DELIVERABLE

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D5.1 Test Plan and Toolkits for ConsumerCases and EULinksChecker

Authors:
Hristo Konstantinov APIS
Tenyo Tyankov APIS
Hristo D. Hristov APIS
Hristo P. Hristov APIS
Yanka Ivanova APIS
Florian Schmedding AVERBIS
Klaus Piesche EMPIRICA
Luigi di Caro UNITO
Prof Kiril Simov IICT-BAS
Andrea Violato NOMOTIKA
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Revision History

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Status | final ✓ / draft □

Abstract (for dissemination)
This document presents a detailed plan for testing and validating the end-user applications to be delivered as main outcomes of the EUCases project – the ConsumerCases web application and the EULinksChecker add-in tools. Object of testing will be also some autonomous software tools and modules, such as the tools for case classification and case summarisation, the EuroVoc classifier, the Multilingual access module and the SPARQL end-point of the EUCases Linking Platform, because they can be used independently as separate project outcomes. Testing activities will be performed in three stages: internal software testing, preliminary tests and user tests and validation. A number of qualitative and quantitative methods will be used for verification and validation of the developed applications and tools: white-box and black-box testing, individual interviews and focus group sessions, online survey. The test plan further traces the testing activities of the partners in respect of scope, schedules and staff involved, user focus groups, testing tasks, measurement of test results. The present document provides also testing toolkits including slide tutorials, test cases and use cases describing the functionalities of the EUCases end-user applications.

Keywords
- test plan, testing toolkit, test case, use case, ConsumerCases, EULinksChecker, NLP tools, EuroVoc classifier, multilingual access module

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This deliverable contains original unpublished work except where clearly indicated otherwise.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.
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Executive Summary

The present Test plan consists of two parts. Section 1 provides an overview of the scope, methodology and organisation of the testing activities at consortium level in general and for each project partner in particular. Section 2 and appendices II - V to it consolidate in testing toolkits the various test tools to be used by conducting the tests – slide tutorials, test cases and use cases.

The tests will be performed in three stages between May, 1st and July, 31st 2015. Their scope is defined in subsection 1.1, and in subsection 1.2 – the methodologies to be applied. The first stage – the **Internal software testing** to be conducted in May, foresees requirements verification by internal experts of the developed alpha-versions of the EUCases end-user applications (ConsumerCases and EULinksChecker) as well as of several autonomous tools and modules (Tools for case classification and case summarisation, EuroVoc classifier, Multilingual access module and SPARQL end-point of the EUCases Linking Platform). Users will be involved in the second (Preliminary tests), and the third stages (User tests and validation). During the **Preliminary tests** to be performed in June the functionality and usability of the EUCases applications and tools will be tested by more experienced (in computer technologies) users just before the launch of their beta versions. Finally, within the **User tests and validation** stage between June, 22 and July, 31 validation tests with real users will be conducted in the three planned test sites – Sofia (Bulgaria), Bonn (Germany) and Turin (Italy). The results from the tests will be summarised in a Test report (Deliverable 5.2) to be drafted by all project partners in August.

Several proven methods described in more details in subsection 1.2 will be used in the testing process – white-box and black-box testing, individual interviews and focus group sessions, online survey. Then subsection 1.3 gives a general overview of the planned testing activities and a detailed description for each of the partners.

The **testing toolkits** provided in Section 2 and appendices II – V consist of a set of testing guidelines and tools to be used in the tests of the two EUCases end-user applications – ConsumerCases web application and EULinksChecker add-in tools. These are the slide tutorials, the test cases and the use cases elaborated for each of the applications.
1 Plan for testing EUCases tools and applications

1.1 Scope of the testing activities

It is generally accepted that software testing is an investigation conducted to provide stakeholders with information about the quality of the product or service under test.\(^1\) In EUCases project testing is aimed at providing an objective and independent view on the extent to which the end-user applications ConsumerCases web service and EULinksChecker add-in tools meet 1) the requirements of the Software project documentation (Deliverable 1.2) and 2) the user needs for cross-border legal information related to the application of EU law and EU consumer law in particular. Therefore, in the Description of work the scope of testing is limited to tests with real users and activities connected with user validation of the beta versions of both end-user applications. Outside this scope remain regular ongoing tests being integral part of the software development process which have been done during the work within the pure technical workpackages 2, 3 and 4, such as unit, integration and component interface tests. Practically, this means that in EUCases project testing is performed at its highest level – system testing of pre-final versions of the end-user applications.

At the consortium meeting in Freiburg EUCases partners decided to extend the scope of the testing activities with tests of the tools for case classification and case summarisation, EuroVoc classifier, the Multilingual access module and the SPARQL end-point of the EUCases Linking Platform. The reasons behind this decision are connected with:

- the fact that the functionality of these tools and modules (except the SPARQL end-point) is integrated in the ConsumerCases application, but is difficult to be analysed in details by the end-users simultaneously with the more complex and at a higher level of perception usability testing performed by them;
- the autonomous nature of the above mentioned tools and modules which may and will be used independently from the ConsumerCases application as separate outcomes of the project.

1.2 Testing methodology

In accordance with the above outlined scope, the testing is divided in three parts which will be performed in three consecutive time periods:

- **Internal software testing** – tests by internal experts of the developed autonomous tools and modules and of alpha-versions of the EUCases end-user applications
- **Preliminary tests** – tests by selected external experienced users of the developed autonomous tools and modules and of pre-beta-versions of the EUCases end-user applications
- **User tests and validation** – qualitative and quantitative testing activities with real users of the beta-versions of the EUCases end-user applications.

The first part is focused on the internal evaluation and acceptance of the developed software whereas the second and the third on testing the user interface and functionality by real users carrying out real tasks in realistic conditions.

In each of the above parts of the testing different test methods and evaluation techniques will be applied.

\(^1\) Kaner, Cem (November 17, 2006). *Exploratory Testing* ([http://www.kaner.com/pdfs/ETatQAI.pdf](http://www.kaner.com/pdfs/ETatQAI.pdf)).
1) During the first period, the **Internal software testing**, the classic methods of white-box and black-box testing will be used.\(^2\)

**White-box testing** is a method of testing the application at the level of the source code. It examines the internal structures and the working mechanisms of the program, as opposed to its functionality. White-box testing is done by testers having a deep level of understanding of the source code, usually the programmers who have written it. The overall goal is to test the proper execution of each line of the code and to ensure that the respective software units (components), integration interfaces or the system as a whole produce the expected correct output. The main advantages of the white-box testing are the thorough checks of the executed source code, the revealing of hidden errors, the improved traceability in case of subsequent changes of the source code and the potential easily to automate the tests. However, it is not sufficient for discovering missing functionality or outputs that are not correct from user’s perspective.

**Black-box testing** aims to test the functionality of the application without any knowledge of its code and internal structures. It is performed by staff members (testers, quality assurance experts or members of the business team) who are not directly involved in software engineering. The tester is aware of what the software is supposed to do but is not aware of how it does it. The methods to be used for black-box testing are specification-based testing and exploratory testing. **Specification-based testing** aims to test the functionality of the EUCases end-user applications according to the requirements set up in the Software project documentation (Deliverable 1.2). The elaborated test cases follow strictly the specified functional and non-functional requirements of the documentation, thus ensuring that the software meets the expectations that guided its design and development. One advantage of the specification-based testing is that no programming knowledge is required. However, it is insufficient to detect more complex or high-risk situations. Thus, **exploratory testing** will be done in parallel by experienced professional testers having skills and knowledge to “invent” test cases in order to test how the software will handle different situations, mainly such that have not been documented or expected in advance.

2) The purpose of the **Preliminary tests** is two-fold: on the one hand, to test the functionality and usability of the EUCases applications and tools just before the launch of their beta versions which would allow to take some corrective measures on time where and if needed, and, on the other hand, to use their results for refinement of the test toolkits (guides, questionnaires, tutorials, test protocols) and the test methods to be applied further in the testing process.

Unlike internal software testing where bug discovery is the main goal of the testers, the preliminary tests will focus on user interface and functionality checks from user’s perspective, i.e. to understand the way how users experience the work of the EUCases applications, tools or modules. At the same time, they differ from the testing to be performed in the third phase – user tests and validation, by the specific profile of the testers to be involved. These will be carefully selected external experts or experienced users with more than average knowledge in working with legal databases or with NLP technologies and linked data.

The preliminary tests will be conducted in the form of **individual tests**. The methods to be applied are scenario based task execution and thinking aloud, observation, walk-through and one-on-one interviewing supported by a post-test questionnaire.

3) During the **User tests and validation** period the qualitative testing activities focused on usability study will be combined with quantitative research techniques for user evaluation and validation of the overall concept, content and functionality of the EUCases end-user applications.

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Qualitative usability testing will be performed by using simultaneously individual tests and focus group methods. Individual tests will be conducted in the same way as already described for the preliminary tests above.

Focus group is an evaluative tool in which the participants are asked to express their honest perceptions and opinions about the software being examined. It is largely used as a survey method both in marketing and in usability engineering. A focus group is an interview conducted by a moderator among a small group of respondents (usually 4 to 6 potential users). As such could be recruited either first-time participants or users that have been already involved in the individual tests. In EUCases project the focus group method will be used for evaluation of the ConsumerCases web application. The EULinksChecker add-in tools will be evaluated in the form of individual tests only.

The moderator opens the focus group session with presentation of the application after which facilitates the free interactive discussion among group members. The participants are encouraged to freely give their opinions about the service and its content, interface design or functions, including suggestions for their improvement. The main risk of focus groups to be avoided is “groupthink”. Therefore, it is advisable that the focus group will include both first-time users and participants who have been already involved in individual tests or simply have been granted preliminary access to the application. This approach will stimulate opposing or at least differing opinions and will foster productive discussion.

Quantitative research techniques include online survey and user feedback collection based on the intended relatively widely open to the public beta testing in Bulgaria of the ConsumerCases web application. The beta version will be offered for free testing to all interested current or potential clients of the consortium partner APIS via its trade representatives network across the country.

Online surveys are proven method for collecting quantitative data about users’ opinions about an application. The EUCases online survey contains questions aimed at obtaining user experiences, preferences and opinions on cross-border legal information services and the ConsumerCases service in particular. At this stage partners have elaborated a preliminary version on paper of the questionnaire (see Appendix I) which will be finalised and published online till the end of the internal software testing stage. It is expected that the online survey will be completed by at least 100 participants from Bulgaria, Germany and Italy.

Additional user feedback will be collected via APIS’ trade representatives who have direct personal contacts with the potential clients involved in beta testing.

