Renting the “Journal Copier”

In fact, a very similar situation exists today in a core area of research and education. This copier example is imperfectly illustrative of the cost and restrictive use imposed on most academic libraries by academic journals. For example, in 2006 a group of 275 doctoral/research universities paid a combined $1 billion to essentially rent the “journal copier” system that would provide their faculty, staff, and students with access to scholarly journals. In 2010, they are paying even more, and the real scale of the cost to colleges and universities spans globally to institutions of all sizes. A sweeping study from the United Kingdom estimated total annual expenditure for journals at £597.4 million (approximately U.S. $952 million) in 2006–7. The total estimate for scholarly communications—inclusive of faculty time for editing and reviewing—was £5.4 billion (approximately U.S. $8.6 billion).

Librarians and others have long chronicled the “Crisis in Scholarly Communication,” so I will not repeat it here. The move from libraries owning paper copies of journals to paying for electronic access via annual subscriptions—that is, “renting” the material—has shifted absolute pricing power to the publishers. Prices have steadily escalated even as electronic distribution has cut production costs and as colleges and universities continue to supply most of the labor and intellectual skills required for journal writing, reviewing, and editing.

A number of solutions have been proposed for this cost and access problem: the assertion by faculty authors of their rights to deposit work in their institution’s library; models of subsidized open-access publication; and federal open-access mandates for sponsored research. All of these ideas have great merit, and in time, they could favorably affect the $1B problem. I fully endorse them as worthy directions. In the near term, however, I see little real relief for the inflating $1B problem without a more substantial intervention. The economics of the relationship between the buyers (fragmented) and the suppliers (consolidated) are vastly skewed and show no plausible reason for self-correction.

Since scholarly communications span many faculty, institutions, and continents, no college or university can influence the $1B cost problem by acting alone. Few journals are owned by institutions. Many are owned by scholarly associations (e.g., the American Psychological Association), which source the digital production of their journals to a diminishing number...
of commercial publishing firms (e.g., Elsevier, Wiley). In the sciences, for example, many journals are owned entirely by the commercial publishers. The scholarly publishing industry is thus composed of many fragmented participants and agency relationships for authoring (faculty), buying (libraries), and consuming (faculty/students). There is no locus of decision-making authority among institutions to produce a directed solution to the $1B problem.

How can CIOs and other IT leaders help? A new model is needed—one that uses a low-cost, IT-enabled infrastructure to incentivize structure and restrictive rules of access are the problem, then institutions should shift from renting to owning the "journal copier—or leasing it under more favorable terms. The Big Digital Machine (BDM) is a concept to do precisely that. It envisions aggregating and integrating a set of publishing capabilities for the full cycle of scholarly publishing—from production to distribution to preservation. Its services would include preprints, conference proceedings, journal articles and journals, monographs, and textbooks. It could make a better offer to the many scholarly societies that have outsourced their journal publishing work to commercial firms. By collectively owning BDM, institutions could set the terms for journal pricing and distribution, and they could better manage the costs of the infrastructure—indirectly paid by colleges and universities—on which scholarly societies run their review and publication processes. BDM could be the “back office” system for both existing journal titles and new journals. I assert five reasons for pursuing BDM:

1. Libraries are nearing (if they are not already beyond) their capacity to cut and prune in all directions to pay for the rising costs of journals. Faculty have long been shielded from these problems, but now the costs of the current model mean that institutions are cutting access to the scholarly record in some fields. This undermines the research mission of the institutions, and in the “Era of the New Normal,” there is no new money to maintain the status quo as prices continue to rise.

2. We stand as the first generation in a millennium that cannot guarantee access to scholarship for future generations. When copyright is transferred from author to publisher in the current model, institutions must then rent it back each year to read their own scholarship—at whatever price is asked. Ownership means that societies or institutions can set their own terms for access to their scholarship—from open access to subscriptions, per-article pricing, and everything in between.

3. We have already proven much of the technology and systems that are needed to create BDM. Tools like Open Journal Systems (OJS), Fedora/DSpace/DuraSpace, Connexions, EPrints, libraries’ institutional repositories, and others are fulfilling many of the core capabilities that are needed for a college/university-owned publishing infrastructure.

4. Colleges and universities can aggregate their resources and run above-campus or cloud service models that serve multiple institutions.

5. Ownership of the infrastructure means that colleges and universities can make a better offer to the scholarly societies and other journal providers to achieve their goals using BDM. Once BDM is established, it will be difficult to further justify exorbitant rental fees for journals that choose other approaches.

The Big Digital Machine

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A Modest Start

In 2009, the institutions in the Committee on Institutional Cooperation (http://www.cic.net) collectively invested $160,000 in early work on the BDM concept. That work developed some technical integration among DuraCloud, OJS, and Connexions software. In addition, these software projects agreed to adopt a common approach to Google Analytics so that authors could assess the use of their content in a uniform way. By the summer of 2010, much of this work was being rolled out in new releases of the various systems.

As of this writing, the next steps for the BDM concept are not determined, but the rising costs and the use restrictions of the current model remain unabated. I believe that visionary leaders can solve the $1B problem that affects the core of the academic mission, but doing so will require the scale of coordinated and visionary action that created Internet2 more than a decade ago.

So, after those management and efficiency consultants help colleges and universities streamline procurement and other non-core activities, we need to turn their attention to fixing one of the big money problems in the core of the academy. Or we could just get started on it ourselves.

Notes


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