

Using patent data in institutional studies: Focus - Entrepreneurship

-
Monday Workshop

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ESNIE 2008
Cargèse, Corsica
19 May 2006



The Structure of our Session

Motivation: *Patents and Entrepreneurship*



5 minutes

Overview of IP Data:
Sources and Uses
Questions



25 minutes

10 minutes

Applications in Researching
Entrepreneurship using Patent Data
Questions



25 minutes

10 minutes

Discussions - Questions



15 minutes

Patents (and Intellectual Property more generally) and Institutional Studies

- Patents qua *economic history*
 - The history and development of patent law (Khan; Lameroux)
- Patents qua *law and economics*
 - Litigation strategies (Lerner and Lanjouw; Somaya)
- Patents qua *transactional chips*
 - In a knowledge economy, assets are intangible
 - Patents and markets for technology (Gambardella)
 - But...
 - Patents are probabilistic (Shapiro)
 - Patents and coordination problems (Farrell)
- Patents qua *law and politics*
 - Ongoing political struggles in legislatures and the courts over the technology economy
 - Patent reform
 - EU versus US: Regimes (e.g., opposition)
 - Patentable subject matter
 - EU versus US: Software patentability

Remember this drawing?

United States Patent [19]

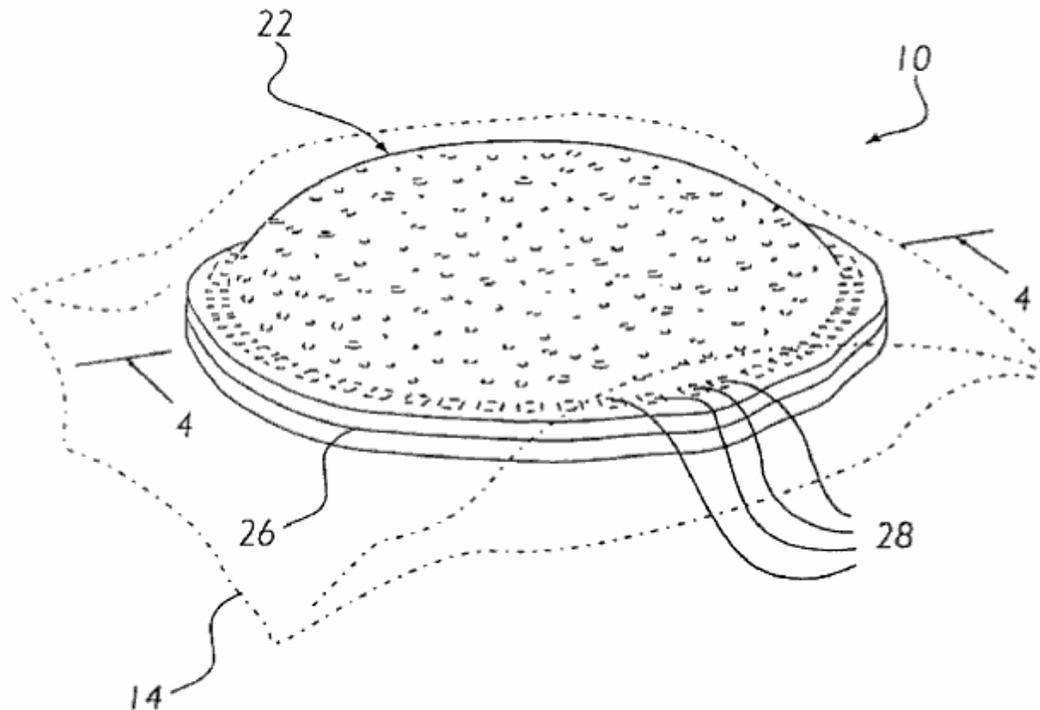
Kretchman et al.

[11] **Patent Number:** **6,004,596**

[45] **Date of Patent:** **Dec. 21, 1999**

[54] **SEALED CRUSTLESS SANDWICH**

5,853,778 12/1998 Mayfield 426/89



What can we find in the patent data?

United States Patent [19]
Kretchman et al.

[11] **Patent Number:** **6,004,596**
 [45] **Date of Patent:** **Dec. 21, 1999**

[54] **SEALED CRUSTLESS SANDWICH**

5,853,778 12/1998 Mayfield 426/89

[75] Inventors: **Len C. Kretchman**, Fergus Falls, Minn.; **David Geske**, Fargo, N. Dak.

