Usage Statistics and Beyond

Workshop "Usage Statistics and Beyond"

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Open-Access-Statistik

Impact

„The ‚impact factor' is the most commonly used assessment aid for deciding which journals should receive a scholarly submission or attention from research readership. It is also an often misunderstood tool."

Dong et al. 2005

When & Why

- Initial meeting of the later project partners, June 2006

- All of the participating institutions were progressive members of the German Initiative for Networked Information (Deutsche Initiative für Netzwerkinformation DINI) and interested in promoting Open Access

- Main obstacle: Little reputation and impact of Open Access infrastructures (repositories, journals)

Alternative Impact

- Neither repositories nor most Open Access journals were covered by citations databases (scopus, web of science)

- Document usage as an alternative model for assessing the impact of scientific publications

Citations vs. Usage

Frequency

JIF   RF

Authors ←————————————→ Readers

SA

SR

Webometrics
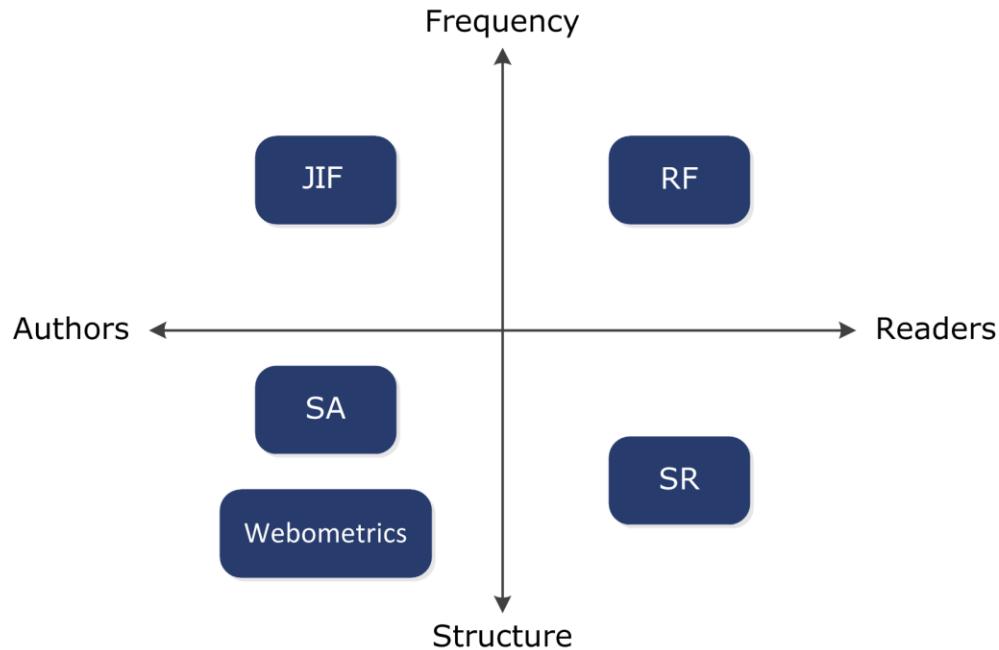
Structure

JIF = Journal Impact Factor

RF = Reading Factor

SA = Structure Author

• based on networks built by authors and their activities, e.g. Google PageRank, citation graphs, webometrics

SR = Structure Reader

• based on document usage and its contextual information, e.g. recommenders, download graphs

Bollen, J. et al. (2005): *Toward alternative metrics of journal impact: A comparison of download and citation data*. In: Information Processing and Management 41(6): S. 1419-1440.
Preprint Online: http://arxiv.org/abs/cs.DL/0503007

