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Publications Office

Web Service User Manual

Subject	Web services user manual
Version	2.00
Release Date	24/04/2012
Filename	ELX-WS-Web Service User Manual-v2.00.doc
Document Reference	ELX-WS-Web Service User Manual

DOCUMENT HISTORY

DOCUMENT HISTORY		
Version	Release Date	Description
0.01	24/04/2012	Initial draft
1.00	26/06/2012	Submitted for Approval
1.01	11/12/2013	Review
2.00	10/03/2014	Queries review and added search restrictions section

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ABBREVIATIONS AND ACRONYMS

ABBREVIATIONS AND ACRONYMS	
Abbreviation	Meaning
WSDL	Web Services Description Language
XML	Extensible Markup Language
XSD	XML Schema
ECAS	European Citizen Action Service

Table 1: Abbreviations and Acronyms

DEFINITIONS	
Term	Meaning
CELLAR	The CELLAR can be seen as the content repository module. This application aims to store all content and metadata needed by the Publications Office and its applications.

Table 2: Definitions

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1 INTRODUCTION

1.1 PURPOSE OF THE DOCUMENT

The aim of this User Manual is to describe how to use the web service provided by the EUR-Lex 2012 system. This document may be used by all users interested in the usage of this web service.

1.2 SCOPE OF THE DOCUMENT

This User Manual refers to the EUR-Lex web services.

1.3 INTENDED AUDIENCE


The present document is intended to be read by the following people:

- EUR-Lex 2012 public users;

1.4 STRUCTURE OF THE DOCUMENT

The document is organised as follows:

- **Chapter 1 - Introduction** provides an overview of the purpose of this document, and the intended audience;
- **Chapter 2 - Registration** explains how the different functionalities related to web services that are accessible from the new EUR-Lex 2012 interface;
- **Chapter 3 - Use the web service** explains how to use the EUR-Lex 2012 web services with a free testing tool like *SOAPUI*;
- **Chapter 4 - Expert search syntax** explains the syntax of the expert search;

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2 REGISTRATION

The new EUR-Lex 2012 provides a web service opened to external user in order to search for legal content. It is a convenient way to perform search queries on the legal content of EUR-Lex without having to use the different search forms present on the website. The search results provided are contained in a structured XML compliant a specific schema definition.

In order to use the web service, the user must be registered in the new EUR-Lex and must subscribe to the web service.

2.1 WEB SERVICE REGISTRATION

The user can access the web services page using the link present in the right menu as shown on the next picture.

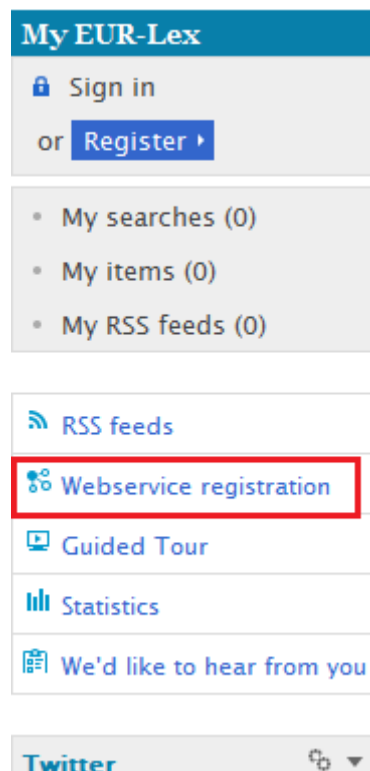



Figure 1: Link to the web service

The user has to register in order to have access to the service. An administrator will check the registration data and allow or forbid the use of the web services.

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The link to the registration form is available on the web service page when the user is not yet registered to the web service.

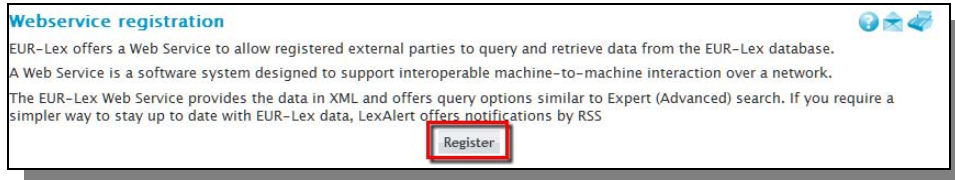


Figure 2: Link to register for the web services

Clicking on the *Register* button redirects the user to the registration form.

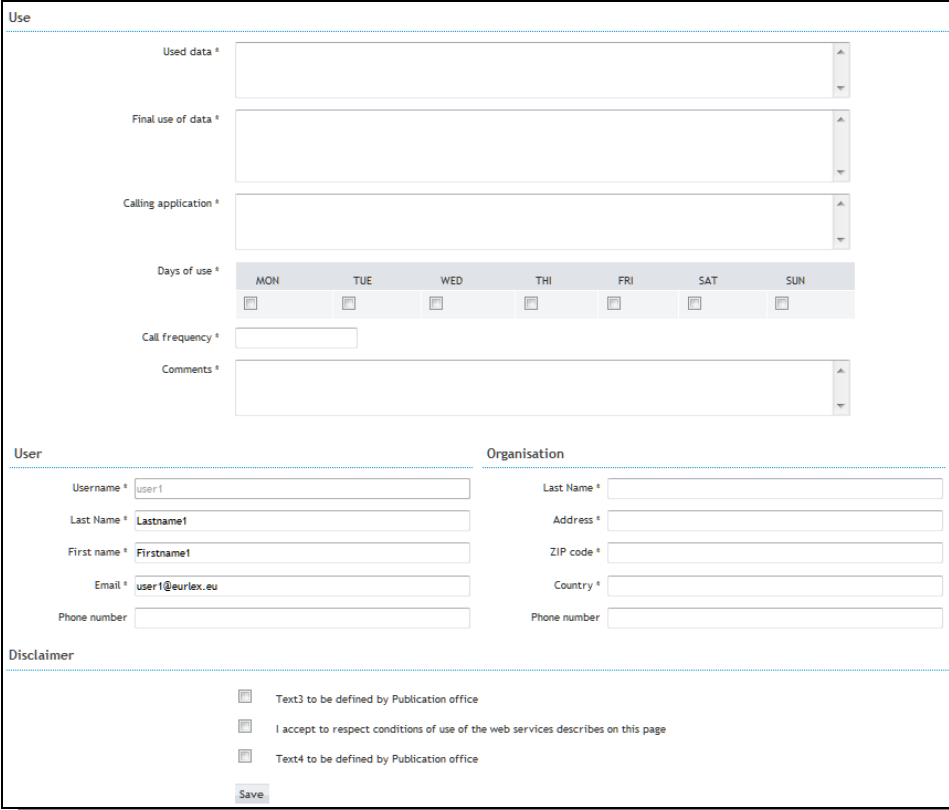



Figure 3: Web services registration form

The form contains the following fields:


