

미국과 유럽에서 바라본 한국산업의 특허경쟁력 평가 및 시사점

1. 가
2. 가
- (1)
- (2)
- 3.

⋮

1. 가
1)

2)

emerging

3)

, emerging

가

5)

(AI)⁴⁾

- (locality)
 , , , : many
 innovator, low opportunity, low firm
 cumulateness
 : many innovators, high opp-
 ortunity, high firm cumulateness, local
 knowledge boundaries
 : few innovators, high opp-
 ortunity, high firm cumulateness, local
 knowledge boundaries
 :
 many innovators, local and global know-
 ledge boundaries

- 가

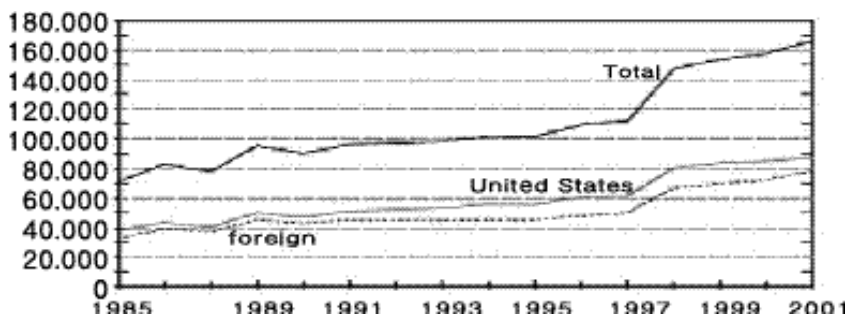
nowires
 Quantum dots 가
 가 .
 Quantum Dots, Nanosys, Evident
 Technologies, Utratech가
 Dendrimers 229
 , Dow가
 , Dendritic Na-
 noTechnologies
 Carbon nanotubes
 가 가 . 293
 가 ,
 가
 Fullerenes 215 1/3
 가 가 가
 . Mitsubishi
 , , ,
 Nanowires 가
 51 가 ,
 2. 가

6)
 Lux Research Foley & Lardner
 LLP 1,084
 .
 : Dendrimers, Quantum
 dots, Carbon Nanotubes, Fullerenes, Na-

1) , 가 , , 2002 , 99 -109 .
 2) , , Patent 21, 2005 , 61 , 2
 3) , , 99
 4) AI(Activity Index): 가가
 5) , , 107 .
 6) Weekly IP Look, 2005.4.29, 148 , , (UPI News 2005. 4. 25)

(1) 1987 343 21,000
 NSF, Science & Engineering Indicators, 2004⁷⁾
 - Science & Engineering Indicators 가 3 2000 2001 5 (2).
 - 가 2 2001 47% 『Science & Engineering Indicators』 (1).
 - 가 (AI)⁸⁾
 가

< 1 > 가



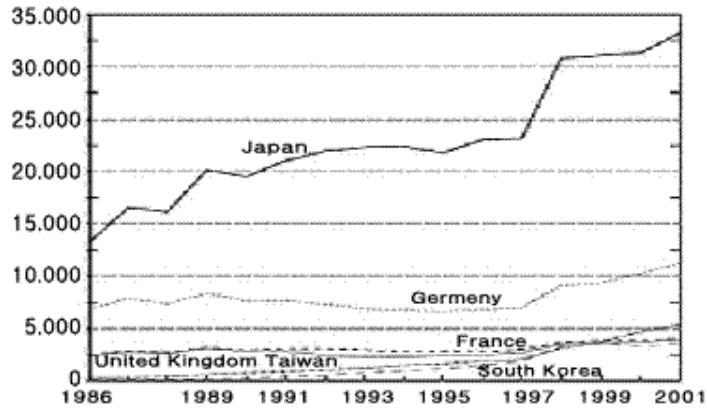
* : NSF, Science & Engineering Indicators, 2004

7) , , , 2004.

8) (AI) () 가

2002, 2002.12., 39 .

