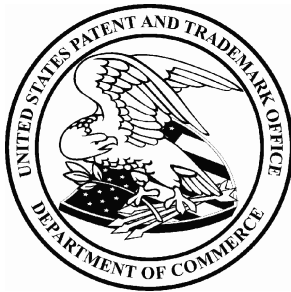


# ALL TECHNOLOGIES REPORT

JANUARY 1, 1963 -- DECEMBER 31, 2004



March 2005

U.S. PATENT AND TRADEMARK OFFICE  
OFFICE OF ELECTRONIC INFORMATION PRODUCTS / PTMD  
MDW 4C18, ALEXANDRIA, VA 22313-1450  
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*A PATENT TECHNOLOGY MONITORING DIVISION REPORT*

# All Technologies Report

## 1/1/1963 - 12/31/2004

### Explanation of Data

This Patent Technology Monitoring Division (PTMD) report profiles utility patent activity (i.e., "patents for inventions") for U.S. patents granted between January 1963 and **December 2004** in all technology areas. The source of the data used for this report is the TAF database maintained by the Office of Electronic Information Products.

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

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

Part A1 distributes utility 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, as shown in the "**Pre 1991**" column, corresponds to the period 1963 through **1990**.

##### **Part B**

Part B of this report distributes patent GRANT data for organizations that have received U.S. patents since 1969. 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 25% OF TOTAL FILINGS) ARE NOT INCLUDED IN THIS REPORT.

Since the average time period between filing for a utility patent and the issuing of the patent (i.e., the patent's "pendency") is now about 24 months, the patented application data for applications filed from **1999 to December 2004** are incomplete.\* This is because a significant number of the applications filed from **1999 to December 2004** which will ultimately become patents were still pending in **December 2004**. 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, for the most part, such fluctuations would be immune from changes in U.S. Patent and Trademark Office (PTO) processing such as occurred in years such as 1986 when the PTO issued fewer patents than would have normally 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.

"Patents Granted By Date of Patent Application", as shown in the "**Pre 1991**" column, correspond to utility patent grants in the report that were filed prior to **1991**.

#### Parts of the Report

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

**Patent ownership** information 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 1000 or more U.S. utility patents since 1969. 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 applications were 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.

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\* As of **December 2004**, utility patent application data are approximately **93%** complete for utility patent applications filed in **1999**, **84%** complete for applications filed in **2000**, **66%** complete for applications filed in **2001**, and **44%** complete for applications filed in **2002**.. They are essentially complete for applications filed prior to **1999**.

## Part A1

Patent Grants as Distributed By Year of Patent Grant

|                       | ----- Patents Granted By Date Of Patent Grant (Granted: Jan 01, 1963 - Dec 31, 2004) ----- |       |       |       |        |        |        |        |        |        |        |        |        |        |        |         |
|-----------------------|--|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
|                       | ----- NUMBER OF PATENTS -----  |       |       |       |        |        |        |        |        |        |        |        |        |        |        |         |
|                       | Pre 1991   | 1991  | 1992  | 1993  | 1994   | 1995   | 1996   | 1997   | 1998   | 1999   | 2000   | 2001   | 2002   | 2003   | 2004   | Total   |
| Total                 | 1905896  | 96511 | 97444 | 98342 | 101676 | 101419 | 109645 | 111984 | 147518 | 153486 | 157494 | 166037 | 167332 | 169026 | 164293 | 3748103 |
| U.S. Origin           | 1229514  | 51177 | 52253 | 53231 | 56066  | 55739  | 61104  | 61708  | 80289  | 83906  | 85068  | 87601  | 86972  | 87901  | 84271  | 2216800 |
| Foreign Origin        | 676382   | 45334 | 45191 | 45111 | 45610  | 45680  | 48541  | 50276  | 67229  | 69580  | 72426  | 78436  | 80360  | 81125  | 80022  | 1531303 |
| JAPAN                 | 203873   | 21025 | 21925 | 22293 | 22384  | 21764  | 23053  | 23179  | 30840  | 31104  | 31295  | 33224  | 34858  | 35516  | 35350  | 591683  |
| GERMANY               | 153625   | 7680  | 7309  | 6893  | 6731   | 6600   | 6818   | 7008   | 9095   | 9337   | 10235  | 11260  | 11280  | 11444  | 10779  | 276094  |
| UNITED KINGDOM        | 73649  | 2803  | 2430  | 2302  | 2236   | 2481   | 2454   | 2680   | 3467   | 3576   | 3669   | 3967   | 3843   | 3630   | 3450   | 116637  |
| FRANCE                | 57591  | 3030  | 3029  | 2909  | 2779   | 2821   | 2788   | 2958   | 3674   | 3820   | 3819   | 4041   | 4035   | 3868   | 3380   | 104542  |
| CANADA                | 33003  | 2037  | 1964  | 1944  | 2008   | 2104   | 2232   | 2379   | 2974   | 3226   | 3419   | 3606   | 3431   | 3426   | 3374   | 71127   |
| SWITZERLAND           | 32670  | 1335  | 1197  | 1127  | 1169   | 1056   | 1112   | 1090   | 1279   | 1279   | 1322   | 1420   | 1364   | 1308   | 1277   | 50005   |
| TAIWAN                | 3073   | 906   | 1001  | 1189  | 1443   | 1620   | 1897   | 2057   | 3100   | 3693   | 4667   | 5371   | 5431   | 5298   | 5938   | 46684   |
| ITALY                 | 20859  | 1209  | 1271  | 1285  | 1215   | 1078   | 1200   | 1239   | 1584   | 1492   | 1714   | 1709   | 1751   | 1722   | 1584   | 40912   |
| SWEDEN                | 20449  | 716   | 626   | 636   | 706    | 806    | 854    | 867    | 1225   | 1401   | 1577   | 1741   | 1675   | 1521   | 1290   | 36090   |
| SOUTH KOREA           | 824  | 405   | 538   | 779   | 943    | 1161   | 1493   | 1891   | 3259   | 3562   | 3314   | 3538   | 3786   | 3944   | 4428   | 33865   |
| NETHERLANDS           | 18313  | 992   | 855   | 800   | 852    | 799    | 797    | 808    | 1226   | 1247   | 1241   | 1332   | 1391   | 1325   | 1273   | 33251   |
| AUSTRALIA             | 6834   | 463   | 409   | 378   | 467    | 459    | 471    | 478    | 720    | 707    | 705    | 876    | 859    | 900    | 953    | 15679   |
| BELGIUM               | 6880   | 324   | 325   | 350   | 352    | 397    | 488    | 515    | 693    | 648    | 694    | 718    | 722    | 622    | 612    | 14340   |
| AUSTRIA               | 6988   | 359   | 371   | 312   | 289    | 337    | 362    | 376    | 387    | 479    | 505    | 589    | 530    | 592    | 540    | 13016   |
| ISRAEL                | 3176   | 304   | 335   | 314   | 350    | 384    | 484    | 534    | 754    | 743    | 783    | 970    | 1040   | 1193   | 1028   | 12392   |
| FINLAND               | 3189   | 331   | 361   | 293   | 312    | 358    | 444    | 452    | 595    | 649    | 618    | 732    | 809    | 865    | 918    | 10926   |
| DENMARK               | 4020   | 210   | 193   | 197   | 207    | 199    | 241    | 333    | 392    | 487    | 436    | 479    | 426    | 529    | 414    | 8763    |
| U.S.S.R.              | 6589   | 178   | 66    | 65    | 53     | 12     | 16     | 4      | 6      | 3      | 1      |        | 1      |        |        | 6994    |
| SPAIN                 | 2064   | 153   | 133   | 158   | 141    | 148    | 157    | 177    | 248    | 222    | 270    | 269    | 303    | 309    | 264    | 5016    |
| NORWAY                | 2298   | 111   | 108   | 117   | 126    | 130    | 139    | 142    | 198    | 224    | 248    | 265    | 242    | 262    | 243    | 4853    |
| SOUTH AFRICA          | 2095   | 105   | 97    | 93    | 101    | 123    | 111    | 101    | 115    | 110    | 111    | 120    | 113    | 112    | 100    | 3607    |
| HUNGARY               | 1912   | 85    | 88    | 61    | 46     | 50     | 43     | 25     | 50     | 39     | 36     | 60     | 48     | 72     | 48     | 2663    |
| CHINA,HONG KONG S.A.R | 532  | 50    | 60    | 60    | 57     | 86     | 88     | 81     | 160    | 155    | 179    | 237    | 233    | 276    | 311    | 2565    |
| SINGAPORE             | 112  | 15    | 32    | 38    | 51     | 53     | 88     | 94     | 120    | 144    | 218    | 296    | 410    | 427    | 449    | 2547    |
| MEXICO                | 1417   | 29    | 39    | 45    | 44     | 40     | 39     | 45     | 57     | 76     | 76     | 81     | 94     | 84     | 86     | 2252    |
| CZECHOSLOVAKIA        | 1999   | 27    | 17    | 13    | 19     | 15     | 8      | 9      | 9      | 5      | 9      | 7      | 2      | 1      |        | 2140    |
| NEW ZEALAND           | 901  | 41    | 44    | 39    | 37     | 44     | 52     | 85     | 114    | 114    | 107    | 124    | 140    | 135    | 142    | 2119    |
| CHINA P.REP.          | 287  | 50    | 41    | 53    | 48     | 62     | 46     | 62     | 72     | 90     | 119    | 195    | 289    | 297    | 404    | 2115    |
| INDIA                 | 352  | 22    | 24    | 30    | 27     | 37     | 35     | 47     | 85     | 112    | 131    | 178    | 249    | 341    | 363    | 2033    |
| IRELAND               | 562  | 53    | 50    | 46    | 48     | 47     | 77     | 71     | 71     | 90     | 121    | 141    | 127    | 163    | 186    | 1853    |
| RUSSIAN FEDERATION    |  |       |       | 3     | 38     | 98     | 116    | 111    | 189    | 181    | 183    | 234    | 200    | 203    | 169    | 1725    |
| BRAZIL                | 593  | 62    | 40    | 57    | 60     | 63     | 63     | 62     | 74     | 91     | 98     | 110    | 96     | 130    | 106    | 1705    |
| ARGENTINA             | 575  | 16    | 20    | 24    | 32     | 31     | 30     | 35     | 43     | 44     | 54     | 51     | 54     | 63     | 46     | 1118    |
| LUXEMBOURG            | 440  | 27    | 26    | 28    | 22     | 24     | 18     | 22     | 20     | 22     | 40     | 33     | 37     | 35     | 44     | 838     |
| POLAND                | 589  | 8     | 5     | 8     | 8      | 8      | 15     | 11     | 15     | 19     | 13     | 16     | 11     | 17     | 16     | 759     |
| VENEZUELA             | 284  | 25    | 22    | 31    | 23     | 29     | 25     | 25     | 27     | 39     | 27     | 26     | 30     | 19     | 18     | 650     |
| Others ( 133 )        | 3765   | 148   | 140   | 141   | 186    | 156    | 187    | 223    | 292    | 350    | 372    | 420    | 450    | 476    | 439    | 7745    |
| Ownership:            |  |       |       |       |        |        |        |        |        |        |        |        |        |        |        |         |
| U.S. Corporations     | 936567   | 39132 | 40308 | 41825 | 44036  | 44035  | 48740  | 50221  | 66052  | 69389  | 70884  | 74325  | 74156  | 75328  | 73035  | 1748033 |
| U.S. Government       | 38648  | 1183  | 1161  | 1167  | 1258   | 1028   | 924    | 944    | 1027   | 985    | 928    | 957    | 912    | 882    | 829    | 52833   |
| U.S. Individuals      | 301639   | 13207 | 12751 | 12281 | 12805  | 12885  | 13729  | 12914  | 16407  | 16698  | 16129  | 15204  | 14116  | 13538  | 12172  | 496475  |
| Foreign Corporations  | 519540   | 37593 | 38239 | 38401 | 38788  | 38688  | 41477  | 42907  | 57667  | 60168  | 63182  | 68943  | 71662  | 73098  | 72778  | 1263131 |
| Foreign Government    | 7728   | 472   | 463   | 434   | 296    | 245    | 259    | 273    | 256    | 162    | 104    | 92     | 112    | 85     | 79     | 11060   |
| Foreign Individuals   | 101774   | 4924  | 4522  | 4234  | 4493   | 4538   | 4516   | 4725   | 6109   | 6084   | 6267   | 6516   | 6374   | 6095   | 5400   | 176571  |

Ownership:



## Part A2

### Patent Grants as Distributed By Year of Patent Application

----- Patents Granted By Date Of Patent Application (Granted: Jan 01, 1963 - Dec 31, 2004) -----

