

# Member Node Topics: Identifiers

DataONE Member Node Forum  
2016-09-15

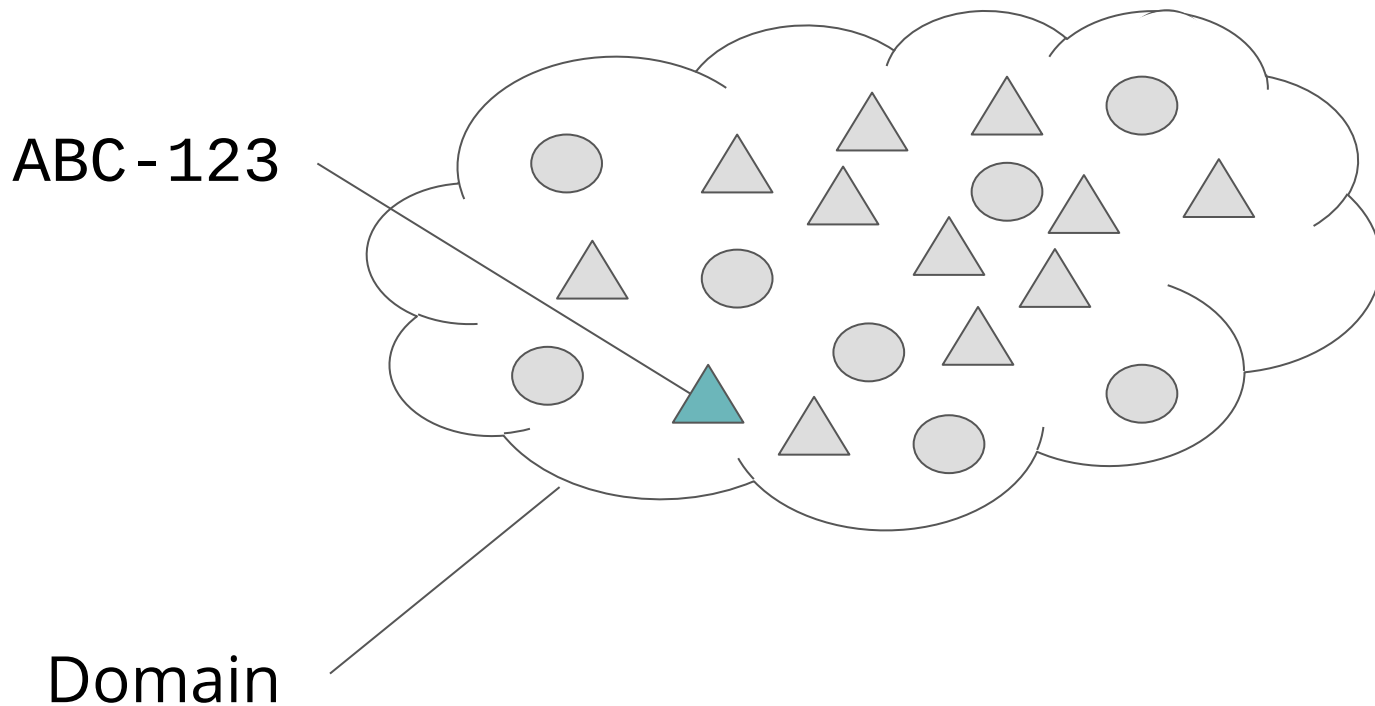
DataONE is a collaboration among many partner organizations, and is funded by the US National Science Foundation (NSF) under a Cooperative Agreement. This material is based upon work supported by the National Science Foundation under Grant Numbers 0830944 and 1430508. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.



# Identifiers

## Overview

Identifiers are used to identify something within a collection of things



# Identifiers

## Overview

Many identifier schemes in use:

DOI      Digital Object Identifier

ARK      Archival Resource Key

LSID      Life Sciences Identifier

UUID      Universally Unique Identifier

LSRN      Life Science Resource Name

*DataONE:*

Character string with no whitespace, less than 800 characters, and unique in DataONE

# Identifiers

## Application Programming Interfaces

Many DataONE API methods require an identifier

`resolve( ID ) -> Object Locations`

`getSystemMetadata( ID ) -> Sys Meta`

`get( ID ) -> object bytes`

# Identifiers

## Escaping

Identifiers as parameters in URLs must comply with rules for URL construction ([RFC 3896](#))

PID = @some/reserved\$characters!



