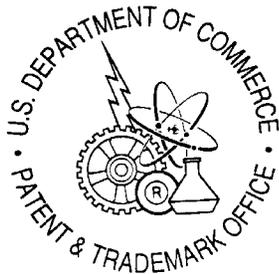


REISSUE PATENTS  
JANUARY 1977 -- DECEMBER 1998



March 1999  
U.S. PATENT AND TRADEMARK OFFICE  
OFFICE FOR PATENT AND TRADEMARK INFORMATION/ TAF PROGRAM  
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*A TECHNOLOGY ASSESSMENT AND FORECAST REPORT*

## Reissue Patents Report 1/1977 - 12/1998 Explanation of Data

This Technology Assessment and Forecast (TAF) Program Report profiles patent activity for U.S. reissue patents (hereafter referred to as patents) granted between 1977 and December 1998. The source of the data used for this report is the TAF data base maintained by the Office for Patent and Trademark Information.

### Data Distribution By Date of Grant and By Date of Application

#### **Parts A1 and A2**

Part A1 distributes patent GRANT data by year of patent grant ("Patents Granted By Date of Patent Grant"). Part A2 distributes grant data by the year in which the patented application was filed ("Patents Granted By Date of Patent Application"). Parts A1 and A2 each provide patent counts (pages A1-1 and A2-1) and percent distributions (pages A1-2 and A2-2).

Patent data in the "Pre 1985" column corresponds to the period January 1, 1977 through December 31, 1984.

#### **Part B**

Part B of this report distributes patent GRANT data for organizations that have received U.S. patents since 1977. Data are presented by the year in which the patent was granted ("Patents By Year of Grant") and the year the patented application was filed ("Patents by Year of Application").

DATA FOR THOSE APPLICATIONS WHICH WERE FILED BUT NEVER ISSUED (ROUGHLY 40% OF TOTAL FILINGS) ARE NOT INCLUDED IN THIS REPORT.

Since the average time period between filing for a patent and the issuing of the patent (i.e., a patent's "pendency") is now about 24 months, the patented application data for the most recent years are incomplete.\* This is because a significant number of the applications filed in the most recent years, which will ultimately become patents, were still pending in **December 1998**. Since they had not yet become patents at the time this report was prepared, they were not included in this report.

Patented application data are of significant value since the date an application was filed more accurately reflects when the technology was developed. Additionally, fluctuations in data based on application date are much more likely to reflect changes in technological activity, since such fluctuations would for the most part be immune from changes in PTO processing such as occurred in 1986 when the PTO issued fewer patents than would normally have been expected due to a lack of funds to print patents. Note that a patent's "pendency" can be quite variable from one patent to another thereby affecting the date of patent grant. Such variation in pendency is determined by many factors, including PTO

workload (which varies between technologies), budget and manpower levels, patent printing schedules, etc.

### Parts of the Report

**Parts A1 and A2** present tables which show, by number and percent, the patent activity.

Part A1 presents data by year of patent grant ("Patents Granted by Date of Patent Grant").

Part A2 redistributes grant data by year of patent application ("Patents Granted by Date of Patent Application"). The location of patent origin is determined by the residence of the first-named inventor at the time of grant.

Information on **patent ownership** reflects ownership at the time of patent grant and does not include subsequent changes in ownership. If more than one assignee was declared at the time of grant, the patent is attributed to the first-named assignee. The U.S. and Foreign Corporations ownership categories count predominantly corporate patents; however, patents assigned to other organizations such as small businesses, nonprofit organizations, universities, etc. are also included in this category. While U.S. Government patent ownership includes only patents granted to the Federal Government, no such distinction is made for Foreign Government patents.

**Part B** is a ranked listing of national and international organizations (i.e., corporations, universities, government agencies) which have received 10 or more U.S. reissue patents since 1977. Data line 1 for each listed organization distributes counts of patent grants by year of grant. Data line 2 for each organization redistributes those same patent grants by year in which the patented application was filed. Information on patent ownership reflects ownership at the time of patent grant. Although a substantial effort has been made to combine name variations into a single organizational name, many organizations continue to have patents listed under more than one organizational name.

\* As of December 31, 1998, UTILITY patent application data (most issued patent documents are utility patents) were approximately 98% complete for patent applications filed in 1995, 84% complete for applications filed in 1996, and 27% complete for applications filed in 1997. They are essentially complete for applications filed prior to 1995. Currently, completion percentages restricted to reissue patents are not available.

Part A1

Patent Grants As Distributed By Year of Patent Grant

---- Patents Granted By Date Of Patent Grant (Granted: Jan 01, 1977 - Dec 31, 1998) ----

