Unbundling the Big Deal with Patron Driven Acquisition of eJournals

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Abstract:

Many academic libraries subscribed to publishers' Big Deal or bundled ejournal packages with expectations of significantly expanded access for relatively small increases over historical expenditure levels. In exchange, libraries often agreed to multi-year commitments with built-in annual price increases. For bundled deals renewed on a year-to-year basis, libraries may be faced with the loss of the majority of the collection if spending thresholds are not met. As budgets stagnate or shrink in difficult financial times, there are legitimate concerns whether these expensive deals are driving libraries to forgo needed resources in exchange for a list of titles with marginal value to patrons.

In this paper, we address our library's experiences beginning to unbundle one publisher's Big Deal, using a mix of individual ejournal subscriptions and patron driven acquisition (PDA) of individual articles. We will discuss our initial experiences implementing access tokens for "just in time" purchase of individual articles from Wiley-Blackwell. Will it be possible to provide a similar or higher level of access while spending less? How will usage patterns change when users can access titles (or certain years within these titles) that previously were off limits? We will provide preliminary findings on our attempt to rein in costs by unbundling the Big Deal and better serve our academic community's need for access to a wide range of timely and relevant research.

Background: The Big Deal

The Big Deal still has proponents in academia for a variety of reasons. In addition to a significantly expanded collection, other potential benefits include predictable yearly budgeting and streamlined workflows. [Cleary 2009] Big Deals can help fill students and faculty expectations of immediate and unfettered access to online content. Some librarians fear that unbundling the Big Deal would potentially lead to higher costs in individual subscriptions. Furthermore, libraries may find it culturally unacceptable to downsize their collections and possibly reduce access to new subject areas.

Pricing is clearly the major drawback to the Big Deal, especially for smaller and medium-sized libraries, and those with more modest budgets. Inflexible contracts allow prices to continue to rise at rates significantly higher than inflation, even when recessionary pressures are causing library budgets to stagnate or shrink. It can also be difficult for libraries to identify what is in their title list, as titles are bought and sold among publishers. [Cleary 2009] That causes financial problems for libraries as well. When titles are removed from the Big Deal and sold to another publisher (without big deal), in order to maintain access to a needed title, the library may be forced to buy an individual subscription (where one was not necessary before), thereby incurring additional expenses. On the other hand, when a publisher (with the big deal) acquires a journal to which the library previously subscribed, the Big Deal may require that libraries continue purchasing the title or maintain the level of spending at the new price. In the past, when journals have been sold from non-profit associations to publishers, prices have jumped in multiples of three up to ten times their original cost. In recent years, both ICOLC and ARL have called for vendors to allow subscribers to renegotiate Big Deals mid-term. When the bulk of the serials budget is earmarked to pay for the Big Deal, librarians can be drastically constrained in their ability to select – or cancel – online content.

Background: Patron Driven Acquisitions

Patron driven acquisition (also called pay-per-view or PPV) has come to be seen as one option for libraries seeking an alternative to the Big Deal. With PDA, nearly any article can be purchased from the publisher's collection using article access tokens. These tokens may be pre-purchased by the library, with significant discounts for buying in bulk. The purchased article is usually available for a limited amount of time, such as twenty-four hours. During this period, it can be viewed by any other patrons within the institutional account. After the viewing period has elapsed, the article is removed from the pool of purchased articles. After that, another token is required in order to view the online content again.

There are at least two models for PDA of ejournal articles. In the first model, the library does not subscribe to any ejournals, and all articles are purchased on an ad hoc basis using article access tokens. In the second model, the librarian selects a set of core ejournals for unlimited access subscriptions; supplemented by purchase of articles from non-subscribed ejournals as needed. This has been called "core plus peripheral." [Harwood and Prior 2008]

Once a certain amount has been spent on purchasing articles from a single journal, the contract may allow this to be credited toward a yearly subscription (though a surcharge may apply.)

