

特許とイノベーションに関する学術研究の俯瞰 —学術俯瞰マップからの示唆—

Overview of Recent Trends in Patent and Innovation Research

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問題意識

○イノベーションと知的財産制度を巡る量的、質的な変化

- ーオープン・イノベーション
- ーグローバル化
- ーサイエンスリンケージの上昇
- ー製品を支える特許数の増加 等

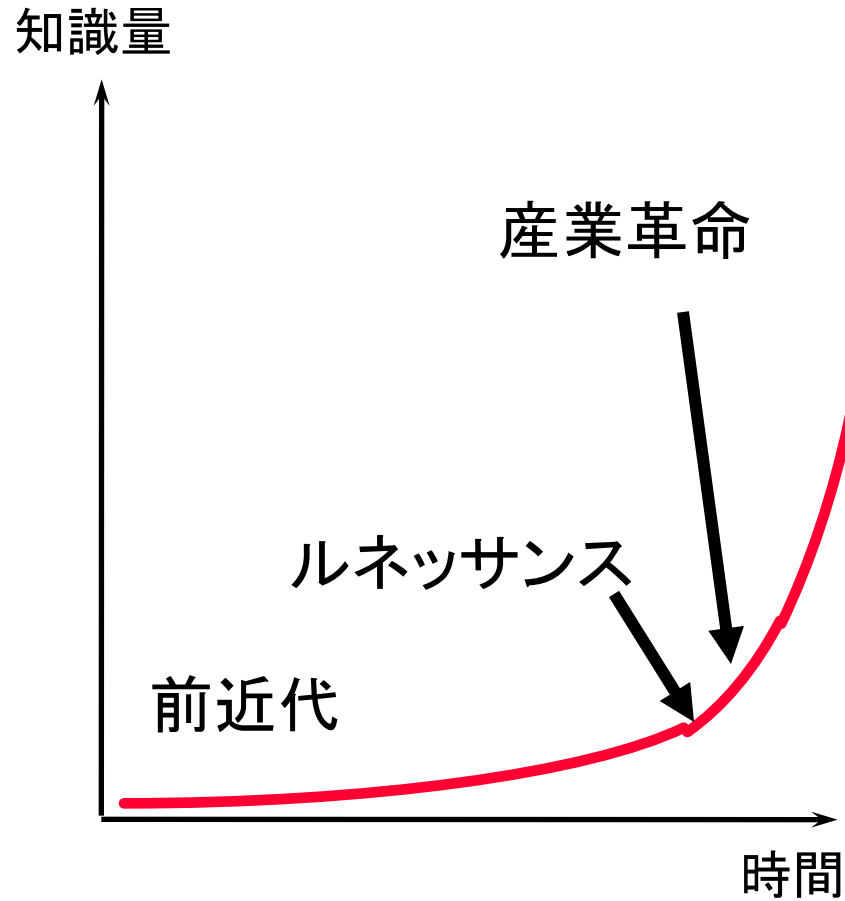
