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Article abstract

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Technical Evaluation Report

46. CanCore: in Canada and Around the World

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Abstract

The current report provides an update on Report #11 and Report #40 in this series, describing the increasing range of international uses of the *CanCore* metadata for the indexing of learning objects.

Introduction

CanCore (http://www.cancore.ca) is a learning resource metadata initiative funded by Industry Canada and supported by Athabasca University, Alberta, and TeleUniversite du Quebec. *CanCore* is designed to facilitate the indexing of online educational resources or Learning Objects (LO), by assisting project implementers and catalogers in the development of high-quality systems and indexing based on the IEEE Learning Object Metadata (LOM) standard. This standard specifies the ways in which descriptive data (metadata) about these educational resources can be formulated to simplify searching and information interchange between systems. The LOM standard is both complex and general in nature, however. It contains a broad range of elements, and leaves open many possibilities for interpretation. *CanCore* provides guidance on interpretation and implementation of the LOM at a level of detail much greater than the standard itself. In the words of one private sector implementer, "*CanCore* has supplied some of the best guides and best practices on how to apply learning object meta-data in the real world" (Recombo, 2004). As a result, the *CanCore* guidelines have been used in public and private-sector projects in many Canadian jurisdictions and provinces, in pan-Canadian initiatives, and in projects in the USA, France, the UK, and elsewhere. As a result of this work, *CanCore* and Canada generally have been widely recognized as providing leadership in e-learning metadata implementation. This article describes the range and character of *CanCore* implementations, illustrating the way *CanCore* is utilized, by focusing specifically on a number of developments currently underway in Ontario.

CanCore has been working with an expanding community of implementers since November 2000. Its beginnings were in the context of collaborative initiatives involving several Canadian provinces: the LearnAlberta portal (http://learnalberta.ca/), the Campus Alberta Repository of Educational Objects (CAREO) project (http://www.careo.org/), and the Telecampus repository of online courses developed at the University by TeleEducation of New Brunswick. CanCore has subsequently been active in the pan-Canadian eduSource project sponsored by CANARIE. Most recently, CanCore's focus has returned to a number of localized private and provincial government implementations, with financial support by the Multimedia Learning Group of Industry Canada, and under the management of Athabasca University.

Among the provincial projects currently implementing *CanCore* are the BCcampus Learning Resources Centre, the LearnAlberta portal, the Centre for Distance Learning and Innovation (CDLI) Portal of Newfoundland and Labrador, and the normetric metadata profile work in Quebec. *eduOntario* is a further provincial project for which *CanCore* has been selected "as the key cataloging model" (Hannaford and Sutherland, 2004). This particular project, funded by the Ontario Knowledge Network for Learning (OKNL) and based at Ontario Institute for Studies in Education (OISE), is developing "a general-purpose repository prototype" to serve the needs of K-12 and other learners in Canada's most populous province (St. John, Hyman, Hannaford, and Sutherland, 2004). The project leaders are Avi Hyman (OISE) and Baiba St. John (OKNL); and project managers are Brian Sutherland and Julie Hannaford (OISE). As a part of this and other work, this initiative has also developed OnCore, a version of *CanCore* designed to meet the educational needs of Ontario. The adaptation of *CanCore*'s classification elements allows each resource catalogued in OnCore to be indexed in relation to Ontario-specific educational outcomes and expectations. OnCore has also been used by Ontario's Bibliocentre to catalogue a number of TVOntario video resources. (TVO is a provincially-funded educational television network that reaches approximately 12 million Ontarians and subscribers to cable and satellite television across Canada.)

The OnCore group has also been exploring the possibility of further adapting *CanCore* to work alongside another successful metadata solution for online resources: Rich Site Summary or Real Simple Syndication (RSS). RSS is used as a way of syndicating or distributing news stories, annotated links, and other timely information from one location to many other locations quickly and easily. Combined with *CanCore*, RSS could be used as a way of alerting users and repositories to the availability of new and relevant learning objects and metadata records, thus increasing levels of resource sharing and reuse. As the OnCore group explains, "the goal is to piggyback LOM (*CanCore*) Learning Object metadata on RSS to energize the many Learning Object Repositories which are creating resources but not facilitating resource discovery" beyond their own collections (B. Sutherland, personal communication, November 2, 2004; Hannaford and Sutherland, 2004). A number of other *CanCore* and RSS implementers, as well as the *CanCore* initiative itself, are currently working together to find ways to accomplish this "piggybacking" or adaptation.