EDITABLE FIELDS		
Field	Description	Mandatory
Used data	Description of the data that will be used in the scope of the utilisation of the web service.	Yes
Final use of data	The description of the data usage	Yes
Calling application	Description of the calling application	Yes
Days of use	Selection of the day of the week when the service will be used.	Yes

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	One check box by week day.	
Call frequency	The number of calls per day that is foreseen	Yes
Comments	Some additional comments	Yes
Username	The username of the user is prefilled and in a read-only mode.	N/A
First name	The first name of the applicant	Yes
Last name	The last name of the applicant	Yes
Phone number	The phone number of the applicant	No
Email address	The email address of the applicant	Yes
Name	The name of the organisation	Yes
Address	The address of the organisation	Yes
ZIP code	The ZIP code of the organisation	Yes
Country	The country of the organisation	Yes
Phone number	The phone number of the organisation	No
I accept the terms of usage	Indicates that the user accepts the terms of usage of the web service	Yes

Table 3: Editable fields for the web services demand

The demand is sent to the administrator after clicking on *Save*. The administrator checks regularly all the requests and accept or reject each of them. The user is informed by email about the details of the web service access.

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3 USE THE WEB SERVICE

This section describes how to use the web service; an example is provided below using SoapUI, an open source testing tool.

The query done with the web service must respect a particular syntax. The request that have to be provided is detailed in the next section.

Finally, it will describe the complete procedure, step by step, to perform a web service request using SoapUI on the EUR-Lex FrontOffice and also a simple and usual way.

3.1 ACCESS THE WEB SERVICES SPACE

3.1.1 VIEW THE WSDL

When the status of the user is granted, he is allowed to use the web service.




The screenshot shows the EUR-Lex website interface. At the top left is the EUR-Lex logo with the text 'Access to European Union law'. At the top right are links for 'About EUR-Lex' and 'Site'. Below the logo is a breadcrumb trail: 'EUROPA > EU law and publications > EUR-Lex > Webservice registration'. A navigation bar contains links for 'Home', 'Official Journal', 'EU law and related documents', 'National law', 'Legislative procedures', and 'More'. The main content area is titled 'Webservice registration' and contains the text: 'Your access to the webservice is active. You can use the webservice by using, for instance SoapUi.' Below this text is a list of links: 'View the WSDL' (highlighted with a red box), 'To increase your calls limit please follow the procedure.', 'Unsubscribe from the webservice', and 'Reset password and send it by email'.

Figure 4: Link to the WSDL of the web service

The user is able to download the WSDL of the web service to retrieve the information necessary to use it.

3.1.2 CHANGE THE LIMITS OF THE WEB SERVICE DEMAND

The number of calls that can be performed each day is limited. In order to change the limitations, the user can send a demand to increase or decrease the limitations for the web services demands. To achieve this, he needs to use the link shown on the next figure in order to see the procedure to apply:

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About EUR-Lex | Site

EUROPA > EU law and publications > EUR-Lex > Webservice registration

Home | Official Journal | EU law and related documents | National law | Legislative procedures | More

Webservice registration

Your access to the webservice is active.

You can use the webservice by using, for instance SoapUi.

- [View the WSDL](#)
- [To increase your calls limit please follow the procedure.](#)
- [Unsubscribe from the webservice](#)
- [Reset password and send it by email](#)

Figure 5: Link to the change the limitations of a web service demands

3.1.3 UNSUBSCRIBE FROM THE WEB SERVICE

If the user does not need to use the web services anymore, he can unsubscribe from the web services using the link shown on the next figure:



About EUR-Lex | Site

EUROPA > EU law and publications > EUR-Lex > Webservice registration

Home | Official Journal | EU law and related documents | National law | Legislative procedures | More

Webservice registration


Your access to the webservice is active.

You can use the webservice by using, for instance SoapUi.

- [View the WSDL](#)
- [To increase your calls limit please follow the procedure.](#)
- [Unsubscribe from the webservice](#)
- [Reset password and send it by email](#)

Figure 6: Link to unsubscribe from the web service

A form is displayed asking the user to give the reason of withdrawal.

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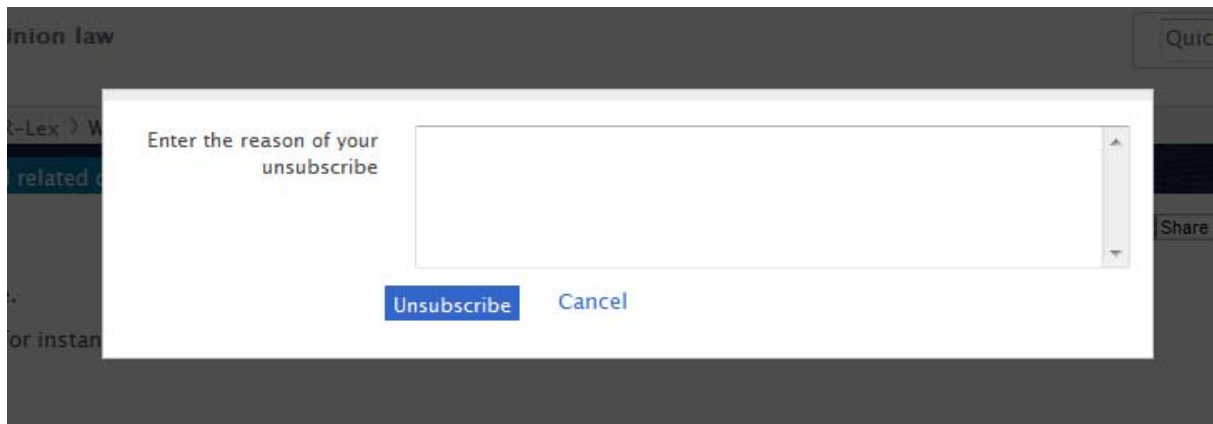


Figure 7: Field to enter the reason of withdrawal from the web services

The withdrawal reason is saved after clicking on *unsubscribe* and the access to the web service is closed.


3.1.4 RESET PASSWORD AND SEND IT BY EMAIL

If the user doesn't remember his password for the web service, he can ask to generate a new one by clicking on the following link:



Figure 8: Link to reset the password for the web service

Once the link clicked, an email is sent to the user with the newly generated password.

