

STM supplemental submission to the European Commission public consultation on Scientific Information in the Digital Age

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The International Association of Scientific, Technical and Medical Publishersⁱ (STM) commends European Commission Vice President for the Digital Agenda Neelie Kroes and Commissioner for Research and Innovation, Máire Geoghegan-Quinn for their sponsorship of the public consultation on access to, and preservation of, digital scientific information. In order to assist the initiative to reach its full potential to benefit the European Union and its citizens, STM offers the following additional comments. STM also encourages the Commissioners to broaden the consultation process to include more fully developed feedback from all concerned stakeholders and is ready to work with the Commission to facilitate direct interaction with leading members of the European STM publishing communityⁱⁱ.

STM Additional Comments:

- 1. Policy makers and academic and professional publishers share common goals of public access to and preservation of today's online scholarly publications and digital research data. Academic and professional publishers know that different approaches are needed for each, because each is at a different level of development.**

Access to scholarly publications

Access to scholarly publications is currently very high. A recent study from U.K. researchers John and Laura Cox found that 96% of scientific, technical and medical journals and 87% of journalsⁱⁱⁱ in arts, humanities and social sciences are available electronically, fully searchable, and accessible on the world wide web. A related survey from the Publishing Research Consortium^{iv} found that 94% of European Union researchers were satisfied with access to scientific publications.

STM recommends that the Commission explore the use of Gold Open Access to close any small access gaps that remain within the Union.

Access to researcher-validated primary data

Access to researcher-validated primary data is low. The Publishing Research Consortium survey that found high levels of satisfaction with access to scientific publications, also found that only 38% of European Union researchers were satisfied with access to data. If the EU wants to address to biggest access barrier currently facing the research community, the top priority is clear – access to data must be improved. Academic and professional publishers have recognized this and are currently participating in initiatives such as ODE^v, CoData^{vi}, and the Alliance for Permanent Access^{vii}.

STM recommends that the Commission devote significantly increased attention to improving European researchers' access to data.

Preservation of scholarly publications

Efforts to preserve scholarly publications are well underway. Initiatives like those at the Koninklijke Bibliotheek^{viii}, Portico^{ix}, LOCKSS^x, and CLOCKSS are on their way to creating a viable system of repositories that will preserve today's scholarly publications for future generations.

STM recommends that the Commission investigate possible collaboration with and/or participation in already-existing initiatives rather than pursue redundant programs.

Preservation of data

Efforts to preserve researcher-validated primary data are just beginning. For a number of reasons that include the enormous diversity of research data and the relatively recent attention to its long-term preservation, efforts to preserve digital data have not achieved the level of maturity or funding found in online publication preservation. Initiatives noted earlier, like ODE and CoData, are a good start but need significantly more attention from policy and funding bodies like the European Commission to improve their chances of success.

STM recommends that the Commission make this area a top policy and funding priority.

Philanthropic Access Initiatives

Finally, academic and professional publishers are aware that there are those, especially in the developing world, whose access or ability to publish is disadvantaged. STM supports major information philanthropy initiatives to improve this, most importantly Research4Life^{xi}, whose three programmes make biomedical, agricultural and environmental research available for free or at very low costs to the world's poorest nations. Over 8,100 of the top journals in the world are made available this way with training programmes for users and potential authors.

Academic and professional publishers also support patient access to the biomedical literature. STM's initiative patientINFORM^{xii} is one approach to this problem, providing guidance from experts in the Voluntary Health Organisations of the major disease classes to the key literature and access to that literature.

Finally the launch of aRD^{xiii} in 2009 by the World Intellectual Property Organisation in cooperation with 12 major publishers encourages innovation and assist developing countries in bridging the knowledge gap.

2. Research and publication are essential to the discovery and dissemination of new knowledge. However they are different creative acts and involve different processes and costs. The costs of publication, like the costs of research, must be paid for in some way.

Academic and professional journal publishers invest hundreds of millions of euros every year in peer review, editing, discovery/dissemination tools and technology, and archiving of scholarly and scientific articles, as well in creating unique journal brands and identities on which researchers and funders alike rely to make critically important personal and professional judgments. Journals typically support a specific discipline and serve as a central point of contact and information exchange for the members of that community, who are frequently spread around the world. The reputations of journals, cultivated by academic and professional publishers, are also used as an

indicator of the importance of the work published therein to a particular field of research and to the public.

This is the critical infrastructure that has supported scholarly communication and spurred scientific and technological innovation for 350 years through numerous changes in media and delivery mechanisms. Today over 2,000 STM publishers worldwide manage the processing of some 2-3 million manuscripts submitted from researchers and finally produce annually in excess of 1.5 million peer-reviewed published journal articles in some 25,000 journals^{xiv}. EU-based STM publishers publish 49% of this total (STM's members originate approximately 2/3 thereof), employ 36,000 staff directly, another 10-20,000 indirectly, and make a €3b contribution to the EU's balance of trade.

