

Patent 21

www.kipi.or.kr

특집

세계 각국의 특허정보 이용현황
호주의 국가경쟁력 보고서
CHI RESEARCH INC.는 어떤 회사인가?

특허청 소식

특허청, 상표관련 정보와 국제표준 주도
전세계 상표출원, 이제는 하나의 출원서로
대한민국 특허출원 세계 3위

기획

특허정보분석에 이용되는 INDICATORS

KIPI 게시판

신의장·신상포 검색 시스템 오픈
국내외 특허뉴스

**KIPRIS** 는

당신 idea에 날개가 됩니다.



CONTENTS

Patent 21 2003

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 : (02 - 3452 - 8144)
 : IDO (02 - 3445 - 9849)
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: www.kipris.or.kr

: www.chosa.or.kr

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	7
가	12
CHI RESEARCH INC. 가?	23

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3	28

INDICATORS	29
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KIPI

.	33
	34

가 !

2003

가 가

가

가 ,

85
가

90%
96

가

가

60

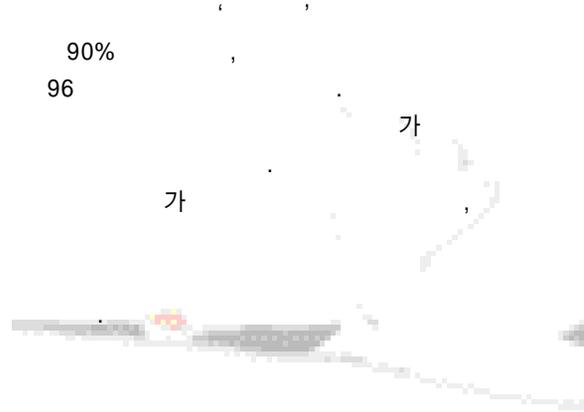
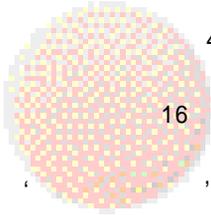
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(KIPS)
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2002

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WIPO

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23 가

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11

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KIPRIS

KIPRIS

(www.chosa.or.kr)

(1544 - 8080)

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One - Stop

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KIPRIS

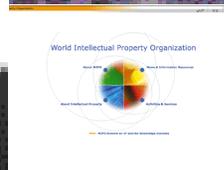
KIPRIS

24 365

KIPRIS

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가 가 IP

, 2003



무한기술경쟁이 전세계적으로 펼쳐지고 있는 가운데, 세계 각국은 자국의 이익을 위해 보다 강화된 특허 정책에 박차를 가하고 있다.

특허정보의 활용은 물론이고, 특허기술 정보의 분석을 통해 공백기술로의 방향설정, 또한 이를 통해 세계적인 특허권 확보 및 경영전략 수립을 포함으로서 국가경쟁력을 강화하려는 노력은 과히 필사적이다.

이번호에서는 세계 각국의 특허정보 이용현황 및 호주의 국가경쟁력 보고서, 그리고 기술과 과학지표 분석조사 컨설팅 업체 CHI RESEARCH INC.에 대해 알아본다.

(USPTO)/

(TAF)

(NSF)

1971
R&D

(TAF)⁽¹⁾

(NSF)⁽²⁾ Science Engineering
Science Engineering

「Science and Engineering Indicators」

가 , ,

R&D

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TAF

• 가 , , , ,

• 가

(, ,)
(Activity Index)

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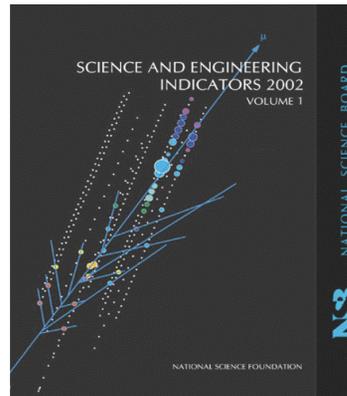
5

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Format TAF

Format

10,000



<NSF S&E Indicators
2002>
<http://www.nsf.gov/sbe/srs/seindo2/start.htm>

U.S. PATENT AND TRADEMARK OFFICE
Information Products Division
Technology Assessment and Forecast (TAF) Branch

TAF Products and Services Brochure

Table of Contents

Introduction

- Background
- Patents and Patent Activity
- Patent Data - Use, Trends, and Limitations

TAF Reports Available From Information Products Division

TAF General Statistical Reports Available on the Internet, By Report Category

By Types of Patent Document

- Please note that for most users, TAF reports displaying only patent statistics will be the area of interest - utility patents are also known as "patents for inventions"
- U.S. Patent Statistical Report - see page numbers table (11/21/01)
- All Patents - All Types Report (11/21/01)
- All Technologies (Utility Patents) Report (11/21/01)
- Number of Utility Patent Applications Filed in the United States by Country of Origin, Calendar Years 1985 to Present (11/21/01)
- Design Patents Report (11/21/01)
- Plant Patents Report (11/21/01)
- Reissue Patents Report (11/21/01)
- Utility Patent Applications and Reissue Publications Report (11/21/01)
- Patent Counts, 2001, 2000, 1999, 1998, 1997, 1996, 1995, 1994, 1993, 1992 (single user reports with counts by sector document here and by geographic origin)

By Geographic Origin

- Patent Counts by Country/State and Year, All Patents - All Types Report (11/21/01)
- Patent Counts by Country/State and Year, Utility Patents Report (11/21/01)

Breakdown Utility Patent Report by the Industry Sector of Origin

- Patenting by Geographic Origin, State, and Control - Breakout by Organization (11/21/01)
- Patenting by Geographic Origin, State, and Control - Breakout by Technology Class (11/21/01)
- The "old-overs" reports listed under the Table of Contents outlying, "By Patented Technology", also may be of interest!

U.S. Patent Grants by State, County, and Metropolitan Area 1990 to the present (11/21/01)

- United States Patent Grants - Breakout by County, Population, and Metropolitan Area, 1990 (11/21/01)

Old-Overs Utility Patent Report by U.S. Metropolitan Area

- Patenting in Metropolitan and Non-metropolitan Areas of the United States - Breakout by Organization (11/21/01)
- Patenting in Metropolitan and Non-metropolitan Areas of the United States - Breakout by Technology Class (11/21/01)

<TAF On-line Service
<http://www.uspto.gov/go/taf/brochure/htm>

(1) :Technology Assessment Forecast(TAF) Branch
<http://www.uspto.gov/go/taf/tafp.html>

(2) 1950
22,000

(www.nsf.gov)

(Technology Administration)

CHI Research Inc.

(TA)⁽³⁾ Office of Technology Policy

CHI Research Inc.

R&D 가

. 1968 (INDICATORS)

(4)

(NSF)

20

1998 『The New Innovators: Global Patenting Trends in Five Sectors』 가

15

15

CHI Research社

IFI claims社

5

CII(Current Impact Index),

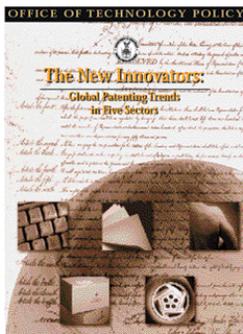
TS(Technology Strength)

, 45

Data

가

○ Data



- 1950 (Chemical Patents)
- 1963 (Utility Patents)
- 1971~1974 (DB
- 1976 Design and Plant 96,000)
- Business Method Patent DB
- Citation DB

○

3

- Dialog (www.dialog.com)
- STN International (www.cas.org)
- Questel- Orbit (www.questel.orbit.com)

1997 『Korea's Strategy for Leadership in Research and Development』

R&D

R&D

1.10

31

1,600

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, UPC

『Patent Intell

igence and Technology Report』

2. IFI claims社

M&A

가

『Patent Portfolio Service』

(3) (TA) 4 (Office of the Under Secretary for Technology/Office of Technology Policy/National Institute of Standards & Technology/National Technical Information Service) <http://www.ta.doc.gov/AboutTA.htm>

(4) <http://www.ta.doc.gov/Reports.htm#formatInfo>

1.

