DELIVERABLE

Project Acronym: **EUCases**
Grant Agreement number: **611760**
Project Title: **European and National Legislation and Case Law Linked in Open Data Stack**

**D4.3 EULinksChecker add-in tools (beta version)**

Authors:
- Hristo Konstantinov APIS
- Daniel Traikov APIS
- Georgi Uzunov APIS
- Hristo P. Hristov APIS
Revision History, Status, Abstract, Keywords, Statement of Originality

Revision History

<table>
<thead>
<tr>
<th>Rev.</th>
<th>Date</th>
<th>Author</th>
<th>Organisation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1</td>
<td>29.06.2015</td>
<td>Hristo Konstantinov</td>
<td>APIS</td>
<td>First draft</td>
</tr>
<tr>
<td>0.2</td>
<td>03.07.2015</td>
<td>Daniel Traikov, Georgi Uzunov</td>
<td>APIS</td>
<td>Beta version of the source code and description of the EULinksChecker add-in tool for Internet Explorer</td>
</tr>
<tr>
<td>0.3</td>
<td>08.07.2015</td>
<td>Hristo D. Hristov</td>
<td>APIS</td>
<td>Description of the ConsumerCases interface design</td>
</tr>
<tr>
<td>Fin</td>
<td>13.07.2015</td>
<td>Hristo Konstantinov</td>
<td>APIS</td>
<td>Review and final draft</td>
</tr>
</tbody>
</table>

Date of delivery | Contractual: 30.06.2015 | Actual: 13.07.2015
Status | final ✓ /draft □

Abstract (for dissemination)

This document presents the beta versions of the EULinksChecker add-in tools for Microsoft Word and Internet Explorer. The role of these tools is to assist legal professionals during the process of drafting or viewing on the Internet legal documents related to EU law by offering them convenient features for performing legal research based on legal citations or other semantic connections of the drafted/viewed documents with EU legislation and case law. To this end the EULinksChecker makes use of a particular web service maintained by the EUCases Linking Platform which connects the add-in with the so-called Linking tools of platform. These tools recognise the legal citations to EU law in the document drafted or viewed by the user. By further user’s request the web service delivers a list of EU legislative instruments or judgments of the EU Court of Justice or of national courts citing the same EU acts or their specific provisions to be opened by user’s default browser. Another valuable feature is the recognition of concepts of the EuroVoc thesaurus in user’s document and the generation of a list of legal documents which are indexed with the same term. The citations and term recognition is possible for the 5 languages used in EUCases project: Bulgarian, English, French, German and Italian. The source code of the beta versions of EULinksChecker add-in tools is published on EUCases web site and on GitHub as open source software (OSS).

Keywords

Links, EU law, legal citations recognition, EuroVoc terms, add-in, plug-in, open source software

Statement of originality

This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.
Table of Contents

Executive Summary ................................................................................................................. 4

1  EULinksChecker add-in for MS Word .................................................................................. 5
   1.1  Installation and removal .............................................................................................. 5
       1.1.1  Minimum HW/SW requirements ........................................................................ 5
       1.1.2  Installation .......................................................................................................... 5
       1.1.3  Removal ............................................................................................................... 6
   1.2  Purpose of the EULinksChecker add-in for MS Word .................................................. 7
   1.3  Main functionalities ...................................................................................................... 8
       1.3.1  Toolbar functions .............................................................................................. 8
       1.3.2  Captured text functions of the host application .................................................. 10
       1.3.3  Context menu functions ................................................................................... 10

2  EULinksChecker add-in for Internet Explorer .................................................................... 15
   2.1  Installation and removal .............................................................................................. 15
       2.1.1  Minimum HW/SW requirements ........................................................................ 15
       2.1.2  Installation .......................................................................................................... 15
       2.1.3  Disabling and enabling ...................................................................................... 16
       2.1.4  Removal ............................................................................................................... 17
   2.2  Intended use ................................................................................................................ 18
   2.3  Main functionalities ...................................................................................................... 18
       2.3.1  Toolbar functions .............................................................................................. 18
       2.3.2  Captured text functions of the host application .................................................. 20
       2.3.3  Context menu functions ................................................................................... 21

3  Publication of source code and software documentation ..................................................... 24
   3.1  Authorship and OSS license ...................................................................................... 24
   3.2  Source code: build instructions and software documentation ...................................... 24
Executive Summary

The present deliverable briefly describes the functionalities and provides a link to the source code of the beta versions of the **EULinksChecker add-in tools for MS Word and Internet Explorer**. The source code is published as open-source software (OSS) at GitHub and on EUCases web site.