○岐路にある知的財産権制度

○「次世代知的の財産権制度」を検討するに当たって学術研究による貢献の必要性



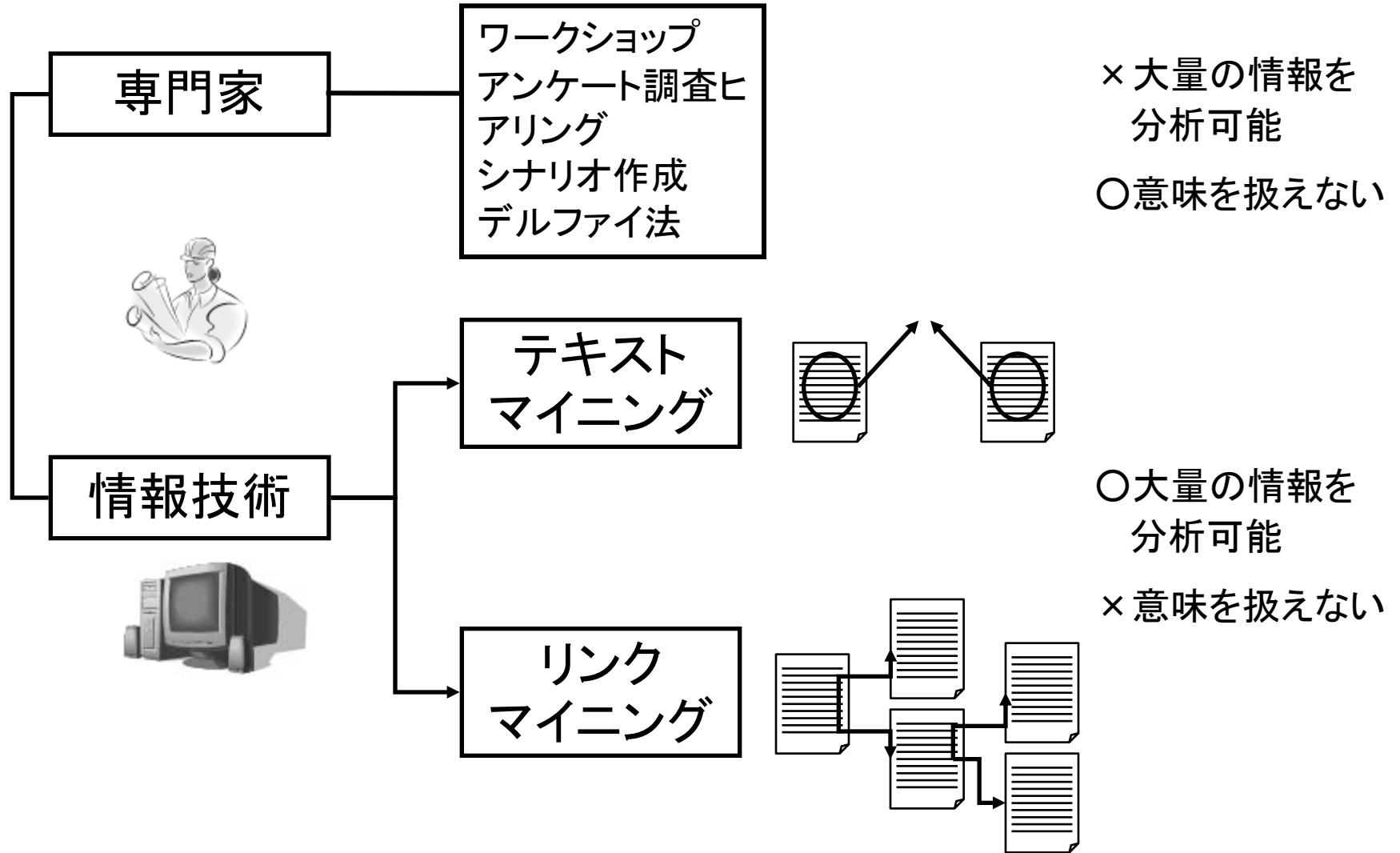
「壁」として、知の爆発と学術研究の細分化

知識の爆発



情報の海に溺れ、
知識に飢える。

課題の解決方法(知の構造化)

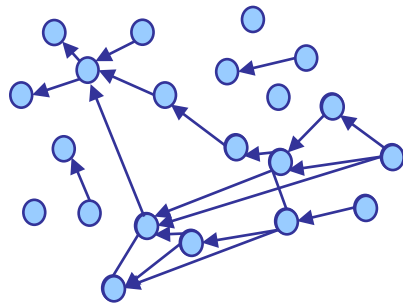


課題の解決方法(引用分析)

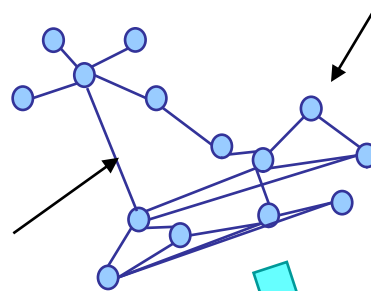
ISIデータベースからの論文等の書誌情報の入手
(Patent & IPR)