3. 12,000
3,500

『IFI Assignee Thesaurus』

<IFI Claim社 .>

30



(EPO)

(http://www.european-patent-office.org/)

200 가

(JPO)

, EPO 1995

『Quick Scan Project』

EPO 1995 1998 187

DB 60%

가

(OECD)

2002 『 D/B 가

- 2001

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- 2001
- 2000
- 1999



가 가

R&D

5 가
1983 3 2001 12
771,760 30 가

가

- , KISPAT, NEF - NET,

(KIPO)

1999

가

社 3 1
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90%

, 70%

가?

(KISTI)

KISTI⁽⁵⁾

가 ()

가

가

(6)

가



가

(The link between Australian patenting and basic science)

2

CSIRO

CSIRO, ,

CHI Reasearch
4가

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가?

가

가?

CHI Research

(Lingkage)

가?

* (CHI Research)

가?

1999 ,
ARC(Australian Research Council)
CSIRO(Commonwealth Scientific and Industrial
Research Organisation;) CHI
Research Inc(USA) 가 ,

4가

가

4

4

가(patent citation analysis)

CHI Research 1999 , 9
2000 .

1. Patent Citation Analysis of Australian - Invented U.S.Patents, 1999.11.10
2. Statistical Comparison of International Science Citation by Patents, 1999.06.24
3. Patent Citation to Australian Papers, 1999.11.10
4. Science Base of Australian - Invented U.S.Paents, 1999.11.10

()

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가

가

1. (Patent Citation Analysis)

B.

A.

(front page) ()

1979 - 1998

가 . Fig.4

가 ,
3가 ,
1~2 , 1~2 , 7~8 ,
5 , 4~5

Indicator

Indicator 'Current Impact Index(CII)' . CII 5 가 가

, CII=1.0 가

가 'Technology Cycle Time (TCT)' . TCT (median age)

. TCT
4~5 ,
10~15

SL

'Science Linkage'(SL)

. SL

SL 0 , 1~2 , 15 ,
5~6 , Genentech 25

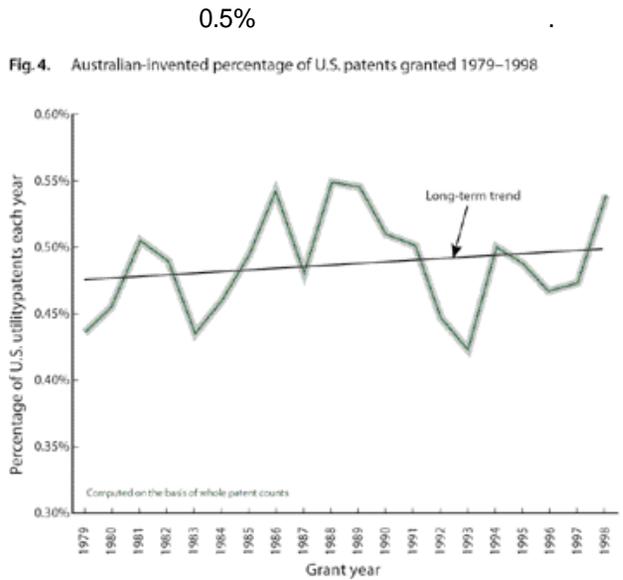
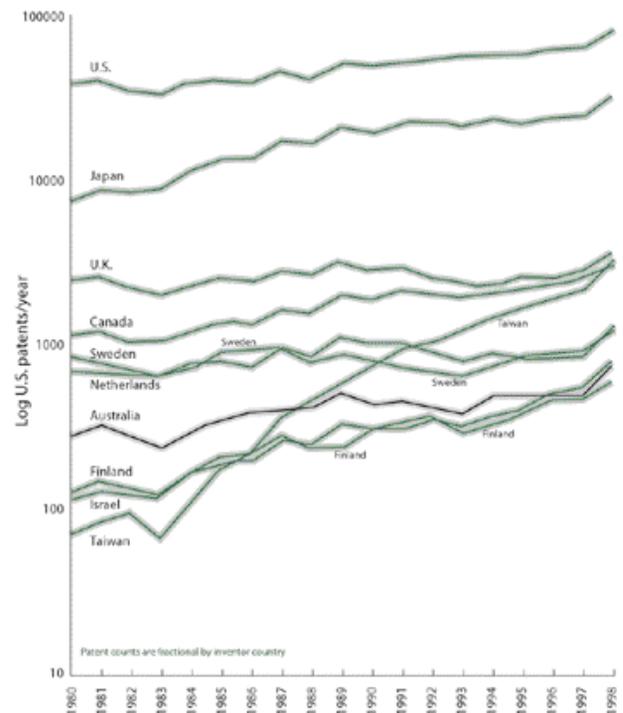


Fig. 4. Australian-invented percentage of U.S. patents granted 1979-1998

Fig.5 9

Fig. 5. Patenting trends in the U.S. patent system by inventor country 1980-1998



가 Fig.6 . GDP GDP) TAs(Technology Area) SIC(SIC 2~3 CHI Research 가

Fig. 6. Patent count vs. GDP by inventor country

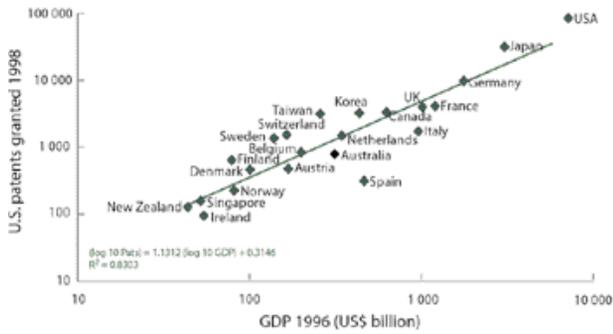


Fig 8

Fig. 8. Comparison of trends for U.S. and Australian patents granted to Australian-resident inventors 1987-1997

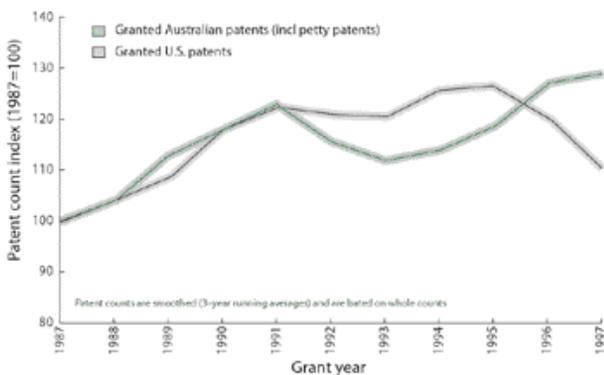


Fig. 9. Distribution of 1994-1998 patenting by technology area (%): Australian-Invented vs. all U.S. patents (technology areas ranked by Australian percentage)

