PATENTING BY ORGANIZATIONS

1997



March 1998 U.S. PATENT AND TRADEMARK OFFICE OFFICE OF ELECTRONIC INFORMATION PRODUCTS / TAF PROGRAM PK3 - Suite 441, WASHINGTON, DC 20231 tel (703) 306-2600 / FAX (703) 306-2737

A TECHNOLOGY ASSESSMENT AND FORECAST REPORT

Patenting By Organizations 1997

This report, prepared from the Technology Assessment and Forecast (TAF) data base, profiles utility patents (i.e., patents for inventions) granted during **calendar year 1997**.

Part A1

Part A1 presents patent counts by origin, U.S. and foreign. Individual counts are also presented for each of the top 36 patenting countries. Patent origin is determined by the residence of the first-named inventor listed on a patent.

Patent ownership-category information reflects ownership at the time of patent grant and does not reflect subsequent changes in ownership. If more than one assignee (the entity, if any, to which the patent rights have been legally assigned) was declared at the time of grant, a patent is attributed to the ownership-category of the first-named assignee. The "U.S. Corporations" 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 these categories. While the "U.S. Government" ownership category includes only patents granted to the Federal Government, no such distinction is made for the "Foreign Government" ownership category. The "U.S. Individuals" and "Foreign Individuals" ownership categories include patents for which ownership was assigned to an individual as well as patents for which no assignment of ownership was made at the time of grant.

Part B1

Part B1 presents organizations which received 30 or more patents during the calendar year. Organizations are ranked based on their patent count.

Patent information included in **Part B1** of the report reflects patent ownership at the time of patent grant and does not reflect changes in ownership which may occur after the patent grant. Where more than one assignee exists, patents are attributed to the first-named assignee.

No attempt has been made to combine data based on subsidiary relationships. However, where possible, spelling variations and variations based on name changes (e.g., ESSO to EXXON) have been merged into a single name. While every effort is made to accurately identify all organizational entities and report data by a single organizational name, achievement of a totally clean record is not expected, particularly in view of the many variations which may occur in corporate identifications.

Patenting By The U.S. Government 1997

In calendar year 1997, the U.S. Government received 935 utility patents.

Under the section labeled "Ownership", **Part A1** presents the total count of patents received by the U.S. Government during the calendar year. Each of the separate U.S. Government agencies receiving 30 or more patents during the calendar year is listed in **Part B1**.

Part A1

(Patent Grants as Distributed By Year of Patent Grant)

Page Al- 1

PATENTING BY ORGANIZATIONS	(CY 19	997)	Page Al- 1
		Datasta	Granted By Date Of Patent Grant (Granted: Jan 01, 1997 - Dec 31, 1997)
		Patents	Granted By Date Of Patent Grant (Granted: Jan 01, 1997 - Dec 31, 1997)
-			
	1997	Total	
Total	111984	111984	
U.S. Origin	61710	61710	
Foreign Origin	50274	50274	
JAPAN	23178	23178	
GERMANY	7008	7008	
FRANCE	2958	2958	
UNITED KINGDOM	2678	2678	
CANADA	2378	2378	
TAIWAN	2057	2057	
SOUTH KOREA	1891	1891	
ITALY	1239	1239	
SWITZERLAND	1090	1090	
SWEDEN	867	867	
NETHERLANDS	809	809	
ISRAEL	534	534	
BELGIUM	514	514	
AUSTRALIA	478	478	
FINLAND	452	452	
AUSTRIA	376	376	
DENMARK	333	333	
SPAIN	177	177	
NORWAY	142	142	
RUSSIAN FEDERATION	111	111	
S. AFRICA	101	101	
SINGAPORE	94	94	
NEW ZEALAND	85	85	
HONG KONG, S.A.RPEOP	81	81	
IRELAND	73	73	
CHINA P.REP.	62	62	
BRAZIL	62	62	
INDIA	47	47	
MEXICO	45	45	
ARGENTINA	35	35	
HUNGARY	25	25	
VENEZUELA	25	25	
LUXEMBOURG	22	22	
MALAYSIA	17	17	
SAUDI ARABIA	14	14	
CZECH REPUBLIC	14	14	
Others (52)	202	202	
Ownership:			
U.S. Corporations	50229	50229	
U.S. Government	935	935	
U.S. Individuals	12914	12914	
Foreign Corporations	42908	42908	
Foreign Government	273	273	
Foreign Individuals	4725	4725	

PATENTING BY ORGANIZATIONS (CY 1997)
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--- Patents Granted By Date Of Patent Grant (Granted: Jan 01, 1997 - Dec 31, 1997) ----1997 Total Total 100 100 U.S. Origin 55 55 Foreign Origin 45 45 JAPAN 21 GERMANY 6 6 FRANCE 3 3 2 UNITED KINGDOM 2 CANADA 2 TAIWAN 2 SOUTH KOREA 2 2 1 1 ITALY SWITZERLAND 1 1 SWEDEN 1 1 1 1 NETHERLANDS ISRAEL 0 BELGIUM 0 AUSTRALIA FINLAND 0 AUSTRIA 0 DENMARK 0 SPAIN 0 NORWAY RUSSIAN FEDERATION 0 S. AFRICA SINGAPORE 0 NEW ZEALAND 0 0 HONG KONG, S.A.R.-PEOP IRELAND 0 CHINA P.REP. 0 BRAZIL 0 INDIA MEXICO 0 ARGENTINA 0 HUNGARY 0 0 VENEZUELA 0 LUXEMBOURG 0 MALAYSIA SAUDI ARABIA 0 CZECH REPUBLIC 0 Others (52) 0 Ownership: 45 U.S. Corporations 45 U.S. Government 1 1 U.S. Individuals 12 12 Foreign Corporations 38 38 Foreign Government 0 Foreign Individuals 4

Part B1 (Ranked Listing of Organizations with Patent Grants Distributed By Year of Patent Grant)

Technology Assessment and Forecast Report	
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(Granted: Jan 01, 1997 - Dec 31, 1997) ---- Ranked List of Organizations with 30 or More Patents ----