1.3 Test plan

1.3.1 Plan overview

The process of software testing typically involves four stages:

- Test planning
- Test designing (preparation of test documentation)
- Test execution
- Test reporting.

In EUCases project the first two stages are part of Work task 5.1 “Preparation for user testing and pilot deployment”. The present deliverable summarises the results from the work performed during the task execution by bringing together the test plan and testing toolkits elaborated within the first two stages. Therefore, the test plan is scheduling only the activities to be performed during the third and the fourth stages.

The table below provides a brief overview of the planned testing activities:
### Table 1 – Planned testing activities

<table>
<thead>
<tr>
<th>Nr.</th>
<th>Activity description</th>
<th>Aims</th>
<th>Time Period</th>
<th>Partners involved</th>
<th>Tested tools &amp; applications</th>
<th>Test sites</th>
</tr>
</thead>
</table>
| 1.  | Internal software testing                                                            | • To evaluate whether the tested tools, modules and applications meet the requirements that guided their design and development and to give opinion and advice on final improvements  
• To find software errors (bugs) or other defects and to eliminate them                                                   | 01.05.2015 – 31.05.2015 | Apis, Averbis, IICT-BAS, Unito                                                   | • Alpha versions of EULinksChecker & ConsumerCases (APIS)  
• EuroVoc classifier (Unito)  
• Case classification & summarisation tools (Averbis supported by Apis and Unito)  
• Multilingual access module (IICT-BAS supported by Apis) | Sofia (BG), Freiburg (DE), Turin (IT) |
| 2.  | Preliminary tests                                                                   | • To test the usability and functionality of the EUCases tools, modules and applications just before the launch of their beta versions  
• To use the results from the preliminary tests for refinement of the test toolkits and the testing methodology | 01.06.2015 – 30.06.2015 | All                                                                               | • Pre-beta versions of EULinksChecker & ConsumerCases (APIS, Empirica, Nomotika)  
• EuroVoc classifier (Unito)  
• Case classification & summarisation tools (Averbis supported by Apis, Unito)  
• Multilingual access module (IICT-BAS)  
• SPARQL end-point (IICT-BAS)                                                                                       | Sofia (BG), Freiburg (DE), Turin (IT) |
| 3.  | User tests and validation                                                            | • To test with real users the EUCases end-user applications  
• To evaluate and validate the overall concept, content and functionality of these applications                              | 22.06.2015 – 31.07.2015 | Apis, Empirica, Nomotika, Averbis                                                | • Beta versions of EULinksChecker & ConsumerCases (APIS, Empirica, Nomotika) | Sofia (BG), Bonn (DE), Turin (IT) |
| 4.  | Test analysis and reporting                                                           | • To analyse the test data collected during testing and to provide feedback for corrective actions to the developers  
• To review and summarise user’s opinions and recommendations and to formulate further improvement and development strategies for EUCases end-user applications | 01.08.2015 – 31.08.2015 | All                                                                               | n.a.                                                                                                               | n.a.               |
1.3.2 Planned test activities by partners

A. Averbis

Averbis will carry out two major tests during the period from May, 25 until July, 31 to evaluate the modules developed by Averbis for the EUCases project. First, internal software tests will assess the concept extraction according to the EuroVoc terminology and the performance and reliability of the restful web-service that provides the NLP toolkit to the EUCases end-user applications. These tests will be performed before other partners are going to evaluate the functionality of both applications. Second, during the Preliminary tests and the User tests and validation stages a questionnaire about the utility and correctness of the keyword and sentence summaries that are generated by the NLP toolkit for each input document will be integrated into the overall EUCases end-user questionnaire.

1) Internal software tests

With internal tests Averbis is going to evaluate the performance and reliability of the restful web-service that provides access to two flavors of the NLP toolkit: A full-fledged pipeline for the processing of Akoma Ntoso documents by the back-end module of the ConsumerCases application and a faster lightweight pipeline that serves the requests from the EULinksChecker add-ins.

Both pipelines must meet certain criteria according to the project requirements. However, only the lightweight pipeline will serve online requests from end users through the EULinksChecker add-in. That means it must be fast enough to provide real-time experience for EULinksChecker users. Additionally, it must be able to handle parallel requests because it is publicly available.

On the other hand, the full-fledged pipeline for the ConsumerCases backend runs in a controlled environment. In contrast to the lightweight pipeline it has to process larger amounts of data.

Additionally, the recognition of EuroVoc concepts will be compared among the five project languages Bulgarian, English, French, German, and Italian. This task is going to be done on the base of EUR-Lex documents that contain the same content in all languages due to the available translations.

Time period for the tests:
- 25.05.2015 – 29.05.2015

Staff involved:
- Kornel Marko
- Florian Schmedding
- Kai Simon
- David Baehrens
- Peter Klügl
- Christian Simon

Test site:
- Freiburg

2) Tests with end users

The tests with end users will start in the middle of the second test stage “Preliminary tests” and will continue till the end of the third stage “User tests and validation”. While the EUCases
questionnaire will ask for an overall assessment of the ConsumerCases application. Averbis is going to provide a more specific questionnaire to evaluate the utility and correctness of the keyword and sentence summaries being generated by the NLP toolkit. Both kinds of summaries are shown in the ConsumerCases application. A separate questionnaire is required due to the details that are to be asked about the summaries.

The questionnaires will be accessible from the main EUCases questionnaire by hyperlinks. They will be presented as web pages containing HTML forms such that they can be filled out online.

Time period for the tests:
- 15.06.2015 – 31.07.2015

Staff involved:
- Kornel Marko
- Florian Schmedding
- Kai Simon
- David Baehrens
- Peter Klügl
- Christian Simon

3) Questionnaire setup
The questionnaires will be generated for about 50 EUR-Lex documents that are available in all five project languages (BG, DE, EN, FR and IT). As EUR-Lex documents are translated from one source document the answers will be comparable although they may refer to another language. Each questionnaire consists of two sections: questions about the summary sentences and questions about the summary keywords. The original document – including annotations from the NLP pipeline – is also shown in order to provide an overview to the user answering the questionnaire.

The introduction to the questionnaire reads as follows:

<table>
<thead>
<tr>
<th>Each document contains two sheets, one for the sentences and one for the keywords. The sentence sheet contains all sentences from the respective judgment. The sentences with yellow background are automatically selected and supposed to summarize the judgment.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Please rate the utility for the judgment's summary of each automatically selected sentence. Do so by filling in an 'x' into one of the blue columns.</td>
</tr>
<tr>
<td>2. Please choose five sentences that summarize the judgment. Do so by filling in an 'x' into the green column. You may choose from the automatically selected sentences, too.</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>The keyword sheet lists all keywords available for the document. Again, the keywords with yellow background are automatically selected and supposed to describe the judgment.</th>
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</thead>
<tbody>
<tr>
<td>1. Please rate the utility for the judgment's description of each automatically selected keyword. Do so by filling in an 'x' into one of the blue columns.</td>
</tr>
<tr>
<td>2. Please choose five keywords that describe the judgment. Do so by filling in an 'x' into the green column. You may choose from the automatically selected keywords, too.</td>
</tr>
</tbody>
</table>

Row one of both sheets contains a link to an HTML version of the judgment that allows a better reading of the text and the generated summary. Additionally, the mentioned
4) Questionnaire example

A shortened example questionnaire follows.

Summary sentences

1. Please rate each of the automatic summary sentences (yellow) by its utility: Enter a letter ‘x’ into one field of the blue columns.
2. Please select the 5 most important sentences from the document for summary yourself: Enter a letter ‘x’ into 5 fields of the green column. Choose from all available sentences (yellow or white).

Table 2 – Example of summary sentences questionnaire

<table>
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<tr>
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<th>Useful</th>
<th>Not useful</th>
<th>Misleading</th>
<th>Human (5)</th>
<th>Summary Sentences</th>
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<td>Dr. Bornkamm und die Richter Prof.</td>
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<td>Dr. Büscher, Dr. Schaffert, Dr. Koch und Dr. Löffler beschlossen:</td>
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<td>Der Gegenstandswert für das Rechtsbeschwerdeverfahren wird auf 8.720 € festgesetzt.</td>
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<td>Die Klägerin nimmt den Beklagten wegen einer Urheberrechtsverletzung auf Unterlassung, Schadensersatz und Erstattung vorgerichtlicher Anwaltskosten in Anspruch.</td>
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<tr>
<td>x</td>
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<td>Das Landgericht hat der Klage stattgegeben.</td>
</tr>
</tbody>
</table>

Summary keywords

1. Please rate each of the automatic keywords (yellow) by its utility: Enter a letter ‘x’ into one field of the blue columns.
2. Please select the 5 most important terms from the document for keywording yourself: Enter a letter ‘x’ into 5 fields of the green column. Choose from all available terms (yellow or white).

<table>
<thead>
<tr>
<th>Automatic</th>
<th>Very useful</th>
<th>Useful</th>
<th>Not useful</th>
<th>Misleading</th>
<th>Human (5)</th>
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B. Apis

As workpackage leader and main contributor in software development of the EUCases end-user applications Apis is actively involved in all three stages of the testing process.

1) Internal software tests

The focus of the internal tests is on the technical verification of the alpha versions of the ConsumerCases web application and the EULinksChecker add-in tools for MS Word and Internet Explorer. However, Apis will also support Averbis in testing of the tools for classification and case summarisation, and IICT-BAS in testing the multilingual access module. In the first case, legal experts of Apis will evaluate the relevance of the automatically selected key words and sentences. In the second case, next to the legal experts who will assess the correctness and reliability of the machine translation of the search query from Bulgarian into English and vice versa, Apis’ programmers will test the integration of the multilingual access module with the search engine of the ConsumerCases application.

The tests by legal experts will be conducted manually whereas programmers will be involved also in execution of automated unit and system tests, especially such related to the performance, integration, non-functional and regression testing.