[73] Assignee: **Menusaver, Inc.**, Orrville, Ohio

[21] Appl. No.: **08/986,581**

[22] Filed: **Dec. 8, 1997**

[51] **Int. Cl.**⁶ **A21D 13/00**

[52] **U.S. Cl.** **426/94; 426/274; 426/275; 426/297**

[58] **Field of Search** **426/94, 274, 275, 426/297, 138**

[56] **References Cited**

U.S. PATENT DOCUMENTS

| | | | | |
|-----------|---------|-----------------|-------|---------|
| 3,083,651 | 4/1963 | Cooper | | 426/275 |
| 3,690,898 | 9/1972 | Partyka | | 426/275 |
| 3,767,823 | 10/1973 | Wheeler et al. | | 426/275 |
| 3,769,035 | 10/1973 | Kleiner et al. | | 426/275 |
| 3,862,344 | 1/1975 | Zobel | | 426/244 |
| 4,382,768 | 5/1983 | Lifshitz et al. | | 426/275 |

OTHER PUBLICATIONS

“50 Great Sandwiches”, Carole Handslip, pp. 81–84,86,95, 1994.

Primary Examiner—Lien Tran

Attorney, Agent, or Firm—Vickers, Daniels & Young

[57] **ABSTRACT**

A sealed crustless sandwich for providing a convenient sandwich without an outer crust which can be stored for long periods of time without a central filling from leaking outwardly. The sandwich includes a lower bread portion, an upper bread portion, an upper filling and a lower filling between the lower and upper bread portions, a center filling sealed between the upper and lower fillings, and a crimped edge along an outer perimeter of the bread portions for sealing the fillings therebetween. The upper and lower fillings are preferably comprised of peanut butter and the center filling is comprised of at least jelly. The center filling is prevented from radiating outwardly into and through the bread portions from the surrounding peanut butter.

10 Claims, 4 Drawing Sheets

Prior Art?



IP-data based research: current knowledge

Questions for this part of the presentation

- **What types of IP information are available?**
- **How have these data (particularly the patent data) been used to study the institutions of innovation?**
- **Where may I obtain such data?**
- **What are opportunities, and challenges, in using these data?**

Main “Species” of IP Protection: What’s in them, and how can it help me as a researcher?

- Patent
 - Government-granted right to prevent others from using a stated technology
 - Requirements
 - Novelty, Usefulness, Non-obviousness, Disclosure
 - Administrative process, with substantial applicant input
 - Limited in time, scope
 - monopoly? Sort of, but not *really*...
- Copyright
 - Government-granted, and “natural” right protecting authors, creators
 - Limited? in time, limited to “expression”
- Trademark
 - Government-granted protection for brand marks, “consumer protection”
 - Limited in subject matter, unlimited in time—but actively protect, maintain
- Secrecy
 - Protection?
 - In the US: valuable information, reasonable efforts, unlimited in time—but independent discovery
 - Observable?

Observable information: what does it look like?

United States Patent [19]
Kretchman et al.

[11] **Patent Number:** **6,004,596**
[45] **Date of Patent:** **Dec. 21, 1999**

[54] **SEALED CRUSTLESS SANDWICH** 5,853,778 12/1998 Mayfield 426/89

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[73] **Assignee:** **Menusaver, Inc.**, Orrville, Ohio

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[58] **Field of Search** 426/94, 274, 275, 426/297, 138

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| 3,862,344 | 1/1975 | Zobel | 426/244 |
| 4,382,768 | 5/1983 | Lifshitz et al. | 426/275 |

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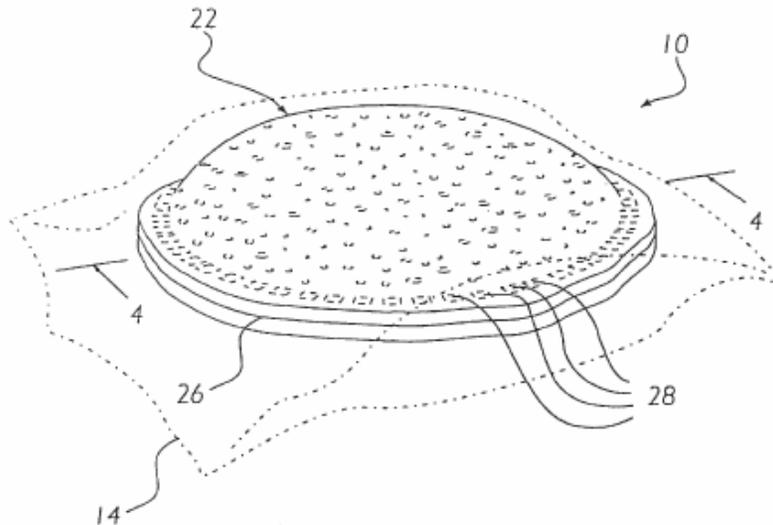
OTHER PUBLICATIONS

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Primary Examiner—Lien Tran
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[57] **ABSTRACT**

A sealed crustless sandwich for providing a convenient sandwich without an outer crust which can be stored for long periods of time without a central filling from leaking outwardly. The sandwich includes a lower bread portion, an upper bread portion, an upper filling and a lower filling between the lower and upper bread portions, a center filling sealed between the upper and lower fillings, and a crimped edge along an outer perimeter of the bread portions for sealing the fillings therebetween. The upper and lower fillings are preferably comprised of peanut butter and the center filling is comprised of at least jelly. The center filling is prevented from radiating outwardly into and through the bread portions from the surrounding peanut butter.



