FundRef: A Funder-Publisher Collaboration

Sharon Jordan
Project Consultant
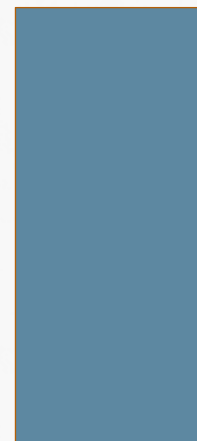
MY [UNIQUE] PERSPECTIVE OF THE VALUE OF FUNDREF

Career-Long Commitment to Ensuring Access to Agency R&D Results

- Federal career with U.S. Department of Energy Office of Scientific and Technical Information: a government "publisher"
- Scholarly articles were an elusive "gap" in coverage
- DOE/OSTI has supported FundRef and believes it is a huge accomplishment

Believer of Collaboration

- Intra-agency, Interagency, and Agency-Publisher
- As consultant to CrossRef, supported FundRef pilot project
- Also consultant to DOE/OSTI via agreement with Information International Associates
- Committed to see FundRef become reality

THE CHALLENGE

Publishing industry lacked standard practices for collecting and displaying funder attribution of research reported in published works.

Funders lacked a way to find and account for research reported in scholarly articles, a key measure of output of their funded research.

This situation made it difficult for all stakeholders (funders, researchers, research institutions, publishers, and the public) to track or analyze published results.

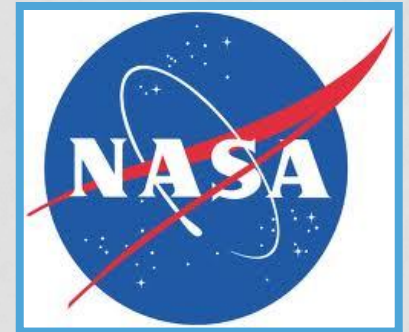A **common solution**, developed through a unique collaboration, is now emerging – called **FundRef.**

PILOT PARTICIPANTS: PUBLISHERS AND FUNDERS

PUBLISHER-FUNDER COLLABORATION

Publishers	Funders
Broad view of research producing publications and sponsoring organizations worldwide	Knowledge of agency-funded research, government programs and policies, and guidance grantees receive
Well-defined publishing systems and peer-review process	Well-defined award systems and research management process
Relationship with authors of manuscripts submitted for publication	Relationship with researchers funded by agency
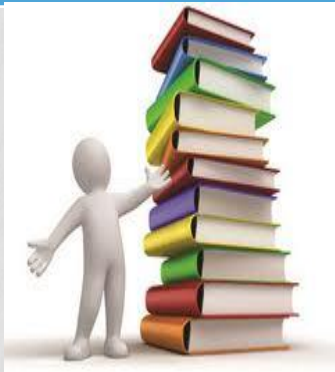
THE FUNDREF PILOT: IN BRIEF

BEGIN

March 2012

March 2013

Finish

- Scholarly publishers and funders worked together to develop a means for capturing **funder name** and **award number in metadata** for published scholarly research.
- Approx 40 staff from 7 publishers and 4 funding agencies, as well as CrossRef as facilitator, contributed to the project.
- The proof of concept was deemed successful.

The pilot project report outlined findings and provided recommendations for going forward. It was presented to the CrossRef Board of Directors in March.

FundRef was approved as a service to be provided by CrossRef.

http://www.crossref.org/fundref/FundRef_Pilot_Project_Report.pdf

KEY ACCOMPLISHMENTS OF THE PILOT

An **industry-wide methodology** for connecting scholarly publications to research funders was designed and demonstrated by the proof-of-concept pilot.

