

Competitive Intelligence - Using Patent information

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Overview

- Defensive use
 - What if your product is infringing other's patent?
(in a case of WIPO IP panorama)
 - Prior patent search is needed for R&D project (All patent documents are published in 18 month after application. except for US)
- Proactive use
 - Technology mapping (patent map) and competitive analysis
 - Economic analysis based on patent information
(such as creating patent quality index)

What to do against infringement warning?

- Invent around
- License negotiation (in-license)
- Fight: post grant opposition system, lawsuit
- Ignore



Depending on

- How critical the potential infringing patent?
- Who warns you (patent troll? Serious players?)
- Who are you (with large IP dept. or small firm?)



US006871616B2

(12) **United States Patent**
Zhadan-Milligan et al.

(10) **Patent No.:** **US 6,871,616 B2**
(45) **Date of Patent:** **Mar. 29, 2005**

(54) **PET UMBRELLA AND COMBINED PET LEASH AND UMBRELLA**

(76) Inventors: **Irina Zhadan-Milligan**, P.O. Box 6412, New York, NY (US) 10150; **Yuri Zhadan**, P.O. Box 6412, New York, NY (US) 10150

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **10/782,942**

(22) Filed: **Feb. 23, 2004**

(65) **Prior Publication Data**

US 2004/0200437 A1 Oct. 14, 2004

Related U.S. Application Data

(60) Provisional application No. 60/449,451, filed on Feb. 24, 2003.

(51) **Int. Cl.⁷** **A01K 27/00**

(52) **U.S. Cl.** **119/795; 119/769; 135/16**

(58) **Field of Search** 119/795, 850, 119/769; 135/16, 20.1; D30/153, 151; 248/514

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Primary Examiner—Teri P. Luu

Assistant Examiner—Kimberly S Smith

(74) *Attorney, Agent, or Firm*—Nixon & Vanderhyc

(57) **ABSTRACT**

A pet umbrella combines an umbrella and a leash. The umbrella includes a shaft carrying a canopy moveable between open and closed positions. In the open position, the convex side of the canopy faces the umbrella handle. A leash is secured to the opposite end of the shaft on the concave side of the canopy. The canopy is preferably oval in plan and formed of clear plastic see-through material. The major axis of the oval defined by the canopy forms a plane with the shaft whereby the shaft forms an included angle in the plane with the shaft of less than 90° and preferably about 30°–60°.

18 Claims, 5 Drawing Sheets

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- EPO: esp@snet: <http://ep.espacenet.com/>
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Other sources

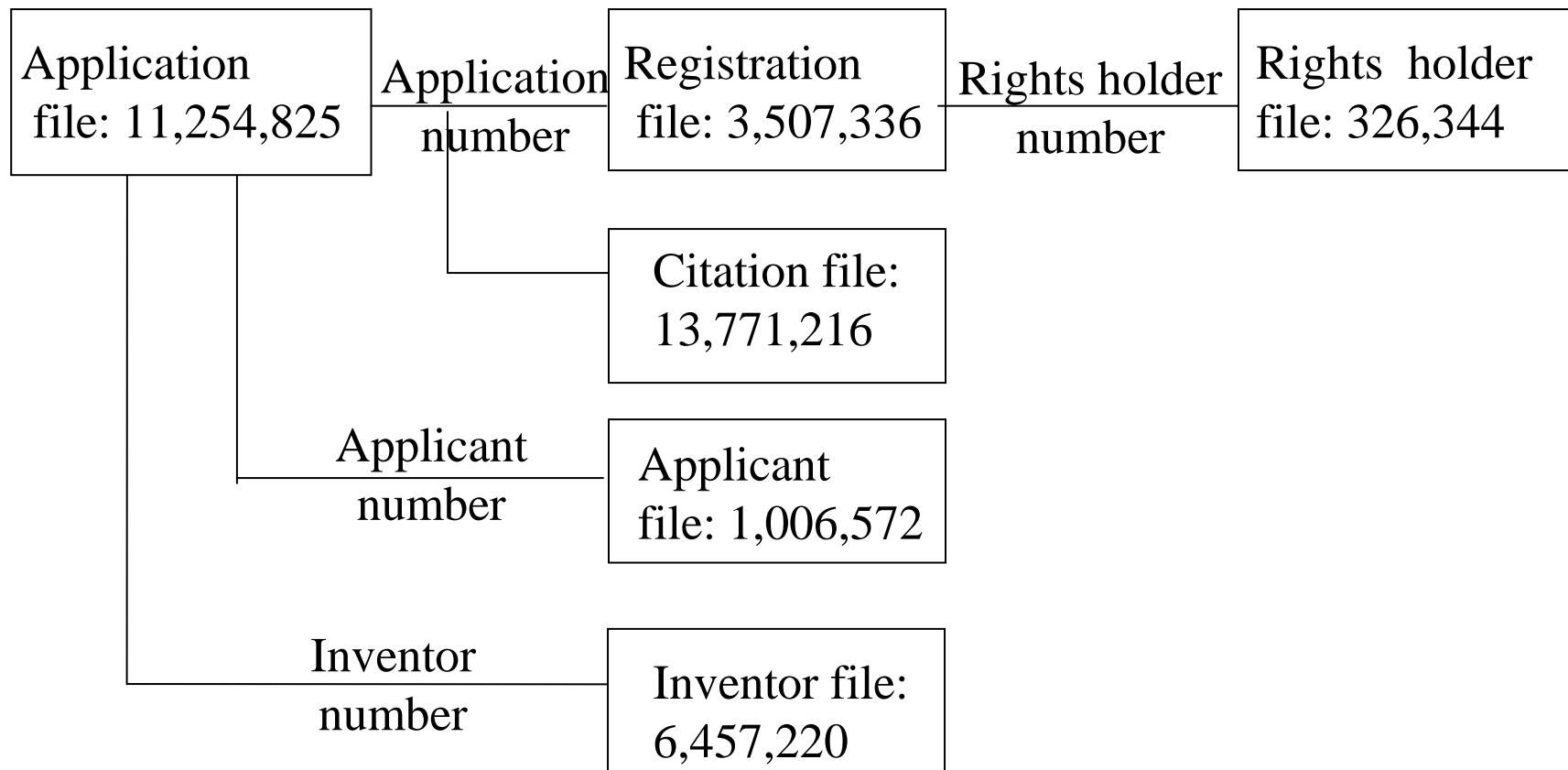
- Patent Databases (for academic researchers):
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- Private data sources: Derwent-Thomson etc.

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- ◆ Original Data Source; JPO Seiri hyojunka Data (publicly available version of JPO examiner's patent information system)
- ◆ Available at IIP website
<http://www.iip.or.jp/e/index.html>
- ◆ All patents published until end of 2004, updated beta version is also available (until 2008 September publication)

IIP Patent Dataset Structure

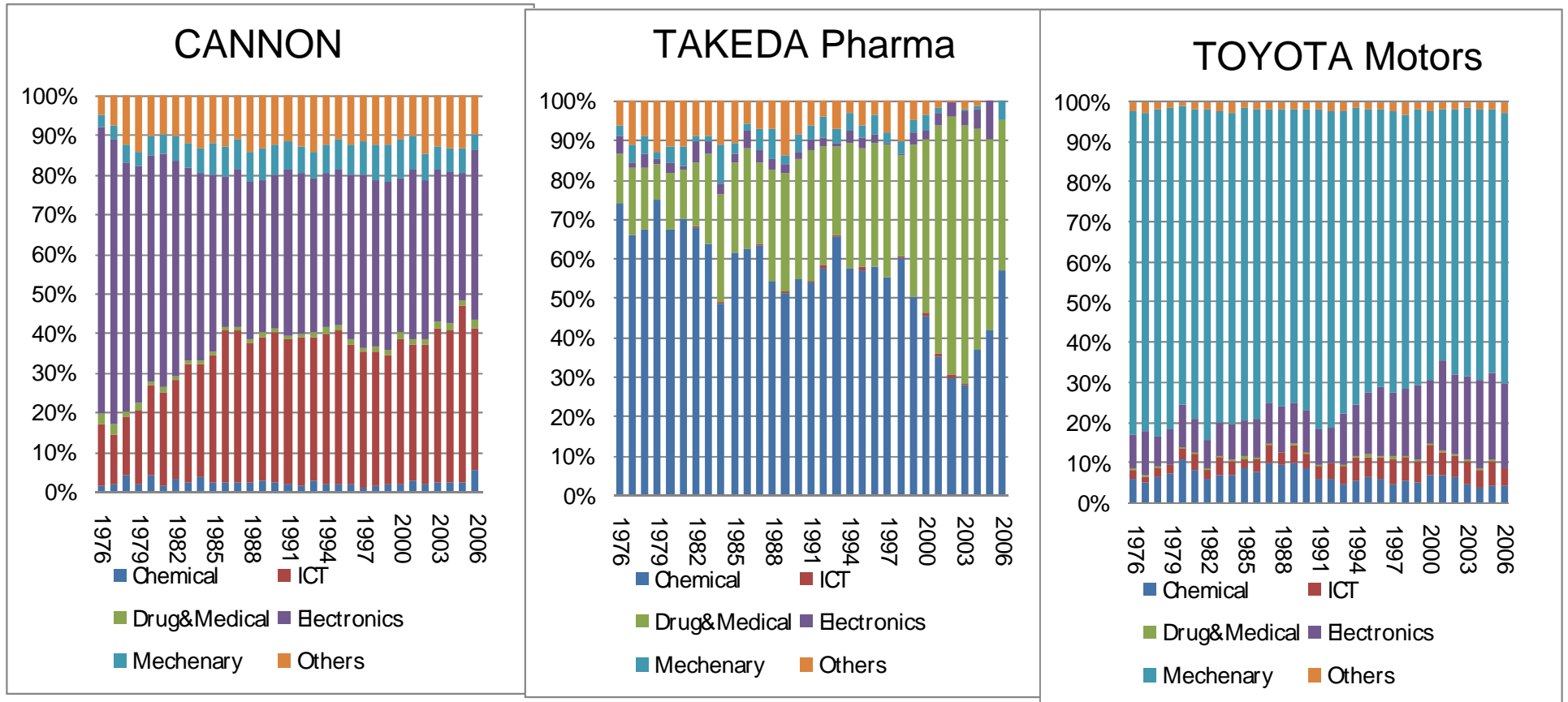
- IIP Patent Database (<http://www.iip.or.jp/patentdb/index.html>)
- Up to 2009 September publication data are available
- NBER Patent Data like public database using JPO patent publication information



Patent database in the world

- NBER Patent Database (USPTO patents)
 - 1963-1999 registration patents (2,933,922)
 - Updated version are available until 2006
 - <http://www.nber.org/patents/>
- EPO PATSTAT
 - Patent application information in the world (by EPO)
 - 40 mil applications for 70 countries
 - But depends on voluntary PO reporting

Changes in technology Portfolio



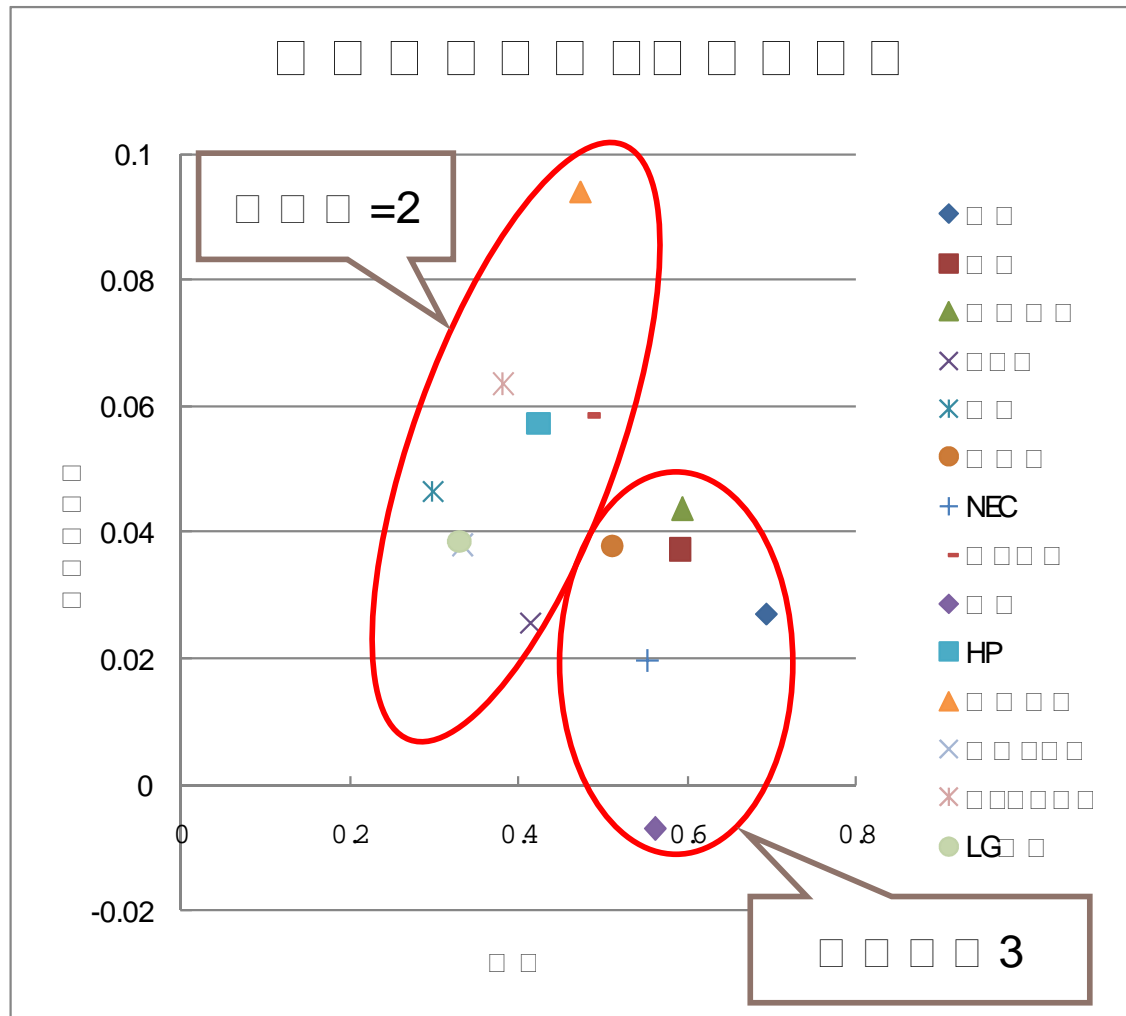
Industry-Technology Concordance Table

Industrial Classification

Technology Classification

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E04	8.3%	4.4%	6.4%	5.2%	2.8%	14.5%	10.4%	9.9%	1.7%	2.3%	4.2%	0.3%	15.5%
E05	1.3%	0.1%	1.8%	0.6%	7.1%	13.0%	7.4%	10.8%	5.3%	30.0%	1.8%	0.9%	16.7%
E06	1.6%	0.5%	3.9%	0.4%	0.8%	50.6%	4.9%	8.1%	1.4%	1.2%	0.5%	0.2%	21.5%
E21	1.7%	3.0%	2.0%	5.9%	4.3%	1.7%	45.0%	2.5%	0.8%	1.2%	2.6%	1.0%	1.9%
F01	0.7%	0.2%	1.2%	3.8%	0.6%	0.3%	16.0%	5.1%	4.4%	60.2%	2.4%	0.2%	0.5%
F02	0.7%	0.2%	0.1%	1.6%	0.2%	0.2%	16.1%	11.4%	4.2%	61.9%	1.2%	0.2%	0.2%
F03	1.0%	1.4%	0.2%	2.3%	2.1%	2.1%	23.7%	17.2%	3.5%	12.6%	5.3%	5.2%	1.0%
F04	0.8%	0.1%	0.6%	2.4%	0.9%	1.3%	30.5%	30.9%	6.9%	12.1%	3.2%	2.2%	1.5%
F15	0.4%	1.9%	0.2%	1.0%	0.7%	4.1%	59.8%	6.0%	1.8%	9.8%	5.2%	1.8%	2.9%
F16	4.6%	6.5%	1.5%	2.9%	1.6%	5.0%	23.8%	5.7%	4.3%	31.5%	1.3%	1.4%	1.9%
F17	2.3%	0.2%	0.8%	6.5%	1.1%	1.9%	28.3%	5.4%	3.4%	2.3%	3.0%	3.0%	0.9%
F21	1.2%	0.2%	0.7%	0.1%	0.3%	0.4%	4.7%	32.3%	4.6%	47.5%	1.1%	1.0%	5.0%
F22	1.5%		0.9%	5.9%	0.6%	1.7%	35.3%	11.8%	1.9%	0.8%	7.0%	1.1%	1.9%
F23	0.6%	0.0%	2.1%	5.7%	0.9%	36.7%	11.1%	11.5%	5.6%	3.1%	1.4%	0.2%	2.3%
F24	0.6%	0.3%	1.3%	0.4%	0.6%	24.9%	9.8%	39.6%	10.4%	1.1%	0.3%	0.1%	3.0%
F25	0.1%	0.0%	0.1%	1.0%	0.8%	1.2%	23.8%	37.0%	16.1%	5.7%	0.5%	0.2%	1.0%
F26	0.9%	0.1%	1.3%	2.2%	1.1%	4.5%	24.1%	12.9%	6.9%	3.1%	0.9%	0.7%	2.2%
F27	1.2%	0.2%	5.0%	37.3%	3.6%	0.5%	5.6%	10.3%	8.1%	3.8%	0.5%	0.6%	6.1%
F28	1.7%	0.8%	1.1%	3.6%	18.6%	2.1%	14.0%	14.2%	8.3%	20.2%	1.2%	0.1%	0.6%
F41	2.8%	0.0%	0.1%	8.3%	0.6%	5.7%	29.5%	20.3%	9.4%	4.9%	5.0%	1.8%	3.6%
F42	0.2%	0.0%		2.6%	1.1%	1.9%	18.2%	11.1%	7.5%	14.4%	10.1%	2.0%	5.6%
G01	0.8%	1.2%	0.9%	2.0%	3.0%	0.8%	14.1%	25.3%	13.7%	8.6%	1.7%	12.7%	1.6%
G02	2.6%	1.1%	1.7%	0.2%	7.2%	0.3%	20.3%	6.9%	30.6%	2.7%	0.2%	13.4%	0.5%
G03	1.5%	1.0%	0.3%	0.2%	0.5%	0.0%	41.5%	10.0%	10.5%	0.6%	0.0%	17.0%	0.2%
G04	0.2%	0.0%	0.1%	0.0%	0.0%	0.5%	3.8%	7.1%	62.5%	1.5%	0.1%	21.0%	1.3%
G05	0.5%	0.2%	0.1%	1.1%	0.6%	1.6%	27.5%	35.0%	14.9%	7.2%	2.3%	2.4%	1.8%
G06	0.3%	0.1%	0.1%	0.7%	0.2%	0.3%	25.5%	17.6%	29.9%	3.2%	0.3%	9.0%	1.7%
G07	0.5%	0.1%	0.0%	1.0%	0.0%	0.5%	46.2%	20.6%	22.3%	3.2%	0.4%	0.8%	0.4%
G08	0.4%	0.3%	0.1%	0.5%	1.7%	0.6%	7.3%	42.5%	16.7%	6.6%	1.5%	2.6%	11.1%
G09	1.3%	0.3%	0.3%	0.1%	0.9%	3.3%	10.9%	13.0%	38.6%	11.2%	1.5%	5.3%	4.6%
G10	0.1%	0.2%	0.3%	0.0%	0.0%	0.1%	2.6%	5.8%	35.8%	1.4%	0.1%	1.1%	42.8%
G11	0.6%	0.0%	0.2%	0.8%	0.2%	0.1%	15.8%	19.8%	46.6%	0.7%	0.0%	7.2%	0.9%
G12	0.2%	3.0%	2.2%	0.4%	3.8%	1.2%	28.2%	17.0%	7.9%	8.0%	1.4%	15.2%	0.2%
G21	0.2%	0.2%	2.1%	2.7%	13.3%	0.7%	17.8%	19.1%	8.7%	4.7%	3.2%	5.8%	0.6%
H01	1.4%	0.6%	1.2%	1.3%	5.4%	0.3%	11.2%	23.5%	32.1%	5.2%	0.4%	3.6%	2.1%
H02	1.3%	0.6%	0.2%	0.6%	4.8%	0.5%	11.5%	37.6%	20.4%	8.1%	1.4%	2.0%	3.1%
H03	0.0%	0.1%	0.0%	0.2%	0.6%	0.1%	9.4%	27.5%	48.3%	4.3%	0.4%	2.1%	1.9%
H04	0.2%	0.1%	0.1%	0.1%	0.7%	0.4%	23.4%	21.9%	33.3%	1.9%	0.1%	10.0%	2.2%
H05	2.0%	0.6%	2.5%	1.4%	2.7%	0.6%	7.5%	29.9%	28.9%	4.9%	0.4%	2.6%	4.7%

Technology Portfolio and Performance (Electronics firms)



Comparison of Cannon and Hitachi DNA micro-alley innovation

- First, identify core scientist of both firms from inventor information of patent datasets.

CANNON Core Scientists

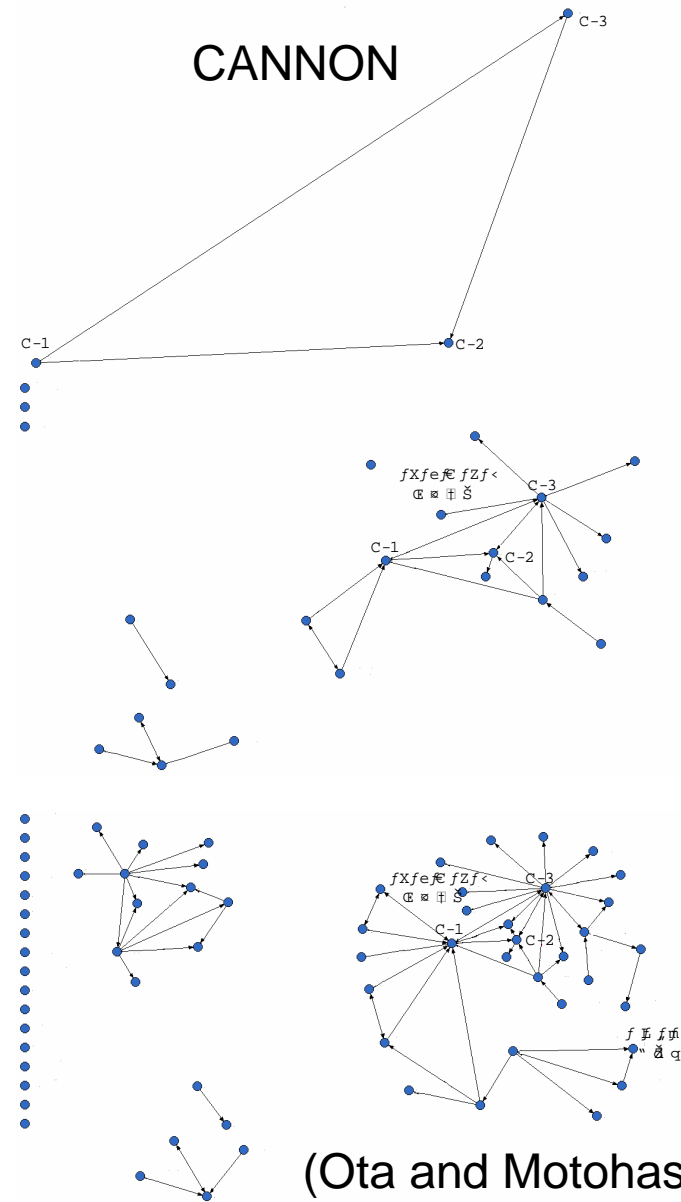
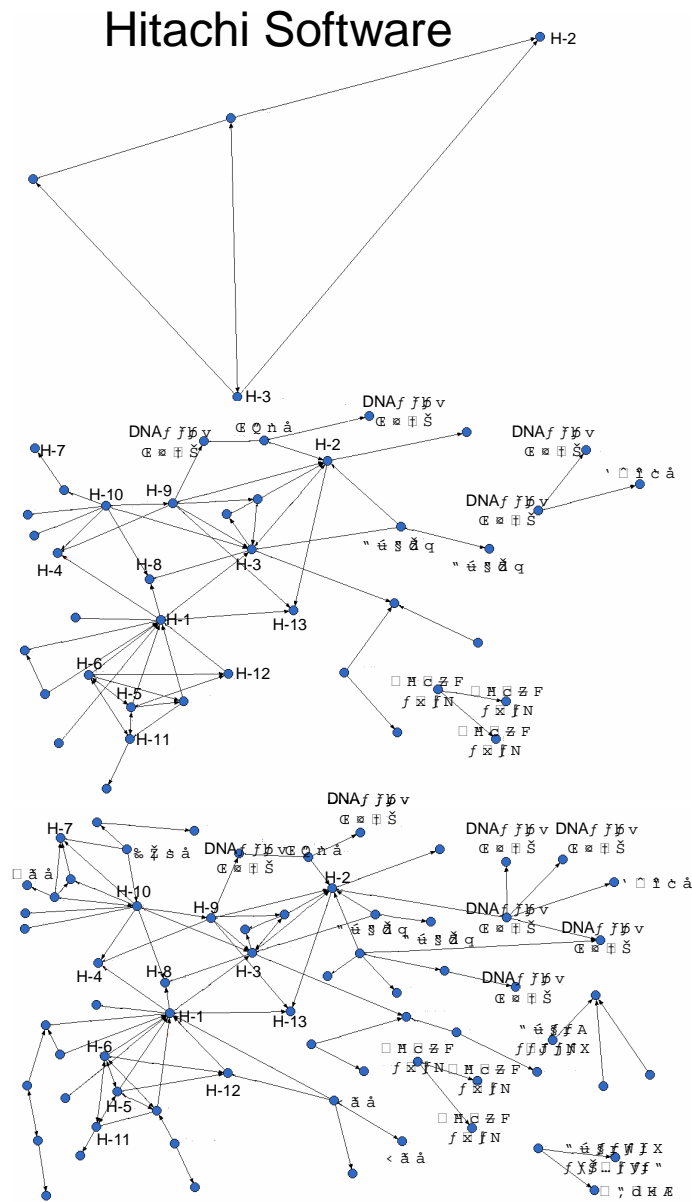
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C-1	71	56.3%	□ □
C-2	53	42.1%	□ □
C-3	37	29.4%	□ □

Hitach Core Scientists

□ □ □	□ □ □ □	□ □ □	□ □ □ □
H-1	46	67.6%	□ □
H-2	41	60.3%	□ □
H-3	29	42.6%	□ □
H-4	21	30.9%	□ □
H-5	20	29.4%	□ □
H-6	19	27.9%	□ □
H-7	18	26.5%	□ □
H-8	18	26.5%	□ □
H-9	16	23.5%	□ □
H-10	16	23.5%	□ □
H-11	14	20.6%	□ □
H-12	14	20.6%	□ □
H-13	14	20.6%	□ □

(Ota and Motohashi, 2010)

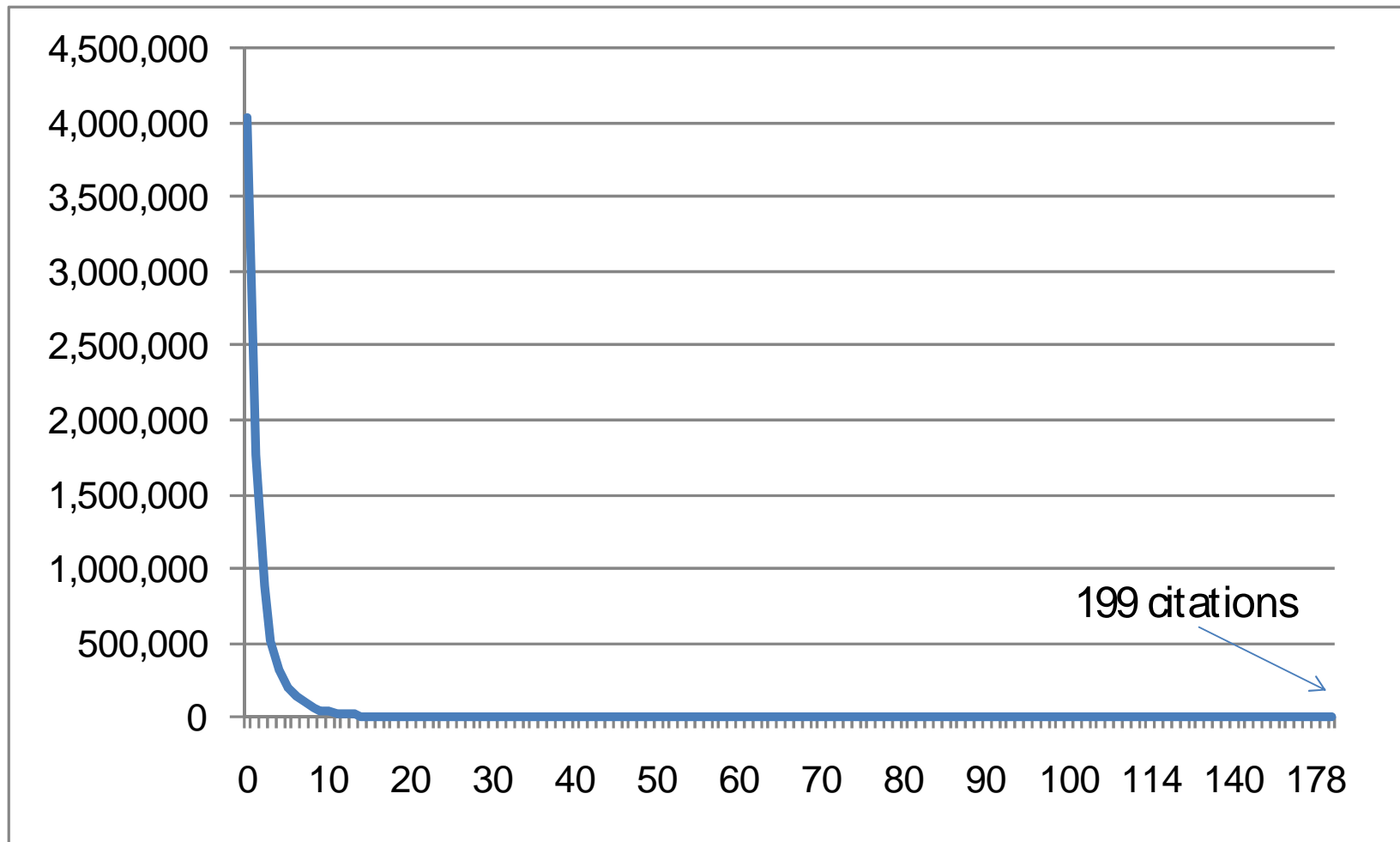
Changes of collaborative relationship of inventors



Patent Quality Index

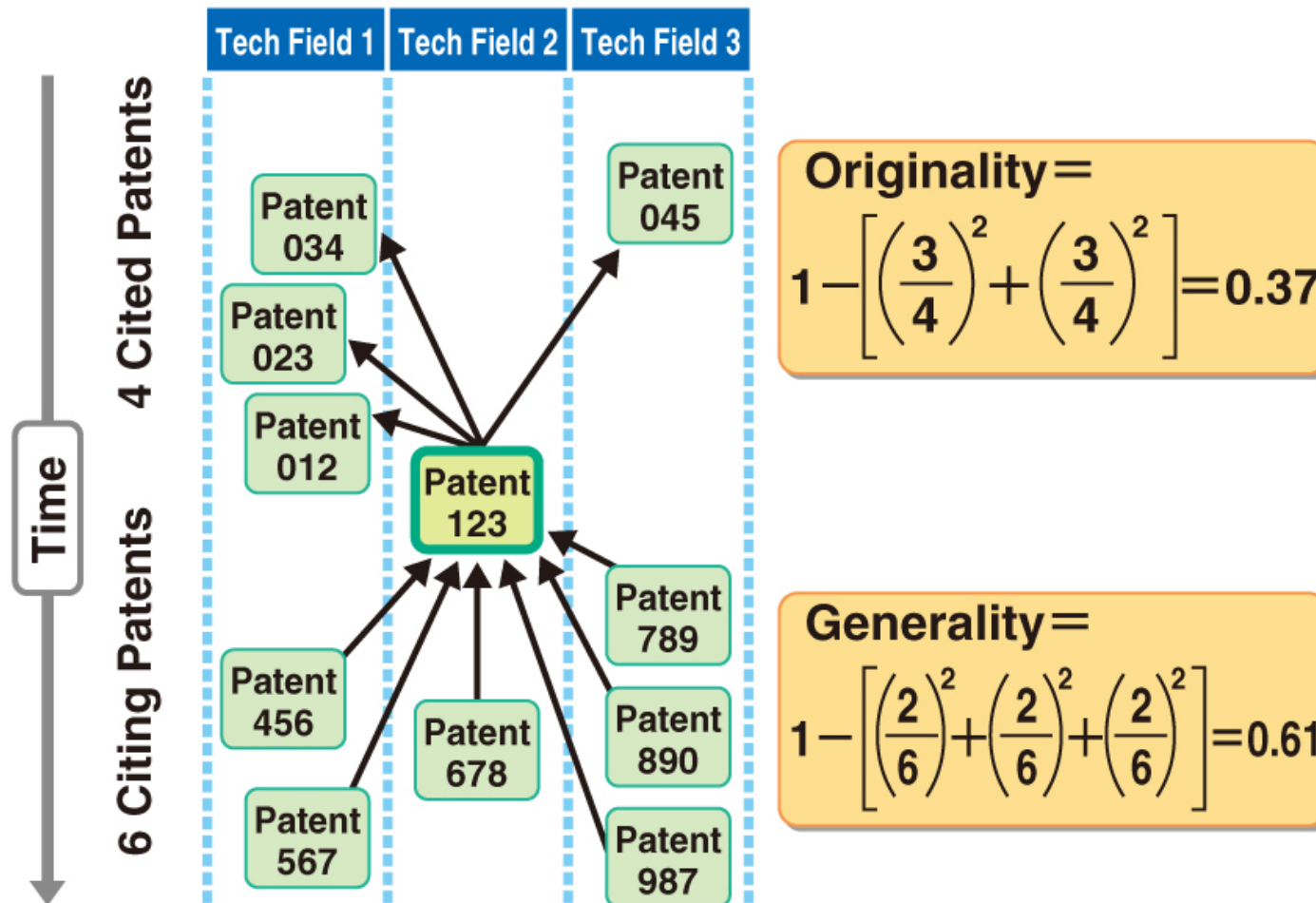
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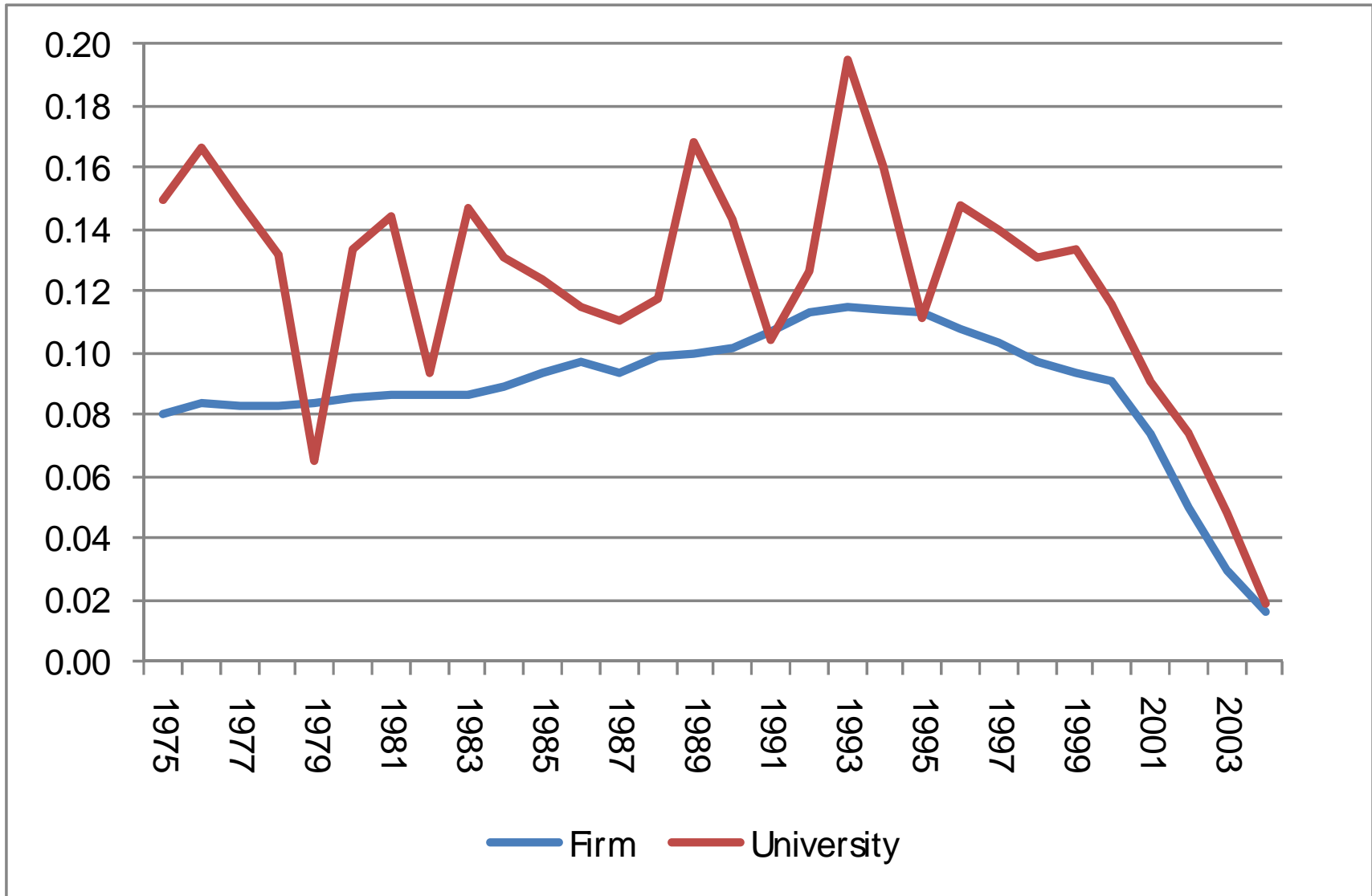


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Originality and Generality Index



Comparing Generality Index



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