	NUMBER OF PATENTS															
	Pre 1985	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	Total
<b>Total</b>	2666	276	260	245	244	317	370	263	360	332	317	316	279	277	298	6820
U.S. Origin	1955	194	183	160	167	212	241	171	231	207	194	208	175	173	195	4666
Foreign Origin	711	82	77	85	77	105	129	92	129	125	123	108	104	104	103	2154
JAPAN	202	29	26	33	28	49	58	53	66	61	59	61	49	51	48	873
GERMANY	136	21	16	11	20	16	15	8	19	13	18	9	9	10	15	336
UNITED KINGDOM	107	9	8	13	8	15	12	4	10	16	11	6	11	8	8	246
FRANCE	47	5	10	3	1	6	9	5	4	9	7	3	9	5	7	130
CANADA	43	2	2	3	2	5	9	6	5	6	9	5	5	4	7	113
NETHERLANDS	28	2	4	5	5	2	2	5	6	3		4	3	2	1	72
SWITZERLAND	27	1	3	3	6	1	6	3	4	2	2	3	5		1	67
ITALY	21	2	2	2	1	1	3	3	1	1	2	4	4	13	4	64
SWEDEN	34	4		3	1	1	3	2	3	3	1	1	1	3	2	62
AUSTRALIA	13	1	2		1	1	1	1	3	1	4	1	1		2	32
DENMARK	10	2	1		1		2		1	1	2			1	2	23
ISRAEL	3		1	2		3	3			1		1	2		4	20
AUSTRIA	6			1			1		2	2	1	1			2	16
BELGIUM	10	1				1	2		1							15
NORWAY	8	1	1	1	2					1						14
FINLAND	2			1		1	1		1	1		2		1		10
TAIWAN				1	1				2	1	2	1		1		9
NEW ZEALAND	3	1	1				2						1			8
SPAIN	1										2	1		1		5
SOUTH KOREA										1		1	2	1		5
INDONESIA		1										2	1			4
SOUTH AFRICA	2					1				1						4
BRAZIL	1					1								1		3
LIECHTENSTEIN	1											1				2
HUNGARY	1			1												2
MEXICO	1													1		2
HONG KONG,S.A.R.-PEOP				1						1						2
LUXEMBOURG						1		1								2
IRELAND								1						1		2
CZECHOSLOVAKIA	2															2
ARGENTINA										2						2
RUSSIAN FEDERATION												1	1			2
THAILAND									1							1
PORTUGAL				1												1
CHILE	1															1
PERU										1						1
Others ( 1 )	1															1
<b>Ownership:</b>																
U.S. Corporations	1659	161	148	132	126	165	185	133	188	156	152	164	134	146	163	3812
U.S. Government	7		2		1			1	2	3	1	1		1		19
U.S. Individuals	355	35	37	36	40	51	61	44	47	52	45	49	46	33	39	970
Foreign Corporations	536	70	66	69	70	85	107	78	112	105	110	96	91	92	93	1780
Foreign Government	6	1	1		1	2	3		2	3	1		1		1	22
Foreign Individuals	103	9	6	8	6	14	14	7	9	13	8	6	7	5	2	217

---- Patents Granted By Date Of Patent Grant (Granted: Jan 01, 1977 - Dec 31, 1998) ----

	PERCENT OF PATENTS															
	Pre 1985	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	Total
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
U.S. Origin	73	70	70	65	68	67	65	65	64	62	61	66	63	62	65	68
Foreign Origin	27	30	30	35	32	33	35	35	36	38	39	34	37	38	35	32
JAPAN	8	11	10	13	11	15	16	20	18	18	19	19	18	18	16	13
GERMANY	5	8	6	4	8	5	4	3	5	4	6	3	3	4	5	5
UNITED KINGDOM	4	3	3	5	3	5	3	2	3	5	3	2	4	3	3	4
FRANCE	2	2	4	1		2	2	2	1	3	2	1	3	2	2	2
CANADA	2	1	1	1	1	2	2	2	1	2	3	2	2	1	2	2
NETHERLANDS	1	1	2	2	2	1	1	2	2	1		1	1	1		1
SWITZERLAND	1		1	1	2		2	1	1	1	1	1	2			1
ITALY	1	1	1	1			1	1			1	1	1	5	1	1
SWEDEN	1	1		1			1	1	1	1				1	1	1
AUSTRALIA			1						1		1				1	0
DENMARK		1					1			1					1	0
ISRAEL				1		1	1						1		1	0
AUSTRIA									1	1					1	0
BELGIUM							1									0
NORWAY					1											0
FINLAND												1				0
TAIWAN								1		1						0
NEW ZEALAND							1									0
SPAIN										1						0
SOUTH KOREA													1			0
INDONESIA												1				0
SOUTH AFRICA																0
BRAZIL																0
LIECHTENSTEIN																0
HUNGARY																0
MEXICO																0
HONG KONG,S.A.R.-PEOP																0
LUXEMBOURG																0
IRELAND																0
CZECHOSLOVAKIA																0
ARGENTINA											1					0
RUSSIAN FEDERATION																0
THAILAND																0
PORTUGAL																0
CHILE																0
PERU																0
Others ( 1 )																0
Ownership:																
U.S. Corporations	62	58	57	54	52	52	50	51	52	47	48	52	48	53	55	56
U.S. Government			1						1	1						0
U.S. Individuals	13	13	14	15	16	16	16	17	13	16	14	16	16	12	13	14
Foreign Corporations	20	25	25	28	29	27	29	30	31	32	35	30	33	33	31	26
Foreign Government						1	1		1	1						0
Foreign Individuals	4	3	2	3	2	4	4	3	3	4	3	2	3	2	1	3

Part A2

Patent Grants As Distributed By Year of Patent Application

---- Patents Granted By Date Of Patent Application (Granted: Jan 01, 1977 - Dec 31, 1998) ----

