

# Increasing Usage and Revenue Online

Discovery Marketing Tips for the Scholarly Publishing Community

A White Paper Prepared by Kaufman-Wills Group for



AIP | Publishing Services

## Overview

Online usage has become a defining measure of a publication's value to readers and its revenue-generating potential for the publisher. To compete in today's journal marketplace, publishers must be familiar with the strategies that promote online usage most effectively. This white paper is intended to assist by offering techniques publishers can use to increase the visibility of their journals and encourage more article downloads. Core concepts include:

- Recognizing how journal usage and cost per download drive library purchasing decisions.
- Marketing content to readers through the innovative use of metadata.
- Enhancing discoverability of content via third-party tools such as search engines and aggregators.
- Attracting new and repeat visits through the development of value-added community-building and customization features.

## Understanding the Importance of Usage

As journal users continue to migrate from print to electronic content, publishers are finding they must adapt to address the corresponding shifts in their revenue streams. For many association publishers, non-member subscription units are in decline as users increasingly access content online at no charge via their institutions. Similarly, advertising sales are falling in many fields due to the weakened economy and the shift in readership from print (which enjoyed relatively high margins for advertising sales) to lower-margin electronic versions. By contrast, revenue derived from institutions—whether through direct subscriptions or content-licensing arrangements with full-text aggregators or other intermediaries—is, for many publishers, their only growing revenue stream.

Increased dependence on institutional revenue presents both promise and perils for scholarly publishers. Institutions traditionally have represented a stable and profitable source of revenue compared with other streams. However, the institutional market is complex and can be difficult to penetrate, especially for smaller publishers. Librarians prefer the one-stop shopping offered by large journal content databases, and may be less likely to consider (or be aware of) subscription opportunities from smaller publishers. In addition, many librarians are warning of steep cuts in their subscription budgets (1). These changes are likely to have a greater impact on smaller, less used titles that are on the margins of librarians' radar screens (see sidebar).

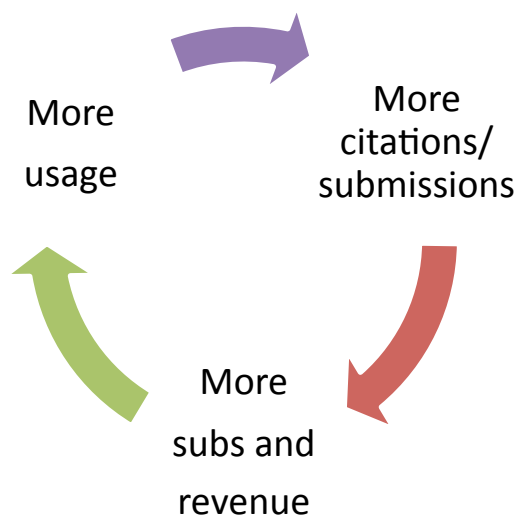
### Why Institutions Cancel

In research conducted by Kaufman Wills Group (KWG), librarians have repeatedly said that they compare cost-per-download for journal subscriptions with the cost of obtaining articles via interlibrary loan. If the interlibrary loan is less expensive, the subscription is in jeopardy. Librarian comments to KWG continue to match the conclusions of a 2005 report based on a two-year study of subscription cancellations (2). The report concluded that:

- Cancellations were primarily a result of low use and format change (migrating from print to online).
- Most libraries have cancelled print when the electronic version is available.
- Budget concerns are now the main reason why libraries make changes in their holdings.

To stand the best chance of success in today's institutional marketplace, publishers of all sizes must recognize the changing criteria used to evaluate serials acquisition and renewal decisions. The major change is a heightened emphasis on journal usage as a measure of subscription value. Librarians used to calculate usage based on how often print copies were picked up and re-shelved—a cumbersome and relatively unreliable assessment method. Now, however, librarians can easily retrieve the annual number of page views or downloads and divide them by the annual cost of the journal or database subscription to calculate the cost per download. Librarians have embraced cost-per-download as an objective barometer of a subscription's worth and a key basis for renewal decisions (2). To demonstrate their journals' value to institutional customers, publishers must focus their efforts on increasing article usage with an eye toward reducing the cost per download. Not only are such efforts likely to attract new institutional subscriptions and renewals, but, as shown in Figure 1, they should also yield benefits in other areas that will ultimately improve journal quality and value to users.

