

***ICCE-WS07
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Hiroshima, Japan***

Implementation of GLOBE federated search service in Japan

National Institute of Multimedia Education, Japan

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Introduction: NIME

1978

Founded for R&D of *broadcasting programs* (+printed materials) for *Univ. of the Air (Japanese OU)* as a governmental institute

1997

Reorganized as a “*Governmental Institute for Inter-university Collaboration*” for *educational use of ICT* in Higher Education

2004

Reorganized as an “*Independent Administrative Institution*” to realize government policies as the National Core Institution for the educational use of ICT in Higher Education

NIME: Missions

- **Governmental / Government-funded**
 - **National Center / Gateway**
 - **Higher Ed / Lifelong Learning / Vocational Ed**
 - **Policy implementation and statistics (Under the ministry as a policy planner / maker)**
- **Meet w/ needs of ALL/MOST of Higher Ed Inst**
 - **Focusing on functionalities among domestic / overseas Inst (e.g. nationwide infrastructure)**
 - **Keen to int'l / domestic standardization activities**
 - **Not compete with private sectors' and other educational institutions' activities**

NIME: Operations

Infrastructure

SCS (FY1997-): A nationwide teleconference system using satellite communication

NIME-glad (FY2004-): Digital learning content distribution and brokerage system

Digital learning resources

Learning content, e-Learning support tools

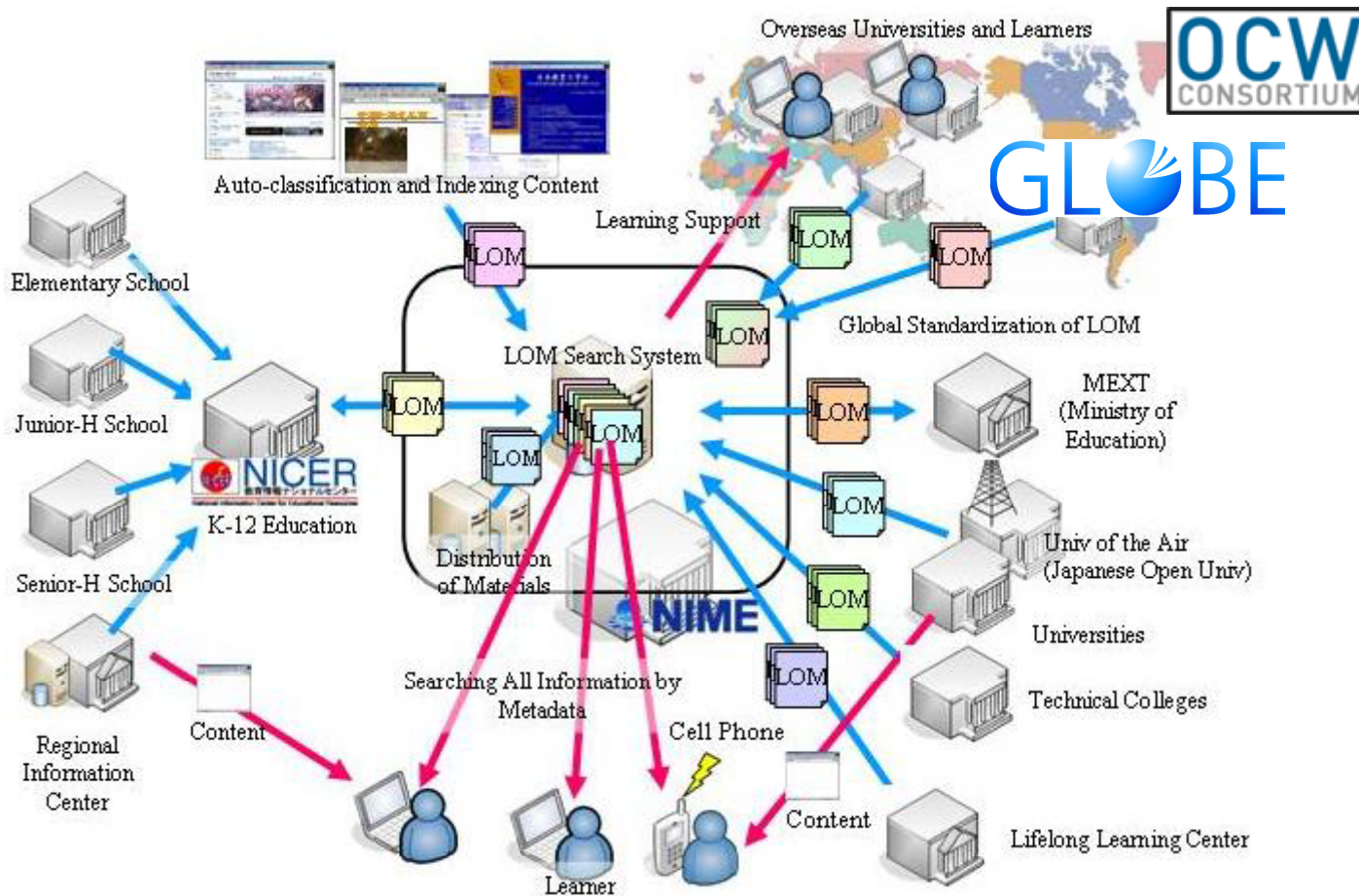
FD & Community

Seminar, FD programs and Meta-consortium

Survey & Consulting

Graduate Education: SOKENDAI

Japanese National Infrastructure for sharing digital learning resources: “NIME-glad” and “NICER”



Change of the national center's missions

