

JuriDiCo: User's Guide



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Search the Juridico

Language: Show equivalences

Search mode:

Precision:

Expression:

Dictionary compiled by the
*Observatoire de linguistique
Sens-Texte (OLST)*

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1. The team

The current version of JuriDico (<http://olst.ling.umontreal.ca/cgi-bin/juridico/search.cgi>) was elaborated by Janine Pimentel in the *Observatoire de linguistique Sens-Texte* (OLST, <http://olst.ling.umontreal.ca/>) under the supervision of Marie-Claude L’Homme. JuriDiCo is in part based on the methodology for compiling specialized dictionaries designed in the OLST. The OLST currently offers two specialized lexical resources that are available online: a dictionary on computing and the Internet called DiCoInfo (<http://olst.ling.umontreal.ca/cgi-bin/dicoinfo/search.cgi>) and a dictionary on the environment and climate change called DiCoEnviro (<http://olst.ling.umontreal.ca/cgi-bin/dicoenviro/search-enviro.cgi>).

The online version of these dictionaries was encoded in XML format in collaboration with Guy Lapalme (*Recherche Appliquée en Linguistique Informatique* - RALI). The XML version and the research prototype were designed by Benoît Alain, Patrick Baril-Robichaud, Guy Lapalme and Vincent St-Amour. The online version of JuriDico was designed by Benoît Robichaud who also provided technical support throughout the implementation of JuriDiCo.

2. Goals of JuriDiCo

JuriDiCo is a lexical resource based on the theory of Frame Semantics (Fillmore 1976, 1977, 1982, 1985; Fillmore and Atkins 1992), on the FrameNet project (Ruppenhofer et al. 2010) as well as on the methodology used to compile the DiCoInfo (L’Homme 2008). It is the product of a doctoral dissertation on bilingual terminography carried out at the Université de Montréal (Pimentel 2012). The research had two main goals.

One of them was to test the possibility of using the theoretical and methodological frameworks mentioned above to assign the equivalents of a specific kind of terminological units, i.e. the specialized verbs that occur in legal texts. The hypothesis was that a methodology based on the description of terms by means of *semantic frames*, “any system of concepts related in such a way that to understand any one of them you have to understand the whole structure in which it fits” (Fillmore 1982: 111), would help lexicographers identify the equivalents of terms because semantic frames are language-independent to a certain degree (Boas 2005; Baker 2009). The descriptions of the terms as well as their equivalents were encoded in a database that functions as an observatory of the equivalence phenomenon for research purposes.

Another goal of the research was to build a bilingual lexical resource that provides users not only with the equivalents of terms but also with the linguistic and the extralinguistic information related to the terms. By linguistic information we mean the syntactic structures in which terms occur, the choice of prepositions, the actantial

structures of verbs, the terms' combinatorics, etc. For instance, users of JuriDiCo may be interested in learning that the verb *to acquit* is used with two prepositions:

The judge **acquitted** him **of** murder but convicted him of manslaughter.

After hearing his alibi evidence, the trial judge **acquitted** him **on** both counts.

By *extralinguistic information* we mean the conceptual scenarios or background knowledge to which terms refer. We call this kind of information *frames*. For example, users may be interested in learning about all the terms that can be used to convey the idea that “a certain legal document regulates a certain issue”. Then, they may browse the list of frames, click on “Regulations” and access seven English terms (*codify*, *establish*, *govern*, *mandate*, *prescribe*, *provide*, *recognize*,) and seven Portuguese terms (*consignar*, *determinar*, *disciplinar*, *estabelecer*, *estatuir*, *estipular*, *prescrever*,) that evoke this scenario.

Target users of JuriDico include translators, technical writers and anyone interested in legal terminology. The resource is freely available at <http://olst.ling.umontreal.ca/cgi-bin/juridico/search.cgi>.