1
SEALED CRUSTLESS SANDWICH
BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates generally to sandwiches and more specifically it relates to a sealed crustless sandwich for providing a convenient sandwich without an outer crust which can be stored for long periods of time without a central filling from leaking outwardly.

Many individuals enjoy sandwiches with meat or jelly like fillings between two conventional slices of bread. However, some individuals do not enjoy the outer crust associated with the conventional slices of bread and therefore take the time to tear away the outer crust from the desired soft inner portions of the bread. This outer crust portion is then thrown away and wasted. There is currently no method or device for baking bread without having an outer crust. Hence, there is a need for a convenient sandwich which does not have an outer crust and which is not prone to waste of the edible outer crust portions. The present invention provides a method of making a sealed crustless sandwich which can be stored for extended periods of time without an inner filling from seeping into the bread portion.

2. Description of the Prior Art

There are numerous sandwich devices. For example, U.S. Pat. No. 3,690,898 to Partyka; U.S. Design Pat. No. 252,536 to Goglanian; U.S. Design Pat. No. 293,040 to Gagliardi; U.S. Design Pat. No. 317,672 to Presl; U.S. Design Pat. No. 318,360 to Sam; and U.S. Pat. No. 5,500,234 to Russo all of which are illustrative of such prior art.

While these sandwiches may be suitable for the particular purpose to which they address, they are not as suitable for providing a convenient sandwich without an outer crust which can be stored for long periods of time without a central filling from leaking outwardly. The prior art does not teach a sandwich without an outer crust which sealably retains an inner filling for extended periods of time.

In these respects, the sealed crustless sandwich according to the present invention substantially departs from the conventional concepts and designs of the prior art, and in so doing provides a sandwich primarily developed for the purpose of providing a convenient sandwich without an outer crust which can be stored for long periods of time without a central filling from leaking outwardly.

SUMMARY OF THE INVENTION

A primary object of the present invention is to provide a sealed crustless sandwich that will overcome the shortcomings of the prior art devices.

Another object is to provide a sealed crustless sandwich that does not have any crust.

An additional object is to provide a sealed crustless sandwich that retains an inner filling from seeping into the bread portion.

A further object is to provide a sealed crustless sandwich that can be stored for extended periods of time for use in lunch box type of situations.

6,004,596

2

To the accomplishment of the above and related objects, this invention may be embodied in the form illustrated in the accompanying drawings, attention being called to the fact, however, that the drawings are illustrative only, and that changes may be made in the specific construction illustrated and described within the scope of the appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

Various other objects, features and attendant advantages of the present invention will become fully appreciated as the same becomes better understood when considered in conjunction with the accompanying drawings, in which like reference characters designate the same or similar parts throughout the several views, and wherein:

FIG. 1 is a side view of cutting cylinder above the upper and lower bread with the fillings in between.

FIG. 2 is a side view of the cutting cylinder penetrating and crimping the upper and lower bread with the fillings in between.

FIG. 3 is an upper perspective view of the sealed crustless sandwich within an airtight packaging.

FIG. 4 is a cross sectional view from FIG. 3 disclosing the peanut butter sealing the jelly in between.

FIG. 5 is a lower perspective view of the cutting cylinder.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Turning now descriptively to the drawings, in which similar reference characters denote similar elements throughout the several view, FIGS. 1 through 5 illustrate a sealed crustless sandwich 10, which generally comprises lower bread portion 20, an upper bread portion 22, an upper filling 30b and a lower filling 30a between the lower bread portion 20 and upper bread portion 22, a center filling 32 sealed between the upper filling 30b and the lower filling 30a, and a crimped edge 26 along an outer perimeter of the bread portions 20, 22 for sealing the fillings 30a-b, 32 therebetween. The upper filling 30b and the lower filling 30a are preferably comprised of peanut butter but may consist of any other edible substance such as but not limited to meat, vegetable oil, jelly, cheese, honey, or fruit. The center filling 32 is preferably comprised of jelly but may consist of any other edible substance such as but not limited to meat, vegetable oil, jelly, cheese, honey, or fruit. The center filling 32 is prevented from leaking outwardly into and through the bread portions 20, 22 from the surrounding upper filling 30b and lower filling 30a. The sealed crustless sandwich is preferably packaged within a resilient packaging 14 to extend its useful life and for providing convenience for the user.

As shown in FIGS. 1, 2 and 5 of the drawings, a cutting cylinder 40 has a sleeve 42 positioned within. The sleeve 42 preferably is sidably positioned within a lumen of the cutting cylinder 40, but may be secured within the cutting cylinder 40. The bottom edge of the sleeve 42 has a notched end 44 with the notches spaced approximately every 1/8 inch. The plurality of extensions created from the plurality of notches form a corresponding plurality of depressions 28 in the

SEALED CRUSTLESS SANDWICH

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Observable information: Patent data

First, some things that are *not* in the data

What's not observable?

- No information on products
- No performance data *per se*
- No sales data

Why not?