	Faculty's contributions	Institutions' roles	National centers' missions
1	Use of LM	Purchase of LM	Develop. & Distri. of standard LM
2	+ Develop. of LM (non-SCORM courseware)	Produc. of LM	+ Support of Develop. of LM + Accumulat. of LM (national Content "repository")
3	+ Develop. of LM (Reusable LO)	+ Content Reposit. (courseware & LO)	Support of construction of some institutional RP functions Promote collaboration among Institutional RP (metadata "referatory")
4 +	Advanced Use (SCORM, adaptive,) Role-sharing & Promotion	+ <i>Interinstitutional alliance</i> + Distri. (Reuse) of materials	+ <i>Gateway to overseas</i> + Additional values (Copyright processing , Quality assurance)

NIME-glad

Gateway to Learning for Ability Development

e-Learning
Course

NIMEglad 能力開発 学習ゲートウェイ Gateway to Learning for Ability Development ENGLISH

I'm glad サイトマップ お問い合わせ

キーワード検索

検索 詳細検索

e-Learning OCW シラバス 公開講座 素材 全て

NIME-gladカテゴリ

e-Learningコース OCW 大学のシラバス 公開講座・公開講演会 素材

専門分野

文学 教育学・保育学 社会学・社会福祉学 法学・政治学 経済学 理学 医学 歯学 薬学 保健衛生学・看護学・医療技術 工学 農学 家政学 美術 音楽 体育学 獣医学 学際・複合

大学

e-learningコース OCW 大学のシラバス 全て

遠隔教育

海外の大学の遠隔教育

FD / ID **NEW!**

FD(ファカルティ デベロップメント)
ID(インストラクショナル デザイン)

リンク情報

NIME

NIME-glad (English) 英単語学習 IT教育支援協議会 SCS

教育×

NIME

NIME-glad ビデオ検索

検索

「NIME-glad ビデオ検索」では、ビデオをナレーションで全文検索することができます

Federated Search

Federated Searchとは
Federated SearchはNIME-glad Englishで提供しています

ログイン・新規登録

学習リスト
メールでお知らせ
ユーザ情報

トピックス

<http://nime-glad.nime.ac.jp/>

New perspective for
National Infrastructure for sharing digital learning resources

Basic Concept

One-stop center for e-Learning
Test-bed of products
Marketplace of digital resources
Online/offline community

System functions

Metadata referatory, Content repository
Course management, Content Brokerage
Intelligent search, Copyright processing
Quality assurance, Learner/Teacher support

(RED : in planning/pilot stage)

