A Broad Look at Open Access
From the BioMed Central Perspective

Bob Schatz
North American Sales Manager
robert.schatz@biomedcentral.com
"Open is everywhere these days...how did it arrive here?"

- Open Conference Systems
- Open Journal Systems
- Open Repositories
- Open data

BioMed Central: The Open Access Publisher
The world (and our expectations) have been changing for a long time

1969: We went to the moon: a new world view
1982: TCP/IP protocol was established providing a functional backbone to the internet (by 1990 there are 300,000 hosts)
Mid-1980s: The arrival of commercially viable laptop computers
1989: The Berlin Wall falls: a new geopolitical view
1990: One million cell phone users in the US
November 2009: 10 billion+ web searches and over 6.75 billion YouTube streams (Nielsen NetRatings)
Today: More than 800 million Facebook users (75% outside the US): 70 languages on Facebook, over 250 million photos downloaded daily
### WORLD INTERNET USAGE AND POPULATION STATISTICS
June 30, 2012

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Africa</strong></td>
<td>1,073,380,925</td>
<td>4,514,400</td>
<td>167,335,676</td>
<td>15.6 %</td>
<td>3,606.7 %</td>
<td>7.0 %</td>
</tr>
<tr>
<td><strong>Asia</strong></td>
<td>3,922,066,987</td>
<td>114,304,000</td>
<td>1,076,681,059</td>
<td>27.5 %</td>
<td>841.9 %</td>
<td>44.8 %</td>
</tr>
<tr>
<td><strong>Europe</strong></td>
<td>820,918,446</td>
<td>105,096,093</td>
<td>518,512,109</td>
<td>63.2 %</td>
<td>393.4 %</td>
<td>21.5 %</td>
</tr>
<tr>
<td><strong>Middle East</strong></td>
<td>223,608,203</td>
<td>3,284,800</td>
<td>90,000,455</td>
<td>40.2 %</td>
<td>2,639.9 %</td>
<td>3.7 %</td>
</tr>
<tr>
<td><strong>North America</strong></td>
<td>348,280,154</td>
<td>108,096,800</td>
<td>273,785,413</td>
<td>78.6 %</td>
<td>153.3 %</td>
<td>11.4 %</td>
</tr>
<tr>
<td><strong>Latin America / Caribbean</strong></td>
<td>593,688,638</td>
<td>18,068,919</td>
<td>254,915,745</td>
<td>42.9 %</td>
<td>1,310.8 %</td>
<td>10.6 %</td>
</tr>
<tr>
<td><strong>Oceania / Australia</strong></td>
<td>35,903,569</td>
<td>7,620,480</td>
<td>24,287,919</td>
<td>67.6 %</td>
<td>218.7 %</td>
<td>1.0 %</td>
</tr>
</tbody>
</table>

**WORLD TOTAL**

| 7,017,846,922 | 360,985,492 | 2,405,518,376 | 34.3 % | 566.4 % | 100.0 % |

Demographic (Population) numbers are based on data from the [US Census Bureau](https://www.census.gov) and local census agencies. Internet usage information comes from data published by [Nielsen Online](https://www.nielsen.com), by the [International Telecommunications Union](https://www.itu.int), by GfK, local ICT Regulators and other reliable sources.
Percent of Population With Internet Access

Source: 2010 International Telecommunications Union.
A Key Driver

Tenure

Grants
Research
Published Articles
Citation
Reputation
A *lot* of publishing

“The last published edition of the *World List of Scientific Periodicals* contained more than 50 000 titles in science and technology. It is variously estimated that between 1 and 3 million new scientific articles are published each year.”

Garfield, Eugene; *International Journal of Epidemiology*, vol 35, issue 5

According to an analysis of by Simon Fraser University:

- Based on Ulrich’s search for active, academic / scholarly, peer reviewed journals (total 53,097), deduplicated by adding up entries for print journals (under format = 23,442) and electronic-only 3,304
- How many active, academic / scholarly periodicals (journals or other types)? 47,845.
Putting a Lot of Pressure on Libraries

• According to the R&D Magazine’s “2011 Global R&D Funding Forecast”, “... growth in R&D spending has resumed following recession-induced cuts in advanced economies, while growth in emerging nations continues unabated”. Total global spending on R&D is expected to increase in 2011 by 3.6% to almost $1.2 trillion.

