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TOPIC: ORGANIZATION AND PEOPLE IDENTIFIERS

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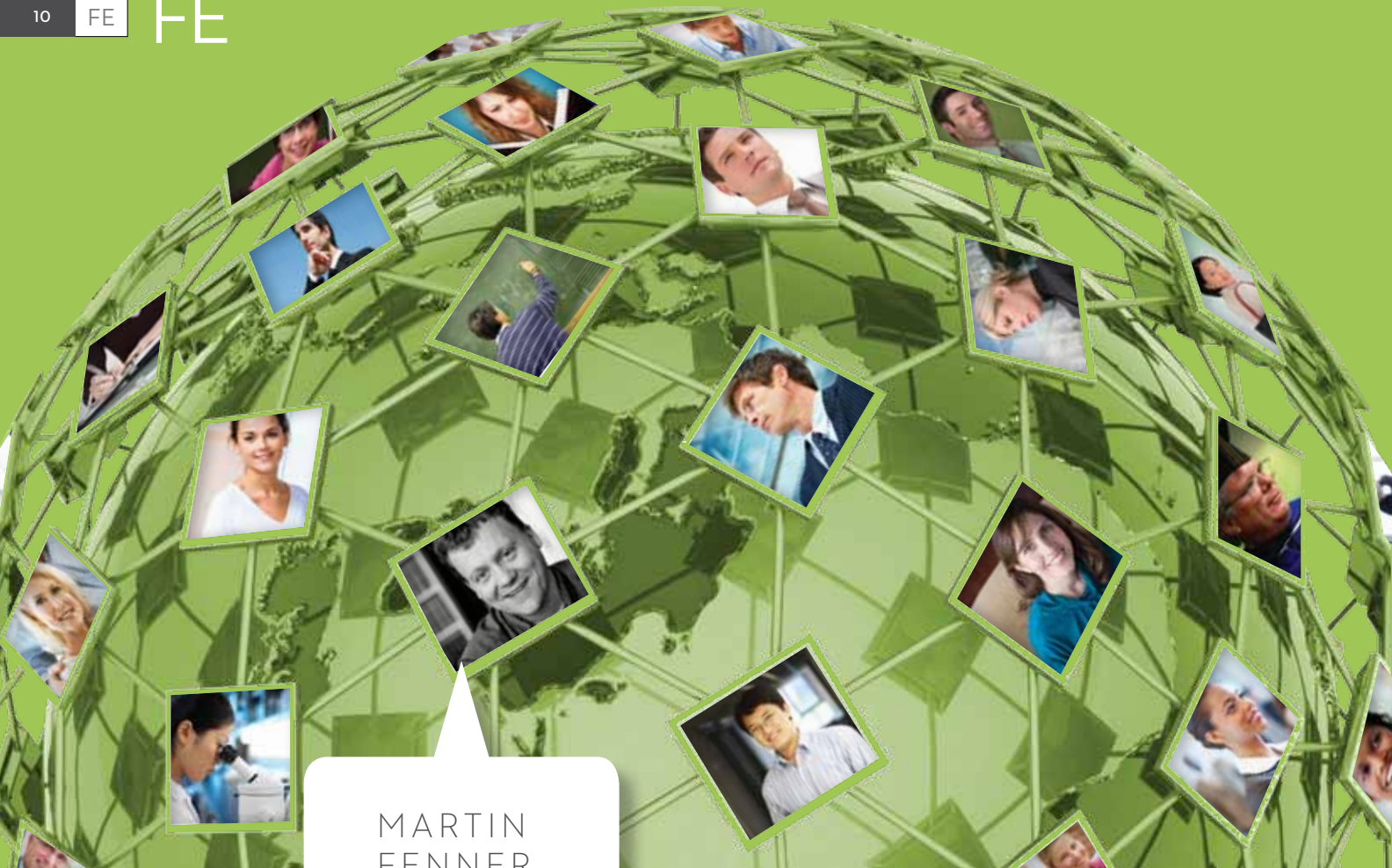
INTERNATIONAL
STANDARD NAME
IDENTIFIER (ISNI)

THE OPEN RESEARCHER &
CONTRIBUTOR ID (ORCID)

THE NAMES PROJECT

STANDARD ADDRESS
NUMBER (SAN)

INSTITUTIONAL IDENTIFIERS
(¹) AND ISNI



MARTIN
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ORCID:

UNIQUE IDENTIFIERS

for AUTHORS AND CONTRIBUTORS

Unique identifiers for authors and other contributors to scholarly works provide the basis for proper attribution. Proper attribution of contributors throughout the research ecosystem facilitates scientific discovery and impact tracking.

