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What’s JAV Got to Do with It? Indicating Versions of Record with CrossMark

by Carol Anne Meyer  (CrossRef)

Scholarly content exists in a multi-channel environment. Journal articles are available from authors’ Websites, from institutional repositories, from subject archive repositories, as pre-publication manuscripts from publishers Websites, as peer-reviewed, accepted, and copyedited manuscripts on publishers’ Websites, and as licensed, redistibuted content from aggregator journal vendors. Articles also increasingly live as PDFs on researchers’ hard drives or in manuscript management systems.

Just as the text of the document has many homes, so too do bibliographic metadata about that document. There may be a separate secondary record for different versions of the text.

So what happens to content in all of these channels when something important changes? Maybe an author’s name was misspelled. Maybe a table was missing a caption. Perhaps a figure was mislabeled. Or an editing error changes the interpretation of the results. The author could have discovered a calculation error. An individual may disavow knowledge of the research and ask to be removed as an author. Or evidence that part of the content was plagiarized could surface. Occasionally, cases of academic fraud require that a paper be retracted.

How, as scholarly publishers and academic librarians can we ensure that all of the consumers of scholarly information have simple, prompt access to important information about status and changes?

NISO’s recommended Journal Article Versions (JAV)1 represents one attempt to classify and label the stages of journal articles to provide important information to readers about exactly what it is they are looking at.

Independently, CrossRef, a not-for-profit organization for scholarly publishers that made scholarly reference linking a reality, has been working on a new initiative of publishers to clearly label their content. CrossRef, which launch in mid-2011 will provide a way to clearly mark versions of record and communicate information about their current status.

How will it work?

An article that is part of the CrossRef service will sport a distinctive logo — which will be the same across all participating publishers. The presence of the logo tells a reader two things: 1) publisher of this document has made a commitment to label it, maintain it, and communicate any changes that it may undergo; and 2) further information is available about the status of the document. In most cases, the presence of the CrossRef logo actually indicates that the document is a version of record, though there may be exceptions due to individual publisher practices, as we will see below.

When a reader sees the CrossRef logo, whether on an HTML page or a PDF copy of a document, he or she may click on it. After doing so, a box pops up containing important information: 1) the current status of the document, 2) if this particular copy is being maintained by the publisher, 3) where to find the copy of the document that is being maintained by the publisher (the CrossRef DOI link), 4) the version of the document, and 5) additional important publication record information.

In this article, we are mostly concerned with the version of the document, but I will spend a little bit of time discussing the other parts of CrossRef to make it clear what the service provides.

Status — Most of the time, when a reader clicks on a CrossRef logo, the status will be “This document is current.” Occasionally and when appropriate, the status will be “An update is available for this document.” If that is the case, the CrossRef status box will display the CrossRef DOI link to the updated document. This feature is especially powerful for PDFs that may have been sitting around on a researcher’s hard drive for a considerable time.

Version — The CrossRef status box will also display the version of a document. Here’s where JAV comes into play. The version field that CrossRef publishers will indicate as part of CrossRef will have some flexibility, and will not require that they use JAV terminology. However, CrossRef will encourage publishers to look at the NISO JAV recommendations in creating their version labels. For many, the JAV recommendations will work fine. In the majority of cases, publishers will use the term “Version of Record” for peer-reviewed, published articles.

For other publishers, the JAV statuses may not fit as well, so they may need to use their own terminology. For example, though a few publishers may make corrections to articles in situ by replacing the previous version, it is not a common practice, so the JAV term “Corrected Version of Record” will probably not be necessary for most publishers. We expect a more common scenario to be an additional entity with its own metadata that is the correction to the original “Version of Record.” In order for the scholarly record to remain clear, it may be important for the publisher to retain the (now) incorrect version, while clearly labeling it as such.

As an organization based on the network advantages of the DOI standard, and as a longtime supporter of NISO, it almost goes without saying that CrossRef would recommend that its members adopt the JAV terminology. Yet, we are also practical, and we understand that not every publisher’s workflow fits nicely into the JAV definitions.

A more fundamentally important reason why CrossRef is not “hardwiring” JAV terminology into CrossRef is that CrossRef may be used for content other than journals. Of the more than 45 million DOIs assigned at CrossRef, over 13 percent of them now come from books and book chapters (including reference entries), conference proceedings, components, database records, and other non-journal content.

Another important relationship between CrossRef and JAV is that, as part of the rules of participation, CrossRef logos may not be displayed on pre-acceptance versions. In fact, if a document is not eligible to get a CrossRef DOI, the purpose of which is to ensure persistent linking, then it may not have a CrossRef either. Publishers who make Accepted Manuscripts or Proofs (both JAV terms) available publicly may wish to display CrossRef logos on those, and use those terms in the CrossRef Version Field.