|                       | NUMBER OF PATENTED APPLICATIONS |        |        |        |        |        |        |        |        |        |        |        |       |       |      |         |
|-----------------------|---------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|------|---------|
|                       | Pre 1991                        | 1991   | 1992   | 1993   | 1994   | 1995   | 1996   | 1997   | 1998   | 1999   | 2000   | 2001   | 2002  | 2003  | 2004 | Total   |
| Total                 | 2074460                         | 100242 | 103906 | 108283 | 123248 | 144240 | 144464 | 168534 | 165714 | 171878 | 168435 | 147833 | 99671 | 26430 | 765  | 3748103 |
| U.S. Origin           | 1318224                         | 54081  | 57355  | 60702  | 68148  | 81642  | 77736  | 91444  | 89881  | 92170  | 88443  | 74503  | 49208 | 12916 | 347  | 2216800 |
| Foreign Origin        | 756236                          | 46161  | 46551  | 47581  | 55100  | 62598  | 66728  | 77090  | 75833  | 79708  | 79992  | 73330  | 50463 | 13514 | 418  | 1531303 |
| JAPAN                 | 242376                          | 22868  | 22918  | 22510  | 26219  | 29030  | 30906  | 35705  | 32842  | 32802  | 34401  | 32053  | 20976 | 5877  | 200  | 591683  |
| GERMANY               | 166598                          | 6935   | 7014   | 6928   | 7652   | 8628   | 8846   | 10211  | 10230  | 11782  | 11529  | 10675  | 7398  | 1621  | 47   | 276094  |
| UNITED KINGDOM        | 78583                           | 2359   | 2293   | 2551   | 2960   | 3473   | 3382   | 3904   | 3922   | 4106   | 3751   | 3055   | 1939  | 355   | 4    | 116637  |
| FRANCE                | 62983                           | 2997   | 2950   | 2974   | 3189   | 3760   | 3563   | 4070   | 3944   | 4204   | 4100   | 3248   | 2115  | 436   | 9    | 104542  |
| CANADA                | 36267                           | 2062   | 1999   | 2313   | 2570   | 3075   | 2988   | 3452   | 3724   | 3708   | 3560   | 2928   | 1990  | 482   | 9    | 71127   |
| SWITZERLAND           | 34914                           | 1177   | 1139   | 1141   | 1241   | 1356   | 1233   | 1350   | 1368   | 1432   | 1403   | 1249   | 797   | 202   | 3    | 50005   |
| TAIWAN                | 4209                            | 1116   | 1260   | 1574   | 1921   | 2256   | 2941   | 3546   | 4520   | 5671   | 4971   | 5479   | 5054  | 2082  | 84   | 46684   |
| ITALY                 | 23014                           | 1251   | 1280   | 1199   | 1302   | 1499   | 1516   | 1674   | 1655   | 1725   | 1751   | 1667   | 1106  | 266   | 7    | 40912   |
| SWEDEN                | 21589                           | 698    | 725    | 841    | 1015   | 1122   | 1172   | 1725   | 1739   | 1755   | 1580   | 1234   | 733   | 155   | 7    | 36090   |
| SOUTH KOREA           | 1679                            | 795    | 910    | 1039   | 1617   | 2124   | 3485   | 3849   | 3916   | 3590   | 3697   | 3456   | 2856  | 828   | 24   | 33865   |
| NETHERLANDS           | 19961                           | 814    | 862    | 917    | 953    | 1080   | 1209   | 1408   | 1242   | 1314   | 1377   | 1233   | 743   | 137   | 1    | 33251   |
| AUSTRALIA             | 7660                            | 424    | 458    | 512    | 533    | 644    | 734    | 715    | 880    | 835    | 885    | 725    | 539   | 128   | 7    | 15679   |
| BELGIUM               | 7472                            | 349    | 345    | 411    | 528    | 711    | 693    | 683    | 719    | 740    | 679    | 555    | 369   | 86    |      | 14340   |
| AUSTRIA               | 7615                            | 332    | 312    | 330    | 407    | 454    | 406    | 465    | 528    | 569    | 562    | 524    | 419   | 92    | 1    | 13016   |
| ISRAEL                | 3779                            | 319    | 362    | 432    | 600    | 693    | 682    | 838    | 920    | 1174   | 1124   | 906    | 481   | 82    |      | 12392   |
| FINLAND               | 3777                            | 354    | 333    | 368    | 475    | 549    | 693    | 753    | 711    | 881    | 868    | 686    | 396   | 80    | 2    | 10926   |
| DENMARK               | 4398                            | 203    | 183    | 238    | 289    | 457    | 359    | 472    | 474    | 513    | 456    | 430    | 257   | 34    |      | 8763    |
| U.S.S.R.              | 6817                            | 80     | 51     | 20     | 10     | 9      | 2      | 3      | 2      |        |        |        |       |       |      | 6994    |
| SPAIN                 | 2313                            | 133    | 166    | 156    | 191    | 209    | 228    | 266    | 253    | 252    | 302    | 307    | 188   | 50    | 2    | 5016    |
| NORWAY                | 2490                            | 122    | 129    | 142    | 146    | 187    | 192    | 227    | 223    | 301    | 267    | 241    | 159   | 26    | 1    | 4853    |
| SOUTH AFRICA          | 2273                            | 88     | 97     | 144    | 138    | 101    | 112    | 109    | 120    | 125    | 114    | 109    | 61    | 16    |      | 3607    |
| HUNGARY               | 2081                            | 67     | 44     | 46     | 45     | 51     | 36     | 38     | 53     | 55     | 63     | 43     | 34    | 7     |      | 2663    |
| CHINA,HONG KONG S.A.R | 617                             | 64     | 65     | 69     | 110    | 102    | 139    | 156    | 187    | 231    | 243    | 276    | 225   | 81    |      | 2565    |
| SINGAPORE             | 146                             | 32     | 60     | 55     | 99     | 101    | 138    | 173    | 223    | 338    | 410    | 401    | 311   | 59    | 1    | 2547    |
| MEXICO                | 1475                            | 43     | 49     | 36     | 51     | 52     | 65     | 70     | 87     | 82     | 85     | 99     | 43    | 15    |      | 2252    |
| CZECHOSLOVAKIA        | 2038                            | 14     | 21     | 19     | 10     | 11     | 8      | 4      | 7      | 8      |        |        |       |       |      | 2140    |
| NEW ZEALAND           | 984                             | 39     | 40     | 37     | 79     | 89     | 111    | 129    | 116    | 121    | 147    | 128    | 82    | 16    | 1    | 2119    |
| CHINA P.REP.          | 364                             | 53     | 50     | 73     | 52     | 64     | 70     | 100    | 124    | 178    | 278    | 333    | 286   | 89    | 1    | 2115    |
| INDIA                 | 399                             | 24     | 35     | 34     | 42     | 53     | 82     | 121    | 136    | 191    | 271    | 317    | 255   | 70    | 3    | 2033    |
| IRELAND               | 653                             | 51     | 48     | 49     | 98     | 78     | 81     | 107    | 151    | 133    | 152    | 138    | 97    | 15    | 2    | 1853    |
| RUSSIAN FEDERATION    |                                 | 2      | 27     | 97     | 129    | 147    | 187    | 193    | 184    | 243    | 220    | 176    | 91    | 28    | 1    | 1725    |
| BRAZIL                | 680                             | 58     | 57     | 61     | 92     | 66     | 77     | 90     | 91     | 118    | 106    | 105    | 87    | 16    | 1    | 1705    |
| ARGENTINA             | 609                             | 24     | 24     | 38     | 38     | 35     | 45     | 46     | 58     | 41     | 60     | 64     | 28    | 8     |      | 1118    |
| LUXEMBOURG            | 481                             | 29     | 25     | 18     | 32     | 20     | 25     | 32     | 32     | 32     | 40     | 37     | 30    | 5     |      | 838     |
| POLAND                | 601                             | 9      | 6      | 13     | 15     | 9      | 18     | 14     | 15     | 20     | 15     | 12     | 11    | 1     |      | 759     |
| VENEZUELA             | 322                             | 29     | 33     | 26     | 28     | 23     | 28     | 33     | 31     | 31     | 28     | 26     | 12    |       |      | 650     |
| Others ( 133 )        | 4019                            | 147    | 181    | 170    | 224    | 280    | 276    | 359    | 406    | 407    | 497    | 415    | 295   | 69    |      | 7745    |
| Ownership:            |                                 |        |        |        |        |        |        |        |        |        |        |        |       |       |      |         |
| U.S. Corporations     | 1006506                         | 42084  | 45232  | 47983  | 54454  | 67399  | 64588  | 76825  | 75736  | 78245  | 75095  | 62906  | 40457 | 10261 | 262  | 1748033 |
| U.S. Government       | 40941                           | 1192   | 1225   | 1222   | 1093   | 1162   | 920    | 956    | 911    | 812    | 888    | 804    | 546   | 159   | 2    | 52833   |
| U.S. Individuals      | 321912                          | 12844  | 12940  | 13878  | 15213  | 16082  | 15306  | 16897  | 15869  | 15652  | 14910  | 12595  | 9497  | 2797  | 83   | 496475  |
| Foreign Corporations  | 586938                          | 39259  | 39800  | 40201  | 46952  | 53905  | 57641  | 67418  | 67099  | 70402  | 70890  | 65555  | 44805 | 11892 | 374  | 1263131 |
| Foreign Government    | 8585                            | 421    | 342    | 265    | 290    | 294    | 243    | 168    | 110    | 106    | 115    | 61     | 48    | 11    | 1    | 11060   |
| Foreign Individuals   | 109578                          | 4442   | 4367   | 4734   | 5246   | 5398   | 5766   | 6270   | 5989   | 6661   | 6537   | 5912   | 4318  | 1310  | 43   | 176571  |



Ownership:

Part B

Ranked Listing of Organizations with Patent Grants

As Distributed By Year of Patent Grant

and As Distributed By Year of Patent Application

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

ALL TECHNOLOGIES (UTILITY PATENTS) REPORT (PARTS A1, A2, B)

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---- Organizational Patenting (Granted: Jan 01, 1969 - Dec 31, 2004) ---- Ranked List of Organizations with 1000 or More Patents ----

Pre

1991 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 TOTAL

INTERNATIONAL BUSINESS MACHINES CORPORATION

Patents By Year of Grant: 12048 679 843 1085 1298 1383 1869 1724 2657 2756 2886 3411 3288 3415 3248 42590

Patents By Year of Application: 13613 1233 1500 1262 1843 2553 2717 3580 3689 4025 3170 2074 1009 313 9 42590

GENERAL ELECTRIC COMPANY

Patents By Year of Grant: 18551 809 937 932 970 758 819 664 729 699 787 1107 1416 1139 976 31293

Patents By Year of Application: 20051 885 953 869 885 841 738 769 915 1207 1312 1089 644 134 1 31293

CANON KABUSHIKI KAISHA

Patents By Year of Grant: 6981 827 1109 1036 1096 1085 1528 1373 1919 1793 1890 1877 1891 1992 1805 28202

Patents By Year of Application: 8652 1170 1263 1327 1924 2416 2006 2416 1692 1718 1374 1247 772 221 4 28202

HITACHI, LTD

Patents By Year of Grant: 10403 929 956 913 976 910 963 903 1094 1008 1036 1272 1600 1892 1514 26369

Patents By Year of Application: 12547 1003 919 915 986 1133 1003 1063 969 1268 1455 1742 1094 263 9 26369

TOSHIBA CORPORATION

Patents By Year of Grant: 7722 1014 1024 1039 968 969 914 862 1170 1200 1232 1149 1130 1184 1311 22888

Patents By Year of Application: 9602 1183 929 886 1088 1077 1240 1329 1286 1119 1061 1040 786 250 12 22888

NEC CORPORATION

Patents By Year of Grant: 3480 428 453 594 897 1005 1043 1095 1627 1843 2021 1953 1821 1181 813 20254

Patents By Year of Application: 4289 612 885 778 1356 1268 1678 2319 2331 2066 1538 818 268 48 0 20254

EASTMAN KODAK COMPANY

Patents By Year of Grant: 8048 863 775 1007 888 772 768 795 1124 992 875 719 694 748 712 19780

Patents By Year of Application: 9439 929 1038 785 760 780 1202 1093 1107 652 762 638 448 144 3 19780

MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.

Patents By Year of Grant: 4707 456 608 713 771 854 841 746 1034 1052 1137 1440 1544 1774 1934 19611

Patents By Year of Application: 5688 747 782 856 926 963 1063 1277 1350 1512 1638 1525 959 314 11 19611

mitsubishi denki kabushiki kaisha

Patents By Year of Grant: 4676 938 959 923 968 972 933 891 1080 1054 1010 1184 1373 1243 781 18985

Patents By Year of Application: 6336 1073 976 943 980 1113 1075 1174 1032 1096 1176 1207 674 126 4 18985

SONY CORPORATION

Patents By Year of Grant: 3655 299 419 565 656 754 864 861 1316 1417 1385 1363 1434 1311 1305 17604

Patents By Year of Application: 4325 561 729 754 930 1170 1454 1945 1527 1537 1251 897 397 125 2 17604

MOTOROLA, INC.

Patents By Year of Grant: 5111 613 660 729 837 1012 1064 1058 1406 1192 1196 778 712 610 563 17541

Patents By Year of Application: 6193 783 840 964 1219 1399 1395 1394 1022 680 888 411 304 48 1 17541

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

ALL TECHNOLOGIES (UTILITY PATENTS) REPORT (PARTS A1, A2, B)

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---- Organizational Patenting (Granted: Jan 01, 1969 - Dec 31, 2004) ---- Ranked List of Organizations with 1000 or More Patents ----

|  | Pre<br>1991 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | TOTAL |
|--|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
|--|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|

SIEMENS AKTIENGESELLSCHAFT

|                                 |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |       |
|---------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| Patents By Year of Grant:       | 9065 | 475 | 398 | 371 | 376 | 419 | 418 | 454 | 626 | 722 | 912 | 793 | 674 | 660 | 732 | 17095 |
| Patents By Year of Application: | 9815 | 379 | 407 | 404 | 466 | 515 | 622 | 821 | 944 | 912 | 703 | 584 | 414 | 108 | 1   | 17095 |

U.S. PHILIPS CORPORATION

|                                 |       |     |     |     |     |     |     |     |     |     |     |     |     |   |   |       |
|---------------------------------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---|---|-------|
| Patents By Year of Grant:       | 9673  | 650 | 501 | 441 | 396 | 504 | 477 | 473 | 725 | 735 | 693 | 702 | 253 | 4 | 2 | 16229 |
| Patents By Year of Application: | 10704 | 495 | 441 | 458 | 570 | 671 | 741 | 803 | 686 | 466 | 173 | 21  | 0   | 0 | 0 | 16229 |

AT&T CORP.

|                                 |       |     |     |     |     |     |     |     |     |     |     |     |     |     |     |       |
|---------------------------------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| Patents By Year of Grant:       | 11248 | 484 | 440 | 448 | 595 | 638 | 510 | 46  | 150 | 278 | 294 | 289 | 284 | 208 | 218 | 16130 |
| Patents By Year of Application: | 12086 | 461 | 565 | 690 | 474 | 209 | 218 | 487 | 337 | 272 | 175 | 107 | 40  | 9   | 0   | 16130 |

E. I. DU PONT DE NEMOURS AND COMPANY

|                                 |       |     |     |     |     |     |     |     |     |     |     |     |     |     |     |       |
|---------------------------------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| Patents By Year of Grant:       | 9607  | 597 | 599 | 568 | 486 | 441 | 395 | 311 | 393 | 338 | 338 | 330 | 312 | 340 | 330 | 15385 |
| Patents By Year of Application: | 10651 | 551 | 505 | 456 | 425 | 428 | 365 | 403 | 333 | 331 | 362 | 312 | 206 | 56  | 1   | 15385 |

FUJITSU LIMITED

|                                 |      |     |     |     |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------------|------|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|-------|
| Patents By Year of Grant:       | 2364 | 358 | 412 | 452 | 592  | 724  | 869  | 903  | 1189 | 1192 | 1146 | 1166 | 1211 | 1302 | 1296 | 15176 |
| Patents By Year of Application: | 3087 | 546 | 603 | 685 | 1017 | 1229 | 1286 | 1413 | 1416 | 1151 | 1090 | 919  | 559  | 171  | 4    | 15176 |

FUJI PHOTO FILM CO., LTD

|                                 |      |     |     |     |     |     |     |     |     |     |     |     |     |     |      |       |
|---------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-------|
| Patents By Year of Grant:       | 6284 | 734 | 641 | 632 | 545 | 504 | 510 | 467 | 547 | 539 | 542 | 583 | 687 | 804 | 1025 | 15044 |
| Patents By Year of Application: | 7526 | 647 | 570 | 516 | 525 | 550 | 623 | 667 | 547 | 639 | 792 | 755 | 522 | 164 | 1    | 15044 |

XEROX CORPORATION

|                                 |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |       |
|---------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| Patents By Year of Grant:       | 6345 | 354 | 473 | 561 | 611 | 551 | 703 | 606 | 769 | 665 | 569 | 716 | 693 | 613 | 514 | 14743 |
| Patents By Year of Application: | 7085 | 560 | 588 | 653 | 704 | 720 | 691 | 645 | 856 | 802 | 645 | 392 | 309 | 91  | 2   | 14743 |

BAYER AKTIENGESELLSCHAFT

|                                 |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |       |
|---------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| Patents By Year of Grant:       | 8711 | 492 | 472 | 443 | 342 | 327 | 323 | 357 | 381 | 341 | 304 | 362 | 398 | 348 | 329 | 13930 |
| Patents By Year of Application: | 9538 | 392 | 419 | 358 | 345 | 399 | 416 | 385 | 283 | 351 | 320 | 391 | 285 | 46  | 2   | 13930 |

UNITED STATES OF AMERICA, NAVY

|                                 |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |       |
|---------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| Patents By Year of Grant:       | 8699 | 381 | 297 | 344 | 378 | 330 | 285 | 288 | 341 | 348 | 351 | 313 | 378 | 358 | 317 | 13408 |
| Patents By Year of Application: | 9464 | 313 | 354 | 356 | 308 | 330 | 328 | 359 | 345 | 280 | 316 | 312 | 258 | 84  | 1   | 13408 |

GENERAL MOTORS CORPORATION

|                                 |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |       |
|---------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| Patents By Year of Grant:       | 8619 | 437 | 399 | 438 | 331 | 282 | 297 | 277 | 305 | 275 | 254 | 176 | 190 | 291 | 376 | 12947 |
| Patents By Year of Application: | 9149 | 451 | 441 | 340 | 325 | 312 | 311 | 264 | 278 | 171 | 211 | 258 | 334 | 100 | 2   | 12947 |

TEXAS INSTRUMENTS, INCORPORATED

|                                 |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |       |
|---------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| Patents By Year of Grant:       | 4353 | 373 | 394 | 369 | 479 | 527 | 600 | 607 | 611 | 598 | 686 | 799 | 717 | 764 | 898 | 12775 |
| Patents By Year of Application: | 5097 | 407 | 437 | 559 | 739 | 828 | 558 | 755 | 697 | 773 | 660 | 612 | 495 | 154 | 4   | 12775 |