- Purpose of disclosure requirements: dissemination of technical and legal knowledge, not necessary economically relevant knowledge

What is observable then?

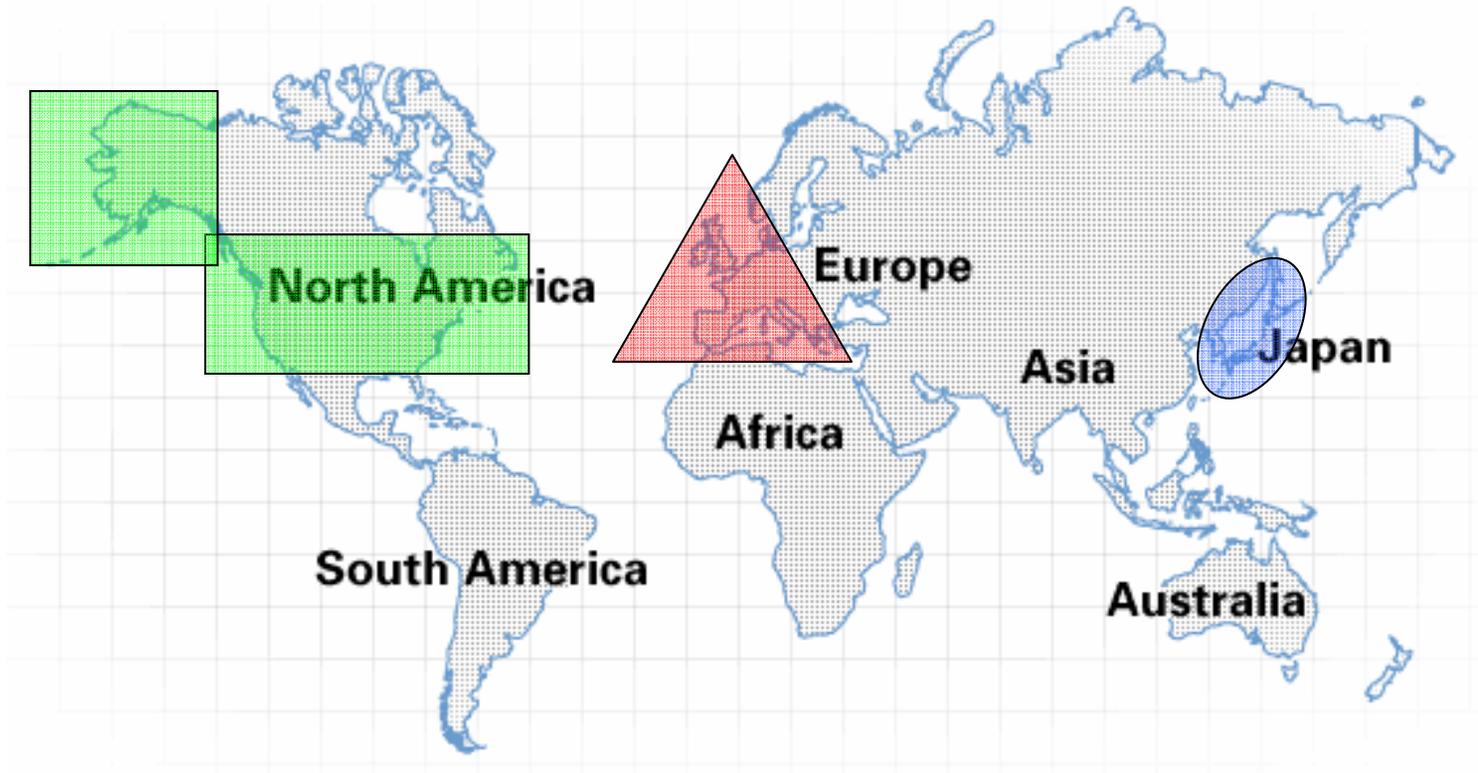
- A lot of information on applicants (firms or people), inventors (firms or people), legal terms, the technology
- What information exactly? Depends on geography. I will focus primarily on European and US patent data

