

# Reflex – Bridging Open Access with a Legacy Legal Information System

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Daniel POULIN, Éric PARÉ and Ivan MOKANOV

LexUM/CanLII, Faculty of Law, University of Montréal

## 1 Introduction

According to Black's Law Dictionary, a citator is "a book or section of a book containing tables of cases or statutes that have been judicially cited in later cases." However, the citators offered by major law publishers do much more than this. They provide not only compilations of texts cited in case law, but also information derived from editorial analyses of the relations among the documents. Until now, owing to the resources required to develop and maintain such tools, citators have remained beyond the reach of free publication. Citators, along with summaries and key words, have become primary features of commercial legal publishing.

To meet CanLII's needs, the LexUM laboratory has developed the first citator for the free access to law environment. Reflex, CanLII's citator, goes far beyond the definition in Black's while remaining more limited than those offered by commercial publishers. It is designed specifically to serve open access publication, in other words, publication that offers free unrestricted access to legal documents from official sources on the Internet. Reflex was developed with a view to the key issues of identifying relations among published documents, linking the CanLII site with the legal information system as a whole, and refining tools for retrieving information.

Reflex is designed to meet the specific needs of Canadian legal practitioners by overcoming CanLII's primary limitation, namely youth and consequent weak historical scope of its collections. Reflex also enhances free publication of law. It is the only citator developed outside commercial legal publishing. Its design, development and benefits thus merit description in order to encourage similar undertakings.

## **2 Context and issues**

In 1993, LexUM began making Supreme Court of Canada decisions available free of charge on the Internet. In 2000, the Federation of Law Societies of Canada, which is the umbrella organization of all Canadian law societies, decided to create a virtual Canadian law library. The resource was to meet three objectives: increase the proficiency of bar members, allow legal practitioners to take advantage of new information technologies by reducing (or helping to control) the cost of legal documents, and serve the public interest by promoting access to law. The Federation of Law Societies of Canada decided to employ open access publication for the project and to carry it out in partnership with LexUM.

Five years later, the resulting virtual library, namely the Canadian Legal Information Institute (CanLII: [www.canlii.org](http://www.canlii.org)), has grown to fulfil the initial dream. CanLII now offers over 75 case law collections, as well as the legislation of 13 of the 14 jurisdictions in Canada. In practical terms, it makes over 300,000 decisions and several tens of thousands of legislative texts available through both navigational pages and a search engine.

Access to CanLII is free of charge for all. However, it remains funded wholly by Canadian lawyers.<sup>1</sup> Direct funding from the profession encourages CanLII's management to pay constant attention to the day-to-day needs of legal practitioners. Thus, at CanLII,

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<sup>1</sup> The only indirect government funding for CanLII is the major infrastructure grant awarded to LexUM by the Canada Foundation for Innovation and the Québec Ministry of Education in the context of the TAPoR consortium.

each decision undergoes numerous verifications before it is entered into the databases. Editorial staff perform a quality control of every document. Indeed, the CanLII production team plays a greater role than that required of other legal information institutes. The development of Reflex is related to this.

In concrete terms, Reflex's purpose is to overcome CanLII's difficulty in meeting the needs of professionals owing to its youth. The development of a citator, in other words, a compilation of information about decisions published in Canadian law reports, seemed like the best way to overcome two of CanLII's limitations for legal practitioners: the opacity of private report citations, which makes it difficult to insert hyperlinks, and the fact that CanLII's collections have little historical depth.

*Increasing the number of hypertext links within CanLII.* In Canada, the usual way to cite a decision is to note the law report in which it appeared, in other words, to refer to a *private* publication. The problem this creates for open access to law is that citations of private publications are opaque; it is little exaggeration to say that they provide access to decisions only in the volumes in which they are published. For example, even for someone like a CanLII editor with access to an electronic version of the document, it is difficult to know which decision is designated by [2001] 6 W.W.R. 409. The only solution is to go and look in the specific volume of the series of law reports in order to gather other information on the decision and, if possible, more neutral information originating from the judicial source, such as the date, file docket number and, perhaps, neutral citation. This information makes it possible to identify the decision and then to insert a hypertext link so that it can be accessed.