Time period for the tests:
- 01.05.2015 – 31.05.2015

Staff involved:
- Tencho Tyankov
- Hristo D. Hristov
- Hristo P. Hristov
- Daniela Spassova
- Yanka Ivanova
- Hristo Konstantinov
- Lachezar Tsvetkov
Test site:
- Sofia

2) Preliminary tests

Within the preliminary tests Apis will enrol external legal experts with more than average experience in using legal information systems and services into the testing of the EUCases end-user applications ConsumerCases and EULinksChecker. As such will be recruited two groups of people:

- Lawyers or legal counsel with excellent computer skills who are / have been working with Apis as content experts or legal advisors. At this stage, the test team has obtained the prior consent of:
  - Dr. Kalojan Monev – managing partner in “Monevi” law firm
  - Pepa Vasileva – lawyer, member of Sofia Bar Association
  - Ekaterina Miteva – legal counsel in “Krapov & Partners” law firm
  - Svetoslav Kaltchev – legal counsel in “Montage Complex Engineering” EOOD
- Sales representatives of Apis with strong background in law:
  - Sevdalina Georgieva – lawyer, member of Sofia Bar Association
  - Georgi Georgiev – lawyer, member of Sofia Bar Association
  - Vencislav Ganov – lawyer, member of Pleven Bar Association
  - Kliment Chorbadjie – legal counsel in “Telelink” EAD
  - Plamen Rusev – lawyer, member of Sofia Bar Association
  - Alexandra Kilikchijska – law student, master’s degree in EU law
  - Evgenia Mihaylova – lawyer, member of Sofia Bar Association

Object of the test activities will be almost finalised preliminary (pre-beta) versions of both applications. Only face-to-face sessions are envisaged.

Apis will also support Averbis in testing by legal experts of the tools for classification and filling-in of the Summary sentences and Summary keywords questionnaires (see previous section about the testing activities of Averbis) as well as IICT-BAS for the user tests of the multilingual access module which at this stage will be already integrated into the search interface of the ConsumerCases application.

Time period for the tests:
- 01.06.2015 – 30.06.2015

Staff involved:
- Daniela Spassova
- Yanka Ivanova
- Hristo Konstantinov
- Lachezar Tsvetkov

Test site:
- Sofia

3) User tests and validation

Based on its extensive market coverage in Bulgaria Apis plans to involve a large number of real users at this most important stage of the testing activities. The first event to gather user’s feedback will be the EUCases second international expert workshop to be held in Sofia on
June, 24th 2015. Along with guests from abroad, to participate in the forum will be invited 10-15 selected representatives of the legal community, such as judges, lawyers, university professors and others, working on a daily basis with legal information concerning EU law.

The user tests will commence with individual interviews with 7 to 10 external legal experts focused on the functionality and usability of the ConsumerCases web application. The EULinksChecker will be tested by another 4-5 users. The add-ins will be installed directly on their computing devices. After the interviews a focus group session with the participation of 5-6 mostly interested potential users will be organised in Apis’ premises.

So far Apis intends to invite the following experts in the user tests:

- Stanislav Kostov – assistant professor in EU law at the Sofia University “St. Kl. Ohridski”
- Ass. Dr. Catherine Salkova – head of department “Criminal law” at the Institute of State and Law to the Bulgarian Academy of Sciences
- Violeta Glavinova – judge at the Supreme Administrative Court
- Iskra Alexandrova – judge at the Supreme Administrative Court
- Elena Rosalinova – judge at Sofia District Court
- Hristo Milushev – legal expert at Deloitte Bulgaria
- Nadia Russinova – lawyer and managing partner at “Rusinov & Bekirska” law firm
- Yordanka Bekirska – chairman of the Executive Board of “Bulgarian Lawyers for Human Rights” foundation, lawyer and managing partner at “Rusinov & Bekirska” law firm
- Hristo Trendafilov – general counsel at Commission for Consumer Protection
- Dr. Boryana Stoeva – legal counsel at Postbank AD
- Tsveta Kilkichija – legal counsel at Court of Appeal of Plovdiv

Most of the above listed jurists participated in the EUCases workshop held on October, 2nd 2014 in Sofia or the face-to-face discussions on the following day where they expressed their interest in the EUCases application and services being developed under the project.

All participants in the individual interviews and the focus group session will be invited to fill-in the online questionnaire about the ConsumerCases web service.

Next to the above described testing activities which target a selected group of legal experts, the ConsumerCases web application will be offered for testing to a large number of potential future customers via Apis’ network of sales reps. All test users will be invited to participate in the online survey. Therefore, it is expected that the online questionnaire will be filled-in at least by 90-100 users.

**Time period for the tests:**

- 22.06.2015 – 31.07.2015

**Staff involved:**

- Daniela Spassova
- Yanka Ivanova
- Hristo Konstantinov
- Lachezar Tsvetkov

**Test site:**

- Sofia, Plovdiv
C. Empirica

Being not involved in software development Empirica will participate in the user tests during the second and third stages of the testing. Therefore, after the technical verification being done, Empirica will support the validation phase.

Depending on the invitees, it is envisaged initially to have the testing in face to face sessions, as this will enable Empirica’s team members to note down reactions and notes on the fly and offer help where applicable. After conducting the individual interviews, a focus group session will be organised in Empirica’s premises.

If this is not possible for some of the invited experts, a webinar would be the next best solution, at least for the ConsumerCases web application.

The EULinksChecker add-ins should be installed directly on the test users computing devices in order to test the installation on multiple, different systems.

Empirica plans to invite the following legal experts for the user tests:

- [Legal expert 1]
  - currently working for the German Ministry of Defence. He specialised in Law of the European Union and International Law and is a member of both Koblenz bar association as well as Barreau de Nantes in France. Member of the Arbeitskreis Völkerstrafrecht (working group on international criminal law)
- F. Reimann – independent lawyer specialised in entertainment and media law (and to a lesser part civil law). He is a member of the Berlin bar association
- O. Mörsdorf – Akademischer Rat a.Z. and post-doc at the Institute for Private International Law and Comparative Law at the University of Bonn (tbc)
- Schulte-Beckhausen Attorneys at Law (tbc)
- Hölzl Rechtsanwälte.

After conducting the tests, users will be invited to participate in the online survey.

Additionally, Empirica envisages to invite young lawyers and students in law sciences to test the EUCases end-user applications, especially the EULinksChecker add-in tools.

Based on ISO9126, the testing done by Empirica will mainly comprise:

**Functionality testing**
- Suitability - Can the software perform the tasks required?
- Accurateness - Is the result as expected?

**Usability testing**
- Understandability - Can the user easily comprehend how to use the software?
- Learnability - Can the user easily learn how to use the software?
- Operability - Can the user use the system without much effort?
- Attractiveness - Does the UI look good? - User interface testing (colour, size, readability, other properties)

**Efficiency**
- Performance - How quickly does the software respond?

---

3 This expert explicitly asked not to make his name public.
Portability testing
  - Installability -> Is it easy to install the software? [Only EULinksChecker Add-ins]

Time period for the tests:
  - 15.06.2015 – 31.07.2015

Staff involved:
  - Veli Stroetmann
  - Karsten Gareis
  - Strahil Birov
  - Klaus Piesche

Test site:
  - Bonn

D. IICT-BAS

IICT-BAS will carry out the following major tests during the period from May, 25 until July, 31: evaluation of Bulgarian NLP pipeline, Multilingual access module and SPARQL end-point. First the internal software tests will be devoted to automatic measures of the corresponding modules. For these test experts at IICT-BAS are preparing domain specific corpora containing morphologically annotated domain texts, domain parallel corpus (based on translations provided by APIS) and preliminary set of SPARQL queries.

1) Internal software tests

IICT-BAS has annotated more than 50000 words of legal texts on morphological level. First the text was tokenised, then the sentence boundaries were determined and each token was annotated with morphological information. This corpus will be used in two ways. First during the evaluation phase the accuracy of Bulgarian pipeline will be measured. The rest of the corpus will be used for retraining of morphological component of the Bulgarian pipeline. After the formal evaluation an error analysis will be performed. The result of it will be used in order to improve the performance of the pipeline.

The parallel corpus is used in three ways for construction and evaluation of the multilingual access module. The first part of it is used during the training of statistical machine translation model. The second part is used to tune the constructed model. The third part will be used for evaluation of the constructed translation. The evaluation will include both approaches: automatic measures like BLUE scores and manual evaluation. During manual evaluation 100 random sentences will be translated and then the evaluators will classify the translations according the following scales for Grammaticality and Content:

**Grammaticality**

1. The translation is not understandable.
2. The evaluator can somehow guess the meaning, but cannot fully understand the whole text.
3. The translation is understandable, but with some efforts.
4. The translation is quite fluent with some minor mistakes or re-ordering of the words.
5. The translation is perfectly readable and grammatical.

**Content**

1. The translation is totally different from the reference.
2. About 20% of the content is translated, missing the major content/topic.
3. About 50% of the content is translated, with some missing parts.
4. About 80% of the content is translated, missing only minor things.
5. All the content is translated.

The performance of the SPARQL endpoint will be evaluated on the basis of SPARQL query specially developed to check the coverage of the database. These queries will be specific in order to return predetermine set of triples. They will be run during the loading of the RDF data in the Linked Open Data repository. In this way will be evaluated the process of rdf-isation of the annotated document, the correct mapping to the selected ontologies, the loading process.

**Time period for the tests:**

- 25.05.2015 – 12.06.2015

**Staff involved:**

- Kiril Simov
- Petya Osenova
- Lubomir Zdravkov
- Alexander Simov
- Vanya Ivanova

**Test site:**

- Sofia

**2) Preliminary tests**

During the preliminary tests IICT-BAS will evaluate the multilingual access module and the SPARQL end-point in closer to end-user environment.

For multilingual access module the tests will start with a list of authentic user queries collected by APIS during the exploitation of their monolingual products. Here are examples of such queries: "посредническа дейност по наемане на работа" (intermediary activity on employing), "защита на потребителите" (consumer protection), etc. The queries will be translated automatically by the multilingual access module and by an expert translator. IICT-BAS will perform a search experiments with both translations. Then the sets of the returned documents will be compared. The overlapping will be measured by the usual precision and recall measures and the derived f-measure. The recall will be evaluated partially on the basis of the top 100 returned documents by the both queries. This will be done in this way because we will not be able to evaluate the relevance of all documents with respect to the queries. This type of evaluation will measure the usefulness of the multilingual access module. The interaction with the search engine will be done via the user interface implemented by APIS.

The SPARQL end-point will be evaluated by experts in SPARQL. They will construct and execute a number of new queries. The goals of this evaluation will be the consistency of the Link Open Data set, the coverage of the ontology and the dataset.

**Time period for the tests:**

- 01.06.2015 – 30.06.2015
Staff involved:
- Kiril Simov
- Petya Osenova
- Lubomir Zdravkov
- Alexander Simov
- Vanya Ivanova

Test site:
- Sofia

E. Nomotika

As Nomotika was not involved in software development, its team members will join the consortium testing activities during the second and the third stages – preliminary tests and user tests and validation. Thus, they will assist Apis and Empirica in testing the pre-beta and beta versions of the end-user applications ConsumerCases and EULinksChecker.

