Academic publishing: today and tomorrow

Presented by:
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Agenda

- Universal access, quality and sustainability
- Emerging publication themes
- What might the future look like?
What do journal publishers do today?

- 5,000 new editors per year
- 500 new journals launched per year
- 3 million+ article submissions per year
- Organise editorial boards
- Launch new specialist journals
- 2.5 million+ referees
- 3.75 million+ referee reports per year
- 50%+ of submissions rejected
- 10 million+ printed pages/year
- 1.5 million new articles produced per year
- 350 years of back issues scanned, processed and data-tagged

Note: industry estimates based on known numbers for a subset of the industry that are then scaled to 100% based on the article share of the known subset.
Elsevier is committed to universal access, quality, and sustainability

1. Universal Access
   - We exist to disseminate information
   - We will identify where remaining gaps exist and find viable mechanisms to close them

2. Quality
   - Peer review provides essential quality controls
   - We will invest to innovate in technologies that increase researchers’ productivity

3. Sustainability
   - Journal publishers invest heavily to deliver a well-functioning communications system upon which society depends
   - Access and dissemination mechanisms must ensure that these investments can be recovered.
   - System must also be sustainable for those who fund it therefore we aim to increase efficiency and value-for-money

We support all mechanisms to achieve sustainable universal access to quality content
Where are we today? Access:

% Very + Fairly easy to access

Research articles in journals: 93%

Reference works: 74%

Clinical guidelines: 73%

Professional/Trade publications: 63%

Books/ Monographs: 62%

Technical information (e.g. characteristics of materials): 57%

Patent Information: 56%

Conference proceedings: 56%

Historical archives/public records: 44%

Doctoral theses/dissertations: 43%

Market Research reports: 38%

Data sets/Data models/Technical Info/Algorithms and programmes: 38%

Access to research articles by region:

North America: 97%

Western Europe: 94%

Eastern Europe: 84%

Middle East: 85%

APAC: 91%

Latin America: 88%

Africa: 78%
Different scientific communities have different requirements. We’re experimenting in all areas of Universal Access to see what offers sustainable options while maintaining the quality provided by peer review.
Future approach for Manuscript Posting?

- Provides list of institution output
  - Metadata (Scopus)
  - Cited by countrs
- Links to the full text on ScienceDirect and other publisher platforms
Emerging publication themes

1. Emphasis will continue to shift from journal to article
Changing user behavior

Methods used by university faculty to locate articles

(Source: Tenopir 2007)

Trend continues: in 2011 we expect 75% of our users to directly enter article pages in ScienceDirect from external searches, compared to 32% in 2004.
‘People’s expectations have grown. Ten years ago, when you looked for something and found it you’d be really impressed. **Now when you don’t immediately find exactly what you want, you think something’s broken.**’

Udi Manber, VP Engineering, Google
2. Platforms will get more intelligent and the user experience richer
3. The “article of the future”

- Article didn’t change (much) in 350 years
- Print-based (although now in PDF form)
- Linear reading (top-left to bottom-right)

- Some changes happened though:
  - Internal navigation
  - Reference linking
  - Supplementary data files

- Small-scale developments:
  - Inline video, Semantic mark-up,
    Data manipulation
A Dynamic Pathway for Calcium-Independent Activation of CaMKII by Methionine Oxidation

Abstract

Calcium calmodulin (Ca2+-CaM) dependent protein kinase II (CaMKII) couples increases in cellular Ca2+ to fundamental responses in avascular cells. CaMKII was identified over 20 years ago by activation dependence on Ca2+-CaM, but recent evidence shows that CaMKII activity is also enhanced by pro-oxidant conditions. Here we show that oxidation of potent regulatory domain methionine residues sustains CaMKII activity in the absence of Ca2+-CaM. CaMKII is activated by angiotensin II (AngII)-induced oxidative stress, leading to apoptosis in cardiomyocytes both in vitro and in vivo. CaMKII activation is decoupled by methionine sulfide reductase A (MsrA) and work, thus showing a dynamic mechanism for CaMKII activation by oxidation and highlighting the critical importance of oxidation-dependent CaMKII activation in AngII and ischemic myocardial apoptosis.
Rich links to data set repositories like PANGAEA.
So what might the future look like?

- Academic publishing has a future, as the (digital) world continues to change around us....

- Scholarly behavior is remarkably unchanged *but* is altering in some subject areas

- Technology provides new tools, so far for existing purposes (registration, certification, dissemination, archive) *but* technology affects attitudes to information (“web=free?”)

- Business models will be viable *if* there is continuing respect for IP/copyright and conditions exist that make publishing economic
Predicting the future...

"There will never be a mass market for motor cars — about 1,000 in Europe — because that is the limit on the number of chauffeurs available!" — Gottlieb Daimler, inventor of the gasoline-powered automobile, 1889

Courtesy: stm