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openlaws

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Analysis of legal networks



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Dec 2014	V1.0	Final editing, executive summary

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Participant List

	Short Name	Organisation Name	Country
1	UVA	Universiteit van Amsterdam	NL
2	SUSS	University of Sussex	GB
3	LSE	London School of Economics and Political Science	GB
4	ALP	Alpenite srl	IT
5	SUAS	Fachhochschule Salzburg GmbH	AT
6	BYW	BY WASS GmbH	AT

Executive Summary

This report describes the main electronically available sources of law in the three target countries of the Openlaws.eu project: Austria, the Netherlands and the United Kingdom, plus those of the EU. It describes their strengths and weaknesses in terms of available data, formats and licensing. Since the world is dynamic, especially that of electronic data, the document was originally set up as a set of spreadsheets and a web site that is easier to maintain and update. This deliverable contains a snapshot of the status of these documents at the end of December 2014.

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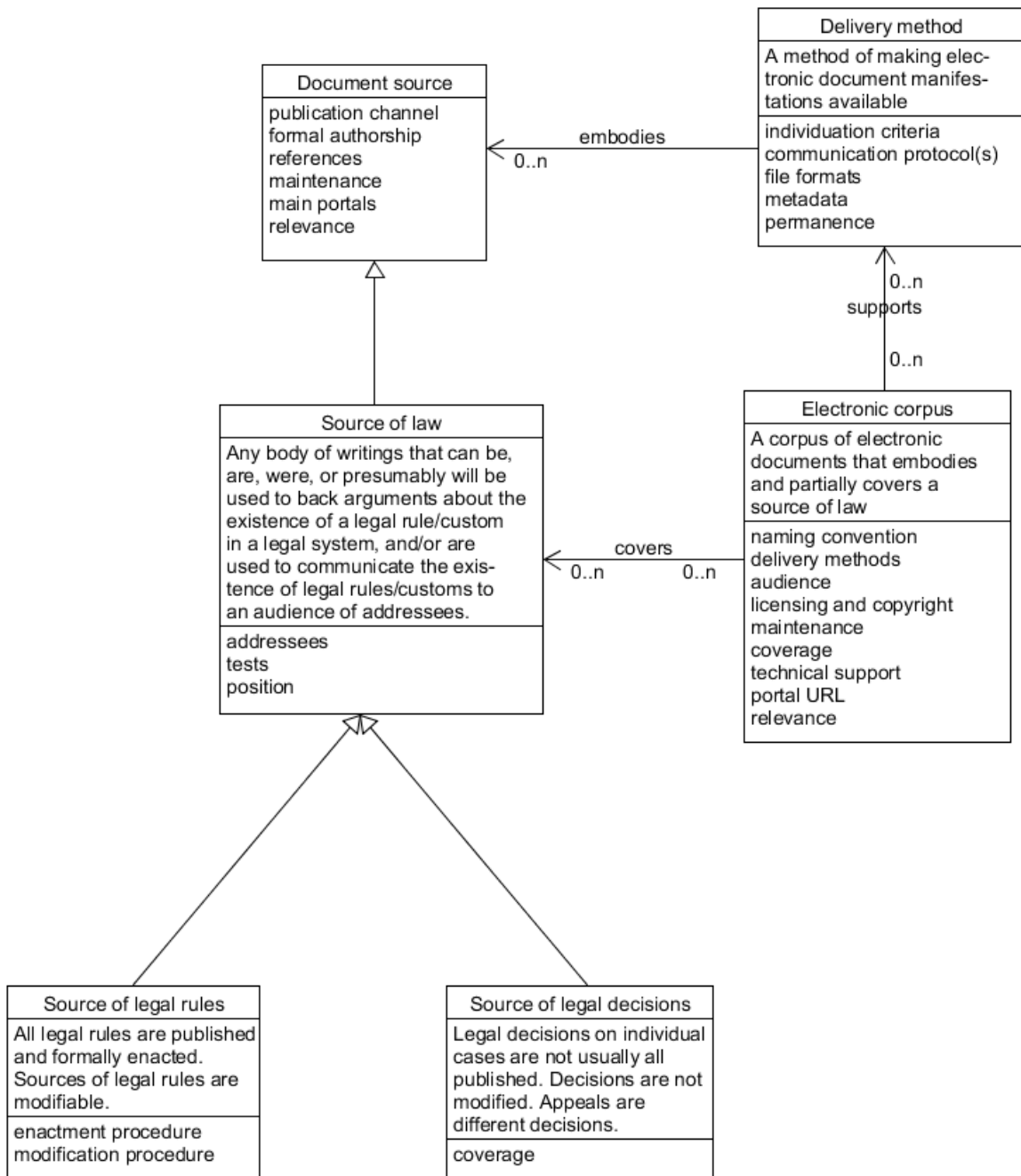
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1 Introduction

1.1 OpenLaws survey on available electronic corpora of legal documents

This document will list the results of the OpenLaws survey on available electronic corpora of legal documents. The structure of each chapter will closely follow the fields of the survey form.

The figure below illustrates the general structure of the survey form. Any type of document is assumed to correspond to a *document source*, that is: a process, associated with an identifiable publication channel (for instance a State gazette, court, or legal publisher) that produces documents of that type.



The survey only covers sources of law. We distinguish three types of document source:

- a) The *source of legal rules* publishes legal rules of a generally binding character, and typically has explicit processes for declaring rules in force and for modifying existing rules.
- b) The *source of legal decisions* carries decisions on individual cases that have a formative influence on future decisions on similar cases. This is most obviously the case for the judiciary, but other arbitration bodies may in practice be relevant in everyday life (for instance arbitration courts for consumer complaints). These documents are typically never changed over their lifetime, and do not have to be declared in force or retracted. Legal decisions may be selectively published, however, depending on their formative influence on future decisions.
- c) *Other document sources* may carry documents that function as expert commentary on legal rules and decisions. These documents typically make references to rules or decisions, but otherwise share little in terms of structure or metadata with sources of law. Legal publishers and their products fall under this category. The survey does not collect data on this category of documents.

Document type is fundamentally associated to a publication channel. An electronic corpus may however cover documents from different sources, and a source may be followed by multiple electronic corpora. Legal publishers may for instance publish legislation also covered by a government portal, and their electronic corpus may have clear added value (more metadata, better resolution of references, etc). Electronic corpora may be selective in covering document sources, only including important documents, or only documents relating to a certain domain. Similarly, we may not assume that an electronic corpus uses only one delivery method, and the same delivery method may be used by separate electronic corpora. Delivery methods may for instance vary on used file format (XML, PDF, HTML, etc.), amount of metadata included in the delivery, or protocol (for instance HTTP GET-based vs. RSS push channel).