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3.2 XML INPUT

The input of the web service must respect the soap envelop structure. The soap envelop is composed of a *Header* and *Body* elements. The content of *Body* must respect an XSD defined by EUR-Lex. Moreover, the *Header* must contain information about security. The template to be used by the web service is the following:

```


<soap:Envelope xmlns:sear="http://eur-lex.europa.eu/search"
xmlns:soap="http://www.w3.org/2003/05/soap-envelope">
  <soap:Header>
    <wsse:Security soap:mustUnderstand="true" xmlns:wss="http://docs.oasis-
open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd">
      <wsse:UsernameToken wsu:Id="UsernameToken-3" xmlns:wsu="http://docs.oasis-
open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd">
        <wsse:Username>${EUR-Lex username}</wsse:Username>
        <wsse:Password Type="http://docs.oasis-open.org/wss/2004/01/oasis-200401-
wss-username-token-profile-1.0#PasswordText">${WS password}</wsse:Password>
      </wsse:UsernameToken>
    </wsse:Security>
  </soap:Header>
  <soap:Body>
    <sear:searchRequest>
      <sear:expertQuery>${expert query}</sear:expertQuery>
      <sear:page>${page}</sear:page>
      <sear:pageSize>${pageSize}</sear:pageSize>
      <sear:searchLanguage>${search language}</sear:searchLanguage>
    </sear:searchRequest>
  </soap:Body>
</soap:Envelope>

```

You can find below the description of each required field:

- `wsse:Username`: Username used by the user to log in EUR-Lex. This is provided by ECAS.
- `wsse:Password`: The password received by email once the user registration to the web services has been accepted by an administrator.
- `sear:expertQuery`: The query used by the search engine to retrieve documents. The following chapter explains the syntax of the expert search.
- `sear:page`: The page of the search results, as the system uses the pagination. For instance, the user is allowed to retrieve the 10 results of the second page. It corresponds to the documents from 10 to 20.
- `sear:pageSize`: The size of the page used in the pagination.
- `sear:searchLanguage`: The search language. When using a web service client, a list of value is provided for the search language.

All these fields are required to perform a query. It is really important to respect the defined namespaces.

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An error will be thrown if:

- One of the field value is missing;
- The user accessing web service is not granted by an administrator;
- The syntax of the expert query is invalid (see chapter **Expert search syntax**);
- The page size is greater than the defined limit size. By default, the maximum value is 100;
- The number of web service call during the current day is greater than the defined limit. The default value is 1000.

3.3 USE THE WEB SERVICE WITH *SOAPUI*

With an easy-to-use graphical interface, SoapUI allows you to easily and rapidly create and execute automated functional, regression, compliance, and load tests. It also allows the user to quickly test soap web service. The version of SOAPUI used for the elaboration of this document was 4.0.1.

You can freely download this software on the following website:

<http://sourceforge.net/projects/soapui/files/>


The next sections explain how to use *SOAPUI* to perform web service against the new EUR-Lex.

3.3.1 CREATE A NEW *SOAPUI* PROJECT

You can retrieve the URL of the WSDL via the Front Office interface, as described in the section 3.1.1.

Start SoapUI and create a new project: File -> New soapUI Project and enter the following parameter, as described on the Figure 9: New soapUi project:

- Project Name: whatever you want
- Initial WSDL/WADL: The URL retrieved via the Front Office interface (for instance <http://eurlex.europa.eu/eurlex-ws?wsdl>)
- Create Requests: checked

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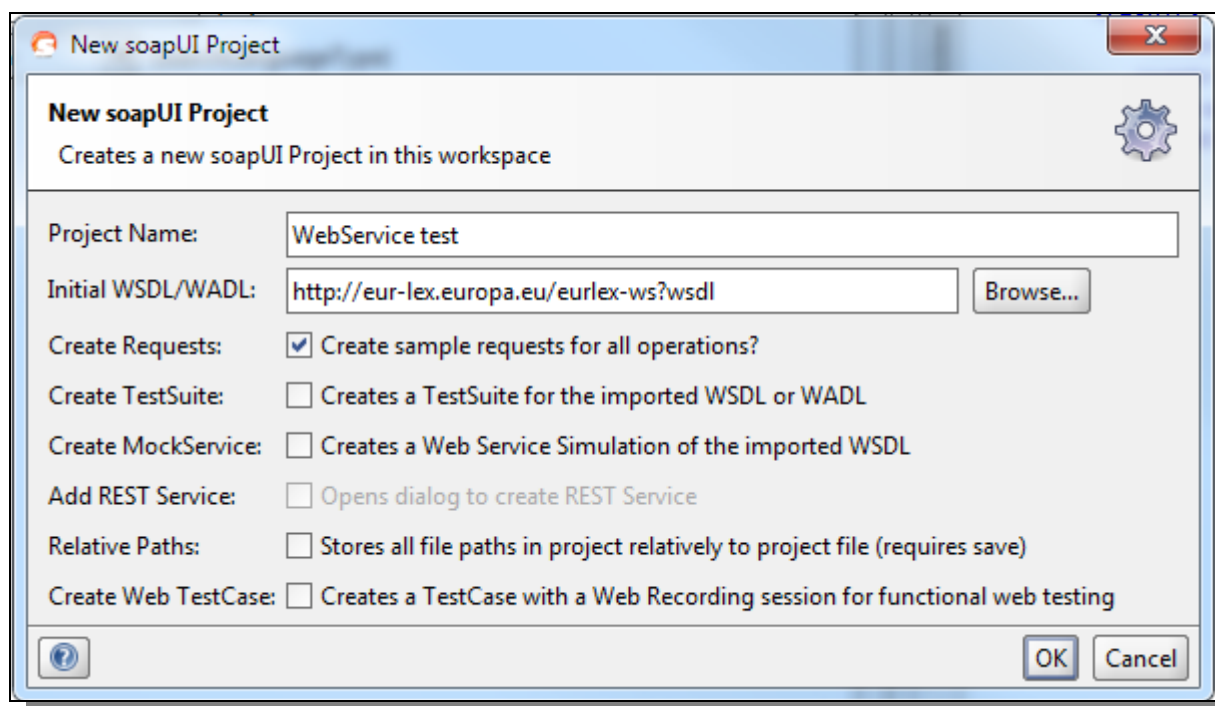



Figure 9: New soapUi project

3.3.2 CREATE A QUERY WITH SOAPUI

This will automatically create a sample request to be fulfilled. Then, navigate to the form view of the sample request and fill the form:

- *expertQuery*: the query you want to perform, in the expert syntax;
- *page*: the page you want to retrieve;
- *pageSize*: the number of results you want to retrieve in a page;
- *searchLanguage*: the search language.

