DOI Project¹

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Early last year, a project initiated by the NEC was begun to add digital object identifiers (DOIs) to all articles published in our journal, JASMR, as well as to back issues and to all the Proceedings of past conferences. A program was run to search existing databases for articles that have had DOIs established. This was a gigantic process, and there are likely articles cited by authors in JASMR or the Proceedings that didn't have DOIs at the time the program was run.

What is a DOI and how does it function? A digital object identifier (**DOI**) is a type of persistent identifier used to uniquely identify objects. DOIs are in wide use mainly to identify academic, professional, and government information, such as journal articles, research reports and data sets, and official publications, though they also have been used to identify other types of information resources, such as commercial videos. A DOI is a permanent identifier given to a Web file or other Internet document so that if its Internet address changes, users will be redirected to its new address. The editor of a journal, such as JASMR, can submit a DOI to a centrally-managed directory and then use the address of that directory plus the DOI instead of a regular Internet address. The DOI system was conceived by the Association of American Publishers in partnership with the Corporation for National Research Initiatives and is now administered by the International DOI Foundation. Essentially, the DOI system is a scheme for Web page redirection by a central manager.

The DOI assigned for our publications is an unique prefix number, 10.21000. The technical term is called a Uniform Resource Locator and directs the user to our Web page (www.asmr.us). This locator is followed by an identifier for the journal, in our case /JASMR. These two items appear in all of the DOIs for articles that we have published or will publish in the future. The manager of publications, in our case the Editor-In-Chief (me), then established a system to identify individual articles. I selected a system of identification after reviewing several examples for

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various journals. In our case, JASMR follows the identifier to become as an example: 10.21000/JASMR16020001. The numbers that follow JASMR indicate that this article was published in 2016 (16), the second issue (02), and the first page of this article starts on page 1 (0001). Once a DOI is established, it is submitted to a foundation and in our case this is CrossRef. Then a link is created for this article <http://dx.doi.org/10.21000/jasmr16020001> and if one clicks on this number you will be directed to an article, and in this case by J. M. Bauman titled “METALS IN SOIL AND AMERICAN CHESTNUT TISSUE IN EXPERIMENTAL SOIL TREATMENTS PLOTS ON A COAL MINE RECLAIMED SITE.”

Usually, the complete “http” is not given in the footnotes of an article in a journal, because the reader is already on that publication. Where the DOI is most useful is in finding an article that was cited by the author so that the reader can review that particular reference. In the above example, Ms. Bauman cited an article by Skousen et al., 2011. This was published in our Proceedings and the link is <http://dx.doi.org/10.21000/jasmr11010591> and by clicking on that link the reader is directed to the particular article by Skousen.

Not all articles have DOIs for a few reasons.

- 1) A journal has not been assigned a DOI. Why might this be the case? DOIs are not free! A charge of \$100 was made to us for the initial locator. Fortunately, non-profit organizations pay a lower rate. A cost is levied for each individual article as well, and we are charged \$1.00 for each of these listings. When I started to consider listing the Conference Proceedings, because each meeting had its unique publication or name assigned as a theme, each would have had the indicator cost, and since we had 28 meetings prior to JASMR we would have had an additional cost of \$2,800. However, I was able to avoid this cost for two reasons: one was associated with our name change from ASSMR to ASMR; and the second was because the Conference Proceedings are linked to the Society and not to the individual editor or location of a given Proceedings. Otherwise, that editor would have had to enter the articles and I pointed out that not all of these individuals are living.
- 2) I learned in the process of searching for the “http” links, a few were incorrectly entered. In these cases, the author of the article may not have the citation entered correctly. This could

have been a typo of the year or page number. I spent a considerable amount of effort to try to correct these errors.

- 3) Another reason for the lack of a DOI for an article is that the journal is no longer being published, hence no one to enter this information and/or pay the associated costs. There are at least two such journals that were once outlets for reclamation papers.
- 4) Books, articles, or chapters within books usually do not have assigned DOIs. I believe larger more affluent Societies have begun to assign DOIs to the books they publish.
- 5) Back issues of either Journals or Proceedings have or were not entered. Periodically, I plan to review the status of citations within JASMR for DOIs that were not available at the time I first began this project.
- 6) There are a few larger or long standing publications that have not chosen to participate in entering DOIs. These cases are similar to JASMR, as we only began to participate in 2016.

If you review the various articles in either JASMR or the Proceedings, you will find that a new method of entry of citations of articles in the Proceedings is to be used. An example is as follows: Ries, R.E. 1993. Historical Prospective of Ecological Reclamation. Proceedings American Society of Mining and Reclamation 1993 pp 3-13. <http://dx.doi.org/10.21000/jasmr93010003> . Note due to my error in method of entry of the Proceedings, the year of the publication occurs two times, once after author and again after the word Reclamation. Even with this minor error in the usual convention of citing articles, the link still directs the reader to the correct paper. Currently, only a few authors in JASMR cite papers in the Proceedings and if they do not use the procedure above, I will hopefully correct these changes.

ASMR has published many abstracts over the years, however, largely due to the costs, DOIs were not assigned to abstracts. Likely for the same reason, in a rather brief search, I didn't see where any other Society assigned a DOI to an abstract.

It should be noted that ASMR decided to link to the entire article. Some Societies have chosen to link to only the abstract portion of an article. For those cases, if a reader would like to see the entire article, a charge for that privilege must be paid. In some cases, it is to the Society and in other cases it is to a third party.

You will find when you open an article in most of the issues of JASMR prior to what will occur in 2017 and most of the Proceedings, there are what appears to be three-way links to cited papers. One has a Red box around the “http,” another the “http” is in RED letters, and the other the “http” is in B & W. Basically, there is no difference, this is the result of how the agency (CrossRef) chose to have the information entered.