Other *CanCore* Implementations

Other implementations of *CanCore* have been undertaken in a wide range of projects and educational contexts. A list of some of these projects, products and organizations, and their respective websites is provided below. In each case, a brief indication is provided of how the initiative has used *CanCore*.

- *AD LIB Project* (http://adlib.athabascau.ca/adlib/). *CanCore* has been used as a basis for defining the metadata creation interface for this project; *CanCore* documentation is used for help screens. Free registration is required to view the metadata interface.
- *BC Campus* (http://www.bccampus.ca). *CanCore* is being referenced and adapted in the Learning Object Repository Project of BC Campus: The goal of this project is to build the foundation for a comprehensive BC learning objects repository (LOR) for British Columbia K-12 and postsecondary education. It is the first phase of a larger goal of BCcampus, which is to provide a LOR model for the BC educational system across all disciplines (http://www.bccampus.ca/Page95.aspx).
- *BC Open School.* BC Open University (http://careo.prn.bc.ca/cgi-bin/WebObjects/CAREO.woa). *CanCore*'s guidelines have been used to develop metadata records. BC School District #60 Peace River North (http://careo.prn.bc.ca/cgi-bin/WebObjects/CAREO.woa). CanCore's guidelines have been used to develop new metadata records and to recapture metadata records that previously existed in the Scrapbook (http://scrapbook.prn.bc.ca) and the Learning Lab (http://tll.prn.bc.ca/newTLL/). XSLT was used to convert the MySQL based records from the Scrapbook and the ZOPE based records from the Learning Lab into CanCore based records in a localized version of CAREO.
- *Canadian Heritage* (http://www.pch.gc.ca/). *CanCore*'s metadata approach plays a central role in this overall metadata strategy recommended for Canadian Culture Online Policy (http://mdlet.jtc1sc36.org/doc/SC36_WG4_N0075.pdf).
- *CDLI Portal* (http://www.cdli.ca/). In making its learning objects available through its portal, the Centre for Distance Learning and Innovation of the Department of Education in Newfoundland and Labrador is adhering to *CanCore*'s guidelines.
- *CELTS* (China). *CanCore* metadata element subset is referenced in defining CELTS subset, "the core set of CELTS-3.1 is a subset of *CanCore*, which in turn is a subset of LOM" (http://mdlet.jtc1sc36.org/doc/SC36_WG4_N0059.pdf).
- *CMEC Portal.* As is explained in CMEC documentation: "proponents will be expected to meta-tag each multimedia learning object using the standard descriptors developed for use in the CMEC portal. These descriptors follow the *CanCore* standard" (http://dev.cdli.ca/developer/meta-tagging.htm).
- *Desire2Learn* (http://www.desire2learn.com). *Desire2Learn* is a full-featured learning management system which includes a learning object repository. "The D2L Learning Object Repository technology incorporates industry standards, such as SCORM, *CanCore*, IMS, and others . . ."