Citations vs. Usage

Citation based measures

Author-centred

Delayed measurement: at first in the following generation of publications

Impact of a separate object is mostly not described

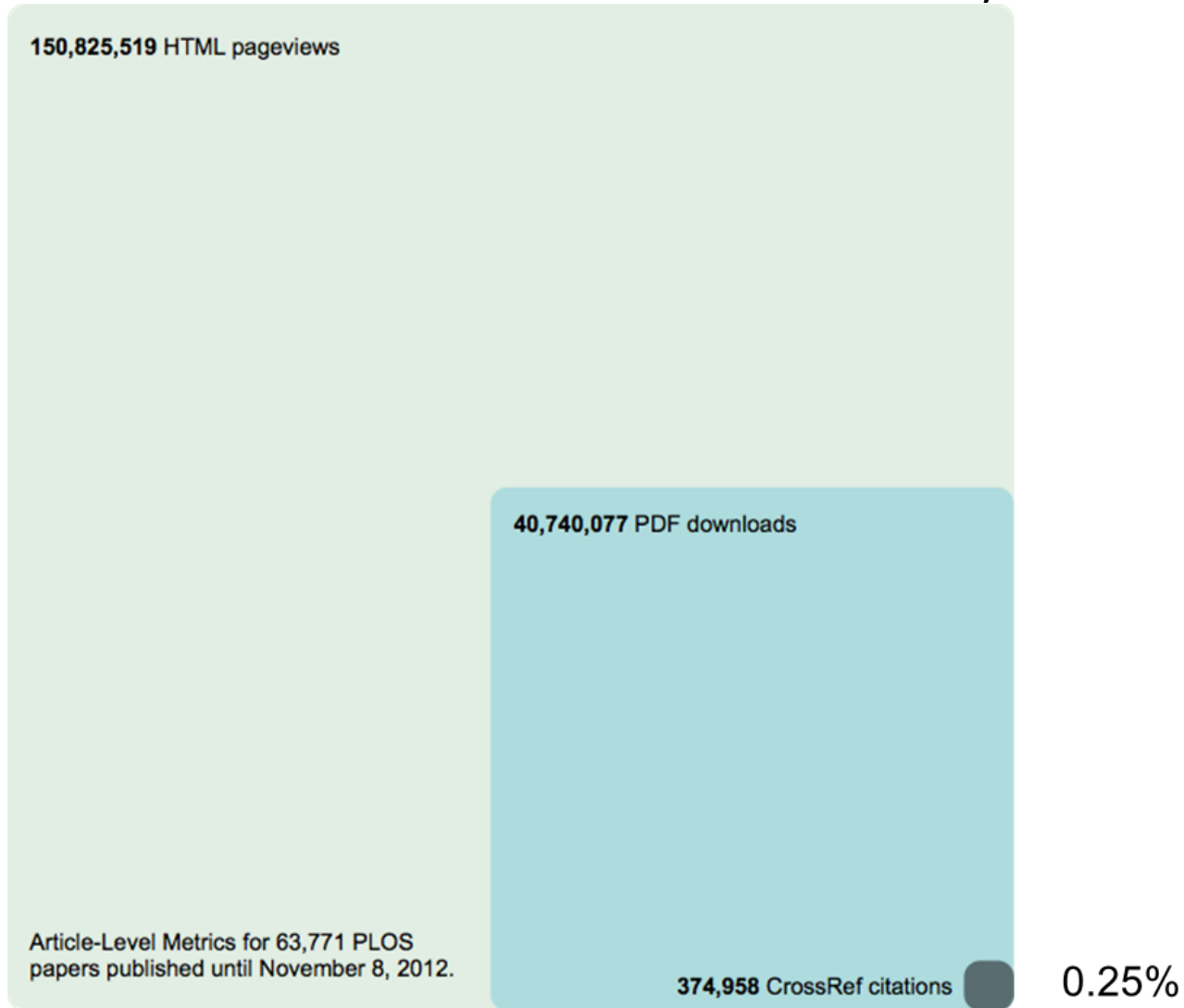**Usage based measures**

Reader-centred

Measuring: on-the-fly and consecutive

Impact of a separate object can be described

Automated measurement is possible

Citations are only a small fraction of how a paper is reused

Slide: Martin Fenner, PLoS

150,825,519 HTML pageviews

40,740,077 PDF downloads

Article-Level Metrics for 63,771 PLOS papers published until November 8, 2012.

374,958 CrossRef citations — 0.25%

Standards?

„An important issue, however, was the lack of standards on how to produce and report the usage data in a way that could be compared"

Baker et al. 2008

Standards

http://www.projectcounter.org

http://logec.repec.org/

http://www.ifabc.org/

Surveys on usage data and standards

- Two online surveys conducted by Saarland University and State Library on the behalf of OAS

- 32 experts on the realm of usage statistics were selected and invited to take part in the surveys

- Survey I focused on an evaluation of the standards COUNTER, LogEc, IFABC:
  8 respondents, 25%

- Survey II focused on functionalities and features based on usage information
  9 respondents, 28%

- Participation rate was very low, but not uncommonly low for expert surveys

Standards as seen by the community...

The ideal standard was expected to be

- comparable and widely accepted

The experts mostly ignored

- financial issues
- legal issues as privacy

Standards as seen by the community…

Results

COUNTER was considered

- the most appropriate standard
- „globally recognized"

But nevertheless

- LogEc was considered more useful than COUNTER regarding the definition of double click intervals and robot identification
- experts expressed the need for article level statistics

Standards as seen by the community…

Results

	Do you agree that COUNTER/LogEc/IFABC is a suitable standard for your work?		
Table 1	COUNTER	LogEc	IFABC
Strongly disagree	7,7%	7,7%	7,7%
Somewhat disagree	7,7%	15,4%	
Don't know		15,4%	15,4%
Somewhat agree	53,8%	23,1%	15,4%
Strongly agree	30,8%	7,7%	
Not familiar with…		30,8%	61,5%

Standards as seen by the community…

COUNTER: the pros and **cons**

- usage information on article level not available
- robot list considered „unorganized"
- time span of COUNTERs double click intervall considered to short
- COUNTER makes it difficult to compare Open Access and Closed Access items