Observable information: the territories

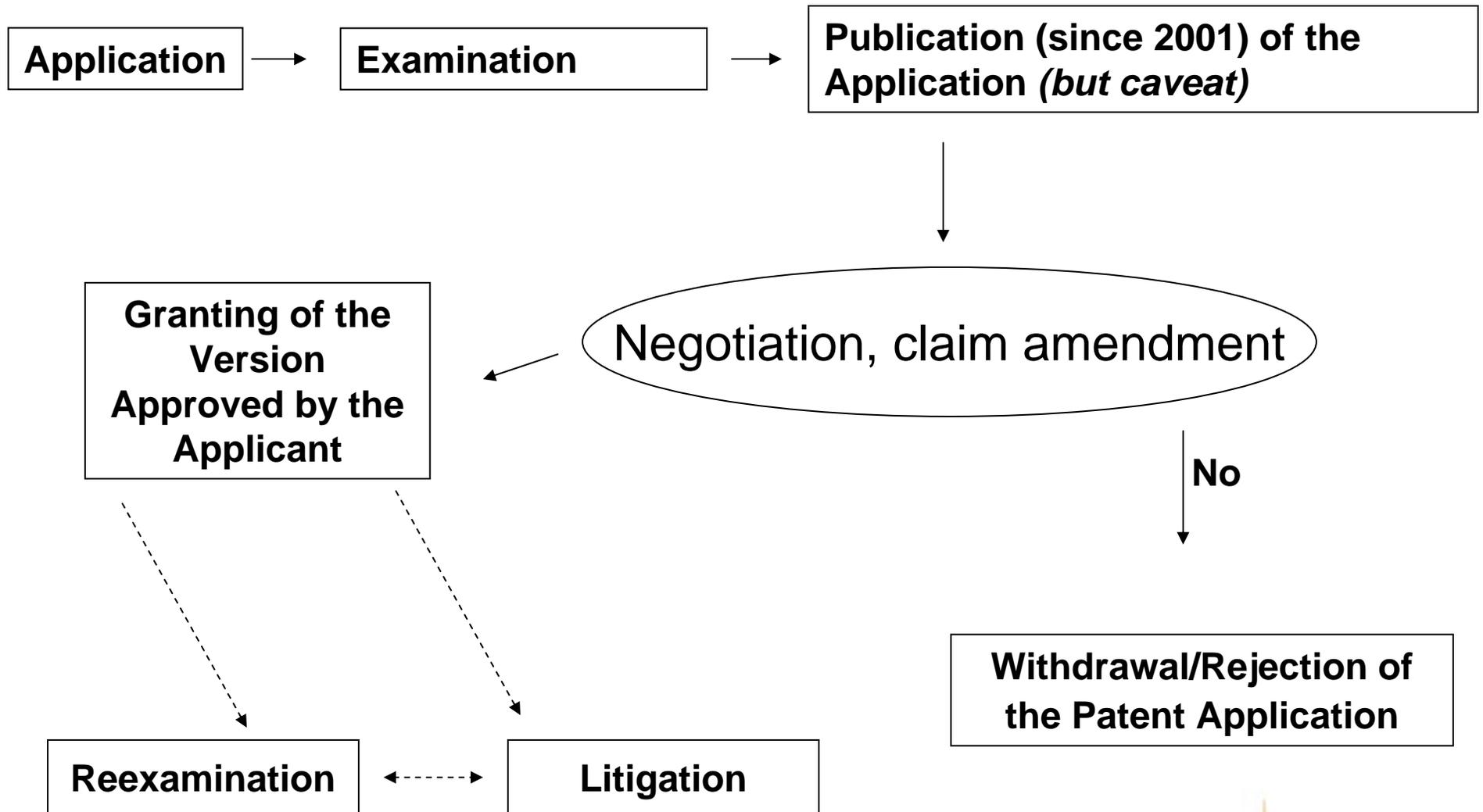
**United States:
US PTO**

**Europe:
EPC-EPO**

**Japan:
JPO**



Observable information: US granting procedure



Observable information: US granting procedure

Application

Applicant and Inventor Information
Backward References (initial)
Initial Claims
Filing Path (Strategy)