Organizational Patenting			
	1997	TOTAL	
INTERNATIONAL BUSINESS MACHINES CORPO	ORATION		
Patents By Year of Grant:	1724	1724	
CANON KABUSHIKI KAISHA			
Patents By Year of Grant:	1381	1381	
NEC CORPORATION			
Patents By Year of Grant:	1095	1095	
MOTOROLA, INC.			
Patents By Year of Grant:	1058	1058	
FUJITSU LIMITED			
Patents By Year of Grant:	903	903	
HITACHI, LTD			
Patents By Year of Grant:	903	903	
MITSUBISHI DENKI KABUSHIKI KAISHA			
Patents By Year of Grant:	892	892	
TOSHIBA CORPORATION			
Patents By Year of Grant:	862	862	
SONY CORPORATION			
Patents By Year of Grant:	859	859	
EASTMAN KODAK COMPANY			
Patents By Year of Grant:	795	795	
LUCENT TECHNOLOGIES INC.			
Patents By Year of Grant:	768	768	
MATSUSHITA ELECTRIC INDUSTRIAL CO.,	LTD.		
Patents By Year of Grant:	746	746	
GENERAL ELECTRIC COMPANY			
Patents By Year of Grant:	664	664	
TEXAS INSTRUMENTS, INCORPORATED			
Patents By Year of Grant:	607	607	
XEROX CORPORATION			
Patents By Year of Grant:	606	606	
SAMSUNG ELECTRONICS CO., LTD.			
Patents By Year of Grant:	582	582	

---- Technology Assessment and Forecast Report ----

PATENTING BY ORGANIZATIONS (CY 1997)

(Granted: Jan 01, 1997 - Dec 31, 1997) ---- Ranked List of Organizations with 30 or More Patents ----

Organizational Patenting		(Gra
	1997 т	OTAL
MINNESOTA MINING AND MANUFACTURING	COMPANY	
Patents By Year of Grant:		548
HEWLETT-PACKARD COMPANY		
Patents By Year of Grant:	530	530
NIKON CORPORATION		
Patents By Year of Grant:	479	479
U.S. PHILIPS CORPORATION		
Patents By Year of Grant:	473	473
FUJI PHOTO FILM CO., LTD		
Patents By Year of Grant:	467	467
SIEMENS AKTIENGESELLSCHAFT		
Patents By Year of Grant:	454	454
PROCTER + GAMBLE COMPANY		
Patents By Year of Grant:	406	406
INTEL CORPORATION		
Patents By Year of Grant:	405	405
SHARP KABUSHIKI KAISHA (SHARP CORPO	RATION)	
Patents By Year of Grant:	394	394
BAYER AKTIENGESELLSCHAFT		
Patents By Year of Grant:	357	357
HOECHST AKTIENGESELLSCHAFT		
Patents By Year of Grant:	353	353
HONDA GIKEN KOGYO KABUSHIKI KAISHA	(HONDA MOTOR	CO., LTD.)
Patents By Year of Grant:	341	341
RICOH COMPANY, LTD.		
Patents By Year of Grant:	336	336
MICRON TECHNOLOGY, INC.		
Patents By Year of Grant:	318	318
NIPPONDENSO CO., LTD.		
Patents By Year of Grant:	312	312
E. I. DU PONT DE NEMOURS AND COMPAN	ſΥ	
Patents By Year of Grant:	311	311

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---- Organizational Patenting (Granted: Jan 01, 1997 - Dec 31, 1997) ---- Ranked List of Organizations with 30 or More Patents ----

Organizacional Pacencing			
	1997	TOTAL	
UNITED STATES OF AMERICA, NAVY Patents By Year of Grant:	288	288	
• • • • • • • • • • • • • • • • • • • •			
GENERAL MOTORS CORPORATION			
Patents By Year of Grant:	277	277	
BASF AKTIENGESELLSCHAFT			
Patents By Year of Grant:	276	276	
UNIVERSITY OF CALIFORNIA, THE REGENTS	OF		
Patents By Year of Grant:		275	
ADVANCED WICEO DEVICES INC			
ADVANCED MICRO DEVICES, INC. Patents By Year of Grant:	271	271	
•			
ROBERT BOSCH GMBH	0.55	0.57	
Patents By Year of Grant:	267	267	
FORD MOTOR COMPANY			
Patents By Year of Grant:	265	265	
CIBA-GEIGY CORPORATION			
Patents By Year of Grant:	238	238	
YAZAKI CORP.			
Patents By Year of Grant:	238	238	
SEIKO EPSON CORPORATION			
Patents By Year of Grant:	225	225	
ELI LILLY AND COMPANY Patents By Year of Grant:	222	222	
racenes by rear or drame.			
OLYMPUS OPTICAL CO., LTD.			
Patents By Year of Grant:	213	213	
CATERPILLAR INC.			
Patents By Year of Grant:	212	212	
DAEWOO ELECTRONICS COMPANY, LTD.			
Patents By Year of Grant:	211	211	
TOYOTA JIDOSHA K.K.			
Patents By Year of Grant:	211	211	
ADDITE CONDUMED THE			
APPLE COMPUTER, INC. Patents By Year of Grant:	206	206	

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---- Organizational Patenting (Granted: Jan 01, 1997 - Dec 31, 1997) ---- Ranked List of Organizations with 30 or More Patents ----

Organizacional Patencing		
	1997	TOTAL
HUGHES ELECTRONIC DEVICES CORPORATION Patents By Year of Grant:	205	205
MICROSOFT CORPORATION Patents By Year of Grant:	199	199
WHITAKER CORPORATION Patents By Year of Grant:	198	198
ABBOTT LABORATORIES Patents By Year of Grant:	189	189
NATIONAL SEMICONDUCTOR CORPORATION Patents By Year of Grant:	188	188
FUJI XEROX CO., LTD. Patents By Year of Grant:	182	182
SUMITOMO ELECTRIC INDUSTRIES CO., LTD. Patents By Year of Grant:	172	172
LSI LOGIC CORPORATION Patents By Year of Grant:	168	168
UNITED STATES OF AMERICA, ARMY Patents By Year of Grant:	168	168
L'OREAL S.A. Patents By Year of Grant:	165	165
SANYO ELECTRIC CO., LTD. Patents By Year of Grant:	164	164
DOW CHEMICAL COMPANY Patents By Year of Grant:	163	163
MERCK + CO., INC. Patents By Year of Grant:	161	161
DAIMLER-BENZ AKTIENGESELLSCHAFT Patents By Year of Grant:	159	159
MINOLTA CAMERA CO., LTD. Patents By Year of Grant:	158	158
HYUNDAI ELECTRONICS INDUSTRIES CO., LT. Patents By Year of Grant:		154