< 2 > 가



* : NSF, Science & Engineering Indicators-2004

가

가

, (television), (dynamic and static information storage) 가

< 1 >

()

1	Liquid crystal cells, elements, and systems
2	Static information storage and retrieval
3	Electric lamp and discharge systems
4	Television
5	Semiconductor device manufacturing process
6	Dynamic magnetic information storage or retrieval
7	Television signal processing for recording
8	Miscellaneous active electrical nonlinear devices
9	Electric lamp and discharge devices
10	Pulse or digital communications
11	Electrophotography
12	Active solid-state devices
13	Computers
14	Electronic digital logic circuitry
15	Computer graphics

* : NSF, Science & Engineering Indicators, 2004.

(data generation and conversion),
(error detection), (display system)
(1).

- 1993

(H05B)

가가

. 1993

10

(G02F)가가

- (G02F) 『Science & Engineering Indicators 2000』 13

『Science & Engineering Indicators 2002』 2, 『Science & Engineering Indicators 2004』 1

가

(3).

TR Patent Scorecard⁹⁾

- CHI Research Inc MIT Techno-
logy Review가 『TR
Patent Scorecard』 1998 2003

(861 86,421 (2003)
) (23),
(111), / (125), (166
) (111), (156), (103
) (68) 가 (441
) (203), (51), (28),
(25), (24), (18),
(13), 가(60) .

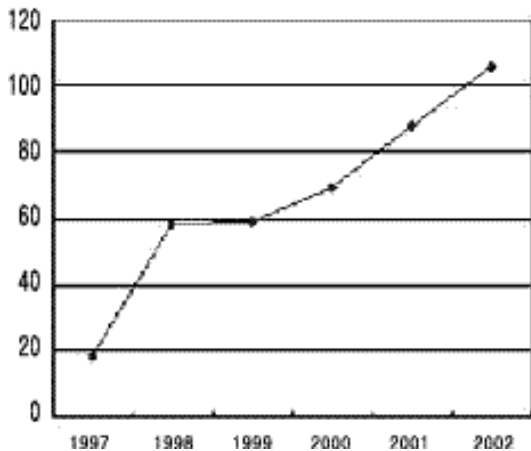
- 『TR Patent Scorecard』

가

2%

13

< 3 >



* : IFI CLAIMS DB

	1997	1998	1999	2000	2001	2002
	0	2	9	8	19	1
	0	0	0	0	0	22
KAIST	0	1	0	0	0	0
LG	4	24	29	34	16	5
LG	0	0	0	0	0	1
LG PHILIPS	0	0	0	4	22	59
LG SEMICON	0	3	0	0	0	0
	4	6	5	6	4	2
	10	22	16	17	26	14
SDI	0	0	0	0	1	2
	18	58	59	69	88	106

