Pursuing
Big Ideas.

cross**ref**

CrossMark.

A simple way for publishers to mark their versions of record and show their commitment to maintaining their scholarly content.

A simple way for researchers to find out the status of a scholarly document.

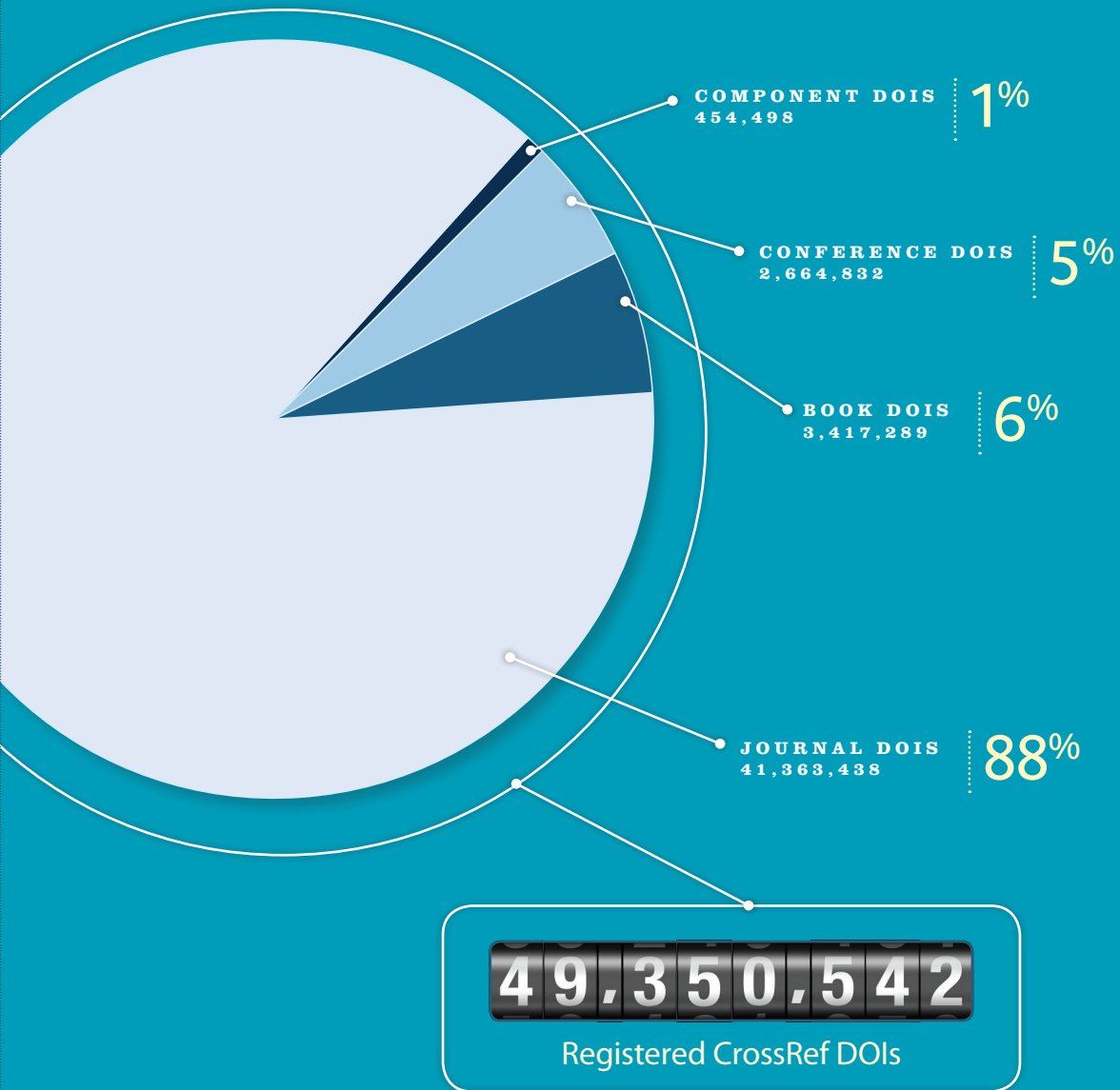It may be the biggest idea in research literature since the paper clip.

ANNUAL REPORT
2010/2011

contents.

CrossRef Dashboard

COMPONENT DOIS
454,498

1%

CONFERENCE DOIS
2,664,832

5%

BOOK DOIS
3,417,289

6%

JOURNAL DOIS
41,363,438

88%

49,350,542
Registered CrossRef DOIs

Over 49 million items of scholarly content are now registered in the CrossRef system, including journal articles, conference proceedings, books and book chapters, reference entries, technical reports, standards, and data sets, with books the fastest-growing category.

CrossRef was established in 2000 during a time of rapid change in scholarly communications. Eleven years later, there is no slowing in the pace of change, but CrossRef is well established in the world of scholarly communications and continues to grow significantly in both membership and usage.

