Distributed Publishing and HyperCite

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Abstract. No one publisher or content owner can ever hope to service all of a given user's information needs. Thus a distributed system of publishing, whereby each publisher ensures that each "knowledge pointer" in their content links to and from all the other important knowledge pointers in given subject areas, ensures that users can go on "information trails". These trails become a voyage of discovery and the junction points on these trails can often be databases, which aim to provide some comprehensive cover of a subject.

I shall describe Institute of Physics Publishing's efforts in this area, including our HyperCite technology, which allows users to roam the literature, backwards and forwards in time, and to experience fascinating information trails.

1. Introduction

In this session of the Conference I and my colleagues have been asked to notion that "Secondary Services Facilitate Interoperability of Electronic Resources". I would argue that ALL content providers should do this – not just secondary services. Perhaps I should explain the Institute of Physics Publishing stance on this. Interoperability of electronic resources can be achieved in several different ways. There is the "one database solution", whereby one content owner aims to provide all the content in a given subject or discipline. Yesterday at this conference Ann Okerson said that this was "unattractive to librarians" and, also yesterday, it was referred to in the Conference Overview as "information monopoly". Then there is the "one gateway solution", as personified by AstroWeb or Urania, where one entity doesn't own the content, but does aim to at least point to it all; and finally there is the "distributed publishing solution", which I want to expand on today.

2. Distributed publishing

With a distributed publishing solution all a content owner or provider aims to do is to link to and from all the important "knowledge pointers" in their discipline, and to enable and encourage others to do so. Therefore one establishes no technology barriers to the free movement of traffic, one shares standards and protocols, one makes no charge for sending visitors to another's site, one agrees minimum services levels so that users are not disappointed as they move from

site to site, and each content provider retains responsibility for any business or commercial aspects of interaction with an end user at their own site (and only at their own site).

3. Linking

At IoPP we have been cogitating on this subject for some time, particularly after the successful launch last year of our HyperCite(tm) linking system, which links from references backwards and forwards in time. We were aware of other systems, but they all seemed to be single URL linkers and most of our customers need, we suspect, wholesale linking systems that insert thousands of links into big databases, rather than one at a time.

4. STACKS

So we have created STACKS(tm) Science Tables of Content and Abstracts Collection service. At the Conference I referred to this by its working title of HyperSolve. STACKS(tm) create Tables of Contents with embedded hyperlinks to IoPP Journals; it automatically creates machine-readible files with URLs and it does so en masse. It can be used in OPACs, Web Catalogues or by any authorised content holder. The information can be pushed by IoP or pulled by the client. Registration is easy and quick. Just state your personal preferences (e.g. send me ToCs of all journals in ASCII files by e-mail once a week) and thereafter the information is sent when you want it, in the format you have chosen, sent in the way you want it sent, and about the journals of your choice. We believe that STACKS(tm) will save librarians time in cataloging, linking and indexing.

5. Libraries as the one-stop-shop

STACKS(tm) users can integrate the machine readable files which include linking URLs, which in turn point to IoP journal abstracts, articles and, using HyperCite(tm), beyond to the INSPEC database, the Los Alamos preprint server, and to Institute of Physics Publishing's own material. Furthermore this integration can occur as soon as issues or articles are published online so that a library's OPAC or Web Catalogue is as up to date as is possible.

STACKS(tm) users can have multiple profiles so that they can, for instance, serve different libraries on a campus or across a multi-national company. Users may also create new profiles, alter existing ones, download the SGML (Standard Generalised Markup Language) DTD (Document Type Definition), or indeed create a custom tagged format to fit their own systems. If users do not want automated push or pull services they can visit the service at times which suit them and generate all available links since their last download, or select titles, years and issues for which they wish to generate links. It is worth noting that Institute of Physics Publishing offers a free 6 year archive of all its journals to subscribers, therefore the amount of links available to download is very substantial and could significantly enhance the value of an Institute of Physics Publishing customer's site.

6.   Inter-organisation reference linking

Finally I should explain that STACKS(tm) has many other uses beyond linking from existing Institute of Physics Publishing customers. It is the perfect vehicle for other content owners to link into Institute of Physics Publishing material, be they publishers, secondary services or gateway services. Any enquiries about using STACKS(tm) should go to sylvie.chenoufi@ioppublishing.co.uk