The work of the EULinksChecker add-in tools requires a constant and stable online connection with the EUCases Linking Platform and its linking repository.

The main functionalities offered by the add-ins are:

- Recognition of the current document language;
- Recognition and highlighting (underlining) of the legal citations in the currently displayed document, which refer to (provisions of) EU legislation and/or case law;
- For each identified legal citation the user can:
  - See the text of the referred EU legal instrument/provision or judgment of the EU Court of Justice by clicking on the established link;
  - See a list of other relevant legislative instruments and/or case law which refer to the same EU legal instrument/provision or judgment of the EU Court of Justice. Each document from can be opened and viewed by the user in full text via the web service provided by the EUCases Linking Platform;
- Recognition and highlighting (underlining) of all terms in the currently displayed document, which have been recognised as concepts in the EuroVoc thesaurus or Syllabus ontology;
- For each term the user can obtain a list of legal documents classified with the same concept;
- Export an XML file containing the text of the currently displayed document together with the identified links to the EU legislative instruments and EU case law.

---

**The beta version of the source code is published on the EUCases web site:**

http://eucases.eu/fileadmin/EUCases/documents/EULinksChecker.zip,

and on GitHub:

https://github.com/apis-bulgaria/Eucases.EULinksChecker
1 EULinksChecker add-in for MS Word

1.1 Installation and removal

1.1.1 Minimum HW/SW requirements

In the following paragraphs are listed the minimum hardware and software requirements for installing the EULinksChecker add-in for Microsoft Word:

- RAM: 300 MB
- CPU: Intel Core 2 or equivalent and better
- Storage (disk) space: 200 MB
- Operating system: Microsoft Vista or later
- Software:
  - Microsoft Word 2010 or 2013
  - .NET Framework 4.0 or later
  - Windows Installer 4.5 or later
- Ecosystem:
  - Administrative rights during installation
  - Internet connectivity if .NET Framework or Windows Installer are not installed on user’s computer.

1.1.2 Installation

The installation is done by the Microsoft Office Customization Installer. In order to install EULinksChecker add-in successfully the user should have administrative rights. Any instance of Microsoft Word application should be closed. Installation is performed by running as administrator the “Setup.exe” file from the installation package.
After pressing the “Install” button the installation begins. The installer is checking for the existence of the following software applications needed for the completion of the installation procedure:

- Windows Installer
- .NET Framework 4.0.

If any of these applications is not installed on user’s PC, they are downloaded from the respective official sources.

After the end of the installation procedure a message informing the user for the successful installation will appear:

After pressing the “Close” button, the user can launch Microsoft Word application. The EULinksChecker add-in is now integrated as a toolbar within the host application on the Ribbon.

1.1.3 Removal

The EULinksChecker add-in can be removed (uninstalled) from the Control Panel -> Programs and Features option:
To this end the user should first choose “EULinksCheckerWordAddIn” from the list of the installed programs, then click on the “Uninstall” button and finally confirm the removal by pressing the “OK” button:

1.2 Purpose of the EULinksChecker add-in for MS Word

The main purpose of the EULinksChecker add-in for Microsoft Word is to assist its intended users (legal professionals) when drafting a legal document which contains references to EU law by offering them information about and access to EU and national legislation and case law related to the EU acts referred in user’s writing.

To achieve this goal the EULinksChecker makes use of a particular web service maintained by the EUCases Linking Platform which connects to the Linking tools of the platform in order to have recognised the legal citations to EU law in user’s draft and delivers by further request a list of legal documents (EU legislative instruments or judgments of the EU Court of Justice or of national courts) citing the same EU acts or their specific provisions to be opened by user’s default browser. Another valuable feature is the recognition of concepts of the EuroVoc thesaurus in user’s text and the generation of a list of legal documents which are indexed with the same term. The citations and term recognition is possible only for the 5 project languages: Bulgarian, English, French, German and Italian.

The proper functioning of the EULinksChecker requires a stable internet connectivity in order to establish the needed communication with the web service of the EUCases Linking Platform.
1.3 Main functionalities

The various features of the EULinksChecker are invoked 1) by pressing the buttons on the add-in toolbar integrated with the Ribbon, 2) by capturing some of the text functions of the host MS Word application or 3) by using the commands from the contextual menu appearing by click with the right mouse button over a link inserted by the add-in. Below are listed the main functionalities of the EULinksChecker.