Number of metadata as of Nov 4th, 2007

e-Learning course (except OCW)	6633
OCW	2906
Materials (e.g. Learning Object)	31720
Open seminar	459
Others	3677
Subtotal	45395
Syllabus	103078

IEEE/Learning Object Metadata (LOM) (Maximum elements)

- 1. General**
- 2. Life Cycle**
- 3. Meta-metadata**
- 4. Technical**
- 5. Educational**
- 6. Rights**
- 7. Relation**
- 8. Annotation**
- 9. Classification**

NIME Support as a JOCW affiliate: Cross-institutional search

The screenshot shows the JOCW (Japan OCW Consortium) website. On the left sidebar, there are several search tools: a 'Google JOCW検索' search box, a 'Google' logo, a 'JOCW横断検索' search box, and a link 'by NIME/NIME-glad' with the NIME logo. The main content area features the JOCW logo, a navigation menu with 'OCWとは', 'OCWの歴史', 'JOCWについて', and 'メンバー', and a 'Topics' section with a list of recent news items.

JOCW
JAPAN OCW CONSORTIUM

English >>

MITOPENCOURSEWARE
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

OCW
CONSORTIUM

Google JOCW検索

検索

Google

JOCW横断検索

検索

by NIME/NIME-glad

NIME

日本オープンコースウェア・コンソーシアム

OCWとは OCWの歴史 JOCWについて メンバー

本サイトは日本でオープンコースウェア(OCW)を公開している大学を中心としたオープンコースウェア・コンソーシアム(JOCW)のウェブサイトです。

OCWとは「大学で正規に提供された講義とその関連情報のインターネット上の公開です。」

JOCWについての詳細は [<<こちら>>](#)

OCWについての詳細は [<<こちら>>](#)

<Topics>

- 2007年6月11日 [京都精華大学のOCWサイト](#)が公開されました。 **News**
- 2007年5月15日 [同志社大学のOCWサイト](#)が更新されました。また、
- 2007年5月2日 OCWコンソーシアムミーティングがスペイン、サンタン
- 2007年4月19日「[各大学の人気コース紹介](#)」の第5回を掲載しました。大学です。
- 2007年4月16日 慶應義塾大学にてクリエイティブ・コモンズ・ジャパン「[高等教育オープンコンテンツに関する知財セミナー](#)」を開催しました。

NIME: International collaborations

GLOBE (Global Learning Object Brokered Exchange):

ARIADNE (EU), education.au ltd (Australia), LORNET (Canada), MERLOT (USA), NIME (Japan) +KERIS (Korea)

**OCW & JOCW
Affiliate**

MOU

Athabasca University, KERIS, KMITL, NSPSPA, Peking University, St Petersburg Technology Institute, Thailand Cyber University, UNESP, University of Insbruk,

NIME-glad English Site

Full Text
Search

Federated
Search

Directory
Search

Learning
Management

Topics

Links

The screenshot shows the NIME-glad English Site interface. The main header includes the NIME logo and the text "NIMEglad Gateway to Learning for Ability Development". Below the header, there are several sections:

- Keyword Search:** A search bar with a "Search" button and a link to "Advanced Search".
- Federated Search:** A section for federated search.
- NIME-glad Categories:** A list of categories including Learning, Specialized Fields, University, and Distance Learning.
- Information Links:** A list of links including NIME, English Word Study, Council for IT Support in Higher Education, SCS, Education Media Portal Sites, Database, Educational Copyright Information, Course Material Creation, Training, NIME Newsletter, and NIME NEWS.

On the right side, there is a sidebar with a "Study List" and "Mail Reminders" section, and a "What is NIME-glad?" link. The bottom right corner shows a list of news items with dates and titles.

Federated Search

The screenshot displays the NIMEglad English website interface. At the top left is the NIME logo and the text "NIMEglad English Gateway to Learning for Ability Development". A "JAPANESE" button is visible. On the top right, there are navigation links: "I'm glad", "Sitemap", and "Contact".

