

# IEEE's Principles of Scholarly Publishing: Putting Open Access into Context

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## EXECUTIVE SUMMARY

This document, defining basic principles of the IEEE’s publishing program, was inspired in large part – but not completely – by the ongoing discussion of emerging open access publishing models. These alternatives to traditional subscription-based business models are characterized by the common aspects that scholarly works are distributed online and free of charge to users. Financial support for these so-called open access systems comes from a variety of approaches ranging from charging authors a publishing fee to support by a government agency or other institution. IEEE’s study of the relative values of traditional and new models requires a broader statement of the basic principles that we uphold as a not-for-profit publisher in the global scientific-technical community.

In 2006, the Publication Products and Services Board (PSPB) of the IEEE began active discussions of open access publishing models. It became apparent in the course of PSPB discussion that the IEEE is best served by a comprehensive statement of overarching principles, rather than one confined only to the open access issue. Over months of discussion, principles were drafted and shared with IEEE leaders. These principles were ultimately approved by the IEEE Board of Directors at its meeting in November 2007.

Three external factors combine to make the adoption of these principles a timely action for the IEEE:

- President Bush’s signing of the FY2008 Labor, Health and Human Services, and Education Appropriations Bill on 26 Dec. 2007 empowered the National Institutes of Health to mandate that authors deposit their published work in an NIH repository within 12 months of publication;
- Publishing industry groups such as the American Association of Publishers and STM International have approached the IEEE to align with particular position statements; and
- IEEE customers, particularly those in the library community, have asked the IEEE to state its position on open access.

This report presents IEEE’s Principles of Scholarly Publishing and background information to help the reader understand the current debate about open access.



# IEEE

## PRINCIPLES OF SCHOLARLY PUBLISHING

*IEEE's core purpose is to foster technological innovation and excellence for the benefit of humanity. As the world's leading professional association for the advancement of technology, we provide peer-reviewed and unbiased information that helps enhance the quality of life for all people.*

*IEEE is committed to providing the world with convenient, timely, and affordable access to scholarly and professional publications and to wide dissemination of research results. Consistent with this commitment, IEEE liberally grants to its authors the right to post their own content for free public access on the author's own web site or their employer's institutional repository.*

*The field of scholarly publishing continues to experience breathtakingly rapid change. The IEEE believes that in order to successfully carry out its publishing mission it will be increasingly important to maintain a clear focus on core values and principles of operation:*

- ◆ **Society benefits from the ability of scholarly publishers to launch, sustain, promote, and develop technical publications. Society also benefits from the commitment and experience that scholarly publishers bring to the challenge of archival preservation of electronic content to ensure the availability of published literature for future generations.**
- ◆ **Society benefits from an objective and intellectually free scholarly publishing environment that is unfettered by censorship or bias based on personal, commercial, or governmental agendas.**
- ◆ **Research results are enhanced by the quality control system known as peer review, which applies the knowledge of independent subject-matter experts, to validate technical worthiness, scientific integrity, and thus gain society's confidence in the research.**
- ◆ **In order to perpetuate itself, scholarly publishing requires financial support from self-sustaining business models. It is important to recognize that no single business model will fit the needs of the various scholarly communities.**
- ◆ **All engineers, scientists, and other scholarly authors should have an equal opportunity to publish, regardless of their sources or levels of grant funding.**
- ◆ **Government has a dual responsibility for funding new research and ensuring that those research results are vetted and widely disseminated by organizations with the experience, infrastructure, and independence to provide the public with affordable and reliable access.**
- ◆ **Copyright and intellectual property rights of authors and publishers must be protected in any publishing activity, including those that involve government-mandated policies on access to government sponsored research.**
- ◆ **Not-for-profit scholarly publishers have an obligation to acquire and disseminate information for the benefit of the global public and to ensure that there are no financial barriers for authors publishing their results.**
- ◆ **Not-for-profit learned societies have the unique and overarching goal of conducting their activities, including publishing, not for benefit of any individual or group of individuals, but rather to provide services that benefit the global public in both direct and indirect ways.**

# **BACKGROUND ON OPEN ACCESS PUBLISHING**

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## **1. Historical Background, Definitions and Business Models**

Four principal factors contributed to the recent development of the open access movement and also drive current interest:

- **Sharing of preprints:** In many research disciplines, sharing of research results among colleagues, especially prior to publication, has been a time-honored, collegial practice. In high-energy physics, the preprint server established in the early 1990s at Los Alamos National Lab (and now operated at Cornell University as arXiv) was a pioneer in electronic dissemination of research results.
- **Public desire for medical information:** In the fields of medicine and biology, public policy in both the US and in the European Union are influenced by taxpayer interest groups who advocate that research funded by government grants would be made freely available to the public.
- **The Internet effect:** The democratizing effect of the communications revolution invites an operating principle that “information wants to be free,” extending an anti-copyright philosophy from the print to the electronic age.
- **Journal pricing practices:** Academic and corporate librarians complain that rising subscription price trends of recent years are straining the ability of library budgets to pay for all the scholarly journals their constituents need.

