Reference linking is one of the most commonly cited advantages of electronic journals. With a series of mouse clicks today’s reader can follow a line of research from journal to journal, moving from a citation in one article to the abstract or full text of the cited article elsewhere on the Internet.

Reference linking began primarily within the boundaries of a single product or publisher, starting in 1997 with the American Astronomical Society, closely followed by CatchWord, the Institute of Physics and the American Physical Society. It soon spread to incorporate linking from citations in full text articles to abstracts held on A&I services. With the advent of CrossRef in 2000, we now see over 60 international publishers working together to facilitate linking between full text articles from different journals, imprints and publishers. While this is undoubtedly a significant step forward for scholarly research, it brings with it a growing awareness of the problem of “appropriate copy”.

The “appropriate copy” problem often goes by the name of the “Harvard Problem”, following research by Dale Flecker, Associate Director for Planning and Systems at Harvard University Library. It is an issue that has been discussed at a number of meetings in the USA throughout 1999 and 2000 by publishers, libraries and information providers, including NISO (the National Information Standards Organization), the Society of Scholarly Publishers (SSP) and the National Federation of Abstracting and Indexing Services (NFAIS). The problem is based on the premise that journal articles can exist legitimately in more than one database or location on the Internet, and that not all users will want to access the same particular manifestation of an online article.

There are several scenarios in which multiple copies of articles can exist. Perhaps the most obvious example relates to aggregators and subscription agent gateways. If you compare EBSCO Online,
SwetsNet Navigator, ProQuest and other gateways, you will find a considerable overlap of journal content. Add to this the publisher’s own website and you have a number of “host sites” for a given article. It could be argued that the appropriate place of resolution for a citation leading from one article to another should be determined by the subscribing institution’s preferences or access rights, not by hard-coded links set by the publisher or aggregator. An institution that prefers to access all of its electronic journals through an agent gateway will not appreciate its patrons being directed to a publisher’s website, where they are neither recognised nor granted access, or are even asked to pay again for the article in question.

A similar situation arises when subscribing institutions host local copies of publisher databases. The OhioLINK consortium, for example, hosts copies of several publishers’ journal databases, to which member institutions then direct their users. This creates yet another duplication of articles, and although the local copy may be the one to which OhioLINK users should be directed, external links between publisher sites will not take this into account.

Pre-print servers are the other main (and growing) source of article duplication. To many, the most familiar of these services is the Los Alamos National Laboratory’s physics pre-print server, mirrored in the UK at http://uk.arxiv.org/. As these articles go on to be published, they may also become available on publishers’ websites and potentially in the aggregations and locally loaded databases previously mentioned.

This leaves libraries with a problem: how do you ensure that users are directed to the appropriate resource that matches not only your institution’s requirements but also acknowledges its access rights? Some A&I services now give librarians the option of choosing which full-text resources their readers can be linked to from their databases. While this goes some way to circumventing the problem, it still requires the librarian to key in or supply details of their access rights to each separate A&I provider: a not inconsiderable task in most instances.

Evidence points to the real solution being one that will allow libraries themselves to manage reference linking between multiple resources and in accordance with their own access rights and preferences.

Most importantly, this needs to be through a single system that can work with their existing catalogues and be managed centrally by the library. The recent launch of SFX from Ex-Libris has shown that such a solution can exist, and has paved the way for the development of other technologies able to offer an answer to the problem of “appropriate copy”.