Grant

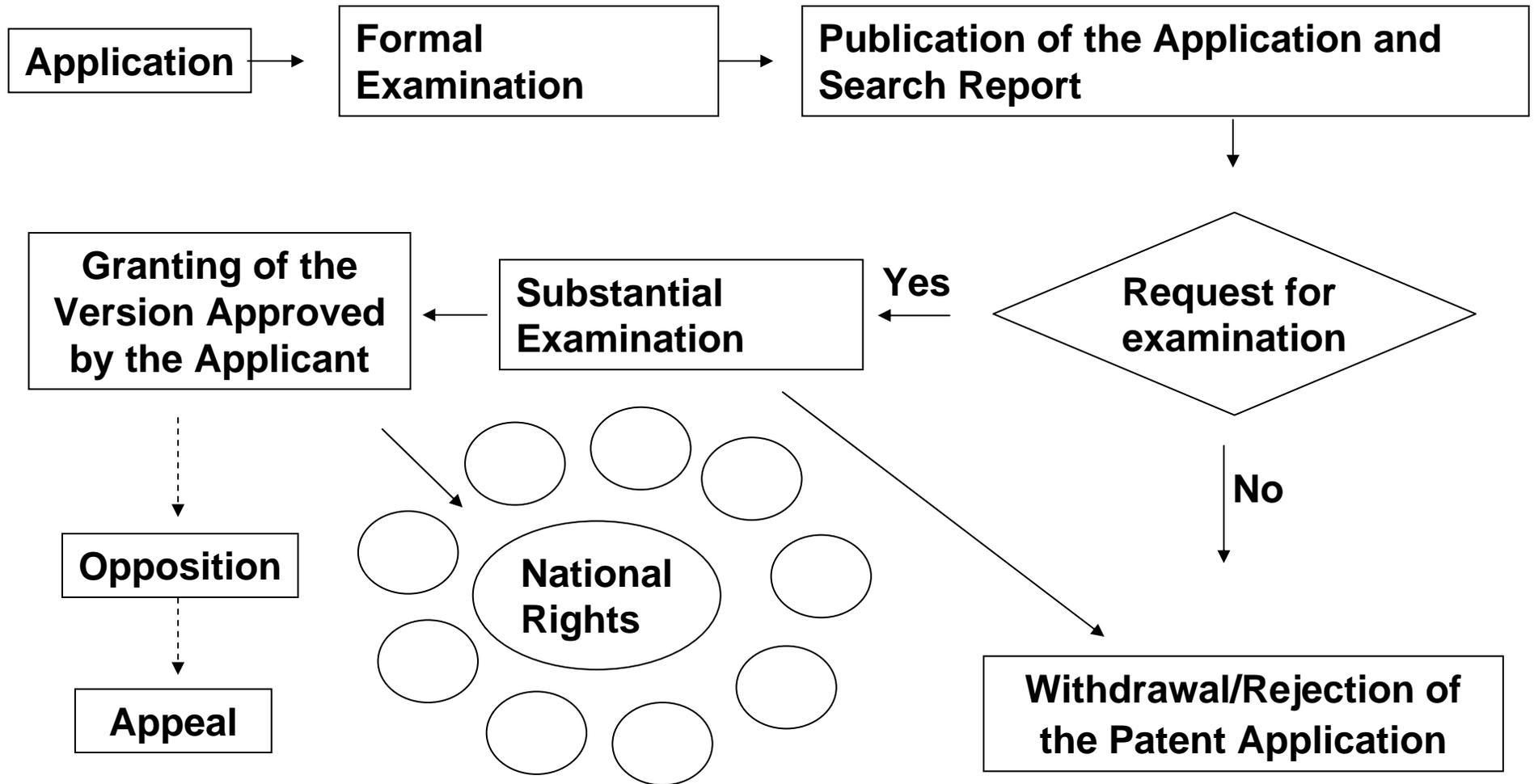
Backward References (final)
Final claims

