

# IAHS and Electronic Publishing of *HSJ*

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## Summary

- There are compelling reasons for IAHS to move towards electronic publication of *HSJ*
- Essentially there are two approaches to electronic publication:  
open access, whereby the publication is made freely available on the Internet;  
levying a subscription on users (institutional and individual) for access.
- Whichever model is adopted, it must be financially sustainable in the longer term. In the short-to-medium term, it is recommended that a print edition continues. Consequently, for a transition period costs will be greater than at present.
- If a subscription model is chosen, IAHS could readily contract the electronic publishing process to an agency. However, access to *HSJ* would be limited to those who have paid personally or whose institution has paid, and to institutions for which IAHS has agreed to waive the subscription fee.
- Open access publication would fit the IAHS remit of research dissemination. IAHS should consider this option in detail. Alternative means of raising revenue to cover the publishing costs would be necessary; innovative means of obtaining this should be explored. One such is author fees, another is sponsorship. An alternative is help in-kind; Demetris Koutsoyiannis of the National Technical University of Athens has made a helpful offer.
- An IAHS ad-hoc working group should be formed and consider and cost the alternatives in detail and report back to the Bureau by December 2003.

## Introduction

The informal ad-hoc working group (Cate Gardner, Demetris Koutsoyiannis, Zbyszek Kundzewicz & Frances Watkins) has been discussing (by electronic means) electronic publication of *HSJ* for some time. The following is a synthesis of the discussion and concludes with a proposal for further action.

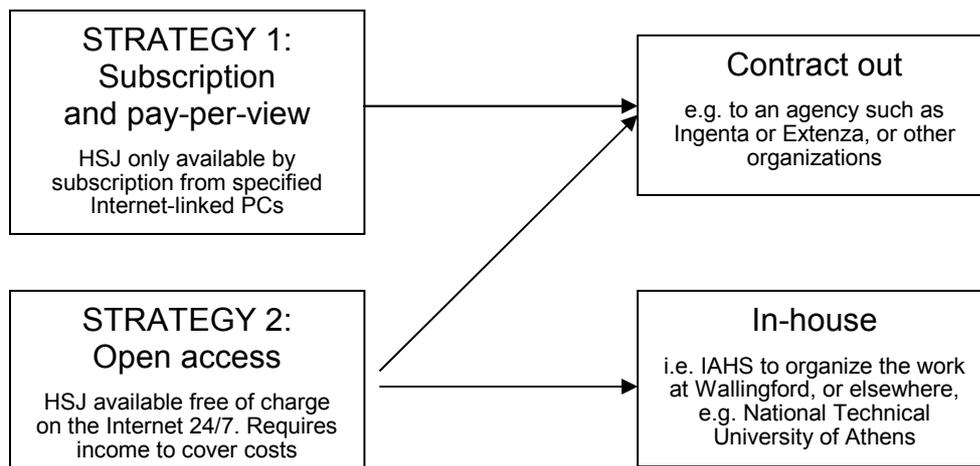
## *HSJ* needs to go electronic

IAHS needs to address the issue of electronic publication of *HSJ* (and/or possibly other publications) because:

- The Internet is not just another technological change. It is a revolution with implications that we are only starting to explore. IAHS and hydrology will benefit if we embrace this new technology and are innovative in how we use it.
- The IAHS mission is dissemination of hydrological research and practice, and by implication, adoption of the means that facilitate that process most readily.
- Electronic publication can provide the user with greater and very convenient 24/7 access to the literature he/she requires. The potential ability to search and/or link to other publications, include data sets in papers, etc. are added features.
- Internationally and across a broad spectrum of journals, journal subscriptions are declining, a result of price increases relative to flat (or reduced) library budgets, and personal budgets. *HSJ* is not immune to this trend, despite its modest subscription increases\*, and needs to become more attractive to users.
- Electronic publication will potentially take *HSJ* to a wider audience more cost-effectively (lower IAHS costs).
- Access to electronic publications could be cheaper than use of hard copies for users, or be free if open access publication were adopted.
- Most of our “competitor” journals are moving in this direction, if they have not already done so.
- Electronic access will help maintain, if not improve the *HSJ* impact factor.
- Electronic publishing improves the turn around time for accepted papers in that delays for printing and distribution are removed, thus immediacy is improved.

## Models of electronic publication

An ideal that would meet fully IAHS’ mission would be **open (free and unrestricted) access** publication, i.e. *HSJ* would be made available to all via the Internet free of charge. We recommend that IAHS consider this option very carefully. The alternative is to require users (institutional and individual) to subscribe for electronic access or to pay-per-view. The focus of our discussions has been the subscription vs open access models of electronic publication, and some of the practicalities.



## Our consensus is that whatever model is chosen, the following are implicit:

- (a) There are unavoidable costs associated with responsible dissemination of scientific information, whether electronic or by conventional hard copy means. In practice *HSJ* operates at a modest profit which could be worth sacrificing for much wider access to *HSJ*. However, as a point of principle, any model adopted for *HSJ*'s future should include (or have a high likelihood of quickly leading to) sustainable funding for the indefinite future.