The main content area is divided into two columns. The left column features a "Keyword Search" section with a search input field and a "Search" button. Below this are radio buttons for "Universities in Japan", "e-Learning", "OCW", and "All Categories", along with a link to "Advanced Search". Underneath is a "NIME-glad Categories" section with several folders: "Top Pages of Universities in Japan" (with sub-links for Alphabetical List and Geographical List), "Faculty and Department in Japan" (with sub-links for Alphabetical List, Geographical List, and Disciplinary List), "International Distance Learning" (with sub-links for USA, Canada, Australia, Singapore, and All), "Learning" (with sub-links for OCW, e-Learning Courses, and Materials), and "Specialized Fields" (with sub-links for Electrical Engineering and Computer Science / Philosophy / Psychology / Social sciences / Anthropology / Political science).

The right column features a "Federated Search" section with a search input field and a "Search" button. Below the search field are four checked checkboxes: "NIME", "MERLOT", "LORNET", and "edna", with "ARIADNE" listed below them but unchecked. A text block explains: "A federated searching is a data retrieval service which can perform a cross-sectional search on multiple search engines and display the results collectively. To implement this capability, a federated search server program and a client program must be installed on each of the servers." A "more..." link is located at the bottom right of this section.

At the bottom right, there is a "Sign In / Register" button and a "Study List" link.

<http://nime-glad.nime.ac.jp/en/>

Federated Search Search Results



NIME-glad Federated Search

NIME MERLOT LORNET edna ARIADNE



Japanese Words & Phrases

A collection of basic Japanese words and phrases for the beginner.



Writing About Race, Spring 2003

In *The Souls of Black Folk* (1903), the great cultural critic W. E. B. Du Bois wrote that "the probl...



Japanese Language Teachers Association of Victoria

The Japanese Language Teachers' Association of Victoria Incorporated aims to promote the teaching and learning of Japanese in Victoria Australia, offe