Nomotika plans to invite the following external legal experts to test and share their opinion on the EULinksChecker and the ConsumerCases application:

- Dr. Michel Cannarsa – Associate Professor at the Catholic University of Lyon, Faculty of Law. His areas of research are: International and European law, Commercial law, Comparative law, Consumer law and Legal translation. He is involved in research programs on Consumer law

- Martin Weitenberg – Lawyer and Senior Associate at Clifford Chance. His areas of research are: European law, Consumer law, Legal translation, M&A corporate. He is involved in research programs on Uniform Terminology for Europe.

- Piercarlo Rossi – Professor of Comparative Law at the University of Eastern Piedmont. His areas of research are: Comparative law, European private law, Consumer law, Legal translation. He is involved in research programs on Uniform Terminology for European Private Law and Consumer Law

- Two other lawyers with expertise in Civil law, Commercial law, Business law and arbitration.

1) Activities during the Preliminary tests stage

Nomotika will test the ConsumerCases and EULinksChecker application just before the launch of their beta versions. At this stage, face-to-face sessions with external experts are envisaged only.

Time period for the tests:
- EULinksChecker: 01.06.2015 – 11.06.2015
- ConsumerCases: 12.06.2015 – 19.06.2015

Staff involved:
- Carlo Cugusi
- Andrea Violato
Test site:
- Turin

2) Activities during the User tests and validation stage

At this stage, next to individual interviews on both EUCases end-user applications Nomotika will organise a focus group session on ConsumerCases with the participation of 5 external legal experts and will invite at least 10 users to fill-in the online questionnaire about the ConsumerCases web service.

Time period for the tests:
- 22.06.2015 – 20.07.2015 – interviews
- 01.07.2015 – 31.07.2015 – focus group session (the exact date will be fixed later)
- 22.06.2015 – 31.07.2015 – conduction of online survey

Staff involved:
- Carlo Cugusi
- Andrea Violato

Test site:
- Turin

F. UNITO

UNITO will carry out the tests during the period from May, 25 until July, 31, evaluating the modules developed by UNITO for the EUCases project. First, internal software tests will assess the classification module, according to the EuroVoc scheme. Then, an overall performance evaluation of the system will be done. These tests will be performed before other partners will actually evaluate the functionality of the classifier.

1) Internal software tests

With internal tests UNITO is going to evaluate the performance and reliability of the classification module, according to the EuroVoc categorisation scheme. The module will be evaluated also to assess the scalability in providing real-time results with large input texts. Additionally, it must be able to handle parallel requests because it is publicly available.

The identification of EuroVoc categories will be compared among the five project languages Bulgarian, English, French, German, and Italian. This task is going to be done on the base of EUR-Lex documents that contain the same content in all languages due to the available translations.

2) Preliminary tests

The tests with end users will start in the second test stage “Preliminary tests” and will be completed before the end of the same stage. A set of random texts from the input corpus of the classification module will be used to evaluate the EuroVoc output categories.

In particular, in addition to an analytical evaluation in terms of Precision and Recall according to a 10-folds cross validation scheme, the users will evaluate the degree of semantic distances in the cases of mismatches between the annotated texts and the returned categories. The users will use a 1-5 range from annotating these distances (1 means slight difference, 5 means semantically-different).
From this phase, a technical summary will be edited, reporting the distribution and the average values of such semantic distances on the whole evaluation set.

Time period for the tests:
- Internal software tests: 25.05.2015 – 30.05.2015
- Preliminary tests: 04.06.2015 – 15.06.2015

Staff involved:
- Luigi Di Caro
- Livio Robaldo
- Carlo Emilio Salaroglio

Test site:
- Turin
2 Testing toolkits

2.1 Slide tutorials

Partners in the project decides to use slide tutorials for providing the necessary guidelines and knowledge for working with the EUCases end-user applications to the internal and external experts and users to be involved in the testing and validation process. The advantage of slide tutorial in comparison with video tutorial is primarily in the fact that it can be updated much more easily and quickly after software changes, especially those concerning the user interface.

In Appendix II is annexed a printout preview of a slide tutorial for working with ConsumerCases web application and in Appendix III – of a slide tutorial for working with EULinksChecker add-ins for MSWord. In addition, the files of both slide tutorials prepared in the form of a PowerPoint presentation (ppt-files) are attached to the present report in a separate zip-file: EUCases_Testing_Tutorials.zip.

2.2 Test cases

According to Standard 610.12-1990 of the Institute of Electrical and Electronics Engineers Standards Association (IEEE-Standard-610.12)⁴ test cases are “a set of test inputs, execution conditions, and expected results developed for a particular objective, such as to exercise a particular program path or to verify compliance with a specific requirement”.

In EUCases project test cases have been continuously drafted at different stages of the software development and software testing process long before the start of Workpackage 5 “Testing and user validation”. Such test cases, for instance, have been written for testing the various autonomous pieces of software code, components or modules as well as their integration (for the needs of the unit, component interface and integration testing). Further to the usual functional test cases, a number of automated unit tests have been created in order to ensure the proper running of the respective module. Below are listed the most important unit tests developed so far:

Table 4 – List of important unit tests

<table>
<thead>
<tr>
<th>Nr.</th>
<th>Unit test</th>
<th>Module/Tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Uploading a document to Crawler framework service</td>
<td>Crawler tools</td>
</tr>
<tr>
<td>2.</td>
<td>Saving a downloaded document into the database</td>
<td>Crawler framework web service</td>
</tr>
<tr>
<td>3.</td>
<td>Adding a document into the database</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Updating a document in the database</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Logging status (error/success) in the database</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Akoma Ntoso XML identification test</td>
<td>Legal-text-to-XML converters</td>
</tr>
<tr>
<td>7.</td>
<td>Akoma Ntoso XML header test</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Akoma Ntoso XML body test</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Automatic conversion from HTML to Akoma Ntoso elements</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Correct conversion of documents from all types to Akoma Ntoso XML</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Automated check of the correctness of the recognised legal citations</td>
<td>Linking tools</td>
</tr>
</tbody>
</table>

⁴ Glossary of software engineering terminology, which identifies terms currently in use in the field of software engineering (http://ieeexplore.ieee.org/xpl/login.jsp?tp=&arnumber=159342)
During the implementation of Worktask 5.1 “Preparation for user testing and pilot deployment” partners have written test cases which will be used mainly for the system tests within the “Internal software testing” stage, and partially within the “Preliminary tests” stage. Where test cases are intended for internal use only they are written in the national language of the respective partner. In the table below are listed, for instance, the prepared test cases for testing ConsumerCases and EULinksChecker applications.

### Table 5 – List of test cases for ConsumerCases and EULinksChecker

<table>
<thead>
<tr>
<th>Nr.</th>
<th>Test case</th>
<th>Test category</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Create a customer</td>
<td>Stability</td>
</tr>
<tr>
<td>2.</td>
<td>Create customers – min 1,000 customers</td>
<td>Performance</td>
</tr>
<tr>
<td>3.</td>
<td>Create a user of a customer</td>
<td>Stability</td>
</tr>
<tr>
<td>4.</td>
<td>Create users of a customer – min 1,000 users</td>
<td>Performance</td>
</tr>
<tr>
<td>5.</td>
<td>Create a user with 1,000 sessions for a simultaneous work</td>
<td>Performance</td>
</tr>
<tr>
<td>6.</td>
<td>Performance of the system with different internet connection speed</td>
<td>Performance</td>
</tr>
<tr>
<td>7.</td>
<td>Performance of the system on different browsers / OS</td>
<td>Performance</td>
</tr>
<tr>
<td>8.</td>
<td>Login in the system</td>
<td>Stability/Security</td>
</tr>
<tr>
<td>9.</td>
<td>Login in the system – min 1,000 users simultaneously</td>
<td>Performance/Security</td>
</tr>
<tr>
<td>10.</td>
<td>Log out of the system</td>
<td>Stability/Security</td>
</tr>
<tr>
<td>11.</td>
<td>Pasting internal URL directly into browser address bar without login</td>
<td>Security</td>
</tr>
<tr>
<td>12.</td>
<td>Open the main page of the system – speed</td>
<td>Performance</td>
</tr>
<tr>
<td>13.</td>
<td>Session time of an user – correct duration / quick and long session’s times</td>
<td>Stability/Security</td>
</tr>
<tr>
<td>14.</td>
<td>Quick search</td>
<td>Stability</td>
</tr>
<tr>
<td>15.</td>
<td>Quick search – min 1,000 users simultaneously</td>
<td>Performance</td>
</tr>
<tr>
<td>16.</td>
<td>Advanced search</td>
<td>Stability</td>
</tr>
<tr>
<td>17.</td>
<td>Advanced search – min 1,000 users simultaneously</td>
<td>Performance</td>
</tr>
<tr>
<td>18.</td>
<td>Search of 100 words in one request</td>
<td>Performance</td>
</tr>
<tr>
<td>19.</td>
<td>Search with words with special symbols</td>
<td>Stability/Performance</td>
</tr>
<tr>
<td>20.</td>
<td>Advanced search – search with all criteria fulfilled</td>
<td>Performance</td>
</tr>
<tr>
<td>21.</td>
<td>Work of the system with one language view</td>
<td>Stability</td>
</tr>
<tr>
<td>22.</td>
<td>Work of the system with min 1,000 users with different language views</td>
<td>Performance</td>
</tr>
<tr>
<td>23.</td>
<td>Work with a list of min 10,000 documents</td>
<td>Performance</td>
</tr>
<tr>
<td>24.</td>
<td>Open some of the largest documents – speed</td>
<td>Performance</td>
</tr>
<tr>
<td>25.</td>
<td>1,000 users open one and the same document simultaneously</td>
<td>Performance</td>
</tr>
<tr>
<td>26.</td>
<td>1,000 users open one and the same large document simultaneously</td>
<td>Performance</td>
</tr>
<tr>
<td>27.</td>
<td>Export of a document</td>
<td>Stability</td>
</tr>
<tr>
<td>28.</td>
<td>Export of a document with special symbols, pictures, etc.</td>
<td>Stability</td>
</tr>
<tr>
<td>29.</td>
<td>1,000 users export one and the same document simultaneously</td>
<td>Performance</td>
</tr>
<tr>
<td>30.</td>
<td>Documents navigation links – time to react</td>
<td>Performance</td>
</tr>
<tr>
<td>31.</td>
<td>Open 300 documents simultaneously</td>
<td>Performance</td>
</tr>
<tr>
<td>32.</td>
<td>1,000 users open 300 documents simultaneously</td>
<td>Performance</td>
</tr>
<tr>
<td>33.</td>
<td>Link in the text of a document – time to open the linked act</td>
<td>Performance</td>
</tr>
</tbody>
</table>
### EULinksChecker add-ins

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Install procedure with administrative rights</td>
</tr>
<tr>
<td>2.</td>
<td>Install procedure without administrative rights</td>
</tr>
<tr>
<td>3.</td>
<td>Install procedure without valid host application</td>
</tr>
<tr>
<td>4.</td>
<td>Install procedure from local storage</td>
</tr>
<tr>
<td>5.</td>
<td>Install procedure from network shared drive</td>
</tr>
<tr>
<td>6.</td>
<td>Install procedure without the required framework environment (e.g. .NET framework)</td>
</tr>
<tr>
<td>7.</td>
<td>Setting a default interface language by determining the default culture/locale</td>
</tr>
<tr>
<td>8.</td>
<td>Connectivity test against the web service of the EUCases NLP toolkit</td>
</tr>
</tbody>
</table>

Where test cases refer to elementary situations that require from testers to follow one or a few steps, partners have produced simple checklists.