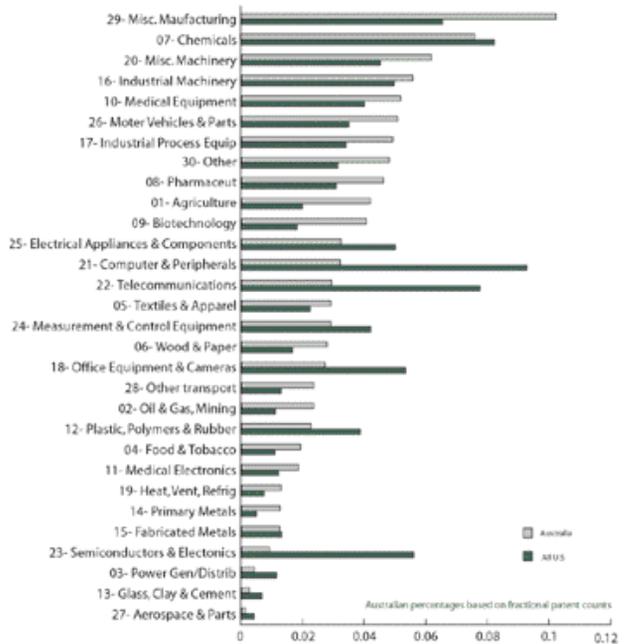
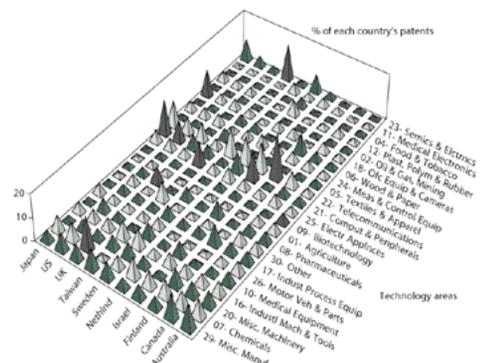


Fig.9

Fig. 10. 1994-1998 U.S. patent distribution by technology area for Australia and nine competitor countries



C.

30 Tech - Lire TAs() 5
 가
 Tech - Lire 가 1200 ,
 CHI Research

Fig.10 9
(TAs)
가

(Growth)

Fig.12 5 가 5
/ 249%
174%
3% /

Fig.12. Technology area growth 1989-1993 to 1994-1998: Australian-invented vs. all U.S. patents (technology areas ranked by percentage change)

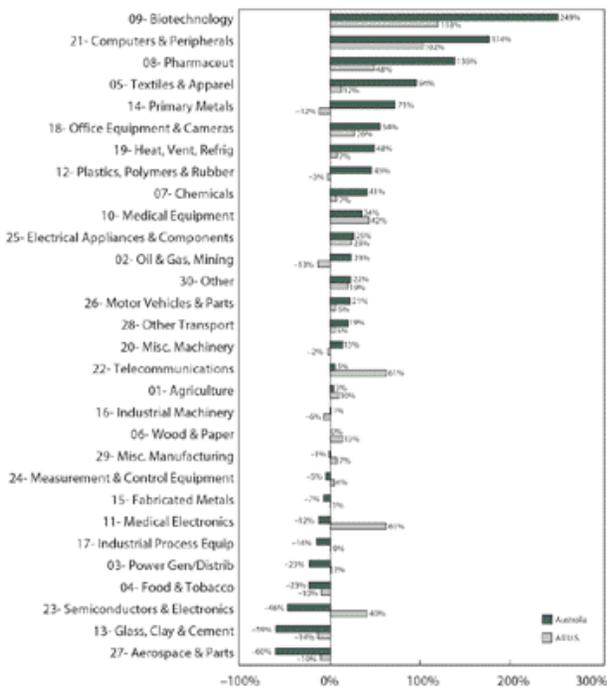


Fig.13

Fig.13. Australian emphasis vs. growth by technology area, relative to all U.S. patents in the same technology area



가

D. (enterprise; , ,)

Table 3. Counts* of Australian-invented† U.S. patents in four 5-year periods for enterprises with at least 10 patents 1979-1998. Fractional counts are rounded to whole numbers. Unified assignees are in bold.

20-Yr total rank	Company [§]	1979-1998 Total	1979-83	1984-89	1990-93	1994-98	% Growth b/tween last 2 periods
1	CSIRO[†]	318	70	52	57	139	144
2	COMM. OF AUSTRALIA except CSIRO	232	37	83	49	64	30
3	ICI (now GRICA)	187	62	57	47	22	-53
4	ST. JUDE MEDICAL INC. (Pacesetter)	102	18	20	41	23	-43
5	UNISEARCH LIMITED	83	25	34	13	11	-15
6	ORBITAL ENGINE CO. PROPRIETARY LTD.	78	0	15	30	33	10
7	UNIV MELBOURNE	72	10	5	23	33	42
8	BROKEN HILL PTY. CO. LTD., THE	69	15	16	19	19	0
9	BTR PLC	43	12	13	8	10	25
10	CANON INC	40	0	0	0	40	#N/A

(relative emphasis)
(relative growth)

Table 3

20 5
 318 1
 St Jude Medical
 가
 CSIRO
 ICI (ORICA),
 가
 CSIRO

Table 5

.11 (TAs) 5
 , CSIRO 8 1~2

Table 5. Enterprises with the largest number of 1994-1998 Australian-invented U.S. patents by technology area

01- Agriculture		17- Industrial Process Equip	
COMMONWEALTH OF AUSTRALIA	7	COMALCO ALUMINUM LTD	12
INTL FLOWER DEVELOPMENTS PTY. LTD.	4	COMMONWEALTH OF AUSTRALIA	5
MINISTER FOR AGRICULTURE & FISHERIES	3	GRACE (VR) & CO	3
MALLINCKRODT GROUP, INC.	3	ROMA TECHNOLOGY PTY LIMITED	3
DARATECH PTY LTD.	3	MEMTEC LTD.	3
WESCOE CRUSHERS PTY LTD	2	BAKER HUGHES INC	2
STRATHAIR PTY LTD	2	COMPRO TECHNIC PTY LTD.	2
SPEEDWAY INC	2	E. DUPOINT DE NEMOURS & CO	2
REDDITT & COLEMAN PLC	2	UNIV SYDNEY	2
MOUNT ISA MINES LTD.	2	MEMTEC AMERICA CORP.	2
GOODMAN FIELDSER LIMITED	2	ORBITAL ENGINE CO. (AUSTRALIA) PTY LTD.	2
F&M HORMWOOD NORMANBY PTY LTD	2	PORTLAND SMELTER SERVICES PTY LTD.	2
AUSTRALIAN NATL UNIV, THE	2	SEELYE (P/F) NORMANBY PTY LTD.	2
		TECHNOLOGICAL RESOURCES PTY. LTD.	2
		HENKEL KGAA	2
07- Chemicals		20- Misc. Machinery	
COMMONWEALTH OF AUSTRALIA	30	ORBITAL ENGINE CO. (AUSTRALIA) PTY LTD.	3
UNIV MELBOURNE	11	SHIP STEEL S&A PTY LTD	3
LUDWIG INSTITUTE FOR CANCER RESEARCH	9	BEHOP (A.E.) & ASSOC. PTY. LTD.	3
ICI AUSTRALIA OPERATIONS PTY. LTD.	8	BTR PLC	3
UNIV SYDNEY	7	CASH ENGINEERING RESEARCH PTY LTD.	3
AMFAD CORP. LTD.	5	CLASH SCREEN WORKERS PTY LTD.	3
CHIRON CORP.	3	COMMONWEALTH OF AUSTRALIA	3
COMALCO ALUMINUM LTD.	3	K.C. METAL PRODUCTS PTY LTD.	3
AUSTRALIAN NATL UNIV, THE	3	TORREN CONSULTING PTY LTD.	3
ROCHE HOLDING LTD.	3	LOCENWAY PTY LTD.	3
UK DEPARTMENT OF DEFENSE	3	MANFALL ENGINEERING PTY LTD	2
UNISearch LIMITED	3		
IRLANTAGENT HOLDINGS PTY LTD	3		