	NUMBER OF PATENTED APPLICATIONS															Total
	Pre 1985	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	
<b>Total</b>	3324	225	252	276	303	364	341	349	333	303	335	237	145	33	6820	
U.S. Origin	2413	161	168	183	192	230	214	213	214	193	215	151	100	19	4666	
Foreign Origin	911	64	84	93	111	134	127	136	119	110	120	86	45	14	2154	
JAPAN	270	26	35	52	44	76	67	65	59	50	59	45	18	7	873	
GERMANY	179	12	18	13	10	15	18	16	12	15	11	7	8	2	336	
UNITED KINGDOM	132	3	12	6	19	12	7	8	13	13	10	7	2	2	246	
FRANCE	60	5	1	6	8	5	10	7	6	6	5	7	3	1	130	
CANADA	50	2	4	1	7	7	7	9	6	6	7	4	2	1	113	
NETHERLANDS	38	5	2	2	6	1	5	4	5	1	1	1	1		72	
SWITZERLAND	33	1	4	4	5	5	2	2	3	2	5	1			67	
ITALY	26	1		2	3	3	1	3	4	3	9	8	1		64	
SWEDEN	39	1	3	1	1	3	3	3	1	1	1	3	2		62	
AUSTRALIA	16	1			1	2	2	6	1		1		2		32	
DENMARK	13		1			1	1	2		2	1	1	1		23	
ISRAEL	4	3	1	1	3	1	1		1	1	1		2	1	20	
AUSTRIA	6	1		1				2	3	1			2		16	
BELGIUM	11				2		2								15	
NORWAY	11	1	1						1						14	
FINLAND	3	1		1	1		1		1	1	1				10	
TAIWAN	1			1		1		2	2	1			1		9	
NEW ZEALAND	5				1	1					1				8	
SPAIN	1							1		1	1	1			5	
SOUTH KOREA								1		2	2				5	
INDONESIA	1							1		1	1				4	
SOUTH AFRICA	2		1					1							4	
BRAZIL	2											1			3	
LIECHTENSTEIN	1										1				2	
MEXICO	1										1				2	
CZECHOSLOVAKIA	2														2	
HONG KONG,S.A.R.-PEOP		1							1						2	
LUXEMBOURG				2											2	
IRELAND						1				1					2	
ARGENTINA								1		1					2	
HUNGARY	2														2	
RUSSIAN FEDERATION										1	1				2	
PORTUGAL			1												1	
THAILAND								1							1	
PERU								1							1	
GREECE	1														1	
Others ( 1 )	1														1	
<b>Ownership:</b>																
U.S. Corporations	2035	140	125	147	144	175	163	170	162	161	169	122	84	15	3812	
U.S. Government	9		1			1	4	1	1	2					19	
U.S. Individuals	443	27	43	40	58	57	52	50	53	39	51	33	19	5	970	
Foreign Corporations	709	51	72	80	90	112	108	116	109	94	107	80	39	13	1780	
Foreign Government	8		1	1	2	3	1	2	1	1		1	1		22	
Foreign Individuals	120	7	10	8	9	16	13	10	7	6	8	1	2		217	

---- Patents Granted By Date Of Patent Application (Granted: Jan 01, 1977 - Dec 31, 1998) ----

	PERCENT OF PATENTED APPLICATIONS															Total
	Pre 1985	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
U.S. Origin	73	72	67	66	63	63	63	61	64	64	64	64	69	58		68
Foreign Origin	27	28	33	34	37	37	37	39	36	36	36	36	31	42		32
JAPAN	8	12	14	19	15	21	20	19	18	17	18	19	12	21		13
GERMANY	5	5	7	5	3	4	5	5	4	5	3	3	6	6		5
UNITED KINGDOM	4	1	5	2	6	3	2	2	4	4	3	3	1	6		4
FRANCE	2	2		2	3	1	3	2	2	2	1	3	2	3		2
CANADA	2	1	2		2	2	2	3	2	2	2	2	1	3		2
NETHERLANDS	1	2	1	1	2		1	1	2				1			1
SWITZERLAND	1		2	1	2	1	1	1	1	1	1					1
ITALY	1			1	1	1		1	1	1	3	3	1			1
SWEDEN	1		1			1	1	1				1	1			1
AUSTRALIA						1	1	2					1			0
DENMARK								1		1			1			0
ISRAEL		1			1								1	3		0
AUSTRIA								1	1				1			0
BELGIUM					1		1									0
NORWAY																0
FINLAND																0
TAIWAN								1	1				1			0
NEW ZEALAND																0
SPAIN																0
SOUTH KOREA										1	1					0
INDONESIA																0
SOUTH AFRICA																0
BRAZIL																0
LIECHTENSTEIN																0
MEXICO																0
CZECHOSLOVAKIA																0
HONG KONG,S.A.R.-PEOP																0
LUXEMBOURG				1												0
IRELAND																0
ARGENTINA																0
HUNGARY																0
RUSSIAN FEDERATION																0
PORTUGAL																0
THAILAND																0
PERU																0
GREECE																0
Others ( 1 )																0
Ownership:																
U.S. Corporations	61	62	50	53	48	48	48	49	49	53	50	51	58	45		56
U.S. Government							1			1						0
U.S. Individuals	13	12	17	14	19	16	15	14	16	13	15	14	13	15		14
Foreign Corporations	21	23	29	29	30	31	32	33	33	31	32	34	27	39		26
Foreign Government					1	1		1					1			0
Foreign Individuals	4	3	4	3	3	4	4	3	2	2	2		1			3

## Part B

Ranked Listing of Organizations with Patent Grants

As Distributed By Year of Patent Grant

and As Distributed By Year of Patent Application

---- Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 1998) ---- Ranked List of Organizations with 5 or More Patents ----