*Improving the links between CanLII and commercially published content.* In Canada, free publication did not arise in a vacuum. The legal publication industry is over 100 years old. The Supreme Court of Canada and the federal courts even publish their own official law reports. Even if we take into consideration only printed sources and only case law, there are several tens of thousands of volumes full of decisions rendered by courts and tribunals over the last century. In comparison, the scope of CanLII's historical collections is currently limited to around 20 years for the Supreme Court, around 10 years for the provincial and territorial appeal courts, and even less for other courts and tribunals. It goes without saying that time will correct this situation. Moreover, decisions older than

20 years are in reality cited very rarely. In fact, with every year that goes by, every new historical collection acquired by CanLII increases its historical depth and thus its practical usefulness. However, the creation of a bridge between the sets of documents offered on CanLII and the commercial resources accumulated over the decades seemed like a means of improving CanLII's immediate utility for lawyers.

### **3 Possible solutions**

The opacity of proprietary work citation is well known. It is the underlying reason for the adoption of neutral case law citation in many countries. Indeed, over the long term and as years pass, neutral citation will solve many of the problems that Reflex seeks to remedy.

#### **3.1 Neutral citation**

In Canada, a neutral framework for designating decisions, a neutral citation, was adopted by the Canadian Judicial Council in June 1999.<sup>2</sup> Since then, the very great majority of Canadian courts and tribunals have adopted and implemented neutral citation. Neutral citation includes three main features: a style of cause, the body of the citation and various optional features. For the purposes of this paper, the body of the neutral citation is particularly interesting. Indeed, three very simple components, namely the year, the court identifier and the ordinal number of the decision, are sufficient to eliminate the opacity created by using private citations alone.

If a court uses neutral citation, it includes it at the top of and as an integral part of the decision. Moreover, if another Canadian Judicial Council standard is also implemented, namely the one providing for the use of neutral citation in reasons for decisions, the opacity almost completely disappears because it becomes possible to access every

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<sup>2</sup> See "A Neutral Citation Standard for Case Law," Canadian Citation Committee, adopted by the Canadian Judicial Council in June 1999. Source: [http://www.lexum.umontreal.ca/ccr-ccc/neutr/neutr.jur\\_en.html](http://www.lexum.umontreal.ca/ccr-ccc/neutr/neutr.jur_en.html).

reference to a decision using only public information from court sources.<sup>3</sup> From the user's point of view, it is possible to identify the decision cited and find it more easily, particularly in electronic sources, but also in series of law reports if the neutral citation appears in tables of published case law. From the point of view of the administrator of a court web site or an open access publisher, the use of neutral citation in reasons makes it possible to establish hypertext links among decisions directly. Neutral citation has many advantages for those who manage legal information, whether they work in the courts or are involved in free or commercial publishing.

Clearly, neutral citation promotes greater openness in the Canadian information system. It allows everyone to choose the source of information according to preferences. In the Internet age, it solves the problem of establishing hypertext links. Indeed, Reflex's development was made necessary largely because of the immaturity of Canadian neutral citation.

Reflex's databases can be used to identify the frequency of citation of three leading Canadian law reports and neutral citation during CanLII's first five years. As is shown in Figure 1, growth in the use of neutral citation was remarkable over the period. After only a few years in existence, and even though it is not available for the years prior to 1999, it is catching up to the frequency of use of the leading law reports. This is not all. The authors of the citation standards adopted by the Canadian Judicial Council suggest using neutral citation as a parallel citation following the official citation, if such citation exists, as in the case of Supreme Court decisions. For this reason and because of how the graph was calculated, a neutral citation is counted only if it appears alone or in first place. The data show that neutral citation use already far surpasses that of the leading law reports, except for that of the Supreme Court and the Canadian Criminal Cases series.

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<sup>3</sup> See the "Canadian Guide to the Uniform Preparation of Judgments", Canadian Citation Committee, adopted by the Canadian Judicial Council in October 2002. Source: <http://www.cjc-ccm.gc.ca/cmslib/general/Guide.en.pdf>.

