

Ya-ning Arthur Chen Computing Centre, Academia Sinica

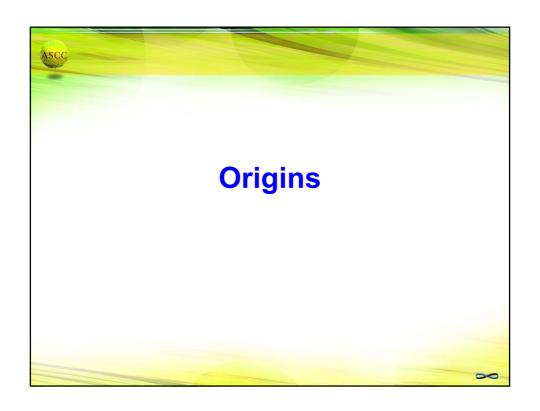
for Scholarly Communication

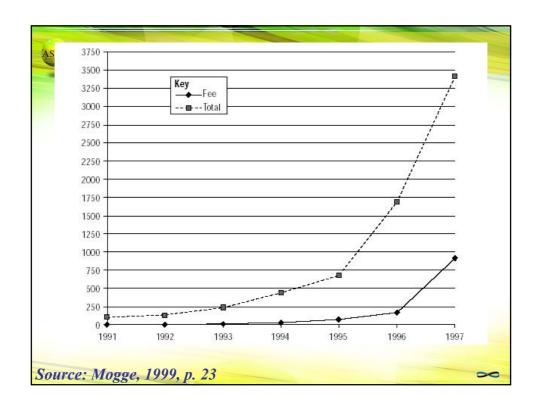
PNC 2005 Annual Conference in Conjunction with PRDLA, ECAI University of Hawaii at Manoa, Haiwaii, USA 3 Nov. 2005

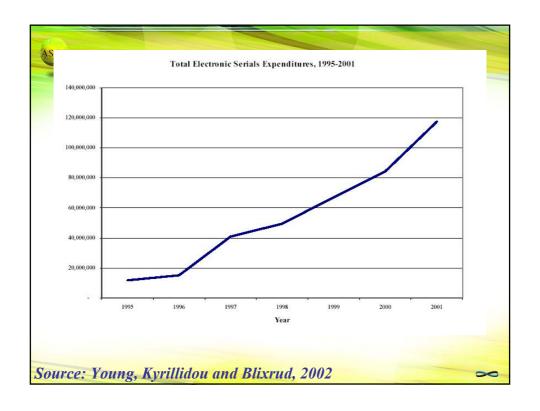


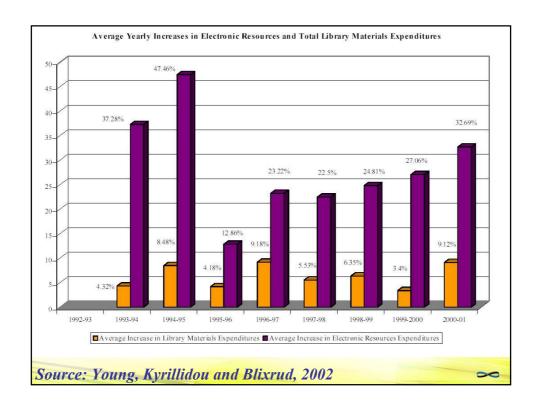
Outline

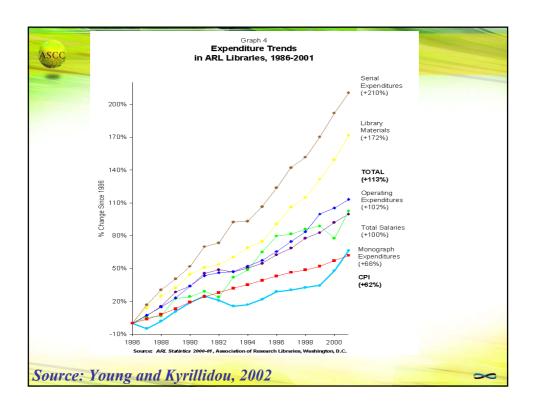
- Origins
- Definition
- Significant Statements and Documents
- Current Development
- Data Analysis of DOAJ
- Findings
- Related issues
 - Response from authors and publishers
 - Quality Assurance and Validation System
- Conclusion and Suggestion

