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Ministry Agency for Science, Technology & Innovation
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STM submission on “Recommendations for implementation of Open Access in Denmark”

The International Association of Scientific, Technical and Medical Publishers (“STM”) comprises approximately 100 publishers of journals and reference works, based in 26 countries, including many Member States of the European Union. EU-based publishers publish 49% of all research articles worldwide (STM’s members may originate approximately 2/3 thereof), employing 36,000 staff directly and another 10-20,000 indirectly, and make a Euro 3 billion contribution to the EU’s balance of trade. STM publishers disseminate journal content, books and reference works, and databases, in a variety of forms including print and online, and in addition provide systems that enable access to individual articles and contributions (hereinafter: “Content”) of a multitude of European and international scientific, medical and technical authors and scholars. This Content is available widely in electronic and in print form for access by individuals, whether through academic and corporate libraries or directly, for use in research, education, in industry, the professions and business.

STM welcomes this opportunity to make its submission to the Recommendations for implementation of Open Access in Denmark.

STM wishes to contribute constructively to the debate by giving its general comments and specific replies to the outlined recommendations.

STM’s submission is composed of three parts:

- A. Summary of STM’s general and specific comments**
- B. STM’s general comments**
- C. STM answers to the specific recommendations raised in the report from the Open Access Committee**

A. Summary of STM's general and specific comments

STM publishers support the maximum sustainable dissemination of the published record of science and for 350 years we have helped create, disseminate and (now) preserve the world's body of knowledge. We do not oppose any government's desire to make articles whose underlying research it funded in some manner freely available but counsel that this must be done in a sustainable manner.

STM has carefully considered the contents of the *Recommendations for implementation of Open Access in Denmark* and believes that the Danish government's consideration of this report would benefit from an appreciation of the following key attributes of scholarly communication:

- Funders may underwrite the cost of research but publishers underwrite the cost of certifying articles about that research as well as their dissemination and discovery
- The value that publishers add to articles describing research findings, and their dissemination and discovery, requires significant investment and that investment must be recovered
- Publishers are open to dialogue about how public access to articles describing research findings may be enhanced, but oppose unfunded and unsustainable mandates

In addition to these key points, STM requests that the Danish government also consider the following in its deliberations:

- Scholarly communication today is a well developed, established and balanced "ecosystem" where each stakeholder performs a certain task. Publishers raise money to fund the infrastructure that enables the discovery, registration, certification, finalization, dissemination, and (most recently) preservation of research articles through peer-reviewed journals and the web platforms that host them. Both journals and the web platforms that publishers underwrite are an integral part of the scholarly communication system.
- Scientific research forms the basis of many articles in scientific publishing, but the articles themselves are different works that include publishers' added-value that is *not* funded by public money. STM peer-reviewed journals, which represent the main dissemination vehicle of scholarly communication, are generally independent of the sources of research funding that support research. The value that STM publishers add to both journals and articles requires significant investments that must be recovered. Any mandates by governments to deposit article versions that have benefited from publisher services should provide funding support for authors to reimburse publishers for services they have provided.
- Green Open Access, or author self-archiving in institutional repositories, lacks a sustainable financial business model and the assumption that this activity will have no adverse impact on scholarly communication is unsupported. In collaboration with other stakeholders in scholarly communication, STM is currently engaged in a large-scale project (PEER) to develop credible evidence on this important issue. Until this, or other credible evidence, is available, we believe that the Danish government should be wary of broad mandates with the potential for unknown and unintended harmful, long-term consequences.
- STM publishers welcome discussions about the use of Gold Open Access to achieve the goals of the Report but note that if the Danish government would like to require that articles be deposited in open access repositories, they should take into account the cost of publishing and make payment out of grants possible. Other funding bodies, such as the Wellcome Trust, explicitly do so.

- If speed, worldwide accessibility and transparency are the government's primary goal, then it should immediately make public the research reports that it receives as a condition of grant-making and fund the creation of material that makes these reports accessible to the general public.
- STM is open to dialogue with the Open Access committee and DEFF. In other countries roundtables and workshops which represent important stakeholders have usefully stimulated the debate and sought cooperative strategies.
- STM applauds the Danish government's desire for the long-term preservation of scholarly research articles and associated data. Although a number of independent trusted digital archives already ensure long-term preservation of research articles, this is less true with respect to data. STM believes that this field represents a valuable area of endeavour for the government.