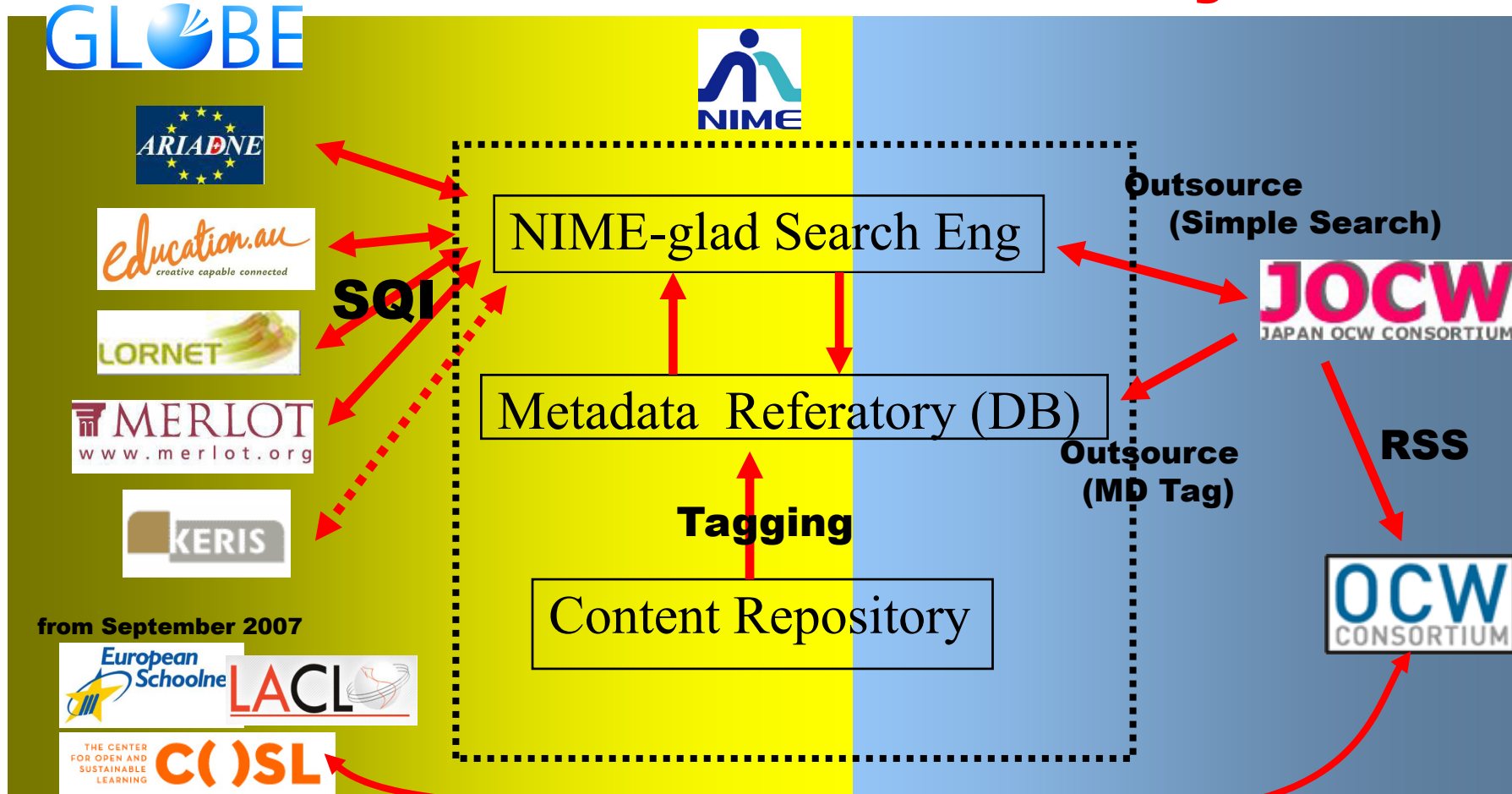


Department of Physics

Order is decided by local rules.

NIME-glad

Cross-institutional Search System



SQI : an interface protocol for exchanging index information of learning objects via SOAP (Simple Object Access Protocol) XML format.

RSS:RDF Site Summary or RSS 2.0: Really Simple Syndication

September, 2004

What is GLOBE?



Global Learning Object Brokered Exchange

Learning Objects: Our understanding

- 1) LOs are digital learning materials on the WWW.
- 2) LOs are sharable and reusable.
- 3) By preparing adequate and/or multiple levels of granularity, LOs can decrease their context-dependency.
- 4) Each LO has metadata
- 5) Small Business

Global Learning Object Brokered Exchange (GLOBE)



- An international broker
- To reach “Critical Mass”
- Focus on educational/learning resources
- All levels
- Federated search and harvesting
- Communication with international standardization activities (e.g. IEEE-LOM, IMS-GLC)
- Finding scalable and interoperable infrastructure and sustainable business model

Member Institutions

September, 2004

Founders



The Common Backgrounds

Each Member had

- an orientation to contribute to **Global Knowledge-based Society**
- missions to promote educational improvements through providing high-quality **Learning Materials and Educational Information**
- been asked to be a regional gateway (hub) in **Europe, North America, Australia and Japan**
- felt drastically increasing needs and demands for **LM**
- the limited financial and human resources
- **necessities of new strategies to reach “Critical Mass”**

Shared Concepts

- **global collaboration on a shared vision of ubiquitous access to quality educational content**
- **development of use cases, specifications, business rules and technologies which will enable searches across the repositories**
- **federated search / harvesting technologies to search across multiple databases and digital libraries**
- **not a closed “club”**

Organization

- **Technology Council**
- **Business/Stewardship Council**
- **Communications Plan Taskforce**
- **GLOBE Website Taskforce**
(<http://www.globe-info.net/>)

History



	Stewardship Council	Technology Council	Dissemination
AUG/03	NIME joined the discussion group (MERLOT, eduSource Canada, edNa)		
JAN/04	ARIADNE joined the discussion group		
AUG/04	1st (Long Beach)		
SEP/04	Official Establishment: Press Release		
FEB/05	2nd (Tokyo)	1st (Melbourne)	1st GLOBE-NIME (Tokyo)
JUN/05			Post Alt-i-lab Workshop (Sheffield, UK)
FEB/06		2nd (Chiba, Japan)	2nd GLOBE-NIME (Chiba, Japan)
JUL/06			ICALT (The Netherlands)
AUG/06			MERLOT-MIC06(Ottawa)
NOV/06	3rd (Montreal)		LORNET 06(Montreal)
FEB/07	4th (Tokyo)	3rd (Chiba, Japan)	3rd GLOBE-NIME (Tokyo)
SEP/07	5th (Crete, Greece)		TEL (Crete, Greece)
OCT/07			4th GLOBE-NIME (Tokyo)
NOV/07			ICCE (Hiroshima, Japan) LORNET 07(Montreal)