Some of the potential problems that have been identified with PDA of ejournal articles include needlessly spending tokens to purchase articles that are available from other sources; repeat purchases of the same article (including separate charges for PDF and html versions); and higher administration and monitoring demands placed on librarians due to "increased complexity and granularity." [Harwood and Prior 2008] Another potential drawback is the "financial unpredictability" of PDA of ejournal articles, including the possibility that it could exceed the costs incurred by the Big Deal.

Despite these concerns, some have found that PPV has resulted in significant cost savings. The administration and monitoring demands were different but not problematic. The experience at Trinity University with pay-per-view acquisition of Science Direct articles is one such example. [Chamberlain and MacAlpine 2008]. In this case, the faculty was heavily involved from the start, and students were not allowed free usage of tokens. After reviewing PPV of ejournal articles at six colleges and universities, Carr and Collins found that administration and policing did not appear to be overly burdensome. Additional tasks included monitoring usage to see if the token balance was running low, identifying journals with high usage to convert to subscription, and (rarely) preventing misuse. The main challenge was providing "access in a way that is seamless and simple and that does not detract from the library's ability to meet and promote its core mission of serving the information needs of its user community through unrestricted access." [Collins and Carr 2009]

Implementation

The implementation of PDA of ejournal articles requires several technical decisions that affect how articles are discovered and accessed. One decision involves access points. For example, some libraries may choose to list the entire collection in the link resolver (such as Serials Solutions). To help distinguish pay-per-view from unlimited access subscriptions, some libraries may also insert a public note in the link resolver such as "access by token." If the titles are not listed in the link resolver in some manner, there is the possibility that only users who find themselves on the vendor's platform will know of their availability. In addition, some libraries may wish to publicize the PPV titles via links on the library website or other venues. [Carr and Collins 2009]

Perhaps the most important decision revolves around who is allowed to spend access tokens. For example, Article Select from Wiley-Blackwell allows three access control options. The least restrictive allows any user who is within the authorized IP address to use article access tokens for unmediated access. For the intermediate level, IP authentication must be combined with a valid Wiley Online ID and password. The most restrictive level is called SuperUser Control, which requires an institutionally-created ID and password for the assigned group of authorized users (usually the library staff or librarians). At the SuperUser level, a message should appear when a user tries to access an article in an ejournal outside the library's subscription. This message should inform the user to contact the Library to acquire article (though this proved problematic, as we will discuss later.)

Case Study

In spring 2011, the Collections and Information Management Department at St. John's University Libraries decided to run a trial of PDA of ejournal articles using the Enhanced Access License of Wiley-Blackwell Article Select. Before 2011, our deal with Wiley-Blackwell granted us access to a large collection of titles at a deeply discounted price as long as we met a spending platform on individual ejournal subscriptions. The bonus titles were pre-selected by the publisher. These terms acted as incentive to spend more on individual subscriptions than we might have otherwise, even though we did not receive perpetual access for these titles (as we did for the subscribed ones.) Along with Wiley-Blackwell, the library had big deals or bundles with Elsevier's ScienceDirect, Sage, Taylor & Francis, Institute of Physics, American Chemical Society, Cambridge University Press, Annual Reviews, and Emerald; and journal archives such as JSTOR and Project Muse. Together, these accounted for approximately 70 percent of the serials budget.

 We carefully analyzed usage statistics for all Wiley-Blackwell ejournals using an Excel spreadsheet, noting which ones were individual subscriptions and which were bonus titles. By adding the yearly subscription price for each journal, we were able to calculate the price per downloaded article. One of the caveats when calculating download price was that some titles were available from other sources, especially the Academic Search Premier from EBSCO, though these had often had an embargo of at least one year. It was impossible to determine from the usage statistics which downloads were of articles in the embargo period.

