analysed homepage of the Bratislava Self-governing Region. 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”.

Trnava Self-governing Region

Next figure displays homepage of the Trnava Self-governing Region, with style sheets and active elements turned off. There is no skip link applied.

Figure 2 Website (with style sheets and active elements turned off) of the Trnava Self-governing Region



Source: Website (with style sheets and active elements turned off) of the *Trnava Self-governing Region* [online]. 2017 [cit. 2017-06-01]. Available at: <https://www.trnava-vuc.sk/>.

⁸ Source code of the website of the *Bratislava Self-governing Region* [online]. 2017 [cit. 2017-06-01]. Available at: <http://www.region-bsk.sk/>.

Analysing the homepage of the Trnava Self-governing Region in context of using the skip navigation links following key findings could be detected:⁹

- ✚ Number of links before the main content: 2014: 68 links/2017: 56 links;
- ✚ Number of skip links: 2014: 1 link/2017: 0 links.

According to the presented results we can conclude that there is no skip navigation mechanism applied on the analysed homepage of the Trnava Self-governing Region. 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".

Trenčín Self-governing Region

Next figure displays homepage of the Trenčín Self-governing Region, with style sheets and active elements turned off. The analysed skip link is marked by red rectangle.

Analysing the homepage of the Trenčín Self-governing Region in context of using the skip navigation links following key findings could be detected:¹⁰

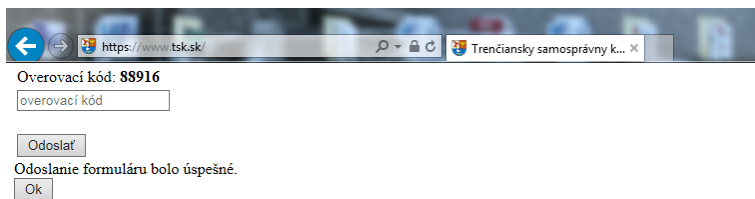
- ✚ Number of links before the main content: 2014: 41 links/2017: 209 links;
- ✚ Number of skip links: 2014: 1 link/2017: 1 link;
- ✚ Number of links before the first skip link: 2014: 10 links/2017: 7 links;
- ✚ Visual display of skip links: 2014: hidden/2017: hidden;
- ✚ HTML code of skip links:
`Preskočiť navi-
gáciu
<div class="row" id="content-main">
...
</div>;`

⁹ Source code of the website of the *Trnava Self-governing Region* [online]. 2017 [cit. 2017-06-01]. Available at: <https://www.trnava-vuc.sk/>.

¹⁰ Source code of the website of the *Trenčín Self-governing Region* [online]. 2017 [cit. 2017-06-01]. Available at: <https://www.tsk.sk/>.

✚ CSS code of skip links:
.readers_only {
position: absolute;
left: -10000px;
top: auto;
width: 1px;
height: 1px;
overflow: hidden;
}.

Figure 3 Website (with style sheets and active elements turned off) of the Trenčín Self-governing Region



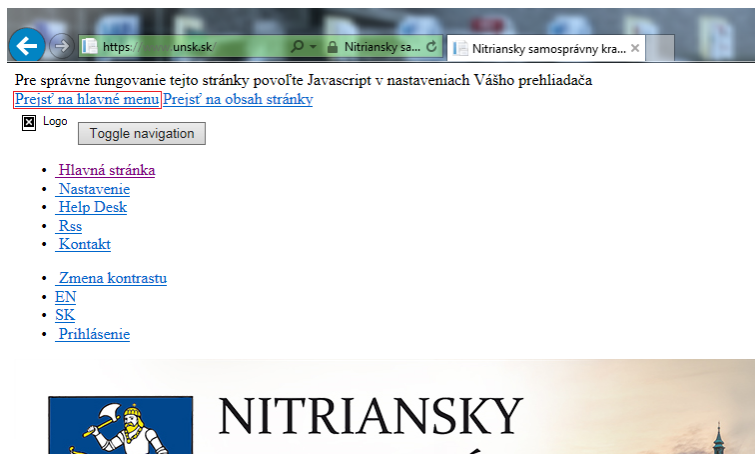
Source: Website (with style sheets and active elements turned off) of the *Trenčín Self-governing Region* [online]. 2017 [cit. 2017-06-01]. Available at: <https://www.tsk.sk/>.