**Figure 1. Multiple Benefits of Increased Online Usage**



- Increased usage reduces cost per download, an important metric used by libraries to evaluate ROI on existing subscriptions.
- Increased usage can alert libraries to gaps in their collection, driving new purchases from institutions that do not currently subscribe.
- Greater usage means an increased likelihood that a publication will be read and cited, which increases the impact factor. This is another important consideration in library purchasing decisions.
- Higher impact factor drives increased manuscript submissions, leading to higher-quality content. This promotes more usage, creating a virtuous cycle of improvement.

## Strategies to Increase Usage

The rise of Internet information resources has significantly changed the way in which readers learn about and access journal content. Instead of allowing publishers to direct them to new and relevant information sources (i.e. via traditional marketing methods such as direct mail), most readers today prefer to actively seek out information on their own using search engines and other online tools. Readers also tend to be increasingly indifferent, if not hostile, to traditional marketing approaches that are seen as interruptive and intrusive. To successfully market journals today, publishers need to be present in the places where readers are already searching for information and most likely to “discover” the publisher’s content.

**Figure 2. Discoverability Marketing vs. Interruption Marketing**

Interruption Marketing (User stops what they are doing to receive marketer's "pitch," which often is not related to current activity.)	Discoverability Marketing (Promotion is seamlessly integrated into user's search for information—no "pitch" required.)
<ul style="list-style-type: none"> <li>• Print advertising</li> <li>• Direct mail</li> <li>• Radio spots</li> <li>• TV advertising</li> </ul>	<ul style="list-style-type: none"> <li>• RSS feeds and personalized alerts</li> <li>• Metadata dispersal (e.g. to A&amp;I services, content gateways)</li> <li>• Search engine optimization</li> <li>• Social bookmarking</li> </ul>

## Exposing Metadata

What techniques can publishers leverage to enhance the discoverability of their journal content? One increasingly important strategy is to collect and expose the richest possible set of XML metadata for external discovery tools to use. Exposing metadata about journal content makes it more accessible and searchable to a wide variety of third parties, including search engines and aggregators. This, in turn, makes it easier for users in new markets to discover and access relevant journal articles. It also provides new ways for existing users to locate and retrieve the information most useful to them.

The importance of exposing metadata is highlighted in a recent study of reader navigation habits (3). Inger and Gardner surveyed 782 readers of *Nature*, *Proceedings of the National Academy of Sciences*, and the *Annual Reviews* series about how they located journal content. They found that readers land at specific journal articles from a surprisingly broad array of different starting points. While abstracting and indexing (A&I) services and search engines ranked among the most popular starting points for subject-based searches, readers also reported navigating to content through library websites, content gateways, email alerts, and numerous other discovery services. The clear implication for publishers is that they must continue to support a wide array of discovery tools by publishing “XML catalogues containing the metadata of [their] articles,” according to Inger and Gardner. “A publisher must actively back all of the navigational options for its readers and not try to pre-judge any of them,” the authors concluded.

What tools are available to publishers to disperse their metadata to other service providers across the Web? Generally speaking, there are three primary methods (4):

### *Metadata Repositories*

These are designated repositories from which third parties, such as search engines (Google, Google Scholar) and other content aggregators (e.g. A&I services) can access metadata about your content. These providers crawl or harvest this metadata to develop an up-to-date index of your electronic content for fulfilling search queries. Importantly, the format in which metadata is exposed can significantly impact its discoverability. The Open Archive Initiative Protocol for Metadata Harvesting (OAI-PMH) is the most established protocol for sharing of metadata and is widely used in the industry. However, metadata records may need to be specially modified to assure optimal discovery and display on search engines such as Google and Google Scholar.

### *Federated Search*

While Google’s simplicity and excellent performance have made it the pre-eminent search resource in the academic community, librarians have long complained that it overlooks vast realms of scholarly content, which is hidden behind search forms or CGI scripts. In order to make these “invisible” resources discoverable to their patrons, librarians have adopted federated search services which query these multiple databases in real time and aggregate the results on a single search page. To be optimally discoverable to federated search services, the publisher’s search gateway must be compatible with the standards supported by the search service. There are a number of standards currently in use (e.g. Z39.50, SRU, SRW, XML), and the standard publishers adopt may affect the visibility of your content to different services and, hence, different markets.