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--- Organizational Patenting (Granted: Jan 01, 1997 - Dec 31, 1997) ---- Ranked List of Organizations with 30 or More Patents ---

organizational racenering		
	1997 т	OTAL
INDUSTRIAL TECHNOLOGY RESEARCH INSTITUT	E, TAIWA	N
Patents By Year of Grant:	153	153
SUN MICROSYSTEMS, INC.		
Patents By Year of Grant:	152	152
ASAHI KOGAKU KOGYO KABUSHIKI KAISHA	1.51	151
Patents By Year of Grant:	151	151
MURATA MANUFACTURING CO., LTD.		
Patents By Year of Grant:	150	150
UNITED STATES OF AMERICA, HEALTH & HUMA: Patents By Year of Grant:	N SERVIC	150
ratenes by rear or grant.	130	130
BROTHER KOGYO KABUSHIKI KAISHA		
Patents By Year of Grant:	149	149
UNITED MICROELECTRONICS CORPORATION		
Patents By Year of Grant:	149	149
1405		
EATON CORPORATION		
Patents By Year of Grant:	145	145
YAMAHA CORPORATION		
Patents By Year of Grant:	140	140
CHRYSLER MOTORS CORPORATION		
Patents By Year of Grant:	139	139
NISSAN MOTOR COMPANY, LIMITED		
Patents By Year of Grant:	138	138
BRISTOL-MYERS SQUIBB COMPANY	134	134
Patents By Year of Grant:	134	134
BECTON, DICKINSON AND COMPANY		
Patents By Year of Grant:	133	133
DIGITAL EQUIPMENT CORPORATION Patents By Year of Grant:	133	133
racence by rear or Grant:	133	133
HUGHES AIRCRAFT COMPANY		
Patents By Year of Grant:	130	130
THE THINK GENT CONDUCTION MANUFACTURES CO.	T MID.	
TAIWAN SEMICONDUCTOR MANUFACTURING CO., Patents By Year of Grant:	130	130
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Technology Assessment and Forecast Report PATENTING BY ORGANIZATIONS (CY 1997) Page B - 6 ---- Organizational Patenting (Granted: Jan 01, 1997 - Dec 31, 1997) ---- Ranked List of Organizations with 30 or More Patents ----1997 TOTAL COMPAQ COMPUTER CORPORATION Patents By Year of Grant: 129 129 KONICA CORPORATION Patents By Year of Grant: 125 125 SHELL OIL COMPANY Patents By Year of Grant: 123 123 SUMITOMO CHEMICAL COMPANY, LIMITED Patents By Year of Grant: 123 123 UNITED TECHNOLOGIES CORPORATION 123 Patents By Year of Grant: 123 SUMITOMO WIRING SYSTEMS, LTD. Patents By Year of Grant: 122 122 ALLIED-SIGNAL INC. Patents By Year of Grant: 119 119 LG SEMICON CO., LTD. Patents By Year of Grant: 119 119 SOUTHPAC TRUST INTERNATIONAL, INC. Patents By Year of Grant: 118 118 EXXON CHEMICALS PATENTS INC. Patents By Year of Grant: 115 115 HARRIS CORP. Patents By Year of Grant: 115 115 MORTON INTERNATIONAL, INC. Patents By Year of Grant: 115 115 AGFA-GEVAERT N.V. 114 Patents By Year of Grant: 114 BOEING COMPANY 114 Patents By Year of Grant: 114 SGS-THOMSON MICROELECTRONICS S.R.L. Patents By Year of Grant: 114 114

LG ELECTRONICS INC.

Patents By Year of Grant:

113

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SHIN ETSU CHEMICAL CO., LTD.

Patents By Year of Grant:

PATENTING BY ORGANIZATIONS (CY 1997)			- Technology Assessment and Forecast Report Page B - 7
Organizational Patenting			(Granted: Jan 01, 1997 - Dec 31, 1997) Ranked List of Organizations with 30 or More Patents
	1997	TOTAL	
TELEFONAKTIEBOLAGET LM ERICSSON Patents By Year of Grant:	113	113	
PIONEER ELECTRONIC CORPORATION Patents By Year of Grant:	110	110	
UNISYS CORPORATION Patents By Year of Grant:	109	109	
AMERICAN CYANAMID COMPANY Patents By Year of Grant:	107	107	
KAO KABUSHIKI KAISHA (KAO CORPORATION) Patents By Year of Grant:	107	107	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY Patents By Year of Grant:	102	102	
NOVO NORDISK A/S Patents By Year of Grant:	102	102	
PFIZER INC. Patents By Year of Grant:	102	102	
KIMBERLY-CLARK CORPORATION Patents By Year of Grant:	101	101	
NORTHROP GRUMMAN CORPORATION Patents By Year of Grant:	101	101	
TRW INC. Patents By Year of Grant:	101	101	
HONEYWELL INC. Patents By Year of Grant:	100	100	
SEAGATE TECHNOLOGY Patents By Year of Grant:	98	98	
MONSANTO CO. Patents By Year of Grant:	97	97	
SEMICONDUCTOR ENERGY LABORATORY CO., L Patents By Year of Grant:	TD. 97	97	

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BASF CORP.

MOBIL OIL CORP.

MEDTRONIC INC.