CrossRef's voting membership now stands at more than 1,100, an increase of 26 percent since July 2010. We are seeing a rapid increase in international participation, with strong growth in Asia, Brazil, and Turkey. The Korea Institute of Science and Technology Information (KISTI) has sponsored 64 Korean society publishers to help them register the contents of 87 academic journals in the CrossRef system, an important extension of the global linking network that follows the model of our partnership with the Japan Science and Technology Agency (JST), which now includes over 700 journals from hundreds of Japanese societies. We are exploring similar partnerships in other countries and also developing tools to enable smaller publishers without expertise in XML to work directly with the CrossRef system, including a new feature for uploading articles in PDF format from which CrossRef will extract the necessary metadata for registration and DOI assignation. We are also improving the integration of CrossRef with Open Journal Systems (OJS), an Open Source journal management and publishing system widely used by smaller publishers.

Nearly 49 million scholarly content items are now registered in the CrossRef system, with books continuing to be the fastest-growing category. The number of CrossRef DOI resolutions—instances of scholars and researchers clicking on links—reached 273 million for the period from January to June 2011, an increase of 14 percent over prior year.

We have begun to roll out the CrossMark service, which identifies publisher-maintained versions of publications and provides information on any major corrections on an ongoing basis. While CrossRef's core linking service is largely invisible to researchers, they will interact directly with CrossMark logos and metadata. Extensive focus groups and usability testing have informed the CrossMark service's development. As publishers take up the service in the months ahead, we will receive further input on the end-user experience that we can draw on as indicated. The CrossMark service has significant potential to advance and highlight the publisher's role in maintaining the integrity of the scholarly record.

We continue to invest in CrossRef's ongoing operations and new initiatives alike, with a 20 percent increase for expenses in the 2011 budget. The CrossRef staff now numbers 18, with the addition of Paula Dwyer as Controller and Siama Begum as Office Administrator in Oxford. Vaishali Patel, Anne Hotchkiss and Betty Momjian and have taken on the roles of Technical Support Analyst, Administrative Assistant and Staff Accountant. The Oxford staff moved to a larger office in the fall of 2010, and the Lynnfield office will relocate by the end of 2011.

We have adopted a Web-based accounting system that is benefiting CrossRef's financial processes, and the new query system installed for the core linking service at the end of 2010 is functioning optimally. A rewrite of the deposit system is underway, with CrossRef staff carrying out most of the development work, as for the query system. CrossRef owns the source code for the entire system, supporting our strategy for long-term sustainability as an organization.

Participation in CrossRef's ongoing services continues to grow steadily. Elsevier has joined Cited-by Linking, contributing a large number of references that significantly increase researchers' ability to identify and access scholarly content relevant to their work. More than 240 publishers now participate in CrossCheck, powered by iThenticate, depositing their content into a database of scholarly literature against which submitted articles can be screened for duplication.

To help ensure the long-term persistence of reference linking, CrossRef is now archiving its bibliographic and reference metadata with the Portico digital preservation service. Our agreement with Portico is one of a series of measures we have taken to preserve the continuity of the scholarly record in the event that participating organizations, including publishers and CrossRef itself, should cease to operate.

In collaboration with the International DOI Foundation (IDF), CrossRef has enabled all CrossRef DOIs for use in linked data applications, ensuring that content accessed through a CrossRef link is rendered in machine-readable form as needed. The DOI System itself has been approved as an ISO Final Draft International Standard, an acknowledgement of its importance.

CrossRef continues its involvement in the ORCID (Open Researcher and Contributor ID) initiative, now incorporated as a not-for-profit organization. CrossRef's Director of Strategic Initiatives, Geoffrey Bilder, is serving as interim Technical Director for ORCID on a part-time basis, and I am representing CrossRef on the ORCID Board of Directors, which comprises 14 members of the global scholarly research community.

With the continued expansion of its existing services, and with the upcoming launch of CrossMark, CrossRef's engagement with scholarly communications has taken on a new dimension, going well beyond the mechanics of reference linking. Publishers have always added value to scholarly literature; through CrossRef, they have the means to enhance and bring new transparency to their processes, guiding researchers working in a complex environment to content that is relevant and trustworthy, quickly and reliably.
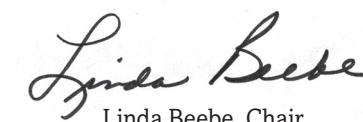
Edward N. Pentz, Executive Director

The success of CrossRef has always depended on the broad participation of publishers, and over the past year it has been gratifying to see the continued growth in membership and the uptake of services. With CrossRef's role in scholarly communications now well established, the Board of Directors has been focusing not only on the long-term sustainability of the organization but also on the long-term persistence of reference linking itself. CrossRef is now archiving its metadata, promoting archival efforts among its membership, and working collaboratively to ensure the persistence of the DOI.

The Board engages in an annual strategic consideration of CrossRef's future direction, mindful that careful assessment of resource requirements and capabilities are key to the organization's ongoing strength and effectiveness as we take on new projects. Among the plans for the coming year are increased support for the assignation of DOIs to books and book chapters, continued support for ORCID, and ongoing collaboration on CrossCheck. The Board has affirmed CrossRef's long-standing policy of remaining neutral on business models and politics.