%40some%2Freserved%24characters%21

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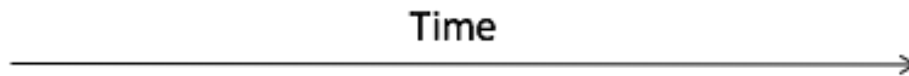
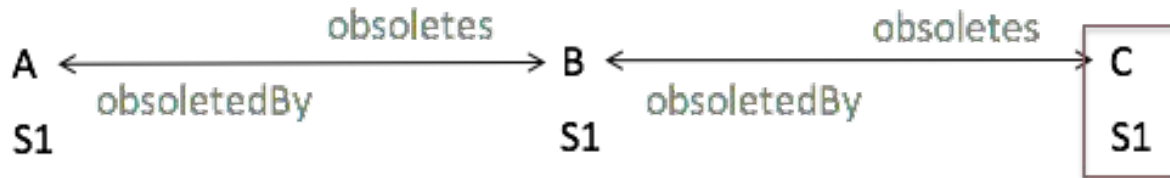
%40some%2Freserved%24characters%21

cn.dataone.org/cn/v1/resolve/%40some%2Freserved%24characters%21

# Identifiers

## Series Identifiers (SIDs)

An identifier for the latest version of a series



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An identifier for the latest version of a series





# Identifiers

## **PIDs and SIDs**

Persistent Identifiers (PIDs):

Always resolve to exactly the same object

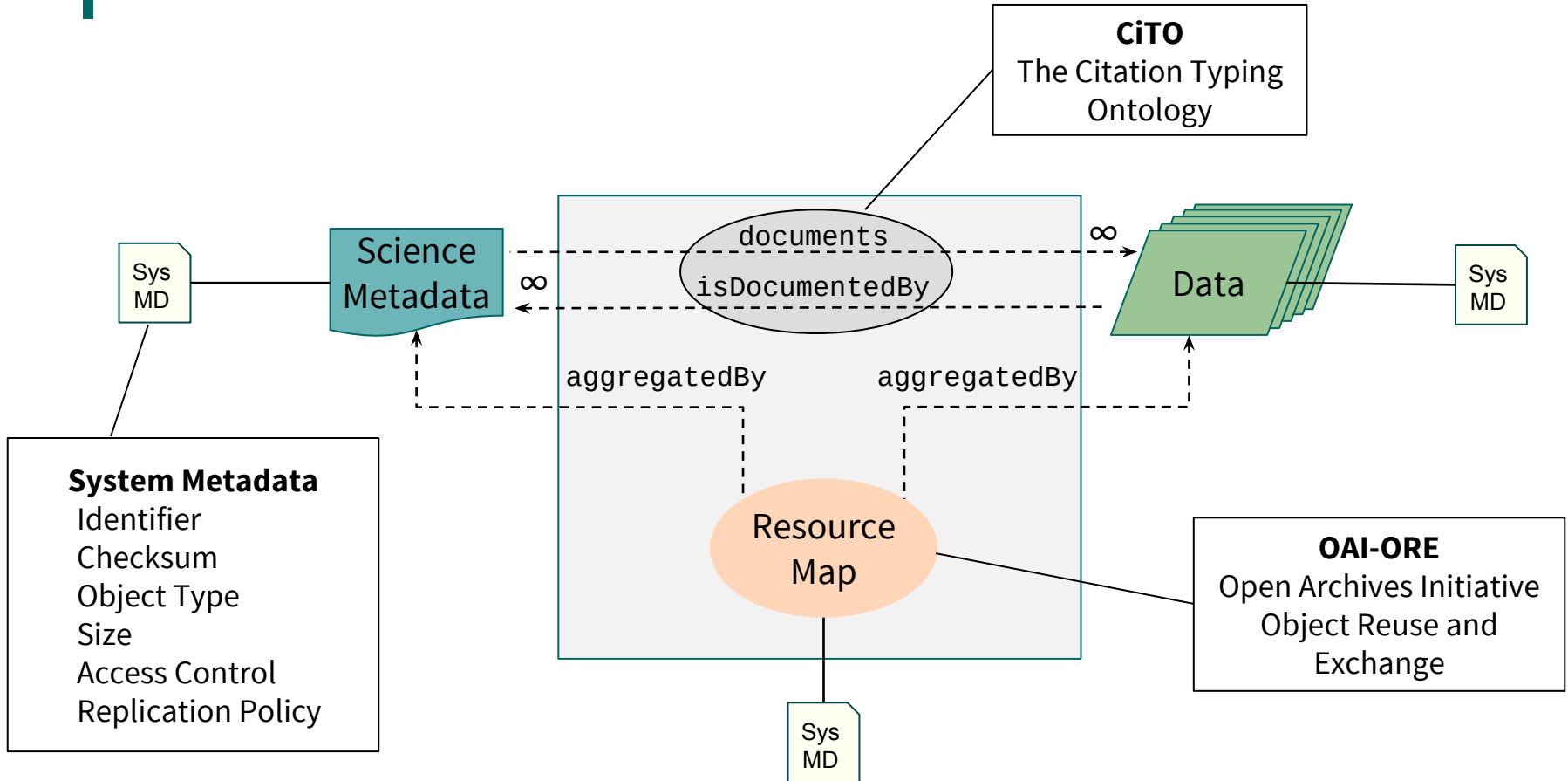
Series Identifiers (SIDs):

