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OPEN RESEARCHER & CONTRIBUTOR IDENTIFIER, A CONTEMPORARY STANLEY

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> *I would have run to him, only I was a coward in the presence of such a mob, - would have embraced him, only, he being an Englishman, I did not know how he would receive me; so I did what cowardice and false pride suggested was the best thing, - walked deliberately to him, took off my hat, and said, 'Dr. Livingstone, I presume?'*
> Stanley Finds Livingstone, 1871

INTRODUCTION

While much has changed since the days of David Livingstone, we continue to struggle with associating individuals with their works accurately and unambiguously. Author name ambiguity plagues science and scholarship: when researchers are not properly identified and credited for their work, dead-ends and information gaps emerge. The impact ripples throughout the ecosystem, compromising collaboration networks, impact metrics, "smarter" research allocations, and the overall discovery process. Name ambiguity also weighs on the system by creating significant hidden costs for all stakeholders.

The vision for the 21st century research landscape has already taken hold—one where collaborations expand across disciplines and nations, where digital research is being realized as publications, datasets, and other scholarly works are seamlessly interlinked. This integrated and ever-expanding landscape is so captivating because it can accelerate science and the humanities. While there are very real hurdles to be overcome, the capacity exists to tackle name ambiguity with immediate, tangible benefits.

Open Researcher & Contributor ID (ORCID) aims to solve the author/contributor name ambiguity problem in scholarly communications by creating a central registry of unique identifiers for individual researchers and an open and transparent linking mechanism between ORCID and other current author ID schemes. These identifiers and the relationships among them can be linked to the researcher's output to enhance the scientific discovery process and to improve the efficiency of research funding and collaboration within the research community.

Many independent initiatives have been undertaken to address name ambiguity within their specific organizations or commercial offerings. Providers of bibliographic databases apply algorithms and manually curate these data in an effort to remove ambiguity in their resources. Funders as well as publishers depend greatly on their respective peer review systems to confirm the identities and works of those they seek to fund or publish. Librarians labor over eliminating confusion of authored works among their current and past faculty, often compensating by with their time, expertise, and attention to detail as they assemble or complete profiles of their researchers. In short, much human capital and technology are invested to address this problem, yet it persists and grows as the body of traditional literature and new forms of scholarly output increase.

Libraries and librarians are in a unique position with respect to author name ambiguity. They wield a powerful lever to affect change for the direct benefit of scholarship. Libraries can play an active role in advancing ORCID within their communities and between peer organizations. Librarians compensate for many of the shortfalls which sustain name ambiguity and are positioned to be relieved of these burdens, if, that is, we are able to realize the networking effects of ORCID.

THE EMERGENCE OF OPEN RESEARCHER & CONTRIBUTOR ID

The Open Researcher Contributor ID (ORCID) initiative emerged from meetings held among a variety of stakeholders held in Boston, Massachusetts on November 9 and London, England on December 3 of 2009. These meetings brought together a cross-section of organizations involved with scholarly communications to explore new ways of approaching a solution to author name ambiguity. The participants included universities, funding agencies, technology providers, society and commercial publishers, among others. The conclusions reached from these discussions were:

- Resolving name ambiguity will require a collaborative effort with representation from all types of stakeholder organizations.
- A widely adopted global registry of contributors will be a pre-requisite for addressing name ambiguity and that registry should be a persistent resource, one whose existence is assured going forward.
- The service should interact with related systems or communities, and support open and commercial initiatives.

