Using Non-Patent Literature (NPL) to Improve Patent Quality

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This presentation focuses on the citation of non-patent literature (NPL), which has been a recent policy priority, as a quality lever.

Crowdsourcing Prior Art **Executive Action to make it easier to share NPL**

Search **Enhancement Programs**
- Automated Pre-Examination Search Pilot - Providing relevant prior art through an automated pre-examination search to an examiner for review before the examiner begins examination and conducts a manual search in the application
- Scientific and Technical Information Center Awareness Campaign - Raising examiners' awareness of available search tools and resources to find better prior art in an application

Global Dossier **Initiative – Short Term Goals**
- Proof-of-Concept for Inter-Office Exchange – sharing documents between offices, e.g. prior art exchanges.
- Alerting Functionality – an automated mechanism that alerts other offices, applicants, and/or representatives when there is a change in the status of an application

This presentation considers US and EP citation of NPL and outcomes at "matched pair" levels

- "Exact match" matched pair approach for prosecution outcomes (Graham & Harhoff, 2006). Filing date / priority date matches.
- Data source: Innography
- Related work: Jensen, et al. (2005, 2007, 2008 2011, 2014), Graham & Harhoff (2006, 2009), Wright (2009), Sampat et al. (2015)

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Family Relationships between Patent Documents

Exact Match →

Document D1	Priority P1		
Document D2	Priority P1	Priority P2	
Document D3	Priority P1	Priority P2	
Document D4		Priority P2	Priority P3
Document D5			Priority P3

Source: Chien 2016, *Comparative Patent Quality*

Source of NPL data

United States Patent
Guevremont et al.

(12) **United States Patent**
Guevremont et al.

(54) **TANDEM FAIMS/ION-TRAPPING APPARATUS AND METHOD**

(75) Inventors: **Roger Guevremont**, Gloucester (CA); **Randy Purves**, Gloucester (CA); **David Barnett**, Orleans (CA)

(10) **Patent No.:** US 6,703,609 B2
(45) **Date of Patent:** Mar. 9, 2004

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,248,875 A	*	9/1993	Douglas et al.	....	250/282
5,811,800 A	*	9/1998	Franzen et al.	....	250/288
6,124,592 A	*	9/2000	Spangler	....	250/287
6,489,608 B1	*	12/2002	Skilling	....	250/281

OTHER PUBLICATIONS

Guevremont et al. "Atmospheric pressure ion focusing in a high–field asymmetric waveform ion mobility spectrometer", vol. 70, No. 2, Review of Scientific instruments, pp. 1–14, Feb. 1999.*

* cited by examiner

Citations: EP1266394

Refine search	↓ ST36	↗ Espacenet	✍ Submit observations	▤! Report error	🖶 Print

| Cited in	International search	
Type:	Patent literature	
Publication No.:	↗ US5283199	[Y]
Type:	Patent literature	
Publication No.:	↗ WO0008454	[Y]
Type:	Patent literature	
Publication No.:	↗ US4311669	[A]
Type:	Patent literature	
Publication No.:	↗ US5420424	[AD]
Type:	Non-patent literature	
Publication information:	[AD] BURYAKOV I A ET AL: "A NEW METHOD OF SEPARATION OF MULTI-ATOMIC IONS BY MOBILITY AT ATMOSPHERIC PRESSURE USING A HIGH-FREQUENCY AMPLITUDE-ASYMMETRIC STRONG ELECTRIC FIELD" INTERNATIONAL JOURNAL OF MASS SPECTROMETRY AND ION PROCESSES, ELSEVIER SCIENTIFIC PUBLISHING CO. AMSTERDAM, NL, vol. 128, 1993, pages 143-148, XP000865595 ISSN: 0168-1176 cited in the application	
DOI:	↗ http://dx.doi.org/10.1016/0168-1176(93)87062-W	
Type:	Non-patent literature	
Publication information:	[AD] PURVES R W ET AL: "MASS SPECTROMETRIC CHARACTERIZATION OF A HIGH-FIELD ASYMMETRIC WAVEFORM ION MOBILITY SPECTROMETER" REVIEW OF SCIENTIFIC INSTRUMENTS, AMERICAN INSTITUTE OF PHYSICS. NEW YORK, US, vol. 69, no. 12, December 1998 (1998-12), pages 4094-4105, XP000918121 ISSN: 0034-6748 cited in the application	
DOI:	↗ http://dx.doi.org/10.1063/1.1149255	