The launch of the CrossMark service will bring publishers a new avenue for delivering information about their articles in a way that complements the reading experience, and while CrossMark will involve a new level of interaction between CrossRef and the researcher, it is, like other CrossRef services, essentially a service for publishers. CrossRef's primary commitment has always been to supporting scholarly publishers across the board in their efforts to produce and disseminate quality literature.

As Chair, it is an honor for me to follow in the footsteps of Eric Swanson, Pieter Bolman, Tony Durniak, and Bob Campbell, whose experience and judgment have been vital to the growth and success of the organization. It is a privilege to serve on a Board where all voices are heard and all opinions considered, and where the dedication is to scholarship and science and the collective good of our industry.

As CrossRef engages more broadly with global scholarly communications communities, its expanding membership and range of services generate revenue growth that reinforces the fiscal health of the organization. We foresee a very strong future for CrossRef.

Linda Beebe, Chair

YEARS ENDED DECEMBER 31, 2010 AND 2009

	2010	2009
REVENUE AND OTHER SUPPORT:		
Deposit fees	2,701,238	2,448,469
Member fees	1,652,524	1,613,587
Interest income	11,806	17,697
Non-linking fees	5,250	14,800
Gain (loss) on foreign exchange	(6,939)	9,832
Miscellaneous income	7,594	—
TOTAL REVENUE AND OTHER SUPPORT	4,371,473	4,104,385
EXPENSES:		
Salaries and benefits	1,977,558	1,733,937
Data center	485,364	399,213
IDF fees	348,323	324,525
Professional fees	259,642	265,591
Travel and meetings	252,387	271,258
Depreciation and amortization	149,058	123,766
Advertising and marketing	101,808	82,762
Office and other	98,539	129,596
Rent	76,064	60,664
Contractor fees	70,913	99,427
Dues and subscriptions	25,430	16,775
Insurance	22,721	21,430
New initiatives	—	77,830
TOTAL EXPENSES	3,867,807	3,606,774
Change in unrestricted net assets	503,666	497,611
Unrestricted net assets, beginning of year	2,696,860	2,199,249
Unrestricted net assets, end of year	$3,200,526	$2,696,860

CrossRef finished 2010 in a strong financial position. Revenue of $4,371,000 was up 6.5 percent over prior year; expenses were up by 7.2 percent at $3,876,000 but in line with budget, and the net surplus contributed to improved cash reserves. CrossRef continues to operate on a principle agreed upon by the Board of Directors that cash reserves should be sufficient to cover three months' operating expenses, and our current position is significantly in excess of that.

Our expenses for 2010 included a significant amount for the system rewrite, a worthwhile investment that has brought us greatly enhanced IP control through the renegotiation of our agreement with our ongoing technology partner Atypon. Our 2011 expenses include amounts budgeted for the new, larger Oxford location and for expanded staff, both of which will benefit the organization going forward.

Prudent financial management is crucial to CrossRef's long-term persistence as an organization. At the same time, it is important for us to be entrepreneurial and think creatively, to keep the organization fresh and vital and our excellent staff fully engaged; with the core reference-linking service in place, CrossRef's new initiatives are its lifeblood. CrossCheck is a prime example of this: revenues from the service nearly matched expenses in 2010 and it should move into profitability this year,

affirming the soundness of the process by which CrossRef projects move through development from concept to mainstream activity. The CrossMark service, now in pilot phase, will be the first CrossRef initiative to require a major marketing effort targeting researchers, to ensure that they recognize the CrossMark logo and understand the benefits that it brings to the scholarly record. The operation of the service will entail additional overhead, as reflected in the staff budget for 2011. We are budgeting modest revenue from CrossMark for the current year, approximately $200,000, with a substantial increase expected in 2012 as the larger publishers begin to incorporate it into their workflows.

Once again, CrossRef passed through the audit process with flying colours, a testament not only to the organization's sound fiscal management but also to the staff's diligence. Going forward, the successful implementation of a new, Web-based accounting system will streamline operations and improve our ability to track accounts.

We are very fortunate at CrossRef to have such an experienced and committed group of executives, maintaining the organization's ongoing health and the reliability of its core service, balanced with a record of successful innovations that deliver benefits to members as well as the wider academic community.

Ian Bannerman, Treasurer

The ability to respond seamlessly to the demands of members and users alike is essential to the fulfillment of CrossRef's mission.

The rewrite of CrossRef's software system, begun in early 2010, continues as the organization's primary infrastructure project. The new query system was deployed in December 2010, and has improved overall performance significantly, as anticipated.

That said, staff members are still tweaking the system and making adjustments to enable it to handle increasing loads optimally, a process of fine-tuning that will continue for some time. Work is now under way on the new deposit system, the less complex of the two primary components. Because of the growing demands of maintaining the daily operations of the CrossRef service, however, the development effort is proceeding more slowly than originally expected, and a phased deployment into the second quarter of 2012 now seems likely.

Requirements for the CrossMark service, now in pilot phase, are being integrated into the new system, which will handle all CrossMark activity as publishers adopt the service over the coming year.

The smooth operation of the CrossRef service relies on regular updates of hardware and software alike, and a number of new servers and database machines have recently been installed. The addition of a very large number of citation deposits along with article metadata has contributed significantly to the workload of the system and staff, but it has been accommodated with no impact on other member activities. The ability to respond seamlessly to the demands of members and users alike is essential to the fulfillment of CrossRef's mission.