3. Originality of JuriDico

JuriDiCo differs from the majority of specialized dictionaries as well as from terminology databases in that it provides rich detail about the meaning as well as the grammatical and phraseological profile of the terms (actantial structure, combinatorial properties) at the same time it provides extralinguistic information on terms (frames).

As mentioned, JuriDiCo follows the theoretical principles of Frames Semantics (Fillmore 1976, 1977, 1982, 1985; Fillmore and Atkins 1992). Frames are conceptual scenarios that contain mandatory meaning slots or core Frame Elements (hereafter FEs) as well as optional slots or non-core FEs. For instance, the Argumentation frame corresponds to a scenario in which parties in a case are called upon to explain why they are accusing someone, being accused by someone, appealing a decision, etc. It therefore includes two core FEs: Arguer and Argument. The FE Arguer can refer to the accuser or to the defendant (criminal suit), to the petitioner or to the respondent (civil suit), whereas the FE Argument refers to a statement, reason or fact for or against the matter under discussion. The terms *argue*, *assert*, *contend*, *invoke*, *state*, and *submit*, all evoke the Argumentation fram, but their linguistic behavior may not be exactly the same. For instance, *argue*, *assert*, and *contend* are typically followed by that-clauses (*The respondents contend that the order being sought should not be granted.*) whereas *invoke* is typically followed by a noun phrase (*The respondents invoke the Business Judgment Rule.*).

JuriDiCo also follows the methodology developed by the FrameNet lexicographers (Ruppenhofer et al. 2010) but some adaptations were made. Whereas FrameNet lexicographers describe a frame and then the LUs that evoke it, we describe the selected verbs and then group them into frames (Pimentel 2012). Frames can group together not only equivalent terms but also certain synonyms, near-synonyms, opposites and related terms within a given language. This is the way in which JuriDiCo accounts for some semantic relations between terms.

As a result, the resource serves a decoding and an encoding function, i.e. it should be helpful for the understanding of legal terminology as well as for the translation and production of legal texts, in that it allows users to search the information they need by introducing the knowledge they already have about a concept (search by frames) or by introducing a term so as to learn about its characteristics (search by terms).

4. Selection of entries

This dictionary is concerned with the basic terms that occur in legal texts, although for the time being it only includes terms belonging to the part of speech of verb. By term we mean any lexical unit whose meaning may be associated with the subject field of law as well as with the texts genres that are characteristic of a given expert community.

More specifically, candidate-terms were extracted from the comparable corpus by means of a term-extractor called TermoStat (Drouin 2003). They were then validated by applying the lexico-semantic criteria provided in L'Homme (2004), according to which a given lexical item may be a term if: 1) it has a meaning related to the subject field in question; 2) its actants (or arguments) are terms themselves according to criterion 1; 3) its morphological derivatives are terms themselves according to criteria 1 and 2 at the same time that there is a semantic relation between the lexical item and its derivatives; and 4) the lexical item has other paradigmatic relations to other terms validated by the same criteria. Often the specialized verbs that were included in JuriDiCo exist in the lexicon of general language but are used in legal discourse in a specific way.

5. How to search for terms

JuriDiCo can be consulted in three ways. Users can browse an alphabetically ordered list of terms (Figure 1); they can use a search engine (Figure 2); or browse an alphabetically ordered list of frames (Figure 3). If users choose the first option, they may click on the terms to directly access their description. As mentioned, for the time being there are two lists of terms: a list of the English terms and a list of the Portuguese terms.