Google Patents, 2015 Edition:

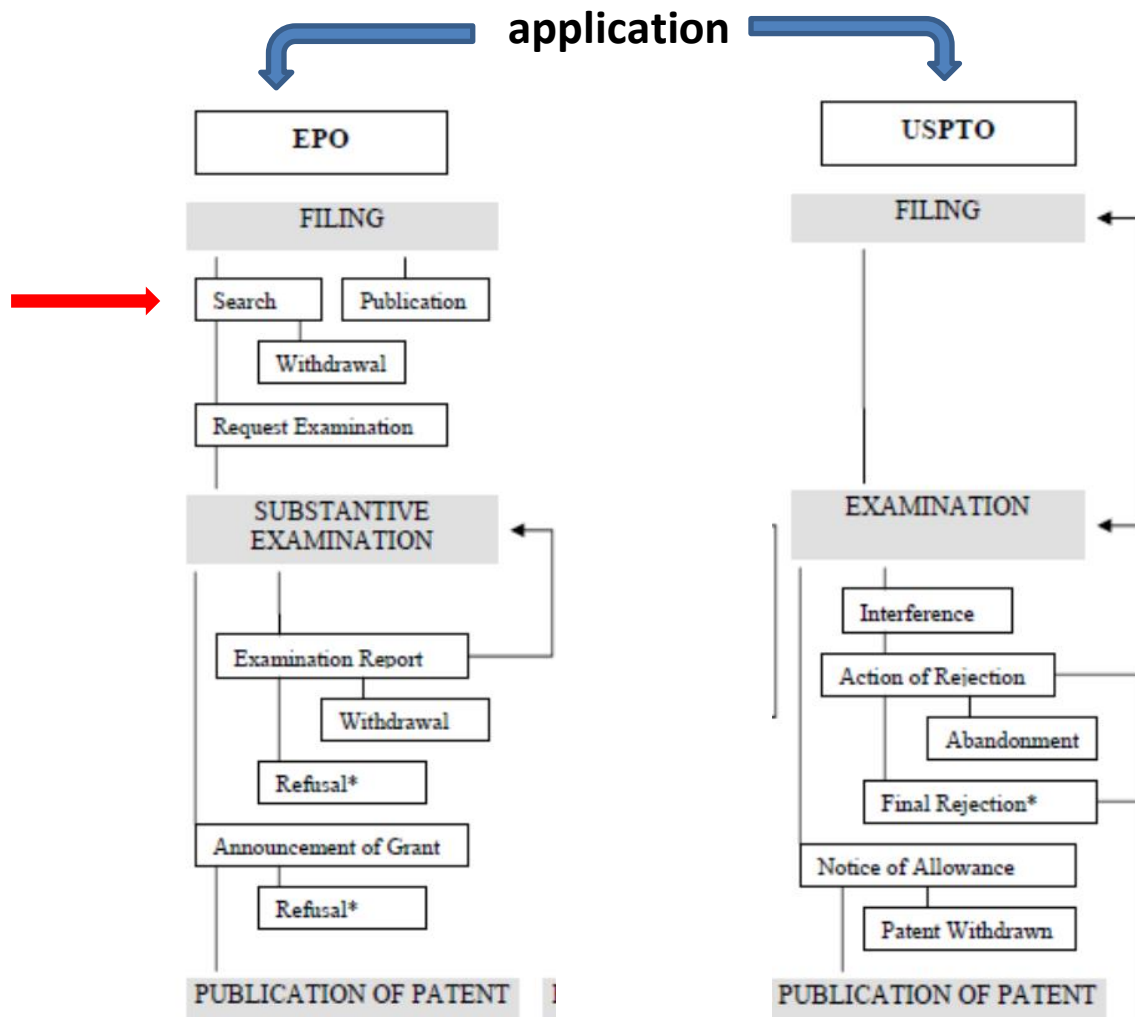**NON-PATENT CITATIONS**

Reference

1	*	See references of WO0169647A2