In response to these influences, various interest groups and individual practitioners promote open access publishing concepts as alternatives to traditional scholarly publishing. It's important to note that open access, as a movement, is not monolithic, and is advocated in different forms.

### **Historical Background**

The e-print servers marked the beginning of open access publishing. The philosophical foundation and basic definitions of open access have appeared in a number of places, including the [Budapest Open Access Initiative](#) (see below), the [Bethesda Statement on Open Access Publishing](#), and the [Berlin Declaration on Open Access](#). People have sometimes referred to these as providing the “BBB definition” of open access. A distillation of the definitions as provided below will serve as the working definition of open access to be used in this background paper.

Open archives as a form of open access publishing are distinguished from open access journals by the feature that open access journals require peer review. There were initially fewer open access journals, but the numbers are now increasing. A current list is available in the Directory of Open Access Journals (<http://www.doaj.org/>). These journals operate under a variety of business models, many of which will be discussed in this background paper.

A number of open access repositories now exist – both as archives for preprints and also as repositories for fully peer-reviewed articles. In 2000, PubMed Central was launched by the U.S. National Institutes of Health (NIH) as a free digital archive of biomedical and life sciences journal literature. From the PMC introduction on its website, “PubMed Central

aims to fill the role of a world class library in the digital age. It is not a journal publisher.” (See <http://www.pubmedcentral.nih.gov/about/intro.html> for more detail.) While PMC is not a journal, it provides an archive for a number of open access publications. It also hosts content from non-open access journals – sometimes on a delayed basis and sometimes with only selected articles being deposited. A number of research funding agencies (NIH and Wellcome Trust) require that articles reporting research that they supported be deposited in PMC. In these cases, PMC will accept applicable articles (which have been peer reviewed for other journals) directly from the researchers.

For an excellent summary of the terms and the arguments about different specific models, we refer to Peter Suber's overview: <http://www.earlham.edu/~peters/fos/overview.htm>. There is also a comprehensive timeline at <http://www.earlham.edu/~peters/fos/timeline.htm>.

### **Definitions**

Definitions of open access publishing often differentiate between self-archiving and open access journals. (See accompanying box). **Self-archiving** (sometimes called the “green road” among open access advocates) means the practice of authors depositing their published articles in a publicly accessible online repository. The repository may be an **institutional repository** maintained by the author’s employer, or a **central repository**, supported by a government or funding agency. (The National Institutes of Health’s PubMed Central is an example). A good FAQ on self-archiving may be found at <http://www.eprints.org/openaccess/self-faq/#self-archiving>.

Proponents of open access through authors’ self-archiving advocate publisher policies that permit authors to post preprint versions (prior to peer review), but more importantly, post-print versions that reproduce the peer-reviewed, published article. An organization that advocates self-archiving, SHERPA (Securing Hybrid Environments for Research Preservation and Access) maintains a service to track publisher policies – RoMEO (Rights Metadata for Open Archiving). In the SHERPA/RoMEO guide (<http://www.sherpa.ac.uk/romeo.php>), the IEEE receives a “green” rating, a favorable designation that means publishing policies permit authors to post peer-reviewed articles on their web sites.

**Open access journals** (sometimes called the OA “golden road”) are online publications that follow traditional scholarly publishing practices, while adhering to open access principles, particularly the availability of information at no charge to the user. Many, if not all, of these open access journals charge authors a fee for publishing an article. In return for this fee the article is then available at no additional charge to readers. A leading example, as shown in Appendix B, is the [Public Library of Science](http://www.plos.org/) (PloS).

Non-OA journals could be considered to require “toll” or subscription access.

### ***From the Budapest Initiative:***

<http://www.soros.org/openaccess/read.shtml> *The Budapest Initiative is a February 2002 statement from a meeting sponsored by George Soros's Open Society Initiative:*

To achieve open access to scholarly journal literature, we recommend two complementary strategies.