B. STM's general comments

1. Funders May Underwrite the Cost of Research but Publishers Underwrite the Cost of Certifying Articles about that Research and their Dissemination and Discovery

STM publishers recognize and applaud the efforts of private sector organizations and government institutions to supply funds to support scholarly research activity. These funding activities are an essential component of today's well-functioning and interdependent system of scholarly scientific communication that relies on each of its major stakeholders (e.g. authors, researchers, primary and secondary publishers, libraries, universities, federal government) to perform a key role in the development and dissemination of peer-reviewed papers. The essential role that publishers play in this system is to underwrite the creation, registration, certification, formalization, improvement, dissemination, preservation and use of scientific information.

For nearly 350 years STM publishers have been helping to create, disseminate and (now) preserve the "body of knowledge". Today over 2,000 scientific and scholarly publishers worldwide (including large and small commercial, university presses and learned societies) manage and fund 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.

Since the early 1990s, STM publishers have invested heavily in the migration from print based products into electronic, digital versions, with the result that 96% of scientific, technical and medical journals¹ and 87% journals in arts, humanities and social sciences are available electronically, fully searchable, and accessible on the world wide web.

At the same time a variety of new business and access models are evolving (and continue to do so), which share the following points in common: they are (i) based on principles of sustainability, (ii) voluntarily collaborative, and (iii) market driven. Each of the evolving models has its own characteristics, serves a specific need and audience, and offers user flexibility (for particular target audiences or communities including e.g. visually impaired users). Examples range from pay per view/download; article rentals (e.g. as provided by DeepDyve); funder-, institutional- or author-paid access, site and user-based licensing; and delayed access. The STM industry is experimenting in the

¹ Cox, J. and Cox. L. (2008) Scholarly Publishing Practice: Academic Journals Publisher's Policies and Practices in Online Publishing: Third Survey (ALPSP)

field of business models (such as Open Access), and engaged in evaluative projects such as PEER² to generate evidence-based data for future policy-making.

All those ongoing initiatives and developments have helped to improve researchers' productivity, resulting in falling costs per journal and article for libraries (e.g. UK)³ and improved access to specialists and society, including those in the less developed world (e.g. via the Research4Life programme)⁴. Today, because of voluntary publisher investments, *more people have more access to more scientific information than at any time in human history.*

2. The Value that Publishers Add to Articles Describing Research Findings, and their Dissemination and Discovery, Requires Significant Investment and that Investment Must be Recovered

STM publishers are true partners with researchers in scholarly communication — publishers identify new areas of science (or changes in disciplines) which are under-served; launch new journals or adapt existing ones to meet these needs; and add value to those journals through innovative web-centred tools and services. On a daily basis, their publishing staff is engaged in:

- **substantive editing and interaction** with the research community;
- **improving quality** through organizing, managing, and financially and technologically supporting peer review;
- **easing researcher workloads and enhancing productivity** through web-based author, editor, and reviewer services such as e-submission and e-refereeing, as well as rapid and efficient author-friendly production workflows;
- **enhancing readability** through substantive copy/technical editing and the preparation of illustrations or special graphics;
- **broadening accessibility** through commissioning material that emphasizes the scope and significance of research results to broad non-specialist audiences;
- **branding excellence** through underwriting and managing the creation, maintenance, and evolution of peer-reviewed journals;
- **fostering dialogue** through the creation of global forums that both reflect, and help shape, the development of emerging scientific fields and foster the interchange of ideas and the cross-fertilization of knowledge to the benefit of human health and welfare;
- **globalizing knowledge** by contributing to the development of international standards and protocols⁵ that improve the accessibility of research and ensure the seamless flow of information;
- **improving skills through** forums and training for researchers to improve their knowledge of, and skills in, the use of online research tools and techniques.

STM publishers are at the forefront of innovation and constantly engaged in supporting, adapting, maintaining and developing cutting-edge technological solutions that enhance

² <http://www.peerproject.eu>

³ RIN (2009) E Journals: their use, value and impact, <http://www.rin.ac.uk/our-work/communicating-and-disseminating-research/e-journals-their-use-value-and-impact>

⁴ Research4Life: http://www.research4life.org/Pages/R4L_homepage.aspx

⁵ Crossref: <http://www.crossref.org> ; ORCID (Open Researcher Contribution Identification Initiative) <http://science.thomsonreuters.com/orcid/>

the ways in which the research community and society at large produces, accesses, uses and shares scientific knowledge, and how the research community works collaboratively to identify and solve the key challenges facing our world. STM publishers:

- **drive innovation** by experimenting with new content, functionality, and design, and by developing and investing in new tools to aid discovery and dissemination, such as data mining and visualization tools, semantic web applications, user-friendly navigation aids, flexible displays, and Web 2.0 applications such as blogging around articles, shared bookmarking, and other forms of online collaboration
- **enable discovery** through podcasts, RSS feeds, customized citation and table-of-contents alerting services, web platforms with sophisticated functionality and design geared to aid and enhance discovery through user-friendly navigation, graphics, taxonomy, personalization, search, browse, analysis, retrieval, and linking tools that provide scientists with seamless and instant access to essential research in a globally standardized format, that facilitate understanding of the relevance of new research tools and technologies, and that make content more accessible to general and specialist search engines
- **enrich content** by inserting tags to create online links to related information, coding for web dissemination and layout, visual enhancement, reference linking, and indexing

Such investments of time, high-level skills and infrastructure require significant financial investment by STM publishers and these costs must be recovered. Because STM peer-reviewed journals, which represent the main dissemination vehicle in the process of scholarly communication, are generally independent of the sources of research funding, any open access policy adopted by the government should foster publishers' ability to continue providing these essential services.

3. Publishers Are Open to Dialogue About How Public Access to Articles Describing Research Findings May be Enhanced, but Oppose Unfunded and Unsustainable Mandates

Governments contribute significant funds for research, and researchers and their institutions provide the facilities and knowledge to support and perform research and informal communication about that research. STM supports the view that the public should have access to the research results that public grants have funded. Research results are the basis of many articles in scientific publishing, but the articles themselves are different works that include publishers' added-value, which is *not* funded by public money.

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) 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 2011.

Gold Open Access may also be described as the “pay-to-publish” business model, where payment may be made by the author, his/her institution, the funders of the research grant, etc. to support the immediate and open availability of the final published article. Some journals rely exclusively on this model for external funding; others offer it as an option for authors, but also seek external funding through subscriptions (i.e. the “hybrid journal” model); while still others do not use it at all. STM notes that some members of our community have raised concerns about the relationship between Gold Open Access payments and subscription prices under the hybrid journal model. STM is actively addressing this issue and preparing a best practices document for its members that, inter alia, calls for “clarity in communication regarding the relationship between funds received for Gold Open Access articles and the subscription prices of the journal in which they appear”. STM notes that some of its members have already committed themselves to account for Gold Open Access payments in their subscription pricing.

STM believes that mandates by governments, funders or institutions for authors to deposit article versions that have benefited from publisher services should provide funding support for authors to reimburse publishers for services they have provided.

Although STM does not recommend mandates, if the Danish government elects to consider such a course of action, then the government 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.

Finally, STM notes with some surprise that the Report makes certain assertions about the economic benefits of open access based on a controversial report entitled *Costs and Benefits of Alternative Publishing Models: Denmark*⁶. Many of the assumptions and conclusions of this paper have been publicly challenged – see *Challenging Assumptions on Open Access Cost Savings*⁷ and we counsel caution in using its material. A detailed response relating to the report “*Economic Implications of Alternative Scholarly Publishing Models: Exploring the costs and benefits by Houghton et al. & Oppenheim et al., commissioned by JISC*” prepared by STM, ALPSP and PA can be found on the STM website⁸.

⁶ <http://www.deff.dk/content.aspx?catguid:{79A0643A-7E30-417A-A184-18F422A6BB86C%7d>

⁷ <http://scholarlykitchen.sspnet.org/2009/07/16/challenging-assumptions-on-open-access-cost-savings/>

⁸ http://www.stm-assoc.org/2009_04_07_Publisher_comments_on_H_O_JISC_report.pdf

C. STM comments to the specific recommendations raised in the report from the Open Access Committee

STM notes that the Danish Government has approved the Council of the European Union's conclusions on scientific information in the digital age. Consequently, we have organized our comments on the Report's specific recommendations around the Council Conclusions' three central strategies:

Area 1 – Reinforce national strategies and structures for access to and dissemination of scientific information (Report Recommendations 1-8)

STM publishers support the maximum sustainable dissemination of the published record of science and for 350 years we have helped create, disseminate and (now) preserve the world's body of knowledge. We do not oppose the government's desire to make articles whose underlying research it funded in some manner freely available but counsel that this must be done in a sustainable manner – i.e. one that recognizes the following realities of scholarly communication:

- 1) Scholarly communication today is a well developed, established and balanced "ecosystem" where each stakeholder (authors, researchers, primary and secondary publishers, libraries, universities, funders, federal government) performs a certain task in the development and dissemination of peer-reviewed papers. Private sector organizations and government institutions and agencies supply funds to support scholarly research activity. Scholars perform the research. Private and public sector institutions, such as universities and corporations, pay the salaries of researchers and provide the physical infrastructure (e.g. offices and equipment) in which research, and the creation of manuscripts describing that research and relating it to the work of others, can occur.