- *Edusplash* and *Lionshare* (http://www.edusplash.net). The *eduSplash* peer-to-peer metadata and object sharing software advertises itself as "powered by *CanCore*." This interface and tool are being incorporated in the international *Lionshare* project.
- *Eisenhower National Clearinghouse* (http://www.enc.org/). *CanCore*'s guidelines documents and discussions have been used extensively in the development of metadata for this American project (http://www.dlib.org/dlib/september03/lightle/09lightle.html).
- *Etraffic Solutions Inc.* (http://www.etrafficsolutions.com). This is an international online learning content and applications developer that uses *CanCore* in creating and tagging its learning objects (http://www.etrafficsolutions.com/about/news/newsletters/apr2003.html).
- *FLORE* (http://www.pomme.ualberta.ca/french/french/a.html) is a free repository of French language educational resources. It is meant to help the user to find appropriate sites and specific learning objects for teaching or learning French. FLORE is designed for faculty and students in post-secondary institutions. It offers over 1,000 online resources with annotations such as content descriptions and peer reviews. *CanCore* is assisting FLORE with the alignment of its metadata to *CanCore*/LOM elements and mechanisms of exchange.
- *Government of Canada Metadata Framework* (Canadian Treasury Board). "Within the GoC, *CanCore* is the preferred interpretation of the IEEE LOM" (www.cio-dpi.gc.ca/im-gi/mwg-gtm/ems-sml/docs/2004/meta-profil/meta- profil04_e.asp).
- *LearnAlberta.ca* (http://www.learnalberta.ca). "The metadata records used to locate and describe resources available at this portal have been developed using the *CanCore* guidelines as a central input."
- *LLearn* (http://www.llearn.net/project.php). "The LLEARN project is a private-public partnership . . . designed to bring together best practices in second language teaching/ learning and the capacity of broadband technology . . . LLEARN will be SCORM and *CanCore* compliant (www.llearn.net/_pdf/documents_papers_3pager.pdf).
- *Magic Lantern* (http://www.magiclantern.ca/index.asp). As a major supplier of video learning objects to Alberta Learning, *Magic Lantern* has created metadata records for a large number of its resources, using *CanCore* as a guide.
- *ManUeL Metadata Application Profile and Metalab tool. CanCore* is acknowledged as being the basis for this French application profile. (Documentation is under development). (http://minotaure.ulysse.ubordeaux.fr/area21/resource_manager_1.7/).
- *National Science Digital Library* (http://www.nsdl.org/). In developing and refining its Dublin Core-based metadata scheme, the NSDL has consulted with *CanCore* staff and utilized *CanCore*'s guidelines.
- *NORMETIC Quebec* (http://www.profetic.org:16080/normetic) The *CanCore* element subset and guidelines has been used as central inputs in the development of the Normetic element subset (http://www.profetic.org:16080/normetic/article.php3?id_article=53).
- *Recombo* (http://www.recombo.com/) has utilized *CanCore* in a number of its metadata tools.
- *Peace River North School District's Resource Scrapbook* (http://scrapbook.prn.bc.ca/). *CanCore* Guidelines has been used in updating this collection's metadata.

- *TeleCampus* is a listing of 50,000 courses and course components used by *CanCore* to update its metadata. A version of this repository will be housed at Athabasca University.
- *The Inclusive Learning Exchange (TILE) Project* (http://barrierfree.ca/tile/project). "*CanCore* Metadata (with extensions)" has been used to mark up the content in this collection.
- *TVOntario* (http://www.tvo.org). "TVOntario recently adopted a version of *CanCore* to catalogue its video resources in relation to the Ontario Curriculum" (http://www.eduontario.ca/research/oncore/).
- *UK LOM Core* (http://www.cetis.ac.uk/profiles/uklomcore/). "Lorna Campbell, one of the UK LOM Core's initiators, felt that the depth of gratitude owed to the *CanCore* makers was well worth a name check, and also neatly indicated the similarity between the two adaptations (http://www.cetis.ac.uk/content/20030731165743/).

References

Hannaford, J. and Sutherland, B. (2004). *OnCore.* Retrieved January 5, 2005 from: http://www.eduontario.ca/research/oncore/

Recombo Inc. (2004). *Resources, Learning Standards Meta-data.* Retrieved January 5, 2005 from: http://www.recombo.com/resources_standards_meta.htm

St. John, B., Hyman, A., Hannaford, J., and Sutherland, B. (2004). *Developing a Prototype for an Ontario Education Portal.* (PowerPoint Presentation). Retrieved January 5, 2005 from: http://www.eduontario.ca/showcase2004.ppt

N.B. Owing to the speed with which Web addresses are changed, the online references cited in this report may be outdated. They are available, together with updates to the current report, at the Athabasca University software evaluation site: http://cde.athabascau.ca/softeval/. Italicized product names in this report can be assumed to be registered industrial or trademarks.

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