ICCC/IFIP Conference: Electronic Publishing '97
New Models and Opportunities

14-16 April 1997 - University of Kent at Canterbury

Conference Paper Abstract

Linking Everything to Everything: Publishing Myth or Reality?

S. Hitchcock, F. Quek*, L. Carr, W. Hall, I. Tarr* and A. Witbrock* Department of Electronics and Computer Science, Southampton University. *Electronic Press Ltd, London.

The hypertext link as popularised by the World Wide Web is a simple utility. As users demand greater quality in the information they find online, as authors seek simpler tools, and as publishers seek original ways of adding value and maintaining control over their online products, a more sophisticated notion of links needs to prevail. New approaches to links are being tackled in two ways. Some research initiatives are building link services based on established hypertext principles, while some online publishers are acting on an immediate need to produce large numbers of links. How these two approaches are converging within research and commercial frameworks will be the feature of this paper, which will describe the publishing application of links in the Open Journal project, in which the publisher Electronic Press (EP) is a partner, and also a separate trial of a link service being developed at Southampton University applied to the journals services on EP's commercial BioMedNet online club for those working in biology and medicine. A link service is one way of supporting greater link productivity. The potential of the link service is to link everything to everything, automatically generating links on a massive scale. But in a publishing context, what is the practical value of doing this? As the link service in development at Southampton University is itself being commercialised, the emphasis of the Open Journal project and the BioMedNet trial is to refine this capability and to optimise its value as a development tool for users and publishers. In this environment the principal goals of the applications are to demonstrate: controlled editorial linking; complete citation linking; the integration of diverse resources such as journals, books and databases; link management; and a framework for publishing online products. In this sense links are more than simple 'go to' jumps between documents, but become highly flexible information filters. Essentially, the link service, by separating links from the underlying documents, provides a means of managing and applying link data across distributed resources. By looking closely at how link data can be created and collected in databases, or linkbases, we aim to show that this data translates effectively to support the publishing goals. From a publishing viewpoint what is also new is the emergence of the Web as a service which unifies communication between these resources and at the same time presents a medium for online publishing with a sufficiently large user base to support commercial products. In turn the online published 'package' is transformed: it is now a linkbase pointing to selected resources.

Referring to the implications of this framework rather than simply the technical detail, the paper will identify the latent power of the novel link types used in the link service. While a full publishing application based on the link service has still to be realised, the approach will be compared with EP's current practice of linking which also stores link information in databases and within BioMedNet is used to link all citations to the cited articles via the Evaluated Medline abstracts service. All of this will be supported by results and experiences from both the Open Journal project and BioMedNet implementations in the most extensive demonstration of these link publishing features to date.