Researchers could use their author identifiers for manuscript submissions and grant applications, and to help locate potential collaborators. Universities could use author identifiers to help them track the research outputs of their researchers. Unique author identifiers will allow publishers to better track authors and reviewers in their journal submission systems. They also allow reliable linking to other articles by the same author, promoting the discovery of related scholarly works. Funding agencies could use unique author identifiers to facilitate the grant application process and to track the scholarly works resulting from their funding.

Despite these obvious benefits to all stakeholders, unique author identifiers have not yet seen widespread use in the research ecosystem. We currently have a fragmented system with many institutions, societies, publishers, and funding agencies using their own identifier scheme, and with author identifier systems that are either specific to a geographic region or scientific discipline. Of the commercial and nonprofit author identifier systems not limited to region or discipline, none has become a predominant player. Author identifier systems are most successful where they have been instituted on a national level, e.g. Brazil (LATTES) or the Netherlands (NARCIS).

The success of unique author identifiers depends on reaching a critical mass. This goal can only be achieved with an open and global registry for unique author identifiers. The Open Researcher & Contributor ID (ORCID) initiative was started in November 2009 to achieve this goal. ORCID has learned from other author identifier systems, and also from the experience of building the CrossRef service of digital object identifiers for scholarly works. ORCID was incorporated as a non-profit organization with a governing Board of Directors in August 2010. ORCID is open to any organization with an interest in scholarly communication and has more than 240 participating organizations as of July 2011. The first public version of the ORCID service will be launched in 2012, at which time ORCID will start charging fees to sustain the service. **In this article I want to describe some of the important decisions that were made in order to ensure widespread adoption, and therefore success, of the ORCID service.**

SCOPE

A number of author identifier services are focused on a particular region (e.g. LATTES for all Brazilian researchers) or discipline (e.g. RePEc for researchers in economics).

Although easier to implement, this approach has important shortcomings. Many scholarly works are cross-disciplinary and/or involve researchers from different countries.

This makes these focused identifiers unsuitable for many scenarios, e.g., the journal submission system of a multidisciplinary journal. The cost of implementing several author identifier services is also higher than building one system covering all disciplines and geographic regions, and many researchers will probably be reluctant to maintain more than a few author profiles.

ORCID not only transcends discipline, national, and institutional boundaries, but will also interact with existing scholarly author identification systems. The challenge to build a global system of unique author identifiers is not so much a technical one, but rather the very difficult task of coordinating a very large group of stakeholders.

Some identifier services are even broader in scope than ORCID. The International Standard Name Identifier (ISNI) aims to assign a unique identifier to all creators of digital content. OpenID is a decentralized identifier mainly used to sign in to multiple websites with the same account. The main focus of these and other services is not the proper attribution of scholarly works. OpenID is an authentication mechanism, and could be used in combination with ORCID or other author identifiers. ISNI will also serve authors, actors, publishers, and performers; the scholarly researcher is not the main focus of ISNI.

CONSENT

Unique author identifiers are fundamentally different from digital identifiers for objects. Assigning a unique identifier to a living person and using this identifier in describing this person are obviously very personal matters. It is important that authors are involved in this process, otherwise we risk that they will not accept and use the author identifier service. Before creating a unique author identifier, that author should have consented in creating this identifier. This is best done in a system where authors can apply for a unique identifier themselves. A reasonable alternative is a system where authors give permission that unique author identifiers are created on their behalf, usually by their employer. The ORCID service will allow both options.

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A survey among ORCID participants in October 2010 demonstrated the need for ORCID profile data to be freely and openly accessible.



When unique author identifiers are used in the research ecosystem, consent of the author should be obtained wherever this is possible with reasonable effort. This consent could be informal, e.g., asking authors to provide their unique author identifier when submitting a manuscript. Consent is obviously not an issue for deceased authors and could be handled differently for authors that are no longer active.

◎ OPENNESS

A registry for unique author identifiers can only become a widely adopted standard if it doesn't set any barriers for participation. Participation in ORCID is open to any organization that has an interest in scholarly communications. All researchers will be able to create, edit, and maintain an ORCID ID and profile free of charge. All profile data contributed to ORCID by researchers or claimed by them will be updated once a year and available for free download in standard formats (subject to the researchers' own privacy settings), released under the Creative Commons Zero waiver. A survey among ORCID participants in October 2010 demonstrated the need for ORCID profile data to be freely and openly accessible.

Openness is not limited to participation and profile data. All software developed by ORCID will be publicly released under an Open Source Software license approved by the Open Source Initiative. For the software it adopts, ORCID will prefer open source. Using open source software will facilitate participation in the development of the ORCID service and will make it more attractive for third parties to develop software that integrates with the ORCID system.