	Pre																
	1985	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	TOTAL	
<b>HITACHI, LTD</b>																	
Patents By Year of Grant:	4	2	7	6	2	11	13	7	7	13	4	4	3	4	7	94	
Patents By Year of Application:	13	6	5	14	4	15	9	14	7	1	0	2	4	0	0	94	
<b>GENERAL ELECTRIC COMPANY</b>																	
Patents By Year of Grant:	24	6	5	2	2	1	3	6	5	8	2	3	2	2	1	72	
Patents By Year of Application:	37	1	2	2	0	7	5	7	2	2	4	3	0	0	0	72	
<b>AT&amp;T CORP.</b>																	
Patents By Year of Grant:	27	2	4	2	2	4	4	5	1	2	4	2	0	0	0	59	
Patents By Year of Application:	32	6	2	5	1	4	1	1	6	1	0	0	0	0	0	59	
<b>MINNESOTA MINING AND MANUFACTURING COMPANY</b>																	
Patents By Year of Grant:	14	3	4	1	0	1	4	0	1	2	3	7	2	5	1	48	
Patents By Year of Application:	20	1	2	1	3	2	2	1	5	5	2	2	2	0	0	48	
<b>EASTMAN KODAK COMPANY</b>																	
Patents By Year of Grant:	21	3	5	3	2	0	1	0	2	0	1	1	1	0	5	45	
Patents By Year of Application:	27	4	2	1	1	1	1	1	0	0	3	0	2	2	0	45	
<b>E. I. DU PONT DE NEMOURS AND COMPANY</b>																	
Patents By Year of Grant:	26	2	2	2	0	2	0	2	1	0	2	0	1	0	2	42	
Patents By Year of Application:	28	2	3	2	1	0	0	1	2	1	1	0	1	0	0	42	
<b>INTERNATIONAL BUSINESS MACHINES CORPORATION</b>																	
Patents By Year of Grant:	15	0	4	1	0	0	1	1	7	0	2	1	3	1	0	36	
Patents By Year of Application:	18	2	0	2	2	3	2	3	0	1	3	0	0	0	0	36	
<b>BAYER AKTIENGESELLSCHAFT</b>																	
Patents By Year of Grant:	18	1	1	0	3	2	2	1	2	0	3	1	0	0	1	35	
Patents By Year of Application:	21	2	1	2	1	2	0	1	1	3	0	1	0	0	0	35	
<b>MITSUBISHI DENKI KABUSHIKI KAISHA</b>																	
Patents By Year of Grant:	1	0	1	0	1	1	5	2	1	3	6	2	3	4	1	31	
Patents By Year of Application:	2	0	1	2	2	2	4	5	5	3	1	3	1	0	0	31	
<b>CANON KABUSHIKI KAISHA</b>																	
Patents By Year of Grant:	14	0	0	1	0	0	3	2	1	1	1	2	4	1	0	30	
Patents By Year of Application:	16	0	1	0	2	2	2	1	2	2	0	2	0	0	0	30	
<b>CATERPILLAR INC.</b>																	
Patents By Year of Grant:	23	2	0	1	0	1	0	1	1	0	0	0	1	0	0	30	
Patents By Year of Application:	25	0	1	0	1	0	1	1	0	0	1	0	0	0	0	30	

REISSUE PATENTS, 1977 - 1998

---- Organizational Patenting (Granted: Jan 01, 1977 - Dec 31, 1998) ---- Ranked List of Organizations with 5 or More Patents ----

	Pre																
	1985	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	TOTAL	
<b>RCA CORPORATION</b>																	
Patents By Year of Grant:	23	1	3	3	0	0	0	0	0	0	0	0	0	0	0	30	
Patents By Year of Application:	27	3	0	0	0	0	0	0	0	0	0	0	0	0	0	30	
<b>U.S. PHILIPS CORPORATION</b>																	
Patents By Year of Grant:	16	0	1	1	0	2	0	1	4	1	1	1	0	2	0	30	
Patents By Year of Application:	19	0	0	0	2	1	2	1	3	1	1	0	0	0	0	30	
<b>DOW CHEMICAL COMPANY</b>																	
Patents By Year of Grant:	14	1	1	1	2	1	1	1	1	0	3	0	0	1	0	27	
Patents By Year of Application:	17	2	1	0	1	1	0	1	3	1	0	0	0	0	0	27	
<b>EATON CORPORATION</b>																	
Patents By Year of Grant:	19	0	1	0	1	0	0	1	0	1	1	0	0	0	1	25	
Patents By Year of Application:	19	1	1	0	0	1	0	1	1	0	0	0	1	0	0	25	
<b>SONY CORPORATION</b>																	
Patents By Year of Grant:	6	0	1	1	1	0	4	2	0	0	3	1	2	1	2	24	
Patents By Year of Application:	6	2	1	0	2	4	0	1	1	3	1	2	1	0	0	24	
<b>XEROX CORPORATION</b>																	
Patents By Year of Grant:	9	3	2	1	1	2	2	0	1	0	0	0	0	2	1	24	
Patents By Year of Application:	16	0	2	1	0	2	0	0	0	0	0	3	0	0	0	24	
<b>MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.</b>																	
Patents By Year of Grant:	6	1	0	1	0	0	0	4	0	0	1	2	1	3	2	21	
Patents By Year of Application:	8	0	0	0	1	3	0	1	1	2	4	1	0	0	0	21	
<b>MOTOROLA, INC.</b>																	
Patents By Year of Grant:	11	1	0	0	2	0	1	0	1	1	1	0	2	0	0	20	
Patents By Year of Application:	13	1	0	0	1	0	1	1	1	1	1	0	0	0	0	20	
<b>ALLIED-SIGNAL INC.</b>																	
Patents By Year of Grant:	9	1	0	1	0	2	1	0	0	1	1	2	1	0	0	19	
Patents By Year of Application:	10	1	2	0	1	0	0	1	1	1	1	1	0	0	0	19	
<b>ELI LILLY AND COMPANY</b>																	
Patents By Year of Grant:	13	0	2	2	0	0	1	0	0	0	0	1	0	0	0	19	
Patents By Year of Application:	13	4	0	0	0	1	0	0	1	0	0	0	0	0	0	19	
<b>ASAHI KOGAKU KOGYO KABUSHIKI KAISHA</b>																	
Patents By Year of Grant:	2	1	1	0	1	0	0	0	1	2	1	1	5	2	1	18	
Patents By Year of Application:	4	0	0	1	0	0	0	3	1	1	4	4	0	0	0	18	



---- Organizational Patenting (Granted: Jan 01, 1977 - Dec 31, 1998) ---- Ranked List of Organizations with 5 or More Patents ----