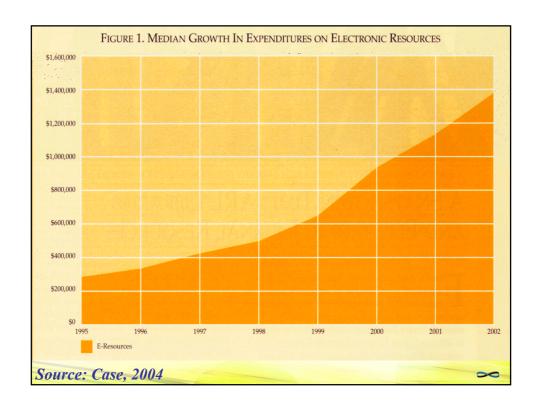


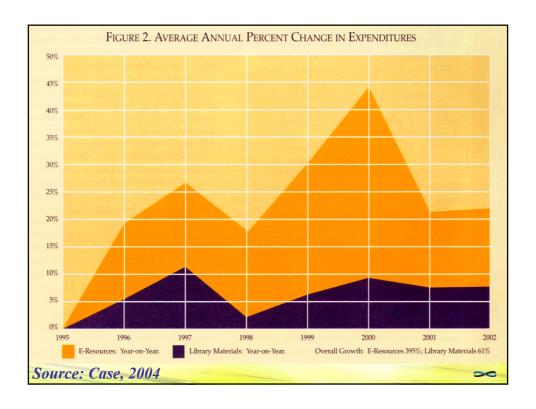


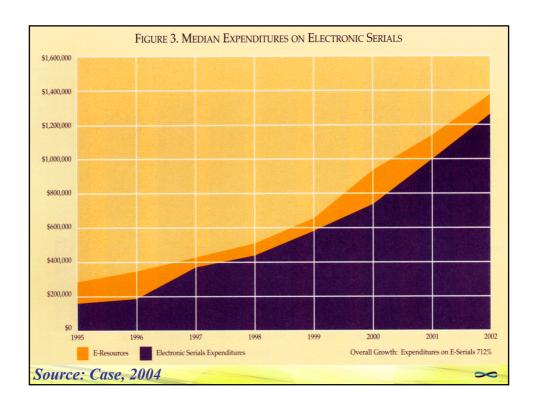


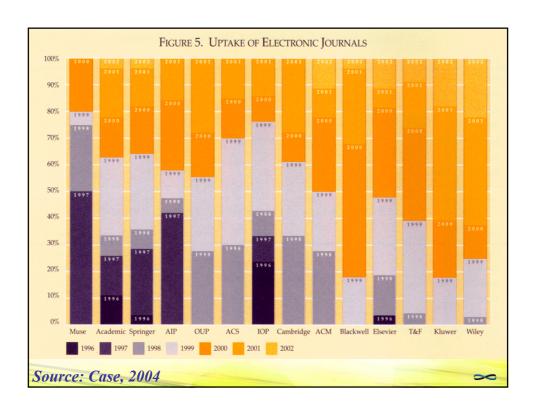


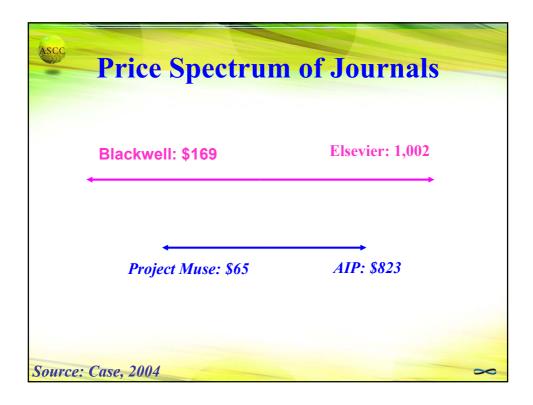








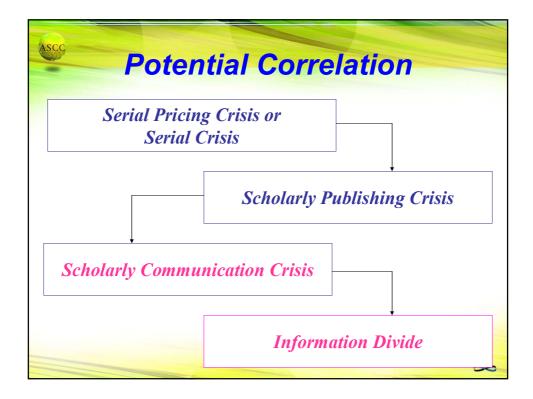






Incentives for Serial Crisis

- Ann Okerson (1989) raised three points listed in Report of the ARL Serials Prices Project
 - The consumer problem: be vigilant on high-priced materials, rather than passive archives of everything published.
 - The systematic problem: current serials publishing system is strained to its limits, and changes are necessary.
 - The classic economic problem: academic serials represent a natural monopoly product.
- Kenneth Frazier (2001) pointed the big deal
 - Is an online aggregation of journals that publishers offer as a oneprice, one size fits all package.
 - Weakening that collection with journals we neither need nor want
 - Increasing our dependence on publishers.





OA Pioneer

1991

Paul Ginsparg and arXive as the first eprint for physicists.

1994

Steven Harnad, Subversive Proposal, and ARL's Internet Discussion on "Scientific and Scholarly Journals and Their Future"

1999

Harold Varmus and E-Biomed Proposal





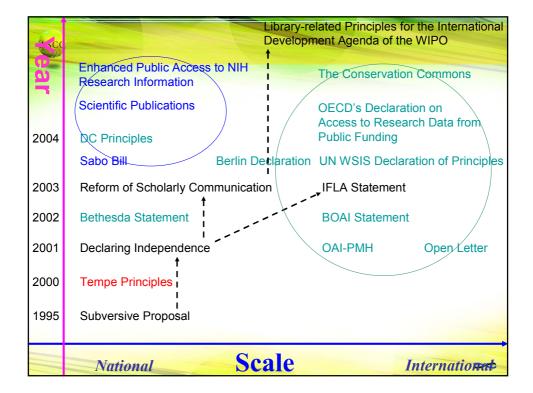
OA Definition

- BOAI(2002)
 - Gold road: Open-access journals
 scholars need the means to launch a new generation of
 journals committed to open access, and to help existing
 journals that elect to make the transition to open access.
 - Green road: Self-Archiving scholars need the tools and assistance to deposit their refereed journal articles in open electronic archives, a practice commonly called, self-archiving.



- 1995—Subversive Proposal
- 2000—Tempe Principles
- 2001—Declaring Independence
- 2001—Open Letter
- 2001—OAI-PMH
- 2002—BOAI Statement
- 2002—Bethesda Statement
- 2003—Principles and Strategies for the Reform of Scholarly Communication
- 2003—IFLA Statement on Open Access to Scholarly Literature and Research Documentation
- 2003—Sabo Bill
- 2003—Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities

- 2003—UN WSIS Declaration of Principles
- 2004—Washington DC Principles for Free Access to Science
- 2004—OECD's Declaration on Access to Research Data from Public Funding
- 2004—The Conservation Commons
- 2004—Scientific Publications: Free for ALL
- 2004—Enhanced Public Access to NIH Research Information
- 2004—Library-related Principles for the International Development Agenda of the World Intellectual Property Organization



Common Claims of Statements and Docs.