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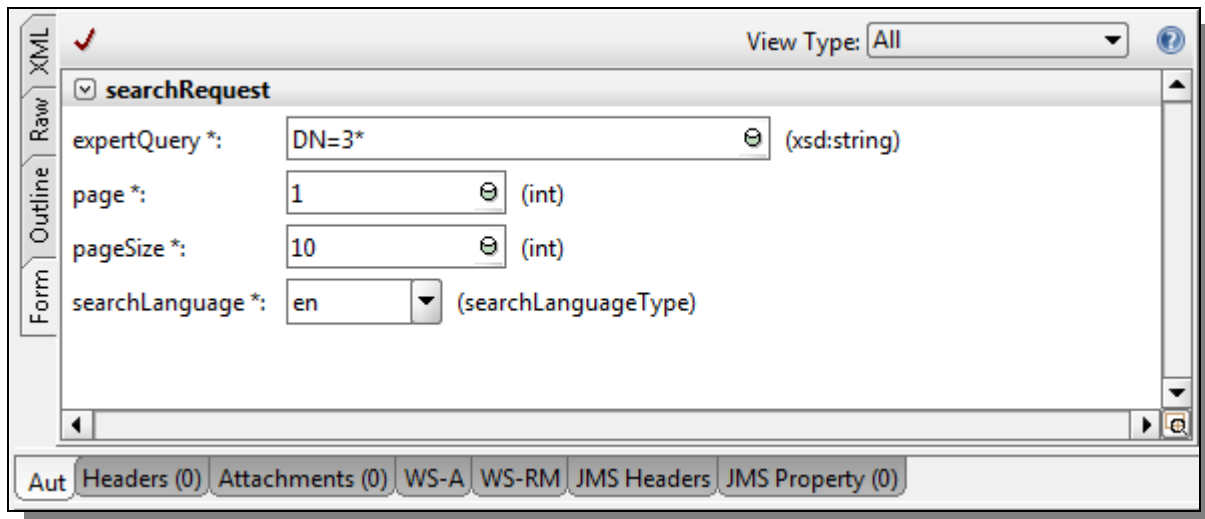


Figure 10: Web service form

These elements are described in the section **XML Input**.

Then, you need to add the authentication to the request. Click on the XML view of the request, and click on the *Aut* button (bottom left hand corner) and enter the following information in the form:

- *Username*: the username of the username registered to the Front Office web services
- *Password*: the password received when you registered to the Front Office web services

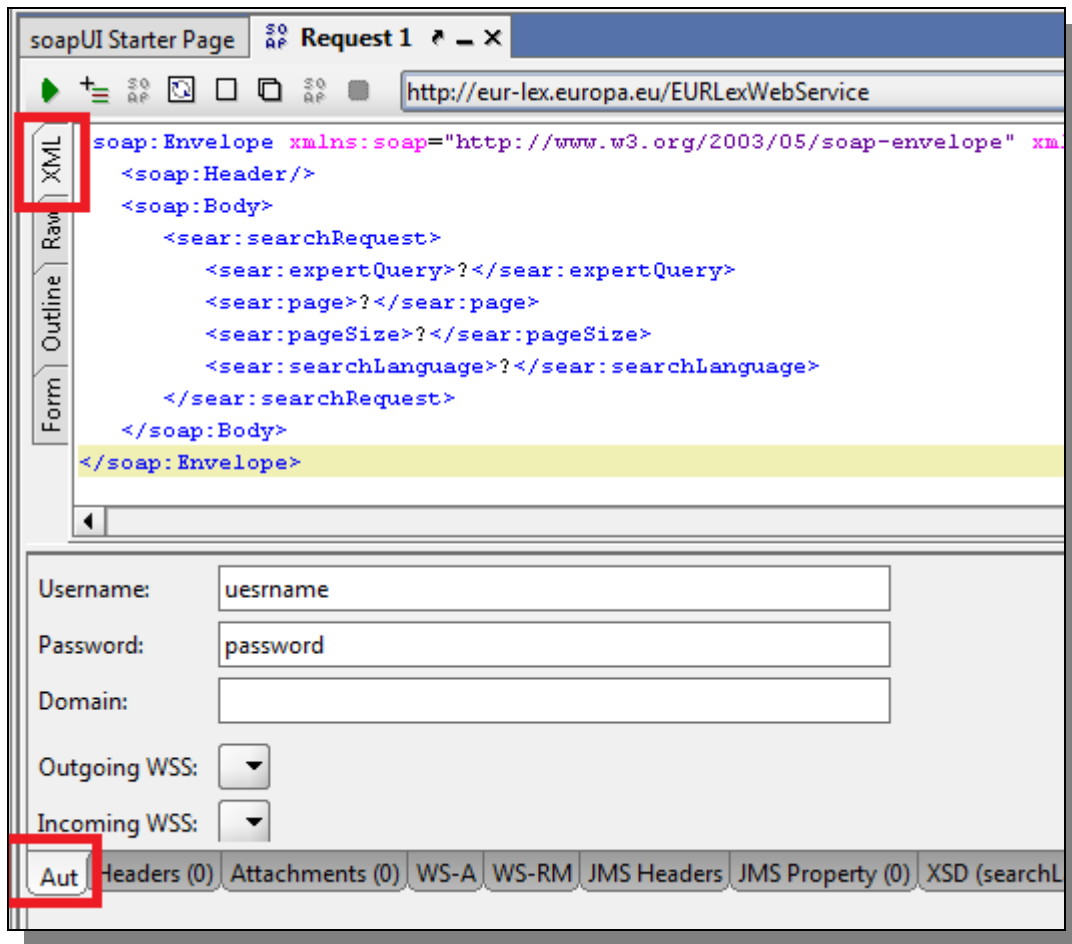



Figure 11: Authentication

Finally, right click in the XML view and click "Add WSS Username Token". Ensure that "PasswordText" is selected and click OK. The result is shown on the following figure. A username token has been added in the request headers.



Figure 12: Username Token element

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As you can see in the previous figure, the *username* and the *password* entered in the *Aut* field have been automatically added in the *Header*.

To perform the same query many times, you need to delete the lines with the xml elements `<wsse:Nonce>` and `<wsu:Created>`.

To start the request, click on  to retrieve the results.

If you have some difficulties to fill the web service request, you can retrieve the template to use to perform a web service query thanks to the FrontOffice web service template, as described in the section **XML result**.