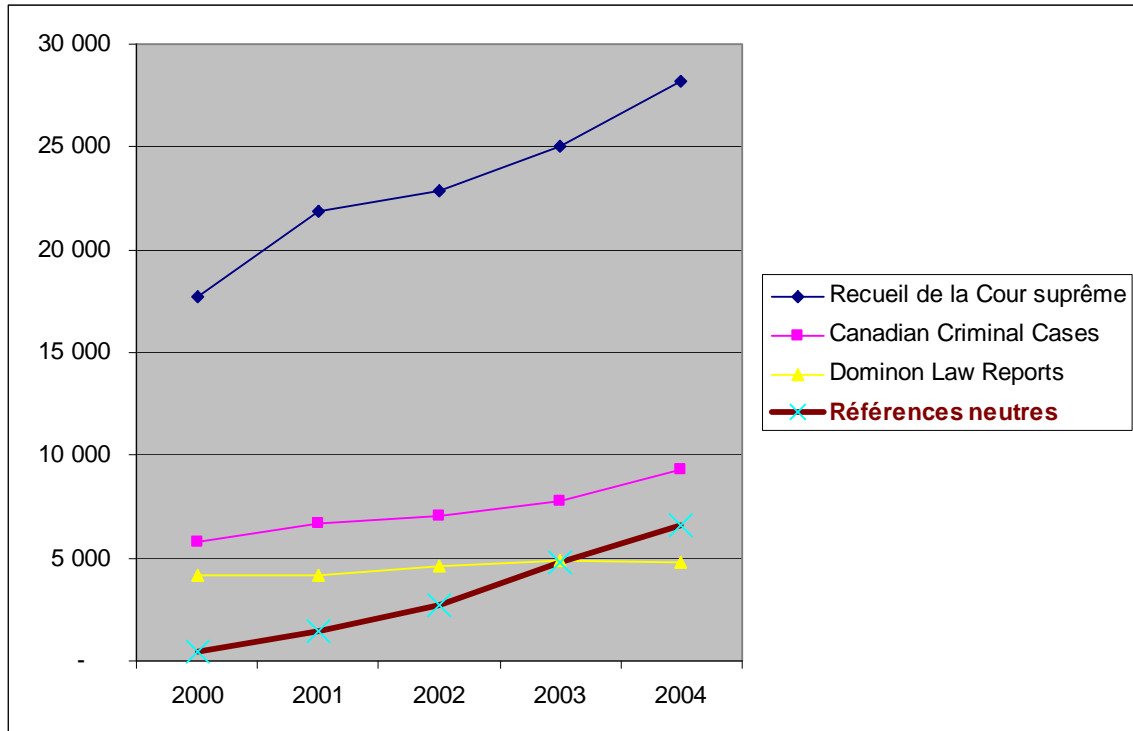


Figure 1: Changes in case law citation practices 2000-2004

In addition to the gradual effect of neutral citation use and the development of a citator, another more limited approach was also possible.

### 3.2 Alternatives to preparing a citator

An alternative to preparing a citator was to design an ambiguity-tolerant function to recognize and analyze citations, and identify them by applying various heuristic methods to the extracted information. The advantage of this approach is that it would have made it possible to try to identify all of the citations that could correspond to a document on CanLII. In fact, prior to implementation of Reflex, the links between decisions were processed more or less in this way. However, it has to be acknowledged that, depending on how it is carried out, this approach can introduce a great deal of inaccuracy or identify only a very limited number of links.

Another possibility was to establish alliances with one or more publishers that already have citators. This would have made access simple, but at the price of directing CanLII users to a commercial product, for example, if the decision was not available on CanLII. It would also have been necessary to determine how to establish links between

documents when a document in a private source was cited. It is not at all clear that a link could have been established between the documents with the help of a commercial citator that, in principle, charges a fee for every query. Finally, even if this approach had been chosen, CanLII would not have gained access to a citator; it would have acquired such access only for its users. With a view to the long term, designing a citator specific to CanLII finally seemed to be the most advantageous option.

#### **4 Methodology**

The purpose of this section is to provide an overview of the methodology used to implement the Reflex citator. It presents the technical points around which the project was developed, and describes the citator's general operation. The Reflex project includes four technological components organized around the idea of maximizing use of information technology and minimizing manual intervention by editors. The four components are data compilation, association of case law citations, identification of citations in decisions, and integration of the findings into CanLII's routine publication procedures.