Some more detailed test cases related to the functionality and usability tests of the ConsumerCases application have been written and after that translated into English to allow key functions of the web service to be tested not only by internal personnel of the EUCases partner Apis who developed it, but also by internal staff of the partners Empirica and Nomotika, and/or external exert (users) from several countries. The translated test cases are provided in Appendix IV. They cover the following key functionalities:

- Folders
- Simple search
- Advanced search – cases
- Advanced search – legislation
- Documents list – sorting and paging
- Documents list – export
- Document text – structure and versions
- Document text – export and print
- Document text – links.

### 2.3 Use cases

In software engineering use case is understood as a sequence of steps defining interactions between a system and a user (agent) related to a particular goal. They can be thought also as a collection of possible scenarios to achieve that goal. Therefore, use cases and goals are sometimes considered to be synonymous.

In EUCases project, however, use cases have been elaborated with the aim to assist user validation of the end-user applications, not internal software tests. As the main purpose of
these applications is to support legal research in a particular situation, use cases have been written in a way of specifying the concrete case in which the need for their usage may arise. Therefore, the use cases in EUCases project have been prepared in the form of practical cases to be solved by a legal professional by using one of the end-user applications (ConsumerCases or EULinksChecker) with the goal to find legislative instruments and case law relevant to the case in question.

In Appendix V are provided seven such use cases describing real situations in the field of consumer law. All they require from user to follow one and the same scenario (the so called “Action” field) for using the search facilities of the EUCases applications. Different are only the facts of the cases.

The use cases can be applied by each of the three partners involved in the third stage of the testing process “User tests and validation” – Apis, Empirica and Nomotika. Notwithstanding this, users may test the applications by using the scenario described in the “Action” field for performing legal research relevant to real cases in consumer law from their own practice.
3 Appendix I: Questionnaire for the online survey

Abstract

- 20 questions
- Time: max 10-15 min
- Questions are split thematically in five sections
- Open questions (2, 4d, 5f, 6c, 9d, 11f, 12, 16, 17, 18e, 19b)

Object

- ConsumerCases application (http://consumercases.eucases.eu)

Answers:

- Check (single choice)
- In range:
  - Strongly disagree
  - [1:5]
  - Strongly agree
  - NA
- Multiple choice
- Free text (max 2000 words)

Questionnaire:

User profile

1. Law career (check)
   a. Judge
   b. Public Notary
   c. Business / Corporate Law Attorney
   d. Civil Rights Attorney
   e. Employment Lawyer / Employees' Rights
   f. Scholar (professor / PhD student / …)
   g. In-house Lawyer
   h. Compliance Manager / Internal Auditor / Risk Manager
   i. Other (please, specify): …

2. Field of interest (examples: Contracts / Litigations / …) (free text)

Case Law

3. Case Law is very important in my daily job (in range)
4. Case Law type used predominantly (multiple choice)
   a. International
   b. European
   c. National
4. Local
5. Legal information search criteria (in range)
   a. Date / Number
   b. Keywords
   c. Jurisdictions
   d. Legal References
   e. Judges or Parties (names)
   f. Other (please, specify): …
6. Search Results (multiple choice)
   a. Abstract / Summarisation
   b. Complete text
   c. Other (please, specify): …
7. Case Law needs time spent for searches (in range)

**Legislation**

8. Legislation is very important in my daily job (in range)
9. Type of Legislation (multiple choice)
   a. European
   b. National
   c. Local
   d. Other (please, specify): …
10. Legislation needs time spent for searches (in range)

**Tools**

11. Tools to search legal information (Case Law and/or Legislation) (multiple choice)
   a. Online Legal Databases (commercial solutions)
   b. Online Magazines (commercial solutions)
   c. Online services (for free)
   d. Legal Databases (CDs / DVDs)
   e. Legal Magazines and Reviews (papers)
   f. Other tools (please, specify): …
12. My favourite tools (one or more) are … (free text)
13. These tools are complete (in range)

**ConsumerCases Application**

14. My general impression is: (in range)
15. The service:
   a. Helps me be more productive (in range)
   b. Is easy to use (in range)
   c. Is easy to learn how to use (in range)
   d. Works the way I want it to work (in range)
16. List the most positive aspects (free text)
17. List the most negative aspects (free text)
18. What would you change? (multiple choice)
   a. Navigation
   b. Layout
   c. Search functionalities
d. Comparing tools

e. Other (please, specify): …

19. Would you pay for this service? **(check)**
   a. Yes
   b. No (if NO, why?...)
   c. NA

20. Feedback on ConsumerCases
   a. What would you add? **(free text)**
   b. What would you remove? **(free text)**
   c. Suggestions? **(free text)**
4 Appendix II: Slide tutorial for ConsumerCases
The login screen contains a login part and a service description part. In this screen user must enter valid username and password in the respective fields.

The pressing of the login button after that leads to username and password verification and, if successful, to the application home screen.

The main menu is positioned as horizontal bar on the top of the screen.
Main menu - options

- **Home** – When clicking the Home button the user is transferred to the initial (home) screen of the application which appears immediately after login.

- **Recent documents** – When clicking the Recent documents button the user is transferred to the Recent Documents' screen which in fact is a Document list with the 100 recently opened documents by the user appearing in descending order (last opened are at the top of the list).

- **My documents** - When clicking the My documents button a list of documents from the application selected by the user appears

- **My searches** - list of search queries performed by the user.

- **Interface language** – By using this function the user changes the Interface language to the selected one. The interface languages are the 5: English, German, French, Italian and Bulgarian.

- **Logout** – This function logs out the current user and redirects him or her to the login screen.

---

Simple search

- The simple search function allows the user to perform quick searches by entering a search query in the search bar and pressing the search button.

- The search query can consists of one word or of several words (text expression). It is recommended to look for specific words and phrases that are most relevant to the case.

- The result is a list of documents containing the search expression.
The advanced search allows users to perform specialised search in legislation or case law by specifying exact search criteria based on document metadata.

Due to the fact that metadata of legislative documents differs from metadata of judicial documents, the interface offers separate advanced search dialogs for searching in legislation and in case law.

The ‘Search cases’ advanced search dialog allows the user to enter a search query in the search bar and simultaneously to define one or more search criteria for more precise searches in case law.
The search criteria are the following:

- **National / ECLI Identifier** — national or ECLI identification number of the case
- **Parties** — names of the parties in the case
- **Jurisdiction** — selectable from another dialog. This dialog is shown with the button and the field is cleared with the button “X”.
- **Directory CaseLaw** — hierarchical thematic classifier. One or more terms selectable from other dialog. This dialog is shown with the button and the field is cleared with the button “X”.
- **Period** — defines a time period in which the cases have been rendered
- **EuroVoc terms** — one or more terms selectable from another dialog. This dialog is shown with the button and the field is cleared with the button “X”.
- **Subject matter fields** — one or more terms selectable from another dialog. This dialog is shown with the button and the field is cleared with the button “X”.

If the user presses the ‘Search’ button search is performed in the case law by all the criteria chosen with logical operator AND between them. If the user presses the ‘Clear’ button, all the fields in the dialog are cleared. The ‘Close’ button hides the dialog.

The ‘Search legislation’ advanced search dialog allows the user to enter a search query in the search bar and simultaneously to define one or more search criteria for more precise searches in legislation.
The search criteria are the following:

- **National / ELI Identifier** – national or ELI identification number of the legislative act
- **Year, Month, Day, Page Nr.** – date and page Nr. of the official publication of the act
- **EuroVoc terms** – one or more terms selectable from another dialog. This dialog is shown with the button and the field is cleared with the button “X”
- **Syllabus terms** – one or more terms selectable from another dialog. This dialog is shown with the button and the field is cleared with the button “X”
- **Subject matter** – one or more terms selectable from another dialog. This dialog is shown with the button and the field is cleared with the button “X”

If the user presses the ‘Search’ button search is performed in the legislation by all the criteria chosen with logical operator AND between them. If the user presses the ‘Clear’ button, all the fields in the dialog are cleared. The ‘Close’ button hides the dialog.

---

**Folders and Filters**

- Folders are a hierarchical structure which task is to classify the legal contents of the ConsumerCases web application by different criteria.

- After choosing one of the folders, the application selects the documents that meet the search criteria and displays them arranged by different filters.
The 'Document list' component displays on the right side of the screen a list of documents contained in a folder or such that meet the search query criteria. The document list is shown when the user performs one of the following operations:
1. By browsing folders contents – when opening a folder
2. By executing search queries
3. By executing the Recent documents command

Documents are displayed in the list by the following requisites:
- title of the document
- icon indicating the type of the document (e.g., legislation or case law)
- date of the document
- the ability to add documents in the structure "My Documents"
- country of origin of the document
- keywords and summary of the case.
The following functions can be performed with the Document list:

- User can export the currently viewed documents in PDF or RTF format. The execution of any of these functions creates a file in the corresponding file format and delivers it for download to the user’s browser.
- Each document can be selected for export by clicking on a checkbox above its title.

**Document list - Paging**

- Document lists are paged for better performance. This means that users can only see one page containing N documents. Navigation between pages is done by using the paging control.
- User can:
  - click on a specific page number and open this page
  - go to the first page – by clicking the leftmost button
  - go to the last page – by clicking the rightmost button
  - write the number of the requested page
Document list - Sorting

Sorting of Document list is done by several criteria:
- Property by which the sorting is done
- Alphabetically - ordered by document title
- Relevance - ordered by the relevance to the search query (e.g., documents which contain the search word in the title or more relevant)
- Date - ordered by the date of the document
- Direction of the sorting
  - Ascending
  - Descending

By selecting different criteria, user initiates resorting of the currently viewed Document list.