I. **Self-Archiving:** First, scholars need the tools and assistance to deposit their refereed journal articles in open electronic archives, a practice commonly called, self-archiving. When these archives conform to standards created by the [Open Archives Initiative](#), then search engines and other tools can treat the separate archives as one. Users then need not know which archives exist or where they are located in order to find and make use of their contents.

II. **Open-access Journals:** Second, 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. Because journal articles should be disseminated as widely as possible, these new journals will no longer invoke copyright to restrict access to and use of the material they publish. Instead they will use copyright and other tools to ensure permanent open access to all the articles they publish. Because price is a barrier to access, these new journals will not charge subscription or access fees, and will turn to other methods for covering their expenses. There are many alternative sources of funds for this purpose, including the foundations and governments that fund research, the universities and laboratories that employ researchers, endowments set up by discipline or institution, friends of the cause of open access, profits from the sale of add-ons to the basic texts, funds freed up by the demise or cancellation of journals charging traditional subscription or access fees, or even contributions from the researchers themselves. There is no need to favor one of these solutions over the others for all disciplines or nations, and no need to stop looking for other, creative alternatives.

### **Business Models**

While all open access publishing models have free access to users as a common principle, revenue sources range widely, and often appear in combinations. Following are the most widely identified:

**Author pays:** A leading alternative to subscription support is the author pays model that shifts the cost of publishing from reader to author, in the form of publication fees. In reality, however, it's typically the author's employer or funding body that covers the fee on the author's behalf. Some publishers with OA programs reduce or waive fees for authors experiencing economic hardship, or for those from developing nations.

**Hybrid models:** Many traditional STM publishers are experimenting with a hybrid approach that combines author fees with subscription models. In this approach, only some of a journal's articles are made freely available, and only those supported by a publication fee (sometimes called a "processing" fee.) Publishers use this approach under various names (see Appendix B), but Open Choice, the name for Springer's program, is often used generically.

**Delayed open access:** Some scientific publishers are adopting an alternative to author fees that makes content freely available to the public, but only after a predetermined period of

time. This model satisfies the expectation of (eventual) free access, while retaining subscription income for current articles. Publishers in the biomedical field (e.g., [Highwire Press](#)) favor this model. But many advocates of open access consider delayed open access to fall well short of OA guiding principles. See also: ([http://en.wikipedia.org/wiki/Delayed\\_open\\_access\\_journal](http://en.wikipedia.org/wiki/Delayed_open_access_journal))

**Institutional/Agency support:** As mentioned, publication in open access journals through author fees is generally assumed to imply support from the author's employer or funding agency. Some OA journals also accept sponsorship from corporate entities, sometimes in the form of memberships that allow discounted fees to authors from the supporting institution.

In the field of self-archiving, institutional support typically appears as a repository created to hold the published research of the institution. The repository most likely would require or encourage authors to use metadata tags consistent with the [Open Archives Initiative](#) (OAI) to facilitate interoperability. A funding agency like the NIH may support and operate its own central repository (PubMed Central) and specifically request that authors supported by NIH grants deposit their research there. More commonly, authors are likely to self-archive with their own institutional repository.

In their early days, most repositories had been generally seen as places for institutions to collect and preserve their intellectual property. However, building on practices and traditions of preprint exchange in disciplines such as high energy physics, and sharing of software approaches like MIT's [DSpace](#), interactive networks of archives now present the prospect of alternative publishing models.

**Philanthropic support/endowment:** The Public Library of Science (PLOS) is a highly visible example of the altruistic model to support online journals. Funding for operations comes from several sources, including membership fees. The PLoS combines author fees and sponsorship arrangements with philanthropic support from the Gordon and Betty Moore Foundation, the Sandler Family Supporting Foundation, and George Soros' Open Society Institute, among others. Another recent example is the March announcement by the Howard Hughes Medical Institute that it will pay Elsevier to deposit author manuscripts in the NIH PubMed Central.

**Advertiser support:** Many web-based publications already permit free access by users while generating income from online advertisements. One example of an online-only advertiser-supported IEEE publication is the IEEE Computer Society's Distributed Systems Online (<http://dsonline.computer.org/portal/site/dsonline/index.jsp>) .

Additional information on the varieties of OA business models may be found at [http://www.soros.org/openaccess/oajguides/html/business\\_planning.htm](http://www.soros.org/openaccess/oajguides/html/business_planning.htm).