Publishers raise money to fund the infrastructure that enables the discovery, registration, certification, finalization, dissemination, and (most recently) preservation of research articles through peer reviewed journals and the web platforms that host them. Both journals and the web platforms that publishers underwrite are an integral part of the scholarly communication system. They foster the cross-fertilization of knowledge in global forums that both reflect, and help shape, the development of scientific fields to the benefit of human health and welfare and create an informal but widely recognized hierarchy used by funding bodies and the academic community itself to assess research quality, impact, and priority—key factors used to allocate funding resources, evaluate levels of personal achievement, and determine professional advancement. Libraries selectively fund publisher activities since no one library or one government can create the international repositories of knowledge so crucial to scientific advancement and the public good that journals individually and collectively represent.

- 2) Scientific research forms the basis of many articles in scientific publishing, but the articles themselves are different works that include publishers' added-value that is *not* funded by public money. Similarly, STM peer-reviewed journals, which represent the main dissemination vehicle of scholarly communication, are generally independent of the sources of research funding that support research. The key role that STM publishers play in the creation, registration, certification, formalization, improvement, dissemination, preservation and use of scientific information (see section B.2 for

details) requires significant investments of time, high-level skills, personnel and infrastructure. These costs must be recovered. Mandates by governments, funders or institutions for authors to deposit article versions that have benefited from publisher services should provide funding support for authors to reimburse publishers for services they have provided.

If the Danish government elects to consider such a course of action, then the government 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.

- 3) Green Open Access, or author self-archiving in institutional repositories, lacks a sustainable financial business model, and the assumption that this activity will have no adverse impact on scholarly communication is unsupported. The EU-funded PEER project (Publishing and the Ecology of European Research) is investigating the effects of large-scale, systematic depositing of accepted peer-reviewed manuscripts, with embargo periods tailored to the needs of specific disciplines and journals, 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 2011.
- 4) Gold Open Access, or perhaps better described as “pay-to-publish”, is a new business model that may fulfill the twin criteria of immediate access and sustainability. STM publishers are experimenting with and refining this model (see B.3 above). We welcome discussions about its use but note that if the Danish government wants to require that articles be deposited in open access repositories, they should take into account the cost of publishing and make payment out of grants possible. Other funding bodies, such as the Wellcome Trust, explicitly do so⁹.

STM believes that each publisher should have the freedom to choose business models that are sustainable and provide an appropriate level of investment for developing future products and services for its customers, clients and end-users in the research community.

- 5) If speed, worldwide accessibility and transparency are the government’s primary goal, then it should make public the research reports that it receives as a condition of grant-making. This is the approach that has been taken by the United States National Science Foundation to provide meaningful public access to the results of government-funded research in a way that does not undermine fundamental private-sector rights in peer-reviewed scientific articles. Specifically, this approach calls for access to all final project reports and citations of published research documents publicly available via the Internet. It ensures that public access policies do not undermine the peer-reviewed scientific journals in which scientists publish. The STM publishing community is strongly supportive of this approach.
- 6) Finally STM is open and supportive about participation and dialogue with the Open Access Committee and DEFF. STM brings internationality, expertise and knowledge

⁹ http://www.wellcome.ac.uk/doc_WTD002766.html

about relevant issues to the table. In other countries roundtables and workshops which represent important stakeholders have usefully stimulated the debate and sought cooperative strategies.

Area 2 – Enhance the coordination between member states on access and dissemination policies and practices (Recommendations 9-11)

STM publishers support the right of its members to experiment with various business models. We welcome discussions about how the Gold Open Access model might be implemented and sustained at a national level.

Area 3 – Ensure the long-term preservation of scientific information – including publications and data – and pay due attention to the scientific information in national preservation strategies (Recommendations 12-14)

STM applauds the government's desire for the long-term preservation of scholarly research articles and associated data. STM notes that there already exist a number of independent trusted digital archives (e.g. Portico¹⁰) that ensure long-term preservation of research articles. This is less true with respect to data and STM believes that this field represents a valuable area of endeavour for the government, possibly in cooperation with publishers. STM has participated in EU projects such as PARSE¹¹ which was concerned with the preservation of digital information in science, from primary data through analysis to the final publications resulting from the research. STM is also a co-founder and participant in the Alliance for Permanent Access¹².

Respectfully submitted

For and on behalf of the International Association of STM Publishers

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Very truly yours



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¹⁰ <http://www.portico.org/digital-preservation/> – to be completed

¹¹ <http://www.parsinsight.eu>

¹² <http://www.alliancepermanentaccess.eu/index.php?id=1>