\**HSJ* subscription has increased ~5% per annum since 1986 (based on £42 subscription for 584 pages in 1986 ≡ £84 for ~1160 pages, present length of *HSJ* (2003 *HSJ* subscription of £172 same as in 2002), cf. average annual 8.5% price increase since 1986 reported by Association of Research Libraries Statistics (2000–2001).

- (b) A “volunteer” *HSJ* Editor, assisted by Associate Editors, will continue to be responsible for peer review and a dedicated Production Editor at IAHS Press will provide administration of this process as well as arranging production of papers to the stage that they are published, whether as hard and/or electronic copy; that is, no reduction in either editorial or production quality is envisaged and, necessarily, the costs associated with this process will continue. In addition, the visibility of *HSJ* (i.e. references to *HSJ* by other organizations) and ease of locating *HSJ* (whether hard copy or electronic) will be maintained by ensuring that *HSJ* continues to be indexed with international indexing/abstracting agencies, etc. and that DOIs (digital object identifiers) are registered with CrossRef\*
- (c) Current production methods are entirely electronic; IAHS Press could readily provide files for use on the Internet (Pdf, HTML, Postscript, etc.). There would be an annual saving in printing and distribution costs of converting entirely to electronic distribution and a further saving if there was no need to process subscriptions. But ~£40000 would still be required for editorial and processing costs, plus there would be additional setup and running costs depending on the model selected. An unknown (if a subscription model is adopted), is what if any increase in subscription income might arise from electronic availability.
- (d) It is desirable that, whatever model for electronic publishing of *HSJ* is adopted, at least for an interim period (~5 years), a hard copy edition continues to be available (though bimonthly printing/distribution could be reduced to six-monthly or annual); this implies increased costs for a transition period. Other journals currently do this; few, if any, have yet phased out print copy.

### Subscription Model

(Subscription is used here to include subscriptions paid by users, libraries etc, as well as subscriptions paid by IAHS; TFDC currently provides *HSJ* subscriptions free of charge to 72 institutions).

This would enable access only from computers that are known to the subscription system. If this option is adopted it is proposed that IAHS contracts out electronic dissemination of *HSJ*. IAHS does not need to re-invent the wheel, and is unlikely to be able to do so cost-effectively; there would be considerable benefits as well as minimization of risk by commissioning an agency to take on our publications. Note that as far as the user is concerned, the agency is invisible. Competent organizations (e.g. Ingenta, Extenza) provide a good service but at a cost (usually an initial set-up fee, and then an annual fee according to the number of subscriptions and depending on journal size; it is in their interest to increase the number of subscriptions by marketing the journal).

IAHS would still process subscriptions and specify where or to whom access should be granted. IAHS would thus be able to charge differential fees for users/organizations, and could also provide *HSJ* free (funded by TFDC) to specific IP addresses. Note that it would be relatively easy to also offer a pay-per-view option via an agency, i.e. a user can pay a one-off fee to download an individual paper.

### Open Access Model

Until now, most journals have behaved in a rather paradoxical manner: if you publish your work on your web site, anyone can access it, whereas if you publish it through a journal, access is restricted and your right to publish your work independently is revoked by the copyright transfer. As a result, journals actually *put restrictions to dissemination of knowledge*, thus contradicting their primary purpose.

The ultimate objective of all involved in the publication of scientific papers, from the author to the editor, is the widest possible dissemination of each paper. The best way to serve this is to have the access to the paper free of charge. There are now many journals operating on this basis, though the majority started as open access not long ago; in particular BioMed Central publish 90+ open access journals. As there is no limit to the availability of the publication, policing access is not an issue and so the practicalities are simplified. IAHS, or someone on our behalf, could manage this. Agencies also offer to publish open access journals. It would be important that visibility and accessibility are facilitated by continuing to provide information to indexing agencies and registering with CrossRef.

Such a model requires generation of revenue to cover the existing production costs, and that of maintaining the web site. The more sophisticated the system, the greater the setup costs. There is a variety of means of generating income in place of subscriptions to cover production costs (OSI, 2003):

#### *Author submission/publication charges or article processing fees*

This requires a fundamental shift in philosophy: authors (or the institutions employing authors) are charged for submitting and/or publishing papers. Provision could be made to subsidize/not charge authors without institutional

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\* The CrossRef system is a collaborative reference linking service operated by the world’s leading academic and scientific publishers under the nonprofit Publishers International Linking Association, Inc. (PILA). It is invisible to the user but is *de facto* the industry “standard” providing a service for linking references by DOIs.

backing, and/or from developing countries. A submission charge to all would-be authors of *HSJ* papers, guards against vanity publishing. A publication charge could be a flat rate, or dependent on length and so equivalent to a page fee.

This option is among the most frequently proposed supply-side business model for open access journals. It is justified from the perspective that those who benefit most from the publication process are the authors and their institutions, in terms of career advancement and prestige.

