CanCore Guidelines

for the Implementation of Learning Object Metadata
(IEEE 1484.12.1-2002)
VERSION 2.0

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and Anthony Roberts

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Foreword

Notes from the CanCore Project Leader
Rory McGreal, Associate Vice-President, Research
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This *CanCore Guidelines* document is the result of more than ten years of experience in the implementation of metadata in e-learning. In 1993, TeleEducation New Brunswick created what we believe to have been the first World Wide Web site focusing on distance learning. Early in 1994, TeleEducation NB began listing online courses as they became available on the Internet. By 1995, there were enough courses online to justify the creation of a database focusing on these course offerings—The TeleCampus (http://telecampus.edu). It was at this time that the importance of metadata became apparent to us. The Dublin Core metadata specification was just being developed and so we followed their minimalist approach. In 1996, the first version of the IMS Meta-data specification for learning resources appeared, and we used their fields to expand the metadata used for the TeleCampus. We believe this was the first attempt to implement the IMS specification.

However, in implementing these specifications, we ran into a common problem, which was also discovered at around the same time by the Open Learning Agency in British Columbia (OLA BC). When more than one person implements or creates metadata, different understandings of the meaning and divergent ways of inputting data into the individual metadata fields typically occur. Within TeleEducation NB, trying to achieve common understandings of precisely what and how data should be entered into the different fields prompted numerous arguments. We felt that if the structure, format, and vocabulary of the data included in the metadata fields were implemented consistently—and according to best practices already established in the library world—then the utility, longevity, and reusability of the database records would be greatly increased. We also felt that if other organizations implemented their metadata in the same manner, the resulting records would be more useful and interoperable: easier to create, search, and exchange. One can drive on the left side of the road or on the right side. However, if everyone going in the same direction drives on the same side, driving is both easier and safer. Dave Porter (formerly of the OLA BC) put it this way: “We don’t care what rule you make, just make it and tell us!” They too valued data consistency across multiple metadata repositories. Like us, they were concerned about avoiding “forking.”

This was the beginning of CanCore. The initial objective was to create recommendations for the implementation of the fields in the IMS Meta-data specification. When this datamodel was standardized as the IEEE LOM standard, CanCore revised and updated these recommendations, based on the input of experts and implementers from around the world. Thanks to a grant from CANARIE, Canada’s advanced Internet development organization, a partnership

was formed as a collaboration between two projects: POOL (Portal for Online Objects in Learning) and BELLE (Broadband Enabled Lifelong Learning Environments). Our goal was to create a common guidebook.

This original CanCore team was made up of librarians and implementers from TeleEducation NB, the University of New Brunswick's Electronic Text Centre, and experts from Netera and the Universities of Alberta and Calgary who created the Campus Alberta Repository of Educational Objects (CAREO). With the move of Terry Anderson, Norm Friesen, and myself to Athabasca University (AU), and a new grant from CANARIE under the eduSource project, the CanCore lead was transferred to AU.

The increased interoperability arising from the implementation of the CanCore application profile becomes even more valuable as we move towards the next generation of the WWW: the semantic Web. The semantic Web will empower computer applications that include intelligent agents to derive meaning from the data. This will be greatly aided by data and metadata that is consistently and carefully created— some of which I hope will be created by these agents. With the continued explosion of information available on the Net, the need for tools and techniques to search, filter, and harvest this information increases.

If you are considering implementing the IEEE LOM or any other set of metadata to describe your online educational content, I strongly recommend that you consider using this book as a guide. This will simplify your own efforts, promote internal consistency, and increase semantic compatibility with the many others around the world who are using CanCore.

All the best in your work.

Dr. Rory McGreal

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