E. 가(Measuring Patent Impact)

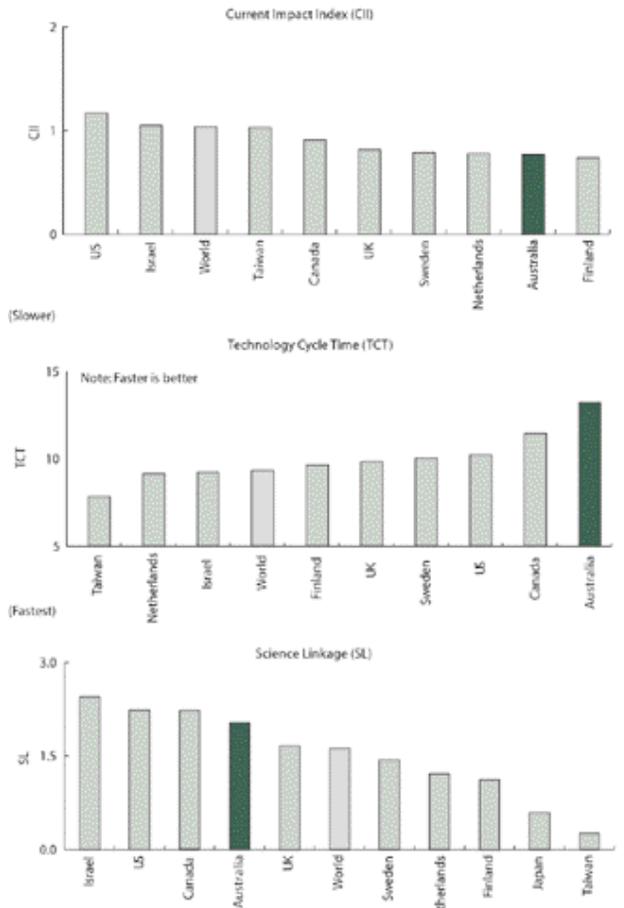
가
 가
 7~8
 가
 가

Fig.A

CII(Current Impact Index), TCT(Tech-
 nology Cycle Time), SL(Science Linkage)

가 , Cycle Time
 가

Fig. A. Overall characteristics of Australian and competitor country patents, 1994-1998



F. (Cross - Sector Citation Linkages)

CSIRO, , , 5

Fig.14A. Cross-sector citations among invented 1979-1998 U.S. patents

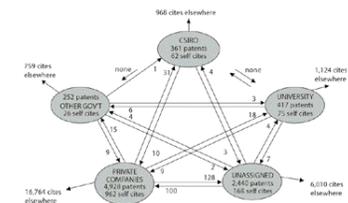
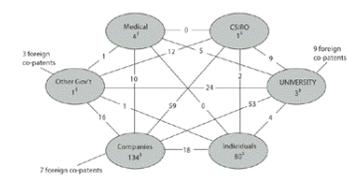


Fig.14B. Co-patents among Australian-invented 1979-1998 U.S.patents¹



¹Where organizations have more than one node on the graph, the patent has been counted between each of the collaborating parties, resulting in being double counted. The second figure shows the number of co-patents between the nodes for each organization.

Fig.14A

. Fig.14B

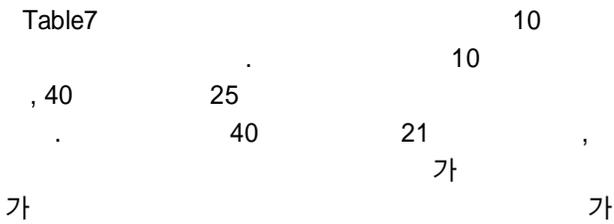
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Table 7. Top-cited 1989-1998 Australian-invented U.S. patents (ranked by number of citations received, minimum of 25)

Pat. No.	Grant Date	Tech. Area	Parent Company	Cites Recd
5235595	9/10/93	22-Telecom	Tyco International LTD	65
5050166	9/17/91	22-Telecom	** UNASSIGNED **	63
4888832	9/19/89	21-Comput	NETWORK SECURITY SYSTEMS, INC.	61
4833992	5/23/89	07-Chem	COSELO IMMOTOPES PTY. LTD.	56
5314794	5/24/94	23-Med/Ph	GOODMAN FIELDER WATTE AUSTRALIA LTD.	48
5288187	12/1/93	04-Food/Bio	QUINJAN (M.J.) & ASSOCIATES PTY. LTD.	41
4930156	5/29/90	22-Telecom	** UNASSIGNED **	39
5421031	5/30/95	22-Telecom	DELTA BETA PTY. LTD.	39
5103367	4/7/92	25-Elec/Apl	Unisearch Limited	36
5164985	11/17/92	22-Telecom	** UNASSIGNED **	36
4893304	1/5/90	22-Telecom	Science Applications Int'l	35
5199434	4/6/93	10-Med/Eng	** UNASSIGNED **	35
4819395	3/7/89	17-Ind/Pr/Eng	AUSTRALIAN NAT'L UNIV., THE	34
4922244	5/1/90	22-Telecom	UNIV WESTERN AUSTRALIA, THE	34
5433700	7/18/95	10-Med/Eng	Heartport Inc.	34
4848181	7/11/89	10-Med/Eng	** UNASSIGNED **	31
5034004	7/23/91	10-Med/Eng	UNIV MELBOURNE	31
5272747	12/21/93	22-Telecom	AUSTRALIAN & OVERSEAS TELECOMM. CORP. LTD.	31
4972368	11/20/90	21-Comput	STALLION TECHNOLOGIES, PTY. LTD.	30

G.

Table 7



H. CSIRO

(Battelle), (NASA)

Fig. 15. Comparison of CSIRO, Battelle and NASA patent citation indicators in two five-year periods

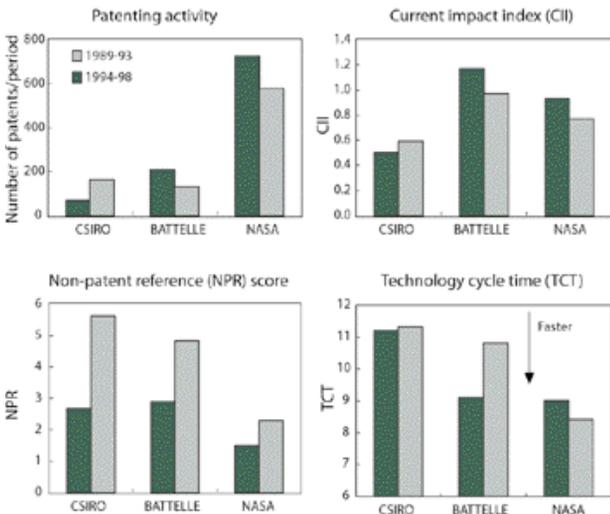


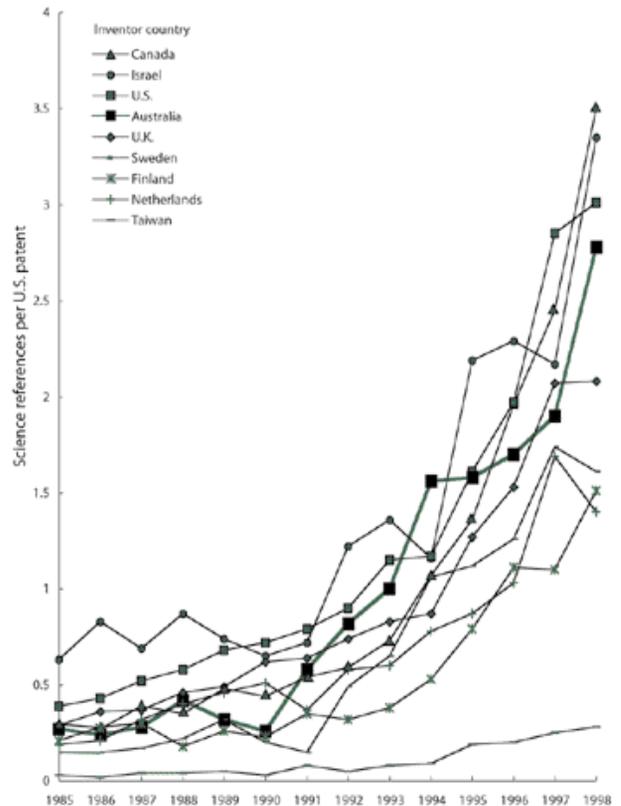
Fig.15 CSIRO NASN(), Battelle(), CII, NPR, TCT NPR(non - patent reference) SL

2.