---- Organizational Patenting (Granted: Jan 01, 1969 - Dec 31, 2004) ---- Ranked List of Organizations with 1000 or More Patents ----

|   | Pre<br>1991 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | TOTAL |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| <b>SAMSUNG ELECTRONICS CO., LTD.</b>                              |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:   | 105         | 148  | 250  | 347  | 412  | 423  | 485  | 584  | 1305 | 1542 | 1437 | 1446 | 1328 | 1313 | 1604 | 12729 |
| Patents By Year of Application:                                   | 499         | 377  | 408  | 419  | 498  | 656  | 1532 | 1608 | 1819 | 1413 | 1154 | 1099 | 907  | 329  | 11   | 12729 |
| <b>WESTINGHOUSE ELECTRIC CORP.</b>                                |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:   | 10268       | 354  | 358  | 276  | 248  | 170  | 132  | 72   | 81   | 11   | 4    | 0    | 1    | 0    | 0    | 11975 |
| Patents By Year of Application:                                   | 10897       | 305  | 228  | 194  | 182  | 86   | 53   | 28   | 1    | 0    | 1    | 0    | 0    | 0    | 0    | 11975 |
| <b>MICRON TECHNOLOGY, INC.</b>                                    |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:   | 46          | 77   | 114  | 172  | 105  | 63   | 125  | 318  | 581  | 934  | 1304 | 1643 | 1834 | 1707 | 1760 | 10783 |
| Patents By Year of Application:                                   | 174         | 143  | 174  | 75   | 96   | 386  | 676  | 1187 | 1491 | 1486 | 1679 | 1618 | 1225 | 353  | 20   | 10783 |
| <b>ROBERT BOSCH GMBH</b>  |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:   | 4327        | 261  | 278  | 363  | 316  | 312  | 306  | 267  | 348  | 419  | 547  | 700  | 679  | 753  | 903  | 10779 |
| Patents By Year of Application:                                   | 4758        | 332  | 373  | 304  | 338  | 312  | 387  | 490  | 513  | 740  | 697  | 745  | 648  | 142  | 0    | 10779 |
| <b>BASF AKTIENGESELLSCHAFT</b>                                    |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:   | 5175        | 384  | 396  | 360  | 318  | 301  | 317  | 276  | 399  | 414  | 509  | 486  | 473  | 393  | 343  | 10544 |
| Patents By Year of Application:                                   | 5846        | 346  | 315  | 330  | 327  | 384  | 361  | 477  | 512  | 492  | 457  | 395  | 248  | 54   | 0    | 10544 |
| <b>DOW CHEMICAL COMPANY</b>                                       |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:   | 7899        | 332  | 320  | 328  | 267  | 226  | 196  | 163  | 174  | 141  | 133  | 167  | 118  | 42   | 28   | 10534 |
| Patents By Year of Application:                                   | 8485        | 289  | 271  | 265  | 231  | 225  | 175  | 153  | 121  | 132  | 120  | 52   | 15   | 0    | 0    | 10534 |
| <b>HEWLETT-PACKARD COMPANY</b>                                    |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:   | 1738        | 318  | 344  | 338  | 428  | 470  | 501  | 530  | 805  | 850  | 901  | 978  | 1061 | 403  | 0    | 9665  |
| Patents By Year of Application:                                   | 2354        | 393  | 413  | 449  | 553  | 661  | 879  | 1004 | 935  | 867  | 650  | 481  | 26   | 0    | 0    | 9665  |
| <b>INTEL CORPORATION</b>  |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:   | 345         | 56   | 73   | 125  | 203  | 271  | 423  | 405  | 701  | 733  | 795  | 809  | 1077 | 1592 | 1601 | 9209  |
| Patents By Year of Application:                                   | 463         | 113  | 208  | 324  | 455  | 613  | 829  | 992  | 1035 | 1230 | 1196 | 923  | 628  | 199  | 1    | 9209  |
| <b>MINNESOTA MINING AND MANUFACTURING COMPANY</b>                 |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:   | 4654        | 365  | 388  | 414  | 519  | 564  | 537  | 548  | 554  | 317  | 50   | 14   | 11   | 6    | 3    | 8944  |
| Patents By Year of Application:                                   | 5314        | 414  | 454  | 534  | 625  | 695  | 527  | 322  | 42   | 8    | 5    | 3    | 0    | 1    | 0    | 8944  |
| <b>SHARP KABUSHIKI KAISHA (SHARP CORPORATION)</b>                 |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:   | 2163        | 385  | 393  | 373  | 454  | 388  | 352  | 395  | 560  | 521  | 586  | 526  | 534  | 493  | 529  | 8652  |
| Patents By Year of Application:                                   | 2894        | 428  | 446  | 408  | 398  | 507  | 563  | 592  | 617  | 461  | 572  | 431  | 252  | 82   | 1    | 8652  |
| <b>HONDA GIKEN KOGYO KABUSHIKI KAISHA (HONDA MOTOR CO., LTD.)</b> |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:   | 2946        | 245  | 195  | 243  | 223  | 248  | 293  | 341  | 389  | 461  | 463  | 562  | 653  | 647  | 736  | 8645  |
| Patents By Year of Application:                                   | 3334        | 217  | 255  | 240  | 301  | 407  | 371  | 469  | 520  | 434  | 715  | 658  | 583  | 135  | 6    | 8645  |

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

ALL TECHNOLOGIES (UTILITY PATENTS) REPORT (PARTS A1, A2, B)

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---- Organizational Patenting (Granted: Jan 01, 1969 - Dec 31, 2004) ---- Ranked List of Organizations with 1000 or More Patents ----

|                                 | Pre  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                                 | 1991 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | TOTAL |
| CIBA-GEIGY CORPORATION          |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:       | 6382 | 414  | 319  | 332  | 299  | 272  | 271  | 238  | 16   | 4    | 3    | 0    | 2    | 0    | 0    | 8552  |
| Patents By Year of Application: | 7023 | 317  | 289  | 290  | 309  | 279  | 43   | 1    | 0    | 1    | 0    | 0    | 0    | 0    | 0    | 8552  |
| UNITED STATES OF AMERICA, ARMY  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:       | 5879 | 171  | 144  | 153  | 186  | 172  | 137  | 168  | 165  | 139  | 141  | 161  | 145  | 129  | 134  | 8024  |
| Patents By Year of Application: | 6134 | 148  | 178  | 179  | 178  | 204  | 172  | 140  | 154  | 142  | 152  | 121  | 86   | 35   | 1    | 8024  |
| HOECHST AKTIENGESELLSCHAFT      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:       | 5028 | 282  | 331  | 356  | 335  | 311  | 351  | 353  | 327  | 152  | 82   | 18   | 18   | 8    | 1    | 7953  |
| Patents By Year of Application: | 5601 | 297  | 367  | 331  | 370  | 496  | 226  | 203  | 39   | 13   | 5    | 4    | 1    | 0    | 0    | 7953  |
| RCA CORPORATION                 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:       | 7887 | 1    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 7888  |
| Patents By Year of Application: | 7888 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 7888  |
| RICOH COMPANY, LTD.             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:       | 2753 | 314  | 360  | 287  | 304  | 273  | 295  | 336  | 406  | 411  | 416  | 375  | 326  | 410  | 531  | 7797  |
| Patents By Year of Application: | 3377 | 306  | 316  | 291  | 337  | 376  | 415  | 442  | 422  | 406  | 359  | 343  | 308  | 96   | 3    | 7797  |
| ADVANCED MICRO DEVICES, INC.    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:       | 466  | 83   | 71   | 85   | 86   | 129  | 179  | 271  | 556  | 824  | 1053 | 1086 | 1154 | 905  | 802  | 7750  |
| Patents By Year of Application: | 645  | 55   | 89   | 129  | 198  | 392  | 559  | 1114 | 1001 | 961  | 1157 | 808  | 521  | 117  | 4    | 7750  |
| PHILLIPS PETROLEUM COMPANY      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:       | 6261 | 157  | 171  | 193  | 149  | 101  | 91   | 76   | 75   | 72   | 113  | 89   | 80   | 48   | 15   | 7691  |
| Patents By Year of Application: | 6545 | 169  | 172  | 121  | 99   | 126  | 63   | 70   | 120  | 90   | 74   | 28   | 9    | 5    | 0    | 7691  |
| LUCENT TECHNOLOGIES INC.        |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:       | 0    | 0    | 0    | 0    | 0    | 0    | 289  | 768  | 928  | 1152 | 1411 | 1109 | 662  | 621  | 534  | 7474  |
| Patents By Year of Application: | 5    | 10   | 13   | 65   | 388  | 900  | 941  | 1263 | 1675 | 1325 | 586  | 183  | 92   | 27   | 1    | 7474  |
| NISSAN MOTOR COMPANY, LIMITED   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:       | 4420 | 334  | 340  | 212  | 139  | 119  | 102  | 138  | 164  | 211  | 251  | 260  | 249  | 260  | 261  | 7460  |
| Patents By Year of Application: | 4986 | 283  | 159  | 110  | 119  | 154  | 179  | 203  | 252  | 222  | 246  | 272  | 216  | 56   | 3    | 7460  |
| MOBIL OIL CORP.                 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:       | 5139 | 366  | 299  | 284  | 286  | 202  | 167  | 91   | 67   | 72   | 70   | 52   | 14   | 4    | 4    | 7117  |
| Patents By Year of Application: | 5683 | 323  | 282  | 239  | 208  | 137  | 53   | 68   | 68   | 51   | 5    | 0    | 0    | 0    | 0    | 7117  |
| PROCTER + GAMBLE COMPANY        |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:       | 2284 | 146  | 156  | 155  | 205  | 226  | 346  | 406  | 454  | 550  | 465  | 426  | 433  | 438  | 397  | 7087  |
| Patents By Year of Application: | 2544 | 148  | 183  | 248  | 340  | 476  | 575  | 576  | 402  | 438  | 477  | 410  | 225  | 45   | 0    | 7087  |

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

ALL TECHNOLOGIES (UTILITY PATENTS) REPORT (PARTS A1, A2, B)

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---- Organizational Patenting (Granted: Jan 01, 1969 - Dec 31, 2004) ---- Ranked List of Organizations with 1000 or More Patents ----

Pre

1991 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 TOTAL

TOYOTA JIDOSHA K.K.

Patents By Year of Grant: 3632 149 149 145 132 156 158 211 387 402 342 330 296 273 268 7030

Patents By Year of Application: 3868 138 155 155 164 209 394 495 338 306 279 293 156 73 7 7030

SHELL OIL COMPANY

Patents By Year of Grant: 4544 267 270 223 226 161 125 123 143 131 132 127 79 100 170 6821

Patents By Year of Application: 4943 244 233 197 174 154 156 143 127 105 105 157 64 19 0 6821

UNISYS CORPORATION

Patents By Year of Grant: 5391 99 85 51 80 112 133 109 122 91 97 107 118 99 117 6811

Patents By Year of Application: 5577 63 74 117 133 136 120 138 144 143 88 46 21 11 0 6811

UNITED STATES OF AMERICA, DEPARTMENT OF ENERGY

Patents By Year of Grant: 5186 195 242 172 199 114 71 68 61 53 56 66 45 42 40 6610

Patents By Year of Application: 5559 220 173 166 77 69 66 55 54 48 55 39 27 2 0 6610

ALLIED-SIGNAL INC.

Patents By Year of Grant: 4036 250 319 245 270 196 189 119 140 147 183 162 67 39 13 6375

Patents By Year of Application: 4516 308 259 218 173 156 160 160 169 192 34 20 9 1 0 6375

CATERPILLAR INC.

Patents By Year of Grant: 3406 76 60 107 107 143 206 212 197 262 334 258 246 220 174 6008

Patents By Year of Application: 3513 84 117 134 206 229 263 262 298 292 253 214 128 15 0 6008

FORD MOTOR COMPANY

Patents By Year of Grant: 3395 180 229 286 320 334 381 265 147 151 102 27 18 46 58 5939

Patents By Year of Application: 3706 246 303 395 360 345 156 145 113 43 57 18 36 16 0 5939

EXXON RESEARCH + ENGINEERING CO.

Patents By Year of Grant: 4758 136 111 109 127 89 72 73 105 122 101 70 8 1 1 5883

Patents By Year of Application: 4975 119 105 109 89 99 81 119 113 65 8 1 0 0 0 5883

UNITED TECHNOLOGIES CORPORATION

Patents By Year of Grant: 3860 164 235 205 203 214 159 123 116 107 118 101 78 58 54 5795

Patents By Year of Application: 4214 227 220 200 206 141 110 116 116 93 45 65 35 7 0 5795

MONSANTO COMPANY, INC.

Patents By Year of Grant: 4598 129 129 103 76 75 82 97 77 83 77 63 10 11 6 5616

Patents By Year of Application: 4844 95 89 86 83 117 76 92 54 54 15 7 4 0 0 5616

MINOLTA CAMERA CO., LTD.

Patents By Year of Grant: 2182 315 282 237 160 114 164 158 304 365 333 305 240 221 210 5590

Patents By Year of Application: 2727 266 187 140 181 195 285 429 396 322 242 149 53 18 0 5590

---- Organizational Patenting (Granted: Jan 01, 1969 - Dec 31, 2004) ---- Ranked List of Organizations with 1000 or More Patents ----

|  | Pre<br>1991 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | TOTAL |
|--|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
|--|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|

OLYMPUS OPTICAL CO., LTD.

|                                 |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
|---------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Patents By Year of Grant:       | 2413 | 161 | 197 | 203 | 228 | 210 | 223 | 213 | 278 | 222 | 281 | 253 | 260 | 251 | 119 | 5512 |
| Patents By Year of Application: | 2725 | 223 | 221 | 277 | 254 | 264 | 237 | 243 | 266 | 271 | 251 | 196 | 73  | 11  | 0   | 5512 |

IMPERIAL CHEMICAL INDUSTRIES PLC

|                                 |      |     |     |     |     |    |    |    |    |    |    |    |    |    |    |      |
|---------------------------------|------|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|------|
| Patents By Year of Grant:       | 4115 | 181 | 189 | 232 | 128 | 93 | 66 | 61 | 63 | 44 | 40 | 39 | 25 | 17 | 15 | 5308 |
| Patents By Year of Application: | 4477 | 193 | 169 | 91  | 74  | 86 | 62 | 41 | 34 | 38 | 20 | 13 | 9  | 1  | 0  | 5308 |

MERCK + CO., INC.

|                                 |      |     |     |     |     |     |     |     |     |     |     |     |     |     |    |      |
|---------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|------|
| Patents By Year of Grant:       | 2955 | 152 | 164 | 222 | 163 | 125 | 126 | 161 | 178 | 216 | 182 | 185 | 174 | 132 | 58 | 5193 |
| Patents By Year of Application: | 3212 | 202 | 229 | 131 | 162 | 163 | 145 | 228 | 208 | 176 | 159 | 127 | 38  | 12  | 1  | 5193 |

HUGHES AIRCRAFT COMPANY

|                                 |      |     |     |     |     |     |     |     |    |   |   |   |   |   |   |      |
|---------------------------------|------|-----|-----|-----|-----|-----|-----|-----|----|---|---|---|---|---|---|------|
| Patents By Year of Grant:       | 2985 | 350 | 296 | 327 | 411 | 323 | 272 | 130 | 50 | 6 | 1 | 0 | 0 | 0 | 0 | 5151 |
| Patents By Year of Application: | 3576 | 347 | 412 | 344 | 253 | 168 | 48  | 3   | 0  | 0 | 0 | 0 | 0 | 0 | 0 | 5151 |

AMERICAN CYANAMID COMPANY

|                                 |      |     |     |     |     |     |     |     |     |     |    |    |    |    |   |      |
|---------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|---|------|
| Patents By Year of Grant:       | 3890 | 106 | 126 | 135 | 148 | 98  | 106 | 107 | 112 | 111 | 66 | 69 | 31 | 10 | 3 | 5118 |
| Patents By Year of Application: | 4109 | 125 | 137 | 144 | 110 | 183 | 50  | 81  | 61  | 72  | 40 | 6  | 0  | 0  | 0 | 5118 |

NIKON CORPORATION

|                                 |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
|---------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Patents By Year of Grant:       | 1255 | 84  | 104 | 132 | 113 | 224 | 423 | 479 | 575 | 365 | 278 | 285 | 245 | 299 | 228 | 5089 |
| Patents By Year of Application: | 1381 | 138 | 121 | 172 | 386 | 625 | 502 | 505 | 279 | 286 | 319 | 227 | 114 | 33  | 1   | 5089 |

SEIKO EPSON CORPORATION

|                                 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
|---------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Patents By Year of Grant:       | 202 | 92  | 133 | 169 | 148 | 146 | 179 | 225 | 312 | 302 | 396 | 498 | 618 | 764 | 839 | 5023 |
| Patents By Year of Application: | 433 | 154 | 170 | 186 | 216 | 297 | 308 | 372 | 468 | 552 | 608 | 652 | 471 | 131 | 5   | 5023 |

UNITED STATES OF AMERICA, NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

|                                 |      |     |     |     |     |     |     |    |     |    |    |    |    |    |     |      |
|---------------------------------|------|-----|-----|-----|-----|-----|-----|----|-----|----|----|----|----|----|-----|------|
| Patents By Year of Grant:       | 3353 | 151 | 151 | 166 | 160 | 122 | 104 | 96 | 95  | 93 | 96 | 91 | 85 | 80 | 102 | 4945 |
| Patents By Year of Application: | 3590 | 170 | 159 | 167 | 125 | 111 | 96  | 95 | 102 | 72 | 99 | 77 | 68 | 14 | 0   | 4945 |

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|                                 |      |    |     |     |     |     |    |    |     |     |     |    |    |    |    |      |
|---------------------------------|------|----|-----|-----|-----|-----|----|----|-----|-----|-----|----|----|----|----|------|
| Patents By Year of Grant:       | 3585 | 99 | 103 | 115 | 103 | 109 | 97 | 60 | 88  | 107 | 104 | 84 | 95 | 67 | 68 | 4884 |
| Patents By Year of Application: | 3747 | 98 | 124 | 95  | 128 | 83  | 79 | 92 | 111 | 121 | 91  | 69 | 41 | 5  | 0  | 4884 |