Publishers added **funder name and grant number** metadata and deposited test records to CrossRef.
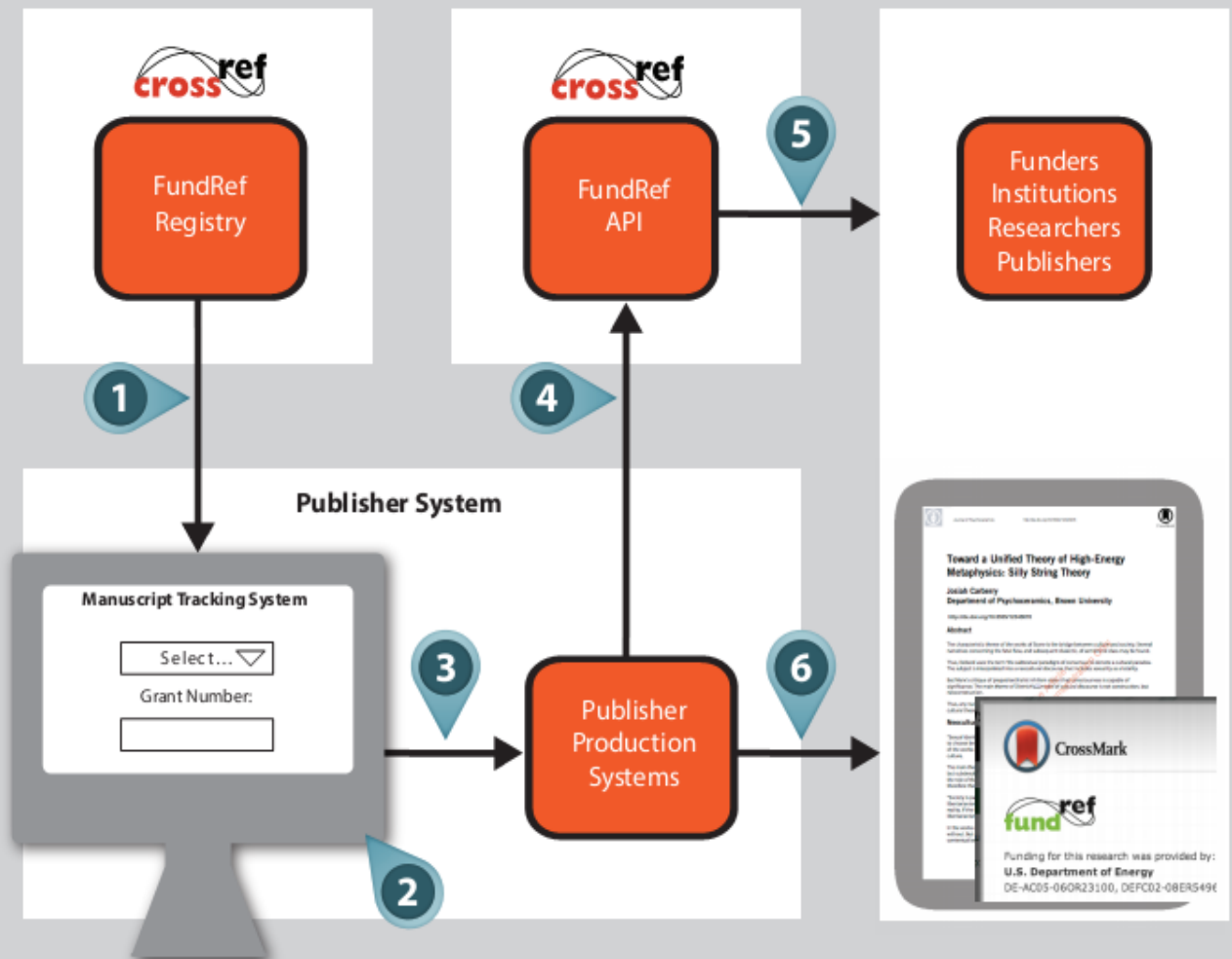
A funder taxonomy (SciVal, contributed by Elsevier) was used to test the capture and display of funding sources. Requirements for a future, ongoing Funder Registry were defined.

In November, the CrossRef Board agreed for CrossRef to run the Funder Registry. A funder search was provided to make FundRef data accessible.

THE FUNDREF WORKFLOW

① FundRef Registry provides standard funder names to publisher submission systems.

② Publishers ask authors to select correct funders and provide grant numbers upon manuscript submission.

③ Funder information transferred to publisher production systems.

④ Publishers send collected funder information in their CrossRef deposits.

⑤ Funders and other stakeholders query FundRef API:
A: Given funder & grant number, return DOIs of publications funded
B: Given DOI, return funder identifiers and grant numbers associated with DOI

⑥ Funding information displayed on publisher PDFs and websites using standard CrossMark UI.