The following figure shows you the result of a web service request:

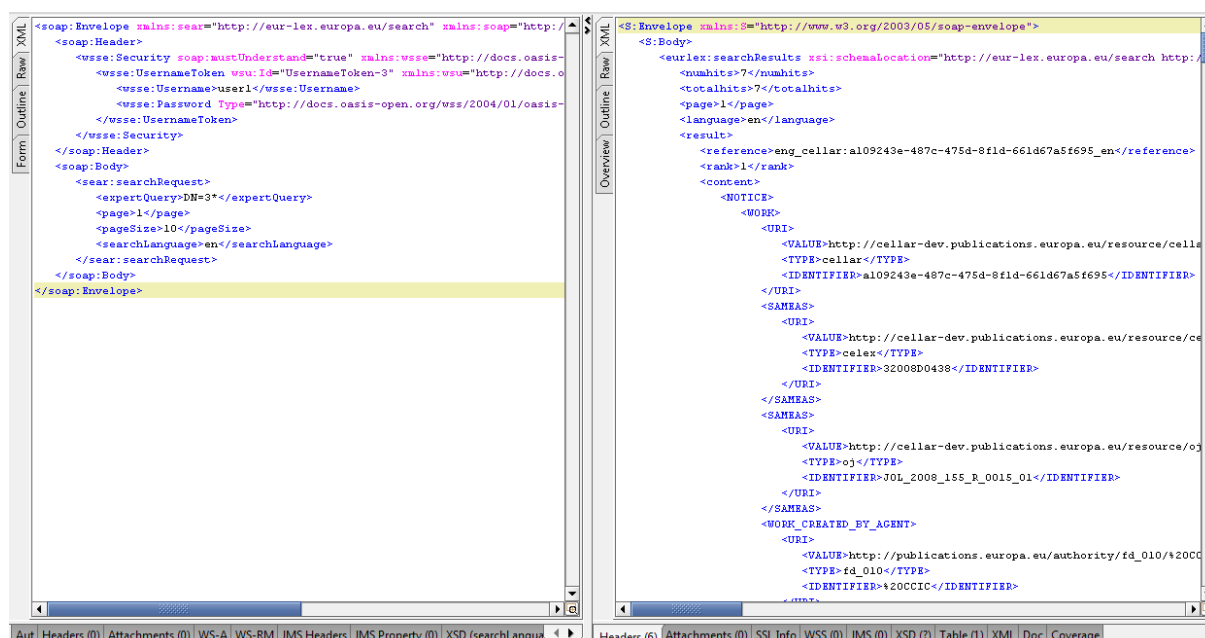



Figure 13: Results

3.4 XML RESULT

The result of the web service is a *Soap Envelope*. That envelop contains a *Body* element which contains XML elements that respect an XSD that can be retrieved from EUR-Lex.

The root element in the *Body* is the `searchResults` element. It contains:

- *numhits*: the number of results in the page;
- *totalhits*: the total number of results related to the query;
- *page*: the current page of results;

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- *language*: the search language;
- *result*: the element related to a result. This element contains:
 - *reference*: the CELLAR reference;
 - *rank*: the index of the document;
 - *document_link*: links to the manifestations of the document (at word, tiff, html or pdf format), if any manifestation of the document exist;
 - *content*: the metadata of the document;

You can find below a sample of the result.

```


<S:Envelope xmlns:S="http://www.w3.org/2003/05/soap-envelope">
  <S:Body>
    <searchResults xsi:schemaLocation="http://eur-lex.europa.eu/search
http://localhost:7001/eurlex-frontoffice/eurlex-ws?xsd=3" xmlns="http://eur-
lex.europa.eu/search" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
      <numhits>10</numhits>
      <totalhits>1946</totalhits>
      <page>1</page>
      <language>en</language>
      <result>
        <reference>eng_cellar:93836665-712f-4444-ale6-dadad5607e80_en</reference>
        <rank>1</rank>
        <content>
          <NOTICE>
            <EXPRESSION>
              <EXPRESSION_TITLE>
                <VALUE>Decision on the ...</VALUE>
              </EXPRESSION_TITLE>
              <EXPRESSION_USES_LANGUAGE>
                <URI>
                  <IDENTIFIER>ENG</IDENTIFIER>
                </URI>
              </EXPRESSION_USES_LANGUAGE>
            ...
          </NOTICE>
        </content>
      </result>
    </searchResults>
  </S:Body>
</S:Envelope>

```

The content element will contain some metadata of the document. The list of provided metadata depends on query:

- If the expert query contains a SELECT clause, the provided metadata will only be those present in the SELECT clause;
- If the expert query doesn't contain any SELECT clause, the list metadata provided will be the list defined in the default search profile of the user, in the EUR-Lex 2012 website.

To know the possibilities of the expert syntax, please refer to the section **Expert search syntax**.

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3.5 GET WEB SERVICE TEMPLATE

Getting the web service template is a very useful way to retrieve the web service request to be used to perform the same request that the one performed on the EUR-Lex website. It allows you to perform web service requests even if you don't know the expert query syntax.


Each user who has a web service status granted can get the web service template for every query he performs.

To get the web service template after a search, the user needs to click on the following icon:



Figure 14: Link to get the web service template

After clicking on the icon, a new window is displayed giving the request template. The user just needs to copy the provided XML and paste it in the XML view of the SOAPUI project created. Before launching the search in the WSDL, the user only needs to insert his password in the query.

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WebService template

Here is a web service template of your previous query. Just replace the password by the one you received after your web service registration.

```


<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns:sear="http://eur-lex.europa.eu/search">
  <soap:Header>
    <wsse:Security xmlns:wsse="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd"
      soap:mustUnderstand="true">
      <wsse:UsernameToken xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd"
        wsu:Id="UsernameToken-1">
        <wsse:Username>heneffem</wsse:Username>
        <wsse:Password Type="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-username-token-profile-
1.0#PasswordText">Your received password</wsse:Password>
      </wsse:UsernameToken>
    </wsse:Security>
  </soap:Header>
  <soap:Body>
    <sear:searchRequest>
      <sear:expertQuery>QUICK_SEARCH = "transport"</sear:expertQuery>
      <sear:page>1</sear:page>
      <sear:pageSize>10</sear:pageSize>
      <sear:searchLanguage>en</sear:searchLanguage>
    </sear:searchRequest>
  </soap:Body>
</soap:Envelope>

```

Cancel

for transport by rail, road and inland waterway

Figure 15: Web service template

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4 EXPERT SEARCH SYNTAX

The Expert search functionality is used to have a flexible search option that allows the combination of many criteria. Each expert search query must comply with a specific syntax described in this chapter.

The basic rule is to use the following scheme: *metadata operator value*. The criteria to enter are written as pairs of metadata and corresponding value.

The user can easily check if the syntax of the query is correct by using the expert search in the EUR-Lex website. Some data helpers are provided as well to help the user with the use of the different metadata.