ROCKWELL INTERNATIONAL CORPORATION

|                                 |      |     |     |     |     |     |     |    |    |    |    |   |   |   |   |      |
|---------------------------------|------|-----|-----|-----|-----|-----|-----|----|----|----|----|---|---|---|---|------|
| Patents By Year of Grant:       | 3802 | 152 | 124 | 136 | 150 | 117 | 119 | 75 | 77 | 67 | 11 | 6 | 1 | 1 | 0 | 4838 |
| Patents By Year of Application: | 4071 | 146 | 137 | 133 | 114 | 120 | 60  | 45 | 8  | 3  | 0  | 1 | 0 | 0 | 0 | 4838 |

UNIVERSITY OF CALIFORNIA, THE REGENTS OF

|                                 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
|---------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Patents By Year of Grant:       | 747 | 83  | 79  | 112 | 153 | 203 | 255 | 264 | 386 | 434 | 432 | 401 | 430 | 437 | 422 | 4838 |
| Patents By Year of Application: | 949 | 115 | 129 | 239 | 320 | 473 | 371 | 407 | 439 | 428 | 411 | 347 | 173 | 36  | 1   | 4838 |



---- Organizational Patenting (Granted: Jan 01, 1969 - Dec 31, 2004) ---- Ranked List of Organizations with 1000 or More Patents ----

|                                     | Pre<br>1991 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | TOTAL |
|-------------------------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| UNITED STATES OF AMERICA, AIR FORCE |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:           | 3332        | 135  | 139  | 132  | 131  | 80   | 99   | 86   | 79   | 90   | 76   | 100  | 68   | 68   | 48   | 4663  |
| Patents By Year of Application:     | 3590        | 130  | 125  | 105  | 98   | 99   | 84   | 81   | 83   | 81   | 70   | 65   | 39   | 13   | 0    | 4663  |
| BOEING COMPANY                      |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:           | 2301        | 197  | 182  | 106  | 80   | 93   | 97   | 114  | 157  | 147  | 136  | 163  | 199  | 266  | 420  | 4658  |
| Patents By Year of Application:     | 2682        | 131  | 88   | 93   | 68   | 210  | 148  | 119  | 139  | 129  | 180  | 297  | 291  | 79   | 4    | 4658  |
| HONEYWELL INC.                      |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:           | 3193        | 162  | 137  | 139  | 167  | 173  | 126  | 100  | 123  | 128  | 101  | 48   | 26   | 20   | 13   | 4656  |
| Patents By Year of Application:     | 3472        | 155  | 155  | 184  | 133  | 113  | 132  | 147  | 93   | 55   | 9    | 4    | 4    | 0    | 0    | 4656  |
| UNION CARBIDE CORPORATION           |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:           | 4584        | 8    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 2    | 0    | 0    | 4594  |
| Patents By Year of Application:     | 4592        | 0    | 0    | 0    | 1    | 1    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 4594  |
| TEXACO INC.                         |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:           | 3622        | 100  | 107  | 109  | 87   | 107  | 65   | 25   | 34   | 35   | 43   | 25   | 19   | 16   | 13   | 4407  |
| Patents By Year of Application:     | 3794        | 110  | 101  | 94   | 86   | 46   | 31   | 32   | 48   | 23   | 15   | 20   | 5    | 2    | 0    | 4407  |
| EATON CORPORATION                   |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:           | 2155        | 114  | 141  | 134  | 148  | 165  | 182  | 145  | 164  | 222  | 194  | 148  | 156  | 139  | 123  | 4330  |
| Patents By Year of Application:     | 2344        | 133  | 154  | 185  | 188  | 144  | 174  | 186  | 196  | 175  | 182  | 126  | 107  | 34   | 2    | 4330  |
| SUMITOMO CHEMICAL COMPANY, LIMITED  |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:           | 2204        | 146  | 130  | 147  | 164  | 139  | 138  | 123  | 148  | 136  | 149  | 168  | 187  | 174  | 152  | 4305  |
| Patents By Year of Application:     | 2457        | 134  | 159  | 149  | 187  | 159  | 143  | 151  | 136  | 168  | 162  | 179  | 96   | 24   | 1    | 4305  |
| SUN MICROSYSTEMS, INC.              |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:           | 28          | 21   | 53   | 64   | 69   | 63   | 113  | 152  | 423  | 560  | 465  | 436  | 502  | 564  | 678  | 4191  |
| Patents By Year of Application:     | 115         | 54   | 76   | 65   | 118  | 314  | 603  | 657  | 492  | 517  | 475  | 399  | 270  | 36   | 0    | 4191  |
| KONICA CORPORATION                  |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:           | 1611        | 225  | 203  | 222  | 228  | 177  | 155  | 125  | 166  | 159  | 152  | 148  | 177  | 146  | 194  | 4088  |
| Patents By Year of Application:     | 1978        | 223  | 196  | 186  | 187  | 161  | 162  | 179  | 182  | 156  | 154  | 139  | 128  | 56   | 1    | 4088  |
| TELEFONAKTIEBOLAGET LM ERICSSON     |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:           | 578         | 28   | 36   | 46   | 66   | 80   | 151  | 113  | 204  | 365  | 463  | 507  | 510  | 471  | 390  | 4008  |
| Patents By Year of Application:     | 645         | 56   | 58   | 96   | 134  | 222  | 247  | 594  | 642  | 577  | 507  | 178  | 38   | 14   | 0    | 4008  |
| TRW INC.                            |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:           | 2077        | 40   | 50   | 82   | 104  | 96   | 98   | 101  | 144  | 200  | 275  | 309  | 227  | 134  | 51   | 3988  |
| Patents By Year of Application:     | 2161        | 85   | 112  | 90   | 83   | 132  | 177  | 221  | 268  | 284  | 220  | 135  | 20   | 0    | 0    | 3988  |

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

ALL TECHNOLOGIES (UTILITY PATENTS) REPORT (PARTS A1, A2, B)

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---- Organizational Patenting

(Granted: Jan 01, 1969 - Dec 31, 2004) ---- Ranked List of Organizations with 1000 or More Patents ----

|  | Pre  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
|  | 1991 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | TOTAL |
| HOFFMANN-LA ROCHE INC.                 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:              | 2739 | 78   | 72   | 87   | 89   | 103  | 106  | 79   | 72   | 70   | 61   | 77   | 73   | 84   | 63   | 3853  |
| Patents By Year of Application:        | 2908 | 60   | 92   | 89   | 119  | 98   | 58   | 66   | 56   | 64   | 81   | 85   | 55   | 22   | 0    | 3853  |
| PPG INDUSTRIES INC.                    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:              | 3201 | 94   | 69   | 83   | 60   | 52   | 51   | 74   | 97   | 44   | 0    | 0    | 0    | 0    | 0    | 3825  |
| Patents By Year of Application:        | 3363 | 81   | 47   | 65   | 66   | 78   | 71   | 53   | 1    | 0    | 0    | 0    | 0    | 0    | 0    | 3825  |
| CORNING INCORPORATED                   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:              | 1998 | 59   | 82   | 102  | 104  | 72   | 85   | 78   | 72   | 102  | 111  | 214  | 247  | 257  | 235  | 3818  |
| Patents By Year of Application:        | 2109 | 90   | 108  | 96   | 104  | 95   | 54   | 105  | 124  | 260  | 252  | 246  | 148  | 25   | 2    | 3818  |
| SANYO ELECTRIC CO., LTD.               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:              | 762  | 133  | 117  | 119  | 123  | 115  | 130  | 164  | 251  | 239  | 251  | 286  | 367  | 373  | 377  | 3807  |
| Patents By Year of Application:        | 992  | 112  | 104  | 144  | 163  | 177  | 268  | 275  | 318  | 301  | 390  | 306  | 207  | 48   | 2    | 3807  |
| ELI LILLY AND COMPANY                  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:              | 1946 | 66   | 63   | 79   | 77   | 147  | 245  | 222  | 180  | 189  | 161  | 115  | 116  | 87   | 59   | 3752  |
| Patents By Year of Application:        | 2070 | 65   | 99   | 158  | 158  | 382  | 110  | 214  | 158  | 109  | 91   | 75   | 45   | 18   | 0    | 3752  |
| GOODYEAR TIRE + RUBBER COMPANY         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:              | 2236 | 88   | 64   | 82   | 82   | 64   | 70   | 93   | 108  | 73   | 101  | 138  | 192  | 170  | 143  | 3704  |
| Patents By Year of Application:        | 2373 | 75   | 80   | 61   | 73   | 97   | 104  | 113  | 107  | 128  | 193  | 180  | 86   | 34   | 0    | 3704  |
| AMP INCORPORATED                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:              | 3035 | 267  | 231  | 129  | 2    | 0    | 1    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 3665  |
| Patents By Year of Application:        | 3341 | 212  | 111  | 0    | 1    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 3665  |
| MURATA MANUFACTURING CO., LTD.         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:              | 486  | 90   | 83   | 66   | 103  | 118  | 151  | 150  | 217  | 268  | 302  | 320  | 444  | 446  | 373  | 3617  |
| Patents By Year of Application:        | 625  | 70   | 97   | 120  | 170  | 169  | 242  | 293  | 282  | 356  | 465  | 395  | 261  | 70   | 2    | 3617  |
| FMC CORPORATION                        |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:              | 2672 | 78   | 77   | 80   | 71   | 53   | 70   | 71   | 97   | 80   | 73   | 47   | 46   | 16   | 15   | 3546  |
| Patents By Year of Application:        | 2803 | 95   | 58   | 72   | 72   | 76   | 91   | 94   | 63   | 46   | 54   | 15   | 6    | 0    | 1    | 3546  |
| GTE PRODUCTS CORPORATION               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:              | 3150 | 148  | 94   | 79   | 35   | 8    | 2    | 0    | 3    | 1    | 2    | 0    | 0    | 0    | 0    | 3522  |
| Patents By Year of Application:        | 3350 | 100  | 63   | 7    | 2    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 3522  |
| SUMITOMO ELECTRIC INDUSTRIES CO., LTD. |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:              | 989  | 131  | 178  | 232  | 233  | 233  | 209  | 172  | 158  | 162  | 136  | 156  | 170  | 183  | 177  | 3519  |
| Patents By Year of Application:        | 1246 | 204  | 271  | 208  | 262  | 249  | 145  | 162  | 134  | 142  | 176  | 177  | 113  | 30   | 0    | 3519  |

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

ALL TECHNOLOGIES (UTILITY PATENTS) REPORT (PARTS A1, A2, B)

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---- Organizational Patenting (Granted: Jan 01, 1969 - Dec 31, 2004) ---- Ranked List of Organizations with 1000 or More Patents ----

Pre

1991 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 TOTAL

MICROSOFT CORPORATION

Patents By Year of Grant: 7 2 7 15 23 46 97 199 334 352 344 396 499 499 629 3449

Patents By Year of Application: 30 7 66 68 157 267 375 497 610 616 496 183 63 14 0 3449

KONINKLIJKE PHILIPS ELECTRONICS N.V.

Patents By Year of Grant: 0 0 0 0 0 0 0 0 0 0 0 12 842 1353 1217 3424

Patents By Year of Application: 1 0 1 0 1 10 22 31 145 506 911 1166 579 50 1 3424

ASAHI KOGAKU KOGYO KABUSHIKI KAISHA

Patents By Year of Grant: 940 151 172 209 204 136 168 151 270 278 233 234 246 8 5 3405

Patents By Year of Application: 1244 200 209 150 187 179 223 299 246 236 168 63 1 0 0 3405

NIPPONDENSO CO., LTD.

Patents By Year of Grant: 1652 76 86 123 161 183 311 312 308 99 34 19 6 1 0 3371

Patents By Year of Application: 1788 108 164 203 266 389 364 57 18 8 5 1 0 0 0 3371

PFIZER INC.

Patents By Year of Grant: 1662 91 81 66 76 75 83 102 117 112 153 172 187 196 164 3337

Patents By Year of Application: 1818 69 89 83 117 113 74 132 99 217 211 175 103 37 0 3337

YAZAKI CORP.

Patents By Year of Grant: 247 65 112 124 119 115 171 238 290 307 304 335 311 311 202 3251

Patents By Year of Application: 341 143 116 142 188 220 320 319 305 284 355 282 195 39 2 3251

POLAROID CORPORATION

Patents By Year of Grant: 2662 36 39 39 40 55 59 60 60 54 35 20 12 24 17 3212

Patents By Year of Application: 2724 50 30 48 72 70 62 59 28 18 27 13 8 3 0 3212

DAIMLER-BENZ AKTIENGESELLSCHAFT

Patents By Year of Grant: 1922 107 97 120 95 104 129 159 241 174 36 17 2 1 0 3204

Patents By Year of Application: 2079 104 111 107 142 173 215 197 72 3 0 1 0 0 0 3204

NCR CORPORATION

Patents By Year of Grant: 1571 92 86 98 90 50 39 80 167 189 138 132 161 166 128 3187

Patents By Year of Application: 1758 111 92 65 47 119 174 226 169 166 133 87 34 6 0 3187

CHEVRON RESEARCH & TECHNOLOGY CO.

Patents By Year of Grant: 2830 77 85 73 64 24 5 5 0 1 0 2 0 0 0 3166

Patents By Year of Application: 2981 64 72 36 9 2 1 0 0 0 1 0 0 0 0 3166

ITT CORPORATION

Patents By Year of Grant: 2686 59 62 61 79 81 62 34 22 11 2 0 0 0 0 3159

Patents By Year of Application: 2785 71 70 89 70 55 13 5 1 0 0 0 0 0 0 3159

---- Organizational Patenting (Granted: Jan 01, 1969 - Dec 31, 2004) ---- Ranked List of Organizations with 1000 or More Patents ----

Pre  
1991 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 TOTAL

L'OREAL S.A.

Patents By Year of Grant: 937 85 71 79 70 72 126 165 182 259 227 268 280 208 128 3157  
Patents By Year of Application: 1084 75 70 81 136 222 216 264 207 282 275 169 72 4 0 3157

APPLIED MATERIALS, INC.

Patents By Year of Grant: 61 16 38 52 56 68 97 93 176 264 386 433 503 537 360 3140  
Patents By Year of Application: 101 55 55 82 109 172 274 361 357 415 557 350 216 35 1 3140

AISIN SEIKI KABUSHIKI KAISHA

Patents By Year of Grant: 1633 162 131 94 71 62 91 73 116 137 110 109 127 108 112 3136  
Patents By Year of Application: 1878 112 80 72 84 89 119 129 124 118 90 139 82 20 0 3136

BROTHER KOGYO KABUSHIKI KAISHA

Patents By Year of Grant: 659 261 217 165 155 117 133 149 209 263 224 188 115 105 165 3125  
Patents By Year of Application: 1063 181 174 132 165 161 256 262 292 138 88 81 97 33 2 3125

HEWLETT-PACKARD DEVELOPMENT COMPANY, L.P.

Patents By Year of Grant: 0 0 0 0 0 0 0 0 0 0 0 0 0 1292 1775 3067  
Patents By Year of Application: 0 0 0 1 0 2 7 19 71 254 626 1008 833 236 10 3067

RAYTHEON COMPANY

Patents By Year of Grant: 1457 85 85 72 51 45 10 20 117 219 205 182 157 184 176 3065  
Patents By Year of Application: 1661 93 48 56 30 54 145 237 143 134 148 144 134 36 2 3065

NATIONAL SEMICONDUCTOR CORPORATION

Patents By Year of Grant: 633 95 103 119 149 186 201 188 178 197 187 183 208 217 219 3063  
Patents By Year of Application: 807 111 157 157 217 259 167 174 227 188 197 190 157 53 2 3063

UPJOHN COMPANY

Patents By Year of Grant: 2866 23 31 30 23 23 33 21 1 1 0 1 0 0 1 3054  
Patents By Year of Application: 2913 31 28 30 26 23 2 0 0 0 0 0 1 0 0 3054

THOMSON-CSF

Patents By Year of Grant: 2106 138 107 90 84 90 52 52 66 67 47 46 46 21 12 3024  
Patents By Year of Application: 2340 100 94 74 70 72 55 63 55 41 41 19 0 0 0 3024

TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.

Patents By Year of Grant: 1 4 5 8 12 25 74 130 218 290 385 529 448 431 463 3023  
Patents By Year of Application: 7 9 9 13 32 107 250 309 384 581 342 418 470 92 0 3023

FUJI XEROX CO., LTD.