For the most part, we ordered individual subscriptions for those titles that had a cost per use under a pre-set amount, though this was not a hard-and-fast rule. For example, if a journal was very heavily used and very expensive, it might still end up with a high cost per use. But, especially if the journal was not available elsewhere and was critical to our curriculum, we felt obligated to continue the subscription, especially since this would allow perpetual access to these titles.

Using these criteria, we cut our current subscriptions to 40 core journals (plus 39 backfile titles we had purchased in previous years.) In 2010, we had access to 455 current titles. In 2011, we had access to 9 percent of the current titles we had the previous year. Unfortunately, our subscription cost did not drop nearly as precipitously. We paid 36 percent of what we had paid the previous year (for 455 titles) for just 40 titles. This did not include the cost for the access tokens. We decided to start with a batch of 1000 tokens for a cost of $15,750; which came to $15.75 per download. Published prices range from $12.25 US to $33.25 depending on the amount purchased.
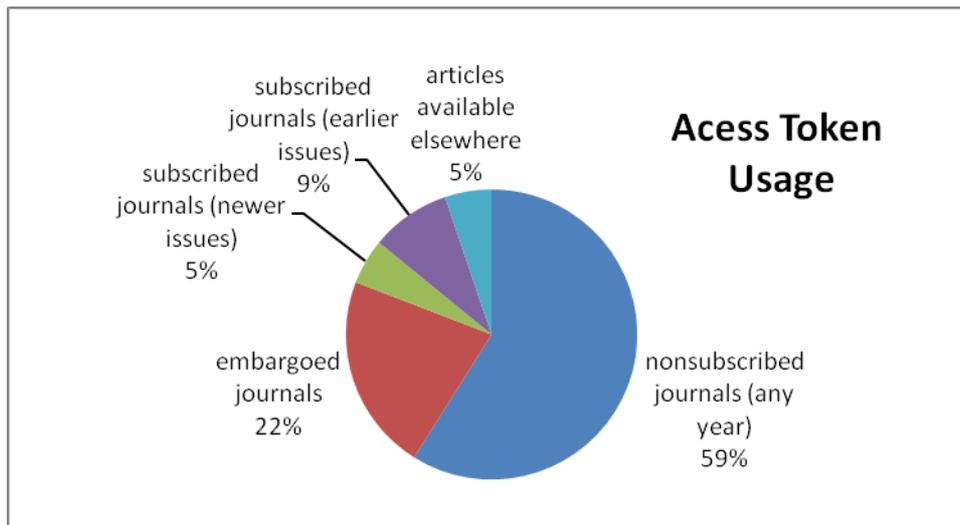
Our initial intention had been to use mediated access (which Wiley calls SuperUser Control), so that tokens would only be spent by designated library personnel, at least at the start. In this way we hoped to prevent unnecessary purchases of articles that were available elsewhere and minimize repeat purchases. Mediated access should also preclude most opportunities for misuse. We were aware that there was a possibility that this could require a considerable amount of staff time, but were willing to provide necessary resources, at least during the beginning stages while we were still working things out.

We expected there would be a mechanism that would intercept the user when trying to access an article outside the subscription, prompting them to contact the designated user. However, the default message the system provided was virtually indistinguishable from what users might have seen at earlier times when trying to access articles outside the subscription. There was no way we could customize the message. Not surprisingly, we did not get any requests for articles (outside normal ILL), probably because there was no way to indicate their availability.

Since we were now in April, the busiest time of the semester for many academic libraries, we decided to allow tokens to be used with the least restrictive option, where anyone within the library IP range would be able to spend article access tokens. We also updated our link resolver, Serials Solutions, to show active subscriptions to the entire Wiley-Blackwell Frontfile (which consisted of 1930 titles) and Wiley-Blackwell Backfile (1375 titles). We did not publicize the availability of the tokens in any other way, outside of informing library personnel. We preferred to see what articles would be downloaded during the normal course of events.