## Where Is Content Discovered?

Journal marketing in the digital era is all about making your content visible wherever readers might be likely to bump into it. According to AIP’s Director of Business Development, Terry Hulbert, publishers should campaign to be included in all appropriate databases or resources which link back to a journal’s full-text content—no matter how large or small the service may be. “If there’s a constituency out there which is interested in our content, then I want them to be able to see it in whatever interface they happen to be using,” Hulbert says. Hulbert’s hit list of important discovery tools includes:

- Abstract & Indexing Services (e.g. Scopus, ISI, INSPEC, PubMed)
- Content Gateways (e.g. EBSCO EJS, SwetsWise)
- Document Delivery Services (e.g. Infotrieve)
- Reference linking collaborations (e.g. CrossRef services)
- Library search services (e.g. federated search products such as Scitopia and emerging “Unified Discovery Services” such as the Summon service from ProQuest.)

## Case Study: Marketing with Metadata

**Challenge:** The SPIE Digital Library, hosted on AIP's Scitation platform, contains the world's largest collection of research papers covering optics and photonics. SPIE wanted to provide users with more intuitive ways to discover content from the seven publications included in the library.

**Solution:** SPIE and AIP developed a new metadata tag that identified all Digital Library articles as belonging to specific topic and sub-topic interest areas. The new tagging protocol allowed end users to navigate the vast database according to their own area of interest.

**Result:** SPIE reported greater satisfaction from end-users and libraries with the new topic-based navigational system. In fact, response was so positive that SPIE decided to develop new subscription products based on the new topical collections. Now, in addition to traditional journal subscriptions, institutions may also purchase access to all content in specific topic areas.

"It's imperative that we provide researchers with a quick and easy method for accessing our online content," says Eric Pepper, SPIE's Director of Publications. "By mounting the SPIE Digital Library on Scitation, we accomplish this goal, while also reaching a broader audience of engineers and scientists."

A related development in the library search space is the creation of so-called "unified" discovery tools such as Serials Solutions' "Summon" service and the EBSCO Discovery service. These products promise to address what librarians say are the significant shortcomings of both Google and federated search. Google is fast and easy to use but doesn't provide access to many library resources, librarians contend. On the other hand, federated search services query databases in real time and must wait for responses to compile their results. This makes them slower than Google, which crawls and indexes pages locally to deliver faster searches for its users. Unified discovery services claim they will harvest both internal and external metadata and pre-index it for faster search queries. The result will be a search service that is as simple and fast as Google and as comprehensive as federated search. As *Library Journal* puts it, unified discovery promises to be the "holy grail" of library resource interfaces: "a true one-box search, collecting article-level results from electronic resources with local catalog holdings into a single integrated results list." (5)

### RSS

RSS (short for "really simple syndication") is an open standard for sharing metadata based on XML. As with other techniques for exposing metadata, publishers who provide content in RSS format (usually through what is known as an RSS "feed" or "channel") stand to reach a much larger audience and drive additional users to their content. Readers increasingly use desktop or web-based RSS readers to keep abreast of feeds in areas of interest. Moreover, because RSS is easily shared, feeds can be picked up and integrated by numerous syndicating sites that act as online aggregators for RSS content. The end result is an increase in entry points for users to access full-text content.

### Metadata-Driven Applications

Many publishers equate metadata with a standard list of tags (e.g. author, title, abstract, etc.) that describe very basic information about an article. However, it is crucial to understand that metadata tags can be applied to virtually any element of a full-text article. Generally speaking, the more

finely grained the metadata that are collected, the more opportunities there will be to enhance the discoverability of your content.

This principle is demonstrated in the case study (above), which shows how the addition of a new metadata tag drove the development of more-customized information products for SPIE journals hosted on Scitation. According to Larry Belmont, Manager of Scitation Development at AIP, there are potentially dozens of other ways innovative metadata tagging can create new and interesting pathways for users to access content. Belmont notes that in some fields, the discussion of specific products or technologies may be of special interest to readers. Publishers can leverage this knowledge by systematically tagging product references and surfacing this information in a separate view. "The product references could be listed in a box off the side, linking to other articles in the journal which also mention that product," Belmont says. "That creates another tool to guide the reader toward the most relevant content and drive greater usage of the site."

Similar applications could be developed to pull out commonly used equations in math or physics and link to other articles referencing those equations. Or, publishers may want to pull out figure and table captions for users to see in the abstract view. This is potentially useful, Belmont explains, because busy researchers are likely to scroll down through an article to see the figures and tables which describe the results of the experiment. "We're

not going to presume that users start at the top of an article and read it straight through to the end,” Belmont comments. “Instead, we should ask, ‘How do researchers want to read the articles?’ and appeal to the users on that level.”