BAYER CORPORATION

Patents By Year of Grant:

PATENTING BY ORGANIZATIONS (CY 1997) ---- Organizational Patenting (Granted: Jan 01, 1997 - Dec 31, 1997) ---- Ranked List of Organizations with 30 or More Patents ----1997 TOTAL DELL USA, L.P. Patents By Year of Grant: 96 ROHM COMPANY LIMITED Patents By Year of Grant: 96 UNITED STATES OF AMERICA, NATIONAL AERONAUTICS AND SPACE ADMINISTRATION Patents By Year of Grant: KIMBERLY-CLARK WORLDWIDE, INC. Patents By Year of Grant: 95 95 UNITED STATES SURGICAL CORPORATION 95 Patents By Year of Grant: 95 DELCO ELECTRONICS CORPORATION Patents By Year of Grant: 94 ZENECA LIMITED Patents By Year of Grant: 94 94 APPLIED MATERIALS, INC. Patents By Year of Grant: 93 93 FUJI ELECTRIC CO., LTD. Patents By Year of Grant: 93 93 GOODYEAR TIRE + RUBBER COMPANY Patents By Year of Grant: 93 93 VLSI TECHNOLOGY, INC. Patents By Year of Grant: 93 ILLINOIS TOOL WORKS INC. Patents By Year of Grant: 92 92

 Organizational Patenting	(Granted: Jan 01, 199	97 - Dec 31, 1997)	Ranked List of Organizations with	30 or More Patents

Organizational Patenting			(Granted:	Jan	01,	1997	- De	31,	1997)	
	1997	TOTAL								
	1997	TOTAL								
MITSUBISHI CHEMICAL CORPORATION										
Patents By Year of Grant:	89	89								
NIPPON STEEL CORP.										
Patents By Year of Grant:	89	89								
DOW CORNING CORPORATION										
Patents By Year of Grant:	88	88								
HEIDELBERGER DRUCKMASCHINEN AG										
Patents By Year of Grant:	88	88								
AKZO NOBEL NV										
Patents By Year of Grant:	87	87								
WARNER-LAMBERT COMPANY										
Patents By Year of Grant:	87	87								
FORD GLOBAL TECHNOLOGIES, INC.										
Patents By Year of Grant:	86	86								
INSTITUT FRANCAIS DU PETROLE										
Patents By Year of Grant:	86	86								
SGS-THOMSON MICROELECTRONICS S.A.										
Patents By Year of Grant:	86	86								
TOKYO ELECTRON LIMITED										
Patents By Year of Grant:	86	86								
UNITED STATES OF AMERICA, AIR FORCE										
Patents By Year of Grant:	86	86								
SGS-THOMSON MICROELECTRONICS, INC.										
Patents By Year of Grant:	85	85								
CIRRUS LOGIC, INC.										
Patents By Year of Grant:	84	84								
GOLDSTAR COMPANY, LTD.										
Patents By Year of Grant:	84	84								
PITNEY-BOWES, INC.										
Patents By Year of Grant:	84	84								
GENENTECH, INC.										
Patents By Year of Grant:	82	82								

Organizational Patenting	(Granted: Jan 01,	1997 -	Dec 31, 1997)	 Ranked List of Organizations with	30	or More Patents	

Organizational Patenting			
	1997	TOTAL	
NGK INSULATORS LTD. Patents By Year of Grant:	Ω1	81	
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UNIVERSITY OF TEXAS			
Patents By Year of Grant:	81	81	
EASTMAN CHEMICAL COMPANY			
Patents By Year of Grant:	80	80	
NCR CORPORATION			
Patents By Year of Grant:	80	80	
COMMISSARIAT A L'ENERGIE ATOMIQUE			
Patents By Year of Grant:	79	79	
DANA CORPORATION			
Patents By Year of Grant:	79	79	
HOFFMANN-LA ROCHE INC.			
Patents By Year of Grant:	79	79	
CORNING INCORPORATED			
Patents By Year of Grant:	78	78	
ANALOG DEVICES, INC.			
Patents By Year of Grant:	77	77	
TAKEDA CHEMICAL INDUSTRIES LTD. Patents By Year of Grant:	77	77	
1400.000 27 1041 01 014100			
ALPS ELECTRIC CO., LTD.	76	76	
Patents By Year of Grant:	76	76	
BAKER HUGHES INCORPORATED			
Patents By Year of Grant:	76	76	
FUJI PHOTO OPTICAL CO. LTD.			
Patents By Year of Grant:	76	76	
MITSUI PETROCHEMICAL INDUSTRIES LTD.			
Patents By Year of Grant:	76	76	
PHILIPS ELECTRONICS NORTH AMERICA CORP.			
Patents By Year of Grant:	76	76	
PHILLIPS PETROLEUM COMPANY			
Patents By Year of Grant:	76	76	

Technology Assessment and Forecast Report PATENTING BY ORGANIZATIONS (CY 1997) Page B - 11 ---- Organizational Patenting (Granted: Jan 01, 1997 - Dec 31, 1997) ---- Ranked List of Organizations with 30 or More Patents ----1997 TOTAL TRW VEHICLE SAFETY SYSTEMS, INC. Patents By Year of Grant: 76 76 G. D. SEARLE & CO. Patents By Year of Grant: 75 75 HOECHST CELANESE CORPORATION Patents By Year of Grant: 75 75 ROCKWELL INTERNATIONAL CORPORATION Patents By Year of Grant: 75 75 BRIDGESTONE CORPORATION Patents By Year of Grant: 74 PPG INDUSTRIES INC. Patents By Year of Grant: 74 TDK CORPORATION Patents By Year of Grant: 74 74 YAMAHA HATSUDOKI KABUSHIKI KAISHA, YAMAHA MOTOR CO., LTD. Patents By Year of Grant: AGENCY OF INDUSTRIAL SCIENCE & TECHNOLOGY Patents By Year of Grant: 73 AISIN SEIKI KABUSHIKI KAISHA Patents By Year of Grant: 73 73 EXXON RESEARCH + ENGINEERING CO. Patents By Year of Grant: 73 73 MITA INDUSTRIAL COMPANY LTD. Patents By Year of Grant: 73 73 W. R. GRACE & CO.-CONN. Patents By Year of Grant: 73 73 HYUNDAI MOTOR CO., LTD. Patents By Year of Grant: 72 72