Document text

- The Document text screen appears when the user opens a document from the Document list. The screen has several parts:
  - on the left side is located hierarchical tree with the elements of the document
  - in the upper right side is displayed the document metadata,
  - above a document is located a bar with functionalities
  - in the bottom right side is displayed the text of the document.
When using this function (by clicking the “Versions” button on the left side) all historic versions of the currently viewed document are listed ordered ascending by date. User can select any two of these versions by clicking in the checkbox next to them. Second click deselects the selection.

By pressing the “Compare” button user is redirected to the version compare window in which the two selected versions are compared.

This function is accessible only after the user has chosen the “Versions” function and has selected two of the listed versions. When in this case the user presses the “Compare” button, a new screen comparing the two merged versions of the document is shown. The comparison is done in the following manner:

- In red are highlighted all the texts that existed in the older versions.
- In green are highlighted all the texts that didn’t exist in the older versions.

When user clicks the ▶️ button the next difference is highlighted. When user clicks the ◀️ button the previous difference is highlighted.
Local search

- Local search is performed in the text of the currently opened document. When the user enters search text in the local search bar and presses the “Enter” button, the occurrences in the text are highlighted. The user has to press one of the buttons ◄ or ► so that the previous, respectively the next occurrence of the search string is displayed.

Document text

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,
Having regard to the Treaty on the Functioning of the European Union, and in particular Article 347 thereof,
Having regard to the proposal from the European Commission,
After consultation of the Steering group to the national parliaments,
Having regard to the opinion of the European Economic and Social Committee,12
Having regard to the opinion of the Committee of the Regions,13
Acting in accordance with the ordinary legislative procedure,11
Whereas:

(1) The Union is facing unprecedented challenges resulting from increasing pressures on energy imports and scarce energy resources, and increasing petrol prices. These challenges, like energy efficiency, are mutually linked and need to be addressed together. Energy efficiency is a key policy area to address these challenges. It improves the Union’s security of supply by reducing primary energy consumption. It increases the cost-efficiency of energy consumption. It supports the implementation of the “20/20/20” targets set by the European Council in June 2008 for an overall reduction of 20% in primary energy consumption and 20% in CO2 emissions by 2020 as compared to 1990 levels and a 20% increase in the share of renewable energy in the Union’s energy supply. It underlines the objectives of the Commission’s Action Plan for Energy Efficiency as well as the policies set out in the Strategic Energy Review. It is essential both to ensure energy security and to meet the targets set by the Kyoto Protocol and to ensure the Union’s competitiveness in the long run. In particular, energy efficiency is key to achieving the Union’s objectives of a 20% reduction in CO2 emissions, in 1990 levels, by 2020, and a 20% non-fossil share of energy by 2020.
References to a provision

When the user has opened a document of the type ‘Legislation’ icons indicating the existence of links to its provisions will appear next to those provisions which are referenced (cited) by other documents (e.g. court decisions).

Clicking on such an icon executes the “References to a specific provision” function. As a result on the left side of the screen a list with the documents referring to the chosen provision is displayed. The user can click on any document and list and to open it in a new browser tab.

Article 9

Public procurement and tenders

1. Where a product is covered by a delegated act, contracting authorities which conclude public works, supply or service contracts as referred to in Directive 2009/17/EC of the European Parliament and of the Council of 13 March 2009 on the promotion of the use of energy from renewable sources in the internal energy market, in the implementation of the procedures for the award of public works contracts, public supply contracts and public service contracts [1], which are not excluded by virtue of Article 12 of the present Directive, shall ensure that the criteria adopted for the selection of the tenderer, in particular those used to determine whether products meet the criteria of having the highest performance levels and belonging to the highest efficiency class, Member States may also require the contracting authorities to procure only products fulfilling these criteria. Member States may make the application of those criteria subject to cost-effectiveness, environmental feasibility and technical suitability and sufficient competition.

2. Paragraph 1 shall apply to contracts having a value equal to or greater than the thresholds laid down in Article 7 of Directive 2004/8/EC.

3. Where Member States provide any incentives for a product covered by a delegated act, they shall aim at the highest performance levels including the highest class of energy efficiency laid down in the applicable delegated acts: taxation and financial measures do not constitute incentives for the purpose of this Directive.

4. Where Member States provide incentives for products, both for end-users using highly efficient products and for industries which promote and utilise such products, they shall ensure the performance levels, in terms of classes as defined in the applicable delegated act, except those they impose higher performance levels than the threshold for the highest energy efficiency class in the delegated act.

Member States may impose higher performance levels than the threshold for the highest energy efficiency class on the delegated act.

Delegated acts

1. The Commission shall lay down details relating to the label and the file by means of delegated acts in accordance with Articles 11 to 13, relating to each type of attribute for each directive referred to above. Article

References to other documents

References (links) to other documents

The titles of all documents cited by the currently viewed one are displayed as active links in a blue color and underlined. When the mouse pointer is positioned over the link it displays the title of the referred document as a tooltip.

1. Council Directive 92/31/EEC of 22 September 1992 on the indication by labelling and standard product information of the consumption of energy and other resources by household appliances [2], has been substantially amended [3]. Since we refer only to the original text of the Directive, it should be read in the interest of clarity.

2. The scope of Directive 2009/17/EC is intended to household appliances. The Commission Communication of 17 July 2008 on the Sustainable Consumption and Production and Sustainable Industrial Policy Action Plan has shown that the extension of the scope of Directive 2009/17/EC, to energy-related products which have a significant direct or indirect impact on energy consumption during their use could reinforce potential synergies between existing legislative measures and in particular Directive 2009/17/EC of the European Parliament and of the Council of 13 March 2009 establishing a framework for the setting of ecodesign requirements for energy-related products [3]. This Directive should play a preparative role for application of Directive 2009/17/EC.
Using this function opens the document text into a new browser window and initiates the printing dialog.
5 Appendix III: Slide tutorial for EULinksChecker add-in

**EULinksChecker**

- LinksChecker is based on the add-in tool to be integrated in the Microsoft Word editor and Internet Explorer.
- EULinksChecker is installed as an add-in (plug-in) in the host application and users can access it where normally they access all the add-ins (plug-ins).
- In MS Word EULinksChecker is appearing as a menu and tool tab on the Ribbon floating pane.
Functions - Check for links

When user calls the function "Check for links" the following steps are performed:

- A confirmation is required
- The add-in recognises and highlights the legal citations to EU law


Opinion of Advocate General Bot delivered on 15 February 2007

Show hint on mouse over

- 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 already recognised and highlighted with "Check for links" function. In this case the full title text of the cited act or the text of the referred legal provision appears in the hint shown.

Under the rule the defendant may be made liable in the place of performance of the contract, the contract not being, in the ordinary course, a service contract. In order to enforce the primary obligation, the rules of jurisdiction and their predictability, Regulation No 44/2001, contains the criterion of place of performance.

First of all, it should be noted that the wording of the first indent of Article 5(1)(b) of Regulation No 44/2001 does not by itself enable the court to come to the question referred since it does not refer expressly to a case such as the present one.

Consequently, the first indent of Regulation No 44/2001 must be interpreted in the light of the origins, object of the Regulation (see, to that effect, Case C-103/05 Reich Montage [2006] ECR I-6692, paragraph 29, and Case C-283/05 ASML [2006] ECR I-00000, paragraph 22).
Click on link

- EU Links Checker add-in captures the “click on link” function of the host application when the user clicks on a legal citation 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 document in a public source, such as EUR-Lex portal.

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 which is already recognised and highlighted (or by right-click mouse operation after the user has positioned the mouse cursor within the text). When selecting the function, a submenu with following functions appears:
  - All documents
  - EU Legislation
  - EU Case Law
  - National Legislation
  - National Case Law.

  The reason for the rule of specific performance relating to a contract for the performance of an obligation in question, since that contract has a close link to the contract of sale of goods, is that it aims to reinforce the primary object of Regulation No. 4/2009, namely predictability.

- By choosing one of these options the user receives a list of documents from the respective kind referring to the same act or provision. The “All documents” option returns a list of documents from all listed kinds. The list is opened in a new window of the default browser.
List of documents referring to an act / provision

The user receives a list of documents from the respective kind referring to the same act or provision provided by a web service of the EU Cases Linking Platform. By clicking on the title of a document from the list, the document will be opened in a new browser window by the service of the EU Cases Linking Platform. By clicking on the source, the document will be opened in the official public portal where it is published (e.g. EUR-Lex).
The “insertlink” function allows the user to insert a hyperlink to any web site or internet resource.
Change interface language

- The user can change the interface language. To this end it should press the button “Settings” from the EULinksChecker toolbar of the Ribbon. The add-in interface is available in 5 languages: English, German, French, Italian and Bulgarian.
## 6 Appendix IV: Test cases

### TEST CASE 01

**Tested component/functionality:** Folders

**Action:** Browsing (selection) in hierarchical structures.

**Test Scenario:**
The tester finds and opens a given document (legislative or judicial) using the hierarchical browsing structures on the left side of the screen.

**Basic workflow:**
The tester:
- Opens each of the levels of the hierarchical structure to a level that displays a list of documents
- Checks the relevance of the list of documents in relation to the opened structure
- Opens a final document from the list

**Expected result:**
If the application runs properly, clicking on a folder from the hierarchical structures leads to the visualisation of a list of documents on the right side of the screen. The listed documents are relevant to the opened folder. For example, when the folder Consumer Cases - Austria is being opened then the list of documents will contain judgments of Austrian courts.

**Output of the test:**

<table>
<thead>
<tr>
<th>Does it differ from the expected result?</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
</table>

**Short comment on the differences.**

*To be completed only in cases of divergences between the expected and received result.*
<table>
<thead>
<tr>
<th>TEST CASE 02</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tested component/functionality:</strong></td>
</tr>
</tbody>
</table>

**Action:**
The simple search function allows the user to perform quick searches by entering a search query in the search bar and pressing the search button.

**Test scenario:**
The tester performs a sequence of searches of documents that contain specific words or expressions. Checks the list of results and opens documents found.