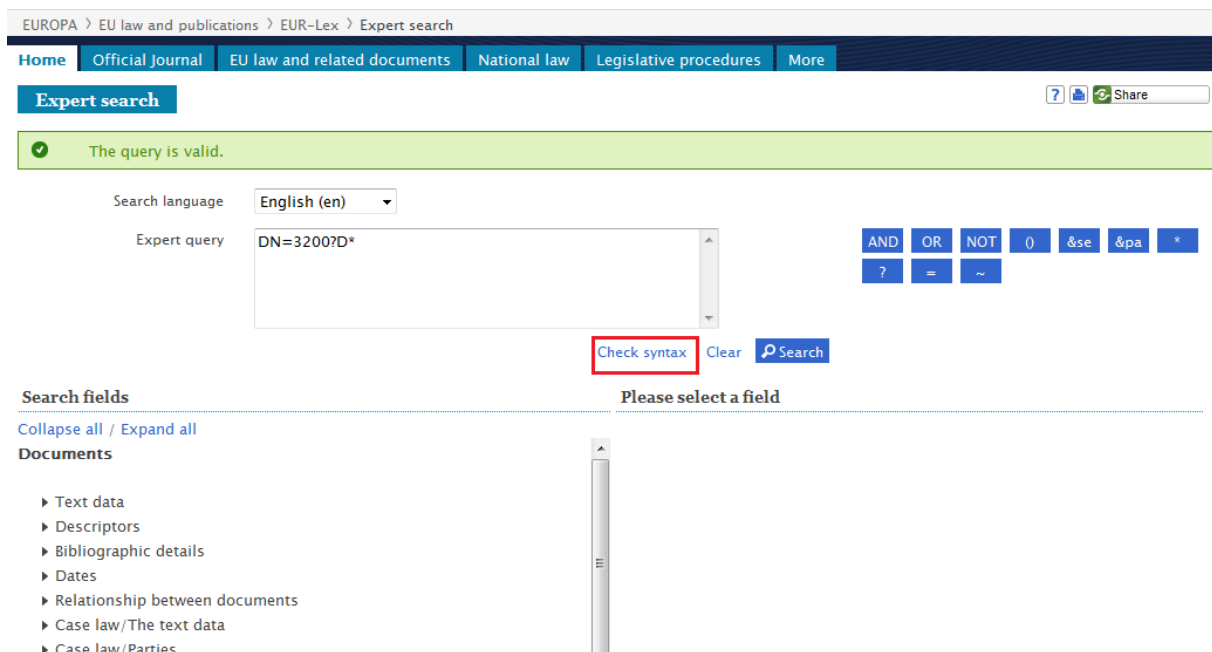



Figure 16: Expert search

4.1 WHERE CLAUSE

4.1.1 GENERAL FEATURES

- Truncation, as for example a wildcard (*) or single character (?) can be used in the search terms. The wildcard stands for 0 to n characters and '?' replaces one single character;
 Example: DN=3200?D* will search for all decision documents of sector 3 within the years 2000 to 2009.
- Boolean operators can be used to separate and group search criteria or values in different ways. The expert search includes three different operators: 'AND', 'OR' and 'NOT'. AND is

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used to impose that all criteria must be fulfilled, 'OR' is used when at least one criteria is mandatory and 'NOT' will exclude some criteria.

Examples: DN = 32000* AND TI ~ Transport

DN = 32000* OR TI ~ Transport

DN = 32000* NOT TI ~ Transport

DN = 32000* NOT 32000D*

In all cases, NOT has precedence over AND and AND has precedence over OR.

- Parentheses establish relationships among search terms so that the search engine is able to interpret how to respond. A set of elementary or more complex queries can be combined, separated by parentheses to clearly identify the query structure and override operators' precedence if needed.

Example: (Title ~ equal treatment) NOT (Type_Sector = 9)

This query is equivalent to Title ~ equal treatment NOT Type_Sector = 9

In some cases, it is necessary to include parentheses in a query to modify the precedence. Imagine that a user is looking for a document that contains the words 'equal treatment' or 'equal rights'. One can structure the query as following:

Title ~ equal AND (treatment OR rights)


If he omits the parentheses, the search engine will look for documents that contain either the words "equal treatment" or "rights" (or both).

- A date or a number can be entered as an exact value or a range of values. The following operators are valid to enter queries with a range of values: < (smaller than), <= (smaller or equal to), > (greater than), >= (greater or equal to), <> (is not equal to).

Examples: Date_of_document >= 25/12/2000

DN<72000L0094

- Some metadata contain codes as well as labels to identify a value. The user can either use the search on codes or labels. Using a '_CODED' suffix for a metadata will imply searches on codes only. Using a '_DECODED' suffix will only perform the query on the label of a value. If no suffix is specified, the system searches on labels and codes.

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4.1.2 SEARCH ON TITLE OR TEXT

- When no parentheses or quotes are specified, the system will by default search for an exact match for the string of words specified.

Example: Title= genetically modified organism

This query will search for all documents containing the sequence of words “genetically modified organism” in the title.

- If a user needs to look for a title that contains all words regardless of the order, he uses the AND operator.

Example: Title ~ genetically AND modified AND organism

This query will search for documents that contain all the words in any order.

- Parentheses can be used in this last case to structure the query. However, a user should pay attention if he looks for titles that contain parentheses themselves. In this case, he needs to put the query into quotes “” to clearly identify that the parentheses are not used as a structure.

Example: *Title ~ the European Economic Community ('the Community')* is not a valid query, to be sure that the search engine performs the search correctly, use *Title ~ "the European Economic Community ('the Community')"*

- Proximity operators can be used to search for terms in a specific range of words. They can be used in a range of approximately 10 (using the operator “&se”) or 40 (using the operator “&pa”) words.

Example: *Text ~ transport &se perishable* will search for documents that contain the words transport and perishable within the same sentence (10 words)

Text ~ transport &pa perishable will search for documents that contain the words transport and perishable within the same paragraph (40 words)

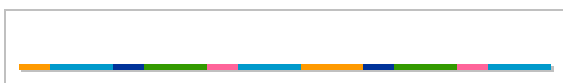
Note that even if quotes are used, the system will be able to interpret the operator and use the proximity operators correctly.

It is important to note that proximity operators are only available for full text searches. If, in a query, one wishes to combine metadata value search with text searches using proximity operators, both terms must clearly be separated with an AND Boolean expression (OR is not permitted).

Example: (Text ~ transport &pa perishable) AND (DD>01/01/2000 OR DN=3*) is a valid query

(Text ~ “transport &pa perishable” OR DN=3*) AND (DD>01/01/2000) is not a valid query

(Text ~ transport &pa perishable) OR (DD>01/01/2000 OR DN=3*) is not valid either.

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4.1.3 SEARCH ON DATES

- The search on dates can be performed using the operators =, >, <, <=, >= (e.g. DD>01/01/2000).
- It is also possible to search using relative dates using the keywords TODAY, MONTHS and DAYS. For instance DD = TODAY – 5 DAYS

4.1.4 SEARCH ON CELEX NUMBERS

- The Set function can be used to find documents within a collection of CELEX numbers. The different numbers need to be separated by commas.

Example: SET(72008L0063, 21992A1231(11), 31977R3024) will return 3 documents.

Note that truncation operators can also be used in this case.

- The use of parentheses is not allowed in a CELEX number for a search. This means that DN=21992A1231(11) will create an error in the expert search, because parentheses are used to establish relationships among search terms. If one needs to look for the document with CELEX number 21992A1231(11), he need to use quotes. A valid query is:

DN="21992A1231(11)"

Attention should be paid to all reserved words as for example AND, OR, etc. Those words refer to expert search options.