• Outsell forecasts a compound annual decline of 2.2% in academic library spending on content for the period 2009-2012, although it forecasts a healthier situation for corporate libraries (compound annual growth of 0.8%). Together, global academic and corporate library spend on content amounted to $8.1 billion in 2010, or about 0.7% of R&D spend.

Morgan, Cliff; Wiley-Blackwell Publishing News: Growth in Research & Development (R&D) Spend Compared With Library Budgets; May 11th, 2011

Raising Concerns Among Researchers

• What will happen to when research libraries can’t afford to subscribe to all the important journals (i.e., the ones that contain my articles)?

• How can my research reach more professional colleagues, especially in the developing world (who might cite my work in their own)?

• Why can’t I retain copyright to my own works?

• How can I have greater access, more quickly, to research being done in my field?
Who We Are

• The pioneer of peer-reviewed open access publishing, est. 2000.
• A publisher of 255 open access journals (plus 132 SpringerOpen journals)
• Host of 163,231 resultant OA articles
• Developer and provider of Open Repository, a hosted IR service
• Supported by 457 institutional members representing 51 different countries.
But What Is Open Access?

• Authors retain rights to their research: Creative Commons licensing
• Upon publication, articles are freely accessible without subscription barriers to anyone with uncensored internet access: other researchers, professionals, individual citizens in both developed and developing countries
• All submissions go through the usual peer-review evaluation process
• Articles can (or must) be deposited in appropriate repositories for wider distribution (i.e. PubMed Central, university institutional repositories, etc.) and freely shared
• Discoverable via major utilities: Google Scholar, Scopus, etc.
• Publisher operating revenues are derived from the assessment of one-time article processing charges
APC’s: Who Pays?

What OA Is (and Is Not)

Is

• A new business model
• Serious scholarship
• An alternative to subscription publishing, not a replacement
• Growing: estimated recently as 7.7% of new peer-reviewed articles
• Expanding beyond the life sciences and medicine
• Gaining support from grantors

Is Not

• A different editorial model
• Vanity publishing
• Onerously expensive
• Putting small societal publishers out of business
• Unfair to authors from developing countries
• The “solution” for every discipline
• The only way forward
Some Performance Measures

• BMC: 10 million+ site visits to our content every month: over 30 million page views
• Huge growth in submitted articles (25%+/year)
• Improving impact factors: i.e.: Genome Biology (10.3), Particle & Fiber Toxicology (9.18), Biotechnology for Biofuels (5.55) BMC Medicine (6.68)
• OA journal growth: (DOAJ) now over 9237 OA journals (not all peer-reviewed), over 1M OA articles (160,000 from BMC), from 119 countries
Early and Later Adopters
Established & Emerging Mandates
Some Permutations

• PLoS One, SpringerPlus: only validate the methodology
• arXiv, F1000Research: preprint posting with open peer review
• PeerJ: author membership to cover article costs
• Sage (and others): focus on social sciences
• Open Library of Humanities
• MOOCs
How Universities Support Open Access

• Centralized OA funding
• Institutional directives or mandates to deposit articles in their repository
• Institutional memberships, which lower or pay for article processing charges
• Education and assistance in understanding copyright and ownership of articles
In conclusion...

• Open access publishing is providing a meaningful option to researchers and libraries outside of the traditional subscription model of publishing.

• With the entrance of traditional publishers and government/funder mandates, one can assume that the model is sustainable and here to stay.

• Because of funding issues, OA may work better in some disciplines than in others.

• OA will continue to grow and morph into new forms.

• OA is one of many viable responses to the challenges we face in disseminating the results of research.
Thank you

Bob Schatz
robert.schatz@biomedcentral.com