**Basic workflow:**

1. The tester opens a document from the application and copies a given word from the text. It then puts the word in the search bar and starts a search.
   1.1. Checks the relevance of the list of documents with respect to the specified search.
   1.2. Opens several documents from the list and verifies the relevance of the selected word with respect to the identified text results.
2. The tester opens a document from the application and copies a text expression of at least two but no more than five words from the text. It then puts the word in the search bar and starts a search.
   2.1. Opens several document from the list and verifies the relevance of the selected word with respect to the identified text results.
3. The tester repeats this sequence of actions in each of the interface languages: English, German, Bulgarian, French and Italian.
4. The tester selects a document and marks an expression that contains more than 10 words. It puts the word in the search bar and starts a search.
   4.1. Checks the relevance of the list of documents with respect to the specified search.
   4.2. Opens several documents from the list and verifies the relevance of the selected word with respect to the identified text results.

**Expected result:**

If the application works correctly the search should last no more than 5 seconds until the visualisation of the results list.
The list should not contain documents which are manifestly irrelevant to the search.
The documents that are open should contain the search term or phrase and they should be marked.

When performing a search which includes more than 10 words, the application
should run normally and should neither delay the work nor display error messages.

Output of the test:

<table>
<thead>
<tr>
<th>Does it differ from the expected result?</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short comment on the differences.</td>
<td>* To be completed only in cases of divergences between the expected and received result.</td>
<td></td>
</tr>
</tbody>
</table>

TEST CASE 03

Tested component/functionality: Advanced search – cases

Action:
The ‘Search cases’ advanced search dialog allows the user to enter a search query in the search bar and simultaneously to define one or more search criteria for more precise searches in case law.

Test scenario:
The tester performs a series of searches of documents from "case law" dialog that contain specific words or text expressions. The search sets various "positive" and "negative" options to document search conditions. The tester checks the list of results and opens the documents found.

Basic workflow:
The tester selects and opens a given case law document – one from each of the interface languages (English, Bulgarian, German, French, Italian).

- Each of the documents contains data that must be used during the search.
- The tester opens the option "Advanced search - Search cases".
- The tester copies a word or expression from any case law document. The tester should strive for the chosen words or expressions to be sufficiently specific for this decision.
- With the selected expression the tester performs a search by changing each of the options in the advanced search with positive or negative condition for chosen document.

Example: The chosen judgment is from 2010. The option "Period" in the
search panel should on the one hand include this year (positive condition) and on the other hand exclude this year from the search panel (negative condition).

or

The judgment is rendered by the Conseil d'Etat of France. Then in the option "Court" this court is being chosen (positive condition) and in the other case this court is being omitted and a different court is chosen (negative condition).

- The tester repeats these checks for each of the options in the dialog "Advanced search – Search cases" by choosing court decisions in all languages.
- The tester verifies with each search query whether the respective document is in the result list in case of a positive condition or it is excluded from the result list in case of a negative condition.
- The tester opens the requested document from the result list and the other documents (if any).
- The tester checks the relevance of the document(s) to the search query.

<table>
<thead>
<tr>
<th>Expected result:</th>
</tr>
</thead>
<tbody>
<tr>
<td>If the application works properly, under the options with &quot;positive condition&quot; it is expected that the decision, which the search expression was taken from, is in the result list. When opening the decision a normal document visualisation follows while the search strings are clearly marked for the user. If more than one document/decision is being found the resulting list should be relevant to both the search query as well as to the set of positive and negative conditions.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Output of the test:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does it differ from the expected result?</td>
</tr>
<tr>
<td>Short comment on the differences.</td>
</tr>
</tbody>
</table>
## TEST CASE 04

### Tested component/functionality:

Advanced search – legislation

### Action:

The ‘Search legislation’ advanced search dialog allows the user to enter a search query in the search bar and simultaneously to define one or more search criteria for more precise searches in legislation.

### Test Scenario:

The tester performs sequence of steps for defining a complex search query for legislative acts, which contains separate words or text expressions and a number of additional search criteria. During the search tests different "positive" and "negative" search options are applied. The tester checks the list with results and opens the found documents.

### Basic workflow:

The tester chooses and opens a legislative act of each EU Member State and one from EU legislation.

- Each of these documents contains data which should be used during the search.
- The tester opens the dialog Advanced Search – Search legislation.
- The tester copies a separate word or an expression from each legislative document. The tester should ensure that the selected words or expressions are document specific enough.
- With the chosen expression the tester defines search queries by changing each of the options of the advanced search dialog with positive or negative condition with respect to the searched document. 
  
  **Example:** The act was published on 11.05.2012. The search option in the first case should include this date (positive condition) and in the other case it should exclude this date from the search (negative condition) or
  
  When choosing a French legislative act, in the option Jurisdiction the tester points to France (positive condition) and in the other case a different jurisdiction is being marked (negative condition).

- The tester repeats this check for each of the options of the dialog Advanced Search – Search legislation for each of the selected documents.
- After each search the tester checks whether the requested document is in the resulting list and corresponds to the positive condition or the negative condition.
- The tester opens the requested document from the resulting list as well as any other document (if any).
- The tester checks the relevance of the document in accordance with the performed search.

### Expected result:
During the work process involving a positive conditions it is expected that the document, from which the searched expression derives, is in the resulting list.

When opening the decision a normal document visualisation follows while the search strings are clearly marked for the user.

If more than one document is found, the resulting list should be relevant to the performed search as well as to the respective positive and negative conditions.

In case another document from the list is being opened it should relate to the search – it should contain the searched words and should not contradict the requested conditions from the search options.

### Output of the test.

<table>
<thead>
<tr>
<th>Does it differ from the expected result?</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short comment on the differences.</td>
<td>* To be completed only in cases of divergences between the expected and received result.</td>
<td></td>
</tr>
</tbody>
</table>

### TEST CASE 05

**Tested component/functionality:**

Documents list – sorting and paging

**Action:**

The Documents list component displays on the right side of the screen a list of documents contained in a folder or such that meet the search query criteria.

**Test Scenario:**

The tester creates a documents list in one of the following ways:
- By browsing folders contents – when opening a folder
- By executing search queries
- By executing the Recent documents command.

It manipulates the list by creating different options for classification.

**Basic workflow:**

- The tester browses the folders for each of the main categories on the left side of the screen – Consumer Legislation, Consumer Cases, Legal Doctrine Articles.
- For each folder the tester receives list of documents on the right side of the screen.
• The tester manipulates each of those lists by doing the following actions:

  **Sorting:**
  Order by which the sorting is done:
  - Alphabetically – ordered by document title
  - Date – ordered by the date of the document.
  Direction of the sorting:
  - Ascending
  - Descending.
  After each change the tester checks whether the list has been reordered according to the sorting criteria and opens a random document from the list.

  The tester performs with each list the following actions:

  **Paging:**
  - Click on a specific page number and open this page
  - Go to the first page – by clicking the leftmost button
  - Go to the last page – by clicking the rightmost button.

• The tester opens a document from the application and copies a random word from the text. It places the word in the search bar and starts the search.
• The tester manipulates the received results list by performing the following actions:

  **Sorting:**
  Order by which the sorting is done:
  - Relevance – ordered by the relevance to the search query (e.g. documents which contain the search word in the title are more relevant)
  - Alphabetically – ordered by document title
  - Date – ordered by the date of the document.
  Direction of the sorting:
  - Ascending
  - Descending.
  After each change the tester checks whether the list has been reordered according to the sorting criteria and opens a random document from the list.

  The tester performs with each list the following actions:

  **Paging:**
  - Click on a specific page number and open this page
  - Go to the first page – by clicking the leftmost button
  - Go to the last page – by clicking the rightmost button.

• The tester chooses the functionality Recent Documents and receives a list of documents.
• The tester manipulates the list by performing the following actions:
**Sorting:**
Order by which the sorting is done:
- Alphabetically – ordered by document title
- Date – ordered by the date of the document.

Direction of the sorting:
- Ascending
- Descending.

After each change the tester checks whether the list has been reordered according to the sorting criteria and opens a random document from the list.

The tester performs with each list the following actions:

**Paging:**
- Click on a specific page number and open this page
- Go to the first page – by clicking the leftmost button
- Go to the last page – by clicking the rightmost button.

<table>
<thead>
<tr>
<th>Expected result:</th>
</tr>
</thead>
<tbody>
<tr>
<td>The received lists of documents should be visualised without delay and without an obvious lack of titles or document icons.</td>
</tr>
<tr>
<td>In case the documents list contains different types of documents they should appear with different icons which indicate the type of the document (e.g. legislation or case law).</td>
</tr>
<tr>
<td>In manipulating the lists it is expected that they correspond to the required search. It is expected that the sorting of documents be the same for the whole list of documents and not only for a separate page. For instance, if the resulting list is more than a page long and is sorted by date, the documents from the whole list should be sorted by dates.</td>
</tr>
<tr>
<td>It is expected that the paging will work in accordance with the choice of the tester – to indicate respectively the first, the last or the chosen page in question.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Output of the test:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does it differ from the expected result?</td>
</tr>
<tr>
<td>Short comment on the differences.</td>
</tr>
</tbody>
</table>
TEST CASE 06

Tested component/functionality:
Documents list – export

Action:
Currently viewed list of documents can be exported in several formats and can be printed.

Test Scenario:
The tester creates a documents list in one of the following ways:
- By browsing folders contents – when opening a folder
- By executing search queries
- By executing the Recent documents command.

The tester exports the received documents in the list into different formats – PDF, RTF, CSV.

Basic workflow:
The tester opens a folder on the left side of the screen.
- It receives a list of documents in the right side of the screen.
- It selects several documents from the list and chooses Export into PDF or Export into RTF.
- It saves the documents on its PC, opens each of the exported documents and checks whether their text has been exported correctly in the desired file format.

The tester performs the search on the basis of a keyword or an expression.
- It receives a list of documents in the right side of the screen.
- It selects several documents from the list and chooses Export into PDF or Export into RTF.
- It saves the documents on its PC, opens each of the exported documents and checks whether their text has been exported correctly in the desired file format.

The tester chooses the functionality Recent Documents and receives a list of documents.
- It receives a list of documents in the right side of the screen.
- It selects several documents from the list and chooses Export into PDF or Export into RTF.
- It saves the documents on its PC, opens each of the exported documents and checks whether their text has been exported correctly in the desired file format.

Expected result:
The execution of any of these functions creates an archive file in zip format
containing the files of the exported documents in the chosen format and delivers it for download to the user's browser.

The received archive file should contain all the documents chosen for export into the desired file format – RTF or PDF.

**Output of the test:**

<table>
<thead>
<tr>
<th>Does it differ from the expected result?</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short comment on the differences.</td>
<td><em>To be completed only in cases of divergences between the expected and received result.</em></td>
<td></td>
</tr>
</tbody>
</table>

**TEST CASE 07**

**Tested component/functionality:**

Document text – structure and versions

**Action:**

Work with an open document, navigation by using the document structure and use of historic (point-in-time) versions.