Using the 2003 *HSJ* budget figures, a projection for a submission fee of £300 per article, or a publication fee of ~£700 would cover *HSJ* costs assuming current submission rates. These rates are high relative to the US\$500 fee per article that seems usual for other journals at present. The idea of a submission fee was perceived as more controversial than a publication fee.

The advantage of this model for generating income is that it can, once established, provide on-going revenue in proportion to the amount of material published. Thus the journal could expand, publish special issues etc. However, the disadvantage is that potential authors may go to other journals which do not request submission/publication fees. However, it is usual for WRR to ask for \$3000 for a single (long) paper and there are authors willing to pay this amount to have their article published on WRR. Note that currently the Open Society Institute (OSI) has allocated funds to pay charges for deserving authors submitting papers to open access journals, for which we can compete.

### ***Sponsorship; grants, gifts and prizes; advertising***

Sponsorship may be by public, or private organizations (e.g. computer or equipment firms), or both, giving the donor wide international recognition. Public would include WMO, UNESCO, national government departments, aid agencies, etc. Sponsorship could be sought as one-off grants to assist with initial setup costs, and/or as on-going grants to assist in maintaining the electronic journal (e.g. sponsoring special issues, special sections).

Advertising of meetings, books, equipment etc. are all possible but require marketing effort and it would probably take some years to establish.

We also addressed introduction of IAHS membership fees but dismissed the idea as politically unpalatable.

### ***Funding in kind***

That is provision of any of facilities/staff/expertise etc. free of charge, e.g. hosting by Ecole Nationale Supérieure des Mines de Paris, of the IAHS web site on their system. Demetris Koutsoyiannis at the National Technical University of Athens has offered to manage electronic publication of *HSJ* via his university: see Appendix.

### ***Revenue from hard copy sales***

Revenue raised from the hard copy sales could support the electronic version; e.g. sales of a 6-monthly print version for libraries. However, unit costs might well increase due to the likely smaller print run and so loss of economies of scale. Also, libraries are moving to electronic publications quite rapidly so there is no guarantee that subscriptions for hard copy will continue if the journal is freely available electronically.

### ***Transition stage***

An interesting proposal for a transition to open access is that the hard copy journal, paid for by subscriptions, is maintained as-is, but authors of papers are given the opportunity to pay say £500, or £50 per page, to have their paper published electronically with free and unrestricted access on the Internet, as well as links to Cross Ref etc.

### **Where to go next**

The IAHS Bureau is too big to effectively discuss the detail of the different options. A clued-up ad-hoc working group with funds to enable it to meet at least once (e-mail communication is great but meeting face to face to thrash out ideas initially) would help. Meeting at IAHS Press Wallingford would enable WG members to see where *HSJ* happens. Such a group to report back to the next Bureau meeting (December 2003?) with costed options. The options, and practicalities, would be really bounced around and different approaches appraised. Having got costed options, we hope that the Bureau would be in a position to mandate the *HSJ* Editor and IAHS Press to run with one of them, probably after further investigation. In practice, if we are going to approach UNESCO, WMO, etc. for sponsorship/grants we would need a business plan showing where we were going.

Really pulling together all the options and perhaps undertaking some market research requires a more dedicated effort than we have been able to give till now. IAHS might like to consider bringing in an “expert” and could employ a consulting firm to do an analysis of the options for us. An alternative is that IAHS Press staff take more time than at present to research and liaise/meet with the electronic publishing community and report to the WG (time input could be covered by a freelance person). There is a considerable amount of information and experience available from various quarters, e.g. ALPSP (Association of Learned and Professional Society Publishers), PLoS (Public Library of Science), SPARC (Scholarly Publishing and Academic Resources Coalition), journals such as *Learned Publishing* (published by ALPSP), and companies like Ingenta and BioMed Central are willing to discuss possibilities. But, ultimately it is the model that fits IAHS from all perspectives that is important.

## References

ARL (2000-2001) Association of Research Libraries Statistics <http://www.arl.org/stats/arlstat/>

OSI (2003) Open Society Institute Guide to Business Planning for Converting a Subscription-based Journal to Open Access.  
<http://www.soros.org/openaccess/>

## Appendix OFFER FROM NATIONAL TECHNICAL UNIVERSITY OF ATHENS

Demetris Koutsoyiannis and Antonios Christofides of the National Technical University of Athens have made the following proposal, and offered to undertake the work of developing the publication system at no charge. They could host the server and maintain the software for the transition. This offer requires serious consideration.

Proposal item	Comments and explanation
Design and implement an electronic publication system on the Internet with the journal articles that are already in pdf format.	Required time: 4 months
Scan all earlier journal articles and append them to the system.	Required time: 6 months
Announce that the electronic system will be free of charge for a transition period of two–three years.	Avoid promising free access on the long term from the beginning, to have a transitional time to study it more carefully. It may be assumed that subscribers (especially institutions) will not cancel their subscriptions during the transition period.
Have a target to keep the access to the system free of charge in the long term, while keeping the printed version charged as usual for subscribers.	If the target proves infeasible, a shift to charged access will be necessary.
During the transition period, try to find ways to extend free access in the long term.	

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