The survey forms are filled in per member state. It is definitely not the intention of this survey to do a full review of what is available in each member state. The objective is to establish:

- a) What the important sources of legal rules and legal decisions are that are relevant to consumers of legal documents in that member state, and what their characteristics are in terms of required provenance metadata;
- b) Which electronic corpora need to be considered to get an adequate degree of coverage for the most relevant types of documents; and
- c) Which delivery methods need to be considered in order to get adequate coverage of relevant metadata available for a document.

Some practical examples of variety in document sources, electronic corpora, and delivery methods:

- a) The Dutch portal for legislation makes available XML files, but these contain less metadata than can be extracted from the HTML variants on the web portal.
- b) The MetaLex database hosted by us covers everything the Dutch portal for legislation covers, but keeps a more detailed history of changes.

- c) The website of the Dutch judiciary makes available a subset of legal decisions taken by the courts. Legal publishers publish other subsets. As a general rule, the website of the Dutch judiciary will make available any court decision that is mentioned by a legal publication, or makes news, but with a slight delay. More recently, the website publishes metadata of more cases than it publishes the actual decision of.
- d) Although the entire US code is available online, the US code is not relevant for many practical matters that are regulated at the state level. The Dutch code regulates almost everything, since lower bodies have very few regulative powers. In the US case, the legislation of each state should be covered, while Dutch province-level regulation is irrelevant in practice.

2 European Union

2.1 Introduction

This section describes the state of EU open legal data for purposes of programmatic re-use. We will describe open data sources for EU law and case law, some pointers on usage, and give some shortcomings. Complementing information is available in [Boella, et al \(2014\)](#).

Summarizing, EURLex is a comprehensive database for many legal documents. The database is slightly hard to use, though.

Some corpora are not presented, because their legal contents are more or less their incorporated in EURLex, including the EU Court of Justice in Luxembourg, the European Parliament, the Council of the EU, the European Commission and its Directorates-General.

2.2 Law & Case Law

2.2.1 EUR-Lex

[EUR-Lex](#) is the the most comprehensive portal of EU law, giving access to legislation, case law, international agreements and preparatory acts.

The portal was launched on November 1, 2004 as the result of a merger of the former EUR-Lex site with CELEX, a fee-based system providing additional value-added contents and functionality. EUR-Lex is available in 24 languages.

EURLex also hosts [N-Lex](#), a meta-search engine that allows one to query national databases. Quality varies, because they depend on the search engines that are in place in the respective member states. (For instance: the interface for Dutch legislation is so slow that EURLex throws a time-out; the portal for British law links to [Legislation.gov.uk](#))

2.2.1.1 Naming convention

2.2.1.1.1 CELEX numbers

Most prominently, EURLex uses CELEX numbers to identify documents, which is a structured identifier. All documents in EUR-Lex should have a CELEX number. Refer to the [EURLex website](#) for more information.

2.2.1.1.2 ECLI

European case law identifiers are standardized through the [European Case Law Identifier \(ECLI\)](#), and you can search for ECLIs on the EURLex portal.

2.2.1.1.3 ELI

The [European Legislation Identifier \(ELI\)](#) is a structured and stable identifier URI that can also be used for search. According to the [EURLex FAQ](#):

The Publications Office plans to provide ELI for the widest range of legislation published in the Official Journal L series. You will then be able to search among documents that have an ELI identifier or make a direct ELI search by using a search URI.

2.2.1.2 Delivery methods

In addition to extensive search functionality in the user-facing portal, there are a number of methods to facilitate programmatic re-use of the EURLex database:

- Users can subscribe to an RSS feed, which can be customised according to the users interests
- One can register for the free WSDL webservice, which allows users to directly query the EURLex database using so-called [expert queries](#), which include common search operators like AND, NOT, ~, etc.
- Access to bulk data also requires registration. Bulk data delivers XML documents through an FTP server, and the user is informed when new data is uploaded.

If one knows the CELEX number, it is easy to create a URI that represents the document:

```
http://eur-lex.europa.eu/legal-content/{language}/{tab}/{format}/?uri={CELEX number}
```

For example:

- <http://eur-lex.europa.eu/legal-content/EN/LNK/?uri=CELEX:32012L0013><http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32012L0013>

Also see http://eur-lex.europa.eu/content/help/faq/intro.html#_Toc3

2.2.1.3 Audience

The portal is freely available to all EU citizens and businesses.

2.2.1.4 License

Commercial and non-commercial re-use is allowed, provided that the re-user attributes correctly. In the [copyright notice](#), it states:

© European Union, 1998-2014

Except where otherwise stated, reuse of the EUR-Lex data for commercial or non-commercial purposes is authorised provided the source is acknowledged ('© European Union, <http://eur-lex.europa.eu/>, 1998-2014').

The reuse policy of the European Commission is implemented by the [Commission Decision of 12 December 2011](#) .

The delivery of files in XML format via an FTP server, namely for exploitation and commercial re-dissemination, is subject to the provision of a password that may be obtained free of charge by sending an e-mail to the following address: eurlex-helpdesk@publications.europa.eu.

Some documents, like the International Accounting Standards, may be subject to special conditions of use, which are mentioned in the respective Official Journal.

The EUR-Lex logo may not be used without the prior consent of the Publications Office.

For all other copyright issues regarding EUR-Lex, please contact: op-info-copyright@publications.europa.eu.

2.2.1.5 Maintenance

EUR-Lex is operated by the [Publications Office in Luxembourg](#) in cooperation with the [Legal services of the European Commission](#), the [Court of Justice of the EU](#) and other EU institutions.

2.2.1.6 Coverage

Currently, EUR-Lex contains about 3 million documents in 24 languages, with texts dating back to 1951. The database is updated daily, and around 12000 documents are added yearly.

The portal contains EU legislation and case law, international agreements and preparatory acts as well as other public documents considered to be of legal significance. These documents are often translated into multiple languages.