**Test Scenario:**

Opening of a specific document (legislative or judicial act). Manipulating the navigation list with its structural elements and navigating through different parts of the document. Opening of the list with historic versions of the document (if there are such) and comparison of the texts of two versions.

**Basic workflow:**

The tester opens several documents from the Consumer Legislation in sequence and several documents from Consumer Cases.

- It checks for compatibility between the structure of the document on the left part of the screen and its structural parts in the text.
- It navigates through the document by using the elements from the navigation list pointing at its structure and makes sure there is correspondence between the elements in the navigation list and the structural parts of the document.

The tester opens several legislative documents with historic versions.

- It marks two consequent versions for comparison and starts the
"Compare" action.
- It checks the text of the compared versions and the differences in blue and red.
- It saves the text with the differences between the compared versions and after that checks each historic version separately in order to establish the accuracy of the comparison.
- The tester marks two (non-consequent) versions of the document and compares again. Then it checks the text of the compared versions and the differences in blue and red.
- It saves the text with the differences between the compared versions and after that checks each historic version separately in order to establish the accuracy of the comparison.

**Expected result:**

In case of a correct action of the application the list with structural elements on the left side of the screen will correspond to the structural elements of the text of the document. This hierarchical elements in the list could be expanded and by clicking on a given element from the navigation list the text of the document should be positioned on this element.

In comparing two historic versions of the document the text which is added in the newer version should be displayed in blue and the text which is repealed (deleted) in the newer version and remains only in the older version should be in red. The rest of the text which is the same in both versions should remain in black colour.

**Output of the test:**

<table>
<thead>
<tr>
<th>Does it differ from the expected result?</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short comment on the differences.</td>
<td>* To be completed only in cases of divergences between the expected and received result.</td>
<td></td>
</tr>
</tbody>
</table>

**TEST CASE 08**

**Tested component/functionality:** Document text – export and print

**Action:** Opening of a document, export of the text into different file formats – PDF and
The text of an open document can be printed by the user.

**Test Scenario:**

The tester checks the proper functioning of the functionalities by opening documents, exporting them into other file formats and printing them.

**Basic workflow:**

- The tester opens several documents from Consumer Legislation folder and several documents from Consumer Cases folder
- Each of the documents should then be exported into PDF and RTF format.
- The tester compares each of the exported files with the text of the document and looks for differences.
- The tester prints each of the open documents.
- It checks each separate document and looks for differences.

**Expected result:**

If the application runs properly then the whole document text should be transferred into the given file format without any complications.

In case of proper operation with the functionality PRINT the full document text should be printed without any complications.

**Output of the test:**

<table>
<thead>
<tr>
<th>Does it differ from the expected result?</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short comment on the differences.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* To be completed only in cases of divergences between the expected and received result.

**TEST CASE 09**

**Tested component/functionality:**

Document text - links

**Action:**

Opening a document and use of the different functionalities based on links
(references, citations) between legal documents – clicking on a link and opening of the referred document, receiving a list of all documents referred by the open document and receiving a list of all referring documents to the open document or a chosen provision/paragraph of this document.

**Test Scenario:**

Several legislative or judicial documents are opened and the links to other documents within their text are clicked. The options References to other documents and References from other documents are chosen and the resulting lists of documents are checked for relevance. Then links from other documents to a specific provision/paragraph are searched and identified by the icons in front of the referred provision/paragraph. A list with the referring documents is received by clicking the icon.

**Basic workflow:**

The tester opens in sequence several legislative or judicial documents.

- For each document the option References to other documents is being identified and then the relevance of the received list is being checked.
- For each document the option References from other documents is being identified and then the relevance of the received list is checked.
- For each document the inline links (references, citations) to other documents are being identified, the referred documents are opened and the correctness of the link is checked.
- In each document provisions/paragraphs with icons indicating the existence of references from other documents to it are identified, the icons are clicked and lists with the referring documents are received. The tester checks the relevance of the received lists.

**Expected result:**

In case of proper and accurate work with each of the functionalities for references the relevant cited document should be opened after clicking the link or a list with relevant documents which refer to the document or to which the document refers should be received.

**Output of the test:**

<table>
<thead>
<tr>
<th>Does it differ from the expected result?</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short comment on the differences.</td>
<td></td>
<td>* To be completed only in cases of divergences between the expected and received result.</td>
</tr>
</tbody>
</table>
# Appendix V: Use cases

## USE CASE 01

### Prepayment of loan

There is a dispute between a creditor and a consumer concerning a consumer credit contract. The consumer pays in advance. However, the creditor requires additional payments as compensation for additional costs related to early repayment. The consumer refuses to pay the additional compensation because these costs are not explicitly specified in the contract.

### Action

The user works with the ConsumerCases or EULinksChecker applications to find the relevant EU and/or national legislation and case law.

1. **ConsumerCases application**
   
   The user performs consequent searches by using one of the functions listed below or any possible combination of them:
   
   - Browsing the folders in Consumer Legislation and Consumer Cases rubrics and the list of documents in these folders
   - Simple search by entering keyword(s) or expression in the search bar and filtering and sorting the results list after that; opening, viewing and exporting/printing the relevant documents or saving them in My documents list
   - Advanced search by entering keyword(s) or expression in the search bar and specifying additional search criteria; filtering and sorting the results list after that; opening, viewing and exporting/printing the relevant documents or saving them in My documents list
   - Using inline links, References to other documents and References from other documents functions to find relevant documents referring to a specific document or a legal provision.

2. **EULinksChecker add-in**

   The user opens in its Internet Explorer browser or MS Word editor a legal text containing references to EU consumer law and presses the “Check for links” button. After the text is being supplied with links it uses the right-click content menu for each relevant link in order to require a list with the EU and national legislative and judicial acts referring to the specific document/provision specified by the link. After obtaining the list(s) the user opens documents from the list to study their content and selects the ones relevant to the case. Where an opened document is relevant, the user can press again the “Check for links” button and repeat the above described actions.

### General assessment and evaluation of the work with the application:

<table>
<thead>
<tr>
<th>Does the application help you to solve your case?</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluate the results:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• unsatisfactory</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comment:
USE CASE 02

Misleading advertising
The claim is based on misleading advertising for a consumer credit. An advertising brochure which misleads the consumer about the terms of the proposed loan is distributed. The consumer claims that there is a discrepancy between the content of the advertisement and the due content by law.

Action:
The user performs the actions described in Use Case 01.

General assessment and evaluation of the work with the application:

Does the application help you solve your case? YES NO

Evaluate results in the following scale:

- unsatisfactory
- satisfactory
- completely satisfactory

General comments regarding problems or suggestions for improvements:
## USE CASE 03

### Unfair general terms

There is a dispute concerning a contract for the supply of electricity where the consumer contests the amount of the due monthly payment. The consumer refuses to pay the price because it exceeds the consumed electricity. The contract is concluded according to the general terms of the supplier. The consumer claims to be in an unfair position because of clauses in the general terms of the supplier of electricity, which are manifestly unfair.

**Action:**

The user performs the actions described in Use Case 01.

**General assessment and evaluation of the work with the application:**

<table>
<thead>
<tr>
<th>Does the application help you solve your case?</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluate results in the following scale:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• unsatisfactory</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• satisfactory</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• completely satisfactory</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**General comments regarding problems or suggestions for improvements:**

---

## USE CASE 04

A contract for the supply of telecommunication services on the phone is concluded. When receiving the first bill for payment according to the contract, the consumer decides to terminate it because s/he has not understood the terms of the contract and s/he has been misled on the phone. However, the service provider argues that the written contract has been sent to the consumer and s/he has signed it.

**Action:**

The user performs the actions described in Use Case 01.

**General assessment and evaluation of the work with the application:**
**USE CASE 05**

**Defective product**
A consumer purchases shoes. Three weeks later the consumer discovers that the purchased shoes have defects that make them completely unfit for use. At the same time the consumer insists that the product has not been subjected to any extreme walks. The product is under warranty but the dealer refuses to replace it with the argument that there are no longer shoes of the same type and a new delivery cannot be made. The merchant refuses to return the price which has been already paid but he offers as compensation to the consumer to give him other shoes which cost the same or higher price in which case the difference should be paid. Nevertheless the consumer wants his money back.

**Action:**
The user performs the actions described in Use Case 01.

**General assessment and evaluation of the work with the application:**

<table>
<thead>
<tr>
<th>Does the application help you solve your case?</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluate results in the following scale:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• unsatisfactory</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• satisfactory</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• completely satisfactory</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comment:** No
A French national lives and works in Bulgaria as a CEO of a French food company. He decides to make a reservation for a vacation for his family and himself in a hotel in France. The consumer submits an electronic enquiry to the hotel. The hotel answers that he can make a reservation under favourable conditions when the full price of the services is paid in advance. When he returns in Bulgaria, the consumer decides to claim damages for non-performance against the hotel.

**Action:**
The user performs the actions described in Use Case 01.

**General assessment and evaluation of the work with the application.**

<table>
<thead>
<tr>
<th>Does the application help you solve your case?</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
</table>

Evaluate results in the following scale:

- unsatisfactory
- satisfactory
- completely satisfactory

<table>
<thead>
<tr>
<th></th>
<th>Comment:</th>
<th></th>
</tr>
</thead>
</table>

**General comments regarding problems or suggestions for improvements:**

---

**USE CASE 07**

A universal mortgage loan contract is concluded between a bank and a borrower for the amount of € 25,000 where the contract is secured by a mortgage on real estate. Due to the
non-performance of contractual obligations the bank announced that all payments under the contract are immediately payable because of acceleration.

The consumer argues that there are many unfair clauses and the contract is void. There is a possibility for unilateral adjustment of interest by the bank without the opportunity for negotiation. Also there is a possibility for unilateral amendment of the due monthly payment, the amount of interest and the fees under the contract without that being bound by clear and predefined criteria describing the circumstances in which the instalments, interest and fees can vary and what their maximum amount could be.

<table>
<thead>
<tr>
<th>Action:</th>
</tr>
</thead>
<tbody>
<tr>
<td>The user performs the actions described in Use Case 01.</td>
</tr>
</tbody>
</table>

**General assessment and evaluation of the work with the application:**

<table>
<thead>
<tr>
<th>Does the application help you solve your case?</th>
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<td></td>
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<tr>
<td>• satisfactory</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• completely satisfactory</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**General comments regarding problems or suggestions for improvements:**