Chapter 19.
http://dx.doi.org/10.1037/10576-019

Chapter 20.
http://dx.doi.org/10.1037/10576-020

Chapter 21.
http://dx.doi.org/10.1037/10576-021

Chapter 22.
http://dx.doi.org/10.1037/10576-022

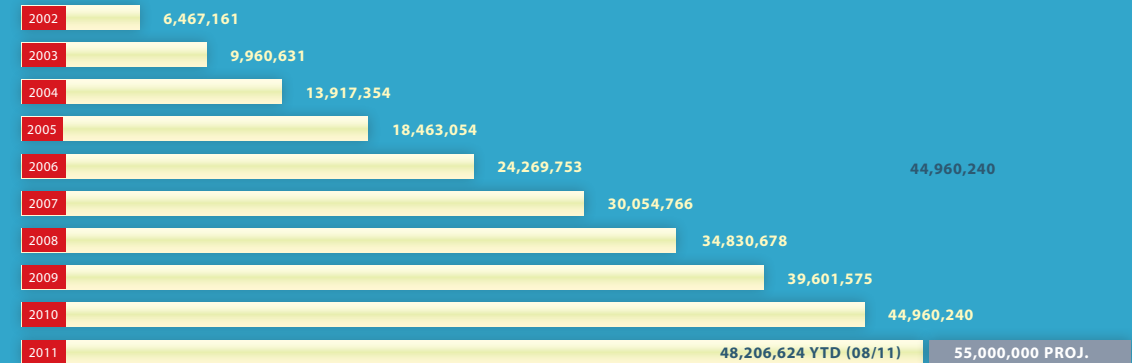**cross**ref

Chapter and Verse.

CrossRef's Core Linking service supports both book and chapter DOI referencing. This opens a whole new world of linking accessibility for publishers.

REVIEW OF THE ORGANIZATION.

Each year in July, the PILA Board of Directors holds a meeting dedicated to CrossRef's strategic direction, setting priorities for its activities and research and defining the key projects for the year ahead. For the 2010 meeting, the Board engaged an outside facilitator to help guide the discussions, the results of which have helped shaped the 2011 budget.

Key Projects for 2011

○ Complete the rewrite of CrossRef's deposit system and implement the automated PDF linking service.

○ Launch CrossMark as a production service.

○ Increase participation in the CrossCheck service beyond large publishers and address the issue of duplicate submission checking.

○ Continue participation in the ORCID initiative.

○ Develop a more advanced metadata quality audit process.

○ Increase book deposits and book reference linking.

○ Develop systems to serve international members and members from developing countries more effectively; create a new customer information database.

○ Continue to review administrative procedures with the goal of streamlining operations.

○ Continue to participate in relevant industry groups and associations such as Transfer, TicTOCS, SSP, STM, ALPSP, NISO, and IDF.

Year	DOIs
2002	6,467,161
2003	9,960,631
2004	13,917,354
2005	18,463,054
2006	24,269,753
2007	30,054,766
2008	34,830,678
2009	39,601,575
2010	44,960,240
2011	48,206,624 YTD (08/11) 55,000,000 PROJ.

44,960,240

DOIs IN THE CROSSREF SYSTEM.

STRATEGIC INITIATIVES

CrossMark

The upcoming launch of the CrossMark service marks a new level of end-user engagement for CrossRef. While the CrossRef reference-linking service is essentially a B2B venture enabling publishers to create links that readers click on, with CrossMark readers will interact directly with metadata associated with publisher-maintained versions of publications. Accordingly, CrossRef has conducted usability tests in developing the service and has worked with a consultant to design a logo that is distinctive but not obtrusive. There is already substantial publisher interest in CrossMark's ability to present nonbibliographic metadata, such as funding sources and clinical trial registration numbers, which can help the researcher identify and navigate a series of "threaded publications." CrossRef plans to make specific efforts to promote this type of use.

Patent Literature

The PILA Board has identified patent literature as another area of strategic priority. While patent documents often cite scholarly articles, and vice versa, linking to articles from patents has been inconsistent, and linking to patents from articles has been stymied by patents' lack of a standard identifier scheme. The issue is complicated by the distribution of patents across national regimes with varying processes and organizational structures.

CrossRef is collaborating with the Australia-based Cambia, creator of the Patent Lens, a tool for searching more than 10 million international patent documents to help innovators survey the existing boundaries of intellectual property. In the spring of 2011, a Cambia developer spent two weeks in Oxford working with CrossRef's R&D staff on a preliminary effort to establish tools and processes for linking to patent literature in the Cambia database, with promising results. On another front, CrossRef has begun to work with the United States Patent and Trademark Office (USPTO) to include scholarly citation links in patent applications and grants.

Linked Data

The ability of computers to link to data automatically is crucial for text mining and related online activities, and represents another Board-designated area of strategic importance. Linked data applications require the display of data in machine-readable form. Since CrossRef DOIs were originally created to lead human readers to human-readable pages, CrossRef has provided APIs to allow querying its metadata for machine-readable results. Other DOI Registration Agencies have created similar APIs of their own design, but because a computer may not know the origin of a particular DOI, it may not know which API to use. With the anticipated growth of the International DOI Foundation (IDF), the problem, if unchecked, will only be compounded.