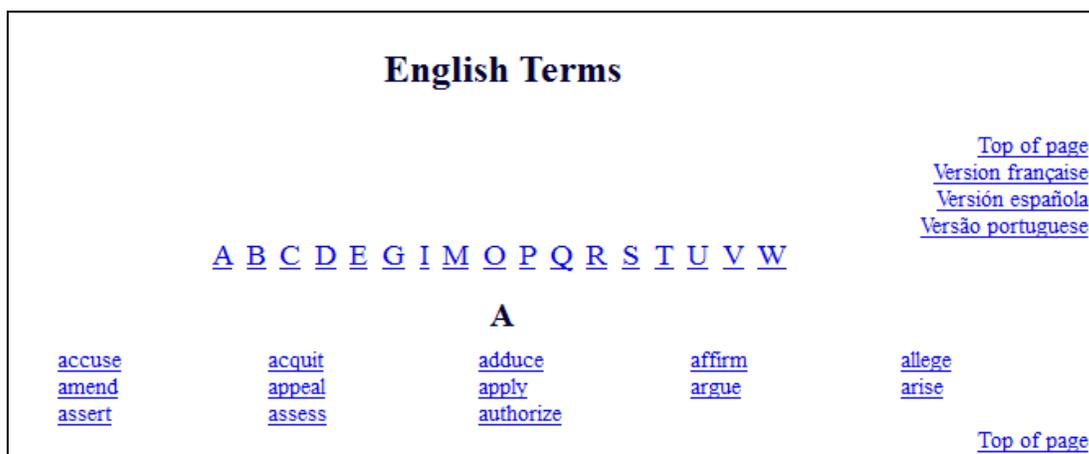
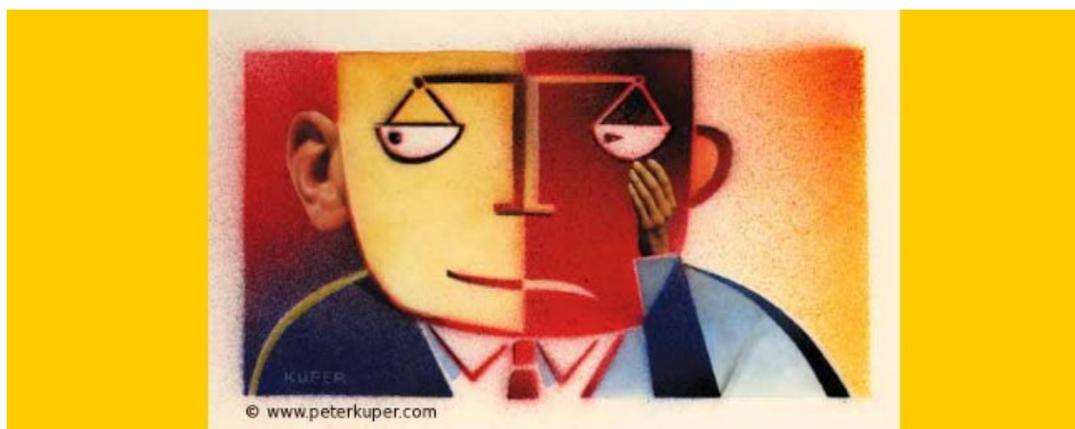


Figure 1. Alphabetical list of terms

If users choose the second option (Figure 2), they will have to select the research mode: by terms, by frames or both. The research mode called *by Frames and Terms* provides users with both terms and frames. Therefore, if REMEDY is entered, they will be able to access the term *remedy*₁ as well as the frame Remedy.

Users will also have to select the parameter specifying the precision level which defines how closely the sequence entered must correspond to the file contents. Choosing “Exact”, will generate only the terms with the exact same spelling as the search term entered by the user. Therefore, if ASSERT is entered, the results will be limited to that sequence only. If users enter the sequence ASSE, they will get no results. Choosing “Starting with” will generate the terms beginning with the character sequence entered, so a search for the sequence ASSE will obtain ASSERT and ASSESS. “Containing” generates the terms that contain the sequence even as a part of the word, so the search for AS will obtain entries for ASSERT, ASSESS, as well as QUASH.