MITSUI TOATSU CHEMICALS INC.
Patents By Year of Grant:

Patents By Year of Grant:

MOLEX INCORPORATED

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 Organizational	Datonting
 Organizational	Patenting

	1997	TOTAL
WESTINGHOUSE ELECTRIC CORP.		
Patents By Year of Grant:	72	72
AIR PRODUCTS AND CHEMICALS, INC.		
Patents By Year of Grant:	71	71
ALLERGAN, INC.		
Patents By Year of Grant:	71	71
CHIRON CORPORATION		
Patents By Year of Grant:	71	71
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FMC CORPORATION		
Patents By Year of Grant:	71	71
HENKEL KOMMANDITGESELLSCHAFT AUF AKTIE	N(HENKE	T. KGAA)
Patents By Year of Grant:	71	71
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KAWASAKI STEEL CORPORATION		
Patents By Year of Grant:	70	70
RHONE-POULENC CHIMIE		
Patents By Year of Grant:	70	70
FICHTEL + SACHS AG		
Patents By Year of Grant:	69	69
SCHERING CORP.		
Patents By Year of Grant:	69	69
SMITHKLINE BEECHAM CORPORATION		
Patents By Year of Grant:	69	69
ALCATEL N. V.		
Patents By Year of Grant:	68	68
ERICSSON, INC.		
Patents By Year of Grant:	68	68
UNITED STATES OF AMERICA, DEPARTMENT OF	F ENERG	Y
Patents By Year of Grant:	68	68
ARCO CHEMICAL TECHNOLOGY, L.P.		
Patents By Year of Grant:	67	67
NSK LIMITED		
Patents By Year of Grant:	67	67
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Technology Assessment and Forecast Report PATENTING BY ORGANIZATIONS (CY 1997) ---- Organizational Patenting (Granted: Jan 01, 1997 - Dec 31, 1997) ---- Ranked List of Organizations with 30 or More Patents ----1997 TOTAL OKI ELECTRIC INDUSTRY CO., LTD. Patents By Year of Grant: 67 67 BAXTER INTERNATIONAL INC. Patents By Year of Grant: 66 66 COLGATE-PALMOLIVE COMPANY Patents By Year of Grant: 66 66 NIPPON TELEGRAPH & TELEPHONE CORP. Patents By Year of Grant: 66 66 UNISIA JECS CORPORATION Patents By Year of Grant: 66 BRITISH TECHNOLOGY GROUP LIMITED Patents By Year of Grant: 65 NORTHERN TELECOM LIMITED Patents By Year of Grant: 64 STANFORD UNIVERSITY, LELAND JUNIOR, THE BOARD OF TRUSTEES OF Patents By Year of Grant: BETZDEARBORN INC. Patents By Year of Grant: 63 MERCK PATENT GESELLSCHAFT MIT BESCHRANKTER HAFTUNG Patents By Year of Grant: 63 MERRELL PHARMACEUTICALS INC. Patents By Year of Grant: 63 OWENS-CORNING FIBERGLAS TECHNOLOGY, INC. Patents By Year of Grant: 63 ROHM AND HAAS COMPANY Patents By Year of Grant: 63 63 THOMSON CONSUMER ELECTRONICS, INC. Patents By Year of Grant: 63 63

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VICTOR COMPANY OF JAPAN, LIMITED Patents By Year of Grant:

MAZDA MOTOR CORPORATION Patents By Year of Grant:

	Organizational	Patenting
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	1997	TOTAL
TORAY INDUSTRIES INC. Patents By Year of Grant:	62	62
WISCONSIN ALUMNI RESEARCH FOUNDATION Patents By Year of Grant:	62	62
ALCON LABORATORIES, INC. Patents By Year of Grant:	61	61
BOEHRINGER MANNHEIM G.M.B.H. Patents By Year of Grant:	61	61
DAI NIPPON PRINTING CO. LTD Patents By Year of Grant:	61	61
IMPERIAL CHEMICAL INDUSTRIES PLC Patents By Year of Grant:	61	61
ETHICON, INC. Patents By Year of Grant:	60	60
POLAROID CORPORATION Patents By Year of Grant:	60	60
UOP Patents By Year of Grant:	60	60
RHONE-POULENC RORER, S.A. Patents By Year of Grant:	59	59
XILINX, INC. Patents By Year of Grant:	59	59
ELECTRONICS AND TELECOMMUNICATIONS RESIDENTS By Year of Grant:	EARCH 58	INSTITUTE 58
HENKEL CORPORATION Patents By Year of Grant:	58	58
SANSHIN KOGYO KABUSHIKI KAISHA Patents By Year of Grant:	58	58
MITSUBISHI JUKOGYO KABUSHIKI KAISHA Patents By Year of Grant:	57	57
SANDOZ LTD. Patents By Year of Grant:	57	57

PATENTING BY ORGANIZATIONS (CY 1997)						_		Page B - 15
Organizational Patenting			(Granted: Jan	n 01, 1997	- Dec 31, 1997)		Ranked List of Organizations with	30 or More Patents
19	997	TOTAL						
BABCOCK & WILCOX COMPANY Patents By Year of Grant:	56	56						
GAS RESEARCH INSTITUTE Patents By Year of Grant:	56	56						
AMOCO CORPORATION Patents By Year of Grant:	55	55						
AVERY DENNISON CORPORATION Patents By Year of Grant:	55	55						
BEHRINGWERKE AKTIENGESELLSCHAFT Patents By Year of Grant:	55	55						
DEERE + COMPANY Patents By Year of Grant:	55	55						
OSRAM SYLVANIA INC. Patents By Year of Grant:	55	55						
SUMITOMO RUBBER INDUSTRIES, LTD. Patents By Year of Grant:	55	55						
UNIVERSITY OF PENNSYLVANIA Patents By Year of Grant:	55	55						
VALMET CORP. Patents By Year of Grant:	55	55						
CASIO COMPUTER CO. LTD. Patents By Year of Grant:	54	54						
EBARA CORPORATION Patents By Year of Grant:	54	54						
LUCAS INDUSTRIES PUBLIC LTD. COMPANY Patents By Year of Grant:	54	54						
NATIONAL SCIENCE COUNCIL Patents By Year of Grant:	54	54						
OTIS ELEVATOR COMPANY Patents By Year of Grant:	54	54						
W. L. GORE ASSOCIATES, INC. Patents By Year of Grant:	54	54						