At the compilation stage, editors enter information on every decision contained in the selected law reports. In addition to the citation as such, the editor records other related factual information, such as the court that rendered the decision, the docket numbers, the date and the style of cause, as well as the report in which it was published. In short, the process expands a citation such as “[2001] 6 W.W.R. 409” by adding that the decision was rendered by the Supreme Court of Canada on January 18, 2001 in the case *R. v. Latimer*. In the compilation process, the data on decisions are added one by one and in a manner that makes them wholly independent from the database. They are linked neither with one another, nor with the corresponding decision, whether or not it is published on CanLII.

An acquisition support system aids compilation. Once completed, each group of citations is submitted to it for validation and registration. In addition to recording each entry in a register, the acquisition program helps the editors achieve exhaustiveness and ensure data integrity.

The editors were based in four libraries: the E. K. Williams Law Library at the University of Manitoba, the Great Library of the Law Society of Upper Canada, the Nova Scotia Barristers' Society Library and the University of Montréal Law Library. A dozen editors were involved in compiling information on the last 20 years of the some 30 reports selected. (See Appendix A.) In all, information was compiled on decisions published in over 4000 volumes, covering over 200,000 case law citations.

The association process involves establishing links among different parallel citations of a single decision, among the citations, and with the decision published on CanLII, if applicable. A list of possible parallel citations and corresponding possible decisions is associated with each citation. The associations are then assigned a similarity score with respect to the case law citation in question. The score is based on information in the database, and is calculated automatically. The more identical or similar features two citations share, the greater the similarity score. Finally, pairs that are sufficiently similar are linked automatically. In other cases, an editor has to intervene. However, the difficulty of the task is greatly reduced since the editor has only to examine pairs of citations that have already been identified and the similarity of which has been calculated by the linking system.

In parallel, a program analyses each decision to identify all citations, whether or not they correspond to compiled sources. At every stage, citations of several hundred law reports are detected. The detection process uses regular expressions, an approach that makes it possible to search for text patterns based on syntax. Thus, it is possible to find citations that comply with current standards in a decision. Thanks to the standards, legislative and case law citations can be detected automatically and reliably.

For each citation identified, the citator has to be queried in order to determine whether it is a citation known to the system. Two scenarios are then possible. On one hand, the citation could be recognized as among those that have been compiled and a link could be added. On the other hand, the citation may not be known to the system, in which case no link is added. This could happen, for example, with citations of law reports that were not selected in the compilation process. In such cases, the citator simply notes the citation and continues the identification process.



Finally, it should be noted that Reflex makes it possible to update all relevant documents when decisions are added, no matter when they were rendered. Since the identification process records in the database every citation found in the decisions, whether or not the cited document has been compiled, previously published documents are automatically updated when citations appearing in them are added to the system. Thus, the effect of adding historical collections is to update the decisions concerned.

## **5 Reflex's features and benefits**

Since the implementation of Reflex, there have been major benefits for CanLII users, but there have also been advantages for its designers and others involved in electronic publication of legal information. For users, the benefits are mainly with respect to retrieving decisions on CanLII and in other sources. For CanLII's designers, the compiled data is available for analysis and planning. Finally, the technological design of the citator makes it possible to transfer its benefits to other electronic resources at low cost.

### 5.1 Recognition of documents with multiple identifiers

Owing to the opacity of citations of printed publications, decisions acquire multiple identities. When a decision is published in a law report, it obtains an identifier - a citation - by which it can be retrieved. A decision published in more than one law report thus has more than one identifier. In the cases of the few Canadian courts that have not implemented the neutral citation standard, the problems are particularly significant.