According to the presented results we can conclude that there is a skip navigation mechanism applied on the analysed homepage of the Trenčín Self-governing Region which works technically correctly. In relation to our finding we can recommend to move the applied skip navigation link to the top of the website and to add the attribute *tabindex="-1"* to website's target element in accordance with the model example shown in the previous part of the study named "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.

Nitra Self-governing Region

Next figure displays homepage of the Nitra Self-governing Region, with style sheets and active elements turned off. The analysed skip link is marked by red rectangle.

Figure 4 Website (with style sheets and active elements turned off) of the Nitra Self-governing Region



Source: Website (with style sheets and active elements turned off) of the *Nitra Self-governing Region* [online]. 2017 [cit. 2017-06-01]. Available at: <https://www.unsk.sk/>.

Analysing the homepage of the Nitra Self-governing Region in context of using the skip navigation links following key findings could be detected:¹¹

- Number of links before the main content: 2014: 66 links/2017: 40 links;
- Number of skip links: 2014: 0 links/2017: 4 links;
- Number of links before the first skip link: 2014: –/2017: 0 links;
- Visual display of skip links: 2014: –/2017: hidden;
- HTML code of skip links:

```
<a href="#upMenu" class="hidelink">Prejsť na hlavné menu</a>
<a href="#main_content" class="hidelink">Prejsť na obsah
stránky</a>
```

¹¹ Source code of the website of the *Nitra Self-governing Region* [online]. 2017 [cit. 2017-06-01]. Available at: <https://www.unsk.sk/>.

```
<a href="#upMenu" class="hidelink">Prejst' na hlavné menu</a>
<a href="#topMenu" class="hidelink">Prejst' na začiatok
stránky</a>
<div class="navbar navbar-default topnavcolor navpadding"
id="topMenu">
...
</div>
<div class="navbar navbar-default navcolor" id="upMenu">
...
</div>
<div class="" id="main_content">
...
</div>;
```

✚ CSS code of skip links:

```
.hidelink {
  position: absolute !important;
  top: -9999px !important;
  left: -9999px !important;
}.
```

According to the presented results we can conclude that there is a skip navigation mechanism applied on the analysed homepage of the Nitra Self-governing Region which works technically correctly. In relation to our finding we can recommend to add the attribute *tabindex="-1"* to website's target elements and to replace CSS code "*top: -9999px !important;*" 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.

Žilina Self-governing Region

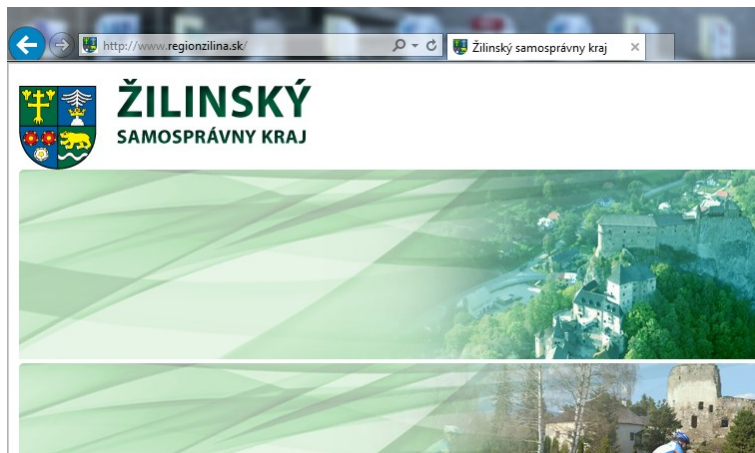
Next figure displays homepage of the Žilina Self-governing Region, with style sheets and active elements turned off. There is no skip link applied.

Analysing the homepage of the Žilina Self-governing Region in context of using the skip navigation links following key findings could be detected:¹²

¹² Source code of the website of the *Žilina Self-governing Region* [online]. 2017 [cit. 2017-06-01]. Available at: <http://www.regionzilina.sk/>.

- ✚ Number of links before the main content: 2014: 10 links/2017: 10 links;
- ✚ Number of skip links: 2014: 0 links/2017: 0 links.