* Cited by examiner

What happens when the same patent application is submitted to the EPO and USPTO?
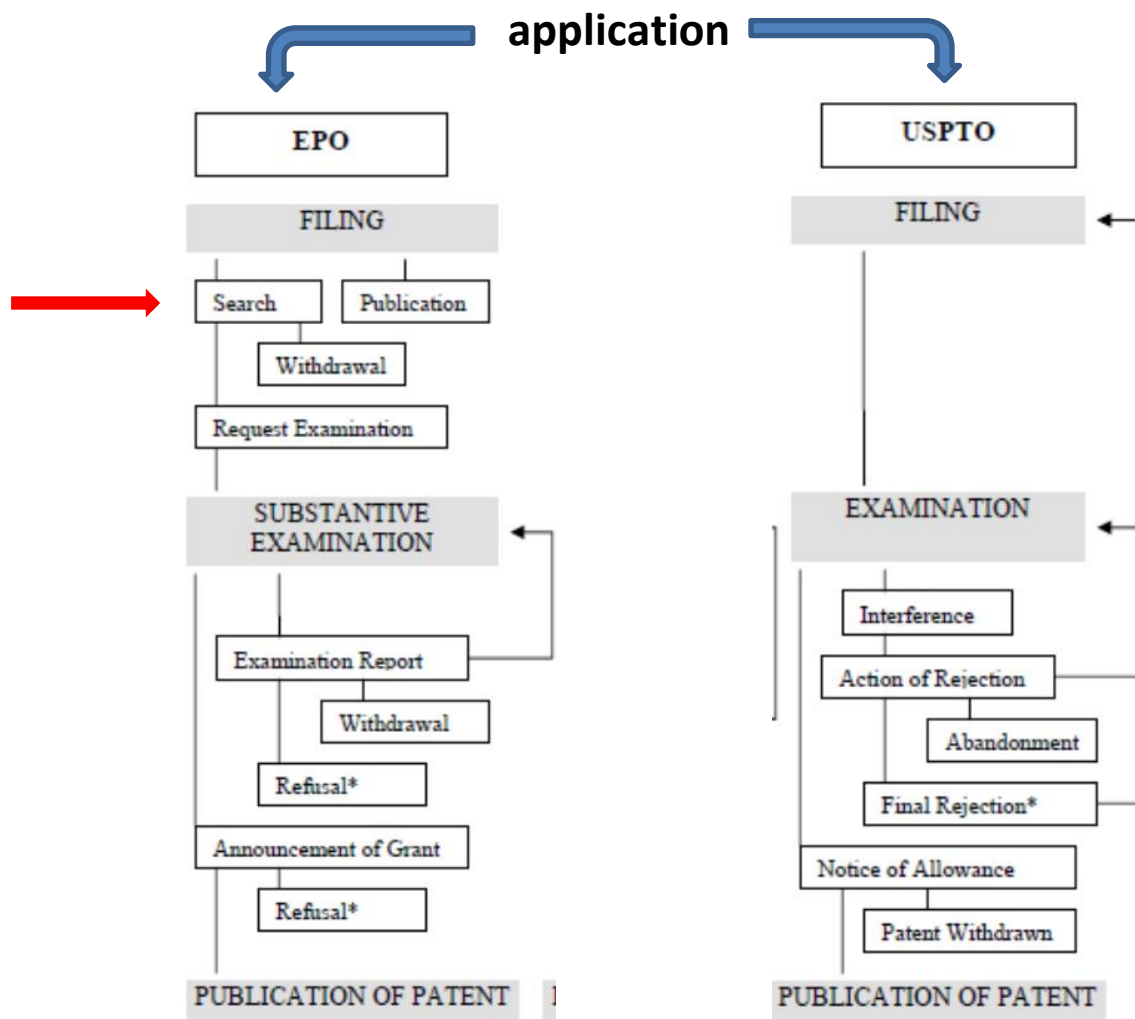