

Digital Object Identifier (DOI)

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Metadata and Persistent Identifiers
for Social Science Data
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Digital Object Identifier (DOI)

1998 Founding of the **International DOI Foundation (IDF)**.

There are currently 9 **DOI Registration agencies (RA)**.

DOI is a trademark.

DOI is technically based on the Handle system, the IDF adds central administration.

ISO standard Working group 26324. (FDIS approved in 2010, should be published pretty soon)

Structur DOI Names

doi: 10.[prefix] / [Handle Local Name]

[prefix] or Handle Naming Authority (NA): Number assigned by RA.

The unique prefix-mapping allows the worldwide Resolution of DOI Names.

[Handle Local Name] has to be a unique (Production-) string/number.

DOI Model

The RA is responsible for Assignment and maintenance of the Identifiers.

Each RA has its own business model (profit or non-for-profit).

The RAs finance the IDF, whose goal is to maintain the DOI system and to set standards and workflows. The technical administration lies in the hands of CNRI.

Facts

Almost 60 Million DOI names have been assigned globally. (Over 90% are for scholarly articles)

Registration Agencies:

- | | |
|---|----------------|
| • CrossRef (scholarly publishing) | 53,809,024 DOI |
| • DataCite (broadly datasets) | 1,311,730 DOI |
| • ISTIC (Chinese publications) | 1,798,683 DOI |
| • EIDR (Film industry) | 263,525 DOI |
| • OPOCE (Publishing unit of the EC) | 620,532 DOI |
| • <i>m</i> EDRA (scholarly publishing) | 496,988 DOI |
| • Bowker (service provider, DOI-ISBN linking) | 801,633 DOI |
| • Ariti (Traditional Chinese materials) | 71 DOI |
| • Japan Link Center (Japanese publications) | 0 DOI |

Citation

Whereas a persistent identifier identifies a resource permanently through the time of its existence, the use-case for a DOI name is: **citability**

DOI names were introduced to allow persistent referencing between journal articles and to trace these references.

This is guaranteed through the existence of the IDF as a central authority, the usage of contracts and agreements between the IDF and the RA, and between the RA and its customers.

Citation

The dataset:

Storz, D et al. (2009):

Planktic foraminiferal flux and faunal composition of sediment trap L1_K276 in the northeastern Atlantic.

<http://dx.doi.org/10.1594/PANGAEA.724325>

Article:

Storz, David; Schulz, Hartmut; Waniek, Joanna J; Schulz-Bull, Detlef; Kucera, Michal (2009): *Seasonal and interannual variability of the planktic foraminiferal flux in the vicinity of the Azores Current.*

Deep-Sea Research Part I-Oceanographic Research Papers, **56(1)**, 107-124,

<http://dx.doi.org/10.1016/j.dsr.2008.08.009>

DataCite

Global consortium carried by local institutions
focused on improving the scholarly infrastructure
around datasets and other non-textual
information

focused on working with data centres and
organisations that hold data

Providing standards, workflows and best-practice

Initially, but not exclusively based on the DOI system

Founded December 1st 2009 in London

DataCite members

Technische Informationsbibliothek (TIB)
Canada Institute for Scientific and Technical Information (CISTI),
California Digital Library, USA
Purdue University, USA
Office of Scientific and Technical
Information (OSTI), USA
Library of TU Delft,
The Netherlands
Technical Information
Center of Denmark
The British Library
ZB Med, Germany
ZBW, Germany
Gesis, Germany
Library of ETH Zürich
L'Institut de l'Information Scientifique
et Technique (INIST), France
Swedish National Data Service (SND)
Australian National Data Service (ANDS)
Conferenza dei Rettori delle Università Italiane (CRUI)



Affiliated members:

Digital Curation Center (UK)
Microsoft Research
Interuniversity Consortium for Political and Social Research (ICPSR)
Korea Institute of Science and Technology Information (KISTI)

DataCite's main goals

Act as DOI registration agency

Actively involved in developing standards and workflows
CODATA-TG, STM, ICSTI, Data citation index

Central portal allowing access to the metadata from all registered objects. (OAI)

Community for exchange of all relevant stakeholders in the area access to and linking of data (data centers, publishers, libraries, research organisation, science unions, funders)

DOI Content negotiation Service

Service for displaying metadata of DOI names

Different formats (BibTeX, RIS, RDF, etc.)

Content Negotiation (through MIME-Typ)

- Access through DOI proxy (<http://dx.doi.org>)
- First implemented by CNRI and CrossRef
- Works with CrossRef and DataCite DOI names

Documentation available:

<http://crosscite.org/cn>

Examples

```
curl -L -H "Accept: application/x-datacite+text"  
"http://dx.doi.org/10.5524/100005"
```

⇒ *Li, j; Zhang, G; Lambert, D; Wang, J (2011): Genomic data from Emperor penguin. GigaScience. <http://dx.doi.org/10.5524/100005>*

```
curl -L -H "Accept: application/rdf+xml"  
http://dx.doi.org/10.5524/100005
```

⇒ *RDF-file*

```
curl -L -H "Accept: application/raw" http://dx.doi.org/10.5524/100005
```

⇒ ?

Meet us and discuss with us

- DataCite summer meeting, June 14th, Copenhagen (in conjunction with Nordbib conference „Structural frameworks for open, digital research”, June 11.-13.)
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