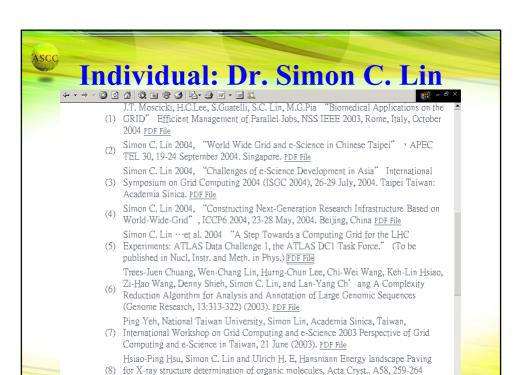
- Publishing is an essential part of research.
- Fair use of copyrighted information for educational and research purpose.
- Encouraged to sharing in data, information and knowledge in order to facilitate the ideas of innovation and invention for human beings.
- The purpose of ICT is employed to facilitate the use, innovation and dissemination of knowledge, rather than control for profit.

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Current Development¹ Self-archiving

- Individual based
- · Institutional based
- Disciplinary based
- · National based
- · International based



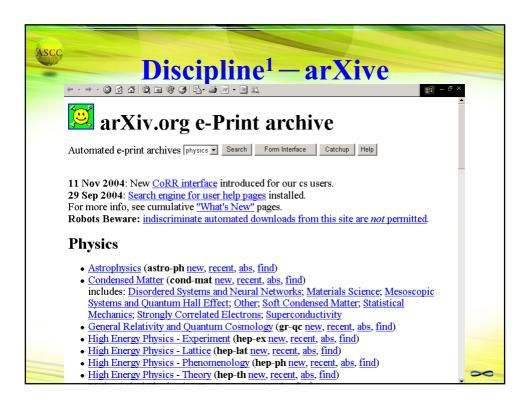
(2002) PDF File







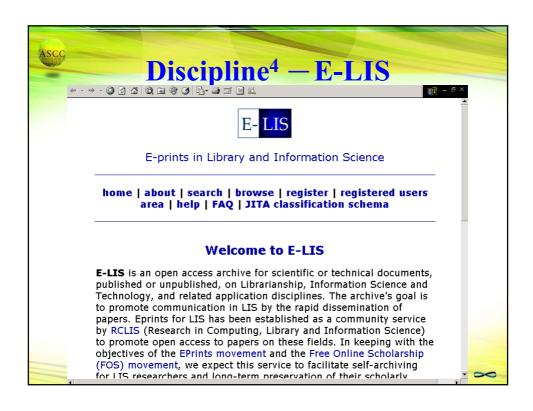


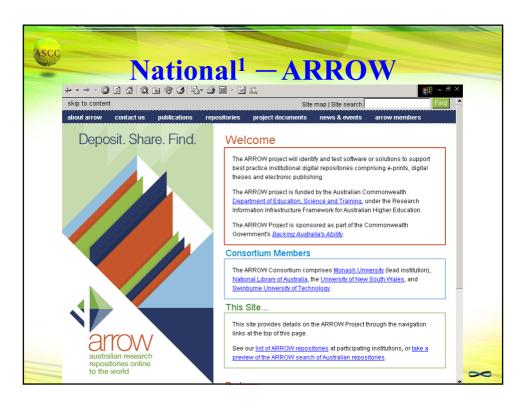












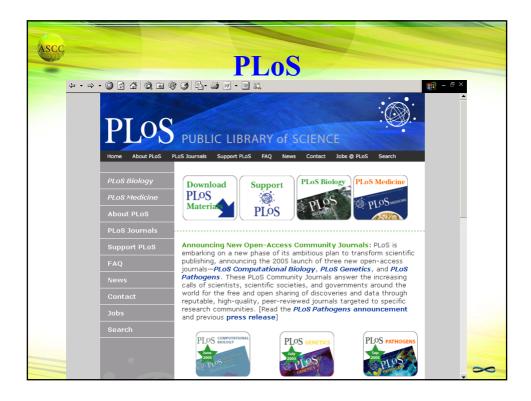






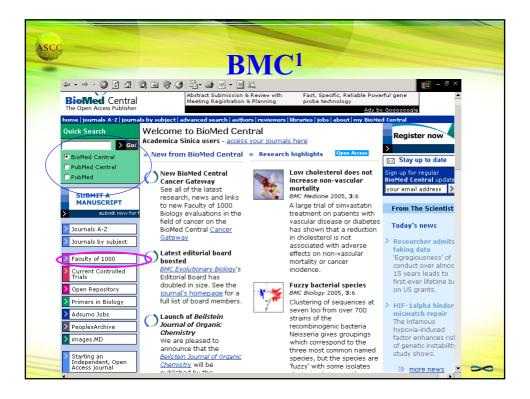


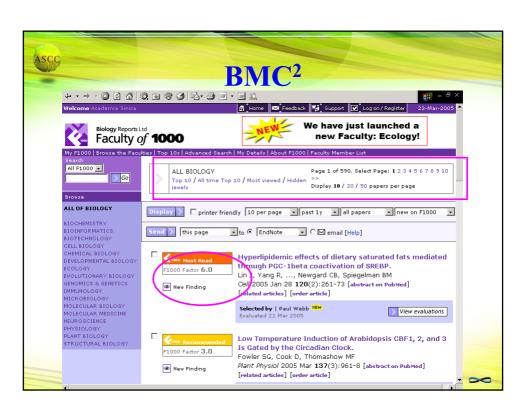
- PLoS—Public Library of Science
 - Founded in 2000
 - By Dr. Harold Varmus
 - Open Letter
 - Journals: PLoS Biology, PLoS Medicine, PLoS Computational Biology, PLoS Genetics, and PLoS Pathogens
 - 2006: PLoS Clinical Trials