### **3. IEEE and the SCOAP<sup>3</sup> Approach to Open Access**

In February 2008, shortly after the November 2007 adoption of the IEEE's Principles of Scholarly Publishing, the IEEE agreed to explore an open access opportunity presented in the high energy physics field through the emerging [SCOAP<sup>3</sup>](#) consortium.

SCOAP<sup>3</sup> (Sponsoring Consortium for Open Access Publishing in Particle Physics) is a global consortium of libraries, laboratories and funding agencies seeking to define a publishing model that would channel funding to open access publishing of scholarly articles in the particle physics field. The SCOAP<sup>3</sup> working group was initiated by the CERN – the European Organization for Nuclear Research, based in Geneva.

The IEEE signed a letter expressing its interest in having one of its journals, the *IEEE Transactions on Nuclear Science*, sponsored by the IEEE Nuclear and Plasma Sciences Society, participate in the SCOAP<sup>3</sup> project. The letter stipulates that interest “assumes that sustainable funding is made available by the organizations comprising the SCOAP<sup>3</sup> consortium and that suitable business arrangements are made between IEEE and the consortium.”

Under the proposed SCOAP<sup>3</sup> model, the traditional funding sources of research, i.e., labs, universities and government agencies, would pay into the SCOAP<sup>3</sup> consortium, which in turn would pay scholarly journal publishers for peer review and publication of research, free to consumers of the information.

The consortium plans to support complete journals dedicated to the high energy physics field, or publication of select articles in what it calls “broadband” journals – those that include particle physics among a wider range of topics. In all cases, the articles would be provided online, free to users. Subscribers to a “broadband” journal (such as the *IEEE Transactions on Nuclear Science*) would receive a cost adjustment, depending on the amount of open access articles that are included in the journal.

The IEEE is in the initial stage of involvement in the SCOAP<sup>3</sup> project, but the initiative's provisions to support peer review and its goals to produce a sustainable publishing model have recommended it as an experiment to evaluate an open access publishing model.

### **3. IEEE Open Copyright Project**

#### **Survey of 2001-05 IEEE Conference and Periodicals Papers Found Online**

The Open Copyright Project was initiated in 3Q06 to provide a better understanding of the possible effects of IEEE's liberal copyright policies on author behavior, specifically related to authors posting their papers on the web. The primary goal of the project was to determine how much the policy/behavior combination may be influencing the amount of openly available IEEE content online. A preliminary report on the periodical search results issued in 2007 by the IPR Office highlighted an upward trend for periodical content which showed that the amount of periodicals content found online increases in relation to the amount of time it has been available since its original publication.

In a companion to the periodicals report, it was shown that papers published in IEEE conferences have not followed a similar trend in terms of online availability over time such as was found with periodicals. However, the overall percentage of proceedings papers

found online (29%) was comparable to periodicals (33%), and the percentage of proceedings papers found in Institutional Repositories (IRs) was the same as the percentage of periodical papers (5%).

The search results from conferences for the five-year period were combined with the previously reported search results from periodicals for the same period. The combination of these two sets of results gives the full picture of author behavior for IEEE publications.

Of the total sample of more than 5,000 periodical and proceedings papers included in the five-year sample used in the Open Copyright Project, 31.3% were found online.

### **Conclusions**

The results from the conference proceedings survey show a different picture than what was seen in the periodicals survey. While the percentages of material found online in both surveys are comparable, the proceedings survey shows that the length of time a proceedings paper has been published has no influence on its availability.

Over 31% of periodical papers published in 2005 were found openly available online, whereas over 36% of 2001 content was found. This increase in periodical search results over time suggests that periodical papers have more long-term archival value than proceedings papers.

The variation in the online availability of each publication type suggests that authors (or their employers) do not view all content as having the same archival value. But the substantial number of IEEE journal papers that were found online (38%) indicates that, when applicable, many journal authors do choose to self-archive their IEEE-copyrighted work.

Nearly a third (31%) of all IEEE papers (periodicals and proceedings) searched in the Open Copyright Project were posted online by the authors, and are freely available for public viewing on a variety of privately owned and corporate online collections of content. This speaks plainly about IEEE's longstanding commitment to authors and their employers, as well as to establishing IEEE as an OA-friendly publisher.