Publication Record — CrossRef can also communicate valuable publication record information about the document to which it applies. Though not directly related to the
The concept of a “version of record” may be an artifact from the days when publishing relied on printed distribution. Yet, in an age of reliance upon digital journal publishing practices, the notion of an unvarying record of scholarly discourse remains valuable to academic researchers and librarians.

Debates continue to stir within our industry, however, on how to overhaul or maintain versioning practices in online journals. There are a number of options for applying metadata to an online article to indicate version status, but there is no clear winner, as no option is yet in dominant use by publishers, libraries, and managers of institutional repositories worldwide. ALPSP and NISO’s Collections and Content Management committee joined forces to commission recommendations from a joint Journal Article Version Working Group (JAV) in 2008. Their proposed terms differ slightly from those in use by the LSE and also those employed by the SHERPA/RoMEO Publisher copyright policies. CrossRef has put considerable effort into development of CrossMark, http://www.crossref.org/crossmark.html, a new version management device set to launch this spring, which simply indicates currency of versions, without applying specific terminology.

In a 2010 NISO survey, intended to assess uptake and interest in the JAV metadata recommendations,1 the majority of respondents indicated agreement that standard journal article version practices are important and necessary to maintain online. Participants were aware that any lack of version clarity causes significant problems for researchers in many disciplines.

However, among these participants, who serve various roles across our global industry, there was no consensus as to how this should be achieved and what type of version indicators should be standardized. Some noted concern that all options currently in use were not universally clear or useful to readers. A slight majority, 51%, indicated agreement with the JAV’s suggested standards, while a notable portion, just below 29%, were not familiar with the recommended terms.

Regardless of the survey respondents’ perspectives of the JAV terms, when asked more generally if standard terms should be applied to journal article versions, the answer was a clear “Yes,” with 176 (92.1%) agreeing there should be, and only seven (3.7%) disagreeing. A full report of the findings of this survey can be found on NISO’s Website http://www.niso.org/apps/group_public/document.php?document_id=6013&kwg_abbrw=ccm.

Despite the strong support of standard versioning practices, and lack of consensus in a common approach, many respondents indicated that they are neither willing nor able to prioritize a solution at this time. Only 20% of respondents indicated that their organization was planning to adopt a set of versioning terms or practices and a surprisingly large contingent of more than 63% responded that they had no intention of incorporating any versioning support.

Most agree, however, that publishers hold the key to breaking through this fog, as article version controls are an extension of the stewardship of the academic record. While this type of development often falls into publishers’ “nice-to-have” camp, publishers must respond to industry feedback on this pitfall of digital publishing. Researchers continually struggle with confusion caused by lack of consistency in determining an article’s status in the publication lifecycle. Librarians educate their patrons on citation practices for ahead-of-print articles, but cannot ensure scholars will follow up to ensure the most recent iteration is applied to research papers or projects. Publishers have a unique leadership opportunity to support cutting-edge online research practices and raise the bar on article versioning practices.

Heeding such industry feedback, SAGE launched development in 2010 to incorporate the JAV-recommended terms into article metadata on SAGE Journals Online (SJO), hosted with HighWire Press. SAGE believes that with the technical capability to publicly release more than one instance of a manuscript and allow access to iterations throughout its lifecycle comes the obligation to clearly signify the status of each version.

In late 2010, SAGE was presented with an opportunity to expand our OnlineFirst (“ahead of print”) program to include accepted manuscripts as well as proof copies of articles. This project allowed for a key chance to improve version identifiers on SJO. Now that SAGE produces content using an XML-first workflow, the addition of these metadata is a relatively straightforward enhancement to our production systems. It is a project similar to others SAGE and other publishers have tackled over the last decade, one that requires infrastructural migration toward an equal focus on both print and online delivery channels.

The primary challenges in this development were not technical for SAGE. Instead, like many respondents to the NISO survey, the barriers we encountered were intellectual and cultural ones. We debated global industry standards, editorial concerns for author and researcher needs, legal quandaries about corrections policies, and budgetary pressures on our online development strategies.

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issue of versions, record information can provide valuable insight to researchers as they assess the credibility of the content they rely upon. Record information may include data like publication dates, funding sources, location of online deposits, licensing information, CrossRef plagiarism screening status, and content type definitions. CrossRef will not specify which record information fields can be present, though we do anticipate and encourage communities of practice to develop among publishers in specific disciplines.

Giving readers choices about where to get their information and what versions to use is “a good thing.” A better thing is providing them with enough information to evaluate the source and quality of that content. Labeling versions of record through CrossMark, especially with standardized, meaningful terminology such as provided by JAV, is an approach to making it easy for researchers to find and use that important information.

For a more complete discussion of the problems with multiple online journal versions, please see the article in Learned Publishing.2

Endnotes