Current Develop³ Both of Green and Gold Road

- BioMed Central (BMC)
- Open Society Institute (OSI)
- Public Knowledge Project (PKP)
- PubMed Central (PMC)
- Scholarly Publishing and Academic Resources Coalition (SPARC)
- Scientific Electronic Library Online (SciELO)









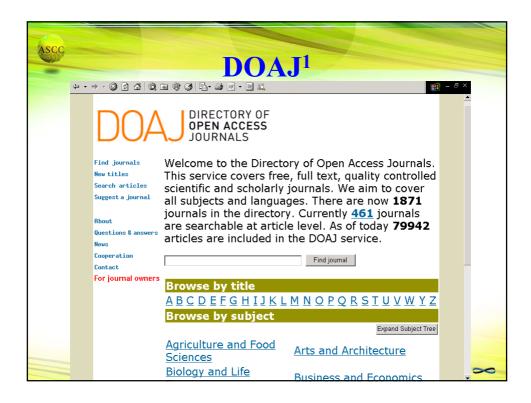


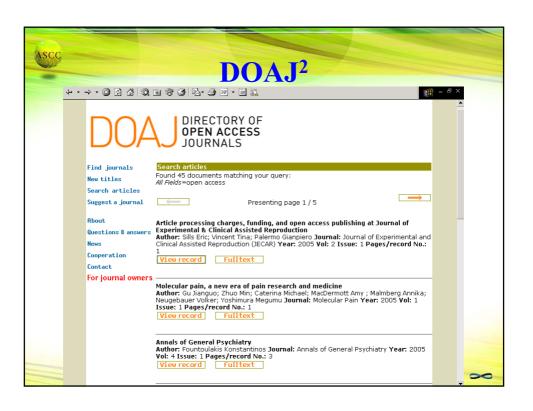


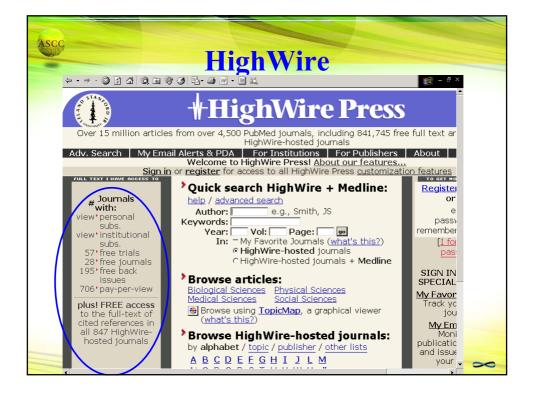


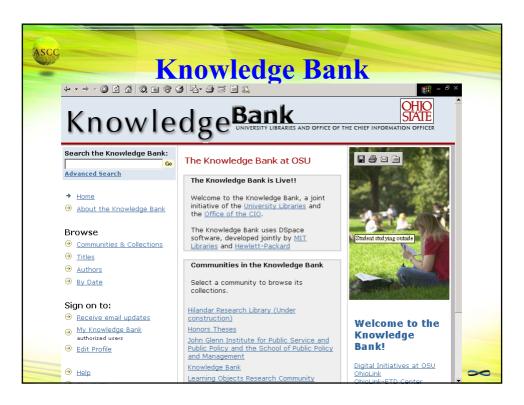


- Directory of Open Access Journals (DOAJ)
- HighWire Press
- Knowledge Bank
- Open Archives Initiative (OAI)
- Open Citation Project (OpCit)

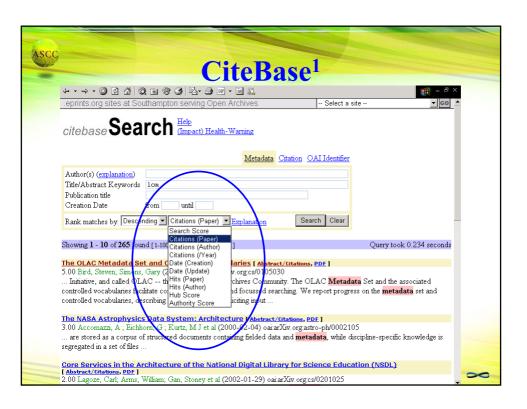




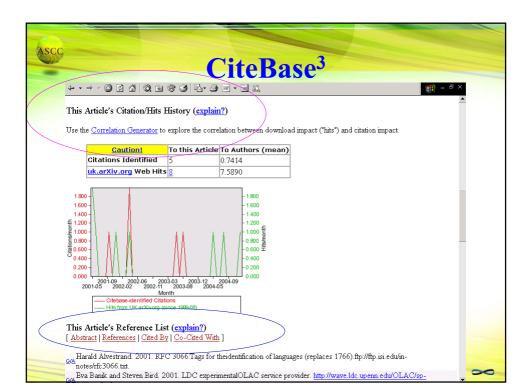
















New ways of documenting and describing language via electronic media coupled with new ways of distributing the results via the World-Wide Web offer a degree of access to language resources that is unparalleled in history. At the same time, the proliferation of approaches to using these new ...

Comment: 10 pages, 2 figures

Extending Dublin Core Metadata to Support the Description and Discovery of Language Resources [Abstract/Citations, PDF]

null * Bird, Steven; Simons, Gary (2003-08-14) oai:arXiv.org:cs/0308022

As language data and associated technologies proliferate and as the language resources community expands, it is becoming increasingly difficult to locate and reuse existing resources. Are there any lexical resources for such-and-such a language? What tool works with transcripts in this particular ...