	Pre 1985	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	TOTAL
<b>UNITED TECHNOLOGIES CORPORATION</b>																
Patents By Year of Grant:	5	2	2	1	0	1	0	1	3	0	0	0	0	0	1	16
Patents By Year of Application:	10	0	0	0	1	1	3	0	0	0	0	0	1	0	0	16
<b>WESTINGHOUSE ELECTRIC CORP.</b>																
Patents By Year of Grant:	12	1	0	0	0	1	1	0	0	0	0	0	0	0	1	16
Patents By Year of Application:	13	0	1	0	1	0	0	1	0	0	0	0	0	0	0	16
<b>AMERICAN CYANAMID COMPANY</b>																
Patents By Year of Grant:	9	1	0	0	2	1	0	1	0	0	0	0	0	0	1	15
Patents By Year of Application:	11	0	0	2	0	0	1	0	0	0	0	0	1	0	0	15
<b>BAXTER INTERNATIONAL INC.</b>																
Patents By Year of Grant:	8	1	1	1	0	0	0	2	0	0	1	0	0	0	1	15
Patents By Year of Application:	12	0	0	1	0	0	0	0	0	2	0	0	0	0	0	15
<b>DEERE + COMPANY</b>																
Patents By Year of Grant:	12	0	0	0	1	0	0	0	1	0	0	0	0	0	0	14
Patents By Year of Application:	12	0	0	1	0	0	1	0	0	0	0	0	0	0	0	14
<b>DOW CORNING CORPORATION</b>																
Patents By Year of Grant:	5	0	2	0	0	0	2	1	0	0	1	1	1	1	0	14
Patents By Year of Application:	7	0	0	0	1	1	1	0	1	2	1	0	0	0	0	14
<b>EXXON RESEARCH + ENGINEERING CO.</b>																
Patents By Year of Grant:	8	2	0	0	0	1	1	0	0	0	0	1	0	1	0	14
Patents By Year of Application:	10	0	1	0	1	0	0	0	0	2	0	0	0	0	0	14
<b>NEC CORPORATION</b>																
Patents By Year of Grant:	8	1	0	0	1	0	0	1	0	1	0	0	0	0	2	14
Patents By Year of Application:	10	0	0	0	0	0	1	1	0	0	0	1	0	1	0	14
<b>SGS-THOMSON MICROELECTRONICS S.R.L.</b>																
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	2	1	8	3	14
Patents By Year of Application:	0	0	0	0	0	0	0	0	2	1	5	5	1	0	0	14
<b>YAMAHA HATSUDOKI KABUSHIKI KAISHA, YAMAHA MOTOR CO., LTD.</b>																
Patents By Year of Grant:	1	3	0	0	1	0	1	0	1	1	2	2	1	1	0	14
Patents By Year of Application:	4	1	0	0	0	2	0	1	3	0	3	0	0	0	0	14
<b>CIBA-GEIGY CORPORATION</b>																
Patents By Year of Grant:	7	0	0	1	0	0	1	0	0	0	1	2	1	0	0	13
Patents By Year of Application:	8	0	0	0	0	1	0	0	1	2	1	0	0	0	0	13

---- Organizational Patenting (Granted: Jan 01, 1977 - Dec 31, 1998) ---- Ranked List of Organizations with 5 or More Patents ----

	Pre																TOTAL
	1985	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	TOTAL	
<b>GENERAL MOTORS CORPORATION</b>																	
Patents By Year of Grant:	2	2	0	0	0	0	1	3	2	0	2	0	0	0	1	13	
Patents By Year of Application:	4	0	0	0	1	1	2	2	1	1	0	0	0	1	0	13	
<b>HONEYWELL INC.</b>																	
Patents By Year of Grant:	7	1	0	0	0	2	0	0	0	0	0	1	1	1	0	13	
Patents By Year of Application:	9	1	0	0	0	0	0	0	0	0	1	1	1	0	0	13	
<b>NIKON CORPORATION</b>																	
Patents By Year of Grant:	3	0	0	1	1	0	0	0	1	1	1	0	0	2	3	13	
Patents By Year of Application:	4	0	1	0	0	0	1	1	1	0	2	2	1	0	0	13	
<b>NISSAN MOTOR COMPANY, LIMITED</b>																	
Patents By Year of Grant:	2	2	1	2	0	0	0	0	2	1	1	0	1	1	0	13	
Patents By Year of Application:	6	1	0	1	0	1	2	0	1	0	1	0	0	0	0	13	
<b>OUTBOARD MARINE CORPORATION</b>																	
Patents By Year of Grant:	3	1	1	1	2	1	0	0	1	1	1	1	0	0	0	13	
Patents By Year of Application:	6	0	2	2	0	1	0	0	1	1	0	0	0	0	0	13	
<b>RICOH COMPANY, LTD.</b>																	
Patents By Year of Grant:	3	0	0	1	0	1	2	0	1	1	0	2	0	2	0	13	
Patents By Year of Application:	4	0	0	0	3	2	0	1	1	0	2	0	0	0	0	13	
<b>ROBERT BOSCH GMBH</b>																	
Patents By Year of Grant:	5	3	1	0	1	1	0	0	0	0	1	0	1	0	0	13	
Patents By Year of Application:	9	0	1	1	0	0	0	0	1	1	0	0	0	0	0	13	
<b>ROCKWELL INTERNATIONAL CORPORATION</b>																	
Patents By Year of Grant:	11	0	0	0	0	1	0	0	0	0	0	0	1	0	0	13	
Patents By Year of Application:	11	0	0	1	0	0	0	0	1	0	0	0	0	0	0	13	
<b>HONDA GIKEN KOGYO KABUSHIKI KAISHA (HONDA MOTOR CO., LTD.)</b>																	
Patents By Year of Grant:	2	0	0	0	0	0	5	1	2	0	1	1	0	0	0	12	
Patents By Year of Application:	2	0	0	1	3	4	1	0	0	0	1	0	0	0	0	12	
<b>MONSANTO CO.</b>																	
Patents By Year of Grant:	9	0	0	0	1	1	1	0	0	0	0	0	0	0	0	12	
Patents By Year of Application:	10	0	0	0	1	1	0	0	0	0	0	0	0	0	0	12	
<b>FUJI PHOTO FILM CO., LTD</b>																	
Patents By Year of Grant:	4	0	0	1	0	2	0	0	1	1	0	1	0	0	1	11	
Patents By Year of Application:	5	1	1	0	0	0	1	1	1	0	0	0	0	1	0	11	







---- Organizational Patenting (Granted: Jan 01, 1977 - Dec 31, 1998) ---- Ranked List of Organizations with 5 or More Patents ----