가 6 , (, 103), LG
 10 . 2002 14 (, 156), LG LCD 18 (, 156), 94 (, 103),
 4 ¹⁰⁾ 13 111 (, 156),

< 2 >

		(%)	51.2%	56.5%	31.5%	59.2%	35.5%	62.2%	48.1%	68%	69.7%
share(%)	1998-2002	42.3%	78.5%	30.8%	49.4%	37.3%	60.1%	18.2%	58.7%	61.8%	
	2003	42.6%	77.3%	31.4%	56.5%	36.4%	60.8%	17.1%	62.4%	58.4%	
share(%)	1998-2002	23.6%	4.3%	35.1%	16.0%	34.9%	16.2%	35.9%	7.8%	4.5%	
	2003	30.2%	0.6%	37.4%	8.5%	23.8%	34.6%	57.7%	3.3%	2.9%	
share(%)	1998-2002	5.9%	4.3%	19.8%	4.8%	8.4%	0.0%	3.8%	1.0%	1.5%	
	2003	8.5%	1.4%	23.7%	10.4%	23.2%	0.0%	6.6%	1.7%	0.5%	
share(%)	1998-2002	1.5%	0.0%	0.9%	0.0%	1.2%	0.0%	3.2%	2.9%	3.0%	
	2003	5.5%	0.0%	1.2%	0.0%	0.2%	0.0%	10.0%	18.8%	0.8%	
share(%)	1998-2002	2.1%	0.0%	0.0%	2.4%	5.4%	1.8%	1.3%	1.0%	1.5%	
	2003	1.4%	0.0%	0.0%	11.4%	4.3%	0.1%	0.2%	0.1%	0.1%	
share(%)	1998-2002	2.9%	13.0%	2.7%	3.2%	4.2%	0.9%	1.9%	1.0%	4.5%	
	2003	2.8%	8.4%	2.1%	2.2%	4.5%	0.3%	1.0%	4.8%	7.5%	
share(%)	1998-2002	2.8%	13.0%	3.6%	4.8%	3.0%	1.8%	1.3%	0.0%	3.0%	
	2003	1.7%	4.6%	1.3%	12.0%	2.1%	0.2%	0.8%	0.0%	2.2%	
share(%)	1998-2002	1.2%	6.0%	1.6%	8.2%	1.6%	0.1%	0.5%	0.0%	1.3%	
	2003	3.3%	0.0%	0.0%	0.0%	0.6%	9.9%	1.3%	12.6%	1.5%	
share(%)	1998-2002	2.2%	0.0%	0.0%	0.0%	0.1%	3.1%	0.1%	11.2%	0.2%	
	2003	2.4%	0.0%	0.0%	0.0%	0.4%	4.6%	0.4%	8.6%	0.0%	

* : TR Patent Scorecard 2004

9) , 2005 , 286
 10) IT , , 2004.5.13.

146 (, 156), 67 (0.2%, 2003 0.4% 가 .
 , 67) .
 - . . KT 53 ((2) .
 , 67), LG 137 (, 166), ¹¹⁾
 36 (, 111) . KT
 가11 , ¹²⁾ SEI 가
 AT&T(8) 가 .
 NTT(16), KDDI(39) . SEI가 (AI)
 2> 가 .
 1.5% .
 , 1998-2002 5.5%, - 가 1992
 2003 4.9% . 20%
 , , 가 . EPO 1992
 1999 25%
 2.9% 가 . 1992
 , 1998-2002 가30 1999
 18.8%, 2003 13.3% . 200 가.
 3.2% - EU 가 ,
 , 1998-2002 10.0%, . 1990
 2003 9.4% 가 (.
 0.9% 8%). /
 , 1998-2002 (3).
 1.2%, 2003 1.2% .
 3.0%
 , 1998-2002 (%)
 0.8%, 2003 0.2% . 가 가 . 6
 1.2%
 , 1998-2002 (4).

11)

12) EC, European Report on Science & Technology Indicators, 2003.

< 3>

가(1992-1999)

		(%)		(%)
1	China	24.4	S.Korea	26.0
2	S.Korea	23.5	Singapore	22.9
3	Singapore	21.2	Malaysia	15.9
4	New Zealand	18.4	Taiwan	12.7
5	Mexico	15.7	India	11.3
6	Israel	12.6	Argentina	8.5
7	Brazil	11.7	Hong Kong	8.0
8	Finland	7.8	New Zealand	7.3
9	India	7.6	Denmark	6.8
10	Ireland	7.6	Israel	6.1

6

< 4>

가

Electricity					Instruments				
1	Finland	22.7	Singapore	20.7	1	S.Korea	27.6	S.Korea	33.1
2	China	22.5	S.Korea	19.9	2	N. Zealand	23.4	Argentina	14.2
3	Sweden	20.0	Taiwan	18.7	3	China	21.3	Taiwan	13.5
4	Singapore	19.5	Finland	15.5	4	Israel	18.0	Belgium	11.8
5	S.Korea	18.8	Israel	12.6	5	Ireland	13.7	N. Zealand	11.0
Chemistry					Process				
1	China	26.2	S.Korea	21.6	1	S.Korea	31.8	S.Korea	22.5
2	S.Korea	25.2	Singapore	18.8	2	China	27.0	Hong Kong	17.8
3	Brazil	20.3	Poland	17.6	3	Brazil	17.7	N.Zealand	13.1
4	N. Zealand	16.9	Taiwan	16.8	4	N.Zealand	16.3	Taiwan	12.2
5	Mexico	12.6	India	12.9	5	S.Africa	11.5	Brazil	12.0
Mechanics					Consumer goods				
1	S.Korea	28.8	S.Korea	30.6	1	N.Zealand	20.5	S.Korea	29.1
2	China	21.5	Taiwan	8.3	2	S.Korea	20.3	Hong Kong	10.9
3	N.Zealand	20.0	Norway	6.4	3	Brazil	17.1	Taiwan	8.9
4	Czech Rep.	14.9	Spain	6.2	4	China	14.0	Denmark	7.1
5	Brazil	9.9	Denmark	4.9	5	Ireland	11.9	Finland	5.6

