



National Standards Authority of Ireland

IRISH STANDARD

I.S. CWA 15454:2005

ICS 03.180
35.240.99

**A SIMPLE QUERY INTERFACE
SPECIFICATION FOR LEARNING
REPOSITORIES**

National Standards
Authority of Ireland
Glasnevin, Dublin 9
Ireland

Tel: +353 1 807 3800
Fax: +353 1 807 3838
<http://www.nsai.ie>

Sales
<http://www.standards.ie>

*This Irish Standard was
published under the
authority of the National
Standards Authority of
Ireland and comes into
effect on:
January 25, 2006*

**NO COPYING WITHOUT NSAI
PERMISSION EXCEPT AS
PERMITTED BY COPYRIGHT
LAW**

© NSAI 2005

Price Code J

Údarás um Chaighdeán Náisiúnta na hÉireann

CEN

CWA 15454

WORKSHOP

November 2005

AGREEMENT

ICS 03.180; 35.240.99

English version

A Simple Query Interface Specification for Learning Repositories

This CEN Workshop Agreement has been drafted and approved by a Workshop of representatives of interested parties, the constitution of which is indicated in the foreword of this Workshop Agreement.

The formal process followed by the Workshop in the development of this Workshop Agreement has been endorsed by the National Members of CEN but neither the National Members of CEN nor the CEN Management Centre can be held accountable for the technical content of this CEN Workshop Agreement or possible conflicts with standards or legislation.

This CEN Workshop Agreement can in no way be held as being an official standard developed by CEN and its Members.

This CEN Workshop Agreement is publicly available as a reference document from the CEN Members National Standard Bodies.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

CWA 15454:2005 (E)**Contents**

Foreword	3
Revision History	5
1 Requirements and Design Principles	10
1.1 Query Language and Results Format	10
1.2 Synchronous and Asynchronous Query Mode	10
1.3 Session Management	12
1.4 Stateful and Stateless Communication	13
1.5 Command-Query Separation Principle	13
1.6 Simple Command Set and Extensibility	13
2 API Specification	14
2.1 Overview	14
2.2 Query Parameter Configuration	15
2.2.1 Set Query Language	15
2.2.2 Set Maximum Number of Query Results	16
2.2.3 Set Maximum Duration	17
2.2.4 Set Results Format	17
2.3 Synchronous Query Methods	18
2.3.1 Set Results Set Size	18
2.3.2 Synchronous Query	19
2.3.3 Get Total Results Count	21
2.4 Asynchronous Query Methods	22
2.4.1 Set Source Location	22
2.4.2 Asynchronous Query	22
2.4.3 Query Results Listener	24
2.5 Fault Mechanism	25
3 SQL Implementation Issues	27
3.1 Stateful versus Stateless Implementations	27
3.2 Bindings	27
3.3 SQL Application Profiles	27

Foreword

This CWA presents an Application Programmer Interface (API) for querying learning object repositories. The core is an abstract API; bindings to web services, Java and PHP have also been developed. Since one major design objective is to keep the specification simple and easy to implement, the interface is labelled Simple Query Interface (SQL).

In the context of this CWA, learning object repositories are defined as collections of educational material, courses, and learning objects with associated descriptions (referred to as “metadata”). Examples of repositories for learning are educational brokers, knowledge pools, streaming video servers, etc.

The decision for this work item was taken by the Learning Technologies Workshop at the 14th meeting on March 24/25, 2003. Work on the CWA actually started at the 17th meeting in April 2003.

The document has been developed through the collaboration of a number of contributing partners, representing a wide mix of interests, from universities to commercial companies. The names of the individuals and their affiliations that have expressed support for this CWA is available at the CEN/ISSS Secretariat. A list of contributors is at the end of this Foreword.

The work relates closely to the Memorandum of Understanding on "Multimedia Access to Education and Training in Europe".

The final review/endorsement round for this CWA was started on 2005-06-16/17 and closed on 2005-07-15.

The final text of this CWA was submitted to CEN for publication on 2005-09-06.

The CWA is technically the same as the Version 1.0 Beta (2005-04-13) that is on <http://www.prolearn-project.org/lori>

The CWA is part of three SQL related documents (see <http://www.prolearn-project.org/lori>):

- i. “Learning Object Repository Interoperability Framework”: this document provides the “big picture” and should probably be read first if you want to understand the context of this work;
- ii. [this CWA] “Simple Query Interface Specification”: this is the core of the specification for querying learning object repositories in an interoperable way;
- iii. “Authentication and Session Management”: this document focuses on specific issues related to authentication and session management.

Contributions from the following initiatives are acknowledged: Ariadne, Educanext, Celebrate, Edutella, Elena, EduSource, ProLearn, Universal, Zing.

This CEN Workshop Agreement is publicly available as a reference document from the National Members of CEN: AENOR, AFNOR, BSI, CSNI, CYS, DIN, DS, ELLOT, EVS, IBN, IPQ, IST, LVS, LST, MSA, MSZT, NEN, NSAI, ON, PKN, SEE, SIS, SIST, SFS, SN, SNV, SUTN and UNI.

Comments or suggestions from the users of the CEN Workshop Agreement are welcome and should be addressed to the CEN Management Centre.

CWA 15454:2005 (E)

List of Contributors and Editors

Bernd Simon, Vienna University of Economics and Business Administration
& EducaNext (Editor)
Christian Werner, Learning Lab Lower Saxony
Erik Duval, Katholieke Universiteit Leuven & Ariadne (Editor)
Daniel Olmedilla, Learning Lab Lower Saxony
Dan Rehak, Carnegie Mellon University
David Massart, European Schoolnet (Editor)
Frans Van Assche, European Schoolnet (Editor)
Griff Richards, Simon Fraser University
Gerhard Müller, IMC
Julien Tane, Universität Karlsruhe
Marek Hatala, Simon Fraser University
Matthew J. Dovey, Oxford University
Michel Arnaud, Université de Paris X Nanterre
Nikos Papazis, NCSR
Peter Dolog, Learning Lab Lower Saxony
Sascha Markus, IMC
Stefaan Ternier, Katholieke Universiteit Leuven (Editor)
Stefano Ceri, Politecnico Milano
Stefan Brantner, BearingPoint Infonova
Simos Retalis, University of Piraeus
Theo van Veen, Koninklijke Bibliotheek
Zoltán Miklós, Vienna University of Economics and Business Administration

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- Looking for additional Standards? Visit Intertek Inform Infostore
 - Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
-