1.3.1 Toolbar functions

1) Check for links

When user calls this function by pressing the “Check for links” button on EULinksChecker toolbar the following steps are performed:

- A confirmation is required

- The language of the user’s text is identified and then this text is sent via internet to the Front-end Web Service of the EUCases Linking Platform which forward it to the linking tools and the tools for classification in the back-end

- The linking tools and the tools for classification recognise the legal citations to EU law and the EuroVoc terms contained in user’s text

- Information about the recognised citations and terms and their positions within the text is sent back to the add-in

- The add-in opens a new document containing an exact copy of user’s text and highlights (underlines) all recognised citations (in green colour) and terms (in red colour)
2) **Remove links**

When user calls this function the following steps are performed:

- A confirmation is required
- The add-in removes the highlights (underlining) of all citations and terms recognised with the function “Check for links”.

3) **Insert link**

Before using this function user must have selected a portion of text. When this function is used, the user is prompted to enter a URL to an external resource:

After entering it the selected text is highlighted and converted to a link to the specified resource.

4) **Remove links from selection**
Before using this function user must select a portion of text containing a link or links to a legal citation or term. When this function is used the contained links within the selection are removed.

5) **Save text to XML-file**

When using this function user is required to select path and file name of the text to be exported. After that the text of the currently opened (viewed) document together with the found legal citations and terms (in the case the “Check for links” function has been already used) is sent to the Front-end Web Service of the EUCases Linking Platform. The service forward it subsequently to the linking tools, the tools for classification and the LT2XML conversion tools in the Back-end. Finally, the Front-end Web Service returns back the text in Legal XML format to the EULinksChecker add-in which stores it into previously selected file name and path.

6) **Change interface language**

This is the only function which appears when the user presses the “Settings” button. It requires confirmation by the user. The available interface languages are: Bulgarian, English, French, German and Italian.

### 1.3.2 Captured text functions of the host application

1) **Show hint on mouse over**

EULinksChecker add-in captures the “show hint on mouse over” function of the host application when the user hovers over a legal citation recognised and highlighted with the add-in “Check for links” function. In this case the exact URL to the text of the cited legal document in EUR-Lex portal is shown in the hint. If the user hovers over a term (concept) from the EuroVoc thesaurus, the text in the hint points at the exact URL linking to the EUCases API delivering the web service which makes it possible to generate a list of all legal documents in EUCases Linking Platform indexed with this term.

2) **Click on link**

EULinksChecker add-in captures the “click on link” function of the host application when the user clicks on a legal citation or term recognised and highlighted with the add-in “Check for links” function. If the click is on a legal citation, a web page in the user’s default browser is opened containing the text of the cited document as published on the EUR-Lex portal. If the click is on a term from the EuroVoc thesaurus, the opened web page contains a list of all documents indexed this term.

### 1.3.3 Context menu functions

In fact, the appearance of a context menu upon right-click mouse operation is a function of the host application. However, in this context menu the EULinksChecker add-in integrates own functions which allow the user benefit from them without losing the context of his work.

1) **Documents referring to this act/provision**

This function appears at the top of the context menu by right-click mouse operation after the user has selected a legal citation recognised and highlighted with the add-in “Check for links” function (or by right-click mouse operation after the user has positioned the mouse cursor within the legal citation). When selecting the function, a submenu with following options appears:

- National case law
- National legislation
- EU case law
EU legislation

All documents.

By choosing one of these options the user sends a request to the EUCases Linking Platform and in response receives a list of documents from the respective type referring to the same act or provision. The “All documents” option returns a list of documents from all listed types. The list is opened in a new window of the default browser.

By using left-click mouse operation on the title of a legal act from the list the user will open its text in a new browser window. In this case the text and metadata are delivered by a web service of the EUCases Linking Platform:
By using left-click mouse operation on the name of the source the user will open the text of the legal act on the web page where it has been published:

2) Documents indexed with this term

This function appears at the top of the context menu by right-click mouse operation after the user has selected a legal term recognised and highlighted with the add-in “Check for links” function (or by right-click mouse operation after the user has positioned the mouse cursor within the term). When selecting the function, a submenu with following options appears:

- National case law
- National legislation
- EU case law
- EU legislation
• All documents.