### **Search Engine Optimization (SEO)**

As much as publishers and librarians would prefer readers to use their carefully developed search tools to access journal content, Google and other search engines remain a primary entry point to journal content for many individuals. Since searchers are more likely to click through to sites that appear higher on the search results page, publishers should be highly motivated to improve the search rankings for their content.

As discussed above, there are steps that can be taken on the technical side to improve search engine ranking and display of journal search results. Publishers should investigate with their IT staff or hosting vendor to determine whether additional measures can be implemented to optimize performance. Publishers should also consider working with their authors and editors to make article titles and abstracts more search-engine friendly, says Hasaan Brown, Director of SEO at Reingold, Inc, a consulting firm based in Washington, DC. Most search engines will scan for keywords to try to determine an article’s topic area and relevance for specific searches, Brown notes. But authors unfamiliar with SEO may fail to include the appropriate keywords in their abstracts. “There are people out there on the Internet putting those search terms into the search engine, but they’ll never find the author’s article because the terms weren’t written into the copy,” he comments. Authors should make certain to use keyword phrases that accurately and specifically describe what the article is about. The phrase should appear in the title and be repeated several times in the abstract (6). In addition, editors should take care to avoid titles which may appeal to readers but cannot be classified by search engines. So, an editorial about the benefits of weight loss in diabetes should be called “Weight loss and diabetes” instead of “Pounds of cure.”

### **Customization and Community**

Another way publishers are driving usage is by allowing readers to take a more active role in the publication process via the Web. This paradigm of increased interactivity is commonly referred to as “Web 2.0.” What is the difference between Web 1.0 and Web 2.0? Put simply, Web 1.0 users followed links to content; by contrast, Web 2.0 users comment, edit and create content. The goal is to foster community and put the user in charge of their experience. Publishers benefit as users become more engaged with each other as well as the publisher’s content.

Given the number of new community-based applications that publishers can potentially implement, it is important to focus on those features that have a reasonable likelihood of providing a return on investment. For example, some publishers are experimenting with the creation of new communities in virtual reality applications such as Second Life (7). This may be a promising medium for fostering real-time communication through virtual lectures, conferences and demonstrations. However, it is unclear whether such applications have the staying power to merit investment from publishers at this time.

Other technologies have matured to the point where they have proven their ability to generate a return. Some examples publishers should investigate include:

#### *Social Bookmarking*

This is an emerging suite of tools which allows users to organize, discover, and share references and Web bookmarks. One popular example in science—Connotea—allows users to save Internet references (web pages or academic article references) on the site using tags instead of nested folders. The references then become available to the user from any computer on the Internet. In addition, users can easily share the references with colleagues by emailing a link to selected reference lists or the entire reference library. They can also see connections to others who may have bookmarked similar references, offering interesting avenues for users to browse for new content (8). This kind of resource-sharing has clear potential to add value for content users and drive additional usage of related content. Other social bookmarking services include citeulike, del.icio.us, and BibSonomy.

#### *Podcasts*

In the STM world, podcasts are being used by some journals and associations to provide original content such as interviews or seminars as well as updates or summaries of important articles. Some publishers report that podcasts drive increased use of the articles discussed during the program. However, it is important that the

podcast be more than a simple audio version of the printed article; if it doesn't add value, it is unlikely to be widely accessed.

### *Blogs*

Individual scientists have received the idea of blogging with mixed feelings: while some see it as an excellent new way to disseminate and discuss data, others have expressed concern about potential damage to their credibility and plundering of their intellectual property. However, a number of scientific publishers have recently begun to embrace blogging as a means of promoting discussion. As much of the blog discussion tends to relate to articles published in the journal, some publishers have found that blogs can be an effective tool for generating additional use of their content.

## Conclusion

Usage is rapidly emerging as a defining metric of success in the library market. To increase usage online, publishers must embrace new, and in some respects more subtle, ways of making their content visible to readers. Whereas readers view traditional marketing methods as an increasingly unwelcome interruption to their daily activities, successful internet marketing can be visualized more as a conversation between publisher and reader. The reader is searching for information, and the publisher provides unobtrusive avenues to discover that information through a variety of resources. The publisher also provides pathways for readers to respond and comment, as well as to share the information with friends and colleagues through social networking sites. The transaction is consensual and mutually beneficial; leads to repeat visits; and attracts new users to the publisher's content. The publisher can monetize this increased usage through higher subscription renewal rates and successful subscription promotion campaigns targeted at institutions.

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