### **Highlights of the Open Copyright Project**

The combined search results for a sample of more than 5,000 papers taken from IEEE periodicals and conference proceedings over the five-year period show:

- The length of time that a proceedings paper has been published has no discernable effect on its online availability
- Approximately 33% of the sampled periodicals papers were found freely available on the web.
- The percentage of IEEE proceedings papers that were found freely available on the web is 29%
- The percentage of IEEE papers from all publications that were found freely available on the web is 31%
- While the possible influence of Institutional Repositories (IRs) remains unclear (only 5% of the combined sample titles were found), an increasing trend in the number of papers found in IRs since 2001 can be seen in the search results for all IEEE publications.

## **Appendix A: Scholarly Publishing Principles Promulgated by Other Organizations**

*STM publishing associations have issued position statements from time to time on the principles of open access, and two are reproduced here in full.*

### **Brussels Declaration on STM Publishing**

Following are the basic principles of the Brussels Declaration on STM Publishing, issued 13 Feb. 2007 during the European Commission-sponsored EU Conference on Scientific Publishing in the European Research Area.

1. **The mission of publishers is to maximize the dissemination of knowledge through economically self-sustaining business models.** We are committed to change and innovation that will make science more effective. We support academic freedom: authors should be free to choose where they publish in a healthy, undistorted free market.
2. **Publishers organize, manage and financially support the peer review processes of STM journals.** The imprimatur that peer-reviewed journals give to accepted articles (registration, certification, dissemination and editorial improvement) is irreplaceable and fundamental to scholarship.
3. **Publishers launch, sustain, promote and develop journals for the benefit of the scholarly community.**
4. **Current publisher licensing models are delivering massive rises in scholarly access to research outputs.** Publishers have invested heavily to meet the challenges of digitization and the annual 3% volume growth of the international scholarly literature, yet less than 1% of total R&D is spent on journals.
5. **Copyright protects the investment of both authors and publishers.** Respect for copyright encourages the flow of information and rewards creators and entrepreneurs.
6. **Publishers support the creation of rights-protected archives that preserve scholarship in perpetuity.**
7. **Raw research data should be made freely available to all researchers.** Publishers encourage the public posting of the raw data outputs of research. Sets or sub-sets of data that are submitted with a paper to a journal should wherever possible be made freely accessible to other scholars.
8. **Publishing in all media has associated costs.** Electronic publishing has costs not found in print publishing. The costs to deliver both are higher than print or electronic only. Publishing costs are the same whether funded by supply-side or demand-side models. If readers or their agents (libraries) don't fund publishing, then someone else (e.g., funding bodies, government) must.
9. **Open deposit of accepted manuscripts risks destabilizing subscription revenues and undermining peer review.** Articles have economic value for a

considerable time after publication which embargo periods must reflect. At 12 months, on average, electronic articles still have 40-50% of their lifetime downloads to come. Free availability of significant proportions of a journal's content may result in its cancellation and therefore destroy the peer review system upon which researchers and society depend.

10. **“One size fits all” solutions will not work.** Download profiles of individual journals vary significantly across subject areas, and from journal to journal.

Two more major organizations became signatories of the Brussels Declaration in March: The University of Chicago Press and the International Publishers Association (IPA), bringing the number of signatories to 44 publishers and 12 trade associations.

Signatories now include the American Chemical Society; American Institute of Physics; Elsevier; Institute of Physics Publishing; John Wiley & Sons; Springer Science + Business Media; Taylor & Francis; the International Association of Scientific, Technical and Medical Publishers. **The declaration and a list of signatories are available at the [STM International](#) web site.**

### **DC Principles**

In the U.S., a group of not-for-profit publishers, largely centered in medical publishing, issued the following position statement on 16 March 2004.

#### **The Washington, DC Principles for Free Access to Science**

As scholarly, not-for-profit publishers, we reaffirm our commitment to innovative and independent publishing practices and to promoting the wide dissemination of information in our journals. Not-for-profit scientific, technical, and medical publishers are an integral part of the broader scholarly communities supporting scientists, researchers, and clinicians. We work in partnership with scholarly communities to ensure that these communities are sustained and extended, science is advanced, research meets the highest standards, and patient care is enhanced with accurate and timely information.

We continue to support broad access to the scientific and medical literature through the following publishing principles and practices.