 In addition, we updated the "One Click" option in Serials Solutions to direct users to full text articles from other vendors, whenever possible. This was intended to discourage unnecessary spending of tokens. This was of limited efficacy, however, especially once the user was already on the Wiley Online platform. After a week of unmediated access, we asked to turn on the message indicating that a token was about to be spent. Although this required user confirmation, it is doubtful that users appreciated the implications of using access tokens. There is no indication that this message had any effect on user behavior.

Within 23 days, all 1005 tokens were used for articles in 304 individual ejournal titles. Of these, 592 tokens were used for ejournals for which we had no coverage for any time period. Of the remaining 413 tokens for which we had some coverage: 221 tokens were used to fill in the embargo period, mainly in EBSCO's Academic Search Premier; 51 tokens were used for recent years of Wiley-Blackwell journals for which we had purchased the backfile, but not the frontfile; 89 tokens were used for older articles where we had access to more recent years, but not the backfile; 52 tokens — about 5 percent of the total — were used to purchase articles that were available elsewhere, mainly in Academic Search Premier. Fewer than ten tokens were used for repeat purchases.

Acess Token Usage

- articles available elsewhere 5%
- subscribed journals (earlier issues) 9%
- subscribed journals (newer issues) 5%
- embargoed journals 22%
- nonsubscribed journals (any year) 59%

Most troubling, it appeared that at least 291 tokens were used in systematic downloads, or about 29% of the total. We discovered consecutive downloads of journal issues had taken place within moments of one another, usually late at night. The usage reports did not provide IP addresses, and we have so far been unable to track down the originator(s) of these downloads. In a past instance of systematic downloading ejournal articles the library had experienced, the publisher (not Wiley-Blackwell) had cut off access to the content. However, in this instance the publisher did not seem concerned.

Monitoring was further hampered by the fact that we were only able to see tokens that had been activated within the past twenty-four hours. Only when the month switched from April to May, were we able to see April's usage statistics as a whole.

Discussion

Various concerns have been expressed on the effect of PPV on user behavior. It has been feared that by inserting financial concerns into academic pursuits, it would discourage or ration use of library resources. [Kohl 2006] Other negative outcomes could be unrestrained use or perhaps even an "underground economy" dealing in tokens. [Golderman and Connolly 2007] For the most part, other case studies of PDA of ejournals did not appear to find misuse to be a major problem. In our case, unfortunately, it was. This would have been ameliorated if we had been able to effectively implement mediated access. Another option would have been to turn on SuperUser control and distribute passwords, most likely among faculty members, but our original intention was not to restrict access to certain classes of users.

 One may speculate why systematic downloading occurred. A more benign explanation might be that someone was seizing the opportunity to stockpile his or her favorite journal, fearful that access would be lost (as it eventually was). Eventually enough articles were downloaded in two journals that would have more than paid for their annual subscriptions.

Unfortunately, the policy did not allow us to automatically convert heavily used ejournals to a subscription (until recently, Wiley-Blackwell had allowed this.)

The usage statistics will undoubtedly give us better insight into what journals we should subscribe to in the future. Hopefully, they will enable us to subscribe to a more optimal mix of journals so that access tokens will not end up being used for large chunks of the same journal. Ideally, tokens should be used for embargoed articles; as many as them were. After one year, many of these articles will be available in aggregator databases or via Open Access; so the lack of perpetual access is less of an issue. Other ideal uses for access tokens is to buy articles in rarely used journals, or for journals that may have moderate usage but are very expensive.

It would be helpful if vendors would build a more robust infrastructure for access tokens. This would include a mechanism that would intercept users when they are trying to access an article that could be purchased with a token. Ideally, it would provide a customizable form that would fill in citation information, prompt for user information, and then forward it to designated library personnel. This capability would help libraries to effectively implement mediated access, if they so chose. Usage reports should provide complete information including journal, author, article title, DOI, time of use, and IP address or password (if applicable) of the originator of the request. This is especially important if the library is implementing unmediated access, in order to minimize the possibility of potential misuse. Another feature that would be helpful would be the ability for the library to block access to certain titles, or certain coverage dates within a title. This could help prevent access tokens from being spent on resources available elsewhere.