[Alphabetical list of terms](#) | [Alphabetical list of frames](#) | [Versão portuguesa](#) | [Documentation](#) | [Team](#) | [Help](#)

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Mode: Show equivalences

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Precision:

Expression:

Figure 2. JuriDiCo's search engine

Finally, if users choose the third option (search terms by means of frames), they may browse an alphabetically ordered list of frames (Figure 3). As mentioned, there is only one list of frames regardless of the language version that users may be browsing.

JuriDico - Alphabetical list of frames				
Assessing	Appellate procedure	Apply law	Argmentation basis	Argumentation
Compliance	Authorization	Case transfer	Cause irregularity	Come_into_existence
Convincing	Conclusion	Constitutionality	Consulting a lawyer	Contesting
Detaining	Court examination	Crime	Decision	Decision type
Hiring	Duty	Evidence	Firing	Granting
Judge's procedure	Incriminating	Investigate	Irregularity	Issues
Law changes	Judging	Jurisdiction	Jury	Law applicability
	Law interpretation	Law-making	Legal relations	Lessening and irregularity
Make an error	Order	Pay	Petition	Presumption
Proceeding	Pronouncing a verdict	Proof	Prosecutor procedure	Regulations
Remedy	Result	Revealing	Review	Right
Sentencing	Taking into consideration	Testimony	Validity of proceeding	Verdict

Figure 3. Alphabetical list of frames

6. Term entries

Each term entry of JuriDiCo contains the following items of information or fields (Figure 4).

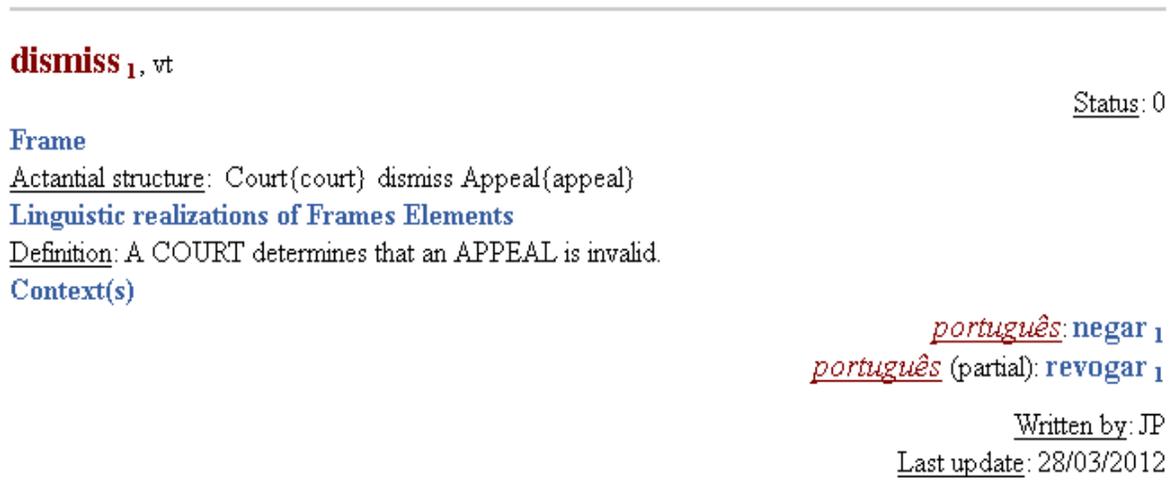


Figure 4. The term entry *dismiss₁* in JuriDiCo

6.1. Headword

This field names the specialized verb with its sense number, e.g. *dismiss₁*. This number is always displayed, even if the term has only one specialized sense. The sense number is used in all the other sections in which the term appears. In general, senses are not arranged in a hierarchical order and the sense numbers do not have a particular meaning except to differentiate the frames that a given verb may evoke. Each entry keyword has a label indicating the part of speech to which it belongs. Verbs are marked as transitive, intransitive or pronominal.