論文間の引用ネットワーク分析



引用

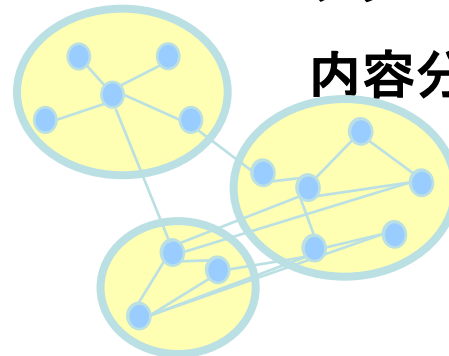


論文

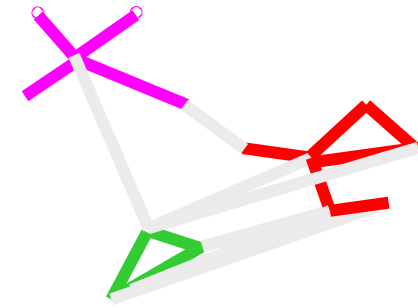


クラスタリング

内容分析



可視化



専門家による領域の特定と分析



研究潮流の把握
重要論文の抽出

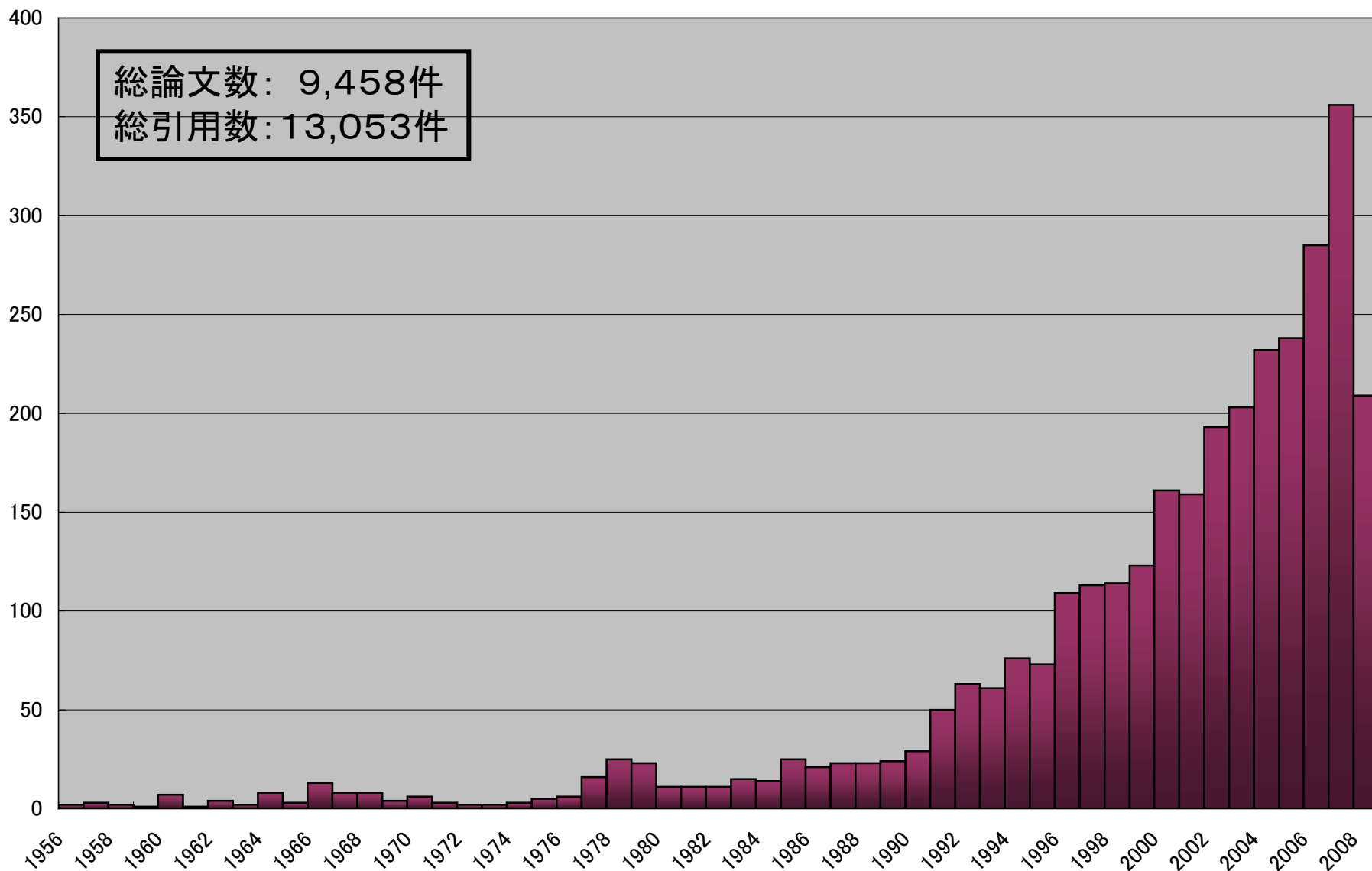
分析結果①ー多様な学術分野のハイブリッド

	Academic Field	# of Papers
1.	Law	3,002