For example, the December 7, 1998 Ontario Court of Appeal decision *Ferrel v. Ontario (Attorney General)* was published in the *Ontario Reports* and can therefore be designated by (1998), 42 O.R. (3d) 97. However, the decision was also published in three other reports: *Dominion Law Reports*, *Canadian Rights Reporter* and *Ontario Appeal Cases*. Thus, there are four independent identifiers for the same decision: (1998), 42 O.R. (3d) 97; (1998) 168 D.L.R. (4th) 1; (1998), 58 C.R.R. (2d) 21 and (1998), 116 O.A.C. 176. Finally, the decision is also available on CanLII through the citation: 1998 CanLII 6274 (ON C.A.). In this situation a user who knows *Ferrel* under one of its five identifiers, for example, its O.R. citation, will not be able to find the decision in a library where only

*D.L.R.* is available. The decision will not be easy to find on CanLII, despite knowledge of a valid case law citation.

However, Reflex makes it possible to find the decision by querying the CanLII search engine about any of the decision's identifiers. This solves the problem of decisions with multiple identities.

Each parallel citation can thus be used to find a decision on CanLII using the search engine. Moreover, incomplete citations can also be used successfully. This is handy in cases where the user is not absolutely certain about a decision's precise or complete citation. The user can do the search by combining a partial citation with other information, for example, the date the decision was rendered, the name of the parties or any other significant fact about the decision. Thus, a search based on the incomplete citation (2003), 232 *D.L.R. (4th)* combined with the phrase *Toronto Star* in the style of cause will return *R. v. Toronto Star Newspapers Ltd., 2003 CanLII 13331 (ON C.A.), (2003), 67 O.R. (3d) 577; (2003), 232 D.L.R. (4th) 217; (2003), 178 C.C.C. (3d) 349; (2003), 110 C.R.R. (2d) 288; (2003), 17 C.R. (6th) 392; (2003), 178 O.A.C. 60.*

## 5.2 Association of related documents

In the world of legal information, the great majority of decisions do not exist in isolation. They are surrounded by a context made up of other legal documents. Decisions cite other decisions and legislation, and are themselves cited. Decisions overturn or uphold the decisions of lower courts, and are themselves overturned or upheld by other courts. For example, *Chaoulli v. Québec (Attorney General), 2005 CSC 35 (IIJCan)* cites several dozen sections of some 20 legislative documents, and refers to around 40 decisions. In the first few months following its rendering, the decision was cited by a number of other decisions. These documents are all part of a process that can be represented on a network diagram of related documents. Clearly, it is highly useful to have multi-directional links among the documents, and to be able to consult any of the documents by following a link from the others.

In a library of printed works, the books containing decisions are arranged physically on shelves, and sometimes in various neighbouring rooms. The only way to consult a

hundred documents is to identify the physical location of each one and then walk from place to place to find and consult the books that are available. In a Web resource, every document is potentially available in a fraction of a second. Reflex exploits this potential of electronic resources to make sets of inter-related legal documents easily accessible in at least three ways.

First, the citator inserts hyperlinks in the documents. When a citation in a document corresponds to a document available on CanLII, a hyperlink to that document is inserted. Thus, the cited document can be accessed easily from the citing document. A total of 900,000 hyperlinks of this type have been added to CanLII documents. The hyperlinks connect to decisions, statutes and sections of statutes.

Reflex also makes it possible to generate tables of cited decisions and legislation. The tables are contained in files separate from the decisions and accessible from them. They list the decisions, statutes and sections of statutes cited by the decision consulted.

Finally, Reflex provides a solid foundation for the note-up function in CanLII collections. The function makes it possible to obtain a list of other legal documents that cite the document in question, and to consult those documents from the list. The note-up function is available for decisions and legislation published on CanLII. In the case of some collections, the function is also available at the level of sections of legislative texts.

### 5.3 Improved accessibility of other collections

Law reports provide their users with major benefits. Law libraries collect and offer many series of reports for users. In some cases, they provide the only way to access the text of a decision, for example, one that is 50 years old.

Thanks to Reflex, CanLII can show the availability of a decision in various case law reports, whether or not the decision is available on CanLII. In such cases, a Reflex record containing various pieces of information about the decision, such as its date, court and file number, is created and added to the web site. The Reflex record also shows the case law reports in which the decision can be found. For example, the Reflex record of the July 27, 1987 Saskatchewan Court of Appeal decision *Reference re: use of French in Criminal Proceedings in Saskatchewan* indicates that the decision was published in five

case law reports, namely, *Dominion Law Reports*, *Western Weekly Reports*, *Canadian Criminal Cases*, *Canadian Rights Reporter* and *Saskatchewan Reports*. Thus, the user can choose the report in accordance with availability or preferences.