	Pre																
	1985	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	TOTAL	
<b>SANDERS ASSOCIATES INC.</b>																	
Patents By Year of Grant:	2	1	2	1	2	0	0	0	0	0	0	0	0	0	0	8	
Patents By Year of Application:	6	0	2	0	0	0	0	0	0	0	0	0	0	0	0	8	
<b>SHARP KABUSHIKI KAISHA (SHARP CORPORATION)</b>																	
Patents By Year of Grant:	2	0	0	0	0	0	2	0	0	1	0	0	1	2	0	8	
Patents By Year of Application:	2	0	0	0	0	2	0	0	1	2	1	0	0	0	0	8	
<b>SUWA SEIKOSHA CO., LTD.</b>																	
Patents By Year of Grant:	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	
Patents By Year of Application:	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	
<b>ABBOTT LABORATORIES</b>																	
Patents By Year of Grant:	4	0	0	0	0	0	1	0	1	1	0	0	0	0	0	7	
Patents By Year of Application:	4	0	0	2	0	1	0	0	0	0	0	0	0	0	0	7	
<b>AKZONA INCORPORATED</b>																	
Patents By Year of Grant:	5	0	0	1	1	0	0	0	0	0	0	0	0	0	0	7	
Patents By Year of Application:	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	
<b>BRUNSWICK CORPORATION</b>																	
Patents By Year of Grant:	4	0	0	0	1	1	0	1	0	0	0	0	0	0	0	7	
Patents By Year of Application:	4	0	0	1	1	1	0	0	0	0	0	0	0	0	0	7	
<b>CORNING INCORPORATED</b>																	
Patents By Year of Grant:	2	0	0	0	0	1	0	0	0	0	2	1	1	0	0	7	
Patents By Year of Application:	2	1	0	0	0	0	1	0	1	1	1	0	0	0	0	7	
<b>ELF ATOCHEM NORTH AMERICA, INC.</b>																	
Patents By Year of Grant:	1	0	0	1	0	1	0	1	1	0	1	0	0	0	1	7	
Patents By Year of Application:	1	2	0	1	0	0	1	1	0	0	0	1	0	0	0	7	
<b>EXXON PRODUCTION RESEARCH COMPANY</b>																	
Patents By Year of Grant:	4	0	0	0	0	0	2	0	1	0	0	0	0	0	0	7	
Patents By Year of Application:	4	1	0	0	0	2	0	0	0	0	0	0	0	0	0	7	
<b>HALLIBURTON CO.</b>																	
Patents By Year of Grant:	5	0	1	0	1	0	0	0	0	0	0	0	0	0	0	7	
Patents By Year of Application:	5	1	1	0	0	0	0	0	0	0	0	0	0	0	0	7	
<b>HEWLETT-PACKARD COMPANY</b>																	
Patents By Year of Grant:	4	1	0	0	0	0	0	0	0	0	0	1	0	0	1	7	
Patents By Year of Application:	5	0	0	0	0	0	0	0	0	0	2	0	0	0	0	7	



---- Organizational Patenting (Granted: Jan 01, 1977 - Dec 31, 1998) ---- Ranked List of Organizations with 5 or More Patents ----

	Pre 1985	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	TOTAL
<b>YAMAHA CORPORATION</b>																
Patents By Year of Grant:	0	0	0	0	0	0	0	3	0	0	1	1	1	0	1	7
Patents By Year of Application:	0	0	1	1	1	0	0	1	1	1	1	0	0	0	0	7
<b>ADVANCED CARDIOVASCULAR SYSTEMS, INC.</b>																
Patents By Year of Grant:	0	0	0	0	0	0	1	0	1	1	2	0	1	0	0	6
Patents By Year of Application:	0	0	1	0	1	0	1	0	3	0	0	0	0	0	0	6
<b>B. F. GOODRICH CO.</b>																
Patents By Year of Grant:	5	0	0	0	0	0	0	0	0	0	1	0	0	0	0	6
Patents By Year of Application:	5	0	0	0	0	0	0	0	1	0	0	0	0	0	0	6
<b>BALL CORPORATION</b>																
Patents By Year of Grant:	4	0	0	1	0	0	1	0	0	0	0	0	0	0	0	6
Patents By Year of Application:	4	1	0	0	1	0	0	0	0	0	0	0	0	0	0	6
<b>BENDIX CORPORATION(NOW ALLIED-SIGNAL INC.)</b>																
Patents By Year of Grant:	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Patents By Year of Application:	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
<b>BOEING COMPANY</b>																
Patents By Year of Grant:	2	1	0	0	0	1	0	0	1	0	0	1	0	0	0	6
Patents By Year of Application:	3	0	1	1	0	0	0	0	0	1	0	0	0	0	0	6
<b>BP CHEMICALS LIMITED</b>																
Patents By Year of Grant:	1	0	0	1	0	0	0	0	0	1	0	0	2	1	0	6
Patents By Year of Application:	1	1	0	0	0	0	0	0	1	0	0	3	0	0	0	6
<b>BRITISH TELECOMMUNICATION, PLC</b>																
Patents By Year of Grant:	0	0	0	0	0	0	1	0	0	1	1	2	0	0	1	6
Patents By Year of Application:	0	0	0	0	0	1	1	0	2	2	0	0	0	0	0	6
<b>CARRIER CORPORATION</b>																
Patents By Year of Grant:	5	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6
Patents By Year of Application:	5	0	0	0	0	0	0	0	0	0	0	1	0	0	0	6
<b>CASCHEM, INC.</b>																
Patents By Year of Grant:	1	0	0	0	0	0	2	3	0	0	0	0	0	0	0	6
Patents By Year of Application:	1	0	0	0	0	4	1	0	0	0	0	0	0	0	0	6
<b>CITIZEN WATCH CO., LTD.</b>																
Patents By Year of Grant:	4	0	0	0	0	1	0	0	0	0	1	0	0	0	0	6
Patents By Year of Application:	4	0	0	1	0	0	0	0	1	0	0	0	0	0	0	6