◎ TRUST

A unique author identifier service will only become popular if the service is trusted. Researchers would be reluctant to enter biographic and bibliographic information into a service that doesn't give them control over the privacy settings of the information collected by them and about them. The ORCID service will allow researchers to make profile data not only public or private, but also to share private information with selected organizations, e.g., during the grant application process.

The first version of the ORCID service will rely on researchers claiming their own identifiers, but will also allow institutions to create and maintain identifiers for their researchers. Because of this self-claiming, ORCID will initially focus on currently active researchers. Users of an author identifier system have to trust the claims made in an author profile, and this is not possible in a system that relies solely on self-claims.

It is envisioned that later versions of the ORCID service will allow external claims. Multiple external claims will increase trust into the data provided by ORCID, but will also increase the complexity of the service. ORCID will not try to create one unique record from all claims about a particular author, but instead will link these records together, maintaining the provenance and avoiding issues with conflicting claims. To track the provenance of every external claim, ORCID will use unique identifiers for organizations.

Both individual researchers and organizations will have more trust in an author identifier service that is not controlled by a single organization, whether commercial, nonprofit, or government. ORCID is therefore set up as a nonprofit organization that is governed by representatives from a broad cross-section of stakeholders, the majority of whom are not-for-profit.

◎ REPUTATION

A unique author identifier in itself has limited value; we have to associate the identifier with biographic and bibliographic information. This information could be in the form of digital object identifiers (DOIs[®]) for journal articles or research datasets, other digital identifiers for scholarly content, or could be free-form text, e.g., for research grants and awards. With this information we are building an author profile, and this profile can be maintained in the author identifier service and/or in external services.

All author identifier systems collect profile information, but many of them are limited to publications. The first version of the ORCID service will collect past and present institutional affiliations and citations to scholarly papers. Future versions of the ORCID service will also collect other scholarly works, and this could include conference abstracts, research datasets, patents, and other scholarly activities. From the start, the ORCID identifiers will be available to other services via an API. Information about journal articles will be directly imported via the CrossRef service, and it is expected that tight integration of the ORCID service with journal submission systems, institutional repositories, grant submission systems, etc. will associate authors on an ongoing basis with their scholarly works at minimum burden to researchers.

ORCID author profiles can be used for knowledge discovery and for academic metrics. Making a substantial number of author profiles available to the scholarly community will create valuable new opportunities and is an important goal of the ORCID organization. ORCID is looking into providing some of the aggregated profile information (which is made available according to author privacy settings) as a potential revenue source.

PERSISTENCE

A unique author identifier service will only become widely used if the organization behind it is sustainable and can guarantee the longevity of the service. The ORCID organization will be run by a small number of staff and is relying on voluntary work from participating organizations and the use of open source software wherever possible. Despite this, building and maintaining a global author identifier service is still expensive, and it is important to

understand that ORCID will have to charge fees to ensure the sustainability of ORCID as a not-for-profit, charitable organization. The ORCID business model will be finalized by the end of 2011, and will most likely include a combination of membership fees, fee-for-services, and sponsorship. (The service will always be free to use for individual authors.)

ORCID is applying for 501(c)(3) tax-exempt status and this requires it to make provisions for passing on the responsibilities to a similar organization should ORCID cease to exist. A focus on persistence requires ORCID to control the intellectual property and the software running the service.

The unique author identifier itself also has to be persistent and ORCID identifiers can't be removed from the system once they have been issued. For privacy reasons, ORCID allows researchers to decide which of their data they want to make publicly available. All the public data will be made available under a Creative Commons Zero waiver, updated at least once a year. This policy encourages the regular distribution of all public data, decreasing the likelihood that data are lost. This process also holds ORCID accountable, as the system could be duplicated somewhere else if ORCID would take a direction not supported by the community.

ORCID is taking all the necessary steps to ensure widespread adoption of the service. Once the service launches and unique identifiers for authors and contributors become as common as digital identifiers for scholarly objects, it will be hard to think back to a time when it was impossible to do all the things made possible by unique author identifiers.

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RELEVANT LINKS



Creative Commons Zero (CCo)
creativecommons.org/about/cc0

CrossRef
www.crossref.org

ISNI
www.isni.org

LATTES
lattes.cnpq.br

NARCIS
www.narcis.info

OpenID
openid.net

Open Source Initiative
www.opensource.org/

ORCID website
www.orcid.org

ORCID Principles
www.orcid.org/principles

ORCID FAQ
www.orcid.org/faq

RePEc
repec.org