February, 2007

GLOBE








Current Members

September, 2007

GLOBE



Merit 1: “Scale merit”

Organization	Number of Metadata
 ARIADNE	6000 and more
 education.au limited-EdNA Online	N/A
 LORNET	ca. 26000
 MERLOT	17661
 NIME	26897

NIME-glad English

<http://nime-glad.nime.ac.jp/en/>



Keyword Search

Universities in Japan e-Learning OCW All Categories [Advanced Search](#)

NIME-glad Categories

- Top Pages of Universities in Japan**
[Alphabetical List](#) [Geographical List](#)
- Faculty and Department in Japan**
[Alphabetical List](#) [Geographical List](#) [Disciplinary List](#)
- International Distance Learning**
[USA](#) [Canada](#) [Australia](#) [Singapore](#) [All](#)
- Learning**
[OCW](#) [e-Learning Courses](#) [Materials](#)
- Specialized Fields**
[Electrical Engineering and Computer Science / Philosophy / Psychology / Social sciences / Anthropology / Political science.....](#)

Information Links

Federated Search

NIME
 MERLOT LORNET edna
 ARIADNE

A federated searching is a data retrieval service which can perform a cross-sectional search on multiple search engines and display the results collectively. To implement this capability, a federated search server program and a client program must be installed on each of the servers.

[more...](#)