2.	Information Science & Library Science	1,851
3.	Business	1,619
4.	Economics	1,372
5.	Management	1,010
6.	Computer Science	798
7.	Planning & Development	491
8.	Engineering	459
9.	Multidisciplinary Sciences	342
10.	Social Sciences	304

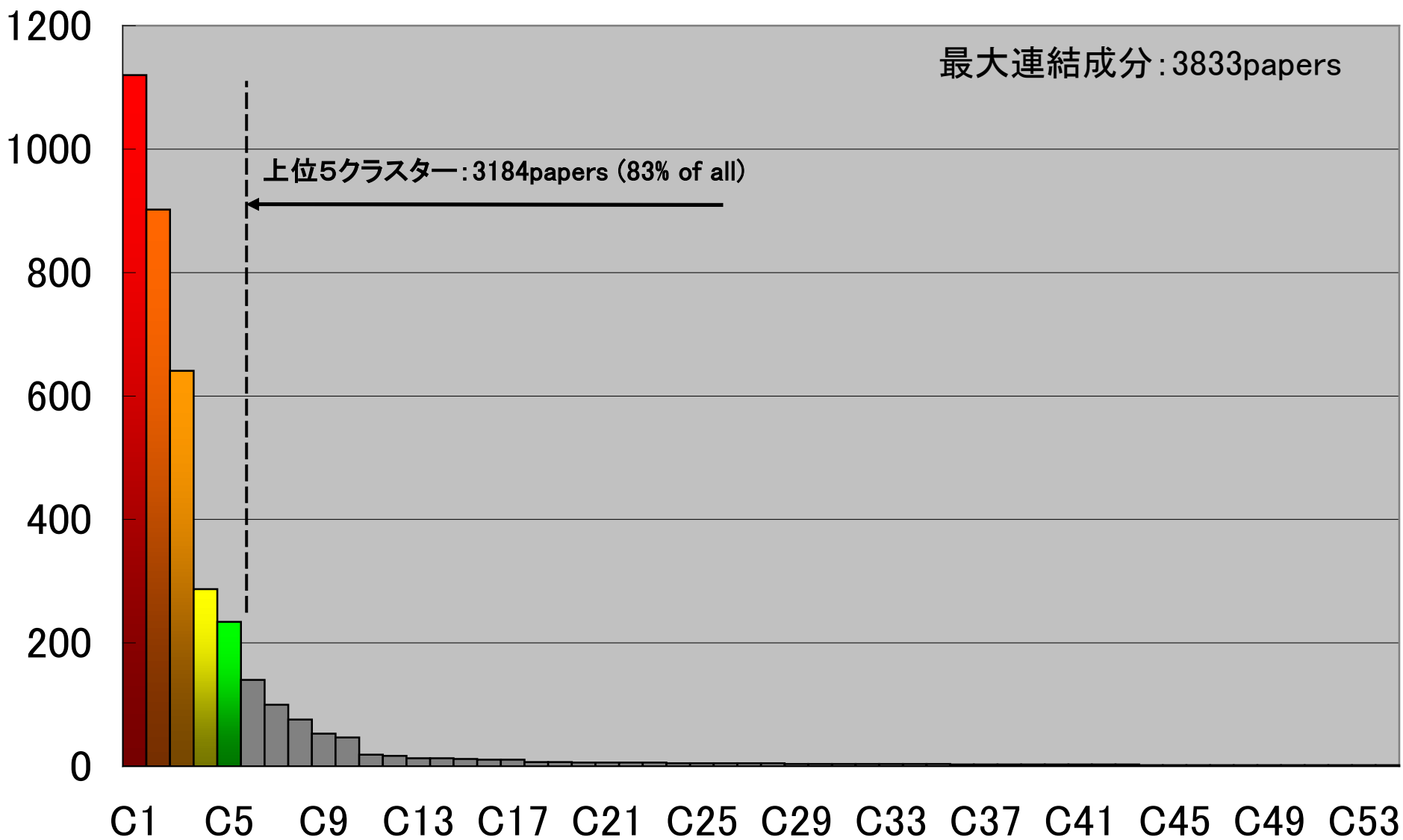
(備考)総論文数:9,458件、上位10学術分野を抽出

(出版数)