CanLII provides information on alternative sources. Information on the availability of a decision in case law reports is shown in a list of parallel references in the decisions that are also available on CanLII. This allows users to, for example, consult summaries of decisions in the printed reports of their choice.

#### 5.4 Identification of the weight of decisions

Thanks to Reflex's ability to detect legal citations in documents, information on the relative weight of decisions can be obtained. An order of relevance can be identified for every decision in accordance with the number of times that it is cited in other decisions. Knowing the relative weight of decisions can be useful for analysing and designing legal information systems. For example, such data could be used when ranking search results. It could also help in the selection of important documents when a historical collection is being reconstructed non-systematically.

#### 5.5 Availability of benefits for other documentary resources

From the point of view of technology, Reflex was designed with the flexibility required to export and share it. Thus, other electronic resources can choose to take advantage of the benefits that are now available for CanLII. It is easy to imagine that a court could want to "reflex," in other words, enhance decisions published on its own website with hyperlinks pointing to the cited documents that are available on CanLI.

## 6 Conclusion

The CanLII citator was designed to overcome the limitations of open access publication with respect to professional needs. In this sense, this ambitious project has met its objective. However, we have to note that, with the adoption of neutral citation, electronic publication needs will soon be fully met. A citator will no longer be necessary. It is

legitimate to expect that in the next few years, neutral citation will become omnipresent in all legal citations.

In Reflex's specific case, annual updates will continue because the citator plays a special role in the Canadian context, where it is a pivotal point in the overall legal information system. It provides a necessary bridge between computerized systems, particularly those providing open access, and traditional legal information systems, which most often involve print.

## **7 Acknowledgements**

The Reflex project, and CanLII of which it is a part, are funded by the Federation of Law Societies. The project also benefits from infrastructure made available to LexUM by the TAPoR consortium, thanks to funding from the Canadian Foundation for Innovation and the Québec Ministry of Education.

## **Appendix A: Law reports covered by Reflex**

Admin. L.R.: Administrative Law Reports (1985 - 2004)  
Alta. L.R.: Alberta Law Reports (1985 - 2004)  
B.C.L.R.: British Columbia Law Reports (1985 - 2004)  
B.L.R.: Business Law Reports (1985 - 2004)  
C.B.R.: Canadian Bankruptcy Reports (1985 - 2004)  
C.C.C.: Canadian Criminal Cases (1985 - 2004)  
C.C.E.L.: Canadian Cases on Employment Law (1985 - 2004)  
F.C.: Federal Court Reports (1985 - 2005)  
C.H.R.R.: Canadian Human Rights Reporter (1985 - 2004)  
C.N.L.R.: Canadian Native Law Reporter (1985 - 2004)  
C.P.R.: Canadian Patent Reporter (1985 - 2004)  
C.R.: Criminal Reports (1985 - 2004)  
C.R.R.: Canadian Rights Reporter (1985 - 2004)  
C.T.C.: Canada Tax Cases (1985 - 2004)  
D.L.R.: Dominion Law Reports (1985 - 2004)  
D.T.C.: Dominion Tax Cases (1985 - 2004)  
F.T.R.: Federal Trial Reports (1986 - 2004)  
Man. R.: Manitoba Reports (1985 - 2004)  
N.B.R.: New Brunswick Reports (1985 - 2004)  
Nfld. & P.E.I.R.: Newfoundland and Prince Edward Island Reports (1985 - 2004)  
N.S.R.: Nova Scotia Reports (1985 - 2004)  
O.A.C.: Ontario Appeal Cases (1985 - 2004)  
O.R.: Ontario Reports (1985 - 2004)  
S.C.R.: Supreme Court Reports (1985 - 2005)  
R.F.L.: Reports of Family Law (1985 - 2004)  
R.J.Q.: Recueil de Jurisprudence du Québec (1985 - 2004)  
R.L.: La Revue légale (1985 - 2002)  
Sask. R.: Saskatchewan Reports (1985 - 2004)  
W.W.R.: Western Weekly Reports (1985 - 2004)