 Technology	Assessment	and	Forecast	Report	

	Organ:	izational	Patenting
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	1997	TOTAL
LEVER PROG. GO. RIVIGION OF GONORGO	TNG	
LEVER BROS. CO., DIVISION OF CONOPCO,		F.3
Patents By Year of Grant:	53	53
UNIVERSITY OF MICHIGAN		
Patents By Year of Grant:	53	53
<u>-</u>		
VANGUARD INTERNATIONAL SEMICONDUCTOR (CORPORA!	rion
Patents By Year of Grant:	53	53
DAIKIN INDUSTRIES LIMITED		
Patents By Year of Grant:	52	52
MCDONNELL DOUGLAS CORP.		
Patents By Year of Grant:	52	52
racence by rear or Granc.	32	32
THOMSON-CSF		
Patents By Year of Grant:	52	52
TOYODA GOSEI KABUSHIKI KAISHA		
Patents By Year of Grant:	52	52
CYPRESS SEMICONDUCTOR CORP.		
Patents By Year of Grant:	51	51
FANUC LTD.		
Patents By Year of Grant:	51	51
racenes by rear or crane.	31	32
HAMAMATSU PHOTONICS KABUSHIKI KAISHA		
Patents By Year of Grant:	51	51
HOECHST MARION ROUSSEL, INC.		
Patents By Year of Grant:	51	51
YKK CORPORATION		
Patents By Year of Grant:	51	51
CORNELL RESEARCH FOUNDATION INC.		
Patents By Year of Grant:	50	50
racenes by rear or crane.	30	30
TEKTRONIX INC.		
Patents By Year of Grant:	50	50
AKTIEBOLAGET ASTRA		
Patents By Year of Grant:	49	49
ITT AUTOMOTIVE EUROPE GMBH	40	40
Patents By Year of Grant:	49	49

	Technology	Assessment	and	Forecast	Report	
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(Granted: Jan 01, 1997 - Dec 31, 1997) ---- Ranked List of Organizations with 30 or More Patents ----

Organizational Patenting		
1	L997	TOTAL
JOHNSON & JOHNSON VISION PRODUCTS, INC. Patents By Year of Grant:	49	49
MERCK SHARP & DOHME LIMITED Patents By Year of Grant:	49	49
PRAXAIR TECHNOLOGY, INC. Patents By Year of Grant:	49	49
SEIKO INSTRUMENTS INC. Patents By Year of Grant:	49	49
ALLEN-BRADLEY COMPANY Patents By Year of Grant:	48	48
BELL ATLANTIC NETWORK SERVICES, INC. Patents By Year of Grant:	48	48
DEGUSSA AKTIENGESELLSCHAFT Patents By Year of Grant:	48	48
ASAHI GLASS COMPANY, LTD. Patents By Year of Grant:	47	47
ELF ATOCHEM S.A. Patents By Year of Grant:	47	47
JOHNS HOPKINS UNIVERSITY Patents By Year of Grant:	47	47
LOCKHEED MARTIN CORPORATION Patents By Year of Grant:	47	47
MANNESMANN AG Patents By Year of Grant:	47	47
NOKIA TELECOMMUNICATIONS OY Patents By Year of Grant:	47	47
RESEARCH CORPORATION TECHNOLOGIES, INC. Patents By Year of Grant:	47	47
RIVERWOOD INTERNATIONAL CORPORATION Patents By Year of Grant:	47	47
SANOFI, S.A. Patents By Year of Grant:	47	47

---- Organizational Patenting

	1997	TOTAL
SCHLUMBERGER TECHNOLOGY CORPORATION Patents By Year of Grant:	47	47
TEIJIN LIMITED Patents By Year of Grant:	47	47
ADIR ET COMPAGNIE Patents By Year of Grant:	46	46
ASEA BROWN BOVERI AKTIENGESELLSCHAFT Patents By Year of Grant:	46	46
AT&T CORP. Patents By Year of Grant:	46	46
CALIFORNIA INSTITUTE OF TECHNOLOGY Patents By Year of Grant:	46	46
GENERAL HOSPITAL CORPORATION Patents By Year of Grant:	46	46
NORITSU KENKYU CENTER CO., LTD. Patents By Year of Grant:	46	46
PACESETTER, INC. Patents By Year of Grant:	46	46
UNITED STATES OF AMERICA, DEPARTMENT OF Patents By Year of Grant:	F AGRIC	ULTURE 46
NESTEC, S.A. Patents By Year of Grant:	45	45
QUALCOMM, INC. Patents By Year of Grant:	45	45
RESEARCH FOUNDATION OF STATE UNIVERSITY Patents By Year of Grant:	Y OF NE	W YORK 45
TRIMBLE NAVIGATION, LTD. Patents By Year of Grant:	45	45
BLACK & DECKER INC. Patents By Year of Grant:	44	44
BORG-WARNER AUTOMOTIVE, INC. Patents By Year of Grant:	44	44