---- Organizational Patenting (Granted: Jan 01, 1977 - Dec 31, 1998) ---- Ranked List of Organizations with 5 or More Patents ----

	Pre																
	1985	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	TOTAL	
<b>CPC INTERNATIONAL INC.</b>																	
Patents By Year of Grant:	4	0	1	0	0	0	0	0	0	0	0	0	1	0	0	6	
Patents By Year of Application:	4	1	0	0	0	0	0	0	0	0	0	1	0	0	0	6	
<b>FORD MOTOR COMPANY</b>																	
Patents By Year of Grant:	1	0	0	0	0	0	1	0	1	1	2	0	0	0	0	6	
Patents By Year of Application:	1	0	0	0	0	1	0	2	1	1	0	0	0	0	0	6	
<b>GENERAL SIGNAL CORPORATION</b>																	
Patents By Year of Grant:	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	6	
Patents By Year of Application:	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	
<b>HERCULES INCORPORATED</b>																	
Patents By Year of Grant:	3	0	1	0	0	0	0	0	0	0	0	1	0	1	0	6	
Patents By Year of Application:	4	0	0	0	0	0	0	0	0	1	0	1	0	0	0	6	
<b>J. M. HUBER CORPORATION</b>																	
Patents By Year of Grant:	3	0	0	0	0	0	0	0	0	0	0	0	2	1	0	6	
Patents By Year of Application:	3	0	0	0	0	0	0	0	0	0	0	3	0	0	0	6	
<b>JOHNS-MANVILLE CORPORATION</b>																	
Patents By Year of Grant:	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	
Patents By Year of Application:	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	
<b>KONICA CORPORATION</b>																	
Patents By Year of Grant:	0	1	0	0	0	0	0	1	1	1	1	0	0	1	0	6	
Patents By Year of Application:	1	0	0	0	1	0	3	0	0	0	0	1	0	0	0	6	
<b>LITTON SYSTEMS INC.</b>																	
Patents By Year of Grant:	2	0	0	0	0	1	0	0	1	0	0	1	1	0	0	6	
Patents By Year of Application:	2	1	0	0	0	0	0	1	0	1	1	0	0	0	0	6	
<b>MOORE BUSINESS FORMS INC.</b>																	
Patents By Year of Grant:	3	0	0	0	0	0	1	1	0	0	0	1	0	0	0	6	
Patents By Year of Application:	3	0	1	0	1	0	0	0	0	1	0	0	0	0	0	6	
<b>NIPPON STEEL CORP.</b>																	
Patents By Year of Grant:	4	0	0	0	0	0	0	0	1	0	0	1	0	0	0	6	
Patents By Year of Application:	4	0	0	0	0	0	0	1	0	0	1	0	0	0	0	6	
<b>NIPPONDENSO CO., LTD.</b>																	
Patents By Year of Grant:	1	0	0	0	0	0	0	0	0	0	1	3	0	1	0	6	
Patents By Year of Application:	1	0	0	0	0	0	1	0	0	4	0	0	0	0	0	6	

---- Organizational Patenting (Granted: Jan 01, 1977 - Dec 31, 1998) ---- Ranked List of Organizations with 5 or More Patents ----

	Pre																TOTAL
	1985	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998		
<b>NORDSON CORPORATION</b>																	
Patents By Year of Grant:	0	1	0	0	0	1	2	0	0	0	0	1	0	0	1	6	
Patents By Year of Application:	1	0	0	1	1	1	0	0	0	1	0	0	1	0	0	6	
<b>POLAROID CORPORATION</b>																	
Patents By Year of Grant:	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	
Patents By Year of Application:	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	
<b>RHONE-POULENC AGROCHIMIE LIMITED</b>																	
Patents By Year of Grant:	0	1	4	1	0	0	0	0	0	0	0	0	0	0	0	6	
Patents By Year of Application:	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	
<b>SECRETARY OF STATE FOR DEFENCE IN HER BRITANNIC MAJESTY'S</b>																	
Patents By Year of Grant:	2	0	0	0	0	1	1	0	0	0	1	0	1	0	0	6	
Patents By Year of Application:	2	0	0	1	1	0	0	0	0	1	0	1	0	0	0	6	
<b>SHIMANO INDUSTRIAL COMPANY, LIMITED</b>																	
Patents By Year of Grant:	1	4	0	0	0	1	0	0	0	0	0	0	0	0	0	6	
Patents By Year of Application:	5	0	0	1	0	0	0	0	0	0	0	0	0	0	0	6	
<b>SINGER COMPANY</b>																	
Patents By Year of Grant:	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	
Patents By Year of Application:	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	
<b>UNITED STATES OF AMERICA, DEPARTMENT OF ENERGY</b>																	
Patents By Year of Grant:	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	
Patents By Year of Application:	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	
<b>USX CORPORATION</b>																	
Patents By Year of Grant:	4	1	0	0	0	0	0	0	0	0	0	0	0	1	0	6	
Patents By Year of Application:	5	0	0	0	0	0	0	0	0	0	1	0	0	0	0	6	
<b>W. R. GRACE &amp; CO.-CONN.</b>																	
Patents By Year of Grant:	4	0	0	0	0	0	0	0	0	0	0	1	1	0	0	6	
Patents By Year of Application:	4	0	0	0	0	0	0	0	0	2	0	0	0	0	0	6	
<b>AIR PRODUCTS AND CHEMICALS, INC.</b>																	
Patents By Year of Grant:	1	0	0	1	0	0	0	0	1	0	1	0	0	1	0	5	
Patents By Year of Application:	2	0	0	0	0	0	0	1	1	0	0	0	1	0	0	5	
<b>AKZO N.V.</b>																	
Patents By Year of Grant:	0	1	0	1	0	0	0	0	0	1	0	1	1	0	0	5	
Patents By Year of Application:	1	1	0	0	0	0	0	2	1	0	0	0	0	0	0	5	