To facilitate the publication process for authors, editors, and reviewers alike, academic and professional publishers have established and maintain sophisticated online manuscript submission systems and prepare the 1.5 million manuscripts that are accepted for publication by copyediting, proofing, formatting, branding, paginating, adding metadata and identifiers, checking and enhancing artwork quality, converting accepted manuscripts, data and artwork to XML, and adding links to ensure interoperability and foster discovery.

Academic and professional publishers also invest millions of euros to support the academy and their editors in peer review – the most important step in the publication process. These costs include the highly skilled people required to manage the process, purchasing, maintaining and updating the technology to streamline the process, keeping track of reviewers and articles, locating and maintaining relationships with possible reviewers, sending articles out to appropriate reviewers and following up with them to make sure the reviews are completed, and reviewing the responses and communicating those responses to authors. These steps are typically managed with the use of specialized software systems that are internally developed, licensed commercially or supported by open source software. In addition to the software system, the necessary hardware must be acquired and maintained.

In summary, the journals, books and web platforms that publishers underwrite are an integral part of the scholarly communication system that fuels European research and innovation. Academic and professional publishers are constantly engaged in further supporting, adapting, maintaining and developing cutting-edge technological solutions that enhance the ways in which Europe's research community, and society at large, produces, accesses, uses and shares scientific knowledge. The cost of this effort, like the cost of the research that precedes it, must be paid for in some way.

3. Academic and professional publishers support any and all economically sustainable access models that ensure the integrity and permanence of the scholarly record. We do not support unfunded mandates that constrain the rights and freedoms of scholarly authors or affect the sustainability of the publishing enterprise.

Today's highly effective system of online scholarly communication supports a wealth of public access options. Each has its own characteristics, serves a specific need and audience (e.g. SME's), and offers end-users flexibility. Examples include pay per view/download, article rentals, site/user-based subscriptions, and funder-, institutional- or author-paid access (i.e. Gold Open Access). Because publishers are business-model

neutral, each option is financially supported in a different way. Some methods of financial support are familiar and some experimental, but all have been developed using the following principles:

- They must prove to be sustainable.
- They must ensure scientific quality and integrity.
- They must not undermine peer review.
- They must encompass the value that publishers add to scientific discourse and must recover the economic cost of that value.
- They must allow authors to have a choice where to publish.

Academic and professional publishers continue to work with a variety of stakeholders to understand their needs and develop new public access offerings grounded in sustainable economic/business models.

Green Open Access, or author self-archiving in institutional repositories, lacks a sustainable financial business model, and the assumption that costs for this model are "paid through institutional journal subscription fees" is misleading since the presence of free copies of articles in repositories may jeopardize the continued subscription to journals containing those articles. As yet, there are no evidence-based data about the possible impact of Green Open Access on the viability of journal subscriptions. The EU-funded PEER project (Publishing and the Ecology of European Research^{xv}) is investigating the effects of the large-scale, systematic depositing of accepted, peer-reviewed manuscripts (so called Green Open Access or stage-two research output) on reader access, author visibility, and journal viability, as well as on the broader ecology of European research. The project is a collaboration between publishers, repositories and researchers and will reach completion in the near future.

STM recommend that the Commission use the findings of this project to inform their policymaking.

If speed, global accessibility and transparency are the Commission's primary goal, then it should make public the researcher project reports that it receives as a condition of grant-making. This approach would provide meaningful public access to the results of funded research in a way that does not undermine fundamental private-sector rights in peer-reviewed scientific articles or the peer-reviewed scientific journals in which scientists publish. These reports could be accompanied by interpretive material designed to make discipline-specific and technical aspects of research reports accessible to broad non-specialist audiences as well as links to published articles. The STM publishing community is strongly supportive of this approach.

4. Public policy should support the healthy operation of free market. Academic and professional publishers who have created a wealth of public access options for scholarly literature enabled more access to more people in more ways than at any time in human history. Public policy should avoid excessive or unnecessary regulation.

Since the mid-1990s the journal publishing industry has been a key player in the dramatic digital revolution in the sciences, investing heavily to drive the shift of published research from print-only to "e-only." According to a 2008 survey by the Association of Learned and Professional Society Publishers, 96% of science, technical and medical journals are available online. That number continues to grow.

The results of academic and professional publisher end-to-end digital publishing systems are robust online platforms with the latest Web 2.0 capabilities that can support efforts to link policymakers, researchers and the public. Rapid innovation in the journal publishing industry has dramatically improved functionality and efficiency for doctors and researchers, who can now perform complex searches of journals, immediately retrieve and print full text articles, link instantly to other cited articles, export text to other databases and programs, and receive e-mail alerts when new journal issues are released. Voluntary cross-publisher initiatives such as CrossRef, developed with non-government funds, have broadened the impact of these benefits for researchers.

