

CrossRef Member Briefing Linking to Publisher Full Text from PubMed Central

Overview

This document contains the following:

1. A recommendation to CrossRef members to contact PubMed Central (PMC) directly to request that DOIs be used in an **automated way** to create persistent links to the publisher version of record of journal articles. The current methods used on PMC to link to publishers are cumbersome, do not make it clear that the publisher version of record is available and require extra work by publishers.
2. Information on current methods of linking to publisher full text from PMC for both Author Manuscripts and final versions of articles and a recommendation that the DOI be used to link to publisher full text. If publishers do not take action there will no links back to publisher full text from PMC.
3. Some background information on the NIH Public Access Mandate and the use of PMCID.

Recommendation on use of DOIs by PubMed Central

CrossRef recommends that its members contact PubMed Central (PMC) directly to request that in addition to the current methods used for linking on PMC DOIs be activated as links in an **automated way** to create persistent links to the publisher version of record of journal articles. The simple question to ask PMC is: “**Why not just automatically link DOIs?**” PMC says that it wants publisher direction on how to link to published content. Almost all articles in PMC already include the DOIs and it would require very little effort from PMC and **no** effort from publishers to automatically make the DOIs active links. Since publishers have invested a lot in setting up CrossRef to ensure that DOIs are persistent links it seems wasteful that the DOIs are not linked on PMC.

In addition, the publisher link should be clearly labeled as a link to the publisher version of record (which PMC does for Author Manuscripts but not for final versions of articles). The suggested text is:

The publisher version of record is available at [DOI link to the publisher’s site in the form
<http://dx.doi.org/doi#>]

The current linking methods used on PMC to link to publishers’ sites are cumbersome and require specific action by publishers. For example, the only way to link to the publisher site from the final version (as opposed to an Author Manuscript) of an article on PMC is via the image at the top of the page as shown in this example - <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=2254226>. The image at the top of the page links to the table of contents page for the journal issue and not to the specific article. The publisher can provide a link to the article in the image file (see more detailed technical information below) as seen in this example - <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=2253615>. However, the linking to the publisher version of record of the article is not prominent and the reader is unlikely to be aware that the link goes to the publisher version of the content.



Providing easy access from the PMC version to the publisher version is necessary to give the reader the option to get to the publisher version of record for citation purposes, for accessing additional features and functionality in the context of the publisher's site and for verifying if there have been any post publication events such as corrections or retractions.

Publishers have invested a lot in CrossRef in order to create an effective system of unique identification and persistent links and PMC should take advantage of this. CrossRef has contacted PMC about this but it is important that CrossRef members raise these issues with PMC independently.

Information on Linking to Publisher Full Text from PMC Author Manuscripts

Links to publishers on [Author Manuscripts](#)

(example: <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=2377029>) in PMC are pulled in from PubMed's [LinkOut service](#) (<http://www.ncbi.nlm.nih.gov/projects/linkout/>). To add links to the LinkOut service requires that the publisher register with PubMed and provide linking files. Information about LinkOut can be found in these help files -

<http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=helplinkout.chapter.ft>

The link to full text is defined in the "resource file" and the DOI can be specified as the full text link.

Example: Create URLs following the pattern: [http://dx.doi.org/id=\[DOI\]](http://dx.doi.org/id=[DOI])

<Base><http://dx.doi.org/></Base>

<Rule>&lo.doi;</Rule>

It is important to note that publishers must send DOIs to PubMed as part of the electronic record for an article. The LinkOut help states "NCBI does not input DOI or PII in PubMed records; to create links using PII or DOI, these values must be included when the record is submitted electronically." Publishers must submit article metadata to PubMed using the PubMed article DTD (<http://www.ncbi.nlm.nih.gov/entrez/query/static/PubMed.dtd>) and must specify the DOI in the ELocationID element."

<!ELEMENT ELocationID (#PCDATA)>

<!ATTLIST ELocationID

EIdType (doi | pii)

CrossRef recommends that the DOI for the article be used as the linking mechanism. This will ensure persistent links.

Information on Linking to Publisher Full Text from PMC Final Versions of Articles

In cases where PMC has the [final version of an article](#) (example:

<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1852252>) in PMC the journal image at the top of the page can be linked to the journal homepage and can have a "Original Article" link to the publisher's site as in the example linked to above. The publisher has to sign up with PMC for specifying the header graphic and the links. The PMC instructions (<http://www.pubmedcentral.nih.gov/pmcdoc/pubsetup.doc> - Word document) say "The static base (e.g. <http://dx.doi.org/>) of the URLs for this link comes from the HTML template." PMC then dynamically completes the URL by adding any item in the XML (such as the



DOI). The example above uses the DOI to link by specifying <http://dx.doi.org/> as the “static base” of the URL.

If the publisher just submits a simple image for the banner at the top of the page **there will be no link to the publisher full text.**

CrossRef recommends that the DOI for the article be used as the linking mechanism. This will ensure persistent links.

Background

The [NIH Public Access Policy \(http://publicaccess.nih.gov/\)](http://publicaccess.nih.gov/) has now come into effect for articles published based on NIH grant funded research. There are aspects of this that are important to many CrossRef member publishers. The information on the NIH website states that “As of May 25, 2008, NIH applications, proposals, and progress reports must include the PubMed Central reference number when citing an article that falls under the policy and is authored or co-authored by the investigator, or arose from the investigator’s NIH award.”

IN addition, the NIH Public Access Policy makes it mandatory that the author’s final peer-reviewed version of the article is deposited with PubMed Central (either by the author or by the publisher). Publishers, at their discretion, may make the final published version of record available to PubMed Central.

The CrossRef board believes it is important to use the DOI to provide readers a persistent link to the final publisher version of record at the publisher’s site. This will enable users to cite the version of record, access additional features and functionality and check if there have been on post-publication events such as corrections or retractions.

PubMed Central’s current practice is to include the DOI assigned to an article as part of the bibliographic information for the article **but the DOI is not linked.**

PMCID (PubMed Central Identifier)

The NIH Public Access Mandate calls for the PMCID to be used in NIH applications, proposals and progress reports and the PMCID is displayed on all articles in PMC. The PMC website provides examples of citations with the PMCID:

Varmus H, Klausner R, Zerhouni E, Acharya T, Daar A, Singer P. 2003. PUBLIC HEALTH: Grand Challenges in Global Health. *Science* 302(5644): 398-399. PMCID: 243493

While the requirement to use the PMCID applies to NIH applications, proposals and progress reports rather than for citations in journal articles it is likely that the PMCID may be adopted more widely to cite articles even though PubMed Central may only have the author’s accepted manuscript and not the final publisher version of record. For this reason it is very important that publishers use DOIs as the main linking mechanism in PMC and also petition PMC to change how it handles DOIs and linking to publishers’ versions of articles.