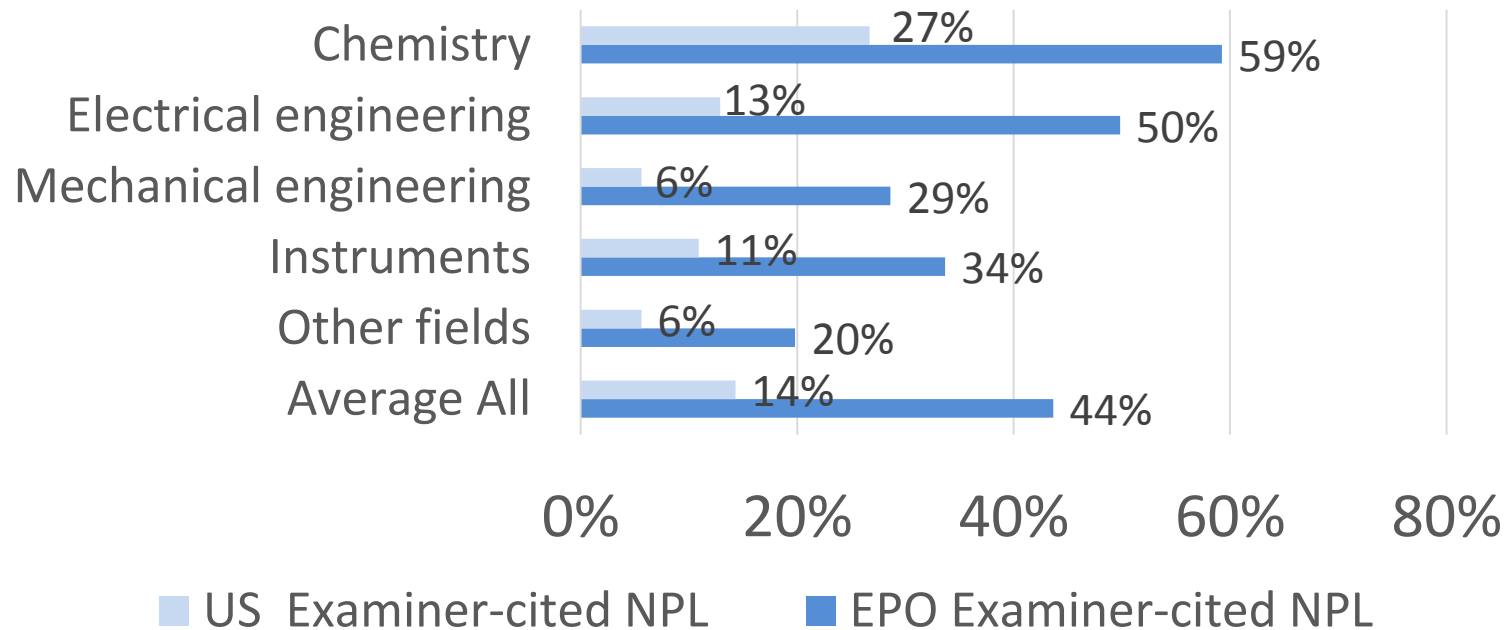
What happens when the same patent application is submitted to the EPO and USPTO?