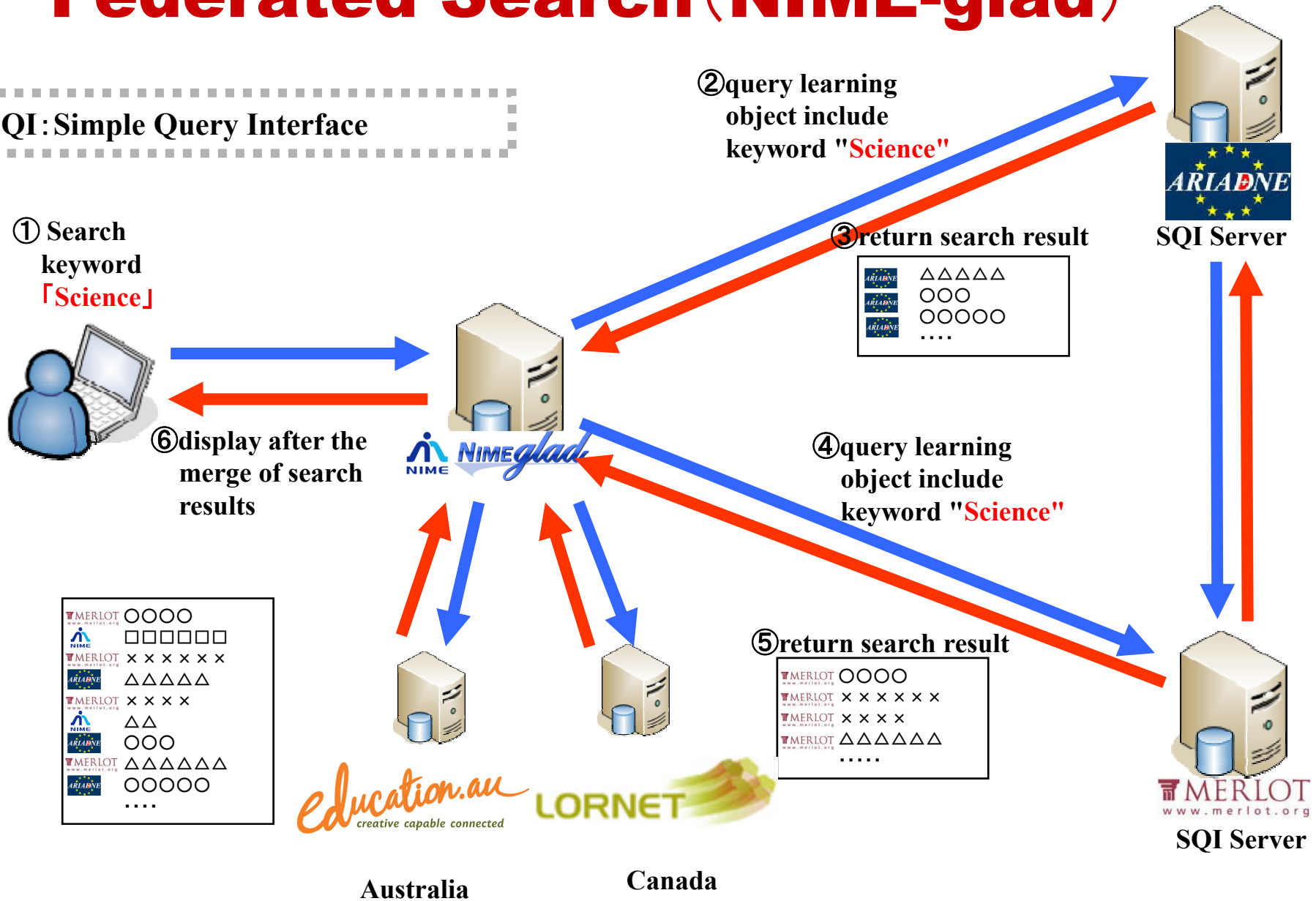


Sign In / Register

[Study List](#)
[Mail Reminder](#)
[User Information](#)

Federated Search (NIME-glad)

SQL: Simple Query Interface



MERLOT	○○○○
NIME	□□□□□
MERLOT	×××××
ARIADNE	△△△△△
MERLOT	××××
NIME	△△
ARIADNE	○○○
MERLOT	△△△△△
ARIADNE	○○○○○
...

ARIADNE	△△△△△
ARIADNE	○○○
ARIADNE	○○○○○
...

MERLOT	○○○○
MERLOT	×××××
MERLOT	××××
MERLOT	△△△△△
...