Patents By Year of Grant: 561 73 116 137 159 182 172 182 277 248 192 158 182 174 198 3011  
Patents By Year of Application: 766 128 160 183 165 246 295 271 178 175 183 137 86 38 0 3011

---- Organizational Patenting (Granted: Jan 01, 1969 - Dec 31, 2004) ---- Ranked List of Organizations with 1000 or More Patents ----

|   | Pre<br>1991 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | TOTAL |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| <b>DEERE + COMPANY</b>                            |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                         | 1753        | 91   | 62   | 85   | 57   | 67   | 64   | 55   | 70   | 84   | 69   | 122  | 119  | 154  | 158  | 3010  |
| Patents By Year of Application:                   | 1859        | 76   | 77   | 72   | 61   | 69   | 63   | 81   | 77   | 119  | 133  | 160  | 130  | 32   | 1    | 3010  |
| <b>PIONEER ELECTRONIC CORPORATION</b>             |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                         | 1123        | 180  | 235  | 220  | 173  | 148  | 101  | 110  | 141  | 139  | 130  | 120  | 64   | 36   | 28   | 2948  |
| Patents By Year of Application:                   | 1508        | 207  | 191  | 149  | 124  | 114  | 152  | 170  | 156  | 134  | 17   | 16   | 8    | 2    | 0    | 2948  |
| <b>OKI ELECTRIC INDUSTRY CO., LTD.</b>            |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                         | 526         | 96   | 111  | 113  | 101  | 80   | 78   | 67   | 120  | 200  | 223  | 298  | 324  | 294  | 306  | 2937  |
| Patents By Year of Application:                   | 695         | 142  | 87   | 84   | 93   | 107  | 105  | 245  | 299  | 259  | 309  | 223  | 215  | 72   | 2    | 2937  |
| <b>DENSO CORPORATION</b>                          |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                         | 0           | 0    | 0    | 0    | 0    | 0    | 0    | 7    | 124  | 305  | 369  | 435  | 482  | 552  | 647  | 2921  |
| Patents By Year of Application:                   | 0           | 0    | 0    | 1    | 1    | 5    | 114  | 346  | 384  | 437  | 426  | 553  | 457  | 184  | 13   | 2921  |
| <b>ABBOTT LABORATORIES</b>                        |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                         | 1051        | 80   | 128  | 127  | 144  | 116  | 182  | 189  | 164  | 149  | 128  | 124  | 115  | 114  | 65   | 2876  |
| Patents By Year of Application:                   | 1236        | 139  | 130  | 138  | 156  | 285  | 174  | 150  | 122  | 124  | 99   | 80   | 32   | 11   | 0    | 2876  |
| <b>W. R. GRACE &amp; CO.-CONN.</b>                |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                         | 1908        | 121  | 129  | 122  | 116  | 86   | 85   | 73   | 56   | 28   | 16   | 30   | 28   | 23   | 23   | 2844  |
| Patents By Year of Application:                   | 2127        | 135  | 100  | 110  | 71   | 117  | 43   | 34   | 20   | 19   | 23   | 25   | 16   | 4    | 0    | 2844  |
| <b>ALPS ELECTRIC CO., LTD.</b>                    |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                         | 1018        | 83   | 78   | 46   | 36   | 42   | 39   | 76   | 99   | 151  | 193  | 263  | 210  | 252  | 239  | 2825  |
| Patents By Year of Application:                   | 1141        | 60   | 46   | 40   | 52   | 74   | 113  | 179  | 193  | 250  | 261  | 239  | 124  | 50   | 3    | 2825  |
| <b>BENDIX CORPORATION(NOW ALLIED-SIGNAL INC.)</b> |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                         | 2825        | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 2825  |
| Patents By Year of Application:                   | 2825        | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 2825  |
| <b>MASSACHUSETTS INSTITUTE OF TECHNOLOGY</b>      |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                         | 1109        | 101  | 125  | 112  | 99   | 104  | 119  | 102  | 138  | 142  | 113  | 125  | 135  | 127  | 132  | 2783  |
| Patents By Year of Application:                   | 1362        | 108  | 97   | 115  | 150  | 139  | 116  | 126  | 148  | 144  | 127  | 90   | 50   | 11   | 0    | 2783  |
| <b>LSI LOGIC CORPORATION</b>                      |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                         | 23          | 10   | 20   | 39   | 45   | 78   | 127  | 168  | 229  | 339  | 325  | 289  | 308  | 375  | 378  | 2753  |
| Patents By Year of Application:                   | 54          | 27   | 59   | 91   | 114  | 232  | 307  | 397  | 382  | 216  | 258  | 366  | 191  | 59   | 0    | 2753  |
| <b>HOECHST CELANESE CORPORATION</b>               |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                         | 1879        | 128  | 133  | 113  | 93   | 78   | 72   | 75   | 68   | 25   | 10   | 3    | 0    | 0    | 0    | 2677  |
| Patents By Year of Application:                   | 2105        | 120  | 99   | 78   | 79   | 92   | 61   | 38   | 3    | 2    | 0    | 0    | 0    | 0    | 0    | 2677  |

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ALL TECHNOLOGIES (UTILITY PATENTS) REPORT (PARTS A1, A2, B)

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---- Organizational Patenting (Granted: Jan 01, 1969 - Dec 31, 2004) ---- Ranked List of Organizations with 1000 or More Patents ----

|                                     | Pre  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
|-------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                                     | 1991 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | TOTAL |
| 3M INNOVATIVE PROPERTIES COMPANY    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:           | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 172  | 434  | 431  | 529  | 572  | 525  | 2663  |
| Patents By Year of Application:     | 3    | 2    | 7    | 9    | 14   | 35   | 76   | 283  | 415  | 448  | 501  | 508  | 265  | 95   | 2    | 2663  |
| OLIN CORPORATION                    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:           | 2062 | 105  | 114  | 72   | 74   | 47   | 56   | 28   | 21   | 14   | 17   | 4    | 5    | 4    | 7    | 2630  |
| Patents By Year of Application:     | 2243 | 83   | 73   | 64   | 52   | 44   | 18   | 18   | 13   | 8    | 5    | 6    | 2    | 1    | 0    | 2630  |
| COMMISSARIAT A L'ENERGIE ATOMIQUE   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:           | 1629 | 49   | 69   | 51   | 62   | 40   | 69   | 79   | 88   | 81   | 62   | 83   | 86   | 82   | 88   | 2618  |
| Patents By Year of Application:     | 1729 | 61   | 54   | 51   | 71   | 85   | 94   | 93   | 63   | 97   | 83   | 78   | 49   | 10   | 0    | 2618  |
| DOW CORNING CORPORATION             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:           | 1312 | 135  | 144  | 93   | 132  | 106  | 107  | 88   | 108  | 105  | 75   | 58   | 51   | 46   | 47   | 2607  |
| Patents By Year of Application:     | 1532 | 114  | 107  | 125  | 126  | 110  | 110  | 88   | 88   | 64   | 44   | 49   | 45   | 5    | 0    | 2607  |
| AGFA-GEVAERT, AG                    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:           | 2194 | 53   | 33   | 36   | 40   | 39   | 19   | 39   | 50   | 54   | 13   | 6    | 14   | 6    | 7    | 2603  |
| Patents By Year of Application:     | 2262 | 35   | 42   | 35   | 38   | 49   | 40   | 51   | 20   | 13   | 11   | 3    | 1    | 3    | 0    | 2603  |
| COLGATE-PALMOLIVE COMPANY           |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:           | 1497 | 69   | 53   | 52   | 52   | 65   | 71   | 66   | 110  | 138  | 91   | 95   | 121  | 87   | 32   | 2599  |
| Patents By Year of Application:     | 1616 | 57   | 42   | 61   | 86   | 57   | 108  | 109  | 77   | 87   | 98   | 85   | 83   | 31   | 2    | 2599  |
| UNITED MICROELECTRONICS CORPORATION |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:           | 1    | 0    | 5    | 10   | 48   | 150  | 170  | 149  | 174  | 266  | 430  | 584  | 277  | 188  | 77   | 2529  |
| Patents By Year of Application:     | 5    | 5    | 8    | 71   | 224  | 188  | 205  | 226  | 521  | 483  | 275  | 210  | 89   | 19   | 0    | 2529  |
| AMOCO CORPORATION                   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:           | 1703 | 149  | 185  | 141  | 87   | 56   | 67   | 55   | 67   | 16   | 0    | 0    | 0    | 0    | 0    | 2526  |
| Patents By Year of Application:     | 2018 | 151  | 88   | 69   | 64   | 71   | 42   | 22   | 1    | 0    | 0    | 0    | 0    | 0    | 0    | 2526  |
| ILLINOIS TOOL WORKS INC.            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:           | 991  | 44   | 53   | 72   | 34   | 56   | 72   | 92   | 120  | 97   | 138  | 176  | 147  | 209  | 216  | 2517  |
| Patents By Year of Application:     | 1063 | 52   | 59   | 51   | 80   | 100  | 105  | 110  | 134  | 165  | 193  | 198  | 166  | 41   | 0    | 2517  |
| WARNER-LAMBERT COMPANY              |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:           | 1390 | 120  | 92   | 85   | 79   | 81   | 66   | 87   | 62   | 80   | 84   | 81   | 72   | 69   | 58   | 2506  |
| Patents By Year of Application:     | 1581 | 81   | 69   | 86   | 100  | 104  | 39   | 67   | 97   | 87   | 64   | 66   | 53   | 11   | 1    | 2506  |
| INSTITUT FRANCAIS DU PETROLE        |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:           | 1031 | 82   | 56   | 72   | 90   | 75   | 69   | 86   | 143  | 112  | 161  | 154  | 119  | 113  | 79   | 2442  |
| Patents By Year of Application:     | 1164 | 64   | 84   | 90   | 77   | 114  | 120  | 156  | 147  | 147  | 146  | 88   | 38   | 7    | 0    | 2442  |

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ALL TECHNOLOGIES (UTILITY PATENTS) REPORT (PARTS A1, A2, B)

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---- Organizational Patenting (Granted: Jan 01, 1969 - Dec 31, 2004) ---- Ranked List of Organizations with 1000 or More Patents ----

Pre

1991 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 TOTAL

ATLANTIC RICHFIELD COMPANY

Patents By Year of Grant: 1931 61 57 66 68 60 37 27 34 41 36 19 3 1 0 2441

Patents By Year of Application: 2032 61 66 68 46 43 31 31 36 21 5 1 0 0 0 2441

HYUNDAI ELECTRONICS INDUSTRIES CO., LTD.

Patents By Year of Grant: 1 14 19 23 54 79 138 154 212 242 294 533 391 179 106 2439

Patents By Year of Application: 30 29 31 71 127 173 256 305 326 458 419 160 42 12 0 2439

MAZDA MOTOR CORPORATION

Patents By Year of Grant: 1086 200 203 173 133 108 59 62 66 56 63 54 44 44 47 2398

Patents By Year of Application: 1398 208 147 130 108 54 62 61 53 35 47 48 35 10 2 2398

ROHM AND HAAS COMPANY

Patents By Year of Grant: 1175 49 65 117 129 117 97 63 71 85 78 95 76 83 86 2386

Patents By Year of Application: 1297 100 109 124 103 102 59 78 84 93 86 82 56 13 0 2386

SCHLUMBERGER TECHNOLOGY CORPORATION

Patents By Year of Grant: 1015 58 50 57 66 49 56 48 45 80 122 158 177 194 206 2381

Patents By Year of Application: 1116 61 53 55 65 56 62 100 128 132 210 168 155 18 2 2381

LUCAS INDUSTRIES PUBLIC LTD. COMPANY

Patents By Year of Grant: 1736 74 40 40 33 48 50 54 58 50 45 67 43 26 16 2380

Patents By Year of Application: 1835 44 35 39 56 61 59 53 55 55 44 29 15 0 0 2380

AIR PRODUCTS AND CHEMICALS, INC.

Patents By Year of Grant: 1115 119 90 110 124 73 78 71 80 86 104 84 74 97 72 2377

Patents By Year of Application: 1281 101 124 92 91 81 75 87 97 100 70 83 71 24 0 2377

MEDTRONIC INC.

Patents By Year of Grant: 439 32 67 61 111 89 77 91 243 208 231 185 171 192 178 2375

Patents By Year of Application: 524 58 88 117 93 119 203 245 231 232 203 186 60 16 0 2375

UNITED STATES OF AMERICA, DEPARTMENT OF AGRICULTURE

Patents By Year of Grant: 1624 46 53 54 38 49 41 46 75 70 55 67 43 63 38 2362

Patents By Year of Application: 1728 58 39 48 51 66 73 64 52 50 54 54 23 2 0 2362

NORTHERN TELECOM LIMITED

Patents By Year of Grant: 1267 78 68 73 84 82 103 64 199 240 70 19 11 2 1 2361

Patents By Year of Application: 1398 66 66 112 92 106 247 217 54 3 0 0 0 0 0 2361

SHIN ETSU CHEMICAL CO., LTD.

Patents By Year of Grant: 517 113 134 166 160 142 134 97 96 97 111 128 134 136 166 2331

Patents By Year of Application: 733 123 157 144 163 141 102 91 116 108 164 159 101 28 1 2331

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ALL TECHNOLOGIES (UTILITY PATENTS) REPORT (PARTS A1, A2, B)

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---- Organizational Patenting (Granted: Jan 01, 1969 - Dec 31, 2004) ---- Ranked List of Organizations with 1000 or More Patents ----

|  | Pre<br>1991 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | TOTAL |
|--|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
|--|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|

AMERICAN HOME PRODUCTS CORPORATION

|                                 |      |    |    |    |    |    |    |    |    |    |    |    |    |   |   |      |
|---------------------------------|------|----|----|----|----|----|----|----|----|----|----|----|----|---|---|------|
| Patents By Year of Grant:       | 1660 | 46 | 56 | 66 | 31 | 58 | 96 | 34 | 50 | 47 | 46 | 72 | 61 | 2 | 1 | 2326 |
| Patents By Year of Application: | 1724 | 61 | 59 | 45 | 72 | 96 | 39 | 37 | 43 | 74 | 59 | 15 | 2  | 0 | 0 | 2326 |

PITNEY-BOWES, INC.

|                                 |      |    |     |    |     |     |     |     |     |     |    |    |    |    |     |      |
|---------------------------------|------|----|-----|----|-----|-----|-----|-----|-----|-----|----|----|----|----|-----|------|
| Patents By Year of Grant:       | 1076 | 74 | 100 | 90 | 82  | 91  | 70  | 84  | 120 | 94  | 76 | 81 | 78 | 89 | 115 | 2320 |
| Patents By Year of Application: | 1242 | 92 | 87  | 91 | 119 | 105 | 109 | 101 | 75  | 113 | 53 | 66 | 52 | 14 | 1   | 2320 |

NORTEL NETWORKS CORPORATION

|                                 |   |   |   |   |   |   |    |     |     |     |     |     |     |     |     |      |
|---------------------------------|---|---|---|---|---|---|----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Patents By Year of Grant:       | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0   | 0   | 92  | 392 | 463 | 413 | 434 | 496 | 2290 |
| Patents By Year of Application: | 0 | 0 | 0 | 0 | 1 | 7 | 72 | 438 | 635 | 596 | 370 | 93  | 66  | 12  | 0   | 2290 |

HON HAI PRECISION IND. CO., LTD.

|                                 |   |   |   |   |    |    |    |    |     |     |     |     |     |     |     |      |
|---------------------------------|---|---|---|---|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|------|
| Patents By Year of Grant:       | 0 | 0 | 0 | 0 | 0  | 1  | 11 | 22 | 37  | 106 | 397 | 441 | 392 | 391 | 486 | 2284 |
| Patents By Year of Application: | 0 | 0 | 0 | 0 | 12 | 27 | 34 | 76 | 206 | 525 | 272 | 452 | 486 | 185 | 9   | 2284 |

INDUSTRIAL TECHNOLOGY RESEARCH INSTITUTE, TAIWAN

|                                 |     |    |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
|---------------------------------|-----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Patents By Year of Grant:       | 82  | 50 | 56  | 104 | 119 | 143 | 110 | 153 | 218 | 208 | 198 | 221 | 217 | 207 | 197 | 2283 |
| Patents By Year of Application: | 167 | 92 | 116 | 141 | 123 | 188 | 195 | 225 | 209 | 253 | 209 | 176 | 144 | 44  | 1   | 2283 |

VICTOR COMPANY OF JAPAN, LIMITED

|                                 |      |    |    |    |    |    |    |    |    |    |    |    |    |    |    |      |
|---------------------------------|------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|------|
| Patents By Year of Grant:       | 1283 | 91 | 82 | 79 | 68 | 48 | 61 | 63 | 77 | 79 | 79 | 63 | 60 | 64 | 86 | 2283 |
| Patents By Year of Application: | 1451 | 73 | 73 | 50 | 63 | 72 | 94 | 89 | 91 | 66 | 49 | 73 | 23 | 16 | 0  | 2283 |

LG ELECTRONICS INC.