Always resolve to the latest version

- Share the same domain -> MUST be unique
- API methods are PID / SID agnostic
- Examine System Metadata to distinguish

# Identifiers

## Objects and Packaging



# Identifiers

## Search User Interface

About News Participate Resources Education Data

DATAONE SEARCH:  Summary Jump to: DOI or ID Go

**Search** ?

**Filter by:**

- ▶  Data attribute
- ▶  Data files
- ▶  Member Node
- ▶  Creator
- ▶  Year
- ▶  Identifier
- ▶  Taxon
- ▶  Location

**2016. Physical trajectory profile data from glider sp011 deployed by University of California - San Diego; Scripps Institution of Oceanography in the Coastal Waters of California from 2016-06-02 to 2016-09-06 (NCEI Accession 0156569).** NOAA NCEI Oceanographic Data Archive. {3E5AAC51-1570-4DDD-82F1-02325B11B1BC}.

**2016. Physical trajectory profile data from glider sp039 deployed by University of California - San Diego; Scripps Institution of Oceanography in the Coastal Waters of California from 2016-02-18 to 2016-09-06 (NCEI Accession 0156570).** NOAA NCEI Oceanographic Data Archive. {47B3BF61-847C-458E-AD78-A8810433DC05}.

**David Lindenmayer and Director of National Parks (Parks Australia). 2014. Jervis Bay Booderee National Park Plot Network: Spotlight Surveys, Booderee National Park, Jervis Bay Territory, 2013.** TERN Australia. [www.tern.org.au/knb/metacat/tern2.105.24/html](http://www.tern.org.au/knb/metacat/tern2.105.24/html).

**David Lindenmayer and David Blair. 2016. Victorian Tall Eucalypt Forest Plot Network (Victorian Central Highlands Monitoring Project): Tree Fern Growth Study, Victoria, Australia, 2014.** TERN Australia. [www.tern.org.au/knb/metacat/tern4.42.18/html](http://www.tern.org.au/knb/metacat/tern4.42.18/html).

**Daniel J. Metcalfe and Eric Vanderduys. 2015. Desert Uplands Plot Network: Vegetation Survey (Presence Data, Species Richness and Stem and Hollow Counts) for Plot WOUR15, Northern Queensland, Australia, 2013.** TERN Australia. [www.tern.org.au/knb/metacat/tern2.1007.6/html](http://www.tern.org.au/knb/metacat/tern2.1007.6/html).

Hide Map »

	4053	19	3	5	
5	1727	171		7	1
2	525	231	66	5	3
4	120	156	91	7	259
	44	85	1621	506	267
	40	34	9087	4368	3423
	39	75	418	38135	4336
	34	119	186	3809	6176
7	83	160	19	52	56
3	224	19	11	29	65
	9	19	11	17	45
	17	24	17	20	28
	26	58	35	35	56

# Identifiers

## Generating and Reserving

Coordinating Node methods:

- [reserveIdentifier](#)

POST /v2/reserve

Reserves an identifier for future use

- [generateIdentifier](#)

POST /v2/generate

Creates a new identifier UUID scheme

DOI generation coming

# Identifiers

## e.g. Generate Identifier

CN [generateIdentifier\(\)](#) method

```
import requests
URL = "https://cn-dev.test.dataone.org/cn/v2/generate"
p = requests.post(URL,
                  cert="/tmp/x509up_u501",
                  data={'scheme': 'UUID'})
print( p.text )
```

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<identifier
xmlns="http://ns.dataone.org/service/types/v1">
  urn:uuid:b8e0f0be-fd30-481c-8cbb-c5bdd1d4a4ca
</identifier>
```

# Technical Resources

## Education

- [purl.dataone.org/architecture](http://purl.dataone.org/architecture)
- [...architecture/design/UseCases/06\\_uc.html](http://...architecture/design/UseCases/06_uc.html)
- [dataone.org/previous-webinars](http://dataone.org/previous-webinars)

## Communications

- [mnforum@dataone.org](mailto:mnforum@dataone.org)
- [developers@dataone.org](mailto:developers@dataone.org)
- [#dataone](http://irc.ecoinformatics.org)

## Sources

- [repository.dataone.org/software/cicore](http://repository.dataone.org/software/cicore)
- [github.com/DataONEorg](https://github.com/DataONEorg)

## Tools

- [search.dataone.org...](http://search.dataone.org...) [search-dev...](http://search-dev...) [search-sandbox...](http://search-sandbox...) [search-stage...](http://search-stage...)
- [cn.dataone.org/cn/v2/diag/subject](http://cn.dataone.org/cn/v2/diag/subject) [/sysmeta](http://cn.dataone.org/cn/v2/diag/sysmeta) [/object](http://cn.dataone.org/cn/v2/diag/object)
- Browser, curl, Python, Java libraries
- [examples.dataone.org](http://examples.dataone.org)