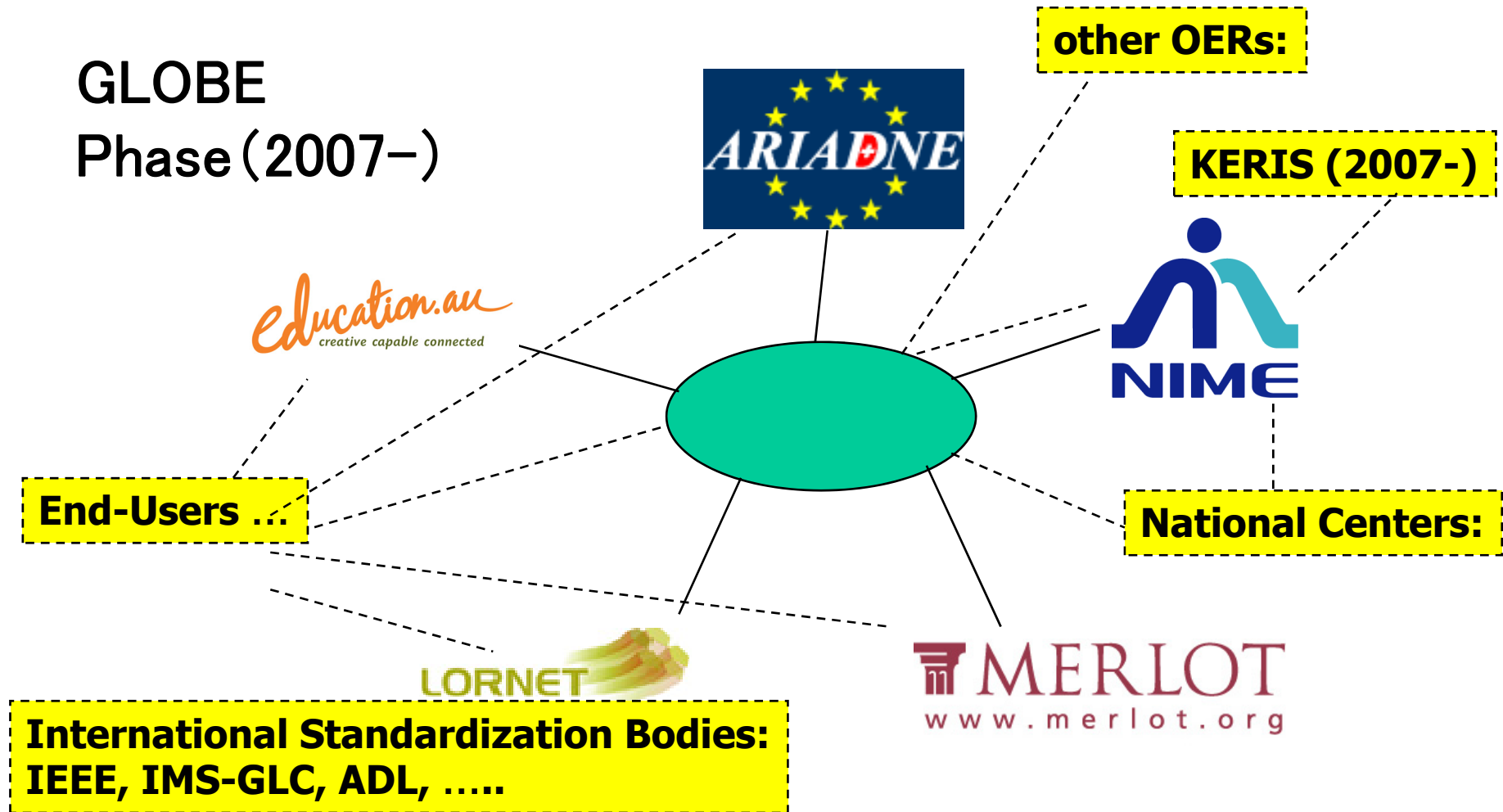
Federated Search

GLOBE
Phase1 (-2006)



Advanced Search

GLOBE
Phase (2007–)



Merits of joining GLOBE for NIME

- **Gateway to overseas GLOBE Fed search network**
- **Quality assurance test-bed**
A place in which users can compare the quality of content / metadata / other services, a catalyst to improve the quality with sustainability
- **Globe-wide community for sharing DLM**
User community and researchers of GLOBE members, the potentiality for new value-added services (vs. invisible services)

Merit 2: New value-added services

- **Right (for the facilitation of exchange)**
 - **EE-Card System (prototype)**
- **Annotation (for quality use)**
 - **Quality**
 - **Educational Effects**
e.g. **Evaluation Studies (Kirkpatrick's)**
 - **Scientific Backgrounds**
e.g. **CALL tools based on Speech technology and L2 Learning Studies**
 - **Tips how to utilize**
Instructional knowledge database
- **Educational (for easy search, personalization)**
Level, Requirements, Learner characteristics, ,

Faculties' view on learning content distribution

	Open	Proprietary Commercial
Japanese Higher Ed.	JOCW	EE-Card (pilot by NIME)
Overseas	OER Movements; OCWC	eLeonet Digital Marketplace (by CSU)
GLOBE		
Int'l Standard Bodies	IMS Global Learning Consortium (LODE), ADL-CORDRA, IEEE, ISO	

Summary

- GLOBE Phase 1: Simple federated search network (with matured technology and standards)
- GLOBE Phase 2: (with increasing number of member organizations), new architecture for new standardized federated repository and new technologies to realize **next-generation value-added services**, that is, **copyright processing, quality assurance, localization and other user-support** are necessary.
- Collaboration with international standardization bodies is indispensable.
- Collaboration with researcher community is also in Japan.

Thank you very much

Contact Information

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<http://www.nime.ac.jp/en/>