Figure 5 Website (with style sheets and active elements turned off) of the Žilina Self-governing Region



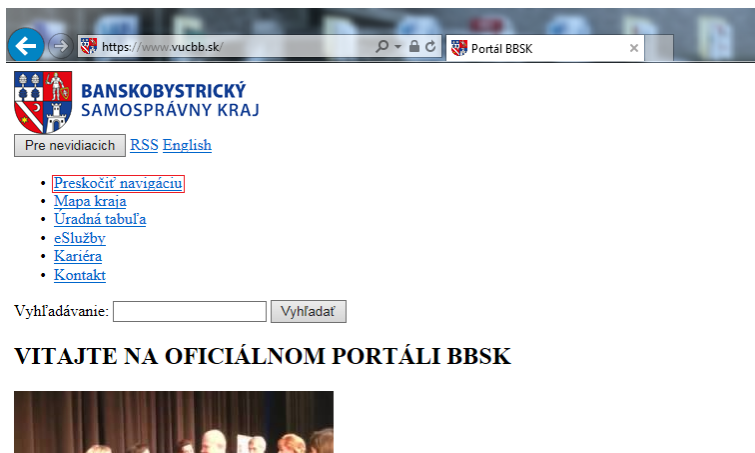
Source: Website (with style sheets and active elements turned off) of the *Žilina Self-governing Region* [online]. 2017 [cit. 2017-06-01]. Available at: <http://www.regionzilina.sk/>.

According to the presented results we can conclude that there is no skip navigation mechanism applied on the analysed homepage of the Žilina Self-governing Region. 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".

Banská Bystrica Self-governing Region

Next figure displays homepage of the Banská Bystrica Self-governing Region, with style sheets and active elements turned off. The analysed skip link is marked by red rectangle.

Figure 6 Website (with style sheets and active elements turned off) of the Banská Bystrica Self-governing Region



Source: Website (with style sheets and active elements turned off) of the *Banská Bystrica Self-governing Region* [online]. 2017 [cit. 2017-06-01]. Available at: <https://www.vucbb.sk/>.

Analysing the homepage of the Banská Bystrica Self-governing Region in context of using the skip navigation links following key findings could be detected:¹³

- ✚ Number of links before the main content: 2014: 64 links/2017: 32 links;
- ✚ Number of skip links: 2014: 1 link/2017: 1 link;
- ✚ Number of links before the first skip link: 2014: 0 links/2017: 4 links;
- ✚ Visual display of skip links: 2014: hidden/focusable/2017: hidden;
- ✚ HTML code of skip links:

```
<li class="skiplink">
  <a href="#dnn_ContentPane">
    <span>Preskočiť navigáciu</span>
  </a>
</li>
<div id="dnn_ContentPane" class="videopane">
```

¹³ Source code of the website of the *Banská Bystrica Self-governing Region* [online]. 2017 [cit. 2017-06-01]. Available at: <https://www.vucbb.sk/>.

...
</div>;
CSS code of skip links:
li.skiplink {
font-size: 0px !important;
font-size: 0rem !important;
margin-left: 0px !important;
}.

According to the presented results we can conclude that there is a skip navigation mechanism applied on the analysed homepage of the Banská Bystrica Self-governing Region, 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 element and to replace CSS code *"font-size: 0px !important; font-size: 0rem !important;"* 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.

Prešov Self-governing Region

Next figure displays homepage of the Prešov Self-governing Region, with style sheets and active elements turned off. There is no skip link applied.

Analysing the homepage of the Prešov Self-governing Region in context of using the skip navigation links following key findings could be detected:¹⁴

- Number of links before the main content: 2014: 61 links/2017: 71 links;
- Number of skip links: 2014: 0 links/2017: 0 links.

According to the presented results we can conclude that there is no skip navigation mechanism applied on the analysed homepage of the Prešov Self-governing Region. In relation to this finding we can recommend to add the skip navigation links in accordance with the model ex-

¹⁴ Source code of the website of the *Prešov Self-governing Region* [online]. 2017 [cit. 2017-06-01]. Available at: <https://www.po-kraj.sk/sk/samosprava/>.

amples shown in the previous part of the study named “Skip navigation links”.

Figure 7 Website (with style sheets and active elements turned off) of the Prešov Self-governing Region



Source: Website (with style sheets and active elements turned off) of the *Prešov Self-governing Region* [online]. 2017 [cit. 2017-06-01]. Available at: <https://www.po-kraj.sk/samosprava/>.