Standards as seen by the community…
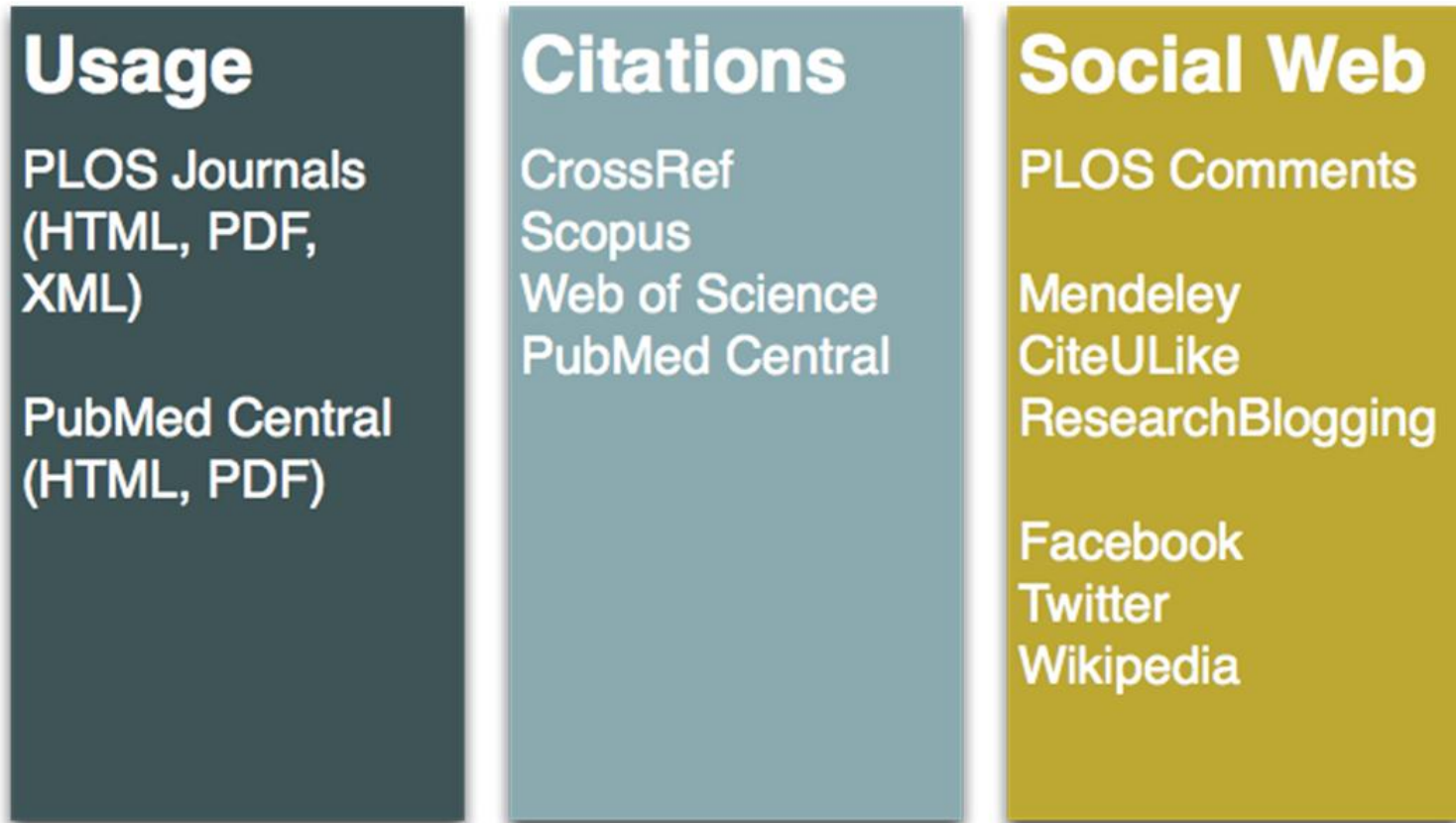
COUNTER: the **pros** and cons

- efficient and well-organised
- reputable
- reliable

(Usage based) features…

- Cross-linkage of Open Access items/ repositories with other e-publication services, social networks for scientists or social media services

- Offering additional context information as affiliation, citations, co-downloads

- Recommender services, based on usage, contributing authors

- Ranking and sorting of results according to usage frequencies

- Integration of Social Media Impact

Article-level metrics add granularity to journal-based metrics

Slide: Martin Fenner, PLoS

Usage	Citations	Social Web
PLOS Journals (HTML, PDF, XML)	CrossRef	PLOS Comments
	Scopus	
	Web of Science	Mendeley
	PubMed Central	CiteULike
PubMed Central (HTML, PDF)		ResearchBlogging
		Facebook
		Twitter
		Wikipedia

PLOS is collecting and displaying ALM since 2009

Many thanks for your attention.
Questions?

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