Comment: 12 pages, 1 figure

Click here to list all citing articles

Top 5 Articles Co-cited with this Article (explain?)

[Abstract | References | Cited By | Co-Cited With]

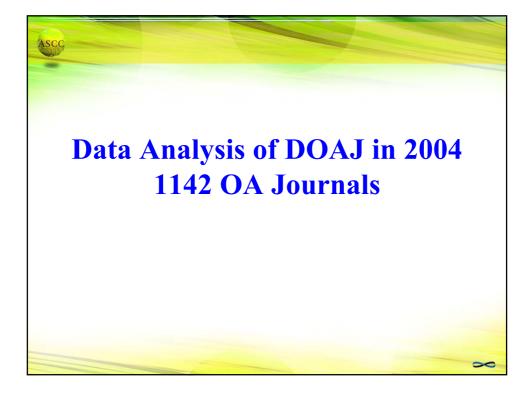
Building an Open Language Archives Community on the OAI Foundation [Abstract/Citations, PDF]

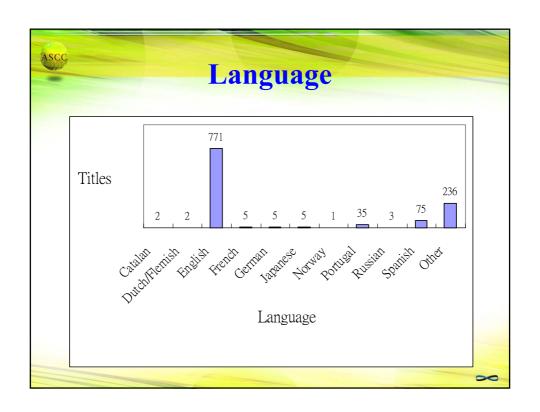
1 Simons, Gary, Bird, Steven (2003-02-14) oai:arXiv.org:cs/0302021

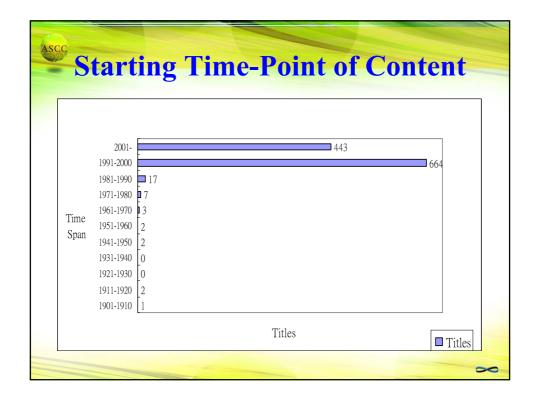
The Open Language Archives Community (OLAC) is an international partnership of institutions and individuals who are creating a worldwide virtual library of language resources. The Dublin Core (DC) Element Set and the OAI Protocol have provided a solid foundation for the OLAC framework. However, we ... Comment 12 pages

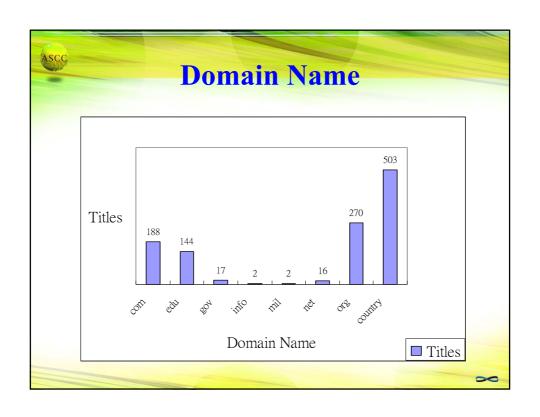
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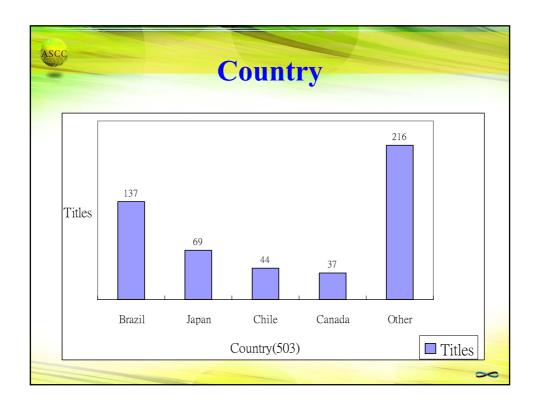
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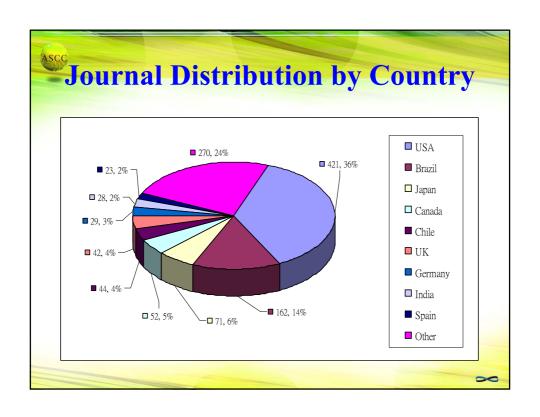