A.

20 가

Fig.16. Science linkage (SL): citations from patents to papers are increasing, 1985-1998



B.

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가 1/3 , 2/3

가

Fig.17. National citation ratios: the linkage between technology and science has a strong national component

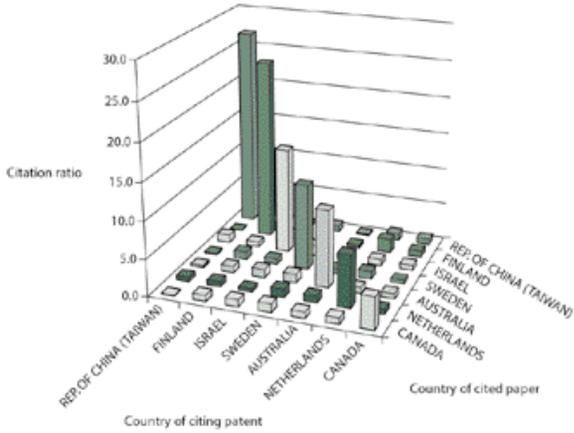


Fig.17 가

10

3.

A.

1981~1997 SCI(Science Citation Index)
 1988~1997 900,000 가
 3,200 7,800 , 0.9% 가 가

가

B. (Subfields),

Fig.18 Fig.19

Fig.18

Fig.19

가

Fig.18. Citations to Australian papers from 1988-97 U.S. patents, by field and subfield*

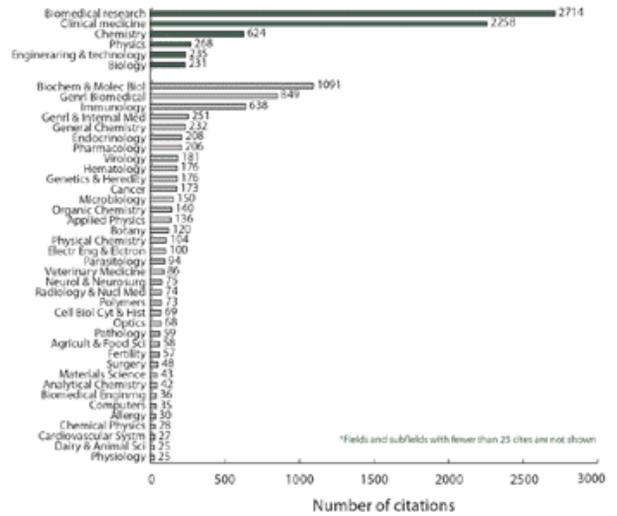


Fig.19. Australian papers cited by 1988-97 U.S. patents by field and subfield*

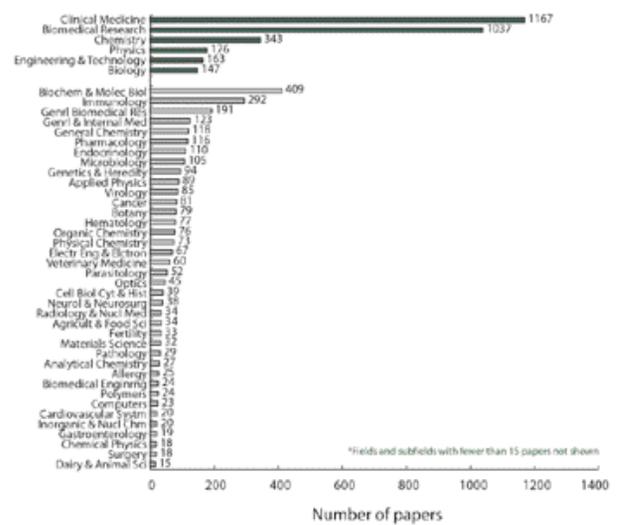


Fig.20

Fig.20. Relative citation ratio — patent citations to Australian papers, by cited paper field

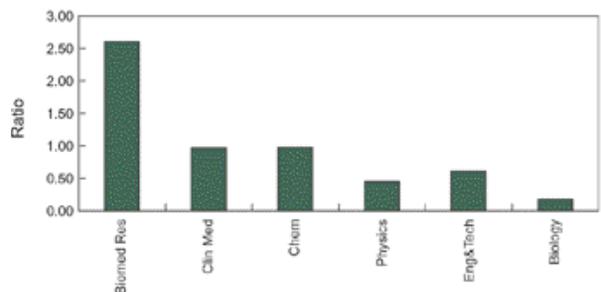


Table 15 1988~1997

가
10 'Australian Journal of Chemistry'가

Table 15. Top journals publishing Australian-authored papers cited in 1988—1997 U.S. patents (whole counts)

Journal	Cites	Cited papers
PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA	399	101
NATURE	332	52
NUCLEIC ACIDS RESEARCH	239	59
EMBO JOURNAL	138	32
AUSTRALIAN JOURNAL OF CHEMISTRY	134	74
SCIENCE	101	24
JOURNAL OF IMMUNOLOGICAL METHODS	100	39
JOURNAL OF BIOLOGICAL CHEMISTRY	96	41
CELL	91	22
JOURNAL OF IMMUNOLOGY	88	41
BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS	85	26

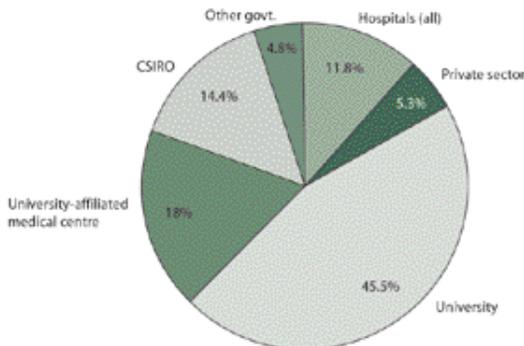
C.

Table 21 가
CSIRO가 가
, Walter and Eliza Hall Institute of Medical Research,

Table 21. Numbers of citations and cited papers in all fields for top Australian author institutions cited in 1988—1997 U.S. patents (whole counts)

To all papers	Citations	Cited papers
CSIRO	1069	465
WALTER & ELIZA HALL INST MED RES	775	292
UNIV MELBOURNE	627	308
AUSTRALIAN NATL UNIV	624	297
UNIV ADELAIDE	403	147
MONASH UNIV	372	217
UNIV SYDNEY	325	197
UNIV NEW S WALES	280	181
UNIV WESTERN AUSTRALIA	225	88
CSLLTD	220	48
LUDWIG INST CANC RES	215	89
UNIV QUEENSLAND	200	121
ROYAL PRINCE ALFRED HOSP	191	88
S AUSTRALIAN GOVERNMENT	153	60
ROYAL PERTH HOSP	134	28

Fig. 21. Sector of Australian papers cited in 1988—1997 U.S. patents



95%

63%

CSIRO 14%, 5%

Table 28. Top assignees of 1988—1997 U.S. patents citing Australian papers (whole counts)

Assignee	Number of citations	Number of patents	Number of papers
Roche Holding Ltd	351	129	188
American Home Products Corp	144	64	77
Chiron Corp	141	44	60
University of California	110	65	79
UNIV MELBOURNE	84	21	47
Commonwealth of Australia	83	28	74
University of Texas	82	66	47
US Dept Health & Human Services	72	55	67
General Hospital Corp, The	67	32	46
Glaxo Wellcome PLC	64	38	28

D.