|                                 |   |   |   |   |   |     |     |     |     |     |     |     |     |     |     |      |
|---------------------------------|---|---|---|---|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Patents By Year of Grant:       | 0 | 0 | 0 | 0 | 0 | 1   | 19  | 113 | 215 | 229 | 220 | 248 | 340 | 409 | 480 | 2274 |
| Patents By Year of Application: | 0 | 0 | 1 | 2 | 1 | 164 | 224 | 305 | 284 | 304 | 361 | 339 | 207 | 81  | 1   | 2274 |

DIGITAL EQUIPMENT CORPORATION

|                                 |     |     |     |     |     |     |     |     |     |     |    |    |   |   |   |      |
|---------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|---|---|---|------|
| Patents By Year of Grant:       | 485 | 141 | 220 | 264 | 269 | 189 | 164 | 133 | 164 | 133 | 92 | 15 | 0 | 0 | 0 | 2269 |
| Patents By Year of Application: | 913 | 218 | 265 | 207 | 170 | 152 | 153 | 136 | 50  | 5   | 0  | 0  | 0 | 0 | 0 | 2269 |

BRIDGESTONE CORPORATION

|                                 |      |    |     |    |    |    |    |     |     |     |     |     |     |     |    |      |
|---------------------------------|------|----|-----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|----|------|
| Patents By Year of Grant:       | 881  | 75 | 90  | 98 | 93 | 92 | 73 | 74  | 85  | 109 | 106 | 156 | 137 | 100 | 92 | 2261 |
| Patents By Year of Application: | 1037 | 97 | 103 | 70 | 85 | 99 | 98 | 123 | 148 | 132 | 132 | 97  | 32  | 8   | 0  | 2261 |

DELPHI TECHNOLOGIES, INC.

|                                 |   |   |   |   |   |   |   |   |    |     |     |     |     |     |     |      |
|---------------------------------|---|---|---|---|---|---|---|---|----|-----|-----|-----|-----|-----|-----|------|
| Patents By Year of Grant:       | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 2   | 94  | 327 | 640 | 635 | 546 | 2244 |
| Patents By Year of Application: | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 44 | 370 | 606 | 671 | 421 | 122 | 3   | 2244 |

HARRIS CORP.

|                                 |      |    |    |    |     |     |     |     |     |     |    |    |    |    |    |      |
|---------------------------------|------|----|----|----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|------|
| Patents By Year of Grant:       | 1036 | 58 | 59 | 62 | 66  | 69  | 91  | 115 | 124 | 120 | 63 | 88 | 82 | 71 | 89 | 2193 |
| Patents By Year of Application: | 1140 | 73 | 82 | 53 | 113 | 118 | 126 | 97  | 95  | 78  | 80 | 70 | 55 | 13 | 0  | 2193 |



---- Organizational Patenting (Granted: Jan 01, 1969 - Dec 31, 2004) ---- Ranked List of Organizations with 1000 or More Patents ----

|   | Pre<br>1991 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | TOTAL |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| SEMICONDUCTOR ENERGY LABORATORY CO., LTD.         |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                         | 190         | 58   | 53   | 70   | 57   | 43   | 90   | 97   | 127  | 184  | 155  | 209  | 246  | 273  | 336  | 2188  |
| Patents By Year of Application:                   | 306         | 67   | 70   | 62   | 118  | 163  | 167  | 222  | 173  | 210  | 206  | 219  | 171  | 31   | 3    | 2188  |
| CHRYSLER MOTORS CORPORATION                       |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                         | 870         | 89   | 49   | 66   | 101  | 116  | 152  | 139  | 166  | 215  | 149  | 35   | 6    | 0    | 0    | 2153  |
| Patents By Year of Application:                   | 978         | 54   | 89   | 116  | 153  | 163  | 198  | 201  | 185  | 11   | 5    | 0    | 0    | 0    | 0    | 2153  |
| E. R. SQUIBB + SONS, INC.                         |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                         | 1788        | 53   | 71   | 69   | 43   | 27   | 28   | 29   | 19   | 11   | 4    | 2    | 2    | 3    | 0    | 2149  |
| Patents By Year of Application:                   | 1905        | 76   | 59   | 33   | 22   | 33   | 11   | 7    | 2    | 1    | 0    | 0    | 0    | 0    | 0    | 2149  |
| BAXTER INTERNATIONAL INC.                         |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                         | 1162        | 70   | 59   | 65   | 75   | 61   | 70   | 66   | 96   | 101  | 77   | 77   | 54   | 66   | 46   | 2145  |
| Patents By Year of Application:                   | 1289        | 63   | 71   | 86   | 86   | 105  | 82   | 99   | 83   | 62   | 50   | 42   | 24   | 3    | 0    | 2145  |
| TAKEDA CHEMICAL INDUSTRIES LTD.                   |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                         | 1143        | 50   | 66   | 92   | 68   | 70   | 99   | 77   | 72   | 80   | 70   | 102  | 64   | 46   | 39   | 2138  |
| Patents By Year of Application:                   | 1279        | 75   | 72   | 86   | 93   | 101  | 84   | 69   | 47   | 90   | 63   | 46   | 30   | 3    | 0    | 2138  |
| INFINEON TECHNOLOGIES AG                          |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                         | 0           | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 42   | 218  | 452  | 639  | 785  | 2136  |
| Patents By Year of Application:                   | 0           | 0    | 0    | 0    | 0    | 1    | 5    | 8    | 83   | 161  | 417  | 676  | 606  | 176  | 3    | 2136  |
| OWENS-ILLINOIS INC.                               |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                         | 2124        | 0    | 0    | 0    | 0    | 1    | 0    | 0    | 0    | 1    | 0    | 0    | 0    | 0    | 0    | 2126  |
| Patents By Year of Application:                   | 2124        | 0    | 1    | 0    | 0    | 0    | 0    | 1    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 2126  |
| UNITED STATES OF AMERICA, HEALTH & HUMAN SERVICES |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                         | 627         | 48   | 76   | 85   | 107  | 96   | 117  | 150  | 169  | 139  | 96   | 102  | 90   | 87   | 117  | 2106  |
| Patents By Year of Application:                   | 816         | 98   | 130  | 128  | 190  | 216  | 72   | 102  | 69   | 84   | 82   | 90   | 25   | 4    | 0    | 2106  |
| YAMAHA CORPORATION                                |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                         | 199         | 98   | 101  | 150  | 113  | 133  | 149  | 140  | 198  | 208  | 141  | 115  | 130  | 113  | 109  | 2097  |
| Patents By Year of Application:                   | 444         | 107  | 119  | 138  | 140  | 163  | 201  | 207  | 144  | 120  | 125  | 106  | 65   | 18   | 0    | 2097  |
| SINGER COMPANY                                    |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                         | 2081        | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 2081  |
| Patents By Year of Application:                   | 2081        | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 2081  |
| OWENS-CORNING FIBERGLAS CORPORATION               |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                         | 1556        | 15   | 15   | 14   | 20   | 11   | 35   | 64   | 68   | 67   | 53   | 44   | 46   | 36   | 36   | 2080  |
| Patents By Year of Application:                   | 1586        | 13   | 14   | 17   | 38   | 67   | 80   | 67   | 55   | 49   | 39   | 32   | 18   | 5    | 0    | 2080  |

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ALL TECHNOLOGIES (UTILITY PATENTS) REPORT (PARTS A1, A2, B)

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---- Organizational Patenting (Granted: Jan 01, 1969 - Dec 31, 2004) ---- Ranked List of Organizations with 1000 or More Patents ----

|  | Pre  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
|  | 1991 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | TOTAL |
| SMITHKLINE BECKMAN CORPORATION                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                            | 1851 | 13   | 31   | 19   | 27   | 36   | 27   | 21   | 24   | 21   | 0    | 0    | 1    | 0    | 0    | 2071  |
| Patents By Year of Application:                      | 1889 | 30   | 34   | 22   | 28   | 33   | 17   | 15   | 3    | 0    | 0    | 0    | 0    | 0    | 0    | 2071  |
| BRISTOL-MYERS SQUIBB COMPANY                         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                            | 794  | 71   | 60   | 50   | 57   | 69   | 74   | 105  | 118  | 135  | 106  | 100  | 101  | 131  | 96   | 2067  |
| Patents By Year of Application:                      | 919  | 42   | 64   | 100  | 98   | 117  | 107  | 103  | 107  | 113  | 99   | 112  | 69   | 17   | 0    | 2067  |
| TDK CORPORATION                                      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                            | 358  | 48   | 56   | 59   | 62   | 65   | 81   | 74   | 83   | 104  | 160  | 216  | 258  | 231  | 204  | 2059  |
| Patents By Year of Application:                      | 464  | 42   | 65   | 71   | 90   | 83   | 75   | 109  | 200  | 246  | 264  | 227  | 86   | 36   | 1    | 2059  |
| TEKTRONIX INC.                                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                            | 1195 | 80   | 66   | 59   | 39   | 60   | 61   | 50   | 66   | 80   | 58   | 53   | 59   | 54   | 57   | 2037  |
| Patents By Year of Application:                      | 1326 | 65   | 59   | 52   | 61   | 69   | 54   | 92   | 90   | 30   | 61   | 46   | 27   | 5    | 0    | 2037  |
| ETHYL CORPORATION                                    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                            | 1595 | 118  | 95   | 88   | 51   | 8    | 12   | 14   | 10   | 8    | 11   | 7    | 4    | 8    | 4    | 2033  |
| Patents By Year of Application:                      | 1766 | 93   | 71   | 27   | 6    | 17   | 10   | 11   | 9    | 9    | 5    | 3    | 6    | 0    | 0    | 2033  |
| NGK INSULATORS LTD.                                  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                            | 532  | 79   | 92   | 111  | 73   | 64   | 67   | 81   | 92   | 123  | 116  | 132  | 161  | 147  | 144  | 2014  |
| Patents By Year of Application:                      | 681  | 97   | 95   | 68   | 74   | 102  | 100  | 136  | 136  | 139  | 136  | 125  | 104  | 21   | 0    | 2014  |
| B. F. GOODRICH CO.                                   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                            | 1533 | 73   | 69   | 59   | 46   | 29   | 33   | 17   | 29   | 27   | 24   | 39   | 17   | 5    | 1    | 2001  |
| Patents By Year of Application:                      | 1668 | 43   | 59   | 38   | 32   | 32   | 22   | 36   | 23   | 30   | 15   | 2    | 1    | 0    | 0    | 2001  |
| HENKEL KOMMANDITGESELLSCHAFT AUF AKTIEN(HENKEL KGAA) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                            | 926  | 65   | 44   | 68   | 101  | 100  | 108  | 71   | 85   | 83   | 56   | 94   | 70   | 63   | 67   | 2001  |
| Patents By Year of Application:                      | 1032 | 59   | 94   | 91   | 122  | 88   | 112  | 88   | 64   | 91   | 65   | 44   | 42   | 8    | 1    | 2001  |
| STAUFFER CHEMICAL COMPANY                            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                            | 1998 | 2    | 0    | 1    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 2001  |
| Patents By Year of Application:                      | 2001 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 2001  |
| AGFA-GEVAERT N.V.                                    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                            | 633  | 40   | 36   | 54   | 67   | 95   | 104  | 114  | 141  | 127  | 174  | 140  | 104  | 80   | 71   | 1980  |
| Patents By Year of Application:                      | 698  | 53   | 50   | 82   | 116  | 136  | 170  | 132  | 164  | 132  | 102  | 77   | 52   | 16   | 0    | 1980  |
| BECTON, DICKINSON AND COMPANY                        |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                            | 734  | 62   | 58   | 56   | 82   | 66   | 99   | 133  | 157  | 131  | 97   | 79   | 66   | 88   | 71   | 1979  |
| Patents By Year of Application:                      | 843  | 52   | 73   | 97   | 112  | 121  | 143  | 154  | 93   | 98   | 86   | 62   | 34   | 11   | 0    | 1979  |

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ALL TECHNOLOGIES (UTILITY PATENTS) REPORT (PARTS A1, A2, B)

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---- Organizational Patenting (Granted: Jan 01, 1969 - Dec 31, 2004) ---- Ranked List of Organizations with 1000 or More Patents ----

Pre

1991 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 TOTAL

CARRIER CORPORATION

Patents By Year of Grant: 1022 72 56 51 57 59 50 40 65 61 99 94 79 90 77 1972

Patents By Year of Application: 1117 62 46 62 64 54 68 64 96 65 87 90 73 23 1 1972

COMPAQ COMPUTER CORPORATION, INC.

Patents By Year of Grant: 28 25 61 61 67 97 99 129 245 251 315 357 159 23 0 1917

Patents By Year of Application: 111 76 79 100 115 157 325 370 391 128 53 11 1 0 0 1917

NIPPON STEEL CORP.

Patents By Year of Grant: 942 62 74 80 79 84 72 89 94 67 56 51 62 59 41 1912

Patents By Year of Application: 1059 89 77 79 80 101 101 83 52 55 51 48 33 4 0 1912

LEVER BROTHERS COMPANY, DIVISION OF CONOPCO, INC.

Patents By Year of Grant: 1240 59 59 44 58 70 58 53 64 68 43 30 9 2 2 1859

Patents By Year of Application: 1350 52 38 74 58 71 79 71 45 12 8 1 0 0 0 1859

ASAHI KASEI KOGYO KABUSHIKI KAISHA

Patents By Year of Grant: 1149 33 34 57 54 34 29 29 50 61 69 66 77 60 56 1858

Patents By Year of Application: 1226 52 41 33 42 30 46 79 64 56 79 59 47 4 0 1858

FORD GLOBAL TECHNOLOGIES, INC.

Patents By Year of Grant: 0 0 0 0 0 0 0 86 314 256 253 360 389 146 6 1810

Patents By Year of Application: 0 0 3 11 21 74 239 290 262 272 410 179 47 2 0 1810

ALCOA INC.

Patents By Year of Grant: 1144 67 52 64 57 44 53 31 53 49 34 41 38 40 41 1808

Patents By Year of Application: 1262 61 46 56 53 51 47 46 35 31 43 40 26 11 0 1808

HEIDELBERGER DRUCKMASCHINEN AG

Patents By Year of Grant: 259 63 62 47 64 97 88 88 129 93 122 94 157 240 200 1803

Patents By Year of Application: 368 39 55 105 94 119 115 107 138 143 198 195 107 20 0 1803

AGILENT TECHNOLOGIES, INC.

Patents By Year of Grant: 0 0 0 0 0 0 0 0 0 0 122 334 312 387 645 1800

Patents By Year of Application: 0 0 1 0 2 5 9 28 233 343 336 367 350 122 4 1800

KIMBERLY-CLARK WORLDWIDE, INC.

