U01-22	Room:419	Time:May 1 17:05-17:20

Recent activity of DOI-minting to database by WDCs in Japan

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Recent electronic journals are published with DOI (digital object identifier) such as doi:10.1029/2012SW000785. DOI is a persistent name that is resolved into URL, where readers can obtain digital objects of the journal articles; for example, abstract, figures, and pdf files. The DOI system was launched around 2000 and becomes popular these days so that DOI is ordinarily indicated in references and citations.

The next development of the DOI system is to extend it to database. It makes possible for researchers to cite the data used in a scientific publication, which is called "data citation". Data citation provides the following benefits:

• Readers can more easily locate the data used in the paper, obtain necessary information of the data (i.e., metadata), and validate the findings of the paper.

• Readers can also easily discover datasets which are relevant to their interests but has not been noticed.

• Data contributors can gain professional recognition and rewards for their published data in the same way as for traditional publications.

• Data centers can measure the impact of individual datasets and receive proper credit of their work.

Recognizing the importance of data citation, World Data Centers (WDCs) in Japan including WDC for Aurora (National Institute of Polar Research), WDC for Geomagnetism (Kyoto University), WDC for Ionosphere and Space Weather (National Institute of Information and Communications Technology), and WDC for Space Science Satellites (Japan Aerospace Exploration Agency) started discussion to mint DOI to their own database in August 2013. The discussion finds that Japan Link Center (JaLC) is a proper agency to register DOI-URL mapping, because JaLC aims at public information services to promote science and technology in Japan and it handles scientific and academic metadata and content from holders nationwide, including national institutes, universities. Two representatives of the above 4 WDCs are working closely with JaLC to define a registration scheme to implement the DOI-URL mapping. We are also developing a web-based system to register metadata with JaLC and create landing pages for database. We expect to start a pilot program to mint DOI to the database from the middle of 2014.

Keywords: DOI, Database, Data Citation, Data Publication