The content is divided into sectors:

Sector	Name	Description of available content
	Official Journal of the EU	scanned copies in PDF format from the first issue in December 1952 to 1997; machine readable electronic copies in PDF format from 1998 to 30th June 2013; authentic electronic versions from 1st July 2013 to date.
0	Consolidated legislation	consolidated up-to-date and historic (point-in-time) versions of the regulations, directives and decisions.
1	Treaties	Original and consolidated versions of the founding treaties of the EU, accession treaties, other treaties and protocols agreements concluded by the European Communities with non-member countries or with international organisations in their specific areas of responsibility;
2	International agreements	agreements concluded jointly by the Member States and the European Communities in areas of shared responsibility ('mixed type' agreements); decisions of joint committees set up pursuant to an international agreement and comprising representatives of the signatories for the purpose of administering the

Sector	Name	Description of available content
		agreement.
3	Legislation	Regulations, directives, decisions, opinions, recommendations and other acts of the institutions.
4	Complementary legislation	Agreements between Member States, decisions of the representatives of the governments of the Member States and other acts.
5	Preparatory acts	legislative proposals and other acts of the European Commission (COM, SEC, JOIN and a. o. documents), legislative resolutions and other acts of the European Parliament, common positions or assents of the Council of the EU, opinions of the European Court of Auditors, the European Central Bank, the European Economic and Social Committee, the Committee of the Regions and other documents.
6	Case law of the Court of Justice of the EU	judgements, orders and decisions of the Court of Justice, the General Court and the Civil Service Tribunal, opinions of the Advocates-General and other documents.
7	National execution measures	lists of the national legislative and administrative acts adopted from the Member States to implement EU directives and notified to the Commission. The information includes the name of the act(s) and textual reference (without hyperlink) to the publication in the official journal of the Member State.
8	National case law	metadata information about selected decisions of national courts in the field of EU law. Actually, Sector 8 of EUR-Lex currently houses the DEC.NAT database created by the Association of the Councils of State and Supreme Administrative Jurisdictions of the European Union. The database provides information about more than 27 300 decisions of predominantly administrative jurisdictions of the Member States.
9	Parliamentary questions	metadata information about written and oral parliamentary questions
E	EFTA documents	agreements between Member States of the European Free Trade Association (EFTA), Acts of the EFTA Surveillance Authority and of the EFTA Standing Committee, Decisions, orders, consultative opinions of the EFTA Court and other documents.
E	EFTA documents	agreements between Member States of the European Free Trade Association (EFTA), Acts of the EFTA Surveillance Authority and of the EFTA Standing Committee, Decisions, orders, consultative opinions of the EFTA Court and other documents.
C	Official Journal C Series documents	Series of the Official Journal which do not fall within the above categories

2.2.1.7 Technical explanations

For a technical explanation, refer to the [EURLex FAQ](#) or refer to [Boella, et al \(2014\)](#).

2.2.1.8 Relevance

EUR-Lex is a comprehensive database with extensive search and offers a lot of data in a multiple formats and languages.

EURLex provides:

- consolidated legislation
- detailed document metadata
- case summaries
- several document classification schemes
- advanced search features, an alerting service
- a multilingual interface
- documents in multiple languages
- export of documents in HTML and PDF formats

2.2.1.9 5 star open data

EURLex is a [3 to 4 star data set according to Tim Berners-Lee deployment scheme](#). (EURLex uses URIs, but not everywhere.)

3 United Kingdom

3.1 Introduction

This section describes the state of UK open legal data for purposes of programmatic re-use. We describe open data sources for UK law and case law, some pointers on usage, and give some shortcomings. Complementing information is available in [Boella, et al \(2014\)](#).

Summarizing, there is one central open data portal for legislation ([legislation.gov.uk](#)) which is very good. Open data portals for case law, however, are fragmented, inconsistent and hard to access programmatically.

All data sources described below are licensed under [Crown Copyright](#), which means that the sources are free to re-use in any way, as long as the documents are attributed correctly and not misrepresented.

3.2 Law

There is one high-profile corpus for legislation in the U.K. ([legislation.gov.uk](#)), which covers most of the current and historical law across the four jurisdictions of the UK. The website makes good use of semantic web standards and is very reliable.

3.2.1 *Legislation.gov.uk*

[Legislation.gov.uk](http://www.legislation.gov.uk) is the official portal for UK legislation. It is one of the world's leading law portals and an important contribution to the web of linked data. The website is managed by [The National Archives](#) on behalf of Her Majesty's Government.

Legislation.gov.uk provides access to almost all legislation in all UK jurisdiction, with over 800 years of history. It has extensive search capabilities and adheres to many publishing standards that were available at the time of launch, which was in 2010.

Refer to www.legislation.gov.uk/developer for official documentation on the API.

3.2.1.1 *Naming convention*

[Legislation.gov.uk](http://www.legislation.gov.uk) uses transparent URIs to identify documents and document sections. The URI scheme is as follows:

```
http://www.legislation.gov.uk/{type}/{year}/{number}[/section]
[/authority] [/extent] [/version]/data.ext
```

([XML example](#).)

When a URI is ambiguous, the server will respond with an appropriate HTTP response. (303 Multiple Choices)

For more information on URIs in the legislation API, refer to the documentation on [URIs](#).

3.2.1.2 *Delivery methods*

[Legislation.gov.uk](http://www.legislation.gov.uk) provides extensive search functionality and a rich API.

The portal provides programmatic access to legislation content in multiple formats through URI dereferencing (i.e., HTTP GET requests) and supports content negotiation. Formats include XML, RDF/XML, HTML and Atom. See the [official documentation](#) for more information on formats.

Dereferencing a URI requires one to know the URI for a law. The [legislation.gov.uk](http://www.legislation.gov.uk) portal provides two canonical ways to search for law identifiers: through identifier search and listings. There is also a [SPARQL API](#).

Identifier search can be done by querying a URI of the form

```
http://www.legislation.gov.uk/id?title={title}&type={type}
&year={year}&number={number}
```

Where any field may be missing. When there is one search result, the server will respond with 301 Moved Permanently. When there are multiple responses, the server responds with 300 Multiple Choices

Refer to the [documentation](#) for more information on identifier search, such as the full range of query options.

Listings are available as Atom feeds. They are queried by using a URI of the form

```
http://www.legislation.gov.uk/search?title={title}&type={type}&start-year={year}&end-year={year}&start-number={number}&end-number={number}&version={version}
```

Again, any field can be missing. One can also use simpler URIs. Refer to [the documentation](#) for more information.

3.2.1.3 Audience

The web portal and API is accessible by anyone. The National Archive is currently working on accommodating researchers and working on a service to make the data in the Statute Book available in bulk, presumably for data mining purposes data mining. This service is not yet available, though.

While publicly available, the API of legislation.gov.uk can be overwhelming, making the website not extraordinarily accessible. The [developer page](#) is hard to find and documentation is very terse. This is especially true for developers that are not familiar with semantic web technologies.

3.2.1.4 License

Like all British data sources described in this deliverable, the documents are licensed under [Crown Copyright](#). This means that the documents are free to re-use in any way, as long as the documents are attributed correctly and not misrepresented.

3.2.1.5 Maintenance

[Legislation.gov.uk](#) is managed by [The National Archives](#) on behalf of Her Majesty's Government.

3.2.1.6 Coverage

Legislation.gov.uk provides access to legislation in the four jurisdictions of the UK, England, Scotland and Wales with over 800 years of history. The portal contains most, but not all types of UK legislation and explanatory documents. Even draft legislation are provided.

At least the following types of legislation are available:

Type	Period
Public General Acts of the United Kingdom Parliament	1801 to date
Acts of the Parliament of Great Britain	1707 – 1800
Acts of the English Parliament	1267 – 1706
Acts of the Old Scottish Parliament	1424 – 1707

Type	Period
Acts of the Scottish Parliament	1999 to date
Acts of the National Assembly for Wales	2012 to date
Measures of the National Assembly for Wales	2008 – 2011
Acts of the Irish Parliament	1495 – 1800
Acts of the Parliament of Northern Ireland	1921 – 1972
Measures of the Northern Ireland Assembly	1974
Orders in Council made under the Northern Ireland Acts	1972 to date
Acts of the Northern Ireland Assembly	2000 – 2002 and 2007 to date
Church of England Measures	1920 to date

The [official documentation](#) describes some limitations on the contents of the database: some legislative effects are out of date or inconsistently represented across types of legislation and some historical legislation is not supplied.

3.2.1.7 Technical explanations

For a technical explanation on how to query and parse the data, refer to the [official documentation](#).

3.2.1.8 Relevance

[Legislation.gov.uk](#) is extremely well curated, linked data set. Most laws and peripheral documents are available, though no case law.

The website provides hyperlinks at the top of each structural elements (i.e., chapter; article), but does not provide inline links in the text. Inline links *are* available in text of annotations, though. While the website links to other corpora, not all text references are marked up as hyperlinks.

3.2.1.9 5 star open data

[Legislation.gov.uk](#) is a [five star data set according to Tim Berners-Lee deployment scheme](#).

3.3 Case law

Unlike legislation, programmatic access to case law is problematic. Data sets for case law in the U.K. are fragmented and web portals are generally not as good as solutions by commercial publishers.

Most web portals contain only a limited selection of judgments and do not provide programmatic access. Collections such as the [British and Irish Legal Information Institute \(BAILII\)](#) and the [Incorporated Council of Law Reporting \(ICLR\)](#) are much more extensive. However, these websites don't publish their data under a license that permits re-use and so do not fall under the scope of this deliverable.

3.3.1 *judiciary.gov.uk*

The official website for the UK judiciary is [judiciary.gov.uk](http://www.judiciary.gov.uk). While the website is set up well, sadly it does not offer an API and document formats are inconsistent (mostly PDF, but sometimes HTML). The website points to multiple search engines that are not mutually consistent. The [search engine for tribunal decisions](#) is different than [the one for ordinary court judgments](#). Court judgments published before 2012 are available on [a different website](#). This makes the browsing experience very inconsistent.

3.3.1.1 *Naming convention*

Cases have an opaque case number, but it is not possible to query for that case number. The [European Case Law Identifier \(ECLI\)](#) does not seem to be supported.

3.3.1.2 *Delivery methods*

Documents can be queried multiple, inconsistent user-facing search engines. There is no API for programmatic access. The lack of an API is ameliorated somewhat by the fact that at least [judiciary.gov.uk/judgments/](http://www.judiciary.gov.uk/judgments/) (court judgments after 2012) is easy to scrape for available documents: one can start at [page 1](#) and increment the page number until a 404 error is encountered. Also, search parameters are easy to manipulate through the search URL:

```
http://www.judiciary.gov.uk/judgments/?filter_type=judgment&search={text_query}&tax-single-court={court_code}&tax-single-judgment-jurisdiction={jurisdiction_code}&date-range-after={date}&date-range-before={date}
```

(Example)

Where the following codes are used for courts and jurisdictions:

Court	
—	-1
Crown Court	19
Family	30
County Court	31
Tribunals	308
Court of Appeal	886
High Court	887
Magistrates	888
Court of Protection	907
Military Court	918
Jurisdiction	
—	-1
Family	30
Civil	167
Criminal	173

Court	
Tribunals	308
Military	885

Broadly, the documents are hard to process programmatically.

3.3.1.3 Audience

The website is accessible by anyone, but commercial products are more popular.

3.3.1.4 License

Like all British data sources described in this deliverable, the documents are licensed under [Crown Copyright](#). This means that the documents are free to re-use in any way, as long as the documents are attributed correctly and not misrepresented.

3.3.1.5 Maintenance

[Judiciary.gov.uk](#) is presumably managed by the judiciary.

3.3.1.6 Coverage

The website points to multiple search engines that are not mutually consistent. There is a [search engine for tribunal decisions](#) and [one for ordinary court judgments](#). Court judgments published before 2012 are available on [a different website](#)

3.3.1.7 Technical explanations

There is no official technical explanation available.

3.3.1.8 Relevance

Commercial products are more extensive and more structured; therefore more popular.

3.3.1.9 5 star open data

This is a [1 star data set](#) according to Tim Berners-Lee 5 star deployment scheme.

3.3.2 House of Lords judgments

On www.publications.parliament.uk/pa/ld/ldjudgmt.htm a list of House of Lords judgments between 14.11.1996 and 30.07.2009 can be found, covering about 800 cases. The list and content are available as static HTML pages that are not semantically marked up. (HTML tables without class names; no API.)

3.3.2.1 Naming convention

Documents have an identifier that is somewhat structured, and a standard across UK case law (the 'neutral notation'). The identifier adheres to the following scheme:

[{year}] {court code} {case number}

where {court code} is, in this case UKHL for 'UK House of Lords'.

3.3.2.2 Delivery methods

The list and content are available as static HTML pages that are not semantically marked up. (HTML tables without class names; no API.)

3.3.2.3 Audience

The website is accessible by anyone, but commercial products are more popular.

3.3.2.4 License

Like all British data sources described in this deliverable, the documents are licensed under [Crown Copyright](#). This means that the documents are free to re-use in any way, as long as the documents are attributed correctly and not misrepresented.

3.3.2.5 Maintenance

The website is presumably managed by the [House of Lords](#).

3.3.2.6 Coverage

A list of House of Lords judgments between 14.11.1996 and 30.07.2009 can be found, covering about 800 cases

3.3.2.7 Technical explanations

A technical explanation could not be found.

3.3.2.8 Relevance

Commercial products are more extensive and more structured; therefore more popular.

3.3.2.9 5 star open data

This is a [3 star data set](#) according to Tim Berners-Lee 5 star deployment scheme.

3.3.3 Supreme court judgments

[supremecourt.uk](#) supplies supreme court cases from after 31.07.2009 as a static list. At time of writing, 425 decided cases are available. For each case, press summaries and full reports are available in PDF format. There is no semantic mark up and no search API.

3.3.3.1 Naming convention

Documents have an identifier that is somewhat structured, and a standard across UK case law (the 'neutral notation'). The identifier adheres to the following scheme:

```
[{year}] {court code} {case number}
```

where {*court code*} is, in this case UKSC for 'UK Supreme Court'.

Documents also have a case ID, that look like {*court code*} {*year*}/{*case number*}

3.3.3.2 Delivery methods

For each case, press summaries and full reports are available in PDF format. There is no semantic mark up and no search API.

3.3.3.3 Audience

The website is accessible by anyone, but commercial products are more popular.

3.3.3.4 License

Like all British data sources described in this deliverable, the documents are licensed under [Crown Copyright](#). This means that the documents are free to re-use in any way, as long as the documents are attributed correctly and not misrepresented.

3.3.3.5 Maintenance

The website is presumably managed by the Supreme Court.

3.3.3.6 Coverage

Supreme court cases from after 31.07.2009 as a static list. At time of writing, 425 decided cases are available. For judgments handed down before 31 July 2009, the website refers to the [House of Lords](#) and [BAILII](#).

3.3.3.7 Technical explanations

A technical explanation could not be found.

3.3.3.8 Relevance

Commercial products are more extensive and more structured; therefore more popular.

3.3.3.9 5 star open data

This is a [1 star data set](#) according to Tim Berners-Lee 5 star deployment scheme.

4 The Netherlands

4.1 Introduction

This section describes the state of Dutch open legal data for purposes of programmatic re-use. We describe open data sources for Dutch law and case law, some pointers on usage, and give some shortcomings.

Summarizing, the data sources are okay, but merit improvement. In 2015, at least the corpus for Dutch legislation receives an overhaul which greatly expands its usefulness.

4.2 Law

The most high-profile source of open law in the Netherlands is the Basis Wetten Bestand (BWB; Base Law File). This data source is [featured on the official open data portal of the Netherlands](#) and covers most Dutch legislation. It has a three-star rating in [Tim Berner Lee's five star linked open data rating model](#).

Historically, there have been some problems with the BWB. Most of these are addressed with update to the BWB, set to launch in 2015. In the interim, two alternatives have been developed within the Leibniz Center for Law: [the Metalex Document Server](#) (in 2010) and the [BWB Mirror](#) (in 2014).

4.2.1 Basis Wetten Bestand (BWB)

4.2.1.1 Naming convention

Documents are identified by an opaque identifier starting with 'BWB', for example ['BWBR0002761'](#) for the civil law code, book 4.

The 2015 iteration of the BWB features multiple structure-level identifiers (`stam-id`; `versie-id`; `label-id`; `id`) for some structural elements (such as chapters and articles). Presumably the multiplicity of these identifiers reflect identity over elements that have not been modified (elements are the same in an absolute way), or elements that *have* been modified, but are still the same in a conceptual sense.

4.2.1.2 Delivery methods

The easiest way of accessing documents is through the combination of

- an [XML metadata dump](#), which contains metadata of all documents in the database
- a simple HTTP GET interface to query XML manifestations of the documents by their identifiers, for example:
<http://wetten.overheid.nl/xml.php?regelingID=BWBR0002761>

There is a [SOAP interface](#), but it uses antiquated standards and it is hard to find software that can work with it. It adds some value in that one is able to filter queries by some metrics such as date and document type.

4.2.1.3 Audience

The web portal and API is accessible by anyone.

4.2.1.4 License

According to data.overheid.nl, the BWB is published under a [CC-0 license](https://creativecommons.org/licenses/by/4.0/).

4.2.1.5 Maintenance

The BWB is maintained by [Kennis- en Exploitatiecentrum Officiële Overheidspublicaties \(KOOP\)](http://kennis-en-exploitatiecentrum.officiële-overheidspublicaties.koop.nl), a government organization that falls under the Ministry of the Interior and Kingdom Relations. It is mainly responsible for digitizing and maintaining government publications.

4.2.1.6 Coverage

The website wetten.nl covers most national law since May 1 2002 (along with historical data). Currently, the API does not provide historical data (like older versions of laws and parliamentary documents), but that is set to change in 2015.

In addition to the laws (~2500) of the Kingdom of the Netherlands, the BWB contains:

- Treaties (~3300)
- Circulaires (~500)
- Royal orders (Algemene Maatregel van Bestuur (~3300); Koninklijk Besluit (~700))
- Ministerial decrees (ministeriële regeling, ~16000)
- Administrative policies (beleidsregels, ~2500)
- Rules for [sectoral organisations under public law](#) (publiekrechtelijke bedrijfsorganisatie (pbo), ~2600)
- Rules for [quasi-autonomous non-governmental organisations](#) (zelfstandig bestuursorgaan (zbo), ~1900)

In total, the website covers about 33000 works.

4.2.1.7 Technical explanations

For a technical explanation, refer to <http://koop.overheid.nl/producten/basis-wetten-bestand/technische-informatie-2014> for official documentation on the old system (pre-2015), or <http://koop.overheid.nl/producten/basis-wetten-bestand/technische-informatie-2015> for official documentation on the new system (post-2015). (Both websites in Dutch.)

4.2.1.8 Relevance

The BWB is up-to-date and has a good coverage, but at least the pre-2015 version has some problems. One problem is that the server can be very slow to respond. For instance, Accessing the XML document for [BWBR0008587](#) takes more than 60 minutes to respond (if ever).

Most problems are to do with information that is supplied on the user-facing website, but not available as machine-readable data. A lot of contextual information (such as law history; references to delegated legislation; etc) is given on the website wetten.nl, but this data is not available in the API. The same for historical versions of law: only the latest XML consolidation of a law is accessible.

Most of the disparity between the website and API seem to be resolved in the 2015 version of the BWB. A preview document reveals that a wealth of metadata is available: a full list of versions; a full list of document changes and lists of related laws, annotated with their relation type.

4.2.1.9 5 star open data

The BWB is a [three star data set according to Tim Berners-Lee deployment scheme](#).

4.2.2 Metalex Document Server

The [Metalex Document Server](#) is an XML document server and SPARQL endpoint that was set up to overcome problems with the BWB (see [Hoekstra \(2011\)](#)). Original XML documents are converted to the [CEN Metalex standard](#) and a lot of metadata is generated, mostly provenance data.

Theoretically, the MDS is very interesting and has been used for a number of experiments ([Plantevin, et al. \(2013\)](#), [van Someren \(2014\)](#), [Vredereg \(2014\)](#)), but there are many bugs in the Metalex document server, and database updates seem to have halted entirely since March 1st 2014. ([SPARQL query](#).)

The MDS seems to have had an impact on the BWB: 5 years after the launch of the Metalex Document Server, the new version of the BWB implements features that look like they have been inspired by the MDS, including version-stable identifiers on XML elements, proper versioning and rich metadata describing references and provenance.

4.2.2.1 Naming convention

The MDS uses rigorous transparent URIs as identifiers of documents and all XML elements get a URI assigned as well, making a distinction between works and expressions according to the [Functional Requirements for Bibliographic Records](#).

Many elements have both a transparent URI and an opaque URI (example: [transparent](#), [opaque](#)). The reasoning is that elements such as articles keep the same opaque identifier as their containing document changes, while the element itself has the same content. URI linking in the `about` fields of XML elements do not consistently use shortened URIs or longform URIs. Although the elements contain `owl:sameAs` relations to each other, it can also be problematic when an opaque identifier has multiple `owl:sameAs` relations with transparent URIs, creating a sense of ambiguity.

Some examples:

URI

Description

URI	Description
http://doc.metalex.eu/BR0003045/	Burgerlijk Wetboek, boek 2 (Work level)
http://doc.metalex.eu/BR0003045/n1/2013-07-22	Burgerlijk Wetboek, boek 2 (Expression level; date 2013-07-22)
http://doc.metalex.eu/BR0003045/boek/2/titeldeel/5/afdeling/5/artikel/252a/n1/2013-07-22	Burgerlijk Wetboek, boek 2, article 252a (Expression level; date 2013-07-22)

As we can see, URIs tend to get very long for deeply nested elements, which clutter the XML documents. The largest document in the BWB ([BWBR0018715](#)) is 15.6MB in size, but 43.8 MB in the MDS.

The URIs are guessable, but not always: in the example above, the language code (nl) was included in the URI. This is sometimes not the case, and it is impossible to know a priori which documents do get language code and which don't.

Also URIs are not properly encoded, so that URIs with special characters are not dereferencable. One example of this is *De Staatsraad, Directeur van het Kabinet des Konings*

Some document elements exist ([example](#)) that do not seem to have a parent ([example 404](#)). This indicates a serious bug.

4.2.2.2 *Delivery methods*

The MDS does not keep a copy of source documents. In the case of bugs, documents can not be reconstructed. Because the government API also doesn't give access to historical XML documents, this information is hard to retrieve.

4.2.2.3 *Audience*

The web portal and API is accessible by anyone, but mostly interesting for research purposes.

4.2.2.4 *License*

The MDS is an exploration in what it takes to make the BWB a [five-star data set](#), but ironically no license is given. The website only shows a copyright notice.

4.2.2.5 *Maintenance*

The MDS is created by Rinke Hoekstra while he was still active for the Leibniz Center for Law. Currently, the MDS is not maintained. Although the [source code is open](#), it is cryptic and not really documented.

4.2.2.6 *Coverage*

The MDS aims to cover the [same documents as wetten.nl](#) (pre-2015).

4.2.2.7 **Technical explanations**

Refer to <http://doc.metalex.eu/> for official documentation.

There are also some interesting articles on the MDS, like [Hoekstra, 2011a](#) and [Hoekstra, 2011b](#)

For a description of additional gotchas with the MDS, refer to leibniz-internship-report.herokuapp.com/mds.

4.2.2.8 **Relevance**

Because of the many bugs, the Metalex Document Server is unfit for production type applications, but at least interesting for its semantic web interpretation of the BWB.

4.2.2.9 **5 star open data**

The MDS is a [five star data set according to Tim Berners-Lee deployment scheme](#) (or zero depending if the data does not turn out to be published under an open license).

4.2.3 **BWB Mirror**

To deal with the problems of BWB and the MDS described above, a new data repository was created. Originally meant to only provide a mirror of source documents (from the BWB), the database now provides HTML manifestations, describes metadata in RDF / JSON-LD, makes a distinction between works, expressions & manifestations and provides some additional metadata.

Because the BWB only supplies the latest consolidations, and the Metalex Document Server has tracked expressions since 2010, initial population of this database also included best-efforts conversions of historical Metalex files back to BWB XML.

4.2.3.1 **Naming convention**

The database uses BWBs to generate dereferencable HTTP URIs, for example:

- <http://wetten.lawly.nl/id/{BWBID}> for work level entities
- <http://wetten.lawly.nl/id/{BWBID}:{expression data}> for expression level entities

Works borrow metadata from its *latest* expression. Note that we only distinguish expressions by consolidation date. Documents that contain multiple translations (like treaties) are considered as just one expression, while they are actually two expressions.

4.2.3.2 **Delivery methods**

An HTTP API allows one to query:

- For individual documents:

- Document metadata in JSON-LD
- HTML manifestation
- For multiple documents:
 - A metadata dump
 - Search

4.2.3.3 Audience

The web portal and API is accessible by anyone.

4.2.3.4 License

The data is available under CC-0, like the BWB.

4.2.3.5 Maintenance

This wrapper is maintained by the Leibniz Center for Law; inquiries go to bcf4ed85@opayq.com.

4.2.3.6 Coverage

All documents from the Metalex Document Server (from ~2010), plus all documents from the BWB since the summer of 2014.

4.2.3.7 Technical explanations

Refer to http://leibniz-internship-report.herokuapp.com/nl_linked_legal_data/bwb_mirror for more information.

4.2.3.8 Relevance

This service is a good bridge until the BWB provides historical expressions (expected in 2015).

4.2.3.9 5 star open data

This is a 5 star data set [according to Tim Berners-Lee 5 star deployment scheme](#).

4.3 Case law

4.3.1 Rechtspraak.nl

4.3.1.1 Naming convention

Historically, the documents on Rechtspraak.nl have been defined using a national identifier called LJN, but Rechtspraak.nl has switched to [ECLI \(European Case Law Identifier\)](#)

Metadata concepts have been attempted to describe using URIs, following semantic web prescriptions. However, this is always succesful: there are many instances of property-specific quirks. One example is the `dcterms:accessRights` property, which has its value fixed to the string literal 'public' instead of a URI, causing RDF processors to not treat the value as the same concept.

Properties in the Dublin Core ontology normally define a range for their relations, and this range is typically a subset of URIs, but Rechtspraak.nl seems to ignore this.

Also, the subject of a triple is not always clear. For example: XML documents contain two `dcterms:modified` properties and it is unclear which one refers to the date on which the document was modified and which one to the date on which the metadata was modified.

4.3.1.2 Delivery methods

[Rechtspraak.nl](#) provides a search interface and search API, where the search interface provides more features. In the API, one can search for a number of document features (location court, type of procedure, publication date, etc), but the result is just an Atom feed and does not allow for full text search.

Documents are available in XML ([example](#)) and XHTML ([example](#)). Both documents contain basic metadata embedded in the document, but metadata can also be obtained separately for XML documents. The XML documents contain slightly more metadata, such as LJN numbers (antiquated identifiers). Some effort has been made to describe the metadata in the XML documents as RDF, but the RDF is not well formed. (Attempting to parse the RDF will make any RDF parser crash; see <http://tinyurl.com/m28mgc8>).

We have attempted to fix some of these metadata quirks and provide XML in Metalex-compliant form. Refer to <https://github.com/digitalheir/dutch-case-law-as-linked-open-data> for more details.

4.3.1.3 Audience

The web portal and API is accessible by anyone.

4.3.1.4 License

The website states that the information is available as 'open data', but does not give an explicit license.

4.3.1.5 Maintenance

[Rechtspraak.nl](#) is managed by [spir-it](#), an ICT organization that's part of the judiciary consortium [Raad voor de rechtspraak](#).

4.3.1.6 Coverage

[Rechtspraak.nl](#) contains selected cases from the Kingdom of the Netherlands from about 1976 to the present. The website has metadata for about 1.8 million cases, and full text for about 300.000 cases.

4.3.1.7 Technical explanations

Refer to the [official documentation](#) for usage information (in Dutch), [leibniz-internship-report.herokuapp.com/rechtspraak.nl](#) for a list of gotchas and [github.com/digitalheir/dutch-case-law-as-linked-open-data](#) for a derivative service that attempts to fix some of the problems with [Rechtspraak.nl](#).

4.3.1.8 Relevance

Aims to make available a superset of all other electronic corpora of jurisprudence. Covers all court decisions in use. Professional users typically prefer legal publisher's subscription-based web portals, however.

4.3.1.9 5 star open data

An idealized version of this data set would be [4/5 stars according to Tim Berners-Lee 5 star deployment scheme](#), but the RDF is not well formed. So realistically, the website is a 3 star data set.

4.3.2 Rechtspraak.nl wrapper

To correct the output of Rechtspraak.nl, a wrapper service was created within the Leibniz Center for Law.

4.3.2.1 Naming convention

The wrapper builds on ECLI to construct dereferencable HTTP URIs. For example: <http://rechtspraak.lawly.nl/id/ECLI:NL:CRVB:2014:617>. The URIs dereference to a JSON-LD document that also uses these URIs where possible (although mostly in contracted form, so it looks like just the ECLI).

4.3.2.2 Delivery methods

An HTTP API allows one to query:

- For individual documents:
 - Document metadata in JSON-LD
 - Metalex XML with embedded metadata
 - Rechtspraak.nl XML
 - HTML manifestation
- For multiple documents:
 - Metadata dump
 - Search

4.3.2.3 Audience

The web portal and API is accessible by anyone.

4.3.2.4 License

Same as Rechtspraak.nl ('open data', but no explicit license).

4.3.2.5 Maintenance

This wrapper is maintained by the Leibniz Center for Law; inquiries go to bcf4ed85@opayq.com.

4.3.2.6 Coverage

Same as for Rechtspraak.nl.

4.3.2.7 Technical explanations

Refer to http://leibniz-internship-report.herokuapp.com/nl_linked_legal_data/dutch_case_law_as_linked_data for more information.

4.3.2.8 Relevance

Same documents as Rechtspraak.nl, except provides better metadata. API is less stable, though.

4.3.2.9 5 star open data

This is a 5 star data set [according to Tim Berners-Lee 5 star deployment scheme](#).

5 Austria

5.1 Introduction

This section describes the state of Austrian open legal data for purposes of programmatic re-use. We describe open data sources for Austrian legal sources along with some pointers on usage. Complementing information is available in [Boella, et al \(2014\)](#).

Summarizing, Austria applies a centralised approach for ensuring access to public legal data. Legislation, case law and preparatory legal documents are published in a single portal that is maintained by the [Austrian Federal Government](#). Sadly, there is no good open API to query the the data.

5.2 Law & Case Law

5.2.1 *Rechtsinformationssystem*

[Rechtsinformationssystem \(RIS\)](#) is a comprehensive database of Austrian legal data. The portal provides a collection of Austrian federal and state legislation, federal and state law gazettes and case law of the federal and state courts. RIS was launched initially in 1983 as internal system accessible only to the public administration, was made publicly available on the Internet free of charge, after the Federal Chancellery decided to open it in June 1997.

5.2.1.1 *Naming convention*

RIS uses 'law numbers' and 'document numbers', which are opaque identifiers for documents. They seem to be any sequence of ASCII characters.

5.2.1.2 *Delivery methods*

There are three ways of consuming the data in RIS: through the [RIS portal](#), the [government data portal](#) (only consolidated federal legislation) and finally through a [paid service of the Federal Chancellery](#)

5.2.1.2.1 *RIS portal*

The RIS portal is a mostly user-facing website for providing search and access to Austrian legislation.

Legal Information

including, for instance, to state law, case law, etc.

<http://www.ris2.bka.gv.at/default.aspx>

Federal law in a consolidated version

changes in the standard text incorporated

<http://www.ris.bka.gv.at/bundesrecht/>

Federal Law Gazette 1945-2003 (in pdf)

<http://www.ris.bka.gv.at/bgbl-pdf/>

Federal law leaves authentic from 2004

<http://ris1.bka.gv.at/authentic/index.aspx>

Documents are broken down up to paragraphs, which are the elements that are returned in search queries and also the lowest level for which metadata is available. These paragraphs are available isolated in either plain HTML, PDF or RTF formats, or in context of the full document in HTML.

Metadata is available as an HTML page which is not marked up semantically, and hard to scrape. According to [Boella, et al \(2014\)](#), the RIS portal 'provides a number a hypertext links between its numerous legal collections'. In our sampling, we have found some hyperlinks in metadata descriptions. There should also be links in the actual content documents, and links to external sources, but we have not come across them.

According to [Boella, et al \(2014\)](#), links are available to the original PDF publication, to the various stages of the pre-parliamentary and parliamentary procedures, to the text of relevant directives in EUR-Lex portal, but again this could not be verified.

For example, Article 1 of the document called '[2. Vereinb. gem. Art. 15a B-VG zwischen Bund und Ländern Niederösterreich, Oberösterreich und Wien über Hochwasserschutz der österr. Donau](#)' uses the following URLs:

Metadata	https://www.ris.bka.gv.at/ Dokument.wxe?Abfrage=LrW& Dokumentnummer=LWI40003342& FassungVom=01.12.2014& VonInkrafttretedatum=& BisInkrafttretedatum=& VonAusserkrafttretedatum=& BisAusserkrafttretedatum=
Isolated HTML	http://www.ris.bka.gv.at/ Dokumente/ LrW/ LWI40003333/ LWI40003333.html
Full HTML	http://www.ris.bka.gv.at/ GeltendeFassung.wxe?Abfrage=LrW& Gesetzesnummer=20000178
PDF	http://www.ris.bka.gv.at/ Dokumente/ LrW/ LWI40003333/ LWI40003333.pdf
RTF	http://www.ris.bka.gv.at/ Dokumente/ LrW/ LWI40003333/ LWI40003333.rtf

The documents most relevant for re-use are obviously the HTML versions. The documents are simple enough to re-use, but sadly lack any semantic markup.

5.2.1.2.2 Government data portal

Data in RIS is also presented in the open data portal of Austria, but only consolidated Federal Law ("Bundesrecht konsolidiert"). The data is [accessible through a SOAP interface](#).

5.2.1.2.3 Paid service of the Federal Chancellery

The Austrian Federal Chancellery offers a paid document service that allows the legal data re-users to order a single bulk data download and daily or weekly updates of so-called RIS applications ("RIS Anwendungen"), reflecting the different types of legal data governed by the portal. In 2014, the data purchase for a single data download is €110 per application and annual subscriptions (for daily or weekly updates) are €1000 per application.

5.2.1.3 Audience

The web portal and API is accessible by anyone. In addition to German, the website is also available [in English](#).

5.2.1.4 License

According to [Boella, et al \(2014\)](#), the data is open for re-use, with the only restriction that RIS must be attributed. However, we could not find this information or an explicit license on www.ris.bka.gv.at or www.data.gv.at.

5.2.1.5 Maintenance

RIS is operated by the Austrian Federal Chancellery.

5.2.1.6 Coverage

The database covers the following types of documents:

Name	Description
Austrian federal legislation	the full body of Austrian federal legal instruments in force in their applicable up-to-date version incorporating all amendments (i.e. consolidated version) with the opportunity to access previous (point-in-time) versions for many of them as well as all officially published in the Federal law gazette initial versions of these instruments. The collection of the Federal law gazette covers all issues of the paper editions from 01.05.1945 to 31.12.2003 in machine-readable format and all authentic electronic issues published on-line as of 01.01.2004.

There are links to the ALEX portal of the Austrian National library , which provides online access to the scanned images

Name	Description
Austrian state legislation	of the Law Gazette of the Habsburg Empire since 1849 as well as archive law collections from the age of the Empress Maria Theresa and afterwards. The ALEX portal is not free to re-use, nor publishes machine-readable data, so we do not discuss it. the applicable consolidated versions and with some of the historic (point-in-time) versions of the legal instruments adopted by the governments of the Austrian States (Provinces) as well as all non-authentic issues of the State Law Gazettes of the following Austrian States: Burgenland, Carinthia, Upper Austria, Salzburg, Styria, Tyrol, Vorarlberg. Since 2014 RIS provides access to the authentic electronic issues of the State Law Gazettes of the Provinces Carinthia, Styria, Tyrol and Vienna.
Austrian municipal law	selected municipal law collection of some of the municipalities in the following Austrian Provinces: Carinthia, Lower Austria, Salzburg, Styria, Vienna
Austrian federal and state case law	decisions of the Constitutional Court (since 1980), Administrative Court (since 1990), selected decisions of the Supreme Court, Regional Appeal Courts, Regional and District Courts, and other courts in civil and criminal matters.
By-laws of Austrian ministries	selected decrees and instruction edicts of Austrian federal ministries.
Bills	collection draft bills of Austrian ministries and government bills.
Austrian laws in English	translated in English consolidated versions of more than 80 selected Austrian federal laws.

There are also some translations available [in English](#).

5.2.1.7 Technical explanations

For a technical explanation, please refer to www.ris.bka.gv.at for the RIS portal, and data.bka.gv.at/ris/OGDService.aspx for the SOAP service of the consolidated federal legislation.

5.2.1.8 Relevance

RIS portal offers many value-added features, but is hard to (re-)use. A list of features from [Boella, et al \(2014\)](#):

- RIS provides access to a comprehensive collection of consolidated versions of all Austrian federal legislative acts in force with the option to access previous (historic) versions of most of them. For each document the user can choose a date and receive the full text of the act to this specific point in time.
- Legal documents are provided with a detailed set of metadata, incl. links to modifying/modified acts and their publication in the Federal Law Gazette.

- The Austrian legislation is classified by subject matter according to the hierarchical 3-level taxonomy “Index of Federal Law” (“Index des Bundesrechts”).
- Where needed, editorial notes are added to metadata, for instance to inform users about specific conditions related to the entry into force of the document.
- Selected court decisions are provided with expert annotations of the most important legal rule(s) deriving from the reasoning part of the judgment (the so called “Rechtssatz”) and relevant key provisions are added to document metadata.
- The consolidated up-to-date versions of more than 80 most important Austrian federal laws are provided in English translation.

5.2.1.9 5 star open data

The RIS is a [three star data set according to Tim Berners-Lee deployment scheme](#).

6 References

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