

[ESDIS DOI System, Approach, and Future Direction](#) [1]



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Abstract:

NASA's Earth Science Data and Information System (ESDIS) Project began investigating the use of Digital Object Identifiers (DOIs) in 2010 with the goal of assigning DOIs to all data products managed by the Earth Observing System Data and Information System (EOSDIS). These data products are archived and distributed by various Distributed Active Archive Centers (DAACs) located across the United States. Each data center has a unique approach and process for generating and archiving a variety of data products that are used for global change research. These varied approaches present a challenge for developing a DOI solution that fits all the possible variations. To address this challenge, ESDIS developed processes, guidelines, and several models for creating and assigning DOIs. Initially the system was started as a prototype approach but is now fully operational. In February 2012, ESDIS joined the California Digital Library (CDL) EZID as a registrar for DOIs.

ESDIS's DOI operational process allows for the reserving of DOIs before formally registering them with EZID. This flexibility allows data providers to embed and test the DOI in the data product metadata before the product has been published. Data providers can change any DOI metadata, including the DOI name as long as it has not been registered or reserved by another data provider. ESDIS assures the uniqueness of the DOI names before it is registered. Currently, ESDIS has 200 data product DOIs registered with EZID and data providers have reserved an additional 145 DOIs with ESDIS. A semi-automated approach is being developed for processing and validating the DOI information provided by the data providers and will cover all the steps from the collection to the registration of DOIs.

ESDIS's DOI concept utilizes a few mandatory metadata elements that effectively identify the data products and the source of availability. Of these elements, the Uniform Resource Locator (URL) attribute has the very important function of identifying the landing page that has the data product description. Even though the development and maintenance of DOI landing pages would be the responsibility of the DAACs, ESDIS in consultation with the data providers is currently developing the landing page guidelines that specifies the key data product descriptive elements to be included on each data product's landing page.

This poster will describe in detail the unique process and system currently implemented by ESDIS for registering DOIs as well as the future directions of the ESDIS DOI system/process.

Collaboration Area: [Preservation and Stewardship](#) [3]

Attachments for download:  [ESIP2014_doi_poster.pdf](#) [4]

Author(s):

Name: [Nathan James](#) [5]

Organization(s): [NASA ESDIS](#) [6]

Email: nate.james@nasa.gov [7]

Name: [Lailit Wanchoo](#) [8]

Organization(s): [NASA](#) [9]

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