CROSSREF LOGS ITS 80,000,000TH ITEM OF SCHOLARLY CONTENT

Marking the milestone reaching 80,000,000 items of scholarly content registered, Crossref's Ed Pentz looks forward to the future

BY ED PENTZ, EXECUTIVE DIRECTOR, CROSSREF

80000000

Crossref is marking a milestone after passing 80 million registered content items. In the context of scholarly content 80,000,000 is a big number. In the context of users of various social media services (e.g. Facebook) it's not so big! But it's an important milestone.

A lot has changed since the first content was registered in the prototype Crossref system in 1999. Who would have thought when we started with 12 participating publishers and that we would now have over 5,400 from around the world? That we would be collecting a richer set of metadata for each scholarly object, including funding and licensing data, corrections and retractions, clinical trials numbers, and ORCID iDs? We now provide more services than ever before, including Similarity Check (previously known as CrossCheck), CrossMark, and Event Data, in addition to reference and cited-by linking. And, as I hope you've noticed, we've recently launched a brand new Crossref logo.

But some things haven't changed; we're still committed to making scholarly content easy to find, cite, link, and assess, still working to build a scholarly road map, still collaborating with the community, and still broadening our membership to include all types of organizations from a wider variety of countries than ever before.

More publishers from more countries

At one time, most of our new members were large or medium-sized publishers from North America and Europe. Now, we're being joined in significant numbers by many smaller publishers that are based in countries in other regions. As a matter of fact, our 80,000,000th DOI, http://dx.doi.org/10.12816/0016504, was registered to Al Manhal in the United Arab Emirates.

Many of our newer members are located in regions that speak languages other than, or in addition to, English. As infrastructure providers for the global scholarly communications community, we want to broaden accessibility to content registration services outside of Europe and North America. One of the reasons Crossref exists is to enable knowledge sharing by reducing barriers and increasing the use of shared tools. Our belief is that registered content such as DOIs and associated metadata promotes discoverability, which is the prerequisite for receiving attention from other scholars and the public at large.

I'm happy that we can play a role in facilitating global diversity in scholarly communications. You'll be hearing more in the coming year about our efforts to further engage with the scholarly community outside of North America and Europe, including the hosting of Crossref community outreach events in Seoul and Sao Paulo, among others.

Not all who publish are "publishers"

Many of our newest members are smaller organizations that publish journals, even scholar-publishers who publish their works on their own websites. What's important is that each publisher has the same access to register DOIs, and the same right to vote for members to serve on Crossref's Board. Crossref is a "one member, one vote" organization, a fact that challenges us to serve all members well without regard to size or publishing revenue.

Our members also include some organizations that publish scholarly content but may not think of themselves as publishers. One good example is the BSI (British Standards Institute). Each BSI standard is published and has a Crossref DOI. In contrast, the *Information Standards Quarterly* you're reading now is more representative of the journal content people most often associate with Crossref. I'd like to point out here that, although Crossref is known for registering journal and journal article content, we actually register many different types of content, including standards, books, book chapters, conference proceedings, working papers, reports, dissertations, and as of 2016, preprints and accepted manuscripts.
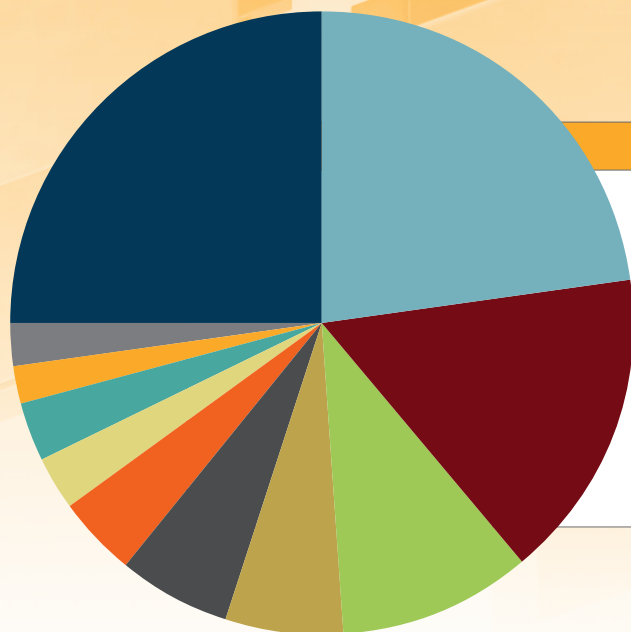
Regardless of type, each piece of registered content is a scholarly object that receives a persistent identifier (a DOI) and the publisher's agreement to preserve the content for the long term—often in an archive such as CLOCKSS or Portico—to ensure the continuity of the scholarly record.