FundRef Registry

FundRef API

Funders Institutions Researchers Publishers

Publisher System

Manuscript Tracking System

Select... ▽

Grant Number:

Publisher Production Systems

CrossMark

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DE-AC05-06OR23100, DEFC02-08ERS496

CROSSREF FUNDER SEARCH RESULTS

(SAMPLE SCREEN SHOT – UNDER DEVELOPMENT)
HTTP://DOI.CROSSREF.ORG/FUNDREFSEARCH

Search for funders by name.

Funder Name   U.S. Department of Energy

[Search]   Download as delimited file: ☑

Get list of funder names

FundRef data

Journal Title	Author	ISSN	Volume	Issue	Page	Year	FundRef Funders	Grant number
Persistent Link								
Article Title								
The Journal of Chemical Physics	Papajak	00219606	137	10	104314	2012	U.S. Department of Energy	DE-FG02-86ER13579
http://dx.doi.org/10.1063/1.4742968							Basic Energy Sciences, Office of Science, U.S. Department of Energy	DE-SC0001198
Thermochemistry of radicals formed by hydrogen abstraction from 1-butanol, 2-methyl-1-propanol, and butanal								
Physics of Plasmas	Heinrich	1070664X	19	8	083702	2012	National Science Foundation	PHY-0903808, PHY-0923141
							National Aeronautics and Space Administration	NNX10AR54G
http://dx.doi.org/10.1063/1.4742992							U.S. Department of Energy	DE-FG01-04ER54795
Secondary dust density waves excited by nonlinear dust acoustic waves								
Physics of Fluids	Murray	10706631	24	8	083303	2012	National Aeronautics and Space Administration	NNX09AD07A
http://dx.doi.org/10.1063/1.4744987							U.S. Department of Energy	DE-FC26-07NT43098
Continuum representation of a continuous size distribution of particles engaged in rapid granular flow								
Journal of Applied Physics	Kathan-Galipeau	00218979	112	5	052011	2012	National Science Foundation	DMR-00-0805174
							U.S. Department of Energy	DE-FG02-07ER46417
http://dx.doi.org/10.1063/1.4746081							Basic Energy Sciences, Office of Science, U.S. Department of Energy	DE-SCOO02334
Direct determination of the effect of strain on domain morphology in ferroelectric superlattices with scanning probe microscopy								

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RECOMMENDATIONS FOR FUNDREF: PATH FORWARD

- Institute FundRef as a cross-industry initiative
  - **CrossRef:** Coordinate and manage FundRef; maintain Funder Registry; include FundRef data in various apps; formally charter the advisory group

- Begin implementation
  - **Publishers:** modify systems to collect and display funder information metadata; deposit as part of regular deposits to CrossRef
  - **Funders:** educate grant recipients about FundRef; explore ways to use FundRef data and DOIs
  - **Authors:** Supply complete and accurate funder name(s) and award number(s)

INTENDED BENEFITS
FOR VARIOUS CONSTITUENTS

Authors	Choose from a standard set of funder names at article submission.
Researchers	View funding information in a standard way across publishers to help them evaluate scholarly content.
Research Institutions	Track articles reporting work of their researchers as well as the funders supporting them.
Publishers	Track the funders driving the content in their journals.
Funders	Better demonstrate the scholarly output resulting from their expenditures because articles will be easier to identify and point to.
Public	Better understanding of research funding and scholarly results.

WHAT'S NEXT?

CrossRef is preparing FundRef as a production service

- FundRef Funder Registry (taxonomy of funder names)
- Deposit schema includes FundRef metadata
- Terms & Conditions for publishers to participate in FundRef

More information coming soon; official launch planned late May

- Publishers encouraged to plan implementation
- Publishers to coordinate with manuscript system companies
- Funders to assess means of using the FundRef data

WANT TO KNOW MORE ABOUT FUNDREF?

▶ Handout available

  ▶ The FundRef Factsheet with Workflow

▶ Sign up for Webinar: May 9

▶ See FundRef page at:
  www.crossref.org/fundref

▶ Talk to a CrossRef representative here today