Table 28 가
(parent company)
Genentech Roche Holdings
Table 28

Table 34. Top assignees of 1988—1997 Australian-invented U.S. patents citing Australian papers (whole counts)

Assignee	Number of citations	Number of patents	Number of papers
UNIV MELBOURNE	84	21	47
Commonwealth of Australia	83	28	74
GENE SHEARS PTY. LTD.	45	5	11
CENTRAL SYDNEY AREA HEALTH SERVICE	41	4	24
AMRAD CORP. LTD.	40	11	26
BIOTECHNOLOGY AUSTRALIA PTY. LTD.	40	7	26
Roche Holding Ltd	40	5	21
ST. VINCENTS INST. OF MEDICAL RESEARCH	37	4	23
MONASH MEDICAL CENTRE	37	4	23
MONASH UNIV.	37	4	23
Lubrizol Corp	36	11	30

E.

Table 34 가 가
(Link)

F. (funding organizations)

Table 37 1988~1997

Table 37. Top funding organisations acknowledged in Australian-authored papers cited in 1988—1997 U.S. patents (whole counts)

Funding source (General means Others not listed individually)	Cited papers
NHMRC (National Health Med. Res. Council)	841
Australian Government (all levels) (General)	394
ARC (Australian Research Council)	266
Foreign Govt and Non-Profit (non-AU, non-US)	174
Australian Universities (General)	153
Private for-profit institutions (all countries) (General)	148
Australian Foundations (General)	134
Victoria Anti-Cancer Council	116
National Cancer Institute (US)	101
All other U.S. private non-profit institutions	72

2,900

37%

1,100

ARC

G. (多)

가

NHMRC,

37 CSIRO

4.

A.

4

1988~1997

, SCI

(linkage)

B.

Table 45 1988~1997

가

. CSIRO가

Table 44

CSIRO

가

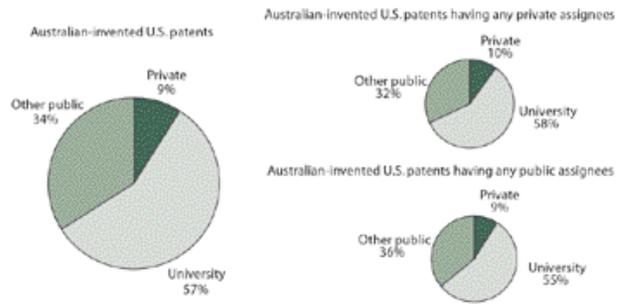
Table 44. Top cited paper details, by field

Biology					
3 cites by patents	Article: INHIBITION OF FUNGI FROM WHEAT ROOTS BY PSEUDOMONAS FLUORESCENS 2-79 AND FUNGICIDES Journal: SOIL BIOLOGY & BIOCHEMISTRY Vol: 0021 Pg: 1019 Year: 1989 Cites by papers: 845 loc: Z2DCY-				
Author(s) BRISSENE PG HARRIS JR MOEN R	Author institution(s) CSIRO	Dept. DIV SOILS	City GLEN OSMOND	Country AUSTRALIA	Funding Source(s) No funding information Given
3 cites by patents	Article: STRUCTURE OF DESACYLSAPONINS OBTAINED FROM THE BARK OF QUILLAJA-SAPONARIA Journal: PHYTOCHEMISTRY Vol: 0026 Pg: 0029 Year: 1987 Cites by papers: 3735 loc: ZFHTTD				
Author(s) TOKIMITSU Y FUJIOKA T KIMMORI T KAWASAKI T DAKENFUDU DG HIGUCHI R	Author institution(s) CSIRO	Dept. FAC PHARMACEUT SCI DIV FOOD RES	City FUKUOKA 812 N RYDE	Country JAPAN AUSTRALIA	Funding Source(s) Australian Govt (all levels) (General)
Biomedical					
53 cites by patents	Article: SIMPLE RNA ENZYMES WITH NEW AND HIGHLY SPECIFIC ENDO-RIBONUCLEASE ACTIVITIES Journal: NATURE Vol: 0334 Pg: 0585 Year: 1968 Cites by papers: 50730 loc: ZYBE-d				
Author(s) HASELOFF J GERLACH ME	Author institution(s) CSIRO	Dept. DIV PLANT IND	City CANBERRA	Country AUSTRALIA	Funding Source(s) Australian Government (all levels) (General)
57 cites by patents	Article: USE OF PEPTIDE SYNTHESIS TO PROBE VIRAL ANTIGENS FOR EPITOPES TO A RESOLUTION OF A SINGLE AMINO-ACID Journal: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA - BIOLOGICAL SCIENCES Vol: 0061 Pg: 3998 Year: 1964 Cites by papers: 76135 loc: UGLEKD				
Author(s) GEYSSEN HM MELDEN M BARTELING SJ	Author institution(s) COMMONWEALTH SERUM LABS	Dept. 45 POPULAR RD	City PARKVILLE LELYSTAD	Country AUSTRALIA NETHERLANDS	Funding Source(s) No Funding Information Given

Table 45. Top assignees of 1988–1997 Australian-invented U.S. patents citing science papers

Assignee	Number of patents (fractional)	Number of cites (fractional)	Number of papers (whole)
Commonwealth of Australia	53.5	299.5	289
UNIV MELBOURNE	21.5	165.0	132
AMRAD CORP. LTD.	15.0	117.0	83
St. Jude Medical Inc.	14.5	26.5	25
BIOTECHNOLOGY AUSTRALIA PTY. LTD.	12.5	112.8	153
AUSTRALIAN NAT'L UNIV. THE	11.0	47.5	45
Lubrizol Corp	10.5	107.0	93
HOWARD FLOREY INST. OF EXPERIMENTAL PHYSIOLOGY	10.0	36.0	18
Ludwig Institute for Cancer Research	8.0	31.0	27
US Dept Health & Human Services	7.0	67.0	55

Fig. 22. Science citations by 1993–1994 patents with Australian inventors, disaggregated by sector



C. (Subfield)

E. (Sector; , ,)

Table 50

Fig. 22

91%

.가

가

73%

가

,

가

가

Table 50. Top fields and subfields of papers cited by 1988–1997 Australian-invented U.S. patents (whole counts)

Field/Subfield of Cited Paper	Number of cites	Number of papers
Field		
BIOMEDICAL RESEARCH	1728	1141
CLINICAL MEDICINE	958	751
CHEMISTRY	143	110
BIOLOGY	120	103
PHYSICS	68	61
ENGINEERING & TECHN	51	47
EARTH AND SPACE	10	8
PSYCHOLOGY	1	1
Subfield		
Biochem & Molec Biol	741	453
Genet/ Biomedical Res	510	327
Immunology	220	180
Endocrinology	130	75
Genet & Internal Med	126	91
Genetics & Heredity	120	90
Virology	90	59
Cancer	89	71
Microbiology	86	74
Botany	60	51
Hematology	57	47
Cardiovascular System	54	46

Table 55. Top author countries of papers cited by 1988–1997 Australian-invented U.S. patents (whole counts)

Country of Paper Author	Number of cites	Number of papers
US	1558	1138
AUSTRALIA	691	432
UNITED KINGDOM	274	206
JAPAN	168	121
CANADA	114	100
GERMANY	109	89
FRANCE	80	57
SWITZERLAND	75	61
SWEDEN	63	36
NETHERLANDS	58	46
ISRAEL	49	34
AUSTRIA	36	22
ITALY	36	31
BELGIUM	27	23
DENMARK	27	23

D. 가

F.