In collaboration with the IDF and the Corporation for National Research Initiatives (CNRI), CrossRef has enabled the DOI Web proxy to support "content negotiation" as a standard way of querying a URL for machine-readable data. All CrossRef DOIs are now enabled for use in linked data applications. Equally important, the DataCite DOI Registration Agency has announced it will adopt this approach, and at a recent conference of Persistent Identifier (PI) providers there was consensus on the advisability of taking similar measures to ensure interoperability across PI schemes. This marks an important step in ensuring the long-term viability of the DOI system.

Cited-by Linking

CrossRef is committed to ensuring the same quality of service for all its members. For smaller publishers there are two common obstacles to participation in Cited-by Linking: the bibliographic references in their articles are often not in XML, which complicates their submission, and the platforms supporting their Web sites often lack the capacity for incorporating the cited-by function.

To address the first issue, CrossRef is developing a set of tools that publishers can use to extract the references from articles in PDF format and submit them to the Cited-by service. CrossRef has also begun work on a tool to bridge the gap in Web site capability, but in the interim, a researcher at Vilnius Gediminas Technical University in Lithuania has written a plug-in for the Open Journal Systems (OJS) platform, used by many smaller publishers, that allows the incorporation of Cited-by Linking into any OJS-based publication. As a collaborative organization, CrossRef welcomes the innovation, which has reduced the urgency of the issue.

ORCID

CrossRef continues its involvement in the ORCID (Open Researcher and Contributor ID) initiative, which was incorporated as a not-for-profit organization in August 2010 and is now developing its Phase I service. CrossRef is represented on the ORCID Board of Directors, and Geoffrey Bilder, CrossRef's Director of Strategic Initiatives, is currently devoting up to half his time for a six-month period to his role as ORCID's interim Technical Director.

ONGOING SERVICES

Cited-by Linking, CrossCheck

Elsevier joined CrossRef's Cited-by Linking service in late 2010 and has started depositing approximately 200 million references from its extensive library of scholarly publications. As with all CrossRef services, the value of Cited-by Linking grows with publisher participation, and the inclusion of Elsevier significantly increases researchers' ability to identify and access literature relevant to their work.

With more than 240 publishers now participating, CrossCheck, powered by iThenticate, is a proven asset to publishers in ensuring the quality and originality of their content, providing a large and growing database of scholarly literature against which submitted articles can be screened. The number of manuscripts that publishers are submitting to the system has grown significantly and now averages over 20,000 per month.

CrossMark

The CrossMark service will roll out to publishers (and scholars!) in 2012.

Over 250 publishers are now participating in Cited-by Linking.

CITEDBY
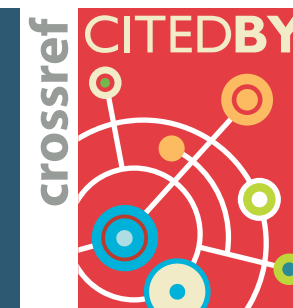
crossref

CROSSREF POLICIES

To highlight and promote the role of the DOI in enabling permanent links, CrossRef has revised its DOI display guidelines, encouraging members to adopt the URL format http://dx.doi.org/ followed by the DOI whenever a CrossRef DOI appears in the online environment. Any DOI displayed in this way is immediately recognizable as an active link, and since the format is machine-readable, the new policy also supports the strategy of enabling linked data applications.

DOI DEVELOPMENTS

CrossRef has been working with DataCite, a DOI Registration Agency focused on improving the scholarly infrastructure around datasets, to ensure the interoperability of CrossRef and DataCite DOIs. The goal is for researchers to have the ability to access the datasets cited in a particular article, and to see which articles have cited a particular dataset.

THE DOI SYSTEM   AN ISO STANDARD

http://dx.doi.org/

Machine Readable, ISO Approved.
Introducing our new DOI URL format.

The core CrossRef linking service depends on reciprocity, with publishers required as a condition of membership to implement outbound reference links in their publications to complement inbound links from other publishers. Because failure to establish outbound linkage usually results from technical obstacles experienced by smaller publishers, CrossRef has as of 2011 discontinued the per-DOI non-linking fee, opting instead for a suspension of membership after an 18-month grace period. CrossRef is working on a tool that will enable any publisher to implement outbound linking from PDF articles, which should help more small publishers comply with their member obligations.

There are now eight DOI Registration Agencies. The recent addition of the Entertainment Identifier Registry (EIDR), which provides a universal unique identifier for movies, television shows, and other commercial audio/video assets, marks the first major use of the DOI System outside scholarly and professional publishing.

The DOI System has been approved as an ISO Final Draft International Standard, a major recognition of its importance.

GOVERNANCE, MEMBERSHIP, STAFF, AND INDUSTRY ACTIVITY

The PILA Board of Directors comprises 16 representatives, listed further on in this report and at www.crossref.org. Five individuals were elected to the Board at the 2010 Annual Member Meeting, to serve three-year terms: Karen Hunter, Elsevier; Steven Hall, IOP Publishing; Howard Ratner, Nature Publishing Group; Stuart Taylor, The Royal Society; and Wim van der Stelt, Springer Science+Business Media.