Košice Self-governing Region

Next figure displays homepage of the Košice Self-governing Region, with style sheets and active elements turned off. There is no skip link applied.

Analysing the homepage of the Košice Self-governing Region in context of using the skip navigation links following key findings could be detected:¹⁵

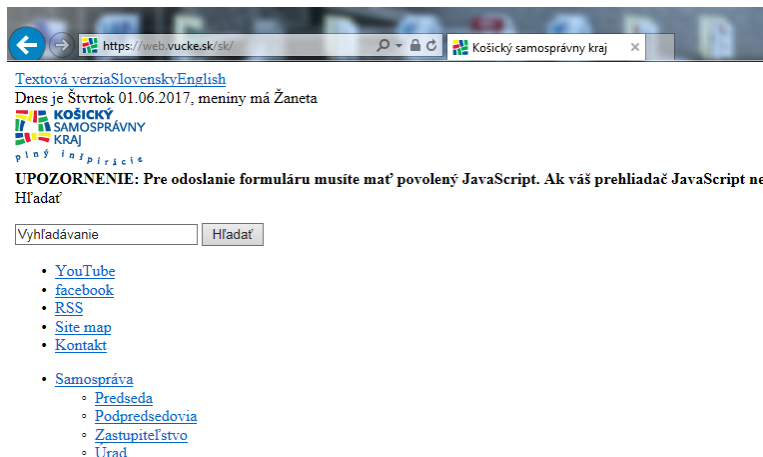
- Number of links before the main content: 2014: 62 links/2017: 65 links;
- Number of skip links: 2014: 0 links/2017: 0 links.

According to the presented results we can conclude that there is no skip navigation mechanism applied on the analysed homepage of the Košice Self-governing Region. In relation to this finding we can recommend to add the skip navigation links in accordance with the model ex-

¹⁵ Source code of the website of the *Košice Self-governing Region* [online]. 2017 [cit. 2017-06-01]. Available at: <https://web.vucke.sk/>.

amples shown in the previous part of the study named “Skip navigation links”.

Figure 8 Website (with style sheets and active elements turned off) of the Košice Self-governing Region





Source: Website (with style sheets and active elements turned off) of the *Košice Self-governing Region* [online]. 2017 [cit. 2017-06-01]. Available at: <https://web.vucke.sk/>.

Conclusion

In the study “Comparison of Applying the Skip Navigation Links in the Context of the Websites’ Accessibility of Self-governing Regions in the Slovak Republic between the Years 2014 and 2017” we have paid our attention in accordance with its main aim to seeking of differences in deficits relating to applying the skip navigation mechanism on the websites of the self-governing regions in the Slovak Republic in the context of improving the websites accessibility between the years 2014 and 2017. In the context of our research questions we defined the main hypothesis as follows: *Homepages of the self-governing regions in the Slovak Republic have applied the skip navigation links mechanism technically more correctly in year 2017 than in year 2014.*

According to the results and key findings presented in previous parts of our study we can underline the following final conclusions (valid as of June 1st, 2017), 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 self-governing regions:

-  Trenčín Self-governing Region;
-  Nitra Self-governing Region.

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 namely to only one self-governing region:

-  Banská Bystrica Self-governing Region.

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 five self-governing regions, which is more than one half of the self-governing regions in the Slovak Republic:



-  Bratislava Self-governing Region;
-  Trnava Self-governing Region;
-  Žilina Self-governing Region;
-  Prešov Self-governing Region;
-  Košice Self-governing Region.

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 8 analysed homepages of the self-governing regions in the Slovak Republic only 2 homepages were technically correctly working and were in compliance with legislation in force¹⁶ (state valid as of June 1st, 2017).

¹⁶ 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].

According to the results of analysing the differences in applying the skip navigation links on the websites of the self-governing regions in the Slovak Republic between the years 2014 and 2017 we can underline the following final conclusions, divided in to two separate groups:¹⁷

Homepages with improved accessibility – which relates namely to these self-governing regions:

-  Trenčín Self-governing Region;
-  Nitra Self-governing Region.

Homepages with worsen accessibility – which relates namely to following self-governing regions:

-  Trnava Self-governing Region;
-  Banská Bystrica Self-governing Region.

The final key finding that highlights the necessity of applying the skip navigation mechanism presents the number of links before the main content, which has significantly increased between the years 2014 and 2017.

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