---- Organizational Patenting (Granted: Jan 01, 1977 - Dec 31, 1998) ---- Ranked List of Organizations with 5 or More Patents ----

	Pre																
	1985	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	TOTAL	
<b>AMPEX CORP.</b>																	
Patents By Year of Grant:	4	0	0	0	0	0	0	0	0	0	1	0	0	0	0	5	
Patents By Year of Application:	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	
<b>ANALOG DEVICES, INC.</b>																	
Patents By Year of Grant:	3	1	0	0	0	0	0	0	0	0	0	0	0	0	1	5	
Patents By Year of Application:	4	0	0	0	0	0	0	0	0	0	1	0	0	0	0	5	
<b>ATELIERS DES CHARMILLES S.A.</b>																	
Patents By Year of Grant:	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	
Patents By Year of Application:	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	
<b>ATLANTIC RICHFIELD COMPANY</b>																	
Patents By Year of Grant:	1	1	0	0	0	0	1	0	0	0	0	0	0	2	0	5	
Patents By Year of Application:	2	0	0	0	0	1	0	0	0	1	0	1	0	0	0	5	
<b>AUTOMOTIVE PRODUCTS PLC</b>																	
Patents By Year of Grant:	0	0	0	0	0	2	1	1	0	0	0	1	0	0	0	5	
Patents By Year of Application:	0	0	0	1	2	0	1	0	0	1	0	0	0	0	0	5	
<b>BOEHRINGER MANNHEIM G.M.B.H.</b>																	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	1	2	1	0	0	1	5	
Patents By Year of Application:	0	0	0	0	0	0	0	1	2	1	0	0	1	0	0	5	
<b>CASIO COMPUTER CO. LTD.</b>																	
Patents By Year of Grant:	0	0	0	0	0	0	1	2	0	2	0	0	0	0	0	5	
Patents By Year of Application:	0	0	0	0	1	1	2	1	0	0	0	0	0	0	0	5	
<b>CHURCH + DWIGHT CO., INC.</b>																	
Patents By Year of Grant:	1	0	0	0	0	0	0	0	0	0	0	4	0	0	0	5	
Patents By Year of Application:	1	0	0	0	0	0	0	0	0	0	4	0	0	0	0	5	
<b>CINCINNATI MILACRON INC.</b>																	
Patents By Year of Grant:	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	
Patents By Year of Application:	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	
<b>COCA-COLA COMPANY</b>																	
Patents By Year of Grant:	1	0	1	0	0	0	2	0	1	0	0	0	0	0	0	5	
Patents By Year of Application:	2	0	1	1	0	0	1	0	0	0	0	0	0	0	0	5	
<b>FMC CORPORATION</b>																	
Patents By Year of Grant:	1	2	0	0	0	0	0	0	0	0	0	1	0	1	0	5	
Patents By Year of Application:	3	0	0	0	0	0	0	0	0	1	0	0	1	0	0	5	



---- Organizational Patenting (Granted: Jan 01, 1977 - Dec 31, 1998) ---- Ranked List of Organizations with 5 or More Patents ----

	Pre 1985	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	TOTAL
<b>SCM CORPORATION</b>																
Patents By Year of Grant:	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	5
Patents By Year of Application:	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	5
<b>STANFORD UNIVERSITY, LELAND JUNIOR, THE BOARD OF TRUSTEES OF</b>																
Patents By Year of Grant:	1	0	0	0	0	0	1	0	0	0	1	1	1	0	0	5
Patents By Year of Application:	2	0	0	0	0	0	1	0	0	2	0	0	0	0	0	5
<b>STERLING DRUG INC.</b>																
Patents By Year of Grant:	3	0	1	0	1	0	0	0	0	0	0	0	0	0	0	5
Patents By Year of Application:	3	1	0	1	0	0	0	0	0	0	0	0	0	0	0	5
<b>SUMITOMO CHEMICAL COMPANY, LIMITED</b>																
Patents By Year of Grant:	0	0	1	1	0	0	0	0	2	0	0	0	0	0	1	5
Patents By Year of Application:	0	1	1	0	0	0	0	2	0	0	1	0	0	0	0	5
<b>SUNDSTRAND CORPORATION</b>																
Patents By Year of Grant:	3	0	0	0	0	0	1	0	0	0	0	1	0	0	0	5
Patents By Year of Application:	3	0	0	0	0	1	0	0	1	0	0	0	0	0	0	5
<b>TEKTRONIX INC.</b>																
Patents By Year of Grant:	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Patents By Year of Application:	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
<b>TORRINGTON COMPANY</b>																
Patents By Year of Grant:	0	0	0	0	0	0	0	0	2	1	2	0	0	0	0	5
Patents By Year of Application:	0	0	0	0	0	0	1	2	1	1	0	0	0	0	0	5
<b>UNIROYAL, INC.</b>																
Patents By Year of Grant:	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Patents By Year of Application:	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
<b>UNIVERSITY OF MINNESOTA, THE REGENTS OF</b>																
Patents By Year of Grant:	3	0	0	0	0	1	0	0	0	0	0	1	0	0	0	5
Patents By Year of Application:	3	0	0	0	1	0	0	0	0	1	0	0	0	0	0	5
<b>WACOM CO., LTD.</b>																
Patents By Year of Grant:	0	0	0	0	0	0	0	1	2	1	0	0	1	0	0	5
Patents By Year of Application:	0	0	0	0	0	2	2	0	0	1	0	0	0	0	0	5
<b>WESTVACO CORPORATION</b>																
Patents By Year of Grant:	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Patents By Year of Application:	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
<b>Other Organizations (2774)</b>																
Patents By Year of Grant:	1315	136	124	126	138	171	189	134	203	179	169	160	150	164	182	3540
Patents By Year of Application:	1658	110	130	148	166	171	185	190	177	166	193	137	89	20	0	3540