*While time for searching prior art varies, EP prior art searching take ~8-12 hours on avg., vs. ~2 hours on avg. at the PTO (*van Pottelsberghe de la Potterie (2011), EPO)

EPO examiners are more likely to cite NPL

FIG____: US v. EPO Examiner Use of Non-Patent Literature (~7K 2002 Matched App Pairs)

- Chemistry — US 27%, EPO 59%
- Electrical engineering — US 13%, EPO 50%
- Mechanical engineering — US 6%, EPO 29%
- Instruments — US 11%, EPO 34%
- Other fields — US 6%, EPO 20%
- Average All — US 14%, EPO 44%

■ US Examiner-cited NPL   ■ EPO Examiner-cited NPL

Matches generated with Innography
NPL data: EP Register 2015, USPTO PAIR 2015, Google Patents (Front Page information)

Source: Chien 2016, *Comparative Patent Quality*

Time pressure during examination is nothing new

Jefferson was "quite favorable to the granting of patents, and granted them with great consideration, the other duties of members of this Board, in view of their high offices, made it impossible for them to devote much time to this work. As a result the law was changed in 1793 to make the granting of patents a clerical function." – PJ Frederico, 1952
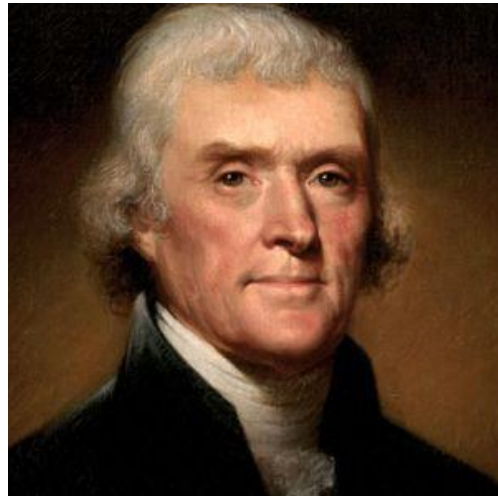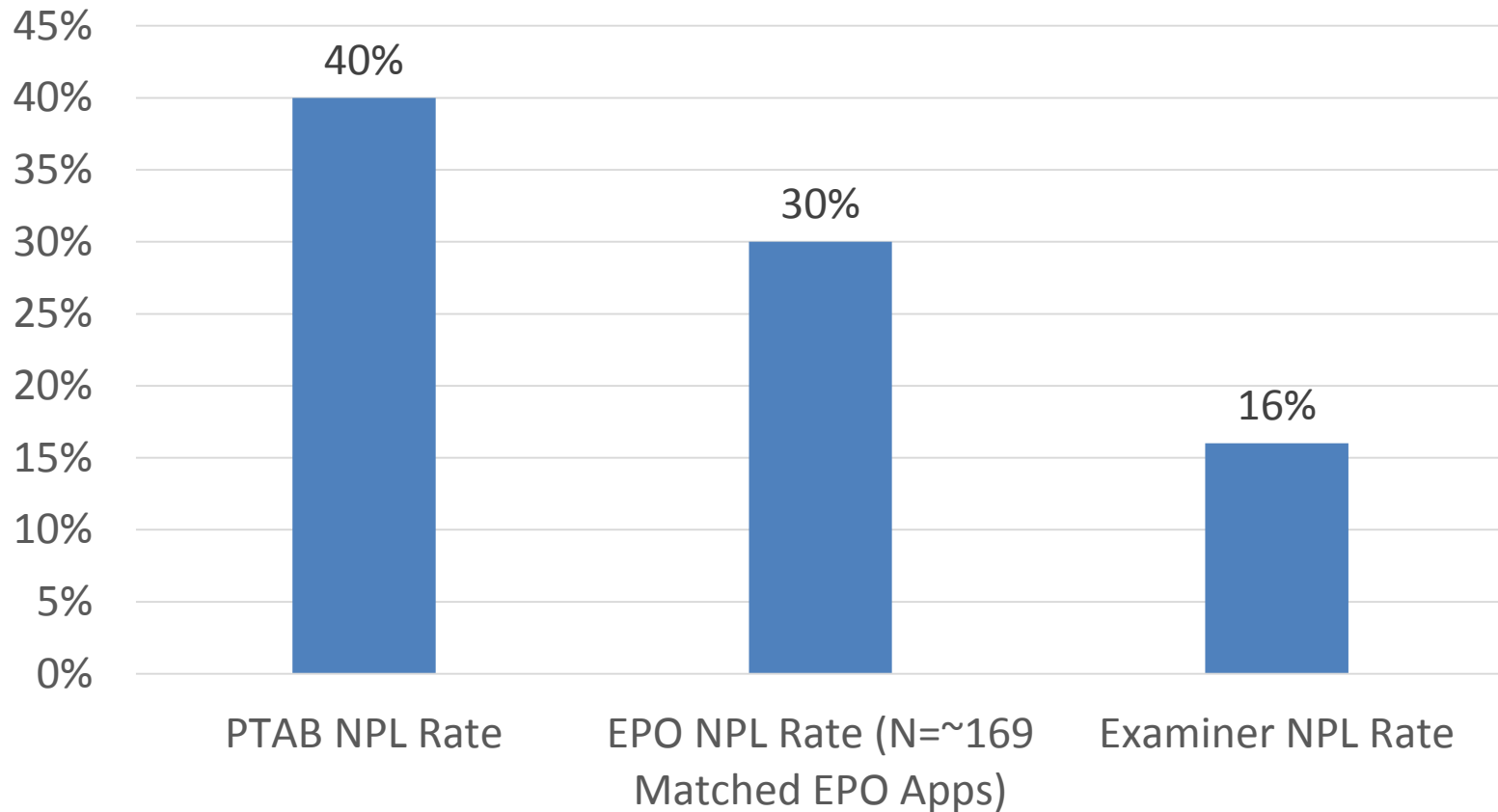
There is a venue that cites NPL more than EPO...

