#### **Provenance System Overview**

The Provenance Team:

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#### Provenance: time travel in DataONE

Goal: Enable and show reproducible science via
Tracking data inputs and outputs of analyses
Storing and document software
Showing data derivation history for objects

#### Provenance at-a-glance

New first-class objects in DataONE

**Figures** 

Software

Extended Data Package with Provenance information

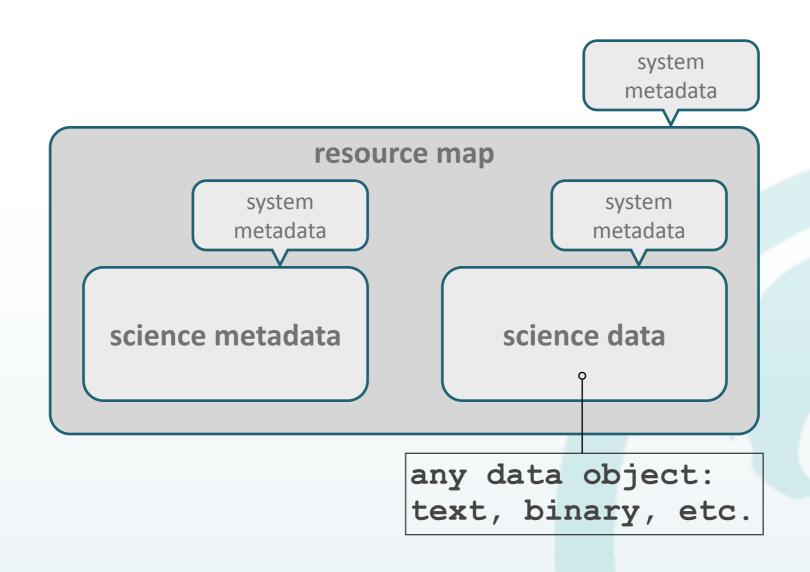
**New Tools** 

Web user interface for browsing provenance

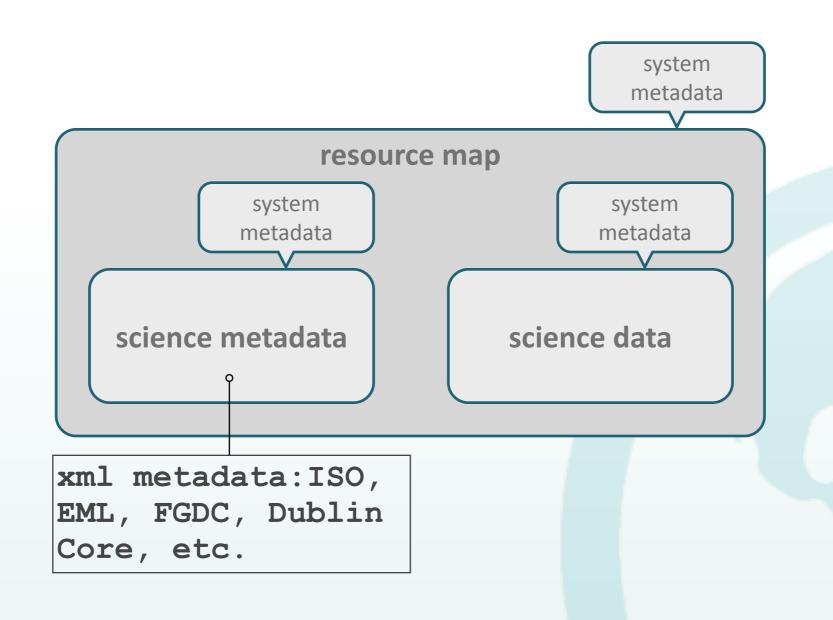
Matlab tool for generating provenance

