

## Journal of Applied Clinical Medical Physics

Intellectual Property Rights of Authors  
Contributing to Open Source Journals

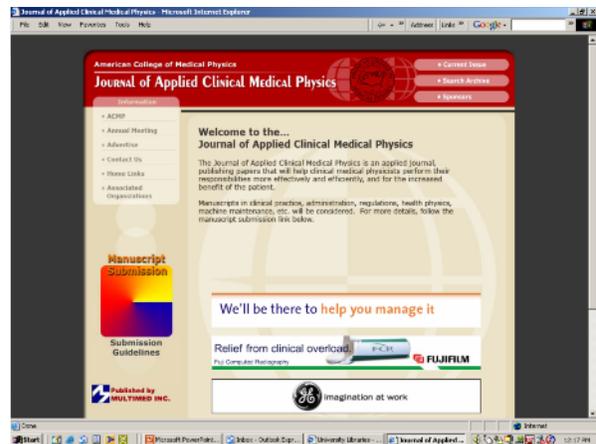
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Editor-in-Chief

Journal of Applied Clinical Medical Physics



## Presentation Outline

- Understand the history and importance of the open-source publication revolution
- Understand the nature of intellectual property rights within an open-source framework
- Understand how the business model for open source journals impacts intellectual property rights and copyright.
- Understand the role of the JACMP in the dissemination of scholarly activity to the worldwide medical physics community

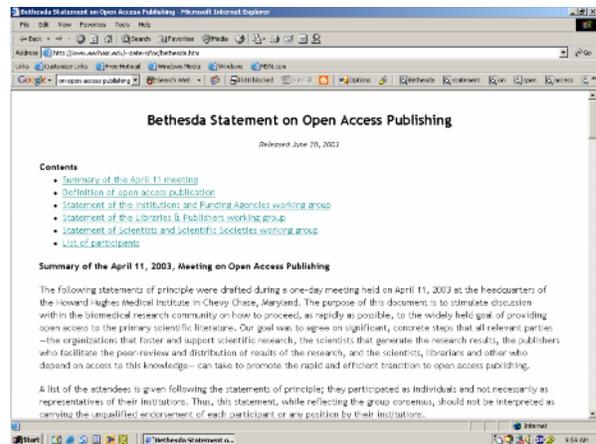


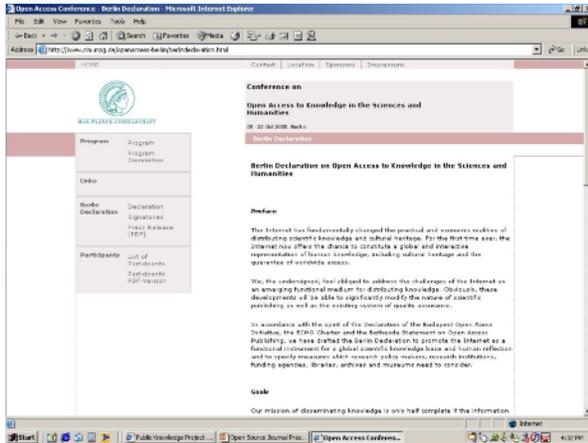
...the transition from a paradigm in crisis to a new one from which a new tradition can emerge is far from a cumulative process.

Thomas Kuhn  
The Structure of Scientific  
Revolutions

## What are the three “B”s of Open Access Publishing?

- Budapest Open-Access Initiative – 2/14/2002
- Bethesda Statement on Open Access Publishing – 6/20/2003
- Berlin Declaration on Open Access to Knowledge in the Sciences & Humanities – 10/22/2003





## How does a journal qualify as “Open Access”?

- The author grants to all users a free, irrevocable, worldwide, perpetual right of access to, and a license to copy, use distribute, and display the work publicly
- A complete version of the work is deposited upon initial publication in an online repository that is supported by an academic institution, scholarly society, or other organization that seeks to enable open access, unrestricted distribution, and long-term archiving

## What are the Criticisms of the Open Access Journal Movement

- If access is without cost to the user, the business model may be unsustainable
- Open Access journals may garner more citations simply because the articles are more widely available
- As a consequence, traditional journal impact factors may suffer with respect to open access journal factors

**Journal of Applied Clinical Medical Physics**

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### Authors give away something whenever they publish

- When an author publishes an article in a traditional journal, the copyright is assigned (given) to the owner of the journal. The journal then charges a fee for access to the article and reproduction of the article. Therefore the article has a value as a commodity.
- When an author publishes an article in an open access journal, the author retains the copyright (including the right to approve of republication as well as other ownership rights). The nature of the article changes from a commodity to a gift. There is no cost to access the article and it has no commodity value.