The PTAB is more likely than the EPO or PTO to cite NPL in its decisions

Citations of Non-Patent Literature in Different Venues
(N~=311 IPRed patents subject to a final determination)

One Example – the 6,032,137 DataTreasury Patent

- In 2015, the PTAB revoked the '137 patent as overly broad and vague, and therefore invalid
- The Community Bankers of Amerca hailed the verdict "a victory for community banks. By that time DataTreasury and its two employees had already collected $350M in licensing fees.

The '137 DataTreasury patent was the subject of 7 EP Applications, none of which matured into a patent

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Remote image capture with centralized processing and storage
US 6032137 A

ABSTRACT

A system for remote data acquisition and centralized processing and storage is disclosed called the DataTreasury™ System. The DataTreasury™ System provides comprehensive support for the processing of documents and electronic data associated with different applications including sale, business, banking and general consumer transactions. The system retrieves transaction data such as credit card receipts checks in either electronic or paper form at one or more remote locations, encrypts the data, transmits the encrypted data to a central location, transforms the data to a usable form, performs identification verification using signature data and biometric data, generates informative reports from the data and transmits the informative reports to the remote location(s). The DataTreasury™ System has many advantageous features which work together to provide high performance, security, reliability, fault tolerance and low cost. First, the network architecture facilitates secure communication between the remote location(s) and the central processing facility. A dynamic address assignment algorithm performs load balancing among the system's servers for faster performance and higher utilization. Finally, a partitioning scheme improves the error correction process.

Publication number	US6032137 A
Publication type	Grant
Application number	US 09/081,012
Publication date	Feb 29, 2000
Filing date	May 19, 1998
Priority date	Aug 27, 1997
Fee status	Paid
Also published as	CA2301793A1, CA2301793C, CN1277694A, CN1319006C, CN101039239A, CN101039239B, EP1008086A2, EP1008086A4, EP1688876A2, EP1688876A3, EP1986148A1, EP2267652A1, EP2267653A1, US5910988, WO1999011021A2, WO1999011021A3, Less «
Inventors	Claudio R. Ballard
Original Assignee	Csp Holdings, Llc
Export Citation	BiBTeX, EndNote, RefMan

Patent Citations (54), Referenced by (595), Classifications (34), Legal Events (16)

External Links: USPTO, USPTO Assignment, Espacenet