4.2 SELECT CLAUSE

It is possible to extend the expert search query to select the metadata that will be retrieved in the search result. The keyword *SELECT* must be used with the list of names of metadata that the user want to retrieve, separated by comma. The use of the *SELECT* clause is used in combination with the *WHERE* clause. The content of the *WHERE* clause is described in the section **Where clause**.


Example: SELECT TI_DISPLAY,DN,DD WHERE TI ~ transport OR TE ~ transport

This query will retrieve the documents the word "transport" in their title or text. The retrieved result will only contain the metadata TI_DISPLAY (title), DN (celex number) and DD (document date).

4.3 ORDER CLAUSE

It is possible to retrieve results sorted with a particular metadata. The order clause can be used to perform such operation. The syntax is:

QUERY ORDER BY metadata_1 (ASC|DESC), metadata_2 (ASC|DESC)...

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So, the ORDER BY keyword is used with a list of metadata separated by comma. The order of sorting must be specified:


- ASC: ascending order;
- DESC: descending order.

The order clause is used with a query that can be very simple, as described in **Where clause** or that contain select and where clauses, as described in **Select clause**.

Examples:

- `TI ~ transport OR TE ~ transport ORDER BY DN ASC, TI_DISPLAY ASC`
will select all documents containing the word “transport” in their title or text. The result will be sorted, firstly by celex number, ascending order and secondly by title, ascending order also.
- `SELECT DN,TI,DD WHERE TI ~ transport OR TE ~ transport ORDER BY DN ASC, TI_DISPLAY ASC`

The order clause can also be used in combination with the select and where clauses.

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5 RESTRICTIONS

This section describes the restrictions implemented following the Autonomy recommendations to avoid bad performing queries.

5.1 SEARCH BEGINNING WITH A WILDCARD (* OR ?)

The following wildcard operators are no more available at the beginning of a search:

- * : zero or more characters (i.e. DN = *2008D0438) ;
- ? : zero or one character (i.e. DN = ?2008438).

5.1.1 EXAMPLE OF RESTRICTION

This section describes an example of request with old query syntax and the response provided by the current system.


5.1.1.1 Web service request

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope"
xmlns:sear="http://eur-lex.europa.eu/search">
  <soap:Header>
    <wsse:Security xmlns:wsse="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-secext-1.0.xsd" soap:mustUnderstand="true">
      <wsse:UsernameToken xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-utility-1.0.xsd" wsu:Id="UsernameToken-1">
        <wsse:Username>genglefr</wsse:Username>
        <wsse:Password Type="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
username-token-profile-1.0#PasswordText">
          uAsIUm9UIDF
        </wsse:Password>
      </wsse:UsernameToken>
    </wsse:Security>
  </soap:Header>
  <soap:Body>
    <sear:searchRequest>
      <sear:expertQuery><![CDATA[DN = ?2008438]]></sear:expertQuery>
      <sear:page>1</sear:page>
      <sear:pageSize>10</sear:pageSize>
      <sear:exactCount>true</sear:exactCount>
      <sear:searchLanguage>en</sear:searchLanguage>
    </sear:searchRequest>
  </soap:Body>
</soap:Envelope>
```

Table 5: Web service call with wildcard

5.1.1.2 Web service response

```
<S:Envelope xmlns:S="http://www.w3.org/2003/05/soap-envelope">
  <S:Body>
    <ns3:Fault xmlns:ns2="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:ns3="http://www.w3.org/2003/05/soap-envelope">
      <ns3:Code>
```

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```

<ns3:Value>
  ns3:Sender
</ns3:Value>
<ns3:Subcode>
  <ns3:Value xmlns:ns1="http://eur-lex.europa.eu/search">
    ns1:WS_QUERY_SYNTAX_ERROR
  </ns3:Value>
</ns3:Subcode>
</ns3:Code>
<ns3:Reason>
  <ns3:Text xml:lang="en">
    The operator ? is not compatible with the metadata DN.
  </ns3:Text>
</ns3:Reason>
</ns3:Fault>
</S:Body>
</S:Envelope>

```

Table 6: Response for a wildcard query

5.1.2 CORRECTION

In order to correct the old query, the beginning wildcard character has to be removed:

```


<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope"
xmlns:sear="http://eur-lex.europa.eu/search">
  <soap:Header>
    <wsse:Security xmlns:wsse="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-secext-1.0.xsd" soap:mustUnderstand="true">
      <wsse:UsernameToken xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-utility-1.0.xsd" wsu:Id="UsernameToken-1">
        <wsse:Username>genglefr</wsse:Username>
        <wsse:Password Type="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
username-token-profile-1.0#PasswordText">
          uAsIUm9UIDf
        </wsse:Password>
      </wsse:UsernameToken>
    </wsse:Security>
  </soap:Header>
  <soap:Body>
    <sear:searchRequest>
      <sear:expertQuery><![CDATA[SELECT DN,XC_DISPLAY WHERE DN = 02008D0438 OR 12008D0438 OR
22008D0438 OR 32008D0438 OR 42008D0438 OR 52008D0438 OR 62008D0438 OR 72008D0438 OR
82008D0438 OR 92008D0438]]></sear:expertQuery>
      <sear:page>1</sear:page>
      <sear:pageSize>10</sear:pageSize>
      <sear:exactCount>true</sear:exactCount>
      <sear:searchLanguage>en</sear:searchLanguage>
    </sear:searchRequest>
  </soap:Body>
</soap:Envelope>

```

Table 7: Corrected web service call without wildcard

5.2 STRICTLY HIGHER/LOWER TEXTUAL OPERATOR

The system allowed to perform comparison on textual metadata like >, <, >= and <=.

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In order to perform a strictly higher or strictly lower operator, the system was using a not match criteria to only include higher or lower values in the result list. Following the recommendations, using a not match criteria can decrease the search response time.

Note that numeric metadata are not affected by this recommendation as the system can determine the values to include in the search result.

5.2.1 EXAMPLE OF RESTRICTION

This section describes an example of request with old query syntax and the response provided by the current system.