{R tool for generating provenance}

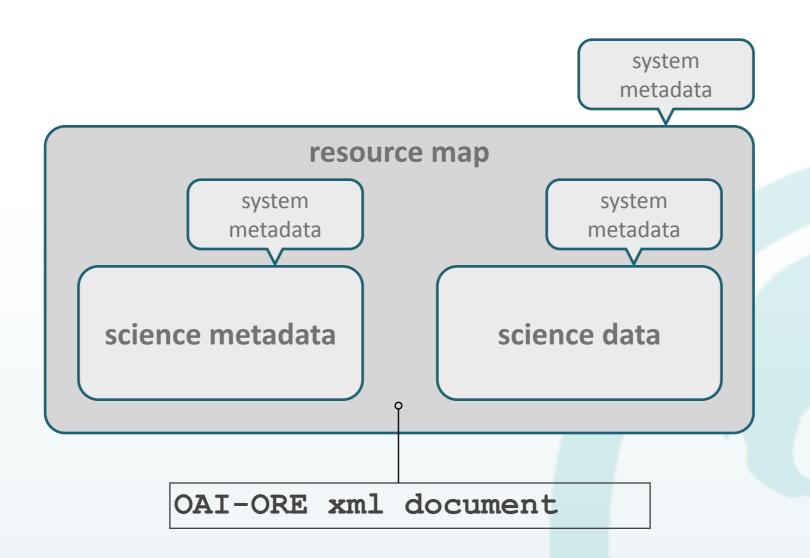
# Data Package: Data



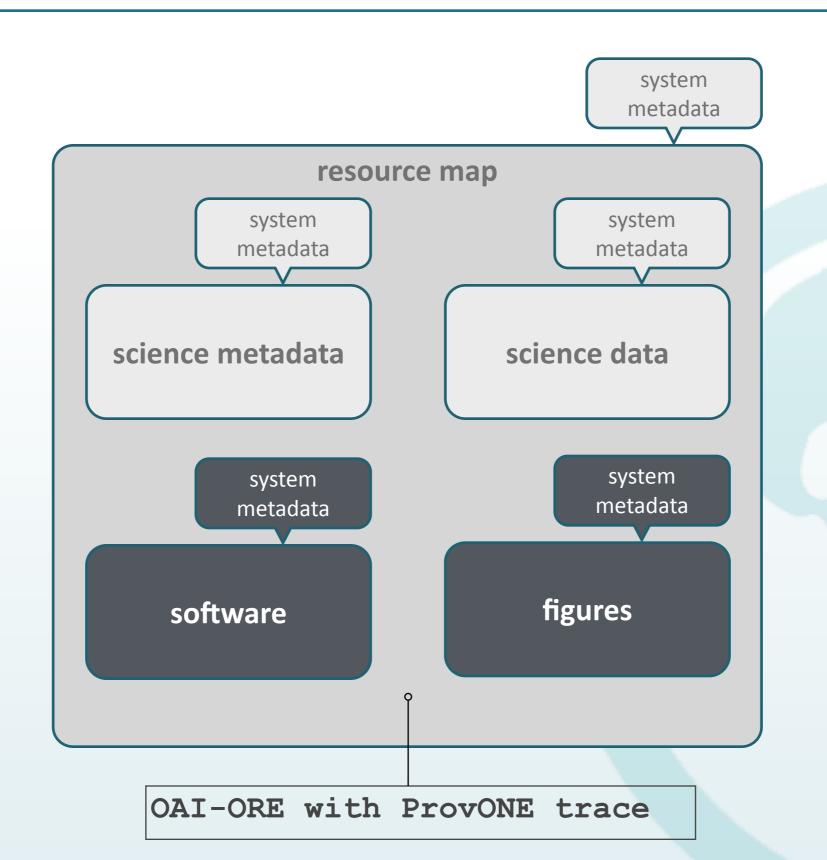
#### Data Package: Metadata



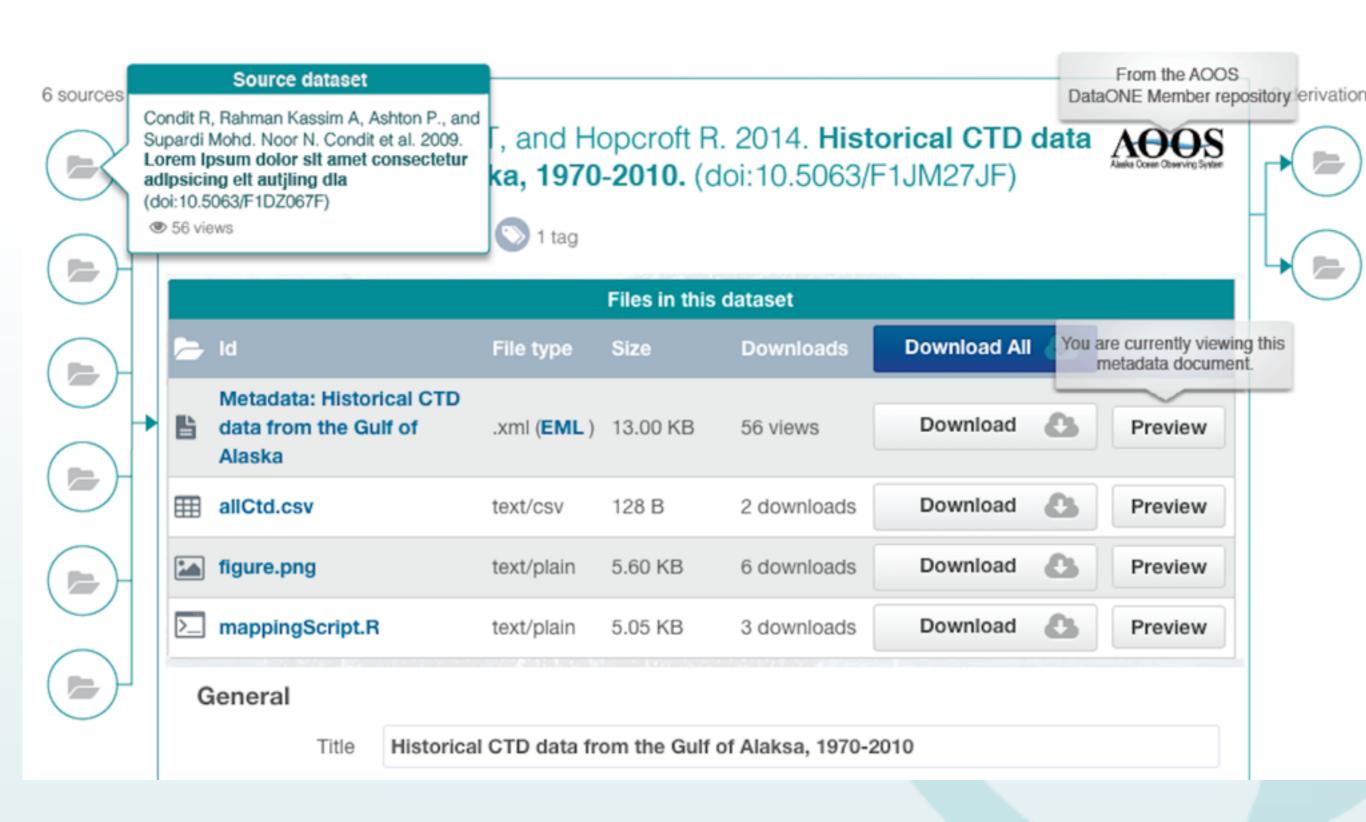
## Data Package: Description



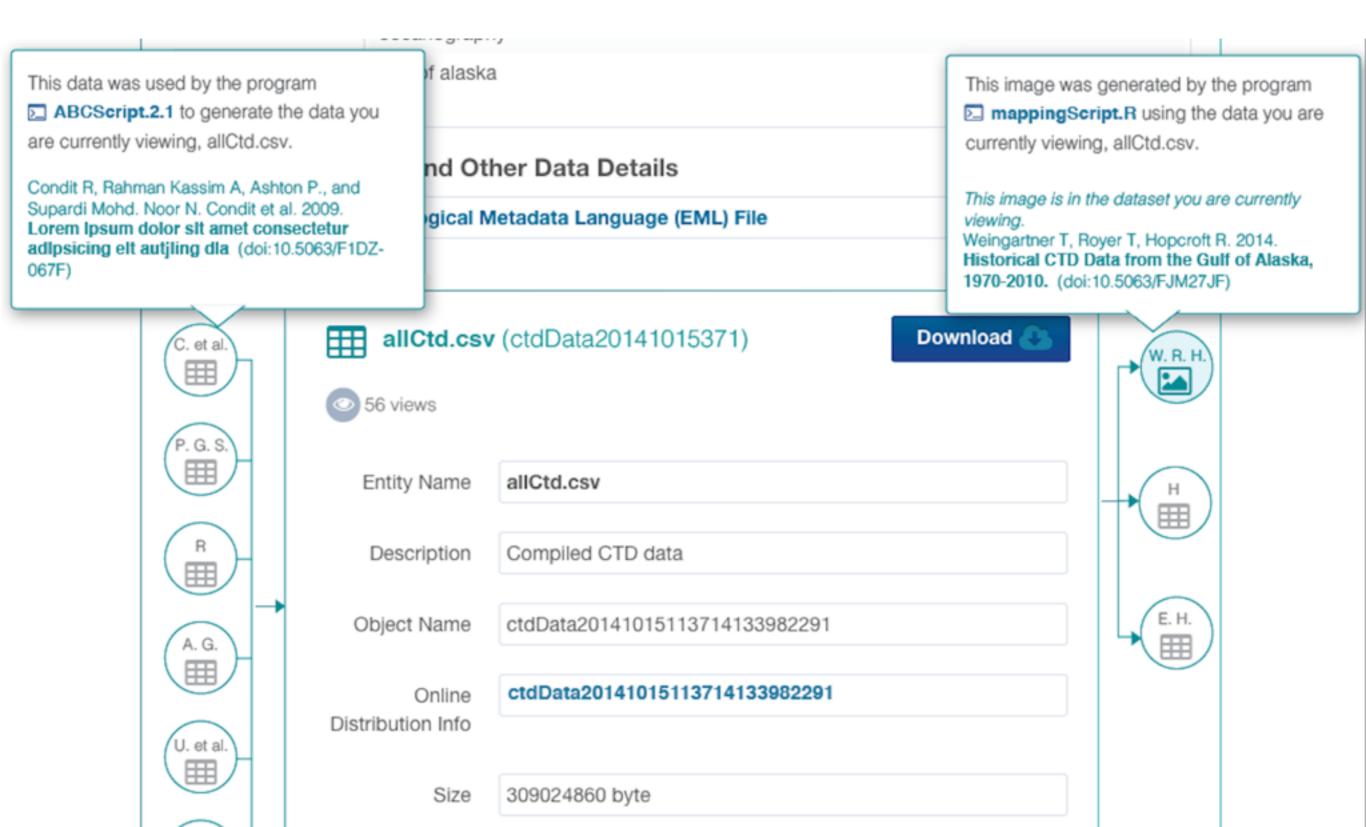