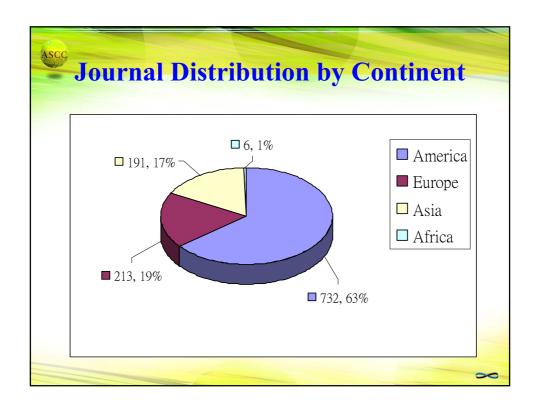


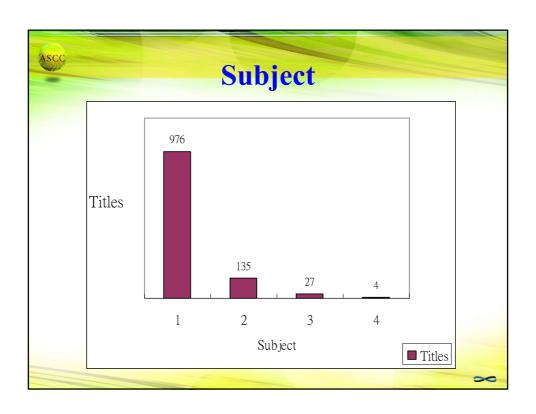


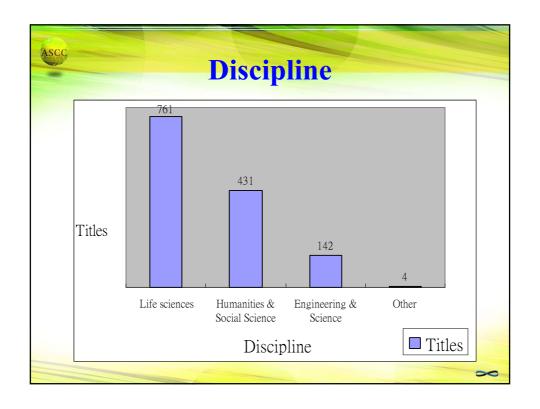






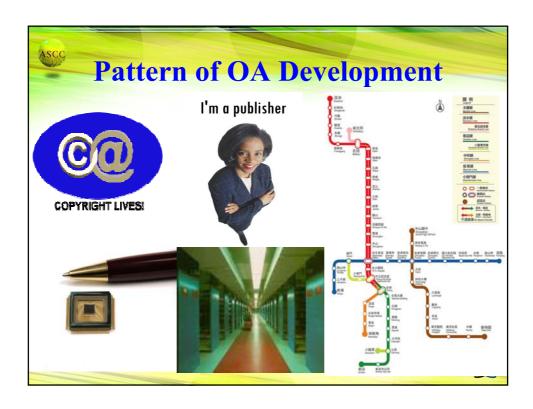




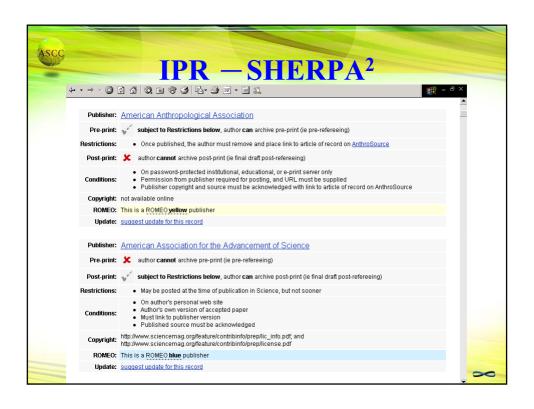


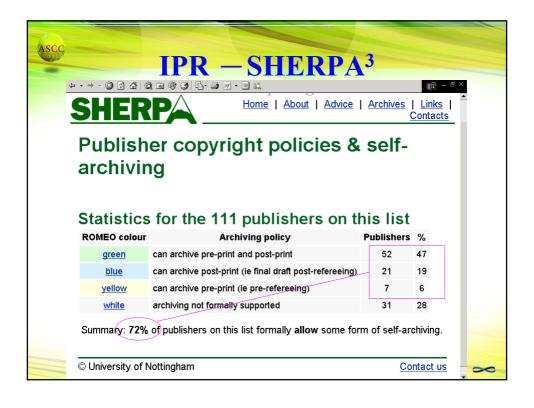






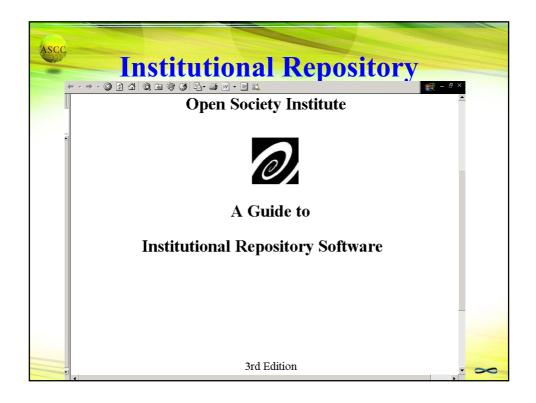


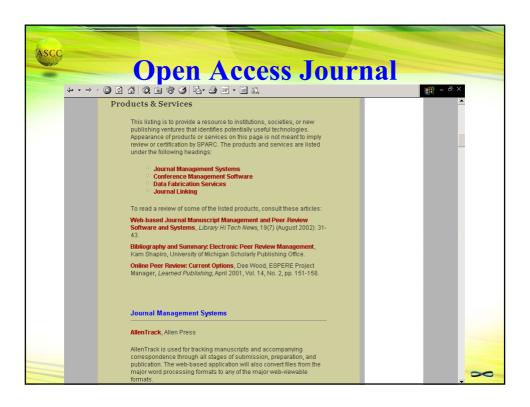






- Institutional Repository
- Open Access Journal
- Resource Discovery
- Citation Analysis