As the saying goes "where there's smoke there's fire," from these early discussions the ORCID initiative began to take shape quickly. ORCID has achieved tangible progress on its early milestones:

- First public meeting in London, England (December 2009)
- Creation of development "sandbox" for technical working group (March 2010)
- Participating organizations exceed 100 (July 2010)
- Completion of Alpha prototype, demonstrating use cases and allowing external assessment and guidance (August 2010)
- Creation of non-profit organization: ORCID, Inc. (September 2010)
- Needs assessment and survey of the community (October 2010)
- System requirements definition and development plans (currently underway)

ORCID is well positioned to achieve its vision. It is governed by a diverse board with the majority of members comprised of non-profit organizations and organizations outside of commercial publishing. With over 180 organizations already participating in ORCID to date, ORCID has become a global collaboration:

Geographic Location of Participants

AUSTRALIA	8
AUSTRIA	1
BELGIUM	1
BRAZIL	2
CANADA	4
CHINA	2
COLOMBIA	1
EGYPT	1
EIRE	1
FRANCE	1
GERMANY	11
GREECE	1
INDIA	4
ISRAEL	1
ITALY	3
JAPAN	3
LITHUANIA	1
NETHERLANDS	1
NEW ZEALAND	1
QATAR	1
SAUDI ARABIA	1
SERBIA	1
SINGAPORE	2
SOUTH KOREA	1
SPAIN	4
SWEDEN	1
SWITZERLAND	1
TURKEY	1
UNITED KINGDOM	38
USA	84
Total	**183**

Participant Organization Types

Organization Type	
Academic	57
Assoc/Society	20
Corporate	23
Government	11
Non-profit	23
Other	9
Publisher	40
Total	**183**

THE VALUE OF ORCID FOR LIBRARIES AND LIBRARIANS

Libraries are integral to digital research—they facilitate research and provide visibility of the institution's research impact on scholarship and society. When metrics and reporting initiatives are called for, librarians take the lead in creating (and populating) researcher profiles. They build institutional repositories to showcase impact, connect their researchers with collaboration networks, and add critical value to researcher grant applications. However, all of these activities are frustrated by name ambiguity.

Librarians bear the brunt of resolving ambiguity within their research institutions and are at the "tip of the spear" when called upon by faculty and administration to deliver complete and accurate profiles of their faculty and research staff. They search among multiple databases, poll the scholar for their CV and "known" gaps, and wrestle with privacy obligations, both their institutional policies and legal requirements. Because librarians fill these gaps with their own 'sweat equity' they stand to gain much from the success of ORCID and are its natural allies.

Let's explore where a reliable identifier will serve librarians:

- Collection development for mapping the journals published in and used by their community.
- Creating profiles and communities for faculty and staff, and interfacing with research management systems and networking services such as VIVO.
- Reporting on the impact of research and tracking compliance with Open Access policies.[1]

THE LIBRARY: A NATURAL ALLY

When we look at how name ambiguity often frustrates library operations, we turn to the role ORCID will play. There are a variety of use cases for a standard identifier and attending benefits for the librarian, their institution, and researchers. Some of these include the following[2]:

1) Institutions will use ORCID to harvest biographical data for an individual and bring it into the university's human resources system. By drawing upon the basic biographic data housed in ORCID, such as educational degrees, awards, honors, and speaking engagements, profiles can be built more efficiently and without introducing new input errors or omitting data previously known. Once these data are integrated with administrative systems, institutions will be able to monitor the impact of their faculty/researchers and analyze cross-institution collaboration.
2) Researchers and their institutions will use ORCID metadata to auto-populate local researcher profiles, websites, and CVs. Creating a public face for the institution which highlights its scholarly, social, and economic impact are valued resources and support the institution's mission.
3) Repositories will use ORCID to identify publications and other scholarly works created by their faculty and researcher community.
4) Librarians will use ORCID to credential temporary access to university resources for visitors who are collaborating with others from the university community.
5) Institutions will use ORCID to authenticate users from other organizations which are collaborating or sharing resources with their own institution.

