

CrossRef: Collaboration to Build a Digital Infrastructure

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Ed Pentz, CrossRef执行主席。目前CrossRef是DOI在世界范围内的主要应用机构，注册的DOI总数已接近3000万个。本文为Ed Pentz先生为本次COINFO会议专门撰写。



CrossRef was started over seven years ago in 2000 as a co-operative venture among scholarly publishers to support persistent citation linking in journals using the Digital Object Identifier, or DOI, System. CrossRef has greatly expanded since it was founded and now registers DOI names for all types of content (journal articles, books, book chapters, conference proceedings, theses and dissertations) from all areas of scholarly publishing and from organizations around the world and provides a central reference linking service for its members. CrossRef is a not-for-profit membership association and isn't just about reference linking but facilitates

publishers working together to build a collaborative digital infrastructure to enable services that can best be done on a collective basis rather than individually.

As of October 2007 CrossRef has over 28 million DOI names registered from 15,000 journals and 40,000 books which makes CrossRef by far the largest DOI Registration Agency. It is important to note that the main service CrossRef provides is not registering DOI names but it is the reference linking network across our 470 member publishers. Each month CrossRef DOI links are clicked on over 15

million times.

From the start CrossRef has been an international organization and in particular we are very interested in promoting the uptake and use of DOI names and the CrossRef system in China. We hope to work with ISTIC and Wanfang Data as the DOI Registration Agency in China to extend the use of DOI names and the CrossRef System to Chinese scholarly content. CrossRef is already working with some Chinese publishers and journals including Science in China Press and Journal of Zhejiang University.

It is very important that Chinese journals and books are interlinked with publications from around the world. Content that is included in the CrossRef System gains visibility and prestige and it is easier for researchers to discover and link to content that is included in CrossRef. Cross-publisher linking offers several advantages to publishers. First and foremost, it brings readers to their online publications.

CrossRef provides publishers with both a technology and a business infrastructure for persistent linking. On the business side, the publisher (or other interested party) signs one agreement with CrossRef and earns the right to link to all other participating publishers. With the current membership of over 470 publishers, tens of thousands bilateral agreements would have otherwise been needed to enable the same network of connections. Hence, a linking network on this scale could never have taken shape without an organizational infrastructure like CrossRef. In particular, the smaller publishers that CrossRef now includes would most likely not have had the means or opportunity to participate in widespread interlinking under the bilateral approach.

On the technology side, CrossRef obviates the problem of broken URL links by use of DOI names. For a publisher with content registered in the CrossRef database, this means that over 450 participating organizations – other publishers, A&I databases, aggregators, and libraries – link automatically to their response pages. For electronic books such as reference works, CrossRef facilitates internal linking of components and references as well. Assigning DOIs to book chapters gives publishers a head-start in re-purposing content for derivative works requiring a subset or re-ordering of the original components, such as course-packs, and for e-commerce at the chapter level. Publishers also benefit from taking part in a collaborative platform for ongoing development of shared technologies, while maintaining control over their own business practices and how their content is accessed.

Smaller publishers, in particular, can expect to see obvious gains from participating in a global interlinking network. According to Bohumir Valter, Editorial Manager of the Collection of Czechoslovak Chemical Communications, an interdisciplinary chemistry journal published by the Czech Academy of Sciences: "After two years in CrossRef, we see

a significant increase in traffic into our journal website, meaning that the articles published in our journal are more accessible than before thanks to the reference linking service. CrossRef is providing a great service to online readers, who can immediately access a rapidly growing number of cited and linked articles as a result. I am very proud that our journal is a member of the CrossRef community, and I see it as a great benefit for smaller publishers." (personal communication).

Going forward CrossRef is working on some new services. One example is the CrossCheck service which will enable efficient plagiarism detection to be incorporated to the editorial processes of journals. CrossRef is running a pilot of the CrossCheck system through the end of 2007 with a number of leading publishers and will be launching a service in early 2008.

Going forward CrossRef is very interested in collaborating to include Chinese scholarly content as part of the DOI System and the CrossRef System.