6.2. Frame

This field includes four pieces of information: a frame label, a definition of the frame, the participants in the frame and other terms that evoke the frame (Figure 5). For instance, Decision is the label attributed to the frame that the verb *to dismiss* evokes. Frame names start by a capital letter. The participants in the frame are divided into mandatory participants or core FEs and optional participants of non-core FEs. A brief definition is provided for each core FE. The section “Other Terms” lists the terms in the same language that were grouped together into the frame Decision. The terms that were grouped together into this frame can be synonyms (*quash₁*), near-synonyms and antonyms (*uphold₁*, *affirm₁*) of *dismiss₁*.

Frame

Decision	
Frame Definition:	
A COURT determines if a previous DECISION or an APPEAL is valid or invalid. When the DECISION or the APPEAL is valid, the COURT affirms or upholds it. When the DECISION or the DECISION is invalid, the COURT dismisses or quashes it.	
Core Elements:	
Court:	The tribunal duly constituted for the hearing and determination of cases.
Decision:	A judgment pronounced by a court in settlement of a controversy.
Appeal:	A proceeding for review of a former decision.
Non-Core Elements:	
Basis, Case, Extent, Manner, Means, Reason, Text, Time	
Other Terms:	
quash ₁ , uphold ₁ , affirm ₁	

Figure 5. The frame field in the entry of *dismiss*₁.

6.3. Actantial structure

The actantial structure lists the semantic actants of the headword and describes their role with regard to the predicate term. This field exists in DiCoInfo but not in FrameNet. It was adopted here to show how terms depict a given scenario. Whereas the FEs are conceptual in nature, the actants (traditionally called *arguments*) are linguistic entities. Therefore, the actants of the terms may or may not correspond to the core FEs of the frame that they evoke because the FEs may not always be expressed by all terms that evoke a frame. For instance, in the case of the term *dismiss*₁, the actantial structure contains two out of the three core FEs of the frame Decision (contrast Figure 4 **Erreur ! Source du renvoi introuvable.** with Figure 5).

The actants are represented by a system of labels which describe their semantic role with regard to the predicate keyword. For instance, the actantial structure of term *dismiss*₁ is: Court ~ Appeal. The label Court refers to the official who directs and presides over the hearing and determination of cases (judge), but most often it refers to the tribunal duly constituted for the hearing and determination of cases (court). The label Appeal refers to a proceeding for review of a former decision.

6.4. Linguistic realizations of the FEs

This field lists the terms that instantiate the core FEs expressed by the predicate headword. The linguistic realizations of the FEs correspond to the realizations of the actants of the verb and they are most often the head of NPs (Figure 6).

Linguistic realizations of Frames Elements

court
Corriveau J. , court , I , Superior Court , we
appeal
action , appeal , application , complaint , cross-appeal , motion , proceeding , work

Figure 6. Linguistic realizations of the FEs that were annotated in the contexts of the term *dismiss*,

6.5. Definition

This field provides a definition of the verb. This definition may or may not correspond exactly to the definition of the frame. For instance, the definition of *dismiss*, illustrates the way this verb offers a perspective on the frame Decision (contrast definition in Figure 4 **Erreur ! Source du renvoi introuvable.** with Figure 5).

6.6. Contexts

This field includes two pieces of information: three illustrative and simple contexts of the term (Figure 7) and about twenty annotated contexts (Figure 8) together with a summary table that contains the semantic and syntactic properties of the term. One can access the annotated contexts as well as the summary table with the semantic and syntactic properties of the term by clicking on “Annotated Contexts” (Figure 9).