Reexamination &
Outcomes

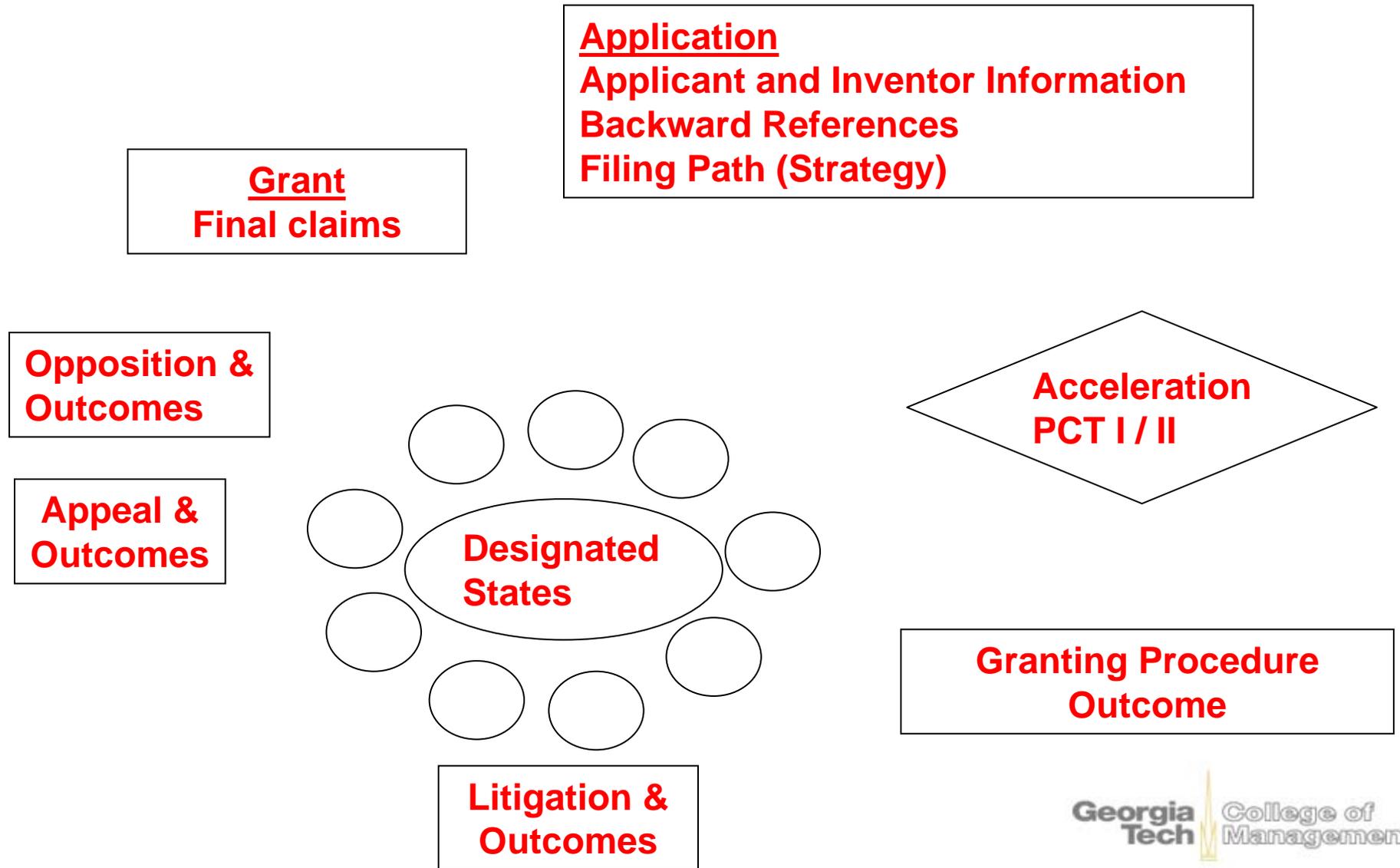
Litigation &
Outcomes

Granting Process
Outcomes

Observable information: the EP granting procedure



Observable information: the EP granting procedure



Observable information: a list of data

Relevant information for researchers

Immediately observable

- Applicant data
- Inventor data
- Technology classes
- Backward references
- Family size
- Filing routes (patenting "strategy")
- Litigation

Computable

- Forward citations (time lag)
- Originality
- Generality (time lag)

Interpreting information

Equivalents or "Family" Information

Contains:

- Designated countries (incl. country code)

Has been applied to the study of:

- Innovation
- Valuation of IP
- Institutional Economics

Some references:

- Lanjouw/Pakes/Putnam (1996); Graham/Harhoff (2006); Jensen/Palangkaraya/Webster (2006).

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
9 June 2005 (09.06.2005)

PCT

(10) International Publication Number
WO 2005/051451 A2

- (51) International Patent Classification⁷: A61L 31/00 (72) Inventors; and
(21) International Application Number: PCT/US2004/039099 (75) Inventors/Applicants (for US only): HUNTER, William,
L. [CA/CA]; 1618 Station Street, Vancouver, British Co-
lumbia V6A 1B6 (CA); GRAVETT, David, M. [CA/CA];
Columbia V5Z
]; 8011 Labor-
76P 5N8 (CA).
sh Street, Van-
Property Law
le, WA 98104.
ated, for every
AG, AI., AM,
, CA, CH, CN,
E, EG, ES, FI,
N, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM.
- (22) In (30) Priority Data:
(25) P 60/523,908 20 November 2003 (20.11.2003) US
(26) P 60/524,023 20 November 2003 (20.11.2003) US
(30) P 60/525,226 24 November 2003 (24.11.2003) US
60 60/526,541 3 December 2003 (03.12.2003) US
60 60/578,471 9 June 2004 (09.06.2004) US
60 60/586,861 9 July 2004 (09.07.2004) US
60 10/986,230 10 November 2004 (10.11.2004) US
10 10/986,231 10 November 2004 (10.11.2004) US
- (71) Applicant (for all designated States except US): AN-
GIOTECH INTERNATIONAL AG [CH/CH]; Bunde-
splatz 1, CH-6304 Zug (CH).

[Continued on next page]

(54) Title: ELECTRICAL DEVICES AND ANTI-SCARRING AGENTS



Interpreting information

Post-grant reviews (e.g., litigation, opposition, etc.)

Contains:

- Information on type of suit challenges (validity or infringement), names of parties, outcomes

Has been applied to the study of:

- Valuation of IP
- Competition Analysis
- Institutional Economics

Some references:

- Lerner (1995); Lanjouw/Schankerman (2001); Harhoff/Scherer/Vopel (2003); Somaya (2003); Graham/Hall/Harhoff/Mowery (2003); Harhoff/Reizig (2004); Lanjouw/Lerner (2004); Graham/Harhoff (2006)

Interpreting information

Forward Citations

Contains:

- Information on how often/by whom a patent is referenced as relevant prior art during subsequent patent examination processes

