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International Dateline — The Pirus Project: Developing a Standard for Recording and Reporting Usage at the Individual Article Level

by **Dr. Peter T. Shepherd** (Project Director, COUNTER Online Metrics, Project COUNTER, 39 Drummond Place, Edinburgh EH3 6NR, UK) <pt_shepherd@hotmail.com>

Background

Since publishing its first *Code of Practice* in 2003, **COUNTER** has set standards for the measurement of online usage of journals. Until now the most granular level at which **COUNTER**¹ requires reporting of usage is at the individual journal level. Demand for usage statistics at the article level from users has, until recently, been low. This, combined with the unwieldiness of usage reports in an **Excel** environment, has meant that **COUNTER** has given a lower priority to usage reports at the individual article level. A number of recent developments have, however, meant that it would now be appropriate to give a higher priority to investigating the development of a **COUNTER** standard for the recording, reporting and consolidation of usage statistics at the individual article level. Most important among these developments are:

- The growth in the number of journal articles hosted by institutional and other repositories, for which no widely accepted standards for usage statistics have been developed
- The emergence of online usage as an alternative, accepted measure of article and journal value and usage-based metrics being considered as a tool to help assess the impact and value of publications.
- Authors and funding agencies are increasingly interested in a reliable, global overview of usage of individual articles
- Some publishers, notably **PLoS**, have already implemented the reporting of usage at the individual article level and are actively seeking a global standard on which they can base such reports
- Implementation by **COUNTER** of XML-based usage reports makes more granular reporting of usage a practical proposition
- Implementation by **COUNTER** of the **SUSHI**² protocol facilitates the automated consolidation of large volumes of usage data from different sources.

Progress so far

The original **PIRUS** (Publisher and Institutional Repository Usage Statistics) project, funded by **JISC**, (the **United Kingdom Joint Information Systems Committee**) and completed in January 2009³ demonstrated that it is *technically* feasible to create, record and consolidate usage statistics for individual articles using data from repositories and publishers, despite the diversity of organizational and technical environments in which they operate.

The four main outputs of the project were:

- a. A proof-of-concept **COUNTER**-compliant XML prototype for an individual article usage report, Article Report 1:

Number of successful full-text article downloads, that can be used by both repositories and publishers. In principle this report could be provided for individual authors and for institutions. In practice, the individual author reports are much easier to generate and are a realistic short-term objective, while the reports for institutions and other entities, such as funding agencies, will be more complex and should be regarded as a longer term objective.

- a. A tracker code, to be implemented by repositories, that sends a message **either** to an external party that is responsible for creating and consolidating the usage statistics and for forwarding them to the relevant publisher for consolidation **or** to the local repository server.
- b. A range of scenarios for the creation, recording and consolidation of individual article usage statistics that will cover the majority of current repository installations. Each repository may select the scenario that corresponds to their technology and implementation.
- c. A specification for the criteria that would have to be met by a central facility that would create the usage statistics where required (for some categories of repository) and collect and consolidate the usage statistics for others

If these outcomes are to be translated into a new, implementable **COUNTER** standard and protocol, further research and development is required, specifically in the following areas:

- **Technical:** further tests, with a wider range of repositories and a larger volume of data, will be required to ensure that the proposed protocols and tracker codes are scalable/extensible and work in the major repository environments.
- **Organizational:** the nature and mission of the central clearing house/houses proposed by **PIRUS** has to be developed, and candidate organizations identified and tested
- **Economic:** assess the costs for repositories and publishers of generating the required usage reports, as well as the costs of any central clearing house/houses; investigate how these costs could be allocated between stakeholders
- **Political:** the broad support of all the major stakeholder groups (repositories, publishers, authors) will be required. Intellectual property, privacy and financial issues will have to be addressed

PIRUS2

PIRUS 2, also funded by **JISC**, is a co-operative project involving publishers and repositories, which aims to develop a set of standards, protocols and processes to enable publishers, repositories and other organizations to generate and share authoritative, trustworthy usage statistics for the individual articles and possibly other items that they host.

PIRUS 2 builds on the results of the original **PIRUS** project and has set the following main objectives:

- The development of a suite of free, open source programmes to support the generation and sharing of **COUNTER** compliant usage data and statistics that will cover individual items in publisher, aggregator, institutional and subject repositories
- The development of a prototype article level Publisher/Repository usage statistics service
- Defining a core set of standard usage statistics reports that publishers and repositories could produce for internal and external consumption
- Assessing the costs for publishers and repositories of generating the required usage reports, as well as the costs of any central clearing house/houses; investigate how these costs could be allocated between stakeholders

To achieve these objectives, the project is organized into six workpackages, described in detail in the project plan, which is available on the **PIRUS2** project Website.⁴

PIRUS 2 is lead by **Mimas (The University of Manchester)** and **Cranfield University**; the other primary partners are **COUNTER**, **Oxford University Press** and **CrossRef**. **Oxford University**, **Southampton University** and other Institutional Repositories will also participate in **PIRUS 2**, together with publishers, repositories and related projects in the UK, USA and elsewhere. Work on **PIRUS 2** commenced in October 2009 and the final report will be published in December 2010.

Further information and updates on the project may be found on the **PIRUS2** Website.⁴

Endnotes

1. http://www.projectcounter.org/code_practice.html.
2. <http://www.niso.org/workrooms/sushi>.
3. http://www.jisc.ac.uk/media/documents/programmes/pals3/pirus_finalreport.pdf.
4. <http://www.cranfieldlibrary.cranfield.ac.uk/pirus2/>.