6) Librarians will use ORCID metadata to complement the data compiled and metrics reported on their community.
7) Researchers will use ORCID metadata to conduct bibliometric research.
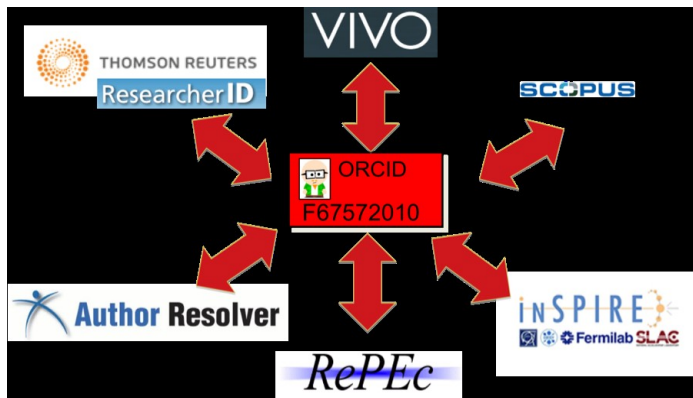
EXAMPLE USE CASES FOR ORCID IN SCHOLARLY COMMUNICATION

In addition to librarians and individual researchers as the most direct beneficiaries, ORCID has other natural allies among organizations that fund scholarly research, publishers, societies, and government agencies. Initial prototype development has created demonstration services around a number of use cases for these organizations.
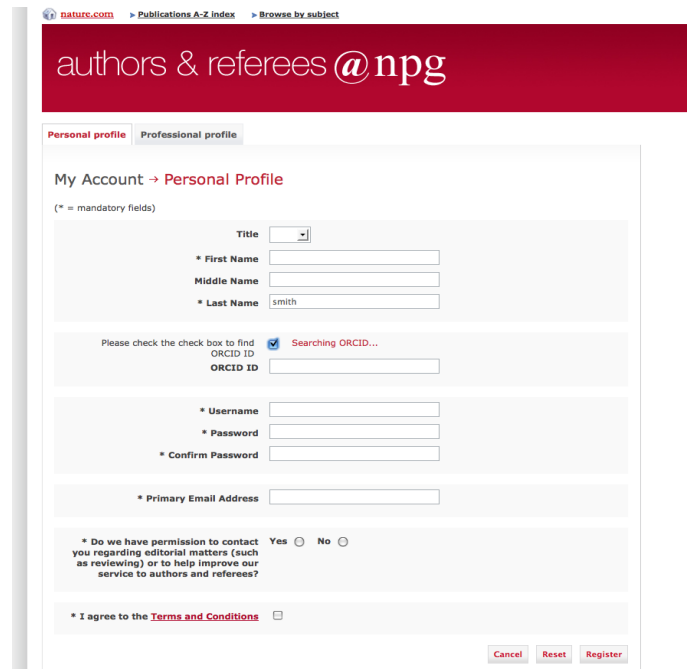
Researchers and librarians will use ORCID to build profiles from accessible bibliographic resources:

ORCID will interface with related services to leverage existing communities or identifier services:

Publishers will use ORCID to connect with manuscript tracking systems:

HOW LIBRARIANS MAY ENGAGE WITH ORCID

ORCID values the role and contributions of libraries in this initiative. Libraries are represented on the governing board and throughout the participant base, and there is room for more. The success of ORCID will be determined by its appeal to information professionals throughout the research community.

General information about ORCID is available at www.orcid.org where readers will find recent news, FAQs, the ORCID Principles, a gallery of participating organizations, and a location to register their interest in participating more actively.

A variety of social communities exist for tracking ORCID progress, including:
- Twitter @orcid_org
- Facebook at http://www.facebook.com/pages/ORCID-Initiative/124343140932918
- ResearchGate at http://www.researchgate.net/group/ORCID/
- Slideshare at http://www.slideshare.net/ORCID and http://www.slideshare.net/tag/orcid
- FriendFeed at http://friendfeed.com/orcid

You may reach out to any ORCID board member you know or contact the ORCID officers which include Howard Ratner, Chairman (h.ratner@us.nature.com), David Kochalko, Treasurer (david.kochalko@thomsonreuters.com), or Amy Brand, Secretary (amy_brand@harvard.edu).

References

1. MacKenzie Smith, Associate Director for Technology, MIT Libraries, interview/email correspondence, October 2010.

2. Amy Brand, Assistant Provost for Faculty Appointments, Harvard University, interview/email correspondence, October 2010.