	Organizational	Patenting
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	1997	TOTAL
KYOWA HAKKO KOGYO CO., LTD Patents By Year of Grant:	44	44
SCHERING AKTIENGESELLSCHAFT		
Patents By Year of Grant:	44	44
SYMBOL TECHNOLOGIES, INC.		
Patents By Year of Grant:	44	44
TOYODA JIDOSHOKKI SEISAKUSHO KABUSHIKI	KAISHA	
Patents By Year of Grant:	44	44
ZEXEL CORPORATION		
Patents By Year of Grant:	44	44
IMATION CORP.		
Patents By Year of Grant:	43	43
MARTIN-MARIETTA CORPORATION		
Patents By Year of Grant:	43	43
RISO KAGAKU CORPORATION		
Patents By Year of Grant:	43	43
SAMSUNG DISPLAY DEVICES CO., LTD.		
Patents By Year of Grant:	43	43
ETHICON ENDO-SURGERY		
Patents By Year of Grant:	42	42
ISIS PHARMACEUTICALS, INC.		
Patents By Year of Grant:	42	42
JANSSEN PHARMACEUTICA N.V.		
Patents By Year of Grant:	42	42
KABUSHIKI KAISHA KOMATSU SEISAKUSHO		
Patents By Year of Grant:	42	42
KOBE STEEL LTD.		
Patents By Year of Grant:	42	42
SOCIETE NATIONALE INDUSTRIELLE AEROSPAT	TIALE	
Patents By Year of Grant:	42	42
DAIWA SEIKO INC		
Patents By Year of Grant:	41	41

	Technology	Assessment	and	Forecast	Report	
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PATENTING BY ORGANIZATIONS (CY 1997)

---- Organizational Patenting (Granted: Jan 01, 1997 - Dec 31, 1997) ---- Ranked List of Organizations with 30 or More Patents ----

Organizational Patenting			(Gr
	1997	TOTAL	
MICHIGAN STATE UNIVERSITY			
Patents By Year of Grant:	41	41	
MOORE BUSINESS FORMS INC.			
Patents By Year of Grant:	41	41	
NATIONAL STARCH AND CHEMICAL INVESTMENT	HOLDIN	G CORPORAT	ION
Patents By Year of Grant:	41	41	
SANKYO SEIKI MFG. CO., LTD.			
Patents By Year of Grant:	41	41	
SILICON GRAPHICS, INC.			
Patents By Year of Grant:	41	41	
ADVANTEST CORP. Patents By Year of Grant:	40	40	
ratenes by rear or grant.	40	40	
CARRIER CORPORATION			
Patents By Year of Grant:	40	40	
COOPER INDUSTRIES INC.			
Patents By Year of Grant:	40	40	
DAINIPPON SCREEN MFG. CO., LTD.			
Patents By Year of Grant:	40	40	
TOKAI RIKA DENKI SEISAKUSHO K.K.			
Patents By Year of Grant:	40	40	
WESTERN ATLAS INTERNATIONAL, INC. Patents By Year of Grant:	40	40	
AGFA-GEVAERT, AG	39	20	
Patents By Year of Grant:	39	39	
EMERSON ELECTRIC CO.			
Patents By Year of Grant:	39	39	
KOITO MANUFACTURING COMPANY LIMITED			
Patents By Year of Grant:	39	39	
PORSCHE AG			
Patents By Year of Grant:	39	39	
UNIVERSITY OF NORTH CAROLINA			
Patents By Year of Grant:	39	39	

---- Organizational Patenting

	1997	TOTAL	
VOITH SULZER PAPIERMASCHINEN GMBH			
Patents By Year of Grant:	39	39	
WACKER-CHEMIE GMBH			
Patents By Year of Grant:	39	39	
ALZA CORPORATION			
Patents By Year of Grant:	38	38	
COBE LABORATORIES, INC.			
Patents By Year of Grant:	38	38	
HALLIBURTON CO.			
Patents By Year of Grant:	38	38	
racenes by rear or drame.	30	30	
HILTI AKTIENGESELLSCHAFT			
Patents By Year of Grant:	38	38	
HITACHI KOKI COMPANY, LIMITED			
Patents By Year of Grant:	38	38	
SANDIA CORPORATION			
Patents By Year of Grant:	38	38	
14001102 27 1041 01 0141101			
SANKYO COMPANY LIMITED			
Patents By Year of Grant:	38	38	
SHIN-ETSU HANDOTAI CO., LTD.			
Patents By Year of Grant:	38	38	
SIEMENS MEDICAL SYSTEMS, INC.			
Patents By Year of Grant:	38	38	
THE BOC GROUP PLC			
Patents By Year of Grant:	38	38	
AJINOMOTO COMPANY INCORPORATED			
Patents By Year of Grant:	37	37	
racenes by rear or drame.	3,	37	
AT&T GLOBAL INFORMATION SOLUTIONS COM	PANY		
Patents By Year of Grant:	37	37	
BRITISH TELECOMMUNICATION, PLC			
Patents By Year of Grant:	37	37	
CHEVRON CHEMICAL COMPANY			
Patents By Year of Grant:	37	37	

Technology Assessment and Forecast Report PATENTING BY ORGANIZATIONS (CY 1997) ---- Organizational Patenting (Granted: Jan 01, 1997 - Dec 31, 1997) ---- Ranked List of Organizations with 30 or More Patents ----1997 TOTAL CHISSO CORPORATION Patents By Year of Grant: 37 37 EISAI CO., LTD. Patents By Year of Grant: 37 FRAUNHOFER-GESELLSCHAFT ZUR FORDERUNG DER ANGEWANTEN FORSCHUNG E.V. Patents By Year of Grant: FUJI JUKOGYO KABUSHIKI KAISHA Patents By Year of Grant: 37 37 INGERSOLL-RAND COMPANY Patents By Year of Grant: 37 37 KUREHA CHEMICAL INDUSTRY CO., LTD. Patents By Year of Grant: 37 M.A.N. ROLAND DRUCKMASCHINEN AG

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Patents By Year of Grant: 37 37 UNIVERSITY OF WASHINGTON Patents By Year of Grant: 37 37 ALBEMARLE CORPORATION Patents By Year of Grant: 36 36 CORDIS CORPORATION Patents By Year of Grant: 36 36 CYTEC TECHNOLOGY CORP. Patents By Year of Grant: 36 FRANCE TELECOM

IOWA STATE UNIVERSITY RESEARCH FOUNDATION INC. Patents By Year of Grant:

36

36

36

Patents By Year of Grant:

NORDSON CORPORATION Patents By Year of Grant: 36

NTN CORPORATION Patents By Year of Grant: 36

TRISTRATA TECHNOLOGY, INC. Patents By Year of Grant: 36 36

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---- Organizational Patenting (Granted: Jan 01, 1997 - Dec 31, 1997) ---- Ranked List of Organizations with 30 or More Patents ----1997 TOTAL WESTINGHOUSE AIR BRAKE COMPANY Patents By Year of Grant: 36 36 BELL COMMUNICATIONS RESEARCH, INC. Patents By Year of Grant: 35 35 COLUMBIA UNIVERSITY Patents By Year of Grant: 35 35 DAICEL CHEMICAL INDUSTRIES LTD. Patents By Year of Grant: 35 35 DOW CORNING TORAY SILICONE COMPANY LIMITED Patents By Year of Grant: 35 FUJISAWA PHARMACEUTICAL CO., LTD. Patents By Year of Grant: 35 HERCULES INCORPORATED Patents By Year of Grant: 35 35 HUELS AKTIENGESELLSCHAFT Patents By Year of Grant: 35 35 KYOCERA CORPORATION Patents By Year of Grant: 35 L'AIR LIQUIDE, SOCIETE ANONYME POUR L'ETUDE ET L'EXPLOITATION DES PROCEDES GEORGES CLAUDE Patents By Year of Grant: LITTON SYSTEMS INC. Patents By Year of Grant: 35 MCNEIL-PPC, INC. Patents By Year of Grant: 35 NIPPON PAINT CO., LTD. Patents By Year of Grant: 35 35 SANDVIK AKTIEBOLAG 35 Patents By Year of Grant: 35

VARIAN ASSOCIATES, INC. Patents By Year of Grant: 35

Patents By Year of Grant:

SOCIETE NATIONALE D'ETUDE ET DE CONSTRUCTION DE MOTEURS D'AVIATION "S.N.E.C.M.A."

35

35

Organizational Patenting	(Granted: Ja	ın 01, 1	1997 - E	Dec 31, 1	997)	 Ranked List of Organizations wit	ı 30	or More Patents	

	1997	TOTAL
AMERICAN HOME PRODUCTS CORPORATION		
Patents By Year of Grant:	34	34
BELOIT TECHNOLOGIES, INC.		
Patents By Year of Grant:	34	34
BRAUN A.G.		
Patents By Year of Grant:	34	34
CUMMINS ENGINE CO., INC.		
Patents By Year of Grant:	34	34
ISP INVESTMENTS INC.		
Patents By Year of Grant:	34	34
ITT CORPORATION		
Patents By Year of Grant:	34	34
NALCO CHEMICAL COMPANY		
Patents By Year of Grant:	34	34
NKK CORPORATION		
Patents By Year of Grant:	34	34
QUANTUM CORP. (LA)		
Patents By Year of Grant:	34	34
RAYCHEM CORPORATION		
Patents By Year of Grant:	34	34
SHIMANO INC.		
Patents By Year of Grant:	34	34
SMITHKLINE BEECHAM PLC		
Patents By Year of Grant:	34	34
BOC GROUP, INC.		
Patents By Year of Grant:	33	33
ELECTRIC POWER RESEARCH INSTITUTE, IN	·C.	
Patents By Year of Grant:	33	33
GLAXO WELLCOME INC.		
Patents By Year of Grant:	33	33
KOMATSU LTD.		
Patents By Year of Grant:	33	33

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	Organizational Patenting	(Granted: Jan 01, 1997	- Dec 31, 1997)	- Ranked List of Organizations with	30 or	r More Patents	
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Organizational Patenting		
1	997	TOTAL
MCI COMMUNICATIONS CORP.		
Patents By Year of Grant:	33	33
MITSUBISHI GAS-CHEMICAL COMPANY, INC.		
Patents By Year of Grant:	33	33
ROLLS-ROYCE PLC		
Patents By Year of Grant:	33	33
SEXTANT AVIONIQUE		
Patents By Year of Grant:	33	33
SQUARE D COMPANY		
Patents By Year of Grant:	33	33
GEN-PROBE INCORPORATED Patents By Year of Grant:	32	32
GOLD STAR ELECTRON CO., LTD. Patents By Year of Grant:	32	32
racenes by rear or draine.	32	32
HUBBELL INCORPORATED Patents By Year of Grant:	32	32
ratents by rear or Grant.	32	32
LEXMARK INTERNATIONAL, INC.		
Patents By Year of Grant:	32	32
MITSUBISHI JIDOSHA KOGYO KABUSHIKI KAISH		
Patents By Year of Grant:	32	32
PALL CORPORATION		
Patents By Year of Grant:	32	32
SCI-MED LIFE SYSTEMS, INC.		
Patents By Year of Grant:	32	32
UNIVERSITY OF MINNESOTA, THE REGENTS OF		
Patents By Year of Grant:	32	32
ALUMINUM COMPANY OF AMERICA		
Patents By Year of Grant:	31	31
GENERAL INSTRUMENT CORPORATION		
Patents By Year of Grant:	31	31
NEUROGEN CORPORATION		
Patents By Year of Grant:	31	31

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---- Organizational Patenting (Granted: Jan 01, 1997 - Dec 31, 1997) ---- Ranked List of Organizations with 30 or More Patents ----

	1997	TOTAL	
NITTO DENKO CORPORATION			
Patents By Year of Grant:	31	31	
PICKER INTERNATIONAL, INC.			
Patents By Year of Grant:	31	31	
THOMAS + BETTS CORPORATION			
Patents By Year of Grant:	31	31	
ZENITH ELECTRONICS CORPORATION			
Patents By Year of Grant:	31	31	
ASGROW SEED COMPANY			
Patents By Year of Grant:	30	30	
CHARTERED SEMICONDUCTOR MANUFACTURING	PTE LTD		
Patents By Year of Grant:	30	30	
LUBRIZOL CORPORATION			
Patents By Year of Grant:	30	30	
MITSUBISHI MATERIALS CORPORATION			
Patents By Year of Grant:	30	30	
SALK INSTITUTE FOR BIOLOGICAL STUDIES			
Patents By Year of Grant:	30	30	
SAMSUNG AEROSPACE INDUSTRIES, LTD.			
Patents By Year of Grant:	30	30	
Other Organizations (19143)			
Patents By Year of Grant:	44898	44898	