Context(s)

Annotated Contexts

We would dismiss the appeal. (Source: SCC-2008-9)

I would dismiss the cross-appeal. (Source: SCC-2007-24)

I would accordingly dismiss the appeal. (Source: SCC-2009-44)

Figure 7. Contexts of the term *dismiss*,

<i>I</i> would also DISMISS <i>the cross-appeal</i> . [SCC-2007-41 0 JP 27/06/2010]
On all other <i>counts</i> , <i>we</i> would DISMISS <i>the appeal</i> . [SCC-2009-32 0 JP 27/06/2010]
<i>Accordingly</i> , <i>I</i> would allow the appeal and DISMISS <i>the action with costs</i> . [SCC-2007-38 0 JP 27/06/2010]

Figure 8. Annotated contexts of the term *dismiss*,

In the annotated contexts (Figure 8), the elements are graphically marked in the following ways: the keyword term to which the annotation belongs is capitalized; the surrounding actants are coded by color (each color corresponds to a different label representing a FE); the linguistic instantiations of the FEs in sentences appear in bold; the head in phrases instantiating the FEs appears in italics. The information following the annotated contexts indicates the source, the annotation status (only o-status contexts are displayed), the editor's code, and the date last updated.

DISMISS 1		
Core Frame Elements		
Court	Sujet (SN) (16) Lien indirect (SN) (3)	<i>i</i> (10) <i>we</i> (4) <i>superior court</i> <i>comiveau j.</i> <i>us {this court}</i> <i>court</i> <i>it</i>
Appeal	Objet (SN) (20)	<i>appeal</i> (10) <i>cross-appeal</i> (2) <i>action</i> (2) <i>application</i> (2) <i>motion</i> <i>proceeding</i> <i>complaint</i> <i>work</i>
Non Core Frame Elements		
Basis	Modificateur (SA.dv) (2) Complement (SP -on) (2)	<i>accordingly</i> (2) <i>ground</i> (2)
Case	Complement (SP -on)	<i>count</i>
Manner	Complement (SP -on)	<i>cost</i>
Reason	Complement (SP -on) (2)	<i>reason</i> (2)

Figure 9. Summary table with the semantic and syntactic properties of the term *dismiss*,

6.7. Equivalents

This field provides a full equivalent of the headword (Figure 4). When a given term has several full equivalents, these are listed. When no full equivalent is available, a partial equivalent is provided.

6.8. Administrative information

This field provides information concerning the entry status, the entity of the editors and the date when the entry was last updated. JuriDico is still under construction and, as a result, its entries are at different points of the editing process. The entry status is a number quantifying the degree of completion of the entry relative to the other entries. 0 status means that the editing is completed. Status 1 means advanced editing of the sections (actantial structure, linguistic realizations of the FEs, annotated contexts). Status 2 means that only the contexts in which the terms occur are available.

7. How to search for frames

Users can proceed in three ways: they can browse an alphabetically ordered list of frames (Figure 3); they can use a search engine (Figure 2); or they can browse an alphabetically ordered list of terms (Figure 1).

8. Frame entries

Each frame entry of JuriDiCo contains the following items of information or fields (Figure 10).

8.1. Definition

This field provides a schematic presentation of a situation type that underlies the meaning of a term (or of the members of sets of terms) along with named participant roles, i.e. FEs. The frame definition may specify the manner in which the FEs are given linguistic expression in sentences containing the terms. It can also draw considerations on the manner in which certain terms profile the frame (e.g. positively or negatively).

Decision

Frame Definition:	
A COURT determines if a previous DECISION or an APPEAL is valid or invalid. When the DECISION or the APPEAL is valid, the COURT affirms or upholds it. When the DECISION or the DECISION is invalid, the COURT dismisses or quashes it.	
Core Elements:	
Appeal : A proceeding for review of a former decision.	
Court : The tribunal duly constituted for the hearing and determination of cases.	
Decision : A judgment pronounced by a court in settlement of a controversy.	
Non-Core Elements:	
Basis, Case, Extent, Manner, Means, Reason, Text, Time	
English Terms:	Portuguese Terms:
affirm 1 dismiss 1 quash 1 uphold 1	negar 1 revogar 1

Figure 10. The frame entry Decision

8.2. FEs

This section is divided into a list of core FEs, or mandatory participants in the frame, and a list of non-core FEs, or optional participants in the frame. Each FE is given a semantic label that can be subject-field-specific like LAW or more general like Act and Protagonist. Labels were by some of the frame labels described in FrameNet that are related to the subject field of law. When no candidate label was found, labels were created based on the typical occurrences of the actants. In any case, the choice of labels aims to help the dictionary user to quickly grasp the participants in the meaning of terms. Definitions are provided for the core FEs.