The result of these productivity benefits has been documented. The portion of their time scientific researchers spent analyzing (vs. gathering) information increased dramatically from 2001-2005. Compared to the print-only era, scientists now read 25% more articles per year from almost twice as many journals, and they do so using a smaller portion of their time^{xvi}. This dynamic yields major benefits in research and funding effectiveness. A recent Publishing Research Consortium survey found that 94% of Europe's researchers are satisfied with access to scientific publications.

Commission policy making should seek ways to foster, not impede, these beneficial activities. Although STM does not recommend mandates, if the Commission elects to consider such a course of action, then it should determine in negotiations with publishers in what fashion such access could be provided and the relevant fees that might be necessary to compensate publishers for the use of their copyrighted works and the significant value publishers add to peer-reviewed articles.

5. The current VAT rate structure has created a major barrier to the realization of the Single Market and Europe's future competitiveness. Measures should be introduced that enable Member States to apply a low, or no, VAT rate on all scientific publications regardless of the format in which they are offered.

The current high VAT rates on online books and journals is effectively a form of tax discrimination and a barrier to the realizing of the goals of the Digital Agenda, the Innovation Union and the enhancement of a knowledge economy and information society in Europe. It hampers the development of e-commerce and the digital Single Market. This is particularly the case in academic libraries where existing high VAT rates on electronic products can drive decision makers to forgo online products and services in favor of print books and periodicals. Reduced VAT rates on electronic publications (e.g. books and journals) would not only enhance the purchasing power of these important cultural institutions but also enable libraries, universities and other educational organisations to provide the leaders of tomorrow with the digital resources necessary to fuel European competitiveness in a digital world.

The drawbacks of a discriminatory VAT rate on electronic books and journals have long been noted. The 2006 "Study on economic and technical evolution of the scientific publication market in Europe^{xvii}" commissioned by DG Research concluded:

"...the higher (VAT) rate applied to electronic delivery of information in Europe strongly affects European research institutions, especially when compared to other countries where electronic services are exempt from tax, such as in the USA. As access to research publications is fundamental to the development of the European Research

Area, taxes on scientific information should be reduced to the lowest or even zero rate.”

ⁱ STM is the leading global trade association for academic and professional publishers. It has over 110 members in 27 countries who each year collectively publish nearly 66% of all journal articles worldwide and tens of thousands of monographs and reference works. STM members include learned societies, university presses, private companies, new starts and established players. EU-based STM publishers publish 49% of all research articles worldwide (STM's members originate approximately 2/3 thereof), employing 36,000 staff directly and another 10-20,000 indirectly, and make a €3b contribution to the EU's balance of trade. <http://www.stm-assoc.org>

ⁱⁱ The “STM publishing community”, often referred to as “STM publishers” encompasses academic and professional publishers in all science disciplines.

ⁱⁱⁱ Cox, J. and Cox. L. (2008) Scholarly Publishing Practice: Academic Journals Publisher’s Policies and Practices in Online Publishing: Third Survey (ALPSP)

^{iv} <http://www.publishingresearch.net/documents/PRCAccessvsImportanceGlobalstudyPhase1Oct2010.pdf>

^v Opportunities for Data Exchange - see www.alliancepermanentaccess.org/current-projects/ode. ODE aims to gather and promote best practices around the way scientific data are treated.

^{vi} CoData is part of the International Council for Science (ICSU) World Data System (www.icsu-wds.org) which aims to create a global federated system of long-term data archives and data-related services.

^{vii} The Alliance for Permanent Access is a collaborative assembly of research institutes, libraries, funding organisations and publishers working to ensure the presence of digital preservation topics on political agendas and to promote technical work on new preservation solutions.

^{viii} <http://www.kb.nl/hrd/dd/index-en.html>

^{ix} <http://www.portico.org/digital-preservation/>

^x Lots Of Copies Keep Staff Safe- <http://lockss.stanford.edu/lockss/Home>

^{xi} <http://www.research4life.org/>

^{xii} <http://www.patientinform.org/>

^{xiii} Access to Research for Development and Innovation; <http://www.wipo.int/ardi/en/about.html>

^{xiv} The STM report, p. 16, <http://www.stm-assoc.org/industry-statistics/the-stm-report/>

^{xv} <http://www.peerproject.eu>

^{xvi} The STM Report, page 27, <http://www.stm-assoc.org/industry-statistics/the-stm-report/>

^{xvii} http://ec.europa.eu/research/science-society/pdf/scientific-publication-study_en.pdf (p.55)

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