By choosing one of these options the user receives a list of documents from the respective type indexed with the legal term. The “All documents” option returns a list of documents from all listed types. The list is opened in new window of the default browser.

3) **Insert link**

Before using this function user must have selected a portion of text. Only after that the ‘Insert link’ function appears when performing a right-click mouse operation at the top of the context menu. When this function is used, the user is prompted to enter a URL to an external resource.
4) Remove link

This function appears at second position from the top of the context menu by right-click mouse operation after the user has selected a legal citation or term recognised and highlighted with the add-in “Check for links” function (or by right-click mouse operation after the user has positioned the mouse cursor within the term). When using this function the link to the selected legal citation or term is removed.
2 EULinksChecker add-in for Internet Explorer

2.1 Installation and removal

2.1.1 Minimum HW/SW requirements

In the following paragraphs are listed the minimum hardware and software requirements for installing the EULinksChecker add-in for Internet Explorer:

- Storage (disk) space: 10 MB
- Operating system: Microsoft Windows Vista or later
- Software:
  - .NET Framework 2.0 or later
  - Internet Explorer 9, 10 or 11

2.1.2 Installation

The installation of the beta version of EULinksChecker is done by running the executable file “EULinksCheckerIEAddInBoostrapperInstaller.exe”. This launches an Installer program managed by the “Wix Toolset”. Any instance of Internet Explorer browser should be closed.

The user must agree to the license terms and conditions. After pressing the “Install” button:
the installation begins.

After the end of the installation procedure a message informing the user for the successful installation will appear:

After pressing the “Close” button, the user can launch Internet Explorer browser. The EULinksChecker add-in is now integrated as a toolbar in a row below the address bar.

2.1.3 Disabling and enabling

Like all other add-ins the EULinksChecker add-in can be repeatedly disabled and enabled by using right-click mouse operation over the heading part of the browser window on the right of
the address bar and switching off or on the EULinksChecker bar. It can be also disabled by pressing the “x” button placed on the very left side of the bar with EULinksChecker buttons.

2.1.4 Removal

The EULinksChecker add-in can be removed (uninstalled) from the Control Panel -> Programs and Features option:

To this end the user should first choose “EULinksCheckerWordAddIn” from the list of the installed programs, then click on the “Uninstall” button and finally confirm the removal by pressing the “Close” button:
2.2 Intended use

The main purpose of the EULinksChecker add-in for Internet Explorer is to assist its intended users (legal professionals) when browsing legal resources on the Internet and viewing legal documents (such as pieces of legislation or case law) which contain references to EU law by offering them information about and access to EU and national legislation and case law related to the EU legal acts referred in the viewed document.

To achieve this goal the EULinksChecker makes use of a particular web service maintained by the EUCases Linking Platform which connects to the Linking tools of the platform in order to have recognised the legal citations to EU law in the document viewed by the user and delivers by further request a list of legal documents (EU legislative instruments or judgments of the EU Court of Justice or of national courts) citing the same EU acts or their specific provisions to be opened in a new window of the user’s browser. Another valuable feature is the recognition of concepts of the EuroVoc thesaurus in the document viewed by the user and the generation of a list of legal documents which are indexed with the same term. The citations and term recognition is possible only for the 5 project languages: Bulgarian, English, French, German and Italian.

2.3 Main functionalities

The various features of the EULinksChecker are invoked either by pressing the buttons on the add-in toolbar integrated with the browser or by using the commands from the contextual menu appearing by click with the right mouse button over a link inserted by the add-in.

Below are listed the main functions of the EULinksChecker. In practice, these are identical with the functions of the add-in for Microsoft Word (see section 1 above) with some minor differences which are explicitly emphasised.

2.3.1 Toolbar functions

1) Check for links

When user calls this function by pressing the “Check for links” button on EULinksChecker toolbar the following steps are performed:

- A confirmation is required
- The language of the user’s text is identified and then this text is sent via internet to the Front-end Web Service of the EUCases Linking Platform which forward it to the linking tools and the tools for classification in the back-end.
- The linking tools and the tools for classification recognise the legal citations to EU law and the EuroVoc terms contained in user’s text.
- Information about the recognised citations and terms and their positions within the text is sent back to the add-in.
- The add-in highlights (underlines) all recognised citations (in dark orange colour) and terms (in dark orange colour). Unlike the add-in for MS Word the highlighting is performed in the same window of host application (i.e. Internet Explorer).