8.3. Terms

This field provides a list of the terms in the languages described that evoke a given frame. For instance, in Figure 10 one can find a list of English terms as well as a list of Portuguese terms that evoke the Decision frame. Terms that are grouped together into

the same frame can be synonyms (*quash*₁ and *dismiss*₁), near-synonyms, antonyms (*dismiss*₁ and *affirm*₁), or related terms (*negar*₁ and *revogar*₁).

9. How to search for equivalents

Users can find the equivalents of terms in three ways: they can browse an alphabetically ordered list of terms (Figure 1); they can use a search engine (Figure 2); or they can browse an alphabetically ordered list of frames (Figure 3). If users access a term entry, equivalents are provided when available. When a given term has several full equivalents, these are listed. When no full equivalent is available, a partial equivalent is indicated. If users prefer to use the search engine, they only need to type the term and the search engine will generate results that immediately indicate the equivalent(s) of the typed term. Finally, if users decide to search by frames, they will access a table that describes the frame and indicates the English and Portuguese terms that evoke the frame and that are therefore equivalents (Figure 10). We recommend the user to click on the equivalents so as to access the term entry and verify the equivalence degree between a given term pair.

10. Current state of JuriDiCo and future work

For the moment, JuriDiCo describes the most relevant specialized verbs used in the highest court decisions of Canada and Portugal as well as the frames that the verbs evoke. It, therefore, includes two lists of terms (English and Portuguese) and a list of frames. The frame names, their description and participants are always given in English for the time being. As future work we envisage an extension of the methodology used to compile JuriDiCo to the description of terms belonging to other parts of speech (nouns, adjectives, adverbs) as well as to other languages.

Also, for the moment we do not provide any indication on how frames relate to each other and we do not directly state the semantic relations between terms. However, the identification of frames and the activity of grouping together the terms into them could be further developed so as to account for that kind of information.

Finally, for the time being the contexts in which the verbs occur and that contain the information used to describe the verbs and assign their equivalents are annotated manually. Therefore, another improvement to our method could consist in the automatic annotation of the contexts, such as the system proposed by Hadouche et al. (2011a) and evaluated in Hadouche et al. (2011b). As the annotation of contexts is helpful for lexicographers and users (L'Homme and Pimentel 2012), the automatization of the annotation could accelerate and ease the lexicographers' work.

11. Obtaining JuriDiCo for research purposes

It is possible to obtain an original XML version of the JuriDiCo for research purposes by making a request to Janine Pimentel (janine.pimentel@umontreal.ca).

12. To learn more

On the methodology used to compile JuriDiCo:

Pimentel, J. (2012, forthcoming). « Description de verbes juridiques au moyen de la sémantique des cadres », *Terminologie & Ontologie : Théories et applications* (Toth 2011), Annecy, 26-27 May 2011.

Pimentel, J. (2012). “Identifying the equivalents of specialized verbs in a bilingual corpus of judgments: A frame based methodology.” *Language Resources and Evaluation* (LREC 2012). 1791-1798. Istanbul (Turkey). 21-27 May 2012.

On the methodologies used to compile DiCoInfo:

Hadouche, F., Lapalme, G. and L'Homme, M.C. (2011a). « Attribution de rôles sémantiques aux actants des lexies verbales. » In *Traitement automatique des langues TALN 2011*, 27 juin au 1er juillet 2011, Avignon.

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On Frame Semantics and FrameNet:

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- Baker, C. F. (2009). "La sémantique des cadres et le projet FrameNet : une approche différente de la notion de « valence »." *Langages* (4): 32-49.
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