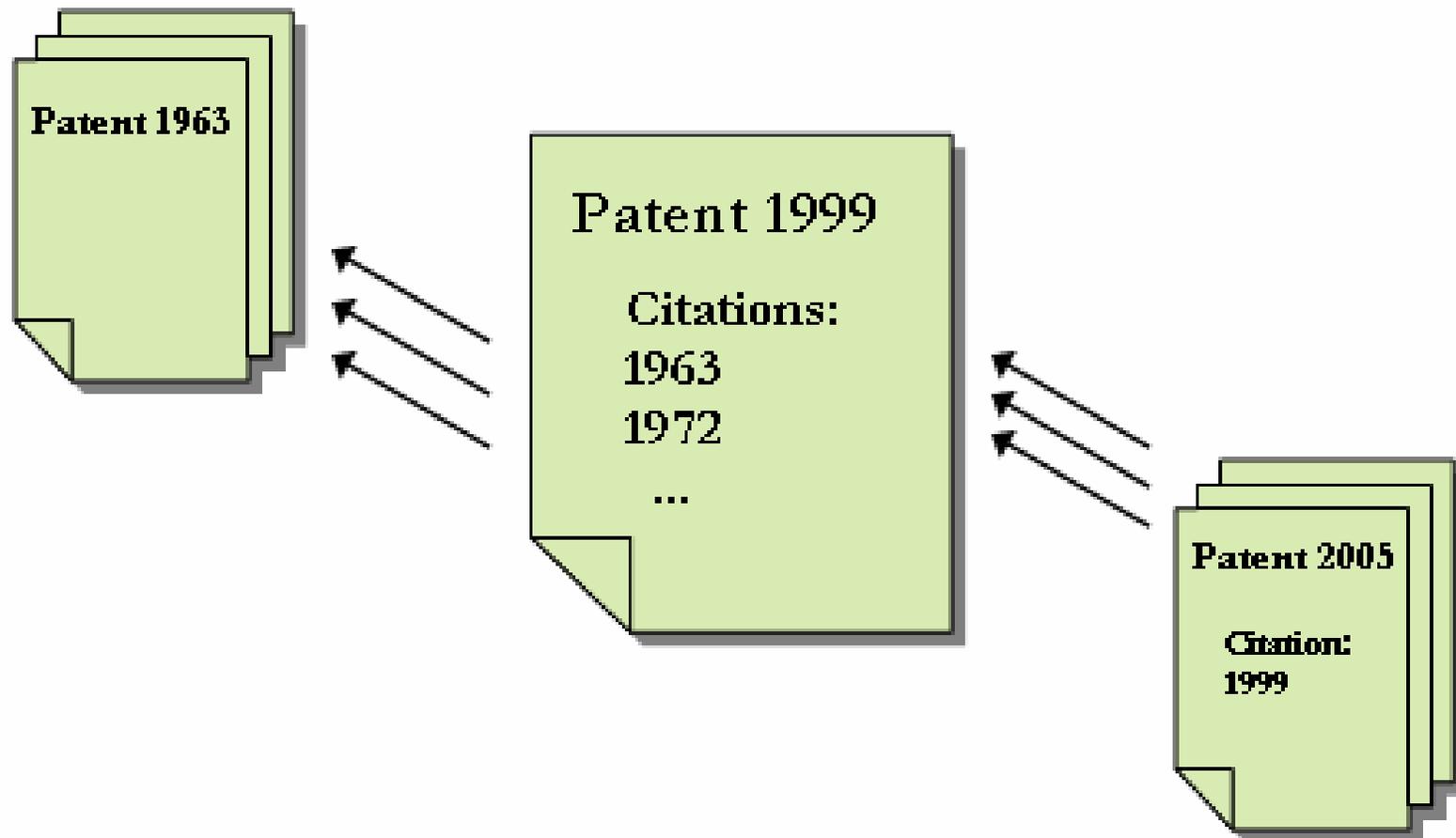
Has been applied to the study of:

- Valuation of IP
- Social network theory
- Technological pathways
- Knowledge flows

Some references:

Trajtenberg (1990); Trajtenberg/Jaffe/Henderson (1997); Stuart (1998); Mowery/A.Ziedonis (2001); Harhoff, et al (2004); Hall/Jaffe/Trajtenberg (2005); Gambardella et al (2006)

Citations: Backward and Forward



Interpreting information

Research areas previously explored using patent data:

Competition analysis

Firm Strategy

Innovation

Institutional Economics

Knowledge flows

Social network theory

Strategic alliances

Valuation of intangible resources

And in the future? ...



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University of California, Berkeley

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[Research summaries](#)

[Forthcoming special issue of EINT \(2006, Vol 15 \(4/5\)\)](#)

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[Journals](#)

[Data](#)

Courses 2005-2006

Collecting information

Data sources

“Free but raw,” official registers, designed for case-based research.

No computed indicators

- EPOLINE
- USPTO

“Free, not raw, but used”

- NBER (Hall, Jaffe, and Trajtenberg, 2000)
 - US patent data complete 1975-1999 (with some data 1963-2002)
 - Standard indicators (incl. forward cites) computed
- NSF (Cockburn, et al., 2005)
 - Multi-year update of the NBER data, with link-outs

Commercial providers

- Micropatent
- Derwent

Using information

- **Opportunities and Challenges??**
 - **The costs to using data have fallen (and continue)**
 - NBER/NSF database
 - Computing power
 - **Uncertain rewards to using the current data**
 - Does the use of data become expected, or passé?
 - **Likely rewards at the frontier**
 - New applications, employing greater institutional knowledge (and methodological skills)
- **Other Data**
 - Copyright
 - Trademark
 - Secrecy?