CrossRef has revised its Affiliate membership categories to reflect more accurately the ways such members interact with the CrossRef system. The current categories are: CrossRef Service Provider, CrossRef Query Account Affiliate, Enhanced CrossRef Metadata Services (CMS) Affiliate, Basic CrossRef Metadata Services (CMS) Affiliate, and End-User Lookup Affiliate.

The 2010 Annual Member Meeting was held in London, U.K., on November 16. Attendance was strong and the program compelling, with featured speakers Tracey Brown, Sense About Science; Christine Ottery, Science Journalist; Toby Green, Organisation for Economic Co-operation and Development (OECD); and Mackenzie Smith, Massachusetts Institute of Technology (MIT) Libraries. The new CrossRef Workshops day on November 15 replaced the Technical Meeting of the past, with a well-received emphasis on hands-on sessions. The 2011 Annual Member Meeting will be held in Cambridge, Massachusetts, on November 15, and will feature keynote speaker Ellen Ruppel Shell, Boston University Center for Science & Medical Journalism, with presentations by Phil Davis, Cornell University, and Helen (Yuehong) Zhang, JZUS (Journal of Zhejiang University-SCIENCE).

The CrossRef staff has grown to 18 with the addition of Paula Dwyer as Controller and Siama Begum as Office Administrator in Oxford. Vaishali Patel, Anne Hotchkiss and Betty Momjian are now Technical Support Analyst, Administrative Assistant and Staff Accountant, respectively, and Lisa Hart, who has been with CrossRef from the start, has been promoted to Associate Director of Finance and Operations.

Staff members continue to play important roles in industry organizations. Executive Director Ed Pentz is Treasurer of the UKSG (formerly the United Kingdom Serials Group) and Chair of the UKSG Project TRANSFER Working Group, Treasurer of the International DOI Foundation (IDF), and a member of the ORCID Board of Directors. In addition to serving as interim Technical Director for ORCID, Geoffrey Bilder, Director of Strategic Initiatives, is an Editorial Board member of Learned Publishing and a member of the Socio-cultural Issues Working Group of the Data Observation Network for Earth (DataONE). Chuck Koscher, Director of Technology, serves on the National Information Standards Organization (NISO) Board of Directors and the NISO/NFAIS (National Federation of Advanced Information Services) Supplemental Journal Article Materials Technical Working Group. Carol Meyer, Business Development and Marketing Manager, is a member of the Book Industry Study Group (BISG) Identification Committee, the American Association of Publishers Professional and Scholarly Publishing (AAP/PSP) Books Committee, and President-Elect of the Society for Scholarly Publishing (SSP).

CrossRef has a strong presence at industry events and conferences. Its 2010 sponsorships included the International Association of Scientific, Technical & Medical Publishers (STM) Meeting in Frankfurt, Germany, Science Online London, the SSP 32nd Annual Meeting, the 30th Anniversary Charleston Conference, and several others. CrossRef staff members are regular presenters at the meetings of such organizations as STM, the Committee on Publication Ethics (COPE), the Japan Science and Technology Agency (JST), the American Library Association (ALA), BioOne, and the Editorial Manager User Group.
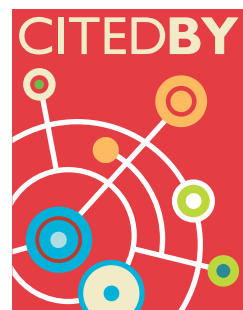
CITEDBY

cross check
Powered by iThenticate

CrossMark

CrossRef's™collaborative reference linking service helps publishers provide affordable, reliable links, increasing usage and traffic to publications. This promotes the development and cooperative use of new and innovative technologies to speed and facilitate scholarly research.

CrossRef Cited-by Linking allows publishers to discover how their publications are being cited in other publications and to display that information to their readers.

CrossCheck™, a joint initiative between CrossRef and iParadigms, surpasses existing plagiarism screening tools by checking submissions against an authoritative and comprehensive database. The database includes full text scholarly and academic publications and web resources with high-quality scholarly content.

CrossMark™ is a simple way for publishers to mark authoritative versions of their published literature and to signal to researchers that publishers are committed to maintaining their scholarly content.

It gives scholars the information they need to verify they are using the most up-to-date versions of the research they rely on.

Interesting Facts

Launched in 2000

Almost 50 million of DOIs now in the CrossRef system

More than 3000 publishers participating

Launched in 2004

250 participating publishers

Over 200 million cited-by links

Launched in 2008

240 publishers participating

Database of 30 million articles to cross-check

Pilot participants include: Elsevier Science, IEEE, Oxford University Press, The Royal Society, Vilnius Gedeminas Technical University and Wiley.

Launch anticipated in 2012

CrossCheck simplifies plagiarism screening.