Fig. 23

가

CSIRO

가

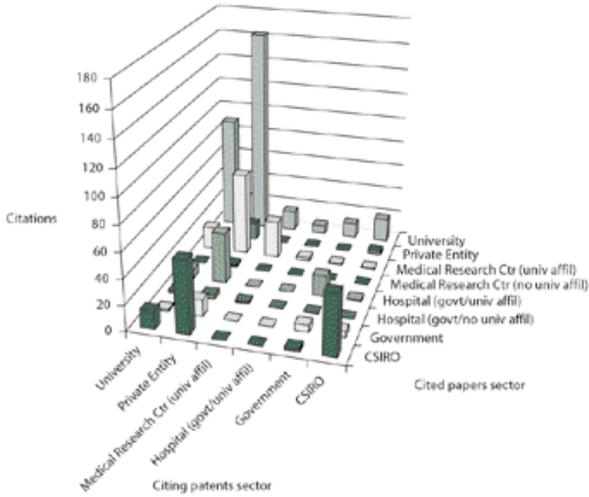
97%가

Table 55

가

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가

Fig.23. Australian cross-citation by sector (fractional counting; patents by private entity inventors include foreign assignees)



가

*

*

가

Cycle Time

*

97%

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Fig.24

'Private Entities'

4

CSIRO

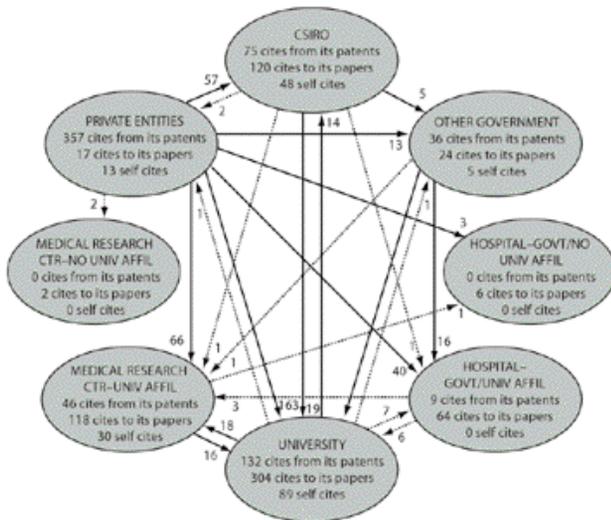
가

20 R&D

(

)가 가

Fig.24. Citation of papers by patents between Australian sectors



Notes: Counts are of references by patents to papers. Patents are counted fractionally; counts less than 0.5 have been omitted. Patents by private entity inventors include foreign assignees.

*

가

가

CSIRO

Walter and Eliza Hall Institute of Medical

Research

*

CSIRO

20

318

가

가

CHI Research

Research

. CHI

. CHI Research

700

, CSIRO가

CHI RESEARCH INC.

가?

CHI Research Inc. 1968
 , 1970 NSF 가
 CHI NSB(National Science Board)
 , 1980 , 가
 . CHI 가가 CHI
 . Tech - Line_ CHI 가
 . 7 20

CHI , , .
 가, 가, (M&A)
 . CHI 100 가 가
 . 가 30 , 2001 1
 가 가 . CHI 1972 가 2002 . CHI 30
 Science Board) NSB(National
 CHI CH가 가 ' 가 .
 CHI 가 Tech - Line
 , , Investor Tech - Line, Technology Snapshots, 가
 International Technology Indicators (TP - 2), Regional Tech - Line
 CHI 가 CHI
 ()
 U.S. Patent Citation Indicators Database : 1975 (USPTO) 270 (1900
) Front Page
 European Patent Office (EPO) Patent Citation Indicators Database : 1978 (EPO) 100
 () Front Page
 - Front Page , , / , IPC/USPOC , , /
 CHI's Tech - Line database : www.economy.com , 1500 ,
 - : 가 , , M&A(Merger and
 Acquisition) 가,
 - : , \$200 ,
 (Metropolitan Statistical Area <MSA>) \$150 , 가 \$300 .

특허청, 상표관련 정보화 국제표준 주도

12 2 6
 (WIPO) (SCIT: Standing
 Committee on Information Technologies)
 (SDWG: Standards and Documentation Working Group)
 (WIPO)

2003 12 SDWG
 WIPO
 WIPO

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(SDWG)
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* :
 * : 042-481-5158

WIPO

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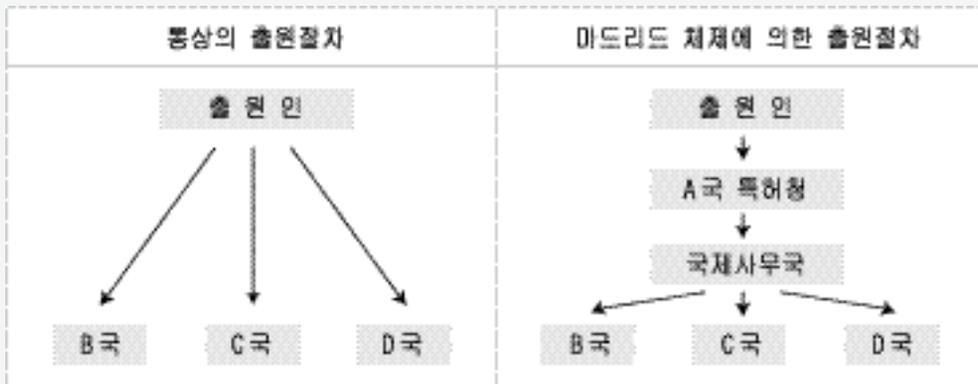
1 20

, 9

- WIPO
- UN WIPO(World Intellectual Property Organization) (, , ,)
- WIPO 5
- (, , ,)
- : ST.1, ST.2, ST.3, ST.6, ST.9, ST.13, ST.16, ST.50, ST.60, ST.64, ST.80
- : ST.11, ST.17~ST.20, ST.63, ST.81
- : ST.10, ST.12, ST.14, ST.15, ST.21
- (micro form) : ST.7
- 가 (machine readable)
- : ST.8, ST.22, ST.25, ST.30~ST.35, ST.40
- WIPO
- (WIPO ST.6)
- IPC(International Patents Classification) (WIPO ST.8)
- (WIPO ST.10/C)
- (WIPO ST.30 ~ WIPO ST.40)
- (WIPO ST.80)
- WIPO

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II. 가

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III. 가

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3.

