

AT WHAT COST? ACCESS TO DIGITISED JOURNAL ARTICLES*

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Introduction

Changes within higher education in the United Kingdom are leading libraries to explore electronic solutions in order to increase access to materials. In the UK between 1988/9 and 1992/3 there was a 57% increase in student numbers; projections to the year 2000 suggest that there will have been a 20% increase in full-time students and an 80% increase in part-time students over a 20 year period. Part-time students often require special provision, such as structured course packs, self-study guides, and out-of-hours access to study materials. Electronic access to study materials from home could make a major contribution to increasing their access to key material.

Project ACORN (Access to Course Readings via Networks) is funded by the Electronic Libraries Programme (eLib) and is investigating the setting up of an electronic short loan collection, focusing on high-demand journal articles on lecturers' reading lists. Project partners are Loughborough University, Leicester University and the international subscription agency Swets and Zeitlinger whose role is to obtain electronic copyright clearance and provide digital copies of journal articles.

The potential benefits of making material available electronically across the campus network are evident: multi-user access; multiple access points; twenty-four hour access; the ability for students to print off their own copy (where permitted under copyright agreements). While this all sounds very positive, there are a number of challenging technical, copyright and economic issues to be resolved in developing such systems. This paper will discuss all three issues and their relevance to the project but the main focus will be the economic issues for librarians, subscription agents and publishers in creating an electronic short loan collection.

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Short loan collections

Traditionally short loan collections in academic libraries exist to provide access to students for high demand materials - both books and journals. For journals articles, librarians normally place a photocopy in their short loan collections. If the article is in a journal held by the library, this is very straightforward. If the library does not subscribe to the journal, then a cleared copy can be obtained from the British Library. The cost of this service is about £5.00 plus a fee to be paid to the publisher. These fees currently range from £4.20 for pre 1990 material and up to £10.00 for most other articles, although there are about 600 journal titles for which publishers have asked for a fee in excess of £10.00. It is worth noting, that apart from the cleared copy fee paid to the British Library, short loan services currently generate no income for publishers.

In order to provide digitised copies of high demand journal articles there is currently a need for a much longer lead in time; the project has demonstrated very clearly that a substantial amount of time is needed to gain copyright clearance (from individual publishers) and then to make an electronic copy of the article. Each of these two processes can be complex and time-consuming for the library and/ or for the intermediary.

Copyright clearance

Copyright issues are a major preoccupation and publishers are viewing electronic copying as a potential new 'primary' market. They are therefore unwilling to licence these rights to a body such as the Copyright Licensing Agency (CLA) as they currently do for paper copying. Their concerns include document security, charging, and ensuring copyright compliance. The rights of authors, who may have signed these over before the advent of electronic dissemination, provide a further complication.

Project ACORN is working, in the first instance, with three departments within Loughborough University - Information and Library Studies, Geography and Human Sciences. 317 high-demand articles from 89 publishers were identified from the reading lists of these three departments. The date spread of the articles is from 1955 to 1996, the average number of pages is 15 per article and the number of articles requested per publisher ranges from one at the lowest to 37 at the highest. The level of permissions received is very encouraging - currently standing at 70% from 57 copyright owners. Reasons for the high number of permissions seem to be linked to a number of factors. Firstly, the involvement of Swets and Zeitlinger as the intermediary. This has had a very positive effect in that they are known and trusted by publishers and have been able to discuss issues

of concern with them. They also have a detailed knowledge of publisher contacts and were able to provide the project with an initial list of publisher contacts from their in-house database. Other reasons include: the sole emphasis on journal articles; the emphasis on working in partnership with publishers through a Heads of Agreement approach; and the undertaking to provide feedback to publishers on usage and user behaviour. Nevertheless, obtaining copyright permissions has proved to be an extremely time consuming, and therefore expensive, procedure. Costing of this activity is ongoing and details will be provided in the workshop presentation.

Requests for payment

The majority of publishers agreed to participate in the project without making a charge for their articles, whilst a small number asked for payment. The range and types of payments requested clearly indicate the lack of consensus among publishers on what constitutes a reasonable charge for this type of service. Payments requested were as follows; 20c per page printed; \$1 per article printed; \$25 per page to mount the article; 2.5p (4c) per page printed; 5p (8c) per page, with advance payment for 10 printed articles and 5p (8c) per page for printing in excess of this; and, finally, £5.00 (\$8) per page to mount the article for a period of 2 years.

If publishers charge a rate for electronic copies beyond the reach of most library budgets, and beyond the means of students, then, in effect, there is no market for this type of activity. In order to set a fair price which the market can bear, a number of elements need to be taken into account, for example: does the library subscribe to the original copy? is digitisation required? does the author work in the institution? how many students on the course? how long is the article needed? Once further data has been collected, the project will calculate the overall cost to the library of providing an electronic copy compared with a paper copy.

Digitisation

The project has opted to scan the documents into Portable Document Format (PDF), which is becoming accepted as a standard, and is a format commonly chosen by publishers for their own electronic products. A major advantage is that the Adobe Acrobat reader needed to view the articles is commonly found on campus networks and can be freely downloaded.

The process of digitisation has proved has proved problematic for a number of reasons. Firstly, it is important to work from a good, lean copy of the document

when scanning. Swets and Zeitlinger are undertaking the digitisation of articles and 30% of required articles were in their back sets department, thus providing access to a good 'clean' copy. Copies of articles not held by Swets were provided from Loughborough University's stock, but the quality of the original copies was often very poor as they had been extensively used by students. It was therefore necessary to acquire an interlibrary loan copy of many articles from the British Library, as these were of better quality.

There have also been problems with the version of the software Adobe Capture used in the project. These include characters and words not being recognised, and the erroneous boldening and italicising of text. In order to achieve the very high levels of accuracy required, it has become clear that large amounts of time need to be spent manually checking every document. Based on experience to date, it is estimated that the whole process, including preparation and cleaning up, scanning, OCR and proof reading requires 30 minutes per page. Even this does not guarantee 100% accuracy. A typical page has some 5,000 characters, so even with a success rate of 99.9% there will still be some 5 errors per page.

Future issues to be resolved

There have been a number of attempts in the UK to bring about a consensus among publishers on their approach to handling requests for digitisation of their materials. The European Copyright Users' Platform has developed a number of Heads of Agreements for use in different circumstances. More recently the Joint Information Systems Committee (JISC) of the Higher Education Funding Councils has established a working group with the Publishers Association which is due to report in shortly. It appears that a lengthy standard licence agreement will emerge, containing a very wide range of clauses from which publishers will be able to select those they wish to apply in their particular circumstances. This may go some way to smoothing the process of obtaining permissions, but still leaves outstanding the issue of charges.

The role of an intermediary in this process could still be attractive for libraries, as the contacts and experience they bring will probably provide a speedier and more efficient approach to clearance. Project ACORN will be able to provide evidence in this area when it has requested permissions for the next academic year.

Finally, and most important, we need to know how students react to electronic readings, whether they use them or no, and whether they see real benefits in being able to access this type of service. Once this information has been gathered and

analysed then libraries and publishers can together explore a realistic pricing structure which can provide benefits to each other.

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