分析結果②—学術研究の蓄積の加速



分析結果③－5大研究領域の存在

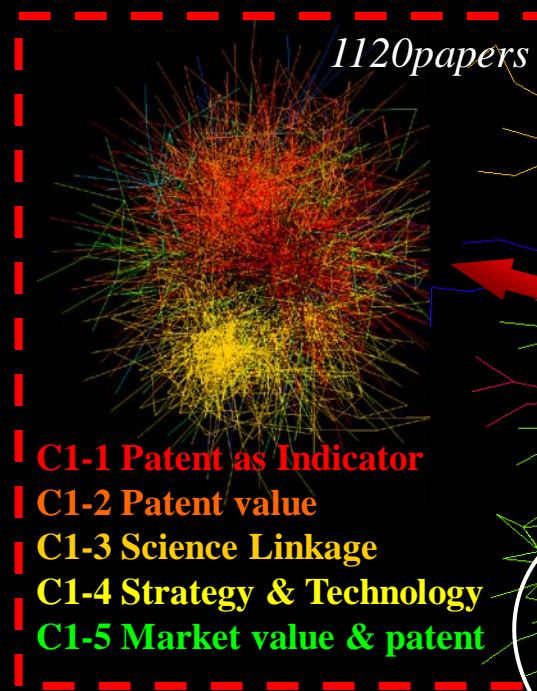


Cluster名	論文数	平均出版年	ハブ論文
C1 Patent Innovation & Econometrics	1120	2001.65	PATENT STATISTICS AS ECONOMIC INDICATORS – A SURVEY
C1-1 Patent as Indicator	315	2002.14	PATENT STATISTICS AS ECONOMIC INDICATORS – A SURVEY
C1-2 Patent value	290	2002.09	A PENNY FOR YOUR QUOTES – PATENT CITATIONS AND THE VALUE OF INNOVATIONS
C1-3 Science Linkage	246	2000.64	THE INCREASING LINKAGE BETWEEN US TECHNOLOGY AND PUBLIC SCIENCE
C1-4 Strategy & Technology	117	2000.66	TRADE IN IDEAS – PATENTING AND PRODUCTIVITY IN THE OECD
C1-5 Market value & Patent	48	2001.92	MARKET VALUE, R-AND-D, AND PATENTS
C2 Institution & Legal system	902	1999.80	ON THE COMPLEX ECONOMICS OF PATENT SCOPE
C2-1 IP Law Policy (patent)	344	1999.40	ON THE COMPLEX ECONOMICS OF PATENT SCOPE
C2-2 IP Law Policy (copyright)	287	2001.52	A PROPERTY RIGHT IN SELF-EXPRESSION – EQUALITY AND INDIVIDUALISM IN THE NATURAL LAW OF INTELLECTUAL PROPERTY
C2-3 Information Security & IP law	135	2000.48	LEGAL HYBRIDS BETWEEN THE PATENT AND COPYRIGHT PARADIGMS
C2-4 Pharmaceutical patent	38	1992.97	PLANTS, POVERTY, AND PHARMACEUTICAL PATENTS
C2-5 IP for IT	28	1991.57	CREATING A NEW KIND OF INTELLECTUAL PROPERTY – APPLYING THE LESSONS OF THE CHIP LAW TO COMPUTER-PROGRAMS
C3 Technology Management & Patent	641	1982.50	INNOVATION, IMITATION, AND INTELLECTUAL PROPERTY-RIGHTS
C3-1 IP in Global economics	151	2001.77	INNOVATION, IMITATION, AND INTELLECTUAL PROPERTY-RIGHTS
C3-2 Optimal Patent Design	145	2000.46	OPTIMAL PATENT LENGTH AND BREADTH