Learn more at www.crossref.org/crosscheck.

cross check
Powered by iThenticate

CROSSREF QUERY AFFILIATES

ACCELRYS
www.symyx.com

ATLAS CO, LTD.
www.atlas.jp

BEIJING MAGTECH CO.
www.magtech.com.cn

BIO-RAD LABORATORIES, INC.
www.bio-rad.com

CAMBRIDGE CRYSTALLOGRAPHIC DATA CENTRE
www.ccdc.cam.ac.uk

CLOCKSS
www.clockss.org

CNPq
www.cnpq.br

DATA CONVERSION LABORATORY
www.dclab.com

DECHEMA
www.dechema.de

EBSCO PUBLISHING
www.ebsco.com

ENERGY TECHNOLOGY DATA EXCHANGE
www.etde.org

EUROPEAN PATENT OFFICE
www.epo.org

EXPERT PUBLISHING LLC
www.expub.com

FIZ KARLSRUHE
www.fiz-karlsruhe.de

FRAUNHOFER GESELLSCHAFT
www.irb.fraunhofer.de

HEALTH COMMUNICATION NETWORK, LTD.
www.hcn.net.au

IFACTORY
www.ifactory.com

INERA
www.inera.com

INFORMATION EXPRESS
www.reviews.com
www.ieonline.com

INFOTRIEVE
www.infotrieve.com

INTERNATIONAL ATOMIC ENERGY AGENCY
www.iaea.org

JAPAN MEDICAL ABSTRACTS SOCIETY (JAMAS)
www.jamas.or.jp

JAPAN SCIENCE AND TECHNOLOGY AGENCY (JST)
www.jst.go.jp

KONINKLIJKE BIBLIOTHEEK, NATIONAL LIBRARY OF THE NETHERLANDS
www.kb.nl

LEIBNIZ-INSTITUTE OF PSYCHOLOGY INFORMATION (ZPID)
www.zpid.de

MEKENTOSJ BV
www.mekentosj.com

MENDELEY LTD.
www.mendeley.com

NATIONAL CENTER FOR PTSD
www.ncptsd.org

NATIONAL RESEARCH INFORMATION CENTER

NNODE

PALGRAVE MACMILLAN
www.palgrave.com

PORTICO
www.portico.org

PROQUEST INFORMATION & LEARNING
www.proquest.com

PUBGET
www.pubget.com

QUOSA, INC.
www.quosa.com

REED TECHNOLOGY
www.reedtech.com

SCIENCE CHECK
www.sciencecheck.org

SEED MEDIA
www.seedmediagroup.com

SEMPERTOOL
www.sempertool.dk

SYMPLECTIC LTD.
www.symplectic.co.uk

ARCTIC INSTITUTE OF NORTH AMERICA
www.ucalgary.ca/aina

THE CHARLESWORTH GROUP
www.charlesworth.com

THE SHERIDAN GROUP
www.sheridan.com

TDNET
www.tdnet.com

TECHSET COMPOSITION LIMITED
www.techset.co.uk

UNIVERSITY OF KANSAS, CENTER FOR RESEARCH, INC
www.rgs.ku.edu

WANFANG DATA CO., LTD.
www.wanfangdata.com

WTI-FRANKFURT EG
www.wti-frankfurt.de

CROSSREF SERVICE PROVIDERS

ALLEN PRESS
www.allenpress.com

ARIES SYSTEMS
www.ariessys.com

ATYPON
www.atypon.com

EX LIBRIS SFX
www.exlibris-usa.com

HIGHWIRE
www.highwire.org

INASP/JOL
www.inasp.info

INERA
www.inera.com

METAPRESS
www.metapress.com

NNODE

OCLC PICA OL2
www.openly.com
www.fdusa.com/linking.html

PREMEDIA GLOBAL
www.premediaglobal.com

PUBGET
www.pubget.com

PUBLISHING TECHNOLOGY
www.publishingtechnology.com

SANBI PRINTING CO., INC.
www.sanbi.co.jp

SILVERCHAIR
www.silverchair.com

CROSSREF METADATA SERVICES AFFILIATES

ACADEMIC ANALYTICS, LLC
www.academicanalytics.com

BIOINFOBANK INSTITUTE
www.bioinfo.pl

CAMBIA
www.cambia.org

COPYRIGHT CLEARANCE CENTER
www.copyright.com

EASYBIB.COM
www.easybib.com

EUROPEAN BIOINFORMATICS INSTITUTE (EMBL)
www.embl.de

EX LIBRIS
www.exlibrisgroup.com

LABTIVA
www.labtiva.com

MESUR
www.mesur.org/MESUR.html

NASA ADS
adswww.harvard.edu

OCLC www.oclc.org

ONTARIO COUNCIL OF UNIVERSITY LIBRARIES (OCUL)
www.ocul.on.ca

PATENT CALLS
www.patentcalls.com

PROQUEST LLC.
www.proquest.com

PUBGET INC.
www.pubget.com

SCIRUS
www.scirus.com

SCHOOL OF ADVANCED STUDY, UNIVERSITY OF LONDON
www.sas.ac.uk

SUNMEDIA
www.sunmedia.co.jp

CROSSREF END-USER LOOK-UP AFFILIATES

AVEDAS www.avedas.com

CINECA www.cineca.it

CITEULIKE/OVERSITY
www.citeulike.org

JOURNALFIRE, INC
www.journalfire.org

LUCARE SYSTEMS, LLC
www.lucare.com

THE MAZUR GROUP
www.mazur-www.harvard.edu

NORTHUMBRIA LEARNING
www.nlearning.co.uk

PAPERCHECK.COM
www.papercheck.com

PAPERPILE www.paperpile.com

SONNY SOFTWARE
www.sonnysoftware.com

SWISS ACADEMIC SOFTWARE
www.citavi.com/en

TALIS www.talis.com

UNIVERSITY OF NORTH FLORIDA
www.unf.edu

ASSOCIATED ORGANIZATIONS

ASSOCIATION OF SUBSCRIPTION AGENTS AND INTERMEDIARIES
www.subscription-agents.org