2) Remove links

When user calls this function the following steps are performed:

- A confirmation is required.
- The add-in removes the highlights (underlining) of all citations and terms recognised with the function “Check for links” (in practice, this function calls the “Refresh” function of the browser application).

3) Insert link

Before using this function user must have selected a portion of text. When this function is used, the user is prompted to enter a URL to an external resource. After entering it the selected text is highlighted and converted to a link to the specified resource.

4) Remove links from selection

Before using this function user must select a portion of text containing a link or links to a legal citation or term. When this function is used the contained links within the selection are removed.

5) Save text to XML-file

When using this function the EULinksChecker sends the text of the opened document to the EUCases Linking Platform where it is converted in legal XML format (Akoma Ntoso XML...
format). The converted XML is sent back to the EULinksChecker, and then a standard message from the Internet Explorer browser appears at the bottom of the browser window:

The user is offered to open the XML, to save it to a file or to cancel this operation.

6) Change interface language

This is the only function which appears when the user presses the “Settings” button. It requires confirmation by the user. The available interface languages are: Bulgarian, English, French, German and Italian.

In order to complete the change the browser should be restarted.

2.3.2 Captured text functions of the host application

1) Show hint on mouse over

EULinksChecker add-in captures the “show hint on mouse over” function of the host application when the user hovers over a legal citation recognised and highlighted with the add-in “Check for links” function. In this case the exact URL to the text of the cited legal document in EUR-Lex portal is shown in the hint.

2) Click on link

EULinksChecker add-in captures the “click on link” function of the host application when the user clicks on a legal citation or term recognised and highlighted with the add-in “Check for links” function. If the click is on a legal citation, a new tab of the browser is opened containing the text of the cited document as published on the EUR-Lex portal. If the click is on a term from the EuroVoc thesaurus, the opened tab contains a list of all documents indexed this term.
2.3.3 Context menu functions

The context menu appears when using the right-click mouse operation after the user has either selected in the document's text a legal citation of term from the EuroVoc thesaurus recognised with the “Check for links” function or has positioned the mouse cursor within such a legal citation or term. The context menu offers the following options:

- All documents
- EU legislation
- EU case law
- National legislation
- National case law
- Remove link.

When the context menu is positioned over a legal citation by choosing one of the options “EU legislation”, “EU case law”, “National legislation” or “National case law” the user sends a request to the EUCases Linking Platform and in response receives in a new tab of the browser a list of documents from the respective type referring to the cited act or provision.

When the context menu is positioned over a term from the EuroVoc thesaurus by choosing one of the options “EU legislation”, “EU case law”, “National legislation” or “National case law” the user sends a request to the EUCases Linking Platform and in response receives in a new tab of the browser a list of documents from the respective type indexed with this term.

The “All documents” option returns in a new tab of the browser a list of documents from all above listed types.

Finally, the “Remove link” option deletes the selected citation or term, respectively the citation or term in which the cursor is positioned.

The picture below illustrates a list of national case law documents referring to Article 5 of the Unfair Commercial Practices Directive:
By using left-click mouse operation on the title of a legal act from the list the user will open its text in a new tab of the browser. In this case the text and metadata are delivered by a web service of the EUCases Linking Platform:

By using left-click mouse operation on the name of the source the user will open the text of the legal act on the web page where it has been published:
In the same way the user can require and receive in a new tab of the browser a list of documents from the chosen type indexed with a term from the EuroVoc thesaurus.
3 Publication of source code and software documentation

3.1 Authorship and OSS license

The beta versions of the EULinksChecker add-in tools for Microsoft Word and Internet Explorer have been developed by the Bulgarian company Apis Hristovich EOOD, member of the EUCases consortium, as part of the EUCases project supported by the European Commission under the 7th Framework Program. Author of the code and documentation is Apis Hristovich EOOD. The source code and the software of the tools are made publicly available under the GNU General Public License, v3 (GNU GPLv3).¹

Unless required by applicable law, software distributed under this license is distributed on an "AS IS" basis, without warranties or conditions of any kind, either express or implied. See the GNU GPLv3 for the specific language governing permissions and limitations under the license.

3.2 Source code: build instructions and software documentation

The source code of the beta version of the EULinksChecker add-in tools for Microsoft Word and Internet Explorer with build instructions and documentation is published on the EUCases project web site:

http://eucases.eu/fileadmin/EUCases/documents/EULinksChecker.zip,

and on GitHub:

https://github.com/apis-bulgaria/Eucases.EULinksChecker