#### New objects, ProvONE trace



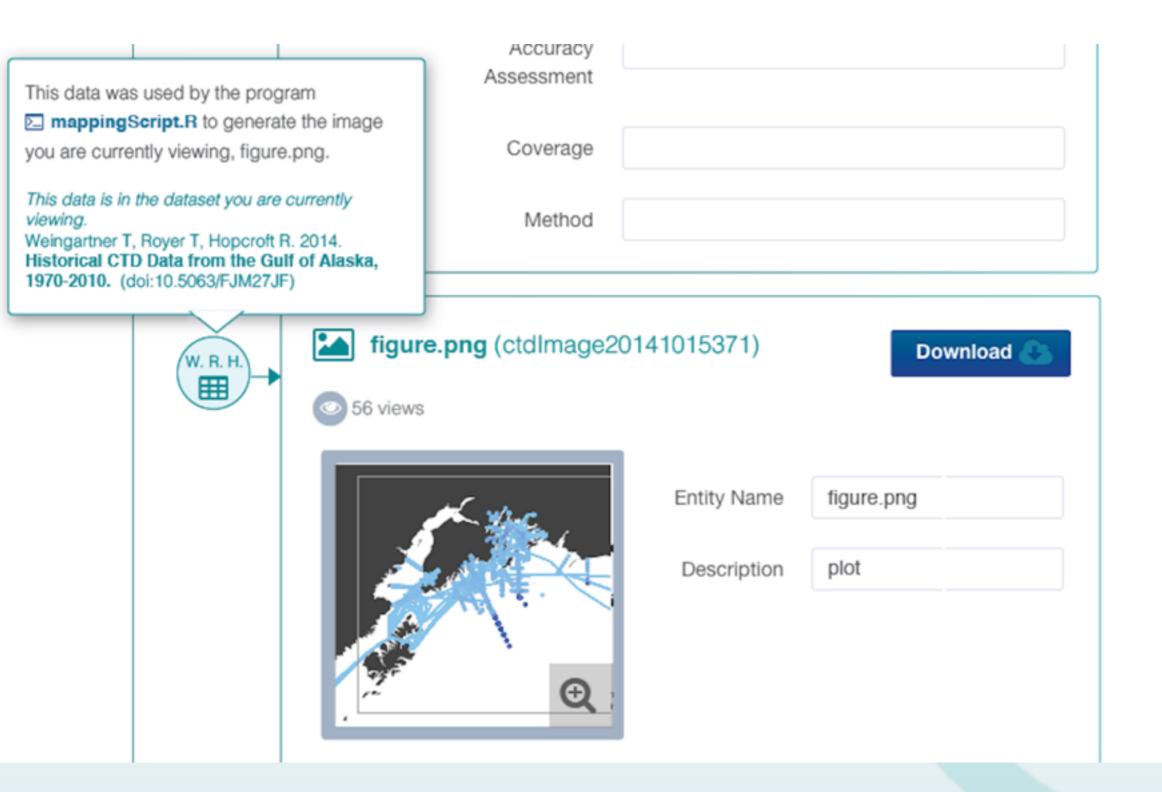
#### Provenance: Package



#### Provenance: Data



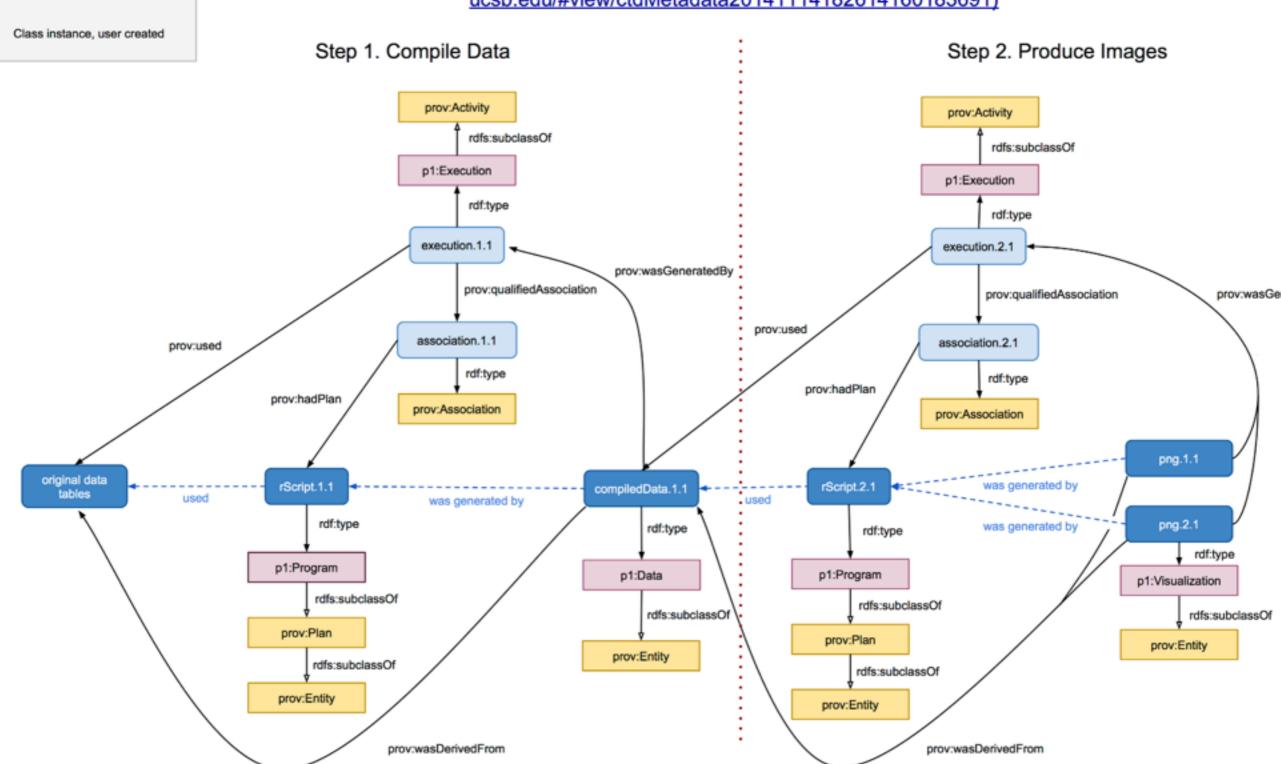
#### Provenance: Figures



# PROV-O Class ProvONE Class Class instance, library created Class instance, user created

#### Example instance graph using the ProvONE model

Based on Couture J. Historical CTD data from the Gulf of Alaksa, 1970-2010 (https://dev.nceas.ucsb.edu/#view/ctdMetadata20141114182614160183691)



# Provenance status (as of Jan 1, 2015)

Design documentation	Completed
Model	Drafted, getting feedback
Indexing and Search	In progress
Web display	In progress
Matlab toolbox	Not started