ASSOCIATION OF LEARNED AND PROFESSIONAL SOCIETY PUBLISHERS www.alpsp.org

THE EUROPEAN MOLECULAR BIOLOGY ORGANIZATION (EMBO)
www.embo.org

NFAIS www.nfais.org

PUBLISHERS LICENSING SOCIETY
www.pls.org.uk

SERMO www.sermo.com

Measuring CrossRef's Growth

LIBRARY MEMBERSHIP.

Year	Value
2002	57
2003	196
2004	471
2005	947
2006	1,152
2007	1,257
2008	1,445
2009	1,537
2010	1,651
2011	1,763 YTD (08/11)
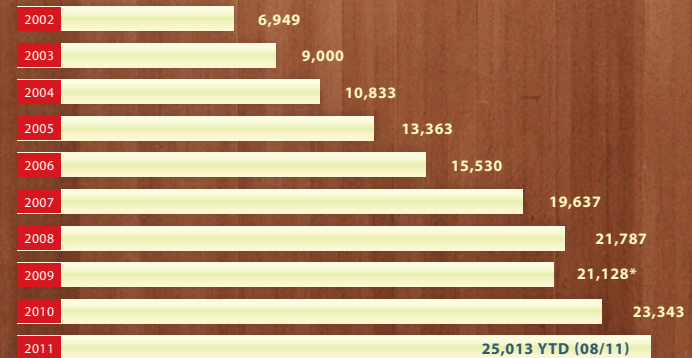
JOURNALS IN THE CROSSREF SYSTEM.
*A change in how we report journal titles lowered journal count.

Year	Value
2002	6,949
2003	9,000
2004	10,833
2005	13,363
2006	15,530
2007	19,637
2008	21,787
2009	21,128*
2010	23,343
2011	25,013 YTD (08/11)

DOI RESOLUTIONS.

Year	Value
2002	19,617,963
2003	44,098,763
2004	70,732,162
2005	111,206,680
2006	150,609,734
2007	178,006,747
2008	259,525,515
2009	340,570,677
2010	464,248,794
2011	325,299,847 YTD (08/11) 500,000,000 PROJECTED
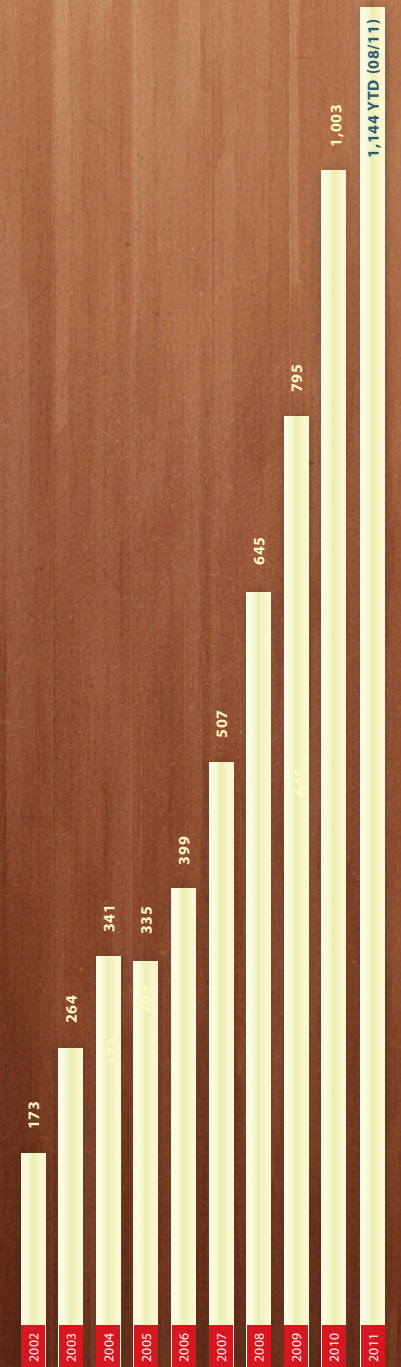
CROSSREF VOTING MEMBERS.

Year	Value
2002	173
2003	264
2004	341
2005	335
2006	399
2007	507
2008	645
2009	795
2010	1,003
2011	1,144 YTD (08/11)

NORTH AMERICA
50 SALEM STREET
LYNNFIELD, MA 01940
UNITED STATES
+1 781 295 0072
FAX +1 781 295 0077

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environmental impact of the
work we do.