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(display system), (tele-
 vision), (dynamic and static
 information storage)
 가 (data
 (4). generation and conversion), (error
 가 detection)
 1992 100 1999
 가 CHI Research Inc MIT Tech-
 (5). nology Review가 『TR Patent
 Scorecard』
 3. 가 1.5%
 1998-2002 5.5%, 2003
 가 4.9%

< 5> 가 (1999) %

	AV	Telecommuni- cations	IT	Semi- conductors	Analysis Control	Pharma- ceuticals	Bio- technology	Materials
EU	28.6	37.9	26.9	29.2	43.7	35.7	28.3	55.1
Belgium	0.4	0.6	0.4	0.7	0.6	1.0	1.1	1.0
Denmark	0.6	0.4	0.3	0.1	0.7	1.2	1.7	1.3
Germany	9.3	10.8	8.6	13.6	19.5	10.8	7.7	23.5
Spain	0.3	0.2	0.2	0.1	0.5	0.6	0.5	0.9
France	4.0	5.4	4.6	4.5	6.0	7.4	4.2	7.6
Italy	1.2	1.2	1.6	2.4	2.1	2.7	1.1	6.1
Netherlands	5.5	3.5	2.5	2.7	2.1	1.1	2.4	3.0
Austria	0.4	0.3	0.3	0.4	0.7	0.5	0.5	1.5
Finland	0.5	4.3	0.7	0.3	1.0	0.4	0.6	1.8
Sweden	1.1	3.8	1.3	1.1	2.2	1.4	0.9	3.1
UK	4.6	5.7	5.0	2.0	7.3	7.4	7.0	4.4
US	29.0	35.7	49.3	36.2	33.7	43.5	51.3	19.0
Japan	33.1	18.2	16.6	29.4	11.8	10.1	9.8	12.6
World	100	100	100	100	100	100	100	100

	AV	Telecommuni- cations	IT	Semi- conductors	Analysis Control	Pharma- ceuticals	Bio- technology	Materials
EU	104	102	133	129	97	94	90	90
Belgium	128	96	132	250	119	115	91	96
Denmark	169	136	302	455	138	126	109	156
Germany	94	78	154	167	106	99	81	87
Spain	231	111	178	187	164	106	136	175
France	85	63	85	77	67	93	82	70
Italy	73	65	143	133	78	59	66	134
Netherlands	112	117	142	95	109	79	93	101
Austria	99	65	179	277	75	78	51	108
Finland	119	485	564	332	133	175	69	104
Sweden	167	362	357	341	142	104	84	72
UK	116	89	105	67	89	90	106	71
US	128	120	106	112	114	113	117	106
Japan	71	63	54	68	68	65	55	123
World	100	100	100	100	100	100	100	100

< 5> 가

2.9% 가
 1998-2002 , 가 1992 1999
 18.8%, 2003 13.3% .
 3.2% 20% 가 . , ,
 1998-2002 10.0%, , , ,
 2003 9.4% 가 가
 0.9%
 1998-2002
 1.2%, 2003 1.2% .
 3.0% , .
 1998-2002 , ,
 0.8%, 2003 0.2% .
 1.2% 가
 1998-2002 .
 0.2%, 2003 0.4% 가 .

• 2005. 8