



Counting Online Usage of Networked Electronic Resources

PIRUS 2

Creating a common standard for measuring online usage of individual articles

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- **Sponsored by JISC**
 - UK Joint Information Systems Committee
- **PIRUS 1** completed in January 2009
 - Lead by COUNTER
 - Report available at:
http://www.jisc.ac.uk/media/documents/programmes/pals3/pirus_finalreport.pdf
- **PIRUS 2**, October 2009-December 2010
 - Lead by Mimas and Cranfield University
 - Primary project team members: Mimas, Cranfield, COUNTER, CrossRef, Oxford University Press

Usage statistics and journal metrics

- **COUNTER**
 - Sets the standard for vendor-generated online usage statistics
 - Covers over 15,000 full-text online journals

<http://www.projectCounter.org>
- **MESUR**
 - Enriches the toolkit used for the assessment of the impact of scholarly communication items with usage data
 - Has created a map of science based on usage data

<http://www.mesur.org/>
- **Journal Usage Factor**
 - Assess the feasibility of Journal Usage Factor as an alternative metric to Journal Impact Factor

<http://www.uksg.org/usagefactors>
- **PIRUS**
 - Aims to provide, publishers, repositories and other organizations with a common standard for measuring usage at the individual article (item) level

PIRUS: why now?

Increasing interest in article-level usage

- More journal articles hosted by Institutional and other Repositories
- Authors and funding agencies are increasingly interested in a reliable, global overview of usage of individual articles
- Online usage becoming an alternative, accepted measure of article and journal value
 - Knowledge Exchange report recommends developing standards for usage reporting at the individual article level
 - Usage-based metrics being considered as a tool for use in the UK Research Excellence Framework and elsewhere.



PIRUS: why now?

Article-level usage metrics now more practical

- Implementation by COUNTER of XML-based usage reports makes more granular reporting of usage a practical proposition
- Implementation by COUNTER of the SUSHI protocol facilitates the automated consolidation of usage data from different sources.

The challenge

- An article may be available from:-
 - The main journal web site
 - Ovid
 - ProQuest
 - PubMed Central
 - Authors' local Institutional Repositories

- If we want to assess article impact by counting usage, how can we maximise the actual usage that we capture?

PIRUS : Mission and Project Aims

Mission

To develop a global standard to enable the recording, reporting and consolidation of online usage statistics for individual journal articles hosted by Institutional Repositories, Publishers and other entities

Project aims

- Develop COUNTER-compliant usage reports at the individual article level
- Create guidelines which, if implemented, would enable any entity that hosts online journal articles to produce these reports
- Propose ways in which these reports might be consolidated at a global level in a standard way.



PIRUS: benefits

- Reliable usage data will be available for journal articles, wherever they are held
- Repositories will have access to new functionality from open source software that will allow them to produce standardised usage reports from their data
- Digital repository systems will be more integral to research and closely aligned to research workflows and environments
- The authoritative status of PIRUS2 usage statistics will enhance the status of repository data and content
- The standard can be extended to cover other categories of content stored by repositories

PIRUS1: outputs

1. A proof-of-concept COUNTER-compliant XML prototype for an individual article usage report
2. A tracker code, to be implemented by repositories, that sends usage data as OpenURL Context Objects to either:
 - An external party
 - The local repository server
3. A set of scenarios for collecting usage data in different repository environments
4. A set of criteria for a central Clearing House that will create (where required), or collect and consolidate the usage statistics



PIRUS2: objectives

- Develop a suite of free, open access programmes to support the generation and sharing of COUNTER-compliant usage data and statistics that can be extended to cover any and all individual items in repositories
- Develop a prototype article-level publisher/repository usage statistics service
- Define a core set of standard useful statistical reports that repositories should produce for internal and external consumption

Technical aspects of project

- Gathering ... usage data and statistics
 - For full-text article downloads (not record/abstract views)
 - From repositories and publishers
- Consolidating ...
 - In an article-level usage statistics demonstrator portal
 - Experiment and illustrate possibilities
- Re-exposing ...
 - To authorized third parties

Three scenarios for gathering ...

- (A) 'tracker' code
 - a server-side 'Google Analytics' for full-text article downloads
 - Pushes metadata to a remote server
- (B) OAI-PMH harvesting
 - A protocol familiar to repositories
 - Used to by third parties to 'pull' metadata from repositories
- (C) SUSHI - Standardized Usage Statistics Harvesting Initiative Protocol
 - a SOAP-based web service, used by publishers, to expose COUNTER Release 3 compliant usage statistics to institutions and consortia

PIRUS2: progress so far:-

WP 4: software, standards and protocols

Usage data from Repositories

- Scenarios (A) Tracker & (B) OAI-PMH
 - Usage data are exposed as:
 - (A) OpenURL Key-Value Pair Strings
 - (B) OpenURL Context Objects.
 - OpenURL approach first suggested by MESUR. Taken forward in Europe under 'Knowledge Exchange' initiative see:
<http://wiki.surffoundation.nl/display/standards/OpenURL+Context+Objects>
- PIRUS2 Repository software plug-ins/extensions
 - Dspace – developed by @mire
 - Eprints – developed by Tim Brody, Southampton University
 - Fedora – developed by Ben O'Steen, Oxford University
 - Links and downloads on PIRUS2 project web site

Usage statistics from Publishers

- Scenario (C) SUSHI
 - Currently operates at journal level, e.g. JR1 report: Number of Successful Full-Text Article Requests by Month and Journal
- PIRUS2 has devised a proposed COUNTER Article Report 1 (AR1) Report: Number of Successful Full-Text Article Requests by Month and DOI
 - SUSHI ultimately
 - Currently working with AR1 reports in MS Excel/CSV format from participating publishers
 - Draft AR1 report in MS-Excel and XML available on PIRUS2 project web site

PIRUS2: progress so far:-

WP 4: software, standards and protocols

Current situation

- Loaded data from 6 publishers
 - Usage statistics are pre-filtered according to COUNTER rules
 - Over 550,000 articles and 470 journals indexed
- Gathering data via tracker from 6 repositories
 - Working on scripts to process and load data
 - Usage data must be:
 - filtered according to COUNTER rules to eliminate Robots and Double clicks
 - Processed into monthly statistics
- Creating user interface to demonstrate possibilities

PIRUS2: progress so far:-

WP 4: software, standards and protocols

Next steps

- Extending the number of participating repositories
- Ongoing development and testing of user interface
- Develop extended SUSHI server to re-expose article-level statistics

PIRUS2: progress so far

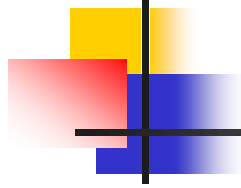
WP5: prototype service

- Tests of publisher usage data
 - Usage data from publishers flowing in
- Define functions to be fulfilled by a Central Clearing House
 - Collect, collate and store usage data
- Define capabilities required of a Central Clearing House
 - Conversion of logfiles, storage, access control, etc
- Define organizational options for a Central Clearing House
 - Global vs. local; identify candidate organizations



PIRUS 2: primary project team

- Ross MacIntyre (Mimas, Manchester University)
- Paul Needham (Cranfield University)
- Richard Gedye (Oxford University Press)
- Ed Pentz (CrossRef)
- Peter Shepherd (COUNTER)



For more information.....

<http://www.cranfieldlibrary.cranfield.ac.uk/pirus2/>

Thank you!