1. As not-for-profit publishers, we see it as our mission to maintain and enhance the independence, rigor, trust, and visibility that have established scholarly journals as reliable filters of information emanating from clinical and laboratory research.
2. As not-for-profit publishers, we reinvest the revenue from our journals in the support of science worldwide, including scholarships, scientific meetings, grants, educational outreach, advocacy for research funding, the free dissemination of information for the public, and improvements in scientific publishing.
3. As not-for-profit publishers, we have introduced and will continue to support the following forms of free access:
  - Selected important articles of interest are free online from the time of publication;

- The full text of our journals is freely available to everyone worldwide either immediately or within months of publication, depending on each publisher's business and publishing requirements;
  - The content of our journals is available free to scientists working in many low-income nations;
  - Articles are made available free online through reference linking between these journals;
  - Our content is available for indexing by major search engines so that readers worldwide can easily locate information.
4. We will continue to work to develop long-term preservation solutions for online journals to ensure the ongoing availability of the scientific literature.
  5. We will continue to work with authors, peer-reviewers, and editors for the development of robust online and electronic tools to improve efficiency of their important intellectual endeavors.
  6. We strongly support the principle that publication fees should not be borne solely by researchers and their funding institutions, because the ability to publish in scientific journals should be available equally to all scientists worldwide, no matter what their economic circumstances.
  7. As not-for-profit publishers, we believe that a free society allows for the co-existence of many publishing models, and we will continue to work closely with our publishing colleagues to set high standards for the scholarly publishing enterprise.

**Information on the statement and a list of signatories may be found at:**

**<http://www.dcprinciples.org/>**

## Appendix B: Selected Open Access Programs in For-Profit and Society STM Publishing

The information in this table was obtained from public sources or from publisher's information, and is current as of November 2007. Users should check data directly with the identified organizations

Society & Other NFP Publishers				
Publisher	Program Name	Launch Date/Type	Notes/Fees to Authors	Link
American Physical Society	Free to Read	16-Aug-06	Program provides free online access to full-text versions of articles published in APS journals.	<a href="http://publish.aps.org/FREETOREAD_FAQ.html">http://publish.aps.org/FREETOREAD_FAQ.html</a>
		Hybrid	Author/Institution Fees: \$975/article for Physics Review; \$1,300 for Physics Review Letters	
American Institute of Physics	Author Select	N/A	Through AIP's Author Select initiative, authors may choose open access for their published scholarly articles. (Includes Journal of Rheology.)	<a href="http://journals.aip.org/au_select.html">http://journals.aip.org/au_select.html</a>
		Hybrid	Fees: Vary by journal; it's \$1,500 for 5 of AIP's 8 titles and \$1,800 for the others (Journal of Rheology: \$2,500).	
Institute of Physics Publishing (IOPP)	IOPSelect and This Month's Papers	Sep-01	IOPSelect provides novel papers from its journals that remain free for 12 months. Additionally, articles from most IOPP non-OA journals are free for 30 days. Content is freely available from the moment of publication until it's archived.	<a href="http://www.iop.org/Select/">http://www.iop.org/Select/</a>  <a href="http://www.iop/EJ/toc/-ff30=7">http://www.iop/EJ/toc/-ff30=7</a>
		Partial OA	Fees: Neither of the IOPP programs require fees from authors. Both combine a reader pays model with open access for a predetermined length of time immediately upon publication. Readers are charged for access to premium archives.	
Institute of Physics Publishing (IOPP)	New Journal of Physics	20-Jun-05	The New Journal of Physics is an OA journal jointly published with Deutsche Physikalische Gesellschaft.	<a href="http://www.iop.org/EJ/njp">http://www.iop.org/EJ/njp</a>
		Total OA	Fees: Currently authors are charged £650 per article; members of IOP and DPG pay £550.	
American Chemical Society	Author Choice	Oct-06	Authors may pay to provide free online access to their articles on the ACS site. Authors may also post e-copies on personal sites and in institutional repositories.	<a href="http://pubs.acs.org/pressrelease/author_choice">http://pubs.acs.org/pressrelease/author_choice</a>
		Hybrid	Fees: Range from \$1,000 - \$3,000, depending on whether the author is an ACS member or is affiliated with an organization subscribing to ACS journals.	
Optical Society of America	Various journal titles	N/A	In addition to Optics Express (below), OSA now offers authors the option to elect open access for articles appearing in five other journals. OA papers will be identified in tables of contents and in the results of Optics InfoBase searches.	<a href="http://www.osa.org/journals/osajournals/default.aspx">http://www.osa.org/journals/osajournals/default.aspx</a>
		Hybrid	Fees: \$1,500 per article	