C3-3 IP piracy matter	139	2001.02	THE INTERTEMPORAL, CONSEQUENCES OF UNAUTHORIZED REPRODUCTION OF INTELLECTUAL PROPERTY
C3-4 Patent races	57	2000.54	A MODEL OF GROWTH THROUGH CREATIVE DESTRUCTION
C3-5 Protection & Exploitation	47	1997.21	IMITATION COSTS AND PATENTS – AN EMPIRICAL-STUDY
C4 Academic Activity & Patent	287	2002.61	THE GROWTH OF PATENTING AND LICENSING BY US UNIVERSITIES: AN ASSESSMENT OF THE EFFECTS OF THE BAYH-DOLE ACT OF 1980
C4-1 Univ. Technology & Licensing	69	2004.22	THE GROWTH OF PATENTING AND LICENSING BY US UNIVERSITIES: AN ASSESSMENT OF THE EFFECTS OF THE BAYH-DOLE ACT OF 1980
C4-2 Life-Science & patent	54	1999.31	UNIVERSITIES AND THE MARKER FOR INTELLECTUAL PROPERTY IN THE LIFE SCIENCES
C4-3 Effect by R&D of Univ.	34	2003.62	PUTTING PATENTS IN CONTEXT: EXPLORING KNOWLEDGE TRANSFER FROM
C4-4 Technology Transfer	30	2003.30	TECHNOLOGY TRANSFER AND PUBLIC POLICY: A REVIEW OF RESEARCH AND THEORY
C4-5 Patents & Commons	22	2005.39	WITHHOLDING RESEARCH RESULTS IN ACADEMIC LIFE SCIENCE – EVIDENCE FROM A NATIONAL SURVEY OF FACULTY
C5 Patent Meta-information	234	1982.01	ONLINE PATENT SEARCHING – THE REALITIES
C5-1 IP history & culture	33	1984.64	UNITED-STATES PATENT OFFICE RECORDS AS SOURCES FOR THE HISTORY OF INVENTION AND TECHNOLOGICAL PROPERTY
C5-2 Patent searching	32	1987.72	ONLINE PATENT SEARCHING – THE REALITIES
C5-3 Leterature(chemical)	31	1979.45	CHEMICAL-ABSTRACTS AS A PATENT REFERENCE TOOL
C5-4 Patent Documentation	27	1968.81	PATENT CITATION INDEXING AND NOTIONS OF NOVELTY SIMILARITY AND RELEVANCE
C5-5 European Patent	25	1987.92	LEGAL MONOPOLY IN LIBERAL ENGLAND – THE PATENT CONTROVERSY IN THE MID-19TH CENTURY