Patents By Year of Grant: 0 0 0 0 0 0 0 95 161 175 224 234 247 363 301 1800

Patents By Year of Application: 0 1 0 8 28 121 180 270 188 272 335 271 114 12 0 1800

NATIONAL RESEARCH DEVELOPMENT CORPORATION

Patents By Year of Grant: 1626 57 59 17 3 1 0 1 1 1 2 3 3 1 0 1775

Patents By Year of Application: 1735 25 2 2 1 2 0 0 4 1 2 1 0 0 0 1775

---- Organizational Patenting (Granted: Jan 01, 1969 - Dec 31, 2004) ---- Ranked List of Organizations with 1000 or More Patents ----

|  | Pre<br>1991 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | TOTAL |
|--|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
|--|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|

ZENITH ELECTRONICS CORPORATION

|                                 |      |    |    |    |    |    |    |    |    |    |    |    |   |    |    |      |
|---------------------------------|------|----|----|----|----|----|----|----|----|----|----|----|---|----|----|------|
| Patents By Year of Grant:       | 1363 | 56 | 60 | 42 | 34 | 28 | 32 | 31 | 26 | 22 | 22 | 17 | 8 | 16 | 14 | 1771 |
| Patents By Year of Application: | 1458 | 55 | 49 | 26 | 29 | 30 | 37 | 28 | 19 | 20 | 10 | 6  | 1 | 3  | 0  | 1771 |

INTERNATIONAL STANDARD ELECTRIC CORPORATION (ITT CORP. UNIT)

|                                 |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |      |
|---------------------------------|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|------|
| Patents By Year of Grant:       | 1741 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1741 |
| Patents By Year of Application: | 1741 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1741 |

TOKYO ELECTRON LIMITED

|                                 |    |    |    |     |     |    |     |     |     |     |     |     |     |     |     |      |
|---------------------------------|----|----|----|-----|-----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Patents By Year of Grant:       | 29 | 24 | 34 | 46  | 72  | 75 | 90  | 86  | 101 | 146 | 179 | 203 | 237 | 191 | 223 | 1736 |
| Patents By Year of Application: | 73 | 50 | 46 | 100 | 106 | 92 | 113 | 169 | 184 | 168 | 272 | 213 | 105 | 43  | 2   | 1736 |

ERICSSON, INC.

|                                 |   |   |   |   |    |    |     |     |     |     |     |     |     |     |     |      |
|---------------------------------|---|---|---|---|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Patents By Year of Grant:       | 5 | 0 | 0 | 0 | 0  | 4  | 29  | 68  | 210 | 292 | 312 | 268 | 251 | 181 | 109 | 1729 |
| Patents By Year of Application: | 5 | 2 | 3 | 9 | 38 | 97 | 335 | 368 | 368 | 306 | 134 | 50  | 12  | 2   | 0   | 1729 |

HALLIBURTON CO.

|                                 |      |    |     |     |     |    |    |    |    |   |   |   |   |   |   |      |
|---------------------------------|------|----|-----|-----|-----|----|----|----|----|---|---|---|---|---|---|------|
| Patents By Year of Grant:       | 1119 | 60 | 61  | 74  | 162 | 88 | 94 | 38 | 25 | 1 | 0 | 0 | 0 | 0 | 0 | 1722 |
| Patents By Year of Application: | 1203 | 76 | 131 | 131 | 82  | 65 | 27 | 7  | 0  | 0 | 0 | 0 | 0 | 0 | 0 | 1722 |

DRESSER INDUSTRIES, INC.

|                                 |      |    |    |    |    |    |    |    |    |    |    |    |   |   |   |      |
|---------------------------------|------|----|----|----|----|----|----|----|----|----|----|----|---|---|---|------|
| Patents By Year of Grant:       | 1420 | 36 | 28 | 20 | 22 | 12 | 14 | 24 | 24 | 43 | 44 | 22 | 7 | 2 | 0 | 1718 |
| Patents By Year of Application: | 1473 | 24 | 18 | 13 | 22 | 24 | 27 | 35 | 56 | 20 | 4  | 2  | 0 | 0 | 0 | 1718 |

CONOCO, INC.

|                                 |      |    |    |    |    |    |    |   |   |    |    |   |    |   |   |      |
|---------------------------------|------|----|----|----|----|----|----|---|---|----|----|---|----|---|---|------|
| Patents By Year of Grant:       | 1449 | 55 | 49 | 37 | 19 | 13 | 11 | 7 | 7 | 7  | 2  | 9 | 21 | 5 | 3 | 1694 |
| Patents By Year of Application: | 1523 | 52 | 28 | 15 | 13 | 7  | 8  | 8 | 4 | 11 | 14 | 8 | 3  | 0 | 0 | 1694 |

WHITAKER CORPORATION

|                                 |   |    |     |     |     |     |     |     |     |     |     |    |    |   |   |      |
|---------------------------------|---|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|---|---|------|
| Patents By Year of Grant:       | 0 | 0  | 0   | 61  | 193 | 199 | 211 | 198 | 216 | 229 | 257 | 79 | 38 | 8 | 3 | 1692 |
| Patents By Year of Application: | 3 | 11 | 115 | 230 | 244 | 220 | 241 | 274 | 228 | 102 | 20  | 4  | 0  | 0 | 0 | 1692 |

HERCULES INCORPORATED

|                                 |      |    |    |    |    |    |    |    |    |    |    |    |    |    |   |      |
|---------------------------------|------|----|----|----|----|----|----|----|----|----|----|----|----|----|---|------|
| Patents By Year of Grant:       | 1233 | 63 | 38 | 30 | 33 | 25 | 41 | 35 | 31 | 22 | 32 | 36 | 29 | 17 | 7 | 1672 |
| Patents By Year of Application: | 1334 | 38 | 31 | 23 | 46 | 35 | 33 | 34 | 31 | 22 | 29 | 10 | 6  | 0  | 0 | 1672 |

SANDOZ LTD.

|                                 |      |    |    |    |    |    |    |    |    |    |   |   |   |   |   |      |
|---------------------------------|------|----|----|----|----|----|----|----|----|----|---|---|---|---|---|------|
| Patents By Year of Grant:       | 1252 | 52 | 41 | 47 | 43 | 44 | 84 | 57 | 20 | 10 | 0 | 0 | 0 | 0 | 0 | 1650 |
| Patents By Year of Application: | 1345 | 49 | 39 | 47 | 65 | 81 | 16 | 8  | 0  | 0  | 0 | 0 | 0 | 0 | 0 | 1650 |

MCDONNELL DOUGLAS CORP.

|                                 |      |    |    |    |    |    |     |     |     |     |    |    |    |   |   |      |
|---------------------------------|------|----|----|----|----|----|-----|-----|-----|-----|----|----|----|---|---|------|
| Patents By Year of Grant:       | 980  | 44 | 33 | 38 | 26 | 39 | 43  | 52  | 111 | 138 | 77 | 41 | 15 | 3 | 8 | 1648 |
| Patents By Year of Application: | 1065 | 41 | 27 | 21 | 55 | 53 | 115 | 154 | 80  | 20  | 6  | 6  | 5  | 0 | 0 | 1648 |

---- Organizational Patenting (Granted: Jan 01, 1969 - Dec 31, 2004) ---- Ranked List of Organizations with 1000 or More Patents ----

|   | Pre<br>1991 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | TOTAL |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| YAMAHA HATSUDOKI KABUSHIKI KAISHA, YAMAHA MOTOR CO., LTD. |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                                 | 510         | 75   | 88   | 85   | 53   | 54   | 72   | 74   | 128  | 101  | 104  | 92   | 73   | 58   | 50   | 1617  |
| Patents By Year of Application:                           | 646         | 76   | 83   | 60   | 84   | 86   | 125  | 123  | 95   | 88   | 67   | 43   | 35   | 4    | 2    | 1617  |
| AGENCY OF INDUSTRIAL SCIENCE & TECHNOLOGY                 |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                                 | 753         | 96   | 72   | 62   | 49   | 57   | 57   | 73   | 71   | 57   | 70   | 65   | 55   | 53   | 23   | 1613  |
| Patents By Year of Application:                           | 899         | 66   | 50   | 51   | 69   | 77   | 78   | 72   | 55   | 61   | 113  | 7    | 12   | 2    | 1    | 1613  |
| DAIMLER-CHRYSLER AKTIENGESELLSCHAFT                       |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                                 | 0           | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 86   | 322  | 430  | 304  | 239  | 217  | 1598  |
| Patents By Year of Application:                           | 1           | 0    | 0    | 1    | 2    | 4    | 22   | 122  | 263  | 441  | 313  | 240  | 153  | 34   | 2    | 1598  |
| SUMITOMO WIRING SYSTEMS, LTD., CO.                        |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                                 | 16          | 6    | 17   | 27   | 63   | 113  | 132  | 122  | 132  | 143  | 154  | 152  | 190  | 167  | 164  | 1598  |
| Patents By Year of Application:                           | 26          | 27   | 46   | 86   | 194  | 136  | 118  | 155  | 116  | 136  | 163  | 174  | 134  | 82   | 5    | 1598  |
| MERCK PATENT GESELLSCHAFT MIT BESCHRANKTER HAFTUNG        |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                                 | 542         | 34   | 51   | 78   | 59   | 65   | 54   | 63   | 99   | 56   | 74   | 78   | 107  | 129  | 106  | 1595  |
| Patents By Year of Application:                           | 651         | 65   | 57   | 58   | 70   | 87   | 91   | 58   | 66   | 81   | 105  | 115  | 77   | 14   | 0    | 1595  |
| G. D. SEARLE & CO.  |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                                 | 757         | 40   | 47   | 92   | 58   | 90   | 64   | 75   | 60   | 62   | 61   | 39   | 74   | 46   | 27   | 1592  |
| Patents By Year of Application:                           | 834         | 67   | 88   | 75   | 89   | 121  | 56   | 45   | 47   | 50   | 50   | 42   | 26   | 2    | 0    | 1592  |
| ROLLS-ROYCE PLC   |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                                 | 967         | 48   | 67   | 45   | 41   | 47   | 35   | 33   | 26   | 36   | 43   | 42   | 42   | 56   | 54   | 1582  |
| Patents By Year of Application:                           | 1069        | 48   | 26   | 52   | 44   | 40   | 26   | 48   | 35   | 42   | 44   | 48   | 50   | 10   | 0    | 1582  |
| APPLE COMPUTER, INC.                                      |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                                 | 55          | 23   | 35   | 49   | 55   | 107  | 169  | 206  | 256  | 169  | 85   | 97   | 76   | 80   | 94   | 1556  |
| Patents By Year of Application:                           | 112         | 51   | 88   | 148  | 187  | 322  | 214  | 128  | 85   | 75   | 45   | 49   | 46   | 6    | 0    | 1556  |
| FANUC LTD.  |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                                 | 608         | 129  | 122  | 101  | 87   | 70   | 73   | 51   | 71   | 49   | 45   | 53   | 38   | 27   | 28   | 1552  |
| Patents By Year of Application:                           | 849         | 99   | 84   | 64   | 87   | 91   | 36   | 69   | 58   | 50   | 23   | 22   | 15   | 4    | 1    | 1552  |
| EMERSON ELECTRIC CO.                                      |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                                 | 821         | 41   | 44   | 46   | 42   | 31   | 47   | 39   | 57   | 67   | 65   | 69   | 59   | 50   | 72   | 1550  |
| Patents By Year of Application:                           | 877         | 50   | 43   | 49   | 57   | 35   | 62   | 62   | 69   | 73   | 54   | 52   | 51   | 15   | 1    | 1550  |
| FUJI ELECTRIC CO., LTD.                                   |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                                 | 420         | 67   | 70   | 64   | 77   | 91   | 123  | 93   | 87   | 110  | 72   | 53   | 57   | 75   | 74   | 1533  |
| Patents By Year of Application:                           | 529         | 79   | 74   | 99   | 117  | 120  | 89   | 88   | 71   | 50   | 75   | 80   | 49   | 13   | 0    | 1533  |

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ALL TECHNOLOGIES (UTILITY PATENTS) REPORT (PARTS A1, A2, B)

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---- Organizational Patenting (Granted: Jan 01, 1969 - Dec 31, 2004) ---- Ranked List of Organizations with 1000 or More Patents ----

|  | Pre  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
|  | 1991 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | TOTAL |
| KIMBERLY-CLARK CORPORATION             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:              | 950  | 42   | 57   | 47   | 65   | 80   | 140  | 101  | 21   | 9    | 7    | 6    | 3    | 2    | 0    | 1530  |
| Patents By Year of Application:        | 1052 | 42   | 59   | 80   | 120  | 128  | 36   | 4    | 1    | 6    | 1    | 1    | 0    | 0    | 0    | 1530  |
| UNION OIL COMPANY OF CALIFORNIA        |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:              | 1134 | 91   | 88   | 54   | 47   | 27   | 11   | 15   | 14   | 8    | 13   | 8    | 4    | 5    | 3    | 1522  |
| Patents By Year of Application:        | 1293 | 64   | 50   | 34   | 19   | 16   | 6    | 9    | 13   | 6    | 5    | 4    | 2    | 1    | 0    | 1522  |
| KAO KABUSHIKI KAISHA (KAO CORPORATION) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:              | 266  | 76   | 88   | 69   | 78   | 82   | 70   | 107  | 129  | 98   | 82   | 93   | 92   | 92   | 95   | 1517  |
| Patents By Year of Application:        | 403  | 94   | 80   | 67   | 92   | 113  | 122  | 112  | 111  | 64   | 91   | 111  | 49   | 8    | 0    | 1517  |
| NIPPON TELEGRAPH & TELEPHONE CORP.     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:              | 670  | 42   | 48   | 54   | 47   | 53   | 61   | 66   | 88   | 58   | 67   | 78   | 56   | 64   | 65   | 1517  |
| Patents By Year of Application:        | 749  | 49   | 52   | 53   | 74   | 77   | 89   | 89   | 86   | 74   | 58   | 35   | 26   | 6    | 0    | 1517  |
| HONEYWELL INTERNATIONAL INC.           |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:              | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 57   | 205  | 342  | 377  | 535  | 1516  |
| Patents By Year of Application:        | 1    | 2    | 0    | 0    | 2    | 4    | 9    | 32   | 110  | 174  | 409  | 370  | 323  | 79   | 1    | 1516  |
| TORAY INDUSTRIES INC.                  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:              | 777  | 38   | 39   | 41   | 41   | 44   | 37   | 62   | 48   | 60   | 70   | 72   | 65   | 62   | 44   | 1500  |
| Patents By Year of Application:        | 853  | 34   | 41   | 54   | 52   | 47   | 72   | 67   | 80   | 72   | 49   | 54   | 22   | 3    | 0    | 1500  |
| CASIO COMPUTER CO. LTD.                |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:              | 521  | 98   | 83   | 71   | 69   | 61   | 94   | 54   | 74   | 80   | 85   | 70   | 64   | 37   | 36   | 1497  |
| Patents By Year of Application:        | 699  | 72   | 77   | 67   | 93   | 81   | 73   | 93   | 91   | 54   | 58   | 24   | 12   | 3    | 0    | 1497  |
| SEAGATE TECHNOLOGY, LLC                |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:              | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 59   | 285  | 323  | 397  | 428  | 1492  |
| Patents By Year of Application:        | 0    | 0    | 0    | 2    | 5    | 13   | 10   | 29   | 185  | 305  | 365  | 408  | 154  | 15   | 1    | 1492  |
| COMBUSTION ENGINEERING INC.            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:              | 1208 | 18   | 19   | 48   | 59   | 26   | 19   | 15   | 35   | 21   | 14   | 3    | 0    | 0    | 0    | 1485  |
| Patents By Year of Application:        | 1242 | 22   | 65   | 45   | 29   | 17   | 23   | 24   | 14   | 3    | 1    | 0    | 0    | 0    | 0    | 1485  |
| NALCO CHEMICAL COMPANY                 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:              | 927  | 49   | 69   | 59   | 71   | 69   | 30   | 34   | 33   | 34   | 41   | 38   | 31   | 0    | 0    | 1485  |
| Patents By Year of Application:        | 1007 | 66   | 65   | 77   | 48   | 48   | 35   | 32   | 40   | 35   | 28   | 4    | 0    | 0    | 0    | 1485  |
| ROHM COMPANY LIMITED                   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:              | 15   | 21   | 15   | 55   | 158  | 152  | 102  | 96   | 112  | 95   | 116  | 132  | 150  | 128  | 135  | 1482  |
| Patents By Year of Application:        | 43   | 35   | 181  | 134  | 141  | 108  | 103  | 115  | 116  | 130  | 154  | 114  | 80   | 27   | 1    | 1482  |

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

ALL TECHNOLOGIES (UTILITY PATENTS) REPORT (PARTS A1, A2, B)

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---- Organizational Patenting (Granted: Jan 01, 1969 - Dec 31, 2004) ---- Ranked List of Organizations with 1000 or More Patents ----

Pre

1991 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 TOTAL

SCHERING AKTIENGESELLSCHAFT

Patents By Year of Grant: 886 41 54 40 31 49 31 44 52 45 61 34 30 40 38 1476

Patents By Year of Application: 993 39 39 46 46 67 37 37 47 36 43 26 16 4 0 1476

SUNDSTRAND CORPORATION

Patents By Year of Grant: 840 196 120 66 57 30 45 29 45 35 8 2 0 0 0 1473

Patents By Year of Application: 1156 70 49 52 38 28 41 29 10 0 0 0 0 0 0 1473

BAKER HUGHES INCORPORATED

Patents By Year of Grant: 92 43 57 69 82 68 69 76 97 106 133 158 138 161 123 1472

Patents By Year of Application: 164 71 80 69 79 106 87 144 134 132 150 141 104 11 0 1472

UNIVERSITY OF TEXAS

Patents By Year of Grant: 223 84 73 86 97 89 87 81 96 91 89 89 91 94 99 1469

Patents By Year of Application: 417 78 102 105 110 124 67 93 81 89 89 74 35 5 0 1469

CALIFORNIA INSTITUTE OF TECHNOLOGY

Patents By Year of Grant: 410 36 32 29 46 37 24 46 93 99 103 124 110 138 135 1462

Patents By Year of Application: 479 27 44 51 42 72 93 96 127 125 123 120 50 13 0 1462

mitsubishi jukogyo kabushiki kaisha

Patents By Year of Grant: 859 62 86 85 69 65 61 57 58 32 14 4 1 4 3 1460

Patents By Year of Application: 966 101 81 58 61 73 75 30 5 3 4 1 2 0 0 1460

ALCATEL

Patents By Year of Grant: 0 0 0 0 0 0 0 0 0 61 248 315 277 269 288 1458

Patents By Year of Application: 0 0 0 0 0 1 7 123 380 407 281 150 94 14 1 1458

INTERNATIONAL FLAVORS + FRAGRANCES INC

Patents By Year of Grant: 1181 38 25 25 30 25 19 12 17 4 19 20 20 13 8 1456

Patents By Year of Application: 1219 31 16 35 29 18 18 11 10 26 19 16 7 1 0 1456

WHIRLPOOL CORPORATION

Patents By Year of Grant: 961 56 38 41 41 32 41 18 35 38 31 16 34 43 30 1455

Patents By Year of Application: 1049 24 31 59 39 27 24 47 18 29 25 48 23 12 0 1455

SCI-MED LIFE SYSTEMS, INC.