5.2.1.1 Web service request

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope"
xmlns:sear="http://eur-lex.europa.eu/search">
  <soap:Header>
    <wsse:Security xmlns:wsse="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-secext-1.0.xsd" soap:mustUnderstand="true">
      <wsse:UsernameToken xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-utility-1.0.xsd" wsu:Id="UsernameToken-1">
        <wsse:Username>genglefr</wsse:Username>
        <wsse:Password Type="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
username-token-profile-1.0#PasswordText">
          uAsIUm9UIDf
        </wsse:Password>
      </wsse:UsernameToken>
    </wsse:Security>
  </soap:Header>
  <soap:Body>
    <sear:searchRequest>
      <sear:expertQuery><![CDATA[SELECT XC_DISPLAY WHERE DN >
320080D438]]></sear:expertQuery>
      <sear:page>1</sear:page>
      <sear:pageSize>10</sear:pageSize>
      <sear:exactCount>true</sear:exactCount>
      <sear:searchLanguage>en</sear:searchLanguage>
    </sear:searchRequest>
  </soap:Body>
</soap:Envelope>
```

Table 8: Web service call with higher/lower textual operator

5.2.1.2 Web service response

```
<S:Envelope xmlns:S="http://www.w3.org/2003/05/soap-envelope">
  <S:Body>
    <ns3:Fault xmlns:ns2="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:ns3="http://www.w3.org/2003/05/soap-envelope">
      <ns3:Code>
        <ns3:Value>
          ns3:Sender
        </ns3:Value>
        <ns3:Subcode>
          <ns3:Value xmlns:ns1="http://eur-lex.europa.eu/search">
            ns1:WS_QUERY_SYNTAX_ERROR
          </ns3:Value>
        </ns3:Subcode>
      </ns3:Code>
    </ns3:Fault>
  </S:Body>
</S:Envelope>
```

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```

</ns3:Subcode>
</ns3:Code>
<ns3:Reason>
  <ns3:Text xml:lang="en">
    The operator > is not compatible with the metadata DN.
  </ns3:Text>
</ns3:Reason>
</ns3:Fault>
</S:Body>
</S:Envelope>

```

Table 9: Response from call with higher/lower textual operator

5.2.2 CORRECTION

Comparison operators for textual metadata are limited to higher/lower or equal operators. This restriction causes the value to be included in the search result.

Here is an example of corrected query:

```


<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope"
xmlns:sear="http://eur-lex.europa.eu/search">
  <soap:Header>
    <wsse:Security xmlns:wsse="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-secext-1.0.xsd" soap:mustUnderstand="true">
      <wsse:UsernameToken xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-utility-1.0.xsd" wsu:Id="UsernameToken-1">
        <wsse:Username>genglefr</wsse:Username>
        <wsse:Password Type="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
username-token-profile-1.0#PasswordText">
          uAsIUm9UIDf
        </wsse:Password>
      </wsse:UsernameToken>
    </wsse:Security>
  </soap:Header>
  <soap:Body>
    <sear:searchRequest>
      <sear:expertQuery><![CDATA[SELECT XC_DISPLAY WHERE DN >=
320080D438]]></sear:expertQuery>
      <sear:page>1</sear:page>
      <sear:pageSize>10</sear:pageSize>
      <sear:exactCount>true</sear:exactCount>
      <sear:searchLanguage>en</sear:searchLanguage>
    </sear:searchRequest>
  </soap:Body>
</soap:Envelope>

```

Table 10: Correction of web service call with higher/lower textual operator

5.3 RESTRICTED FULL TEXT METADATA

Previously, the system allowed configuring large text metadata to perform match operation (i.e. on the text of the document).

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Large text metadata have been restricted to full text search operator (~). The exhaustive list of restricted metadata is:


- TI
- TE
- CM
- MI
- NOM_USEL
- MEMBER_STATE
- INSTITUTION
- IX
- I1
- I2
- MO
- VS
- CO
- DI
- DESCRIPTORS
- LP_INITIATING_DATE

5.3.1 EXAMPLE OF RESTRICTION

This section describes an example of request with old query syntax and the response provided by the current system.

5.3.1.1 Web service request

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope"
xmlns:sear="http://eur-lex.europa.eu/search">
  <soap:Header>
    <wsse:Security xmlns:wsse="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-secext-1.0.xsd" soap:mustUnderstand="true">
      <wsse:UsernameToken xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-utility-1.0.xsd" wsu:Id="UsernameToken-1">
        <wsse:Username>genglefr</wsse:Username>
        <wsse:Password Type="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
username-token-profile-1.0#PasswordText">
          uAsIUm9UIDf
        </wsse:Password>
      </wsse:UsernameToken>
    </wsse:Security>
  </soap:Header>
  <soap:Body>
    <sear:searchRequest>
      <sear:expertQuery><![CDATA[SELECT XC_DISPLAY WHERE TI =
transport*]]></sear:expertQuery>
```


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```

<sear:page>1</sear:page>
<sear:pageSize>10</sear:pageSize>
<sear:exactCount>true</sear:exactCount>
<sear:searchLanguage>en</sear:searchLanguage>
</sear:searchRequest>
</soap:Body>
</soap:Envelope>

```

Table 11: Web service call with restricted full text metadata

5.3.1.2 Web service response

```

<S:Envelope xmlns:S="http://www.w3.org/2003/05/soap-envelope">
  <S:Body>
    <ns3:Fault xmlns:ns2="http://schemas.xmlsoap.org/soap/envelope/"
      xmlns:ns3="http://www.w3.org/2003/05/soap-envelope">
      <ns3:Code>
        <ns3:Value>
          ns3:Sender
        </ns3:Value>
        <ns3:Subcode>
          <ns3:Value xmlns:ns1="http://eur-lex.europa.eu/search">
            ns1:WS_QUERY_SYNTAX_ERROR
          </ns3:Value>
        </ns3:Subcode>
      </ns3:Code>
      <ns3:Reason>
        <ns3:Text xml:lang="en">
          The operator = is not compatible with the metadata TI.
        </ns3:Text>
      </ns3:Reason>
    </ns3:Fault>
  </S:Body>
</S:Envelope>

```

Table 12: Response from call with restricted full text metadata


5.3.2 CORRECTION

In order to correct the old query, the equal operator has to be replaced by the tilde (~) operator.

```

<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope"
  xmlns:sear="http://eur-lex.europa.eu/search">
  <soap:Header>
    <wsse:Security xmlns:wsse="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
      wssecurity-secext-1.0.xsd" soap:mustUnderstand="true">
      <wsse:UsernameToken xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
        wssecurity-utility-1.0.xsd" wsu:Id="UsernameToken-1">
        <wsse:Username>genglefr</wsse:Username>
        <wsse:Password Type="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
          username-token-profile-1.0#PasswordText">
          uAsIUm9UIDf
        </wsse:Password>
      </wsse:UsernameToken>
    </wsse:Security>
  </soap:Header>
  <soap:Body>
    <sear:searchRequest>
      <sear:expertQuery><![CDATA[SELECT XC_DISPLAY WHERE TI ~ transport]]></sear:expertQuery>
    </sear:searchRequest>
  </soap:Body>
</soap:Envelope>

```

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```

<sear:page>1</sear:page>
<sear:pageSize>10</sear:pageSize>
<sear:exactCount>true</sear:exactCount>
<sear:searchLanguage>en</sear:searchLanguage>
</sear:searchRequest>
</soap:Body>
</soap:Envelope>

```

Table 13: Correction of web service call with restricted full text metadata

End of Document