### Selected Open Access Programs (cont'd)

Optical Society of America	Optics Express; the International Electronic Journal of Optics	1997	Optics Express publishes articles reporting developments of interest in the optics community. It offers authors rapid publication; inclusion of color images at no additional cost; and new ways to present data and results.	<a href="http://www.opticsexpress.org/submit/review/pub_charge.cfm">http://www.opticsexpress.org/submit/review/pub_charge.cfm</a>
		Total OA	Fees: \$700 for 6 or fewer published pages; \$1,200 for 7-15 published pages; Manuscripts longer than 15 pages incur a charge of \$120/pg beyond 15.	
Cambridge University Press	Cambridge Open	Aug-06	Program extends success of Breast Cancer Online and Neuron Glia Biology to an additional 15 journals.	<a href="https://arl.org/lists/sparc-oaforum/message/3253.html">https://arl.org/lists/sparc-oaforum/message/3253.html</a>
		Hybrid	Fees: Once papers are accepted, authors may make them freely available for a charge of £1,500. The costs associated with producing printed issues are not included.	
Oxford University Press	Oxford Open	Jul-05	OA is offered as an option in 54 journals, and uptake has been modest -- about 6.6% of authors have volunteered to pay. OA papers are available online immediately. One journal, Nucleic Acids Research, has been totally open access since 2005.	<a href="http://www.oxfordjournals.org/oxfordopen/">http://www.oxfordjournals.org/oxfordopen/</a>
		Hybrid	Fees: The regular charge is £800 for an author at a subscribing institution, and £1,500 for an author at a non-subscribing institution. Special charges apply to authors in developing countries. Fees for NAR, the full-OA journal, have increased about 25% for each of past two years.	
Royal Society	EXiS Open Choice	Jun-06	Publishes 7 journals, covering the biological and physical sciences. For 3 of the 7 journals, the fee is £150/pg for the first 10 pages and £50 for each additional page. For the remaining four, the charge is £225/pg for 10 pages and £50 for each additional page.	<a href="http://publishing.royalsociety.org/index.cfm?page=1412">http://publishing.royalsociety.org/index.cfm?page=1412</a>
		Hybrid	Fees: Article submission remains free, but an author may pay £300 per page to make an accepted article immediately available.	
Public Library of Science	Various journal titles	Oct-00	PLoS publishes peer-reviewed, open access scientific and medical journals. All PLoS articles are freely accessible immediately and are deposited in the public archive PubMed Central.	<a href="http://www.plos.org/">http://www.plos.org/</a>
		Total OA	Expenses are recovered in part by publication fees charged to authors. In 2006, PLoS raised fees from \$1,500 to a range of \$2,000-\$2,500 "to reflect more closely the true cost of publication." Fees for PLoS Biology and PLoS Medicine are currently \$2,750.	
Public Library of Science	PLoS One	20-Dec-06	PLoS One is a new OA journal that, unlike the standard PLoS journals, conducts peer review only on technical merits, without regard for "likely impact," "degree of advance" or "interest to a general reader."	<a href="http://www.plosone.org/home.action">http://www.plosone.org/home.action</a>
		Total OA	Fees: Charges a publication fee of \$1,250 with a full or partial waiver for authors without funds to publish; discounts are available to authors at subscribing institutions.	

Selected Open Access Programs (cont'd)				
American Association for the Advancement of Science	Science Online	N/A	Users may register at the Science Online web site to receive free access to Science articles that are at least one year old and published since 1996.	<a href="http://www.sciencemag.org/subscriptions/access_chart.dtl">http://www.sciencemag.org/subscriptions/access_chart.dtl</a>
		Delayed open access	Fees: None are charged to authors for publication.	
Institution of Mechanical Engineers	Engineering Open Choice	2007	Program is available to authors of all papers accepted for publication in 17 journals published by Professional Engineering Publishing, including the Proceedings of the Institute of Mechanical Engineers	<a href="http://www.pepublishing.com/pep/guidelines/Engineering_Open_Choice.PDF">http://www.pepublishing.com/pep/guidelines/Engineering_Open_Choice.PDF</a>
		Hybrid	Fees: Standard author fee of £1,700 per article.	
Society for Industrial and Applied Mathematics	N/A	N/A	SIAM makes selected content freely available, but scholarly articles are accessible only by subscription.	<a href="http://www.siam.org/journals">http://www.siam.org/journals</a>
Association for Computing Machinery	N/A	N/A	At this point, ACM does not offer authors an open access option.	<a href="http://www.acm.org/pubs">http://www.acm.org/pubs</a>
American Society of Civil Engineers	N/A	N/A	ASCE does not offer authors an open access option.	<a href="http://www.pubs.asce.org/journals">http://www.pubs.asce.org/journals</a>
American Society of Mechanical Engineers	N/A	N/A	At this point, ASME does not offer authors an open access option.	<a href="http://www.asme.org/Publications">http://www.asme.org/Publications</a>
Institution for Engineering and Technology	N/A	N/A	IET does not yet offer an open access option.	<a href="http://www.theiet.org/">http://www.theiet.org/</a>
<b>Commercial Publishers</b>				
Bentham Science Publishers	Bentham OPEN	N/A	Plans to launch more than 200 OA journals devoted to various sci-tech disciplines. Articles will undergo peer review. These free-to-view online journals cover all major disciplines of science, technology and medicine.	<a href="http://www.bentham.org/open/index.htm">http://www.bentham.org/open/index.htm</a>
		Total OA	Authors will pay "modest" fees (not yet disclosed) and retain copyright.	
Blackwell Publishing	Online Open	24-Feb-05	Authors of accepted peer-reviewed articles may pay a fee to make their articles accessible via the online platform, Blackwell Synergy.	<a href="http://www.blackwellpublishing.com/static/onlineopen.asp">http://www.blackwellpublishing.com/static/onlineopen.asp</a>
		Hybrid	Fees: This year the Online Open fee is fixed at US \$2,600 plus VAT where applicable. Additional standard publication charges will also apply, such as those for color images or supplementary datasets.	