Patents By Year of Grant: 10 7 13 21 22 40 47 32 53 83 147 180 221 311 250 1437

Patents By Year of Application: 31 17 26 32 49 57 54 113 170 227 263 279 93 26 0 1437

BRUNSWICK CORPORATION

Patents By Year of Grant: 940 28 38 14 22 25 13 22 45 48 56 51 51 42 41 1436

Patents By Year of Application: 984 29 9 31 22 21 34 61 39 52 48 51 41 13 1 1436

---- Organizational Patenting (Granted: Jan 01, 1969 - Dec 31, 2004) ---- Ranked List of Organizations with 1000 or More Patents ----

|  | Pre<br>1991 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | TOTAL |
|--|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
|--|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|

USX CORPORATION

|                                 |      |   |   |   |   |   |    |   |   |   |   |   |   |   |   |      |
|---------------------------------|------|---|---|---|---|---|----|---|---|---|---|---|---|---|---|------|
| Patents By Year of Grant:       | 1360 | 3 | 4 | 4 | 2 | 3 | 10 | 3 | 7 | 7 | 8 | 4 | 2 | 0 | 2 | 1419 |
| Patents By Year of Application: | 1362 | 7 | 4 | 1 | 8 | 6 | 5  | 6 | 9 | 5 | 4 | 0 | 1 | 1 | 0 | 1419 |

NOKIA MOBILE PHONES LTD.

|                                 |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |      |
|---------------------------------|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Patents By Year of Grant:       | 0  | 10 | 17 | 26 | 44 | 44 | 41  | 45  | 109 | 152 | 169 | 186 | 207 | 202 | 165 | 1417 |
| Patents By Year of Application: | 25 | 26 | 53 | 44 | 44 | 73 | 166 | 240 | 216 | 221 | 200 | 96  | 11  | 2   | 0   | 1417 |

MITSUI TOATSU CHEMICALS INC.

|                                 |     |     |     |     |     |    |    |    |    |   |   |   |   |   |   |      |
|---------------------------------|-----|-----|-----|-----|-----|----|----|----|----|---|---|---|---|---|---|------|
| Patents By Year of Grant:       | 646 | 88  | 130 | 139 | 118 | 95 | 79 | 72 | 45 | 2 | 2 | 0 | 0 | 0 | 0 | 1416 |
| Patents By Year of Application: | 857 | 107 | 118 | 105 | 86  | 97 | 39 | 7  | 0  | 0 | 0 | 0 | 0 | 0 | 0 | 1416 |

DANA CORPORATION

|                                 |     |    |    |    |    |    |     |    |    |     |     |    |    |    |    |      |
|---------------------------------|-----|----|----|----|----|----|-----|----|----|-----|-----|----|----|----|----|------|
| Patents By Year of Grant:       | 451 | 41 | 38 | 45 | 59 | 42 | 59  | 79 | 82 | 86  | 102 | 97 | 77 | 70 | 86 | 1414 |
| Patents By Year of Application: | 512 | 56 | 58 | 39 | 68 | 86 | 100 | 87 | 80 | 107 | 61  | 94 | 52 | 13 | 1  | 1414 |

STANFORD UNIVERSITY, LELAND JUNIOR, THE BOARD OF TRUSTEES OF

|                                 |     |    |    |    |    |    |    |    |     |     |     |    |     |    |    |      |
|---------------------------------|-----|----|----|----|----|----|----|----|-----|-----|-----|----|-----|----|----|------|
| Patents By Year of Grant:       | 415 | 57 | 42 | 50 | 62 | 54 | 55 | 64 | 79  | 83  | 103 | 84 | 102 | 85 | 75 | 1410 |
| Patents By Year of Application: | 517 | 47 | 63 | 66 | 79 | 87 | 63 | 91 | 106 | 104 | 79  | 66 | 39  | 3  | 0  | 1410 |

EXXON CHEMICALS PATENTS INC.

|                                 |     |     |    |     |     |     |     |     |     |     |     |    |   |   |   |      |
|---------------------------------|-----|-----|----|-----|-----|-----|-----|-----|-----|-----|-----|----|---|---|---|------|
| Patents By Year of Grant:       | 211 | 115 | 93 | 115 | 113 | 124 | 103 | 115 | 119 | 112 | 110 | 66 | 5 | 5 | 2 | 1408 |
| Patents By Year of Application: | 428 | 82  | 96 | 137 | 107 | 173 | 96  | 166 | 82  | 38  | 3   | 0  | 0 | 0 | 0 | 1408 |

LITTON SYSTEMS INC.

|                                 |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |      |
|---------------------------------|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|------|
| Patents By Year of Grant:       | 648 | 39 | 30 | 39 | 61 | 71 | 66 | 35 | 58 | 76 | 72 | 91 | 42 | 36 | 27 | 1391 |
| Patents By Year of Application: | 732 | 36 | 54 | 67 | 70 | 35 | 45 | 82 | 81 | 89 | 50 | 30 | 14 | 6  | 0  | 1391 |

TEIJIN LIMITED

|                                 |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |      |
|---------------------------------|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|------|
| Patents By Year of Grant:       | 792 | 26 | 29 | 53 | 44 | 43 | 38 | 47 | 37 | 37 | 43 | 54 | 57 | 45 | 41 | 1386 |
| Patents By Year of Application: | 855 | 42 | 34 | 38 | 56 | 57 | 33 | 35 | 46 | 53 | 48 | 57 | 25 | 7  | 0  | 1386 |

DEGUSSA AKTIENGESELLSCHAFT

|                                 |     |    |    |    |    |    |    |    |    |    |    |     |    |     |     |      |
|---------------------------------|-----|----|----|----|----|----|----|----|----|----|----|-----|----|-----|-----|------|
| Patents By Year of Grant:       | 502 | 68 | 52 | 61 | 62 | 42 | 50 | 48 | 63 | 49 | 21 | 39  | 86 | 102 | 117 | 1362 |
| Patents By Year of Application: | 606 | 48 | 69 | 54 | 49 | 55 | 61 | 64 | 33 | 44 | 63 | 135 | 68 | 13  | 0   | 1362 |

CITIZEN WATCH CO., LTD.

|                                 |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |      |
|---------------------------------|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|------|
| Patents By Year of Grant:       | 739 | 25 | 22 | 23 | 23 | 19 | 28 | 29 | 42 | 69 | 77 | 84 | 61 | 54 | 55 | 1350 |
| Patents By Year of Application: | 783 | 24 | 15 | 29 | 33 | 34 | 40 | 83 | 79 | 91 | 72 | 41 | 19 | 7  | 0  | 1350 |

NAVISTAR INTERNATIONAL TRANSPORTATION CORP.

|                                 |      |    |    |    |    |    |    |    |    |    |    |    |   |   |   |      |
|---------------------------------|------|----|----|----|----|----|----|----|----|----|----|----|---|---|---|------|
| Patents By Year of Grant:       | 1163 | 22 | 15 | 18 | 13 | 11 | 10 | 11 | 13 | 15 | 36 | 18 | 4 | 0 | 0 | 1349 |
| Patents By Year of Application: | 1194 | 12 | 19 | 12 | 12 | 13 | 19 | 11 | 28 | 22 | 7  | 0  | 0 | 0 | 0 | 1349 |



---- Organizational Patenting (Granted: Jan 01, 1969 - Dec 31, 2004) ---- Ranked List of Organizations with 1000 or More Patents ----

|   | Pre<br>1991 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | TOTAL |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| SCHERING CORP.                                |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                     | 608         | 52   | 32   | 32   | 27   | 49   | 29   | 69   | 78   | 81   | 52   | 72   | 62   | 61   | 44   | 1348  |
| Patents By Year of Application:               | 696         | 30   | 37   | 46   | 56   | 111  | 46   | 67   | 54   | 67   | 52   | 54   | 31   | 1    | 0    | 1348  |
| ROBERTSHAW CONTROLS COMPANY                   |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                     | 1117        | 29   | 36   | 23   | 34   | 26   | 18   | 12   | 6    | 7    | 5    | 5    | 4    | 6    | 7    | 1335  |
| Patents By Year of Application:               | 1159        | 27   | 29   | 30   | 37   | 14   | 6    | 4    | 7    | 3    | 8    | 6    | 5    | 0    | 0    | 1335  |
| SEIKO INSTRUMENTS INC.                        |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                     | 94          | 50   | 57   | 48   | 50   | 54   | 52   | 49   | 59   | 70   | 95   | 148  | 183  | 179  | 140  | 1328  |
| Patents By Year of Application:               | 205         | 53   | 43   | 70   | 77   | 63   | 59   | 66   | 109  | 149  | 161  | 162  | 85   | 26   | 0    | 1328  |
| TOYODA JIDOSHOKKI SEISAKUSHO KABUSHIKI KAISHA |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                     | 411         | 46   | 25   | 39   | 49   | 47   | 51   | 44   | 78   | 86   | 110  | 125  | 135  | 65   | 15   | 1326  |
| Patents By Year of Application:               | 470         | 24   | 49   | 56   | 50   | 58   | 66   | 114  | 111  | 109  | 137  | 80   | 2    | 0    | 0    | 1326  |
| VARIAN ASSOCIATES, INC.                       |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                     | 1128        | 21   | 23   | 18   | 21   | 26   | 9    | 35   | 34   | 8    | 2    | 0    | 0    | 0    | 0    | 1325  |
| Patents By Year of Application:               | 1170        | 21   | 17   | 20   | 17   | 24   | 41   | 14   | 1    | 0    | 0    | 0    | 0    | 0    | 0    | 1325  |
| CISCO TECHNOLOGY, INC.                        |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                     | 0           | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 19   | 45   | 104  | 164  | 223  | 336  | 433  | 1324  |
| Patents By Year of Application:               | 0           | 0    | 0    | 0    | 1    | 14   | 35   | 113  | 265  | 426  | 292  | 89   | 69   | 20   | 0    | 1324  |
| KOBELITE LTD.                                 |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                     | 613         | 61   | 74   | 36   | 56   | 43   | 46   | 42   | 66   | 56   | 49   | 46   | 44   | 44   | 48   | 1324  |
| Patents By Year of Application:               | 718         | 55   | 56   | 41   | 61   | 46   | 66   | 71   | 39   | 47   | 39   | 45   | 34   | 6    | 0    | 1324  |
| BORG-WARNER CORPORATION                       |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                     | 1316        | 4    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 1    | 0    | 1    | 0    | 1322  |
| Patents By Year of Application:               | 1320        | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 1    | 1    | 0    | 0    | 0    | 1322  |
| BLACK & DECKER INC.                           |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                     | 583         | 28   | 28   | 21   | 29   | 48   | 36   | 44   | 73   | 60   | 73   | 77   | 64   | 83   | 74   | 1321  |
| Patents By Year of Application:               | 625         | 23   | 26   | 39   | 59   | 48   | 71   | 70   | 63   | 86   | 58   | 74   | 70   | 9    | 0    | 1321  |
| MITA INDUSTRIAL COMPANY LTD.                  |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                     | 414         | 84   | 97   | 120  | 93   | 82   | 86   | 73   | 154  | 76   | 29   | 2    | 0    | 0    | 0    | 1310  |
| Patents By Year of Application:               | 587         | 92   | 111  | 96   | 74   | 104  | 95   | 100  | 39   | 11   | 1    | 0    | 0    | 0    | 0    | 1310  |
| SMITHKLINE BEECHAM CORPORATION                |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:                     | 12          | 15   | 10   | 16   | 7    | 22   | 22   | 69   | 94   | 184  | 193  | 248  | 206  | 130  | 78   | 1306  |
| Patents By Year of Application:               | 40          | 7    | 14   | 20   | 41   | 90   | 66   | 252  | 215  | 215  | 144  | 117  | 70   | 14   | 1    | 1306  |

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

ALL TECHNOLOGIES (UTILITY PATENTS) REPORT (PARTS A1, A2, B)

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---- Organizational Patenting (Granted: Jan 01, 1969 - Dec 31, 2004) ---- Ranked List of Organizations with 1000 or More Patents ----

|                                 | Pre  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                                 | 1991 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | TOTAL |
| MOLEX INCORPORATED              |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:       | 219  | 51   | 76   | 82   | 85   | 56   | 61   | 72   | 79   | 88   | 107  | 107  | 69   | 40   | 92   | 1284  |
| Patents By Year of Application: | 282  | 72   | 92   | 100  | 73   | 71   | 86   | 106  | 97   | 95   | 80   | 52   | 40   | 36   | 2    | 1284  |
| QUALCOMM, INC.                  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:       | 8    | 4    | 9    | 8    | 9    | 21   | 48   | 45   | 82   | 110  | 100  | 173  | 196  | 178  | 283  | 1274  |
| Patents By Year of Application: | 20   | 9    | 9    | 22   | 54   | 76   | 124  | 130  | 171  | 266  | 146  | 156  | 75   | 16   | 0    | 1274  |
| ASAHI GLASS COMPANY, LTD.       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:       | 415  | 45   | 48   | 50   | 42   | 36   | 47   | 47   | 64   | 67   | 53   | 81   | 81   | 105  | 92   | 1273  |
| Patents By Year of Application: | 501  | 40   | 45   | 40   | 49   | 50   | 72   | 82   | 64   | 78   | 70   | 92   | 73   | 16   | 1    | 1273  |
| NORTHROP GRUMMAN CORPORATION    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:       | 0    | 0    | 0    | 0    | 8    | 53   | 106  | 101  | 197  | 164  | 130  | 88   | 96   | 150  | 175  | 1268  |
| Patents By Year of Application: | 30   | 2    | 8    | 38   | 81   | 166  | 139  | 182  | 143  | 107  | 127  | 130  | 76   | 38   | 1    | 1268  |
| CIBA-GEIGY AG                   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:       | 1245 | 4    | 1    | 2    | 1    | 2    | 2    | 4    | 1    | 1    | 0    | 0    | 0    | 0    | 0    | 1263  |
| Patents By Year of Application: | 1250 | 2    | 0    | 1    | 5    | 4    | 1    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 1263  |
| YOSHIDA KOGYO KABUSHIKI KAISHA  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:       | 951  | 73   | 58   | 43   | 64   | 53   | 10   | 2    | 1    | 0    | 1    | 0    | 0    | 0    | 0    | 1256  |
| Patents By Year of Application: | 1045 | 54   | 45   | 80   | 26   | 6    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 1256  |
| KAWASAKI STEEL CORPORATION      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:       | 434  | 52   | 44   | 59   | 83   | 53   | 62   | 70   | 59   | 63   | 60   | 86   | 77   | 42   | 3    | 1247  |
| Patents By Year of Application: | 516  | 63   | 75   | 67   | 73   | 61   | 72   | 61   | 71   | 68   | 63   | 46   | 10   | 1    | 0    | 1247  |
| BABCOCK & WILCOX COMPANY        |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:       | 759  | 43   | 45   | 69   | 42   | 53   | 71   | 56   | 38   | 9    | 14   | 16   | 15   | 7    | 7    | 1244  |
| Patents By Year of Application: | 822  | 58   | 56   | 50   | 80   | 67   | 38   | 22   | 12   | 12   | 10   | 8    | 9    | 0    | 0    | 1244  |
| MANNESMANN AG                   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:       | 518  | 63   | 63   | 83   | 60   | 52   | 54   | 47   | 59   | 65   | 68   | 61   | 24   | 24   | 3    | 1244  |
| Patents By Year of Application: | 634  | 78   | 59   | 56   | 56   | 58   | 56   | 70   | 63   | 78   | 24   | 11   | 1    | 0    | 0    | 1244  |
| LOCKHEED MARTIN CORPORATION     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:       | 0    | 0    | 0    | 0    | 0    | 0    | 19   | 47   | 108  | 117  | 175  | 152  | 192  | 223  | 200  | 1233  |
| Patents By Year of Application: | 31   | 2    | 0    | 7    | 23   | 65   | 105  | 106  | 158  | 181  | 182  | 200  | 145  | 26   | 2    | 1233  |
| MORTON THIOKOL, INC.            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:       | 1039 | 23   | 12   | 15   | 26   | 38   | 33   | 19   | 17   | 1    | 1    | 0    | 0    | 0    | 0    | 1224  |
| Patents By Year of Application: | 1083 | 14   | 26   | 36   | 33   | 18   | 13   | 0    | 1    | 0    | 0    | 0    | 0    | 0    | 0    | 1224  |

---- Organizational Patenting (Granted: Jan 01, 1969 - