

IMPROVING LEGAL INFORMATION RETRIEVAL BY ONLINE LEGAL TOOLS DATABASE



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Introduction

With the emergence of Internet various institutions started making available important legal materials in centralized online databases. Depending on the previous classification of data, available resources, degree of disclosure, each organization adopts its own way to present materials online. Oftentimes institutions providing similar data organize it in different ways (different titles, categories, search criteria, search engines, websites etc.) Additionally, some may do it differently due to budget restrictions, profitability/non-profitability of the project, etc. As a result, a user needs to adjust to interface and retrieval mechanisms of each online database.

In the present thesis I illustrate state of the art in retrieval of legal sources online from the user perspective in order to contribute to the development of recently made available Legal Tools database run under the auspices of the International Criminal Court.

The features that immediately distinguish this database from other international criminal law libraries are:

- 1) The database incorporates legal acts and case law from different jurisdictions (both national and international) related to international crimes;
- 2) It allows analysis of certain issue across national and international jurisdictions in various languages enabling its users to distinguish and compare judicial practice and situations, unlike the majority of legal databases focusing on specific jurisdiction;
- 3) It is free to the public and is organized with the aim to reduce costs of the International Criminal Court by distributing work among several research institutions.

I will describe interface of Legal Tools website, the retrieval of data, the presentation of results, the organization of documents and I will compare it with the manner materials are organized on other websites and online databases (legal libraries, human rights advocacy websites, etc.)

Method

To substantiate my discussion of the Legal Tools website, I invited four potential users of the Legal Tools database (three students of LLM programs “Public International Law” and “Theory and Practice of Human Rights” of the University of Oslo, one employee of Norwegian Organization for Asylum Seekers) for an informal usability test which took form of a structured interview. All of the interviewees conduct regular research on such databases as International Court of Justice, International Criminal Tribunal for Former Yugoslavia, Council of Europe, Westlaw, Refworld, etc. A reflection of the interviewees about the Legal Tools website help to determine the problems associated with use of the Legal Tools database.

1 What is the Legal Tools project?

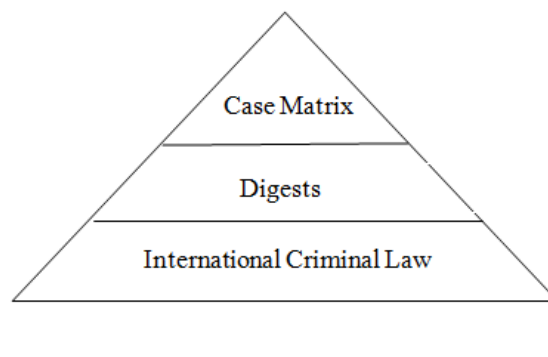
Legal Tools project is a joint effort of research institutions to provide legal data about prosecution of international crimes in the following forms:

- “[...]International criminal law organized in more than ten collections and databases of legal resources such as court decisions, treaties, preparatory works and publications;
- [Digests] of such raw data in three comprehensive commentaries on substantive and procedural international criminal law, as well as means of proof for the legal requirements of core international crimes and modes of liability;
- An application tailor-made for the investigation, prosecution, defence and adjudication of serious human rights violations which may amount to core international crimes (the Case Matrix)”¹.

1.1 Description of the Legal Tools project

The following is the graphical representation of the way these three components correlate.

Scheme 1². Correlation between the three components



¹ <http://www.prio.no/FICJC/Forum-activities/The-ICC-Legal-Tools-Programme-of-the-Norwegian-Centre-for-Human-Rights-and-the-broader-ICC-Legal-Tools-Project/> accessed on September 4, 2009

² Based on the scheme by Morten Bergsmo available at <http://www.huridocs.org/involved/conference/presentations/Bergsmo%20presentation.pdf>

Body of international criminal law³

International criminal law is organized in the following 9 databases comprising over 40 000 documents:

ICC Documents

This database incorporates two thematic folders:

1) Basic documents

It incorporates foundation documents of the International Criminal Court (such as the Rome Statute of the International Criminal Court (hereinafter – Rome Statute), Rules of procedure and evidence, Elements of crimes, etc.) as well as the key documents regulating internal activity of the court adopted by the judges (such as the code of professional conduct for counsel, code of judicial ethics, regulations of the registry, etc.)

2) ICC situations and cases

It incorporates four situations that were referred to the International Criminal Court for adjudication. Three states parties to the Rome statute – Uganda, the Democratic Republic of the Congo and the Central African Republic – have referred situations occurring on their territories to the International Criminal Court. In addition, the Security Council has referred the situation in Darfur, Sudan – a non-state party. Each of the situations is organized in separate folders structurally represented by “Situation only records” and “Cases” that are processed by the International Criminal Court in respect of alleged criminals.

ICC Preparatory works

³ Further description of the project and the website is based on the information available at <http://www.legal-tools.org/en/overview-of-the-tools/> accessed on August 4, 2009

This database incorporates documents related to the creation of the International Criminal Court, negotiation and drafting of the Rome Statute. The database encompasses documents of the Ad Hoc Committee on the establishment of the International Criminal Court throughout years 1994-1996, International Law Commission throughout years of 1989 – 1995, Preparatory Commission throughout years of 1999-2002, Preparatory Committee throughout years of 1996-1998, UN Diplomatic Conference in the course of 1998 (provisional agendas, minutes, comments of states about the establishment of the International Criminal Court, reports of the working groups and secretary general about establishment and operation of the International Criminal Court, press releases, position papers, etc.). The database includes documents produced by academic institutions, non-governmental organizations, and states.

International Legal Instruments

This database stores important international treaties in four areas:

- Public international law

This section focuses on legal treaties regulating obligations of states on the international arena, constituent documents of international organizations, peace agreements, law of the sea and other instruments.

- International human rights law

This section encompasses general human rights instruments and documents regulating activity of international human rights bodies.

- International humanitarian law

This section consists of The Hague Conventions, Geneva Conventions, and other international instruments in the field.

- International criminal law

This section includes documents on international crimes, international(ised) criminal jurisdictions, and instruments regulating international cooperation in criminal matters.

International(ised) Criminal Jurisdictions

This database keeps basic legal data about international military tribunals in Nuremberg (1945-1946) and Tokyo (1946 - 1948), International Criminal Tribunal for the former Yugoslavia (established in 1993), International Criminal Tribunal for Rwanda (established in 1994), United Nations Mission in Kosovo courts and tribunals (authorized in 1999), Special Court for Sierra Leone (established in 2002), the East Timor Panels for Serious Crimes (established in 2000), the Iraqi High Tribunal (established in 2003), and the Extraordinary Chambers in the Courts of Cambodia (established in 2003) such as statutes, rules of procedure and evidence, codes of professional conduct, agreements concerning headquarters, etc.

International(ised) Criminal Judgments

This database provides comprehensive case law from the aforementioned tribunals in the form of indictments and decisions. Jurisprudence of each tribunal is organized alphabetically based on names of defendants or based on the state where the tribunal was located. Some cases are subdivided into “indictments”, and/or “decisions” and “other documents”.

National Jurisdictions

The purpose of this database is to provide essential national legal instruments necessary to conduct comparative research on criminal law and procedure and on the legal status of core international crimes in each system. Legal system of each state is represented by such documents as constitution, criminal law, law regulating activity of judiciary, laws implementing international human rights obligations of the state, professional commentaries, etc.

National Implementing Legislation

This database stores national legislation implementing Rome Statute. A user may find agreements on cooperation between the International Criminal Court and particular state, criminal codes (both substantive and procedural), laws on protection of witnesses, etc.

National Cases Involving Core International Crimes

This database collects the most relevant decisions issued by national courts and tribunals concerning genocide, crimes against humanity, and war crimes, both in civil and criminal matters.

Other International Legal Decisions

The database presents decisions of the International Court of Justice on a number of issues (compensation for injuries suffered during service for the United Nations, cases concerning armed activities, cases questioning legality of use of force, application of convention on the prevention and punishment of crimes of genocide, etc.). Each case is represented by a number of documents such as judgment, dissenting opinions, separate opinions, orders, etc. ensuring full coverage of procedural history of each case.

Digests of the international criminal law

In order to enhance usability of the collected data, the body of international criminal law is interpreted and classified in the following databases:

Elements Commentary

It provides doctrinal explanation of elements of crimes and modes of liability in accordance with the Rome Statute. This tool is only available through the Case Matrix (see below).

Means of proof document

“This tool provides practical examples of the types or categories of evidence used in national and international criminal jurisdictions to satisfy the legal requirements of the crimes and modes of liability contained in the Rome Statute[...] This tool is only available through the Case Matrix (see below)”⁴.

Electronic application of the resultant body of information

Case Matrix is a case management system which allows its users (judges, prosecutors, defense counsels, victim’s representatives, NGOs, etc.) to trace each case and easily access supplementary resources necessary for the furtherance of their work. It serves several functions:

- Provides electronic library of the key resources selected from the aforementioned databases;
- Links to “Elements commentary” through general table of contents and at the level of specific legal requirements for each crime; and
- Links to “Means of proof document”;
- Provides tool for structuring information and evidence on each concrete case.

Case Matrix may only be accessed by approval of the International Criminal Court and upon signing standard Case Matrix Understanding.

The Case Matrix has been introduced in several jurisdictions on the basis of a standard Case Matrix Understanding entered into, inter alia, with:

- the War Crimes Chamber of Bosnia and Herzegovina;
- Extraordinary Chambers in the Courts of Cambodia;
- Crimes Against Humanity and War Crimes Section of the Canadian Department of Justice;
- Dutch National Prosecutor’s Office and War Crimes Unit;

⁴ <http://www.legal-tools.org/en/overview-of-the-tools/> accessed on September 4, 2009

- Danish Special International Crimes Office;
- Norwegian National Authority for Prosecution of Organized and Other Serious Crime;
- Attorney General's Office of Indonesia;
- Office of the Defense of the Iraqi High Tribunal;
- Human Rights Watch; and
- Several defense counsels.

It has been translated from English into French, Arabic, Bahasa Indonesian and Khmer⁵.

1.2 History and purpose of the Legal Tools project

Development of the Legal Tools project was preceded by consultations with more than 120 experts from international and national criminal justice systems and study visits to large national serious fraud agencies, such as the Serious Fraud Office in London, and the Oberlandesgericht in Cologne (Germany)⁶. The work commenced with preparation of collections of basic documents of the International Criminal Court, international legal instruments and publications. Elements commentary, proceedings commentary and Case Matrix followed it. The next stage encompassed collection of documents from national and international jurisdictions involving core international crimes.

The first version of electronic collections was prepared in 2005. Effectiveness of the project spurred its extension to other offices and to the general public under guidance of court-wide Legal Tools Advisory Committee. The Legal Tools database and Case Matrix were published on the separate website (www.legal-tools.org) in 2008 and were linked to

⁵ http://www.icc-cpi.int/NR/rdonlyres/58958352-4379-46AB-81E8-61A7D85418D2/0/ICCCaseMatrix_ENG.pdf accessed on September 4, 2009

⁶ <http://www.legal-tools.org/en/what-are-the-icc-legal-tools/2003-2005/> accessed on August 12, 2009

the website of the International Criminal Court (www.icc-cpi.int) communicating the project to the public at large in 2009.

As any other electronic database, the electronic suite of international criminal law was necessary for the International Criminal Court to efficiently access information. It was recognized, however, that the Legal Tools Project is a much more powerful tool because it can empower any professional working with international crimes since it draws on more than 10 years of experience from the practice of international criminal justice.

Pursuant to article 17 of the Rome Statute, the role of the International Criminal Court is reduced to “complementary” to national jurisdictions. The International Criminal Court shall take on case if the state itself is unable or unwilling to genuinely do so. “Putting an end to impunity of perpetrators consequently largely depends on legislative and institutional preparedness of national courts to prosecute core international crimes. The state of such national preparedness is therefore in many ways a new frontline issue in the discourse on criminal justice for atrocities”⁷.

The mission of the Legal Tools project is therefore to ultimately bring the comprehensive suite of international criminal law in a user friendly way to professionals conducting work at the national level. User friendliness of the project is achieved through careful selection of the materials and construction of databases, classified doctrinal interpretations and creation of electronic toolbox of international criminal law.

1.3 Organization of work

The work on the project consists of:

⁷ Morten Bergsmo. *The ICC Legal Tools Project: its services, goals, status and further development*, HURIDOCS conference, February 26, 2009 available at <http://www.huridocs.org/involved/conference/presentations/Bergsmo%20presentation.pdf> accessed on September 4, 2009

- (1) editorial selection of materials;
- (2) registration of metadata and keywords for each document;
- (3) uploading the documents.

Development of the Legal Tools project is formally entrusted to the Office of the Prosecutor of the International Criminal Court, but due to limited human resources and labor intensiveness of the project, the work was outsourced to several expert research institutions which concluded cooperation agreements.

Because the project is made *pro bono publico*, it is essential that processing of information and development of tools is entrusted to non-commercial organizations which would independently, secure funding of their work. Outsourcing of work to outside research institutions also ensures sustainability of the Legal Tools project.

Eight research institutions are entrusted with particular sections of the Legal Tools pursuant to their cooperation agreements with the International Criminal Court:

- The Human Rights Law Centre, University of Nottingham (UK);
- Norwegian Centre for Human Rights, University of Oslo (Norway);
- Asser Institute (Netherlands);
- Hague Institute for the Internationalization of Law (Netherlands);
- International Research and Documentation Centre for War Crimes Trials, University of Marburg (Germany);
- Institute for Law and Informatics, Saarland University (Germany); and
- The Institute of International Law and International Relations at the University of Graz, TRIAL (Track Impunity Always) (Switzerland).

Each of the research institution is assigned with the particular tool of the Legal Tools database⁸.

1.4 Guidelines for the Legal Tools project

Two instruments regulate the way research institutions process the documents: The metadata manual adopted by the Legal Tools Advisory Committee on the 17th of October 2008 (Manual) and Keywords list of the Legal Tools project as of February, 2008 (Keywords list).

The purpose of the Manual is to provide an overview of the metadata that are being collected for each resource. “A definition is provided for each metadata field. Furthermore, specific information is provided regarding the field type, the scope of application of the piece of metadata, and whether multiple entries are possible... Additionally, based on the practical experience with the collection of metadata thus far, the Manual contains tips and examples for the collection of some of the metadata”⁹.

Table 1. Overview of data categories collected for each resource of the Legal Tools database (in accordance with the Manual)

Basic data describing the resource					
<i>Title of the resource</i>	<i>Source of the resource</i>	<i>Language of the resource</i>	<i>Date of the resource</i>	<i>Content of the resource</i>	<i>Relations with other resources or entities etc.</i>
Data specific to judicial documents					
<i>Case name,</i>	<i>Related information</i>	<i>Phase of case</i>	<i>Outcome of trial</i>	<i>Information about judge,</i>	<i>Information about other participants</i>

⁸ <http://www.legal-tools.org/en/work-on-the-tools/table-of-responsibilities/> accessed on September 4, 2009

⁹ http://www.legal-tools.org/fileadmin/user_upload/Legal_Tools_Metadata_Manual_version_1-1.pdf accessed on September 4, 2009

<i>short title</i>				<i>court</i>	<i>etc.</i>
Data specific to documents of the International Criminal Court					
<i>Court record, number, interlocutory appeal number</i>		<i>Officiality of the document</i>		<i>Titles for situations in the International Criminal Court, etc.</i>	
Access rights, Bibliographical information, Subject levels, Administration and quality control					
<i>Level of confidentiality, copyright authorization</i>	<i>Resource citation</i>	<i>Subject, phase of preparatory works</i>	<i>Date accessed, downloaded, published</i>	<i>Responsible outsourcing partner</i>	<i>Path name, file name, database record number, etc.</i>

The keywords list is based on the thesaurus of the database of the International Criminal Court. “Nearly all of the keywords are related to the provisions of the Rome Statute, Rules of Procedure and Evidence, Regulations of the Court, and the Code of Professional Conduct for Counsel”¹⁰. The keywords list indicates hierarchical relationship between the terms. For instance, see hierarchical relationship between the following terms:

amicus curiae

granting leave to amicus curiae
invitation by Chamber to amicus curiae
observations by amicus curiae

responses to observations of amicus curiae
time limit for observations by amicus curiae

The keywords list does not display related keywords to the terms, while this option is available in the thesaurus. “An example is the term “*burden of proof*”. The thesaurus [but not the Keywords list] indicates that the following key-words are related: *conviction of guilt*

¹⁰ http://www.legal-tools.org/fileadmin/user_upload/Legal_Tools_Key-word_List_2009-02-05.pdf accessed on September 4, 2009

beyond reasonable doubt, evidence, no reversal of burden of proof [...] Displaying this relationship [...] would have made the list too complex.”¹¹

¹¹ *ibid.*

2 What is the Legal Tools website?

2.1 Description of the Legal Tools website

Legal Tools website has the following URL address: www.legal-tools.org. Its homepage answers the question: “What are the ICC Legal Tools?” All web pages bear logo of the International Criminal Court on the top and are equipped with a vertical navigation panel located on the left of the webpage. Most web pages (with the exception of “Search the database” and “Go to database”) display continuous text. Most webpages contain special button “Go to database” apart from the navigation bar entitled similarly.

Screenshot 1. Homepage of the Legal Tools website



The screenshot shows the homepage of the Legal Tools website. At the top left is the logo of the Cour Pénale Internationale (International Criminal Court). At the top right, there are links for 'français', 'home', and 'sitemap'. A vertical navigation panel on the left contains the following items: 'Back to legal texts and Tools', 'What are the ICC Legal Tools?' (selected), 'Overview of the Tools', 'Current status of the Tools', 'Go to Database', 'Search Database', 'Work on the Tools', 'Copyright policy', 'Contribution of materials', and 'Questions and comments'. The main content area is titled 'What are the ICC Legal Tools?' and contains the following text:

Home » What are the ICC Legal Tools?

[Go to Database](#)

What are the ICC Legal Tools?

The Legal Tools have been developed at the Office of the Prosecutor. They equip users with legal information, commentaries and an application to work more effectively with core international crimes cases (involving war crimes, crimes against humanity or genocide). The Tools serve as an electronic library on international criminal law and justice. They comprise at present over 40,000 documents in several databases (the "Legal Tools Database"), together with four legal research and reference tools developed by lawyers with expertise in international criminal law and justice: the Case Matrix, the Elements Commentary, the Proceedings Commentary and the Means of Proof Document. Text in these tools or in the Legal Tools Database does not necessarily represent views of the ICC, any of its Organs or any participant in proceedings before the ICC or any of the ICC States Parties.

The ICC provides the general public with free access to the Legal Tools Database of basic legal information in international criminal law through this website (the "Legal Tools Website"). In so doing, the Legal Tools Project represents a significant effort to disseminate legal information in the Court's area of work. Additionally, criminal jurisdictions, counsel and NGOs that work on core international crimes cases may seek to have access to the Case Matrix - which encompasses the Elements Commentary, the Means of Proof Document and key documents from the Legal Tools Database - by sending an e-mail message with a short statement on the nature of the need to case.matrix@icc-cpi.int. This represents an important knowledge transfer platform for jurisdictions outside the ICC, through which legal information pertaining to core international crimes - much of it generated by international criminal jurisdictions - is made available to those who need it, in a practical and cost-effective manner.

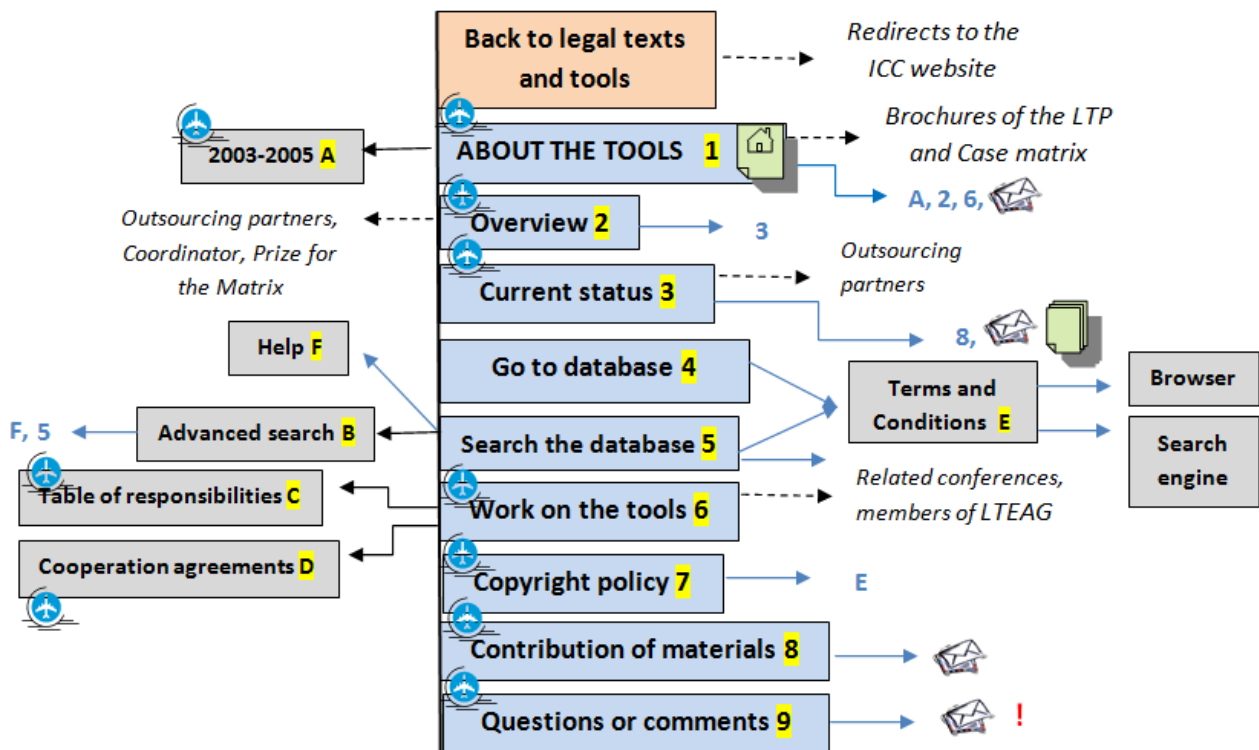
Navigation panel consists of the following sections and cascading subsections:

- *What are the ICC Legal Tools?* (Provides description, background information, goals, and names of those in charge of the Legal Tools Project. One and a half screen).
 - *2003-2005* (Timeline of the Legal Tools project from 2002 – 2005 containing one and a half screen.)
- *Overview of the Tools* (Table detailing contents of the Legal Tools project. Six screens.)
- *Current status of the Tools* (Current technical state of the Legal Tools database and specific status of each tool. Three screens)
- *Go to Database* (Browser of the entire Legal Tools database (see Scheme 2). Access to the browser is permitted once the user agrees with the Terms and conditions of use of the Legal Tools database by clicking a button. Browser takes up one screen, while Terms and conditions take up seven screens.)
- *Search the database* (Leads to data entry field for a user to search Legal Tools database. This section contains one screen.)
 - *Advanced search* (Contains data entry fields, check boxes, open lists for a user to fill in to retrieve necessary information from the Legal Tools database. Three screens.)
- *Work on the Tools* (Overview of the way the work on the Legal Tools project is organized among outsourcing partners. One and a half screen.)
 - *Table of responsibilities* (Table detailing distribution of responsibilities over each section of the Legal Tools database among outsourcing partners. Three screens.)
 - *Cooperation agreements* (Provides links initiating download of cooperation agreements between outsourcing institutions and the International Criminal Court. One screen.)
- *Copyright policy* (Informs about compliance of the Legal Tools database with copyright legislation and invites copyright owners to send their complaints to the Legal Tools project. One and a half screen).
- *Contribution of materials* (Invites users to contribute relevant materials to the Legal Tools project. One screen.)
- *Questions and comments* (Invites users to send queries and comments to the Legal Tools project. One screen).

Horizontal navigation line is represented by breadcrumbs, which allow users to identify its location on the website as well as to change it by clicking one of the links. Continuous text of the web pages contains embedded links with small pop-up windows appearing once a user points at them. These windows provide summary information on where a link will take a user prior to the user clicking on the link (so called gloss).

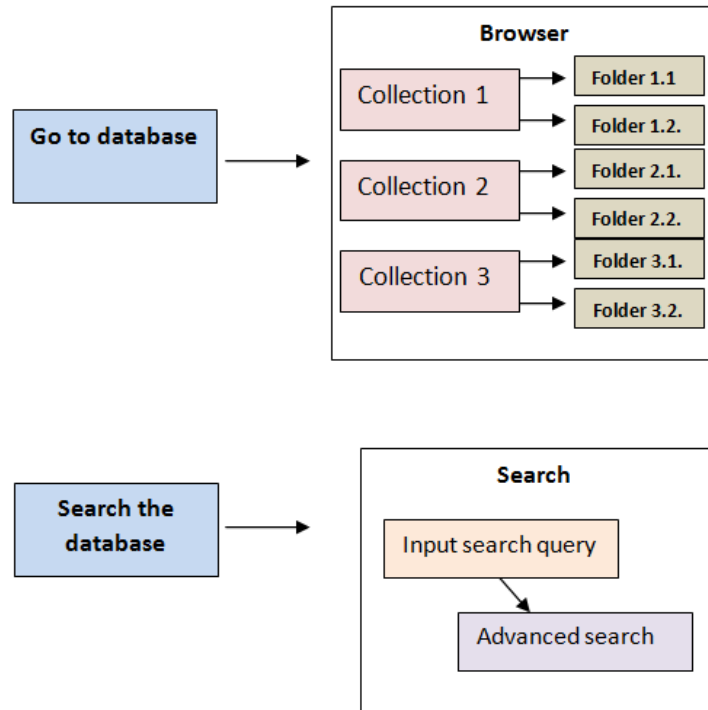
The following scheme illustrates external references from the Legal Tools website to other websites as well as internal references between different web pages of the website.

Scheme 2. Sitemap of the Legal Tools website



- >* *Italics* Redirection to external websites through links embedded into continuous text
- >* *Nº/Letter* Direction to other web pages of the website through links embedded into continuous text
- Section Nº** Sections located on the left panel of the website. Each section has its number which is used for reference (see sign above)
- Subsection Letter** Subsections that emerge upon clicking on the sections on the left panel. Each section has its letter which is used for reference (see sign one from above)
- Link to e-mail
- Link to privacy policy
- Link to the Manual and Keywords list
- Homepage
- Go to database

Scheme 3. Interrelation between browser and search



2.2 Retrieval of data on the Legal Tools website

To retrieve data on the Legal Tools website, a user may use sections “Go to database” or “Search the database” on the navigation panel. If the user opens the website for the first time, it will need to accept Terms and conditions of use by clicking button “Yes, I accept” prior to accessing or searching the database (for a more discussion of the Terms and conditions, see paragraph 2.3).

“Go to database” option allows a user to overview content of the entire Legal Tools database through browser. All the documents are distributed among folders as described in paragraph 1.1.

Screenshot 2. Browser of the Legal Tools database



The “Search the database” index link leads a user to a data entry field designed for simple search. But a user may opt for the “Advanced search” if he has a complex query. The advanced search of the Legal Tools database may be conducted by the following criteria in the following form.

Table 2. Criteria of the advanced search

Search Criteria	Form	Comment
Full text search	Data entry field	
Title search	Data entry field	Searches the document by title and short title (i.e. widely known substitute of title) in either the official language or official translations in English or French.
Source type	Open list	Searches by the type of the entity primarily responsible for the making of the content of the resource (judicial body, prosecution service, defence service, legislative or executive branches of the state, international organization, international diplomatic conference, NGO, etc.)
Source	Data entry	Searches by the source primarily responsible for the

	field (with selection)	making of the content of the resource
Content type	Open list	Searches by the nature or genre of the content of the resource (academic writing, domestic legal instrument, preparatory works, implementing legislation, international legal instrument, etc.)
Organization	Data entry field (with selection)	Searches by the state or organization to which the source belongs
External identifier	Data entry field	Searches by unique identifier, if any, given by the source to the document. For the International Criminal Court records, it is a document number, for the UN documents, it is the number at the top of the page, etc.
Language	Checkboxes and Open list	The user may chose between 35 languages of documents in the Legal Tools database.
Date	Data entry field (To - From)	The user may search by the date of creation of the document (with the exception of international legal instruments where the date of adoption is a criteria)
Case name	Data entry field	Searches judicial documents by name of the case
Accused/defendant	Open list (with selection)	Searches judicial documents by name of the accused party/defendant. Searches public international law by the states participating in litigation
Case number	Open list (with selection)	Searches by official number of the case
Phase of case	Open list	Searches by phase of proceeding (appeal, review, revision, admissibility, merits, advisory opinion, etc.)
Place of court	Open list (with selection)	Searches by the geographical location of the court to which the case relates
Type of court	Open list	The user may choose between ordinary, international(ized) and military jurisdictions.
Outcome of trial	Open list	The user may choose between the following

		outcomes: conviction, acquittal (partial and full), new trial ordered, revision allowed
Key judicial document	Open list	Searches judicial documents by particular court decision: decision of acquittal or conviction, decision on sentence, reparation order
Participating states	Checkboxes (Yes or No)	Search by criteria of whether states participated in the proceeding for which the judicial document was produced (this field can be applied when states are not litigants)
Victims participation	Checkboxes (Yes or No)	Search by criteria of whether victim participated in the proceeding

Search engine applies Boolean logic¹² when processing queries of the user conducting text search.

2.3 Legal relationships between the Legal Tools website and its users

The use of the Legal Tools website is conditional on specific regulations. Currently, there are 3 policies located on the website regulating legal relationships entered by the user with the International Criminal Court and partners of the Legal Tools project:

1. Terms and Conditions of use of Legal Tools (hereinafter - LTP regulation);
2. Terms and Conditions of use of this site, or General disclaimer as entitled on the website (hereinafter – General disclaimer); and
3. Privacy Policy (as a separate webpage).

- 1) Delimitation of regulation spheres

¹² Search engine supporting implied Boolean logic supports special operators which indicate that a word is required to be present or absent for a match to occur. For example, “+” stands for “and” connector between two words, “-“ stands for “not” connector between two words, and blank between the two words stands for “or”.

As titles suggest, each document regulates different legal relationships existing between a user and a website owner. While General disclaimer represents general policy of the International Criminal Court with respect to any website that it endorses¹³, LTP regulation is designed specifically for Legal Tools. However, as it can be inferred from the text of the documents, regulation spheres of the documents overlap at several points:

- Scope of rights

Paragraph 1 of the LTP regulation stipulates the scope of rights granted to the user, which includes consultation, downloading, copying of material for user's personal non-commercial use. Similar norms are provided for by the General disclaimer in paragraph a.

- Disclaimer of liability

Paragraph 6(a) of the LTP regulation states that the opinion of the parties participating in the Legal Tools project does not necessarily represent opinion of the International Criminal Court. Moreover, the user shall indemnify the International Criminal Court against any liability arising out of the user's use of the Legal Tools. The similar norm is provided for in paragraph c and under the "Disclaimers" title of the General Disclaimer. Both documents stipulate that the User's sole and exclusive remedy is to discontinue using the site (or the Legal Tools).

- Both documents provide for privacy policy regulating the use of the site or Legal Tools.
- Both documents enable the International Criminal Court to alter, limit or discontinue access to the materials (paragraph 8 of the LTP regulation, paragraph under title "General" in the General Disclaimer)
- Privacy Policy of the General Disclaimer is repeated on a separate webpage (see the sitemap of the Legal Tools website above, Scheme 2).

¹³ Identical disclaimer is located on the website www.icc-cpi.int

- Section entitled “Copyright policy” (see the sitemap of the Legal Tools website above, Scheme 2) repeats paragraph 5 of the LTP regulation.
- Paragraph 1(b) of the LTP regulation states that the International Criminal Court may authorize a user in writing to redistribute, compile or create derivative works, etc. General Disclaimer not only provides for the same norm, but also cites contact which may be used to communicate with the International Criminal Court on this matter. This is an example of documents supplementing one another.

2) Contradiction between the regulating documents

The major discrepancy between the LTP regulation and the General disclaimer was found in their Privacy policies. The Privacy policy regulates the use by the International Criminal Court of generic data obtained from a user (such as Internet protocol (IP) addresses, navigation through the website, the software used and the time spent, along with other similar data) and of personal data provided by the user (name and title, address, contact details and other data which helps identify the user).

According to the Privacy policy of the General disclaimer, the International Criminal Court may use generic non-identifying data internally only for web site traffic analysis. However, according to the privacy policy of the LTP regulation, the International Criminal Court may use, process and disclose it without any restriction.

The International Criminal Court assumes no responsibility for the security of personal data, according to the Privacy policy of the General disclaimer (paragraph 2.2 of the LTP regulation), and undertakes to only use it for statistical purposes not publishing it for general access. However, privacy policy of the LTP regulation adds that personal data may be used for periodical communication of information about the Legal Tools project and may be shared between external partners in charge of the development of the Legal Tools. Moreover, it provides for cases when personal data may be disclosed. Further

reading of the paragraph suggests that personal data is in fact subject to obligation of confidence on the part of the International Criminal Court:

“Any information **other than Personal Data** the User communicates to the Court pursuant to or by reason of the Legal Tools Project **will be considered non-confidential and will not be subject to any obligation of confidence** on the part of the International Criminal Court.” (paragraph 2.2. of Terms and conditions of use of Legal Tools)

The Legal Tools database exists online, and therefore is perceived as an unalienable part of the Legal Tools website by a user. The user accessing the Legal Tools website most likely needs to access the database. Moreover, as it is stated in the paragraph a of the General Disclaimer, the latter document regulates the use of website and materials stored on the website. Therefore, it seems more convenient for a user to unite LTP regulation with the General Disclaimer in a single document and to connect embedded links of the Legal Tools website to a single document (as opposed to the singled out sections) in order to avoid repetitions.

3) Certain shortcomings of the LTP regulation

- Acceptance of the LTP regulation by website users

According to the introduction of the LTP regulation, *access* by the user to the website constitutes agreement with the Terms and Conditions. The moment when a user becomes bound by the terms of use of the website is debated. Some argue that a mere fact of accessing a website does not constitute agreement with its terms, and a threshold for communicating acceptance with terms should be higher. In case of Legal Tools project, this moment is unambiguously determined by the moment when a user clicks the button “Yes, I agree” located under the LTP regulation when accessing the Legal Tools database.

This is also important when assessing the following norm of the Introduction to the LTP regulation: “By exercising any rights to the Legal Tools under these Terms and Conditions, the User agrees to be bound by these Terms and Conditions”. This norm

redefines the moment a user accepts the LTP regulation by linking it to an ambiguous “exercise of any rights to the Legal Tools”.

Thus, it is recommended to link the moment the user is bound by the LTP regulation to the moment of clicking the button in the end of the document, since earlier acceptance of websites terms has not been widely approved by the legal doctrine¹⁴.

- Scope of rights granted to the user

According to paragraph 1 of the LTP regulation, a user is authorized to consult, download and copy the information, documents, materials contained in the Legal Tools database subject to the following limitations:

- 1) Information must serve user’s personal needs;
- 2) Intended for non-commercial use, not primarily intended for or directed toward commercial advantage or private monetary compensation;
- 3) Not authorized to transmit, resell or redistribute Legal Tools or the information, documents and materials contained therein unless authorized in writing;

The first requirement unnecessarily excludes all the users of the Legal Tools database performing work for third person(s). While a student making research in international criminal law, or a victim collecting information about possible charges against the perpetrator, use the Legal Tools database for their “personal needs”, in other cases this does not seem so. A defence attorney and human rights activists search the database for their client’s needs and for the needs of the community. While the discussion on “personality” of needs is rather philosophical, it is recommended to clarify the term

¹⁴ See generally Christina L. Kunz, John E. Ottaviani, Elaine D. Ziff, Juliet M. Moringiello, Kathleen M. Porter, and Jennifer C. Debrow “*Browse wrap agreements: validity of implied assent in electronic form agreements*” *Business Lawyer* 59 (2003) http://meetings.abanet.org/webupload/commupload/CL320004/newsletterpubs/Browse-Wrap_Big.pdf accessed on August 18, 2009.

“personal need”. Does it encompass “professional needs”, “research need”, “academic need”, etc.?

Similarly, the second requirement also narrows the audience of potential users. Consider for example a defence attorney serving the client under contract of rendering a service. His research on the Legal Tools database is directed towards performing work for the client and receiving monetary compensation for the work. Does it mean that LTP regulation prevents him from using resources of the Legal Tools database? Possible solution to the aforementioned problem is to unite requirement 2 and 3, i.e. to restrict “transmittance, reselling or redistribution of Legal Tools or the information, documents and materials contained therein for commercial purposes, primarily intended for or directed toward commercial advantage or private monetary compensation”. Therefore, it is essential to reformulate the second limitation.

Finally, the third requirement significantly affects functioning of the Legal Tools database on the web overall, undermining its essential purpose – distribution of information on international criminal law. Pursuant to article 2 of the Berne Convention for the protection of literary and artistic works, it shall be a matter for legislation of the member states to determine the protection to be granted to official texts of a legislative and legal nature. Subject to applicable law, most of the legal material is likely to be excluded from copyright and should therefore freely circulate (with the exception of material copyrighted by the Crown).

Users making research on the database should be able to send information, documents contained in the Legal Tools database to their colleagues, general public, governmental authorities etc. Moreover, the Legal Tools website should encourage spread of this information. It is advisable to reformulate provision by informing users about which material is restricted from circulation and subject to which conditions.

- Length of the LTP regulation

Taking into account that the LTP regulation takes up 7 screens which impedes prompt and effective understanding of it by the user, it is advisable to reduce its length by eliminating repetition of provisions within the document. The following provisions may be united in a single provision.

1. Endorsement by the International Criminal Court

Subparagraph a of paragraph 6 of the LTP regulation:

“The findings, interpretations and conclusions expressed in the Legal Tools or in information, documents and materials contained therein produced by the International Criminal Court are those of the various staff members, consultants and advisers of the International Criminal Court who prepared the Legal Tools and do not necessarily represent the views of the International Criminal Court or its States Parties”.

Subparagraph e of paragraph 6 of the LTP regulation:

“The inclusion of a link or reference does not imply the endorsement of the linked site by the International Criminal Court”.

Subparagraph c of paragraph 6 of the LTP regulation:

“The International Criminal Court does not represent or endorse the accuracy or reliability of any advice, opinion, statement or other information provided by any information provider, any User of the Legal Tools or any other person or entity”.

2. Disclaimer of liability

Subparagraph b of paragraph 6 of the LTP regulation:

“The International Criminal Court, members of its staff, its contractors and its employees disclaim any liability or responsibility for any financial or other consequences whatsoever arising from the use of the Legal Tools or of the information, documents and materials contained therein, including any inappropriate, improper or fraudulent use

thereof. The use of the Legal Tools is at the User's sole risk. Under no circumstances, including but not limited to negligence, shall the International Criminal Court, its staff, contractors or employees be liable for any direct, indirect, incidental, special or consequential damages, even if the International Criminal Court has been advised of the possibility of such damages”.

Subparagraph d of paragraph 6 of the LTP regulation:

“As a condition of use of the Legal Tools, the User agrees to indemnify the International Criminal Court, members of its staff, its contractors and its employees from and against any and all actions, claims, losses, damages, liabilities and expenses (including reasonable attorneys' fees) arising out of the User's use of the legal tools”.

Subparagraph c of paragraph 2 and subparagraph b of paragraph 5 of the LTP regulation can be united in a single provision. Both paragraphs refer to the same mailing address. Paragraph 2 invites contributions from the users, while paragraph 5 describes the mean to send copyright claims to the International Criminal Court.

3 User experience on the Legal Tools website

Proponents of the Web 2.0 call for simple and focused content and pixel saving layout. Since the Legal Tools database is published online, the design of its web pages should conform to these requirements.

Due to inherently loosely formulated rules of Internet design, most of the tips on web development are contained in articles by web developers and usability guidelines that bear advisory nature. However, most recommendations can be summarized in the following principles of web-design:

1. Balance – The visual weigh of the elements is balanced in the webpage;
2. Harmony and unity - Elements and pages are organized in order to give a feeling of totality;
3. Simplicity - Only the necessary elements are used to reach the purposes;
4. Consistency - The similarity and repetition allows presenting page/site with uniformity;
5. Design clarity - Readability of graphical elements in a page¹⁵.

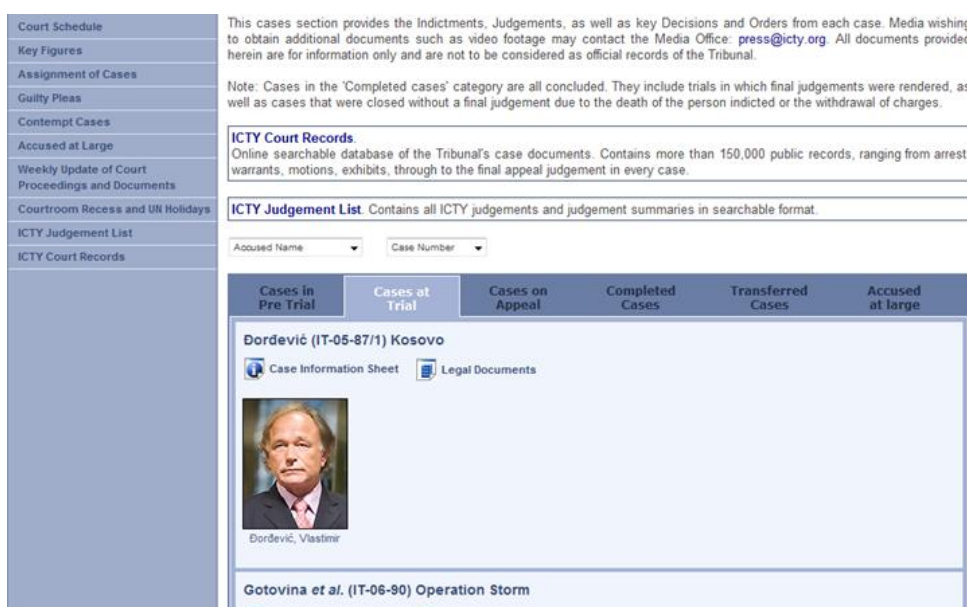
The usability test of the website revealed a number of significant barriers which complicate users of the website and as a result impede prompt and effective use of the database.

3.1 Purposing the Legal Tools website

¹⁵ *Evaluating website design* Pedro Costa, Proceedings of the 26th annual ACM international conference on Design of communication, 2008: 265-266 <http://portal.acm.org/citation.cfm?id=1456591>

According to the interviewees, they do not tend to spend much time examining the database in itself. The fact that the database is administered by a renowned institution suffices their credibility requirements. They might look through information about content of the database, but do not focus on it primarily. One of the interviewees noted, that it is important for her to know the structure of particular institution before researching a legal database. For example, in order to work with the legal library of International Criminal Tribunal for Former Yugoslavia, it is necessary to know rules of procedure and structure of the tribunal.

Screenshot 3. Interface of the legal library of the International Criminal Tribunal for Former Yugoslavia



As exemplified by the screenshot 3, a database should inform its first time users about such terms as “Transferred cases”, “Accused at large”, “Guilty pleas”, “Contempt cases”, etc.

In the opinion of interviewees, the Legal Tools website provides much excessive background information about the project thus overloading the user. Consider the fact for example, that out of 10 navigation bars there are only 2 bars which provide actual access to

the database (Go to database, Search the database), while 8 others navigation panels lead the user to detailed information about the project which is not necessary for searching the database (for example, cooperation agreements between institutions, table of responsibilities, timeline, etc.). Interviewees spent much time skipping through web pages before they actually found the search menu. In their opinion, most of the information on the website is redundant as it is not related to their search request and is not easy to read. This leads to many complications.

For example, most interviewees suppose that search menu is located on the homepage. Having not found one there, they tend to click on “Overview of the Tools” which actually contains commentary about each tool but does not provide access to the database. Presentation of information on this page leads users to conclude that the database might be located on the website of the Norwegian Center for Human Rights as shown on the screenshot below. However, they don’t find it there either. In the opinion of one of the interviewees, there is no need to mention outsourcing partner responsible for each tool, as it takes up much space on the webpage and confuses the user. Interviewees also tended to click on the title of each tool which they expected to be a link. This appeared to be a simple text.

Screenshot 4. Webpage “Overview of the Tools”



Interviewees did not tend to read a webpage for more than 20 seconds. This is time consuming taking into account that the text is written in Verdana size 8.5 and usually takes up more than 1 screen. As a result, none of them fully understood what the concept of Legal Tools is. For example, one of the interviewees noted that “tools” might mean navigation bars “Go to database” and “Search the database” i.e. that each bar represents

each tool. When I asked the interviewee if she could find national criminal law in the database, she replied that probably not because the database is focused on international criminal law (based on the common use of the term “international” on the homepage). Another interviewee having browsed through the webpages of Legal Tools Website concluded that the database is unlikely to provide any information about International Criminal Tribunal for former Yugoslavia, due to often use of a term “ICC” on the homepage.

None of the interviewees were able to delineate the difference between Legal Tools project and Legal Tools database. Interviewees did not tend to scroll down the webpage “Overview of Tools”. If they did, they noted a paragraph on Case Matrix, Commentaries and Digests and supposed that they were located on the website (while in reality they are not open to the public).

Moreover, interviewees complained about mixture of terms “Legal Tools” and “Legal Texts”. One of the interviewees trying to locate the search menu on the website, clicked on “Back to Legal texts and tools” which brought her to the Official Journal and Basic Legal Texts of the International Criminal Court. Interviewee believed that the resulting list of 12 documents on the website is actually the entire library of the International Criminal Court and was disappointed about it.

The aforementioned mistakes that the interviewees tended to make indicate that current version of Legal Tools website does not provide clear way to search the database, focusing on the Legal Tools project instead. Excessive and overly detailed information about internal matters of the project distracts the interviewee from the main purpose of the website – search of information on criminal law. As a result, they neither comprehend the idea of the Legal Tools project nor are able to effectively find interface of the database.

3.2 Organization of the Legal Tools website

Interviewees experienced problems trying to determine purpose of each navigation bar. All of the interviewees noted that according to their perception of the database, navigation bars entitled “Go to database”, “Work on the tools”, “Search the database” describe the same function of accessing the database. Interviewees also supposed that “Overview of the tools” might bring them to the interface with the database. In the opinion of one of the interviewees, bars “Overview of the Tools” and “Go to database” serve the same function of presenting contents of the database. One does it by means of text; another one does it by means of browser with folders.

All of the interviewees clicking on the navigation bar “Go to database” and “Search the database” stumbled upon Terms and Conditions of Use. None of them paid attention to the notice “You will only be able to access or search the Legal Tools when you have accepted the Terms and conditions of use listed below.” Moreover, none of them made attempt to scroll down the seven-screen webpage, and left the webpage having not accessed the database. One of the interviewees looking for the search menu clicked on “Back to Legal texts and tools” navigation bar and guessed that the database may be located under the navigation bar “Press and Media” of the website of the International Criminal Court.

Another interviewee tried to find interface of the legal database under the navigation bar “Contribution of materials” explaining that she noticed the word “materials”, which is what she is looking for. The second attempt was to find the database under the navigation bar “Questions and comments” because this phrase suggests that Frequently Asked Questions or comments about the way to search the database might be located there.

When I asked the users where the Legal Tools website is likely to provide information about its last update, only one interviewee found it under the navigation bar “Current status of the tools”. Most of the interviewees guessed that it might be located in the corner of the homepage or under the bar “Contribution of materials”, “Work on the tools”, and even in the Timeline of the Legal Tools project (see Scheme 2). The last misconception led the interviewee to believe that the last update of the website took place in 2005 which discredited the database.

Experience of another interviewee revealed the problem of inconsistency of links on the web pages of the website. In search of the interface of the database, she loaded external websites of conferences “ICC and the State”, “The ICC Legal Tools Programme of the Norwegian Centre for Human Rights and the broader ICC Legal Tools Project”. In her opinion, the underlined titles of links invite the user to try them as they seem to lead to the database itself.

The aforementioned mistakes of interviewees show that information is presented inconsistently. Users tend to click wrong navigation bars and are oftentimes confused by links spread out over the text. Because most interviewees noted that they are used to more comfortable databases and clear structure of websites, they are unlikely to return to the database again. As one of the interviewees noted, it is better to have a well organized database with less legal materials than to have a large database which compromises data organization.

Sitemap of the website (Scheme 2) illustrates that links to external websites are distributed rather arbitrarily among the web pages of the Legal Tools website. For instance, links to brochures about the project and the Case Matrix are located on the homepage instead of the webpage entitled “Overview of the Tools”. This raises the question of whether the website needs this web page since similar information may well fit into other web pages.

Links to outsourcing partners of the Legal Tools project are provided on both pages of “Overview of the Tools” and “Current status of the Tools”. The abundant information about participating institutions is also presented in detail on the web pages “Work on the Tools”, “Table of Responsibilities”, and “Cooperation Agreements”. The website invites users to contact it on the web pages “About the tools”, “Current status of the tools”, “Questions and comments”, “Contribution of materials” while users expect to find such information on a single spot on the website entitled “Contact Us”. The text of the website contains a number of embedded links leading users to the webpages that are already listed on the vertical navigation bar. Although there is no distinct restriction on such design of the

webpage, it does not comply with the principles of simplicity and consistency enunciated by Web 2.0 and increases the probability of confusing the user.

3.3 Search of documents

All interviewees had common problems when searching for certain document in the database. As mentioned above, most users stumbled upon Terms and Conditions of Use and did not see the button “Yes, I accept”. Having received assistance from the interviewer, they experienced a number of problems with the browser of the tools.

Users had difficulty grasping the difference between particular tools. For instance, some users clicked on the folder “International Legal Instruments” instead of “ICC documents – Basic Documents” when searching for the Rome Statute. As a result, none of them found Rome Statute in the Legal Tools database. The collection “International(ised) criminal jurisdictions” were often confused with collection “International(ised) criminal judgments”. For example, when looking for the sentencing judgment of Dusko Tadic, some users guessed that it might be located under the folder “ICTY” of “International(ised) Criminal Jurisdictions”.

Many interviewees could not distinguish folders from subfolders and therefore had an impression that certain folders were empty (main folders). Having opened several folders and subfolders, users did not know how to roll them back because they were not used to databases with such a browsing interface. This significantly impeded the process of searching the document and discouraged further use of the database. One of the users guessed that minus located next to the opened folder might mean that the folder is empty and stopped further use of the database, while another user tried to push button “back” in order to roll back all the subfolders.

When trying to locate the Rome Statute in the list of documents under the folder “ICC Documents” – “Basic Documents”, some users did not notice the document “Rome Statute” which was in the end of the list and gave up searching for it in the database. Some

users noted that searching the database is a difficult task because the resultant list includes a lot of documents in French although the user communicates with the English version of the database. This is also a significant factor discouraging further use of the database.

Serious problems were also encountered by users when searching the documents on situation in Darfur. One of the interviewees supposed that the database does not have any documents on Darfur because the folder “Situation in Sudan, Darfur (ICC-02/05)” was empty (i.e. it did not list any documents in the end of the webpage because this folder contains subfolders). The user did not understand that “DAR situation only records” is a subfolder, probably by failing to connect the word “Darfur” and title “DAR”. Those who did not deal with the situation in Darfur before did not recognize that the folder “Harun A. et al.” is a part of situation on Darfur. Similar problems may be encountered by users dealing with the folder “Situation in Uganda” and its subfolder “Kony J. et al.” Users noted that it was difficult for them to comprehend numerous abbreviations used in the browser interface, especially in the folder “International(ised) Criminal Jurisdictions”.

The aforementioned difficulties illustrate the fact that browsing interface of the database is not easily understood by users. It causes many problems when searching even basic documents in international criminal law. Users agree that problems are partly caused by the architecture of browser itself, and partly are caused by overlapping titles of collections.

As far as the search function is concerned, interviewees were not satisfied with the documents that the database returned on each query. Notably, interviewees did not use Boolean full text operators (+, -, “ ”). When inputting their queries, users expected that the database will operate as a typical search engine. For instance, instead of inputting “Criminal+Code+Australia”, they would input “Criminal Code of Australia”, supposing that “no operator” implies AND, rather than OR, as it is set out in the database. Interviewees questioned the reason why the database returns Criminal Code of Australia (on the page 1 of results) easier than, Criminal Code of Spain (no return). Similarly, interviewees could not retrieve the relevant document when they input -Sentencing

Judgment of Dusco Tadic- even though all the terms are contained in the title of the document.

The impression of interviewees was that the database at its current state is uncomfortable and ineffective for their search (both in terms of its browsing and search interfaces). All of the interviewees said that they are likely to switch to another database or to a mere search engine.

As described by Jon Bing in the theory of availability factors, the cost of information retrieval for respondents turned out to be high. “The use of any information service is associated with costs. It is obvious when the user subscribes to a journal or a computerized service: the user is then billed for the subscription fee. This is perhaps less obvious, but still evident, when the user browses through his own files or looks up references in a compilation of statute law. In this case the cost is associated with the expenditure of time”¹⁶. Legal analysis depends on the availability of, among other things, legal sources, and efficient database organizing them.

¹⁶ Bing (1984) p. 115.

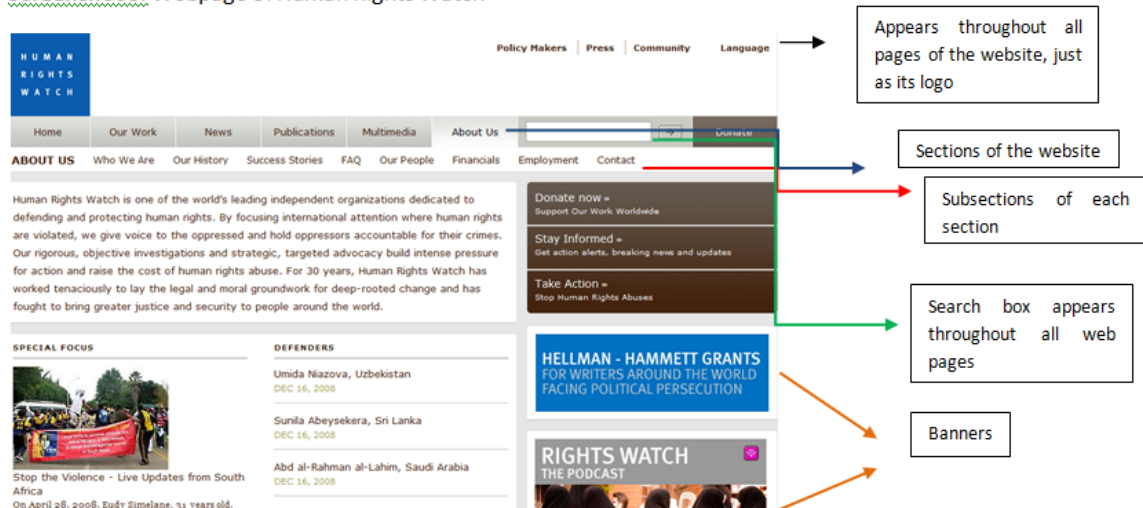
4 Improving “Look and Feel” of the Legal Tools website

In order to improve the Legal Tools Website it is useful to look at what has already been achieved by online legal databases. My observations let me conclude that online databases may be classified into those that develop to a greater extent either search or browsing options. The difference between search and browsing is not clear cut, as in both cases users may look for a document according to certain criteria, but the simplest example of such difference may be viewed in the fields “Search the database” and “Go to database” of the Legal Tools website. Searching function says: “Here is what we have with regard to your request” while browsing function says: “Have a look at what we have. In order to see everything you may look at the bulk of materials from the right, left, under magnifying glass, in glasses, etc.” The ideal online database must perform well in both search and browsing opportunities.

4.1 Website design

I will lead the caravan of the interesting examples of legal data retrieval mechanisms online starting from a very simple and informative website of Human Rights Watch:

Screenshot 5. Webpage of Human Rights Watch



The website of Human Rights Watch exemplifies simplicity and effectiveness in communicating information on wide variety of topics. Note the ease of the titles “Who we are”, “Success Stories”, “Our Work” etc. and short, nearly one-paragraph texts.

Each section in horizontal navigation bar leads to subsection which in turn may lead to sub-sub-sections, etc. This fairly simple model may well be applied in the Legal Tools website browser and its collections. Simplified titles of collections (perhaps by way of their unification into larger units of data) of the Legal Tools database may be represented on the horizontal bar of the website, their subfolders (also reorganized where possible) may be represented as subsections of each section, just as it is demonstrated by the screenshot above. Thus the website in itself will become a large browser of the Legal Tools database. Search field should be present on all of the web pages. Information about the Legal Tools project may be provided at the very top of the web page just as it is done on the screenshot above for those interested in the project itself.

In order to draw attention of all interested visitors in the Case Matrix and its applications and not to overload the webpage with all the aspects of the Legal Tools project, it is advisable to present the Case Matrix as a banner advertisement on the website. Affiliation of the Legal Tools Website with the International Criminal Court is unlikely to confuse the user in commercial nature of the banner. Just as vivid banners draw attention of visitors of the website of Human Rights Watch to the urgent issues, the Legal Tools website may use banners to inform visitors who potentially can become users of the Case Matrix about existence of this application.

The “look” of text on the Legal Tools website should also be reconsidered with respect to its readability. There are many ways to arrange content in order to ease on-screen reading. General rules state that website designers should avoid fully justified texts, small

fonts (less than 12), and place the most important information toward the top and the left of the screen¹⁷.

4.2 Classification of case materials

List of cases from the website of the International Court of Justice www.icj-cij.org presenting its contentious and advisory proceedings, despite of its simplicity, is noteworthy for a very clear presentation of each case through its browser. First of all, name of each case suggests the main topic that it deals with. For instance, the title of the case “aerial herbicide spraying (Ecuador v. Colombia)” is elucidative of the subject of the case. Although it seems quite burdensome to entitle cases located in the Legal Tools database anew, there is a need to indicate to a user what the case is about before one starts reading it. This subject will be dealt with in more details later. Another noteworthy feature of online database in ICJ is its structured procedural representation of the case.

All documents related to one case are kept in special folders indicating procedural stage of the document and a user is given opportunity to view all the procedural stages, as is shown on the screenshot below

¹⁷ See generally www.skillsforaccess.org.uk accessed on September 4, 2009, *Accessible Web Typography - an introduction for web designers*. Jim Byrne available at <http://www.scotconnect.com/webtypography/index.php> accessed on September 4, 2009

Screenshot 6. Division of case materials

Request for Interpretation of the Judgment of 31 March 2004 in the Case concerning Avena and Other Mexican Nationals (Mexico v. United States of America) (Mexico v. United States of America)

See also: [Avena and Other Mexican Nationals \(Mexico v. United States of America\)](#)

Application	Incidental Proceedings	Written Proceedings	Oral Proceedings	Orders	Judgments	Summaries of Judgments and Orders	Press releases
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Orders

Order of 16 July 2008

Request for the Indication of Provisional Measures

▶ [PDF](#) 121 Kb

Dissenting opinion of Judge Buergenthal

▶ [PDF](#) 43.6 Kb

Joint dissenting opinion of Judges Owada, Tomka and Keith

▶ [PDF](#) 101.2 Kb

Dissenting opinion of Judge Skotnikov

▶ [PDF](#) 21.7 Kb

The database allows a user to choose procedural stage of most interest in each case.

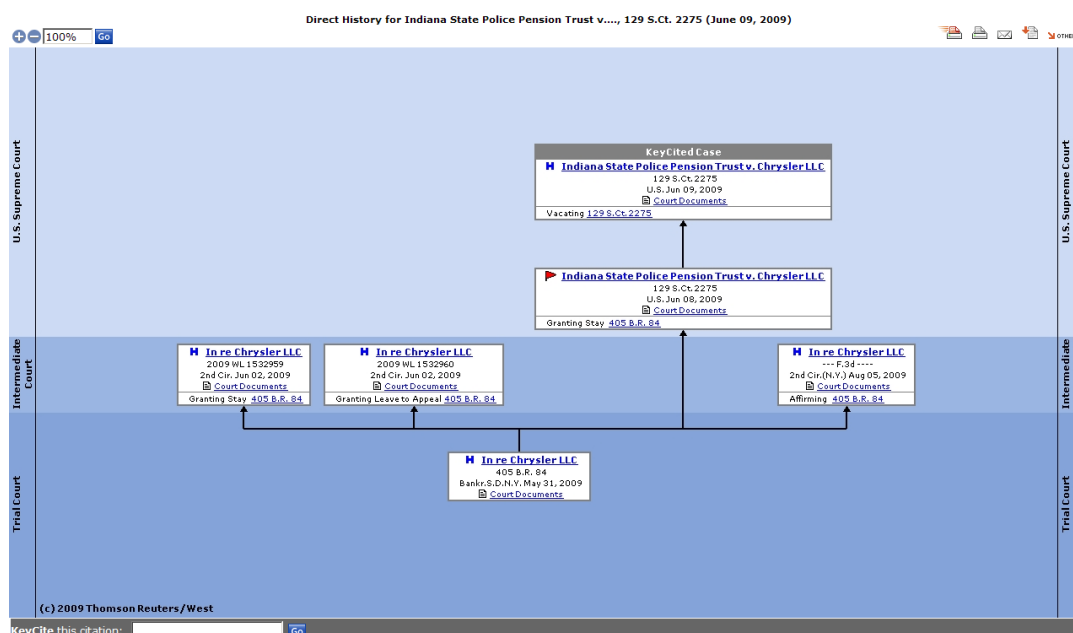
Another example of similar approach to representation of legal data is the website of the International Criminal Court. Before accessing the body of materials on certain cases, the user views basic information about the accused and counts against him. Documents are subdivided based on which body of the court issued them.

Screenshot 7. Representation of case by the International Criminal Court

The screenshot displays the ICC website interface for the case 'The Prosecutor v. Jean-Pierre Bemba Gombo'. The left sidebar contains navigation menus for 'About the Court', 'Structure of the Court', 'Situations and Cases', 'Press and Media', and 'Assembly of States Parties'. The main content area shows the breadcrumb path 'ICC » Situations and Cases » Situations » ICC-01/05 » Related Cases » ICC-01/05-01/08', the case title 'Central African Republic', and 'Case The Prosecutor v. Jean-Pierre Bemba Gombo'. A profile section for Jean-Pierre Bemba Gombo includes a photo and biographical details: 'Born on 4 November 1962 in Bokada, Equateur Province, in the Democratic Republic of the Congo. National of the Democratic Republic of the Congo. Alleged President and Commander-in-chief of the Mouvement de libération du Congo (Movement for the Liberation of Congo) (MLC)'. A timeline of events is provided, including 'Prosecution application for a warrant of arrest' on 9 May 2008, 'Warrant of arrest issued by Pre-Trial Chamber III' on 23 May 2008, 'Issued under seal on' on 23 May 2008, 'Unsealed on' on 24 May 2008, 'Request to the Kingdom of Belgium for provisional arrest' on 23 May 2008, and 'Arrest by Belgian authorities' on 24 May 2008. A final entry notes a 'Warrant of arrest replacing the one issued on 10 June 2008' on 23 May 2008. The right sidebar features a 'Court Records' menu with sub-items: 'Chambers', 'Filing of the Participants', 'Presidency', 'Transcripts', 'Pre-Trial Chamber III', 'Background information', and 'Press Releases'.

However, none of the presented examples illustrate what actually happened to particular case procedurally, i.e. its key judicial developments. Westlaw administers graphical application which describes judicial history of the case in an ascending table.

Screenshot 8. Direct history of a case administered by Westlaw (US Research)



Notably, the International Criminal Court publishes detailed “Background information” with respect to each case, describing its procedural story. However, it is represented in a separate file. For the purposes of the Legal Tools website, it is advisable to represent case documents in their procedural order describing what actually happened to the case. Brief description of the case with photograph of the accused and counts against him would also significantly help the user browsing the Legal Tools database. Legal databases of International Criminal Tribunal for Rwanda, International Criminal Tribunal for former Yugoslavia and the website of the International Criminal Court when classifying case documentation take the following criteria into account:

- Which chamber or other unit of court issued the document (pre-trial, trial, appeals, presidency, registry, etc.).
- What kind of document it is (transcripts/minutes, court records)

- What is the name of the document (decision, order, judgment, etc.)
- Which party to the case submitted the document to the court (defense, office of the prosecutor, legal representatives of victims, states representatives, etc.).

Although all of these criteria aid the user in searching for the relevant document, they require certain level of prior awareness from the user before searching the database. For instance, when all the documents are classified according to its title, the user will simply have to guess what is the title which the International Criminal Court uses for the document confirming the charges on which the prosecutor intends to seek trial according to article 61 of the Rome Statute (decision, order, confirmation, approval) or which chamber is issuing it (pre-trial or trial). This means that a user has to make prior research elsewhere to understand the judicial regulations.

The ideal browser should facilitate this preliminary understanding. One of the ways to do so is to present a structured and simplified judicial story of the case linking each procedural step to the judicial document as follows:

Extract from the case story of Mr. Lubanga Dyilo

- *Pre-Trial Chamber I issued a warrant of arrest under seal for Mr Lubanga¹⁸.*

See:

Warrant of arrest

Request to the Democratic Republic of the Congo for the purpose of obtaining the identification, tracing, freezing and seizure of property and assets belonging to Mr. Thomas Lubango Dyilo

Request to the State Parties to the Rome Statute for the identification, tracing, freezing and seizure of property and assets belonging to Mr. Thomas Lubango Dyilo

¹⁸ Extract of the Background information on the case The Prosecutor v. Thomas Lubango Dyilo available at http://www.icc-cpi.int/NR/rdonlyres/477CC240-07A5-4FAC-80AC-3A743C2CD649/280468/CIS_Lubanga_ENG.pdf accessed on September 4, 2009

Legal Tools database represents full authentic texts of selected judicial decisions and basic legal sources. I have not found information about criteria that the developers use in order to select legal instruments. However, it is advisable to distinguish most important procedural document from less important (for instance, indictment against instructions to the court's expert) so that the user would not face a large list of documents of different legal significance. For instance, interface of the website of the Special Court for Sierra Leone separates judgments and minutes of the trial of each particular case from other decisions of trial and appeals chambers putting them into different categories.

When determining priority of the document, account may be taken of rule 40 of the Rules of Procedure and Evidence of the International Criminal Court which determines the following decisions resolving fundamental issues:

- All decisions of the appeals commission;
- Certain decisions on jurisdiction of the court or on the admissibility of the case
- Certain decisions on guilt, innocence, sentencing, and reparations to victims
- Certain decisions authorizing investigative steps without cooperation of the state concerned.

When prioritizing the document, the database browser may divide the documents into those resolving factual issues, procedural issues, and issues of law by analogy with paragraph 1a of article 81 of the Rome Statute.

4.3 Abstracting

As it has been noted above, abstracting of the cases would significantly help users of the website to retrieve necessary document. Automatic text summarization tools provide

good summaries of news, but do not process longer texts as well¹⁹. Unlike conventional legal databases, which need to keep their fingers on the pulse because each case may potentially affect jurisprudence of the state, international criminal law is of more permanent nature, and cases of adjudicating individuals accused of international crimes are rarer than regular civil and criminal cases produced in particular jurisdiction and dealt with by a regular legal database. For this reason abstracting of case law stored in the Legal Tools database seems more realistic than in a regular legal database.

Developers of the Legal Tools database may choose the mode of generating abstracts. Jon Bing distinguishes informative from descriptive abstracts: “In informative abstracts the aim is to present all factual information of the original...may therefore replace the original. A descriptive abstract would describe which problems are discussed in the original...but does not aim...to be used independently of the original source”²⁰. Alternatively, instead of producing natural language abstracts, website developers may generate abstracts of the case as file records (charges, stages of proceedings, etc.) as it is implemented on the website of the International Criminal Court (see Screenshot 7).

WTO website offers summaries of agreements describing issues which each agreement deals with²¹. Additionally, the most important agreements are accompanied by interpretations of each article²². While summary helps the user to determine whether he accesses the right document, interpretations help users to understand document in depth. Alternative to abstracting are KWIC snippets described in more details in paragraph 5.4. of the present thesis.

4.4. Classification of cases

¹⁹ Presentation “Human language technology to improve information retrieval” by Herkules Dalianis at e-Stockholm Legal Conference, Stockholm University, 17-19 November 2008.

²⁰ Bing (1984) p. 81.

²¹ http://www.wto.org/english/docs_e/legal_e/ursum_e.htm#bAgreement accessed on September 4, 2009

²² http://www.wto.org/english/res_e/booksp_e/analytic_index_e/sps_e.htm accessed on September 4, 2009

Aside from classifying documents of each case, it is necessary to present all cases in such a way that a user may easily locate relevant case. Taking into account wide coverage of case law by the Legal Tools website it seems reasonable to retain the following main criteria for subdivision of case law:

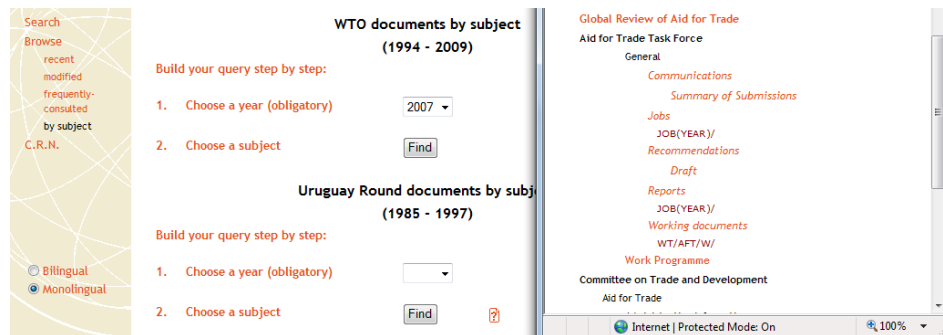
- 1) Whether the case comes from national or international jurisdiction;
- 2) Which state/international tribunal heard the case;
- 3) Name of accused/indicted. This criteria is especially helpful because names of these individuals are well-known from media and other sources.
- 4) Year of the case.

Most online databases presenting case law online apply similar criteria. However, it is advisable to include other less evident criteria for classifying cases in order to help users select case according to the issue that it discusses. Browser interface may serve complementary function to the search engine in this respect. For example, the database may offer a user to locate case by crime committed. Cases that are currently being heard may be classified according to the charges in the indictment, while completed cases can be classified according to the charges in the final judgment.

Genocide, crimes against humanity, war crimes may be listed in dropdown menu in the order established by the Elements of Crimes of the International Criminal Court. This classification requires complex menu for the war crimes as there are 71 elements of it. It should be also taken into account that average user of the Legal Tools website may not know the difference between war crimes of attacking civilians under article 8 paragraph 2 point b and article 8 paragraph 2 point e of the Rome Statute. It is possible then to subdivide war crimes into three categories: grave breaches of the Geneva Conventions (article 8 paragraph 2 point a of the Rome Statute), other serious violations during international conflict (article 8 paragraph 2 point b of the Rome Statute), other serious violations during non-international conflicts (article 8 paragraph 2 point e of the Rome Statute). Database of the WTO “Documents online”, for instance, provides opportunity to browse WTO documents by subject. To deal with a large amount of options available to the user, a user is offered a data tree with a number of options which can be contracted or

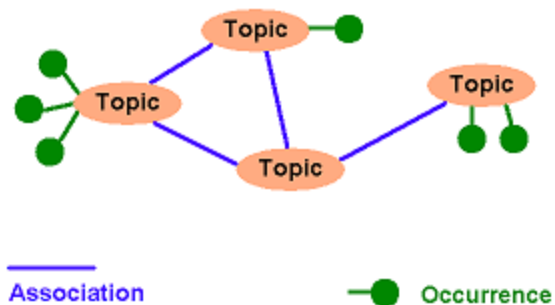
expanded. Similar approach may be taken by the developers when classifying case law available on the browser of the Legal Tools database.

Screenshot 9. Data tree on the browser of the website of WTO



Complex concepts may well be represented via topic maps which represent information using topic, associations (relationships between topics), and occurrences (information resources relevant to particular topic).

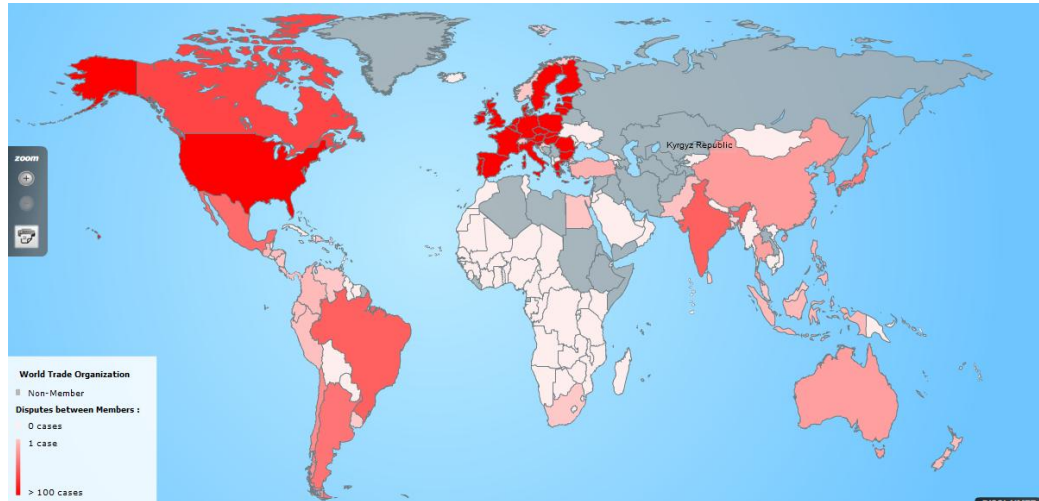
Screenshot 10. Topic Map



Another interesting approach taken by the WTO website developers is to represent all WTO disputes between states on the map. The user may click on the WTO member state's territory to search for disputes where this state is involved as complainant, as respondent, or as either of them. Alternatively, the user may achieve similar results by simply choosing the state from dropdown menu. The advantage of administering the map is its more popular interface and ability of the user to see which members of the WTO were

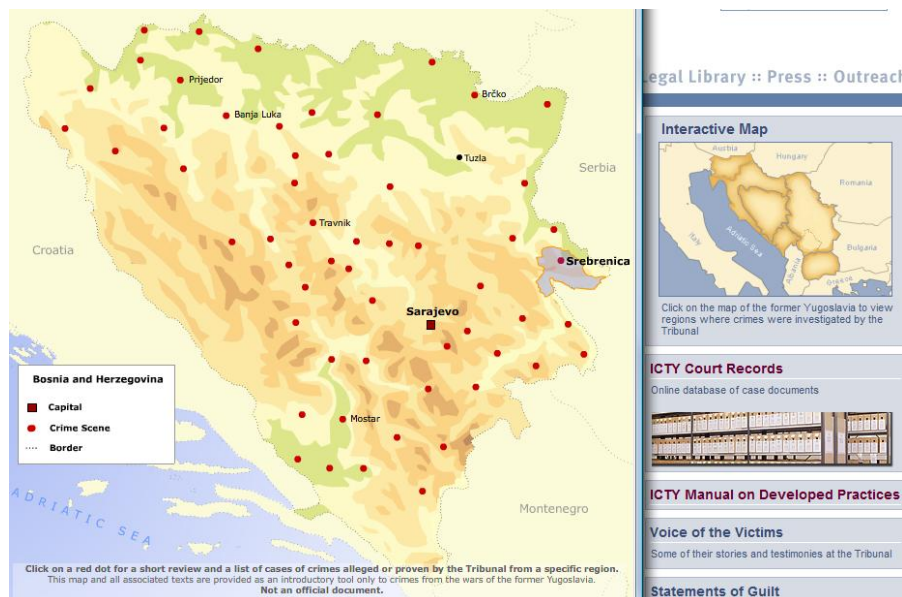
not involved in any disputes with respect to their WTO obligations, i.e. which query returns no results.

Screenshot 11. Map of disputes between member states of the WTO



Website of the International Criminal Tribunal for Former Yugoslavia went even further in its efforts to structure case law geographically. The user selects a state from the map of former Yugoslavia. The system returns detailed map of the state marked with the crime scenes.

Screenshot 12. Map of crime scenes on the website of International Criminal Tribunal for Former Yugoslavia.



By clicking on each crime scene, the user accesses a short review and a list of crimes alleged or proven by the tribunal. This feature can be improved if the interactive map would provide similar review and list of cases from each state of the former Yugoslavia.

The step taken in legal data retrieval based on geographical criteria is underestimated. Legal Tools website may use this approach to organize more sophisticated interface. First of all, having collected case law from all over the world, crime scenes may be spotted on the entire world map. World map may be adjusted to several modes presenting case law and legislation:

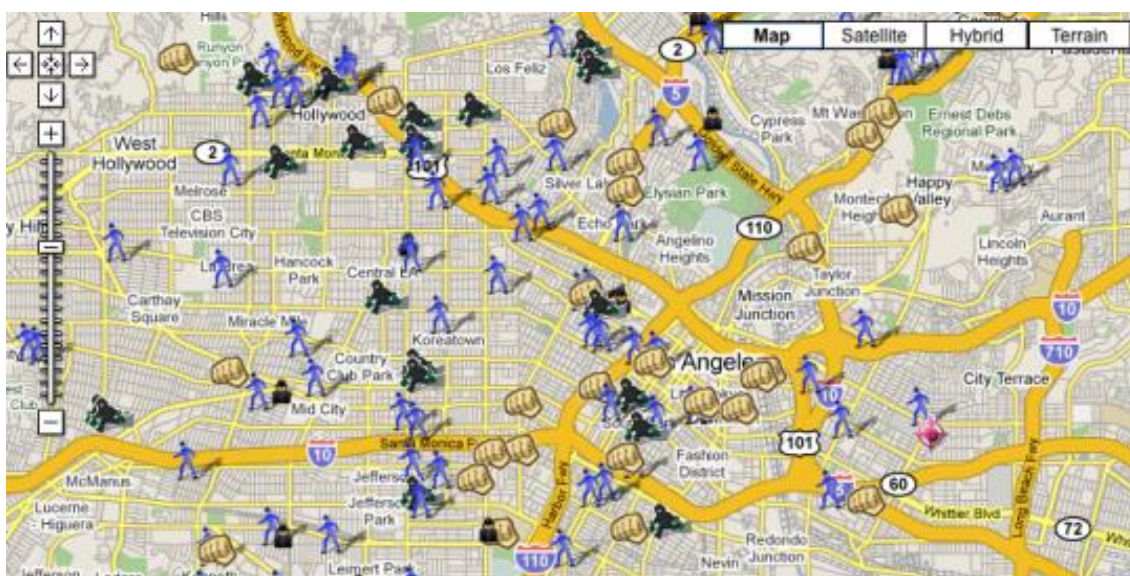
- 1) Place where the crime occurred;
- 2) Place where the court is located;
- 3) State participating in the dispute;
- 4) State where indicted (accused)/victim comes from. This criterion is important for the war crimes committed in the course of international conflict where the place of crime does not usually indicate the state where aggressor or victim comes from;
- 5) State where relevant national legislation was adopted;
- 6) State which undertook certain obligations under international law.

A world map suite can be elaborated further by visualizing crimes addressed by the criminal tribunals on the map. A user may choose to view the world map communicating certain statistics about the crime. This suggestion is inspired by Compstat, police management tool applied initially by New York Police Department back in 1994, which among other things mapped crime occurring in the city. Los Angeles Police Department currently administers Crime Map allowing any user to trace crimes reported in certain area

of the city²³. Visualization of crime on the map helps a user to determine tendency of certain crimes occurring in certain area of the city, profile victims, suspects, etc.

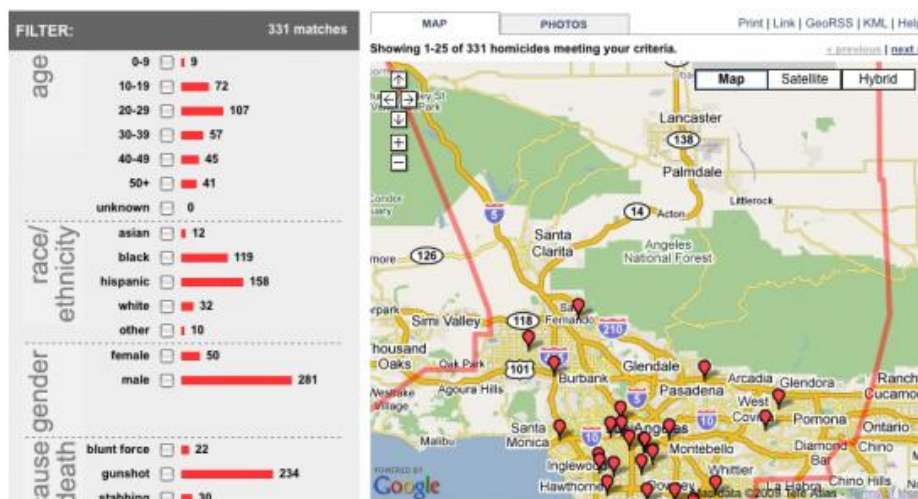
The thought behind crime mapping is community policing, a notion that interaction between police and community about crime rate can help control crime with community members helping to identify suspects and bring problems to the attention of police. It is advisable to consider incorporating similar application on the Legal Tools website. Although “community policing” does not easily translate to international criminal law, crime mapping provides a new analysis of information with respect to victims, types of crime, etc. which may serve as an independent browsing criterion.

Screenshot 13. Google map spotted with different types of crime (burglary, assault, etc.)



²³ <http://www.lapdcrimemaps.org> accessed on September 4, 2009

Screenshot 14. Filtering crime spots according to the age of victims, race/ethnicity, gender, etc.



Another interesting approach taken by the developers of the WTO website is to browse legislation through its terms. Alphabetically organized index terms refer to particular point in WTO law. Similar approach may well be taken by the Legal Tools website in representing case law stored in the database.

Screenshot 15. Browser of WTO law based on terminology of the WTO

[panel \(composition\) \(PSI 4\(c\)\)](#)
[panel \(PSI\)](#); see also [consultation and dispute settlement \(PSI\)](#)
[chairman \(PSI 4\(d\)\)](#)
[composition \(PSI 4\(c\)\)](#)
[costs, apportionment on merit \(PSI 4\(g\)\)](#)
[decision](#)
 [binding nature \(PSI 4\(h\)\)](#)
 [by majority vote \(PSI 4\(a\)\)](#)
 [communication to parties \(PSI 4\(a\)\)](#)
 [time-limits \(PSI 4\(a\)\)](#)
 [extension by agreement](#)
[expeditious settlement, decisions to ensure \(PSI 4\(d\) and 4\(e\)\)](#)
[expert participation \(PSI 4\(a\)-\(c\)\)](#)
[request for \(PSI 4\(c\)\)](#)
panel reports
[adoption by DSB](#)
 [notice of appeal and \(DSU 16.4\)](#)
 [right of parties to participate in DSB consideration \(DSU 16.3\)](#)
 SCM 4.8, [time-limits](#)
 SCM 7.6, [time-limits](#)
 [timing](#)
 [adoption of report \(DSU 16.4\)](#)
 [consideration of report \(DSU 16.1\)](#)
[appeal, right of \(DSU 17.4\)](#)
[applicability of relevant provisions, need for \(DSU 12.7\)](#)
[circulation to Members](#)
 SCM 4.6
 SCM 7.5
[confidentiality considerations \(DSU 14\)](#); see [confidentiality of proceedings \(DSU 4.6/DSU 14/DSU 17.10/DSU 18.2/WP 3\)](#)
[developing country Members and \(DSU 12.11\)](#)

This classification leads the user to a single provision dealing with particular index term or the term which the user was searching for. Index term may be connected to cases, relevant articles of legislation and even overview of the term. For instance, the same website administers similar Trade topics gateway which highlights the most current and actual topics of the WTO. Each topic leads to:

- News on the topic;
- Introduction to a topic in the handbook Understanding the WTO;
- Official texts of the WTO. Texts and works are classified according to year, subject, etc.

Index terms assigned to documents may serve as a glossary which leads user to the most important documents/cases defining the meaning of the index term.

Browse facility of the Legal Tools website may also incorporate a link to the most frequently consulted documents as it is implemented on the website of the WTO²⁴. The user is presented with predefined most frequently conducted searches which are grouped and sub grouped into various categories by type of the document, by year it was issued, by body that issued it and even alphabetically. This option may be provided based on analysis of previous search requests made by the users of the website by grouping patterns of requests and adding relevant synonyms.

4.5 Classification of statutes

The suggestions above are related to representation of judicial documents in the browser of the Legal Tools website. Examples of applications that I referred from the website of the WTO (search the document by index term, search by geographical location,

²⁴ http://docsonline.wto.org/gen_frequently.asp accessed on September 4, 2009

summaries, interpretations, data tree, etc.) are applicable to the browsing interface of Legal Tools website for alternative representation of statutes.

Classification of legislation is usually based on the basic criteria of:

- 1) Whether legislation is national or international;
- 2) For national legislation – which state issued it; for international legislation – which sphere it belongs to (human rights law, public international law, international humanitarian law, international criminal law, etc.);
- 3) Which legal instrument it relates to/relies on.

4.6 Structure of collections

The structure of the collections is not uniform as on the one hand it applies aforementioned criteria, but on the other hand it applies different criteria. Collection “ICC Documents” is intended as one-stop location for finding materials on the International Criminal Court uniting both legislation and cases. However, information about other international tribunals is subdivided into legislation (legal texts, background information on tribunals in the collection “International(ised) Jurisdictions”) and cases (collection “International(ised)Judgments”). Similarly, legislation coming from national jurisdictions is divided between two collections – national legislation implementing Rome Statute and other national legislation.

It is advisable, however, to consider renaming the structure of collections (for example by merging them into larger units) according to a single criterion. For instance, collection “National Jurisdictions” and collection “National Implementing Legislation” may be merged under single title “National Legislation”. “International Legal Instruments”, “Internationalized Criminal Jurisdictions”, “ICC documents” (part related to legal texts of the International Criminal Court) may be organized under single section. “International Criminal Judgements” and “National Cases Involving Core International Crimes” may be merged in common section of the Legal Tools website – “Case law”. Subsections of the Legal Tools website may stay the same, but it is important to facilitate quick perception of

the Legal Tools database by operating with more obvious criteria, at least on the larger scale.

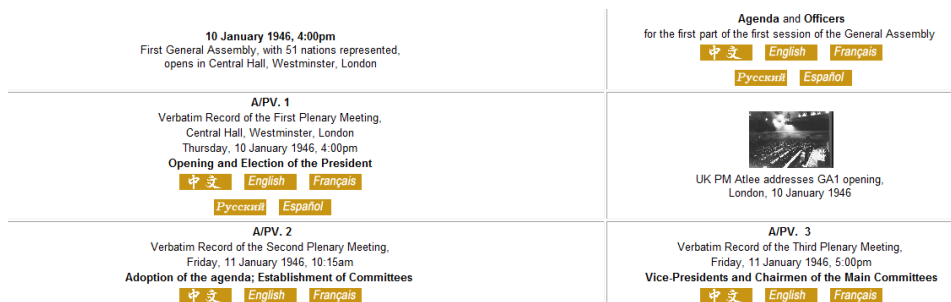
4.7 Presentation of multilingual content

The majority of the documents stored on the Legal Tools database is in English and French, and the interface exists in both of these languages. However, the database contains documents in other languages as well and approach to representation of documents in different languages should be elaborated further.

- 1) Documents in certain languages have their titles in English, while documents in other languages have their titles in authentic languages. For instance, the system administers titles in French, English, Danish, Dutch, German of documents in corresponding languages, but does not administer titles of documents in Russian or Chinese of the corresponding documents. This may be related to limitation of ASCII (American Standard Code of Information Interchange) characters, and may be improved by implementing Unicode as a character encoding scheme. Some documents in Portuguese have English titles, while other documents are entitled in Portuguese. In some cases English titles of documents in language other than English have no indication of what is the language of the document. User needs to access metadata to determine the language of a document which impedes the process of retrieving the relevant document.
- 2) The system cannot process search requests in Cyrillic letters, which is the consequence of implementing ASCII characters. Similar problems may be encountered with other alphabets.
- 3) Metadata of all documents irrespective of their language is in English. Thus, the system is still not fully adapted to search requests in foreign languages.
- 4) Even if the user chooses interface in English language, browser presents documents in French language as well (and vice versa). This significantly increases list of documents returned for each query and impedes retrieval of data.

The website of the ICJ when presenting case law through its browser in English language offers documents in English language, but makes a note that the same document is available in other languages. Similar approach is taken by the website of the United Nations.

Screenshot 16. Selection of UN documents in different languages



When a user chooses French version of the website of the International Court of Justice, the website translates titles of documents in English language into French language. However, once one enters a website in Chinese or Russian language, the website presents basic documents of the International Court of Justice and a brief summary of case law of the International Court of Justice. This unequal translation of website’s versions occurs due to limited resources. It may be argued that even those limited versions of the website provide limited but reliable data.

However, these limited versions have significant detrimental effect. A user choosing limited version of the website cannot estimate full capacity of the website in its main version. For instance, a Chinese speaking person having some knowledge of English is likely to enter Chinese version of the ICJ website, which is very limited. Those users cannot estimate full capacity of the website in English language because the system presents English and Chinese versions as identical.

The system should let the user know that he might find relevant material in its most developed version (for instance, with banner advertisement). To communicate materials in

different languages by a database with multilingual interfaces, it is advisable to implement the following suggestions:

1. Browser (and search engine) of legal database which is primarily developed in English language should present documents in English language. If the same documents are available in other languages, it should indicate so by short hyperlinks instead of providing its translations in the list of results.
2. If the legal database in English language presents documents in other languages and has no reliable translation into English, at least title of the document should be translated into English. However, the title of the document should unambiguously indicate that this document is in foreign language.
3. If legal database has interface in other languages with limited resources, it should not only concentrate on providing this limited data in other languages but also data in English language with titles translated into other languages. The title of the document should unambiguously indicate though that the document is available in English version only.
4. As for the Legal Tools database specifically, it is advisable to keep metadata and keywords assigned to the documents in other languages in both English version and the version of that other language. This suggestion is true if the Legal Tools database is planned to be developed in that other language.
5. The search interface of the Legal Tools website should indicate that English version of the website can process requests in certain other languages (for example, French, German, Portuguese, but not Russian, Chinese, etc.)

These suggestions raise the question of how legal databases in secondary languages should present data in another secondary language and whether it should present it. Ideally, titles, metadata and keywords of all the documents in secondary languages should be translated into other secondary languages and each title should indicate that the document is available in a different language only. For example, browser of the Legal Tools Website in Norwegian once developed will retrieve documents in Norwegian language. If suggestion 3 above is implemented, then documents in English language with titles in

Norwegian should also be browsed. All titles of documents that are present in languages other than Norwegian and English should also ideally be translated into Norwegian. In order to implement this suggestion, developers can involve automatic translation tools (such as Babel Fish, Promt, Wordfast, Deja Vu, etc.).

Because it requires much translation, browsing interface of the Legal Tools website might group the resultant list of documents according to languages. Thus, a user operating interface of the Legal Tools database in Norwegian may choose to access documents in Norwegian only, documents in English with titles in Norwegian and all documents in other languages with titles in English (if suggestion 2 is implemented). This will help the user to realize depth of the Legal Tools website and if necessary involve translator in his research. At the same time, it will help to avoid the impression of overloaded list of documents where documents with titles in different languages are mixed.

5 Improving “searchability” of the Legal Tools website

Failures of interviewees to retrieve the relevant document from the Legal Tools database may be illustrated by the following example. A user looking for Treaty Establishing European Atomic Energy Community enters the phrase “ “atomic energy” ” into the search field. A phrase that is enclosed within double quote (") characters matches only rows that contain the phrase literally, as it was typed²⁵. The system seems to operate with certain ranking criteria, as it does not list the results strictly chronologically.

The system returns the list (468 documents) with the document in question located in the end of the 2 page. Moreover, most of the documents in the list do not contain phrase “atomic energy” in their title. For instance, “Discussion paper relating to part 13 of the Rome Statute (Final clauses)/Proposed by the coordinator” which is the 7th document on the 1st page, mentions the term “atomic energy” only once. This document is irrelevant to the user as it only mentions that new amendment to the Rome Statute was communicated to the International Atomic Energy Agency.

19th document on the page 1 “P. v. Orík Third Amended Indictment” mentions the word “atomic” once, but does not contain the word “energy” in its text. The document is irrelevant to the user. The document which the user actually intended to find had both words in its title and mentioned the phrase “atomic energy” 16 times throughout the text. However, the Legal Tools database ranked the most relevant document lower than the less relevant despite of its obvious relevancy.

Imagine if the database returns 9263 documents (for instance, search request “human rights”). Take into account that the user needs to make 2 clicks in order to see the context

²⁵ <http://www.legal-tools.org/en/search-the-tools/help/> accessed on September 4, 2009.

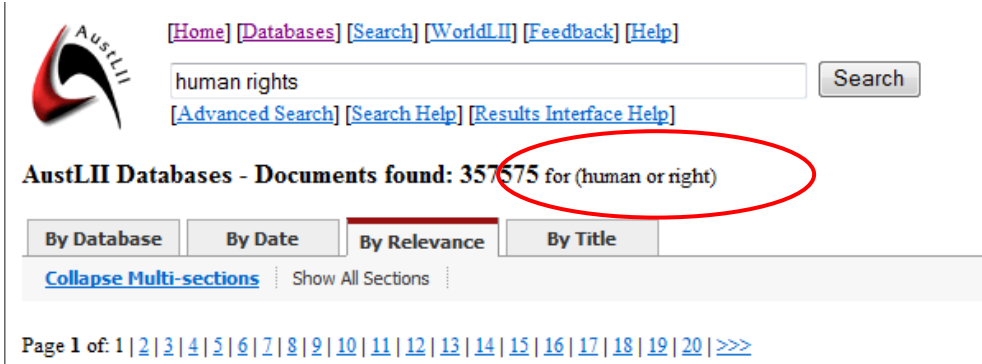
in which the term is used, wait until the document is downloaded (which depends on the Internet speed), and there is still a risk that computer will not recognize file format. Thus, the user needs to make unreasonably large efforts to retrieve necessary legal text. Notably, similar trend continued when I changed search requests into atomic + energy, “atomic energy”.

5.1 Functioning of Boolean operators

The Legal Tools website applies Boolean retrieval methods which are criticized for making a user responsible for retrieval of relevant document by posing high demands on the user. It is advisable to ease their understanding by the user. All interviewees searching the documents on the database expected that word space implies “and” rather than “or”. Moreover, users expected the database to assume a phrase rather than each word. For instance, instead of typing “statute of limitations” to retrieve the entire phrase, interviewees typed the phrase without quotes. Notably, one of the largest legal databases LexisNexis applies similar search methods and differs from Westlaw search methods in this respect. Interviewees explained that they are used to formulate their search requests so on the internet. In order to make the database more user-friendly, it is advisable to bring Boolean connectors closer to what users are accustomed to.

Moreover, it is advisable to inform users about the way database understood their search request, as it is done by Austlii database.

Screenshot 17. Austlii database informs the user about the way it understood search request



The screenshot shows the Austlii database search interface. At the top left is the Austlii logo. To its right are navigation links: [\[Home\]](#), [\[Databases\]](#), [\[Search\]](#), [\[WorldLI\]](#), [\[Feedback\]](#), and [\[Help\]](#). Below these is a search input field containing the text "human rights" and a "Search" button. Underneath the search field are additional links: [\[Advanced Search\]](#), [\[Search Help\]](#), and [\[Results Interface Help\]](#). The main search results line reads: "AustLI Databases - Documents found: 357575 for (human or right)", where the number "357575" is circled in red. Below this are four sorting tabs: "By Database", "By Date", "By Relevance" (which is selected and highlighted with a red bar), and "By Title". At the bottom of the sorting area are links for "Collapse Multi-sections" and "Show All Sections". The footer of the page displays "Page 1 of: 1" followed by a series of numbered links from 2 to 20, and a ">>>>" link.

Alternatively, the website may provide users with textual representation of Boolean operators, as it is done by the Westlaw database:

Screenshot 18. Boolean connectors on the Westlaw



5.2 Relevancy assessment

From the example given in the beginning of this section, it is evident that the Legal Tools database should define unambiguous criteria for relevance assessment of documents. Whenever constructing mechanisms for relevancy assessment, it needs to be considered what document unit is (document, article, paragraph). Large legal texts contain extensive amount of terms which may not necessarily represent the meaning of the document. It is therefore necessary to describe where searched terms should co-occur (within 1 paragraph, 1 provision, 1 document, or be adjacent).

Jon Bing suggests several retrieval strategies stated below that can be implemented in order to improve nearness function of the Legal Tools database²⁶.

“Word frequency based ranking algorithms [...] based on the following ranking criteria:

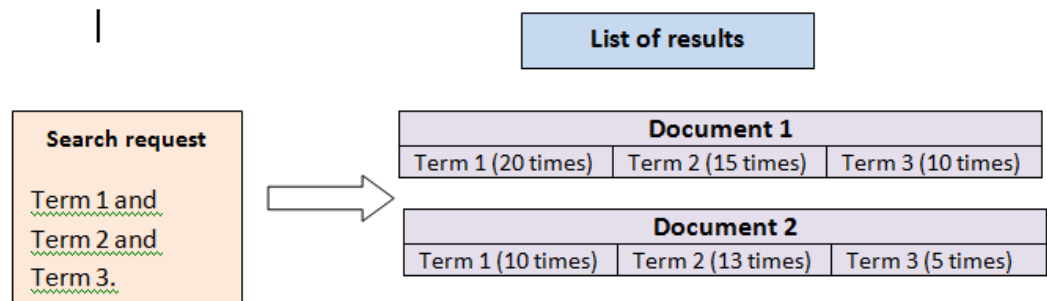
²⁶ Bing (1984) p. 164-171

- The total number of search terms occurring in the document;
- The number of different search terms occurring in the document;
- The number of conceptors in the document, a conceptor being defined as a set of terms denoting the same idea²⁷. This seems to be possible if the database runs thesaurus denoting certain search terms.

One may also add one more criteria – whether search terms occur in the title or in the text of the document.

In accordance with vector retrieval mechanism, different vectors are assigned to each document, consisting of terms mentioned in the document and assigning weight to each term based on the number of times certain term is mentioned in the document. As Jon Bing exemplifies it, a vector space looks as follows:

Scheme 4. Vector retrieval mechanism



Extension of vector retrieval strategy is clustering based retrieval strategy, according to which “documents with similar properties are clustered as they also tend to be relevant to the same request. Each cluster is represented by a vector – a “profile” or “cluster profile”, a

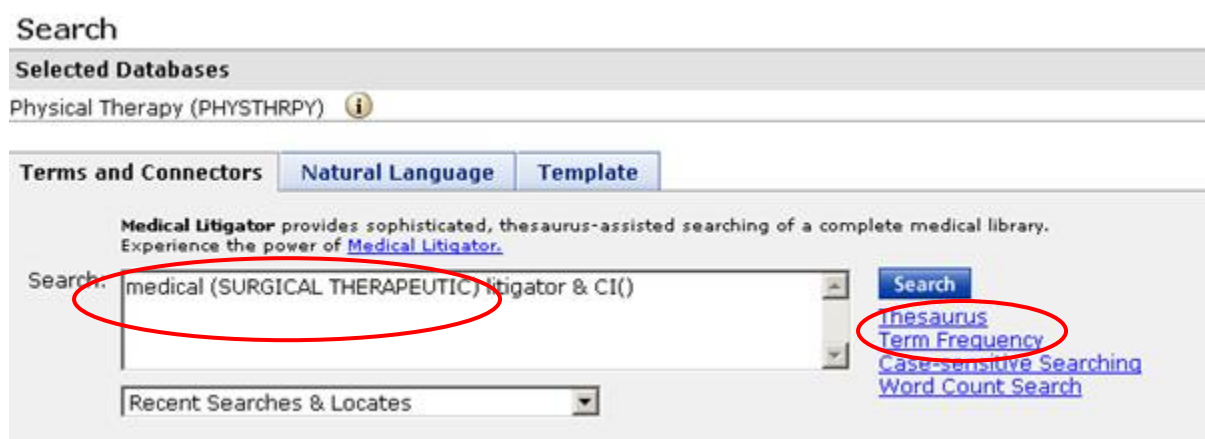
²⁷ Ibid. – p. 164

characteristic of the documents in the cluster. These are in turn compared to the search vector²⁸. This approach, however, reduces retrieval performance²⁹.

Finally, “conceptor based retrieval [...] takes into consideration the relation between search terms and the ideas they represent [...] A conceptor is defined as a class of terms representing the same idea³⁰. The purpose of this mechanism is to find the document which is likely to reflect on particular idea. In order to establish connection between search request and ideas provided for in a number of documents, the database operates a range of synonyms or definitions of particular idea. According to Jon Bing, this mechanism demonstrates the most impressive results.

Westlaw makes use of vector retrieval through its Terms frequency option and conceptor retrieval through its thesaurus.

Screenshot 19. Conceptor and vector retrieval options offered by the Westlaw



European Country of Origin Information Network (ECOIN) administers its search facility with the help of bilingual Country of Origin Information Thesaurus. Once a user inputs a search term which is also found in the thesaurus, the system will automatically

²⁸ Ibid. – p. 168

²⁹ Ibid.

³⁰ Ibid. – p. 169

include synonyms and near synonyms. A search query for *female genital cutting* will include related terms in English and German (because much data stored in the database is in German language). Therefore the search engine will also find documents containing the terms *FGM*, *female genital mutilation* or *female circumcision*³¹.

Suggestions requiring administration of thesaurus have already been mentioned before in different contexts. Thesauruses are costly to maintain and do not necessarily ensure consistency. They attempt to place complex interrelations between the terms within three types of relations:

- Hierarchical relation occurs when terms are narrower or broader in relation to one another;
- Equivalent relation occurs when the terms are synonyms or near-synonyms;
- Associative relation occurs in all other cases.

The difficulty of administering a thesaurus may be illustrated by example of relation between terms “love” and “kindness” which is difficult to incorporate into online thesaurus. “However, using references to a legal instrument have empirically proven themselves to be used with higher consistency (both intra- and inter-indexer consistency)”³².

Screenshot 20. Search interface of ECOI

The screenshot shows the search interface of ECOI. At the top, there are two tabs: "Search" and "Advanced Search", with "Advanced Search" selected. To the right of the tabs is a link for "SearchTips". Below the tabs, there is a search form with two input fields: "Search in" containing "Cameroon" and "for" containing "child soldiers". A "SEARCH" button is located to the right of the second input field. Below the search form, it says "Displaying documents 1 - 20 out of 20". There is a small icon of a document with a magnifying glass to the right of this text. Below that, there is a section titled "Did you mean:" followed by a list of suggestions: "chold", "nchild", "childe", "fchild", "chiild". Below this is a section titled "Related English and German terms included in search query:" followed by a list of terms: "Kindersoldat", "Child soldiers", "Child soldier", "Child combatant", "Child combatants", "Kindersoldaten". At the bottom of this section, there is a link: "Click here to find out more about this new search feature."

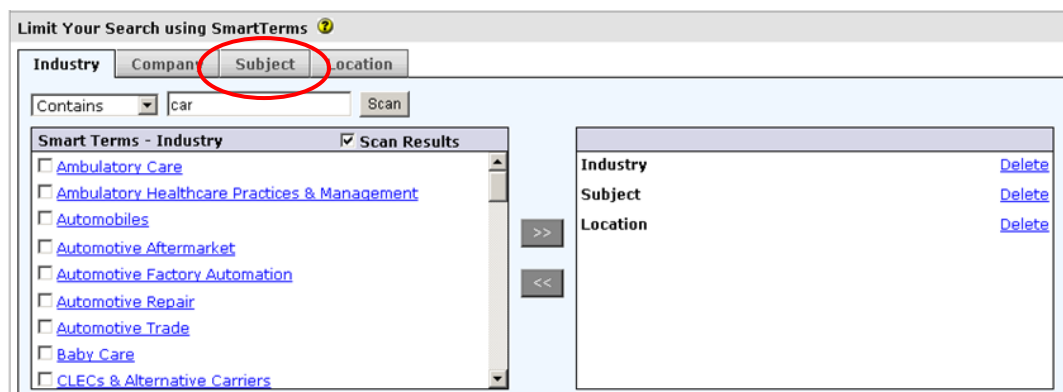
³¹ <http://www.ecoi.net/news/58.Thesaurus.htm> accessed on September 4, 2009

³² Comment by the supervisor of the present thesis Jon Bing

5.3 Disclosing keywords list

Legal Tools database contains documents which are assigned with metadata and keywords. It is useful to make the list of keywords available to users so that they could choose which keyword describes their search request better. Consider Smart Terms of the Westlaw.

Screenshot 21. Predetermined list of keywords available on the Westlaw




The problem that keywords list includes terms that differ from what users are used to search may also be resolved by connecting existing list to other more customary terms. For instance, the term found on the website of one of the human rights organization “child soldiers” has another equivalent in the Keywords list “conscripting, enlisting, or using children under 15”. “Ethnic cleansing”, or “Police brutality” are not found in the keywords list. In such a case search engine may automatically connect terms if each term is defined through another, more customary term.

5.4 Representation of search results

It is important to provide users with the contextual use of a search term once they are presented with the list of results by highlighting search term in the text of the document (so called KWIC format (key word in context)). This will relieve the user from 2-clicks necessary to make in the current version of the Legal Tools database in order to assess the

relevancy of the document. KWIC snippets may well serve as an alternative to abstracts (see paragraph 4.3. of the present thesis).



Screenshot 22. Usage of KWIC format by ECOI

16.06.2009 - Source: → [US Department of State](#) 

Brazil, Burkina Faso, Belgium, Myanmar, Benin, Congo, Cameroon, Belarus, Côte d'Ivoire, Cyprus, Argentina, Bahrain, Central African Republic, Azerbaijan, Cambodia, Angola, Bulgaria, China, Czech Republic, Bolivia, Chile, Costa Rica, Austria, Chad, Australia, Albania, Bosnia and Herzegovina, Congo, Democratic Republic, Canada, Croatia, Cuba, Burundi, Colombia, Afghanistan, Algeria, Bangladesh, Botswana, Armenia: "Trafficking in Persons Report 2009"

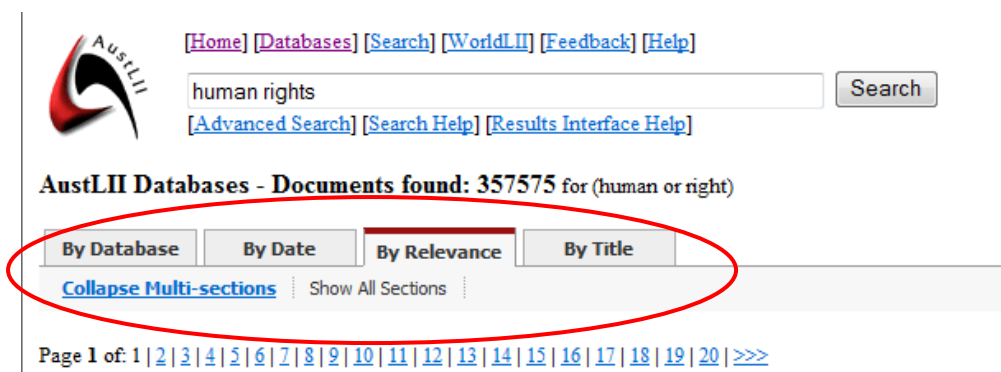
Trafficking in Persons Report 2009 [ID 121428]


offered minimal protection to trafficking victims during the reporting period. NGOs provide nearly all of the shelter, legal, medical, and psychological services available to trafficking victims. Under the National Disarmament, Demobilization, and Reintegration Plan (PNDDR), all ex-combatants, including child soldiers, pass through a common process during which they disarm and receive ... increase in child soldier demobilization took place after the signing of a January 2009 agreement between the FARDC and the CNDP, resulting in the demobilization of 223 child soldiers during the first week of the agreement's implementation. Some FARDC elements essentially outside government control continued during the reporting period to harass, arrest, and physically mistreat children ... for child sex tourism. Government and military use of forced labor remained widespread, reportedly targeting members of ethnic minority groups. Urban poor and street children in Rangoon and Mandalay are at risk of involuntary conscription as child soldiers by the Burmese junta. Thousands of children are forced to serve in Burma's national army as desertions of men in the army rise. Some

Document(s):   [Full Report](#)

Another example of the methods to digest list of results is found on the interface of Austlii database. A user faced with a long list of documents may regroup them based on which database the documents are stored in (In case of the Legal Tools website, the database may group documents according to which collection documents belong to), date of document starting from the latest, or alphabetically. Ranking based on relevance is a default setting.

Screenshot 23. Regrouping option in Austlii database



 [\[Home\]](#) [\[Databases\]](#) [\[Search\]](#) [\[WorldLII\]](#) [\[Feedback\]](#) [\[Help\]](#)

human rights

[\[Advanced Search\]](#) [\[Search Help\]](#) [\[Results Interface Help\]](#)

AustLII Databases - Documents found: 357575 for (human or right)

[Collapse Multi-sections](#) Show All Sections

Page 1 of 1 | [2](#) | [3](#) | [4](#) | [5](#) | [6](#) | [7](#) | [8](#) | [9](#) | [10](#) | [11](#) | [12](#) | [13](#) | [14](#) | [15](#) | [16](#) | [17](#) | [18](#) | [19](#) | [20](#) | >>>

5.5 Search of multilingual content

Legal Tools website requires special treatment of its search facility in other languages. First, it is necessary to ensure that search engine processes requests in non-Latin scripts in order to enable full text search of the documents and their titles in languages other than English. If suggestion 3 in 4.7 is implemented, search facility will also be able to search titles in foreign languages of documents in English language.

5.6 Advanced search on the Legal Tools website

All interviewees who worked with search engine of the website commented that “advanced search” option of the website is uncomfortable to work with. It is overly long and overly detailed. As one of them said: “I have a feeling of being a “beginner” when I go to this page, because it requires much knowledge about procedural law of international criminal tribunals in order to use it”. As noted by Jon Bing, the question is whether the performance is increased by such solution. “The solution reveals a dependence on the French tradition which often is based on library science, and where the presumption has been that the user is not an end user, but a librarian”³³.

Structure of the advanced search on the website illustrates examples of various browsing options and search narrowing options that I described above. The lists “Source type”, “Content type”, “Organization”, “Outcome of case” etc. can rather be referred to browsing functions of the website than its natural language search functions/conceptor based search. Lists “Phase of case” and “Language” can also be transferred into the browsing facility of the website. Instead, advanced search option should construct system of Boolean connectors processing sophisticated search requests and provide facility connecting keywords with the materials they are assigned to, as I described afore.

³³ Comment by the supervisor of the present thesis Jon Bing.

6 Improving interaction of legal texts

The discussion above dealt with retrieving the right document. Once the user finds it, the legal database should assist user in comprehending it. Building the system of relations between legal documents is the most effective way to facilitate comprehension of document. Paragraphs 23-25 of the Manual are dedicated to building relations between documents by inputting data about related resource link³⁴, and cited case/legislation (applicable only to judicial documents of the International Criminal Court).

In addition to relations that were built by the Legal Tools database, it is advisable to provide links to other documents available in the Legal Tools database. As I have found when writing this work, Legal Tools project is planning to cooperate with the Austlii research project entitled “Improving online case law within the constraints of free access through heuristic linking and resulting discovery mechanisms” which ambits to recognize citations to court decisions by automated means³⁵.

Having embedded links into legal texts, the developers of the Legal Tools database will be able to construct backlinks and fatlinks described by Trygve Harvold :

“Link: natural link in document A to document B

Backlink: constructed link in document B to document A which has a natural link to B

Fatlink: link to one or more documents, i.e. for example all the backlinks in a document.

³⁴ According to the Manual, the resource is considered to be related if its content is the same, but it is in a different language or the same language, but in a different translation or in a different electronic format, or if it is a corrigendum or annex to a described resource. It is also used for different versions of legislation.

³⁵ <http://www.austlii.edu.au/austlii/research/2008/linkage/> accessed on September 4, 2009.

Links and backlinks are thus mirror versions of each other, and a fatlink is the collection of all backlinks in a document. A fatlink is represented as a button in the Lovdata system³⁶.

This will not only help users to locate documents from other legal texts, but also to search the database by asking it a question of “Which documents refer to certain legal text?”. This highlight may further be enhanced by allowing users to see which jurisdiction cited the case, when the case was cited and even how deep it is being discussed. Depth of treatment of each case in the Westlaw legal database for instance is expressed by particular number of stars, while history of statutes is marked with flags. Westlaw builds on the long editorial experience of West publishing company – and their huge editorial staff which assigns stars and key numbers.

Screenshot 24. KeyCite system of Westlaw indicating related legal texts

KeyCite

Alexander E. GUERRERO, a minor child, by his next friend and father, Cristian Guerrero, ...
1994 WL 34402315
Superior Court of Alaska.
Trial Motion, Memorandum and Affidavit

22 Cases Cited in Alexander E. GUERRERO, a minor child, by his next friend and ...

Cases in U.S.A.

★ ★ ★ Discussed

- 1 Newton v. Magill, 872 P.2d 1213 (Alaska 1994) [34402315+](#)
- 2 Industrial Indem. Co. v. State, 669 P.2d 561 (Alaska 1983) [34402315+](#)
- 3 Jennings v. State, 566 P.2d 1304 (Alaska 1977) [34402315+](#)

★ ★ Cited

- 4 Coburn v. Burton, 790 P.2d 1355 (Alaska 1990) [34402315+](#)
- 5 Webb v. City and Borough of Sitka, 561 P.2d 731 (Alaska 1977) [34402315+](#)
- 6 University of Alaska v. National Aircraft Leasing, Ltd., 536 P.2d 121 (Alaska 1975) [34402315](#)
- 7 Alaska State-Operated School System v. Mueller, 536 P.2d 99 (Alaska 1975) [34402315](#)
- 8 Nizinski v. Currington, 517 P.2d 754 (Alaska 1974) [34402315](#)
- 9 Larman v. Kodiak Elec. Ass'n, 514 P.2d 1275 (Alaska 1973) [34402315](#)
- 10 City of Fairbanks v. Schaible, 375 P.2d 201 (Alaska 1962) [34402315+](#)
- 11 Owens v. Kings Supermarket, 243 Cal.Rptr. 627 (Cal.App. 1 Dist. 1988) [34402315+](#)
- 12 Wylie v. Gresch, 236 Cal.Rptr. 552 (Cal.App. 1 Dist. 1987) [34402315+](#)
- 13 Brooks v. Eugene Burger Management Corp., 264 Cal.Rptr. 756 (Cal.App. 5 Dist. 1989) [34402315+](#)
- 14 Morton v. Galvan, 151 So.2d 866 (Fla.App. 3 Dist. 1963) [34402315](#)

³⁶ Trygve Harvold. *Is searching the best way to retrieve legal documents*, e-Stockholm'08 Legal Conference, Stockholm November 14-19, 2008.

One of the key achievements in relating case law which is close to conceptual retrieval of law is services rendered by LexisNexis and Westlaw – Shepard’s and Keycite respectively. Although highly labor intensive, both systems manage to trace negative indirect history of each case (finding cases outside direct appellate line that may have negative impact on the precedential value of the case) and some additional history (related non-negative history). Thus, the system shows the user how courts dealt with similar questions of law in other cases even if there is no literal mentioning of the case title in the text. Developers of the Legal Tools database should consider to what extent they can enhance interrelation of cases and statutory law.

7 Improving networking on the Legal Tools website

Most of my previous suggestions dealt with improvements in computerised retrieval of documents. However, Legal Tools website may communicate data not only via system-to-user, but also user- to-user. User generated content, blogging, citizen journalism characterize the idea of Web 2.0., denoting that users can produce information, that they are not only mere recipients, but also contributors, members, authors.

Legal Tools website captures a specialized audience of legal professionals working with international criminal law from all over the world, sharing common problems, questions, and tasks. It would be reasonable to deploy latest online solutions in order to organize online community of the Legal Tools website fostering communication between Legal Tools project and the users, as well as between the users. Personal interaction online will help satisfy informational needs of the users when their search requests are too narrow or specialized or when they cannot correctly formulate them.

Legal Tools website at its current state stores documents and offers its users means to search and browse them. Further step can be taken to exercise editorial functions over it. Developers of Legal Tools database owing to their interaction with material and institutions/specialists working in the field are competent to trace developments in international criminal law, select news topics, provide overviews, etc. This form of communication will help Legal Tools website satisfy informational needs of those users that are selecting topic for their legal research saying “Here are the topics that you might want to look at”.

The following tools may be considered by the Legal Tools project in order to facilitate interaction between its users.

7.1 Blogging

Running official Legal Tools Blog would enable users interact online as effectively as in the forum. The advantage of a blog as compared to a forum is that the blogger running it can control discussion/direct it/determine the most important topics. Consider for example wide range of information represented by the Official Google blog³⁷. Official Legal Tools blog can communicate information on the recent news in international criminal jurisprudence, archive them online, organize blogs on international criminal law in a directory and publish recent posts from these blogs, link to blogs run by other professionals in international criminal law. Each post published by bloggers of Legal Tools project may be commented by users, bloggers can answer the questions posed by users, and the blog as a result may become an independent way to retrieve data.

Blogging provides another unconventional approach to browse documents in the form of tag cloud. Each post published by blogger is usually labelled with a certain name and a number of posts made under that name. Instead of the blog posts, the key materials may be tagged with several titles. Titles (or tags) may be organized into a tag cloud assigning weight to each tag. Consider, for example, tag cloud from social bookmarking website delicious.com:

Screenshot 25. Tag cloud on a social bookmarking website

.net 2008 3d advertising ajax and animation api apple architecture art article articles artist audio **blog** blogging blogs book books browser **business** car cms code collaboration comics community computer converter cooking cool **css** culture data database **design** desktop **development** diy documentation download downloads drupal ebooks economics **education** electronics email entertainment environment fashion fic film finance firefox **flash** flex flickr **food** forum **free** freeware fun funny gallery game **games** geek **google** government graphics green guide hardware health history home hosting house **howto** html humor icons illustration images imported information **inspiration** interactive interesting internet iphone japan java **javascript** jobs jquery kids language learning library **linux** list lists literature **mac** magazine management maps marketing math media microsoft mobile money movie movies mp3 **music** network networking news online **opensource** osx people phone photo **photography** photos photoshop php plugin podcast **politics** portfolio privacy productivity **programming** psychology python radio rails realestate recipe recipes **reference** religion research resources reviews rss ruby rubyonrails school science search security seo shop **shopping** social socialnetworking **software** statistics streaming teaching tech **technology** tips todo tool tools toread travel **tutorial** tutorials tv twitter typography ubuntu usability **video** videos vim visualization **web** web2.0 webdesign webdev wiki wikipedia windows wishlist wordpress work writing youtube

³⁷ <http://googleblog.blogspot.com/> accessed on September 4, 2009

Tags represent random concepts selected according to their popularity, expressed in the size of titles. Tag clouds are mainly criticized for their inability to represent complex problems (due to simplistic tags) and for concentrating on popularity of the concept which does not necessarily reflect its importance. However, tag cloud above manages to present complex terms.

Having selected one of the tags, user is presented with relevant websites and suggested related tags. For example, related tags to a tag “database” are “sql”, “programming”, “oracle”, “java”, “performance”, “development”, “software” etc. In order to find material on legal databases, a user can type in “law” into a search field and the website finds materials tagged both “law” and “database” by its users. This step brings relevant material. Tag clouds can be applied to international criminal law represented in the Legal Tools database.

Screenshot 26. Search in the tag cloud

The screenshot displays a web interface titled "Recent database and law Bookmarks". At the top, there is a navigation bar with "Recent | Popular" and a "Tags" section containing "database" and "law" with a search input field "Type another tag". Below this, a list of bookmarks is shown, each with a date, title, author, and a set of related tags. The first bookmark is "PACER Service Center Home Page" by "VTSnoop" with 315 tags, including "court", "courts", "government", "legal", "pacer", "records", "research", "database", and "law". The second is "JD Supra | Legal Documents, Legal Forms, Court Filings, Articles" by "petehollis" with 285 tags, including "legal", "research", "jdsupra.com", "forms", "documents", "filings", "makeuseof", "database", and "law". The third is "OpenCongress - Track bills, votes, senators, and representatives in the U.S. Congress" by "braduro" with 2947 tags, including "government", "politics", "usa", "policy", "information", "advocacy", "aggregator", "bills", "political", "congress", "legislation", "transparency", "open", "database", and "law". The fourth is "Feist Publications v. Rural Telephone Service" by "ThreeDayMonk" with 16 tags, including "copyright", "us", "database", and "law".

The claim that tag clouds is a populist way to present data can be overcome by development of tag cloud by the Legal Tools database itself or with assistance of users. Potential users of Legal Tools website after all is a specialized category of users interested in international criminal law and motivated to contribute to its potential blog. Facilitated by developers, potential users of the Legal Tools database are likely to adequately tag the documents forming their tag cloud. There is a risk though that they will not be motivated and active enough to tag documents.

Notably, similar application is implemented by legal database “Lovdata”. A user of Lovdata may post his comment to any statutory provision in force and choose to share it with the limited group or all users. Comments are not posted to the public before read by an editor. “It is hoped this will grow into some sort of community discussion”³⁸.

Blog can provide content feeds to the users. “Feeds permit subscription to regular updates, delivered automatically via a web portal, news reader, or in some cases ... email. Feeds also make it possible for site content to be packaged into "widgets," "gadgets," mobile devices, and other bite-sized technologies that make it possible to display blogs, podcasts, and major news/sports/weather/whatever headlines just about anywhere”³⁹. For example, website of International Court of Justice offers the users to subscribe for updates in content of the website⁴⁰.

Another popular feature used by numerous organizations is YouTube channels. Consider for example channel of Homeland Security Foundation of America, non-profit organization for public safety, energy security and health and human services displaying videos about its projects and interviews with its officials. Legal Tools Project may similarly endorse its YouTube channel communicating the latest trials, interviews and talks. Consider for example website www.ted.com posting videos of “riveting talks by remarkable people, free to the world” translated into several languages. Videos are categorized according to speakers, themes, and popularity. Digestions of international criminal law may well be contained in video materials communicated via YouTube channel which provides its own environment for communication and dissemination of videos to the world at large.

Aside from YouTube channel, webcasts may be published on the website. For example, podcasts by Director General of the WTO are provided on the website of the WTO, website of law firm Pinsent and Masons publishes weekly 10-minutes podcasts on

³⁸ Comment by the supervisor of the present thesis Jon Bing.

³⁹ FeedBurner Help on the Official Google Blog available at <http://www.google.com/support/feedburner/bin/answer.py?answer=79408> accessed on September 4, 2009.

⁴⁰ <http://www.icj-cij.org/homepage/index.php?lang=en> accessed on September 4, 2009

particular legal issues. Users can subscribe to weekly update of podcasts “Out-Law Radio”⁴¹.

7.2 Online messaging system

Blogging allows interaction between users even if they are offline. For instance, website of WTO administers forum about WTO where users initiate various topics for discussion. Legal Tools website can take step even further by allowing users to view which of other users are online in order to ask them particular question while they are online. Facebook recently implemented software which allows a user to view which of his friends is currently on the same website in order to initiate conversation. Similar chat rooms are available on Google mail, Yahoo mail.

Legal Tools website may potentially gather specialists working with international criminal law from all over the world. One needed to run an international conference in order to let them talk before. With chat room Legal Tools website will be able to do it over couple of mouse clicks. In order to run this service, users will need to register username in order for users to find the right interlocutor.

7.3 Other tools

Legal database may communicate with the users about its latest updates. For instance, Westlaw allows users to select those areas of law/case law where users would like to be updated on the latest developments. Similar system may be offered to users of the website by sending out alerts when new documents are uploaded on the Legal Tools database on particular issues.

⁴¹ <http://www.out-law.com/page-7212> accessed on September 4, 2009

Moreover, the Legal Tools website may issue analytical commentaries about the most important developments in international criminal law to the users that signed up for this service. Such analytical commentaries may inform about questions of law and highlight news from international criminal tribunals/national courts.

Conclusion

Having described Legal Tools website which makes available Legal Tools database, the following suggestions have been made in order to improve the website:

- Improve relations between the documents regulating relationships of the Legal Tools project and the users as discussed in paragraph 2.3. of the present thesis;
- Consider redesign of the website by distributing collections of the Legal Tools database among the webpages (sections/subsections) of the Legal Tools website as discussed in paragraphs 4.1, 4.6 of the present thesis;
- Consider structuring of case materials according to suggested criteria and providing the user with basic information about a case before he accesses it (through abstracts, KWIC snippets, etc.) as discussed in paragraphs 4.2, 4.3 of the present thesis;
- Consider providing the user an opportunity to browse cases/statutory law based on suggested criteria (data trees, terminology-based browsers, maps, etc.) as discussed in paragraphs 4.4, 4.5 of the present thesis;
- Consider improving multilingual representation of materials as discussed in paragraphs 4.7, 5.5 of the present thesis;
- Consider amending patterns of Boolean operators as discussed in paragraph 5.1 of the present thesis;
- Consider improving relevancy assessment by the Legal Tools database (word-frequency ranking mechanisms, vector retrieval mechanisms, clustering based mechanisms) as discussed in paragraph 5.2 of the present thesis.

- Consider disclosing keywords list as discussed in paragraph 5.3 of the present thesis;
- Consider amending the way system represents search results (KWIC snippets, regrouping options) as discussed in paragraph 5.4 of the present thesis;
- Consider changing advanced search by incorporating suggested search criteria as discussed in paragraph 5.6 of the present thesis;
- Consider increasing interaction between the texts by constructing links, backlinks, and fatlinks between the documents and perhaps by relating texts conceptually as discussed in chapter 6 of the present thesis;
- Consider creating network environment on the Legal Tools website by administering Legal Tools blog, online messaging system, etc. as discussed in chapter 7 of the present thesis.

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