Not all members publish

One of the reasons Crossref is seeing member growth outside of its traditional geographic concentrations in North America and Europe is the work of some of our Sponsoring Affiliates. Sponsoring Affiliates are member organizations that provide hosting, discovery, submission, or other publishing services to other members, often new and emerging publishers. Sponsoring Affiliates pay one annual fee and manage the technical and financial needs, including the deposit fees, of the members they represent. Crossref has collaborated with the Public Knowledge Project to help publishers that use OJS (Open Journal Systems) to take better advantage of Crossref services by facilitating their application for Crossref membership, and the nuts and bolts of their deposits of DOIs and associated metadata such as ORCID iDs, license data (access indicators for text and data mining), funding data, and more.

We've also got some great members who provide their users with access to Crossref metadata. Some members provide technical assistance for Crossref members, for example, registering content and querying for metadata on

CROSSREF MEMBER LOCATIONS

- USA: 23%
- SOUTH KOREA: 16%
- JAPAN: 10%
- TURKEY: 6%
- BRAZIL: 6%
- UK: 4%
- RUSSIA: 3%
- CANADA: 3%
- INDIA: 2%
- SPAIN: 2%
- OTHER: 25%

behalf of Crossref publishers. These services vary based on the metadata needed, how it will be used, and the method of delivery. A few examples include Aries Systems, the Massachusetts-based workflow management software company that provides publishing support from submission to production tracking, and Knowledge E, the Dubai-based publishing platform and provider of software solutions for libraries, researchers, and schools.

Looking Forward

I was the first employee at Crossref in February 2000, but it still feels like we're just getting started when I reflect on everything we're working on. We're updating our website and deposit system to keep up with steady growth and to make it easier for smaller, non-technical publishers to participate, planning the launch of Crossref Event Data, moving forward with early content registration and registering preprints, looking into organization identifiers, and experimenting and collaborating on new stuff you'll be hearing about in 2017. As Crossref has grown so has the number of staff—from none at the end of 1999 when the prototype system was built to 29 today.

Crossref has always had a tradition of inviting our members to attend our Annual Meeting, an event that combines regular Board business with thought-provoking guest speakers and Crossref service updates. This year, we did things a little differently: we opened the meeting to all interested people in the scholarly community, and reconceptualized it as an Annual Community Meeting. That event was held on November 2nd at the Royal Society in London.

That's another thing—we've traditionally held our Annual Meetings in London or in Boston in alternating years. Is this something we should change now that membership has become more diverse? Where would you like to attend a Crossref Annual Community Meeting? I'd like to hear your suggestions.

Since it seems like it should be a cause for a celebration anytime you accomplish something worthwhile for the 80 millionth time, I'd like to mark this occasion by recognizing the Crossref staff for their tireless efforts (cue the transatlantic champagne toasts in the Oxford, England and Lynnfield, MA offices—well maybe a warm pint in Oxford and a glass of sparkling apple juice in Lynnfield) and to our members, sponsoring affiliates, service providers, and the worldwide community of colleagues who have made this possible. Thanks for your support.

ED PENTZ
Ed Pentz has served as Executive Director of Crossref since the organization was founded in 2000. Crossref is a non-profit membership organization that provides infrastructure to make scholarly content easier to find, link, cite, and assess. Ed is also Chair of the Board of ORCID, a non-profit organization that provides a persistent identifier for individuals to use with their name as they engage in research, scholarship, and innovation activities. He can be reached on Twitter via @epentz.