### Some Observations on “Giving” an Article Away in any Journal

- When a scientist publishes (gives away) an article, it is with the intention someone will read it
- The reader “gives back” to the author:
  - By citing the work in another article
  - By mentioning the work in public forums
- A connection therefore exists between the author and the reader
- The “giving” is at once self-interested and altruistic

### “Giving” Articles in Traditional versus Open Access Journals

- In traditional journals, the article (gift from the author) is a commodity, and it has value.
- This value is not easily traded, sold or recovered. This is because the primary value is in the relationship between author and reader.
- In traditional journals, the work has fiscal value and demands a price to read or copy it.
- In open access journals, the work changes from commodity to gift (from the author to the reader).
- Paradoxically, the more the article is accessed (given), the more the article is “worth”.

### How do Traditional and Open Access Journals Administrate Copyright?

- A request to republish information from a journal article is handled differently as follows:
  - Traditional print journals with online access will usually require permission both from the author and from the owner of the copyright, either a scientific society or a publisher
  - Strictly speaking, however, the owner of the copyright could make this decision alone
  - Open Access journals refer the republish request to the author who holds the copyright and who has sole authority to grant permission to republish

## What is a business model for a traditional journal with online access?

- When a library subscribes to an electronic version of a journal, the library does not own the archive
- The publisher decides who may view, copy and distribute the contents of the journal
- Access to content is restricted to library users who are authorized by the publisher
- When scholars sign away copyright, they inhibit dissemination of their work, and readers may be prevented from accessing that work through high cost or lack of authorization

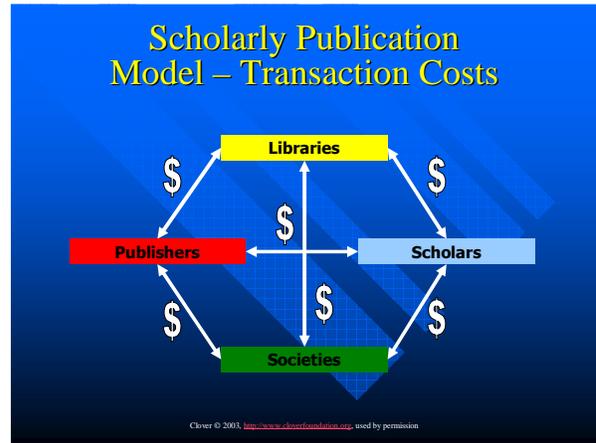
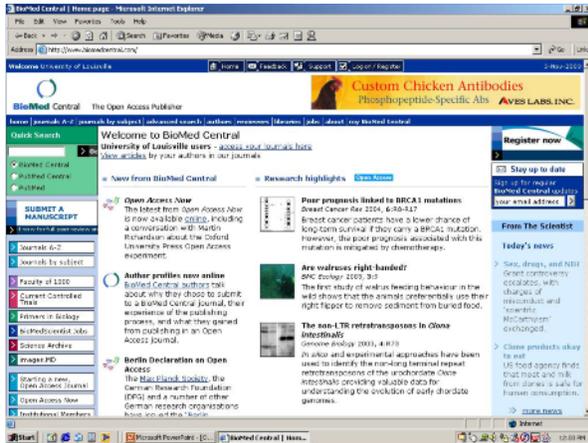
## What is the business model of the Public Library of Science (PLOS)?