 PDA of ejournals would benefit from increased communication with faculty and students. For example, Information Literacy Librarians might discuss good research practices in their classes, such as downloading articles at first use, thereby not using tokens needlessly or preventing a scenario where articles can no longer be accessed after a certain period of time. The library could benefit by interacting more closely with teaching faculty to make sure we are on the same page regarding which journals they consider core, and which can be acquired on an article-by-article basis. User behavior studies could help us understand more about how and why faculty and students acquire and use research articles.

One question we have had to wrestle with is that we as librarians are relinquishing our role as information selectors/preservers. PDA means we are participating in less selection activities. We will no longer be providing perpetual access for as many journals as before (keeping in mind that most Big Deals do not provide perpetual access either.) Will librarians of the future come to regret our decisions to "sacrifice long-term access in favor of short-term savings?" [Carr 2009-2010] Or, as Carr wonders, will the idea of perpetual access be a "relic" from a time of "information scarcity"? It is impossible for us to know whether the perpetual access that we now purchase will last more than the foreseeable future, or until another disruptive technology arises. Some ejournals become freely available via Open Access after a few years elapse. If it becomes necessary to purchase ejournal back files in the future, hopefully it would be at a lower price, since information typically becomes less expensive as it ages.

Conclusion

With the rate of price increases of journals, it is not farfetched to imagine a scenario where journals swallow up nearly the entire library budget.   Some have feared that vendors will not embrace PDA of ejournals since it could potentially lead to smaller contracts. In our case, it is still not clear how significant the savings would be. However, we do have good reasons to expect that we will see significantly higher usage of ejournal articles at the same or lower price. There is increasing demand for ebooks, many of which we will likely purchase from the same publishers with whom we previously had big deals. In addition, PDA of ejournal articles could also be used in lieu of InterLibrary Loan, if priced competitively. If this happens, it is possible that both the user and the publisher would financially benefit. In addition, smaller libraries or those who due to financial constraints could never participate in deals or afford individual subscriptions might produce new revenue streams for the publishers.

Further study is needed to see how much our library would save by implementing Patron Driven Acquisition of ejournals, but it seems very clear that in any event we will see higher usage statistics. One interesting thing we noticed is that we added and removed all the Wiley-Blackwell frontfiles and backfiles from Serials Solutions during the semester, but only one faculty member noticed that access had been taken away for a particular journal (though this may be because it coincided with the end of the semester.) Is it possible that users have grown somewhat used to scenarios where journal articles inexplicably come and go?

PDA of ejournal articles seems to be gaining traction. Besides Wiley-Blackwell, vendors who have offered pay-per-view include Elsevier's ScienceDirect, HighWire Press, IngentaConnect, and the British Library. [Golderman and Connolly 2007] Springer, Oxford University Press, MIT, and Sage also have PPV options. PDA of ejournals holds much promise, but needs a more robust and cohesive technological infrastructure. This would include customizable forms and intercept messages to allow libraries to effectively implement mediated access. Detailed and timely reporting would help libraries to monitor usage, prevent possible misuse, and add subscriptions as needed. The ability to block access to certain titles could help minimize purchase of articles available elsewhere. We would also argue that the period of full access to the purchased article should be longer than twenty-four hours. We found several instances of repeat purchases of the same article within a few days. Though we cannot be sure, it is most likely by the same person. A PPV period that would last one semester (or at least one month) would help prevent wasting access tokens. On the libraries part, proactive information literacy education and communication among all members of the academic community, and a better understanding of user needs and behavior is needed. PDA of ejournals requires extensive analysis, careful preparation, and ultimately a leap of faith that there is a better way to spend a large chunk of the library budget to best serve the needs of our users.

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