WIPO

INDICATORS

가

INDICATORS

100

- Patent Activity
- AI
- Cites Per Patent
- Current Impact Index (CII)
- Science Linkage
- Technology Cycle Time
- Technology Impact Indices

DB

가

가

1. Patent Activity

Number of Patent

Patent Growth Percent in Area

(1

)

Percent of Company Patents in Area

가

INDICATORS

INDICATORS

가

2. AI (Activity Index)

INDICATOR

INDICATOR

가

1

가

1

가

2000

H01L

가

3

ACTIVIY INDEX(AI) =

(선택기업의 해당클래스 특허건수)
(해당 클래스의 전체 특허건수)

(해당연도의 해당기업의 전체 특허건수)
(해당 연도의 전체 특허건수)

	2000년
전체건수	61,048
일본건수	27,349
H01L 전체건수	11,649
H01L 일본건수	2,990

표 1. 한국 2000년 데이터 일부

$$(2,990/11,649)/(27,349/61,048) = 0.57$$

H01L

3. Cites Per Patent

INDICATOR

Citation

Citation

Citation

Backward Citation, Forward Citation

Citation

Backward

Citation

Forward

Citation

Citation

Citation

Indicator가

Cites Per Patent

Cites Per Patent

가

가

Cites Per Patent

가

4. Current Impact Index (CII)

5

Indicator

5

가

가

1991 CII

등록특허

	1986	1987	1988	1989	1990
전체	71,882	72,860	81,854	78,542	95,530
정보원	104	250	125	180	285

1991년도에 인용된 특허수

	1986	1987	1988	1989	1990
전체	35,321	36,854	50,785	49,970	52,635
정보원	62	130	85	103	165

1991년도에 인용된 특허당 평균 인용수

	1986	1987	1988	1989	1990
전체	0.49	0.51	0.62	0.63	0.55
정보원	0.60	0.52	0.68	0.57	0.58

여 기는
35,321 / 71,882
이 값은
0.60 / 0.49

* 정보원의 평균인용수 = 인용수/등록건수
* 전체의 평균인용수 = 전체 인용건수/전체 등록건수
이 값은 62 / 104

정보원의 인용비율 (전체 대비)

	1986	1987	1988	1989	1990
정보원	1.22	1.02	0.83	1.07	1.05

이 값은
0.60 / 0.49

* 정보원의 인용비율 = 정보원 평균인용수 / 전체 평균인용수

$$\frac{(\text{연도별 정보원 인용비} \times \text{연도별 정보원 등록건수})}{(\text{연도별 등록건수 합계})}$$

CII

$$(1.22 \times 104 + 1.02 \times 250 + 0.83 \times 125 + 1.07 \times 180 + 1.05 \times 285) / (104 + 250 + 125 + 180 + 285) = 1.03$$

1991

5. Science Linkage

Indicator
가
, ETRI
ITRI

구분	1984	1985	1986	1987	1988	1989	2000	2001	Age	기술분야	도.	
번드제	ETRI	0	0.83	1.35	1.18	1.31	1.52	2.47	2.0	1.29	영도제 및 관사	1.3
	ETRI	1.3	1.25	2.89	2.51	1.3	2.7	3.46	6.58	0.61		
통신	ETRI	0	1.76	1.85	2.77	1.37	0.84	1.35	1.68	1.21	통신	3.8
	ETRI	0.6	1.11	2.89	2.59	1.3	1.8	1.29	6.73	0.96		
컴퓨터	ETRI	0	2	1.35	1.58	1.35	1.3	1.6	1.17		컴퓨터 및 주변기기	1.0
	ETRI	0	0.73	2.6	2.19	2.46	0.96	2.89	2.83	1.38		

TCT

Reference
가
TCT

레퍼런스가 짝수인 경우
특허번호 6,136,630(2000.말)
레퍼런스

번호	issue	year	age
5863788	1999	1.00	2.00
5746849	1998	2.00	2.33
5847454	1998	2.33	2.67
5719073	1998	2.67	3.00

median은 두번째와 세번째 레퍼런스 사이에 존재함.
따라서 여기에 TCT를 2.33을 줌.

6. Technology Cycle Time

Indicator

Reference

TCT
Reference
가

TCT

Technology Cycle Time illustration

Patent	5200004		
Application date	1991.12.16		
Issue date	1993.04.06		
Title	Permanent Magnet		
	year	patent number	age
	1957	2810640	36
	1966	3241930	27
	1988	4722869	5
	1989	4770718	5
	1990	4925741	3
	1991	5043025	2

레퍼런스가 홀수인 경우
특허번호 6,297,580(2001.말)
레퍼런스

번호	issue	year	age
5861323	1999	2.00	3.00
5849608	1998	3.000	3.125
5801449	1998	3.125	3.250
5801072	1998	3.250	3.375
5770476	1998	3.375	3.500
5751968	1998	3.500	3.625
5742100	1998	3.625	3.750
5710071	1998	3.750	3.875
5704116	1998	3.875	4.0
5629566	1997	4.0	5.0
5349240	1994	7.0	8.0

여기서 중간값은 정확히 5751968임.
따라서, TCT 범위는 3.500-3.625사이에 있으며
이 중간값을 취하여 3.562 또는 3.6으로 한다.

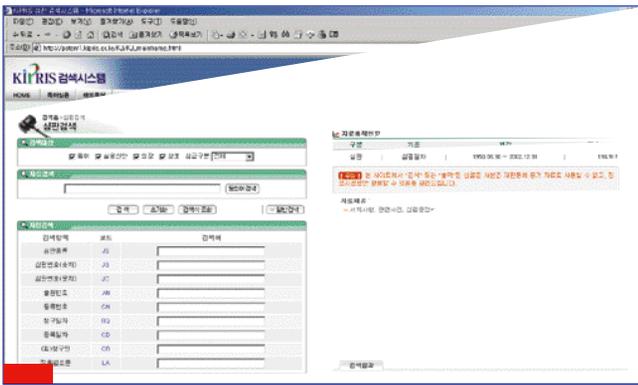
7. Technology Impact Indices (TII)

가()
Indicator

1993 ()
가 Reference
Reference
1
TCT 5.5

특정 기술분야 제조분야에서
X혹은 X이상을 가지는 특정 국가(출원인) 특허의 비율

특정 기술분야 제조분야에서 X혹은
X이상을 가지는 특허의 비율



KIPRIS 가

KIPRIS

Verity

(www.kipris.or.kr)

가

1

DB

Verity

FPD

US Class

가

1

BM

BM

WIPO

BM

Current Drug (), Wila - Derwent (),
 [: World Patent Information, Vol. 24, 2002]
 World Patent Information
 [: 12. 16,]
 12. 16() 1989 65 가
 (Madrid Protocol) 13 가
 1988 1998 ,
 가 (INTA)
 가 EU
 ,EU가
 가 가
 2003. 11. 2 가
 66.3% 7.5% 90 가
 160% 가
 53.4% WIPO WIPO
 가 18 10 1
 가 10
 , Data Base Delphion 가 \$ 14,000 가
 [: Thomson Press Release 12. 16, Nikkei Biztech 12. 17] \$ 4,700 가
 Thomson
 Corporation (TSX and NYSE : TOC) 2000 IBM (Search) 가
 Chicago Delphion Data Base Delphion 5 가
 Research \$ 2200 DB , , 가 가 가
 70 3,500 가()
 KIPRIS 가 1
 Delphion Research Group Group
 Derwent Information (), ISI (),

KIPRIS 검색가능 최종 데이터 현황

(2003. 1. 15 현재)

구분	종류	기준일	정보제공범위	구분	종류	기준일	정보제공범위
특허 / 실용	공개서지	공개일	2003. 1. 8	의장	등록	공고일	2003. 1. 3
	공고서지	공고일	2003. 1. 8		공개(조기)	공개일	2003. 1. 3
상표	초록	공보일	2003. 1. 8	심판	1심 ~ 3심	청구일	2003. 1. 3
	전문이미지	공보일	2003. 1. 8		4권리	등록	등록일
특허	서지/이미지	방식심사일	2003. 1. 10	특허	중간처리	서류접수일	2003. 1. 14
	생명공학	출원일	1980 ~ 2000		KPA	등록-공고 특허공개	1979.1 ~ 2000.10 2000.1 ~ 2002.9

아직도 뒤틀북을 치십니까?





발행인 : 한국특허정보원 원장 민경탁
서울특별시 강남구 역삼동 814-1 발명회관
전화 : (02) 3452-8144
FAX : (02) 3453-5951

특허기술정보서비스 : www.kipris.or.kr
선행기술조사서비스 : www.chosa.or.kr