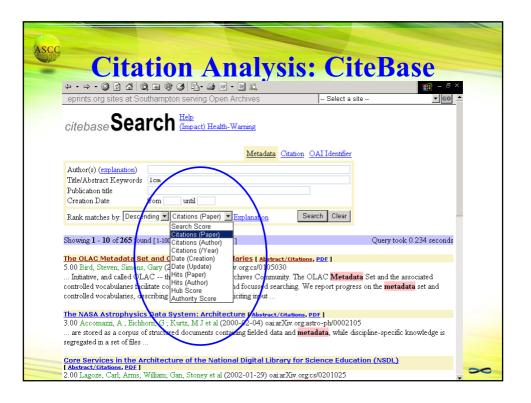


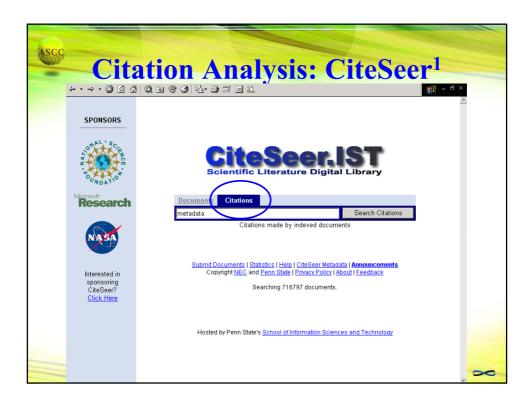


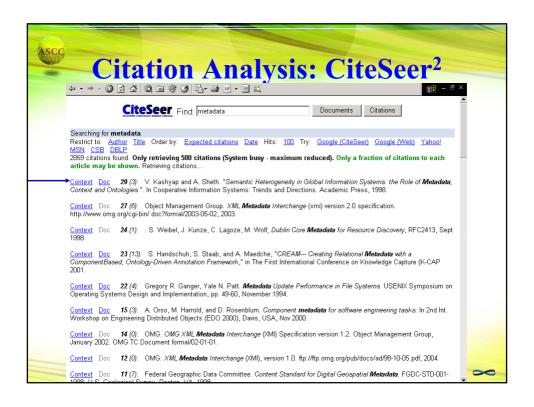
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The Proposed Standard

Demonstrations









Citation Analysis: CiteSeer³

*40 citations found. Retrieving documents...
V. Kashyap and A. Sheth. "Semantic Heterogeneity in Global Information Systems: the Role of Metadata, Context and Ontologies". In Cooperative Information Systems: Trends and Directions. Academic Press, 1998.

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First 50 documents

Ontology-Based Information Sharing in Weakly Structured.. - Stuckenschmidt (2002) (Correct)

key technology for this kind of applications [Fensel, 2001, Uschold and Gruninger, 1996, Gruninger and Uschold, 2002] Successful approaches and applications are reported from the database area where ontologies have been used to enable Intelligent Information Integration (e.g. Arens et al. 1993, Kashyap and Sheth, 1998, Levy et al. 1996, Calvanese et al. 1998b, Preece et al. 1999] However, many of these approaches rely on the existence of well established data structures that can be used to analyze and exchange information. There are attempts to extend existing approaches to semi

information, however, remains an important research topic called Intelligent Information Integration [Fensel, 1999, Wiederhold, 1996] Problems that might arise due to heterogeneity of the data are already well known within the distributed database systems community (e.g. Kim and See, 1991] [Kashyap and Sheth, 1998]) In general, heterogeneity problems can be divided into three categories: 1. Syntax (e.g. data format heterogeneity) 2. Structure (e.g. homonyms yonolyms or different attributes in database tables) and 93. Semantics (e.g. intended meaning of terms in a special context or application)

[Article contains additional citation context not shown here]

Kashyap, V. and Sheth, A. (1998). Semantic heterogeneity in global information systems: The role of metadata, context and ontologies. In Papazoglou, M. P. and Schlageter, G., editors, Cooperative Information Systems, pages 139–178. Academic Press, San Diego

Practical Context Transformation for Information System. - Wache, Stuckenschmidt (2001) (Correct)



Citation Analysis: CiteSeer⁴

V. Kashyap and A. Sheth. "Semantic Heterogeneity in Global Information Systems: the Role of Metadata, Context and Ontologies". In Cooperative Information Systems: Trends and Directions. Academic Press, 1998.

This paper is cited by the following papers

Procs. of ER2003, Chicago, Illinois, Oct. 13-16.. - Springer-Verlag. (2003) (Correct)
Ostensive Automatic Schema Mapping for - Taxonomy-Based Peer-To-Peer Systems (2003) (Correct)
Mediators over Ontology-based Information Sources - Yannis Tzitzikas Nicolas (2001) (Licitation) (Correct)
Landscaping the Information Space of Large Multi-Databass... - Papazoglou, Proper (2001) (2 citations) (Correct) Information System Evolution as Language Evolution - Proper Sub-Faculty Of 2003 (Cornect)
A Survey on Information Systems Interoperability - Fileto, Mederice (Cornect)
Bridging Ontologies and Conceptual Schemas in. - Frederice Incosea... (Cornect) Bridging Untologies and Conceptual Schemas in. - Frederico Fonseca. (Correct)
Schema Integration on Federated Spatial DB across - Ontologies Villie Morocho (Correct)
Ostensive Automatic Schema Mapping for Taxonomy-Based. - Tzitzikas, Meghini (2003) (2 citations) (Correct)
Procs. of ER2003, Chicago, Illinois, Oct. 13-16. - Springer-Verlag. (2003) (Correct)
Attribute Match Discovery in Information Integration. - David Embley David (Correct)