- Any user can read, download, copy, distribute, print, search or link to any article
- PLOS charges authors a \$1,500 fee to cover costs.
- Whereas the old model traditionally had scientists signing away their copyright to the journal, the library uses a license that leaves copyright with the author, but allows unlimited use by third parties, provided credit is given to the author



## Are there other open access initiatives?

- PLoS follows in the steps of BioMed Central, a London-based open-access publisher of online scientific journals
- BioMed Central currently publishes over 100 online peer-reviewed journals in a variety of fields of academic inquiry
- BioMed journals charge authors \$500.00 per submission, however if the employer joins as an institutional or corporate member, this charge is waived
- Although BioMed is a valuable repository of all sorts of research, it has yet to make a dent in the major journal's hold on big research



### Transaction Cost Per Article

Transaction	Cost/Article PRINT	Cost/Article OPEN ACCESS
Libraries – Scholars	\$0.0001	\$0.00002
Scholars – Societies	\$0.50	\$0.10
Societies – Publishers	\$1000.00	\$100.00
Publishers – Libraries	\$4.00	\$0.20
Libraries – Societies	\$0.50	\$0.002
Publishers – Scholars	\$4.00	\$0.20

- ### What do Transaction Costs Tell Us?
- Transaction costs per article are lowered across the board for everyone for open source journals by factors between 5 and 20
  - The overall system has not responded yet because Universities and scholars are not yet insisting on open source scholarly exchange
  - The criticism of open access business models as unsustainable must be weighed against the high transaction costs of the traditional journals with limited online access

## How did open access journals gain credibility?

- Both PLoS and BioMed have convinced scientists that the new publications have authority.
- Publishing in Science or Nature means your paper matters – Promotion and tenure committees pay attention
- PLoS has earned some credibility by hiring the former Editor-in-Chief of Cell and lining up contributors from Harvard, Princeton, Yale, and the National Institutes of Health for the first issues of PLoS Biology
- Currently, the PLoS Biology has an initial impact rating of 13.9 and a Thomson Scientific (formerly Institute for Scientific Information) ranking of #1 in biology journals—very rare for a journal only two years old

## What about the JACMP?

- ISI did not grant an impact factor rating to the JACMP in 2006 because the journal was “too new”. The JACMP began publication in 2000.
- The JACMP was established primarily to help clinical physicists better treat cancer patients. The impact factor value was not a concern.
- An argument could be made that it is wrong to restrict such information that could directly benefit cancer patients. Open access made sense.
- The JACMP currently has a sustainable business model that we discovered through trial and error.

## What is the ideal “free” model for open-source publishing?

Platform	Independent of
Server (Intel based)	Operating System (Linux)
Operating system (Linux)	Application Software (PHP, MySQL, PKP)
Application Software (PKP)	Publishing Partner
Publishing Partner (Multimed)	Intellectual property of journal articles
Intellectual property	Commercial or Society interests (ACMP)

The screenshot shows the PKP @ SFU website. The main content area is titled "Open Journal Systems" and describes it as a journal management and publishing system developed by the PKP Knowledge Project. It lists several OJS features:

- OJS is installed locally and locally controlled.
- Editors configure requirements, sections, review process, etc.
- Online submission and management of all content.
- Subscription module with delayed open access options.
- Comprehensive indexing of content part of global system.
- Reading Tools for content, based on field and editors' choice.
- Email notification and commenting ability for readers.
- Complete content-overview online Help support.

Below the list, it states: "OJS assists with every stage of the refereed publishing process, from..."

The website also includes a navigation menu on the left with items like "Journal PKP", "Software and Services", "Open Journal Systems", "Documentation", "Installation", "Manual", "Community", "Contributors", "FAQ", "Credits", and "Open Access". On the right, there are sections for "Featured Journals" (Journal of Applied Clinical Health Physics) and "Featured Conferences" (Digital Games Research Association Conference).

## Take-away messages

- Universities pay for scholarly research, then pay again to obtain access to published results
- Universities must cooperate with the owner of the copyright to restrict access to those authorized by the publisher
- Copyright is key – the one that holds the copyright holds the power to grant or restrict access to the article
- For many categories of knowledge, the greatest benefit occurs when author and reader are able to connect without a commodity broker middleman owning the copyright and restricting access to scientific knowledge
- This is especially true when the knowledge is urgently needed to treat cancer patients