### Selected Open Access Programs (cont'd)

BioMed Central	Various journal titles	2002	Biomed Central is an independent publishing house providing immediate open access primarily to biomedical research. Its portfolio includes 186 journals. In 2007, BioMed Central launched 7 new journals offering open access platforms for physics, mathematics and computer science.	<a href="http://www.biomedcentral.com/info/about">http://www.biomedcentral.com/info/about</a>
		Total OA	Biomed Central's publishing model treats publication as the last phase in the research process. Article-processing charges (APCs) cover the cost of publication.	
BMJ Publishing Group	BMJ Unlocked	Aug-06	Allows authors to pay make their articles freely available online, immediately on publication. If authors do not wish to pay the Unlocked fee, their articles will be published in the usual way and remain behind access controls for 12 months.	<a href="http://adc.bmj.com/info/unlocked.dtl">http://adc.bmj.com/info/unlocked.dtl</a>
		Hybrid	Fees: The Unlocked fee is up to £1,700 (+VAT).	
Hindawi Publishing Corporation	N/A	2004	Hindawi is a Cairo-based OA publisher focusing on STM journals and technical books. Hindawi publishes 97 journals. Founded in 1999 with one subscription journal, went total OA for online journals in Feb. 2007, with print for paid subscribers.	<a href="http://www.hindawi.com/oa.html">http://www.hindawi.com/oa.html</a>
		Total OA	Fees: Author fees are charged in two ways: a per-article range of \$560-\$840 for some journals, and a page rate of \$40-\$130 for others, generating revenue of \$1,000-\$1,350 per article. Overall average is about \$800/article.	
John Wiley & Sons	Wiley's Funded Access	8-Aug-06	An option for authors of primary research articles whose funding agency requires deposit of articles in an archive. The option is available only for primary research articles.	<a href="http://www3.interscience.wiley.com/authorresources/funded_access.html">http://www3.interscience.wiley.com/authorresources/funded_access.html</a>
		Hybrid	Fees: Each author pays a \$3,000 fee to make an article available for free to non-subscribers via Wiley InterScience and to ensure delivery to the preferred agency archive.	
Reed-Elsevier	Sponsored Article Journals	24-May-06	Offers authors the option to pay a sponsorship fee. Six physics journals were the first to offer the sponsorship option; 44 Elsevier journals now offer it.	<a href="http://www.elsevier.com/wps/find/authorsview.authors/sponsoredarticles">http://www.elsevier.com/wps/find/authorsview.authors/sponsoredarticles</a>
		Hybrid	Fees: \$3,000 to make articles accepted for publication freely available to non-subscribers via ScienceDirect.	
Springer Science + Business Media	Open Choice	4-Jul-04	Open Choice is an OA option available in any of Springer's 1,700 journals. Current uptake from authors is modest at 2%, expected to reach 5% after five years. Authors choosing Open Choice are not required to transfer copyright to Springer.	<a href="http://www.springer.com/dal/home/open+choice?SGWID=1-40359-0-0">http://www.springer.com/dal/home/open+choice?SGWID=1-40359-0-0</a>
		Hybrid	Fees: \$3,000 per article	