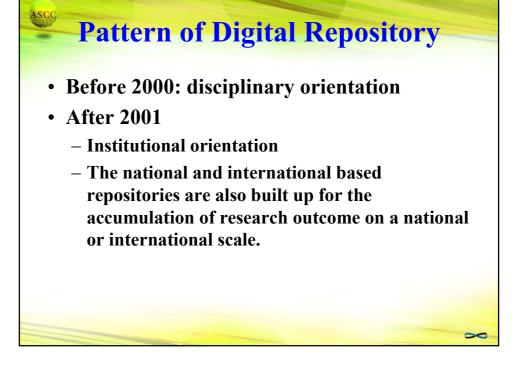
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A Semantic Modeling approach to Metadata - Terje Brasethvik Department (1998) (3 citations) (Correct)

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Catalogue Service

- DOAJ
- OpCit Explore Open Archives-Metalist



Development of OAJ

- Discipline
 - 1st: Life Science, 2nd: Humanities and Social Sciences, 3rd: Engineering and Science
- Language
 - Western language, English
- Country
 - USA
- Starting Time-Point of Content
 - Majority:1991-2000
 - After 2001: under observation



Related Issues

- Response from Authors and Publishers
- Quality assurance and related validation system





Publisher's response

- Elsevier (2004)
 - By introducing an author-pays model, Open Access risks undermining public trust in the integrity and quality of scientific publications.
 - The Open Access business model in its current form has not proven its financially viability.
 - For universal access to be a reality, publishers must continue to make articles available in multiple media formats.



Author's response1

 A survey has been carried by Key Perspectives Ltd. on behalf of the JISC and OSI between Nov. 2003 and Jan. 2004.

• Sample: 8,059

- OA: 3,059 authors

- Traditional journals: 5,000



Author's response²

Agriculture & food science	3%
Biomedicine	38%
Chemistry & chemical engineering	6%
Physics & astronomy	7%
Mathematics & statistics	5%
Computer sciences	5%
Engineering	5%

Earth & geographical sciences	4%
Psychology	4%
Social sciences & education	4%
Philosophy & religion	3%
Law & politics	3%
Business &	3%
management	
Humanities	10%



Author's response³

Submission to OAJ

- Free access for all readers.
- Faster publication times
- Larger readership
- Article can be frequently cited.
- Cost to my institution of non-OAJ
- Prestigious in my field

- Influenced by my cocolleagues
- Object to publishing with a commercial publisher.
- Attracted by editor or editorial board.
- OAJs are published by my own institution.
- Influenced by grantawarding body.
- Influenced by my institution.





Author's response4

Not Submission to OAJ

- Not familiar
- Low impact
- Low prestige
- Smaller readership
- Could not identify any OAJ to publish.
- Less frequently cited
- Cannot find funds to pay the publication fee
- Objection to paying the publication fee
- Archiving issue

- Poor peer review
- Influenced by my cocolleague
- Satisfied with the current journals.
- Influenced by my institution
- Not attracted by editor or editorial board
- Influenced by grantawarding body
- Slower publication time



Author's response⁵

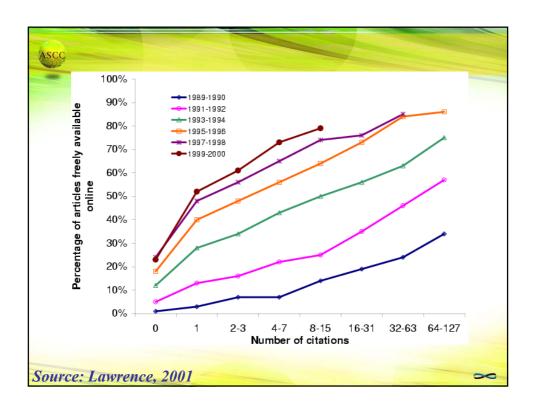
- Concerning points are consistent and similar as follows:
 - Readership
 - Cited and Impact
 - Tenure and Promotion
 - Research fund
 - Research career for co-authors
 - Trust of permanent archiving





Quality assurance and Validation System¹

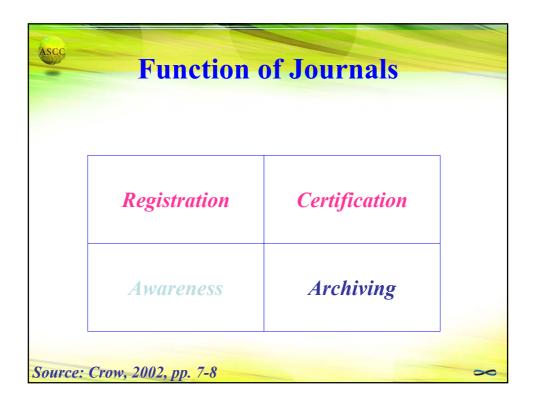
- ISI (2004) Citation Study
 - OAJs have a broadly similar citation pattern to other journals, but may have a slight tendency to earlier citations.
 - The wide distribution of OAJs do not necessarily result in higher citations.
 - The wide distribution of OAJs have not yet been shown to have any appreciable effect on their appearance in lists of cited references in other journals.



Quality assurance and Validation System²

- ISI Citation DBs have included and indexed articles of OAJs.
- Two studies from UK and USA pointed out that OA articles have higher impact than traditional jouranls. (Harnad, and Broday, 2004; Antelman, 2004)
- The trend of impact factor of OA is seemingly focused on articles, rather than on journals (ex. CiteBase and CiteSeer).







Conclusion and Suggestion

- Can research output be attributed into the public domain?
- What are real author's needs for journals?
- Would be possible to offer alternative solution to journals for scholarly communication by adoption of ICT?





Reference

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