Academic landscape of patent research



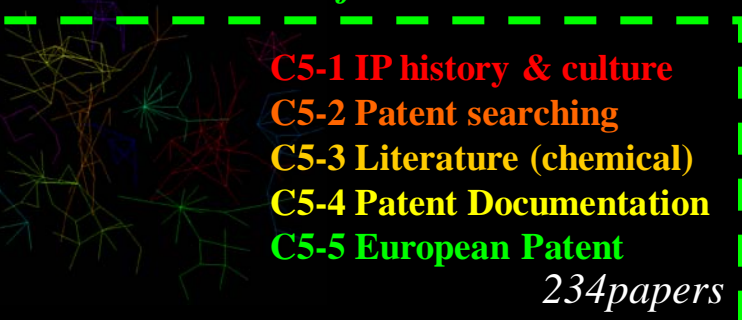
C1 Innovation & Patent in Econometrics



C4 Academic Activity & Patent

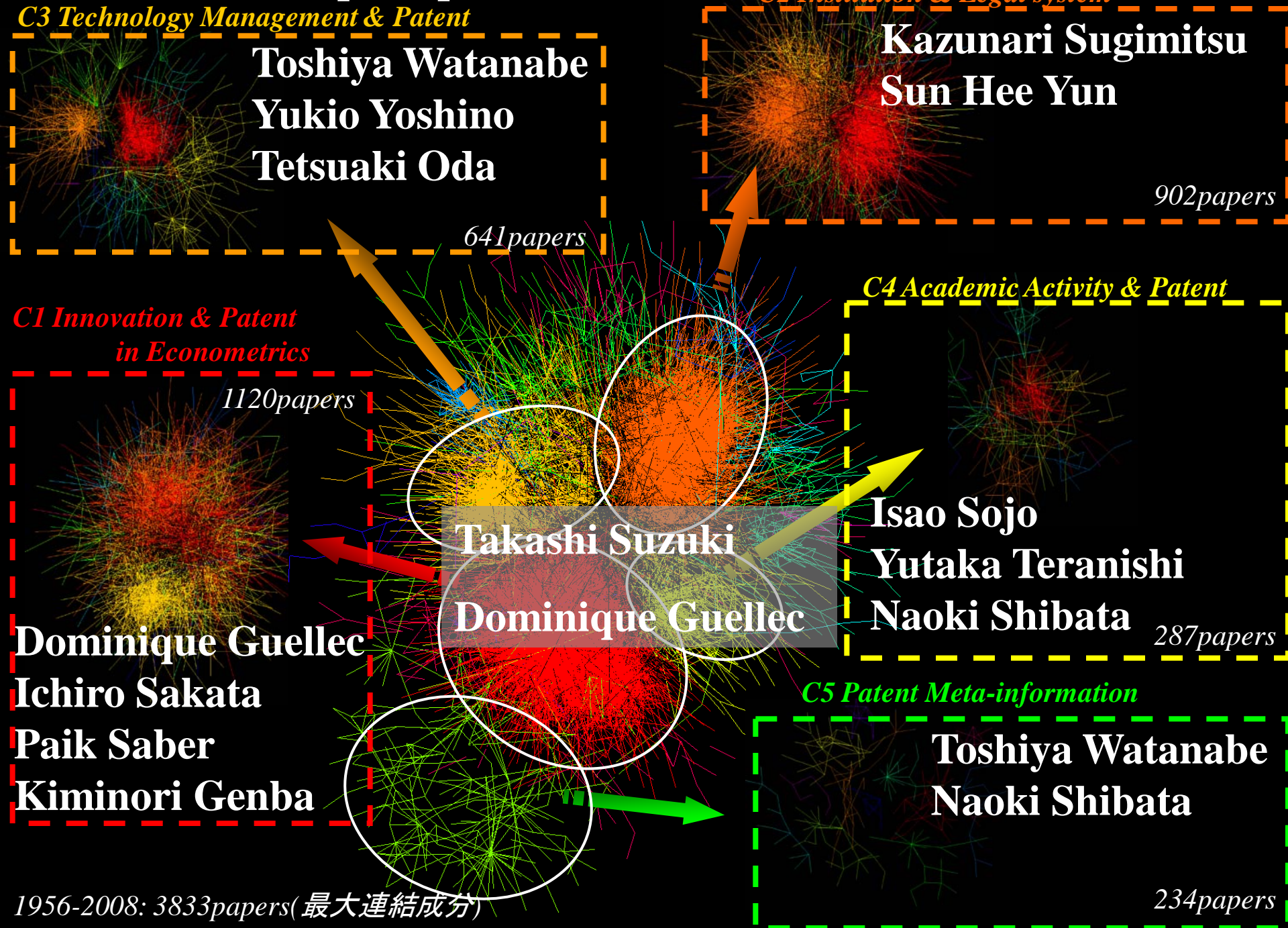


C5 Patent Meta-information



1956-2008: 3833papers(最大連結成分)

Academic landscape of patent research



1956-2008: 3833papers(最大連結成分)

結 論

- 引用ネットワーク分析の手法を用いることにより、知的財産 & イノベーション研究の全体像の把握、成長分野や重要論文の把握は、可能。知識活用の「壁」を超えることが可能。

- 主要な論点については、学術研究の蓄積あり。
また、制度検討において関心の高い領域では、学術知見の蓄積も加速している。(特許の価値と質、グローバル化、大学など)

- 2つの課題と解決策
 - ー学術研究の領域間の「溝」に橋を架ける
 - 領域間の知識交流、多分野横断型の研究チーム編成
(政策ビジョン研究センター「知的財産権とイノベーション研究ユニット」)
 - ー情報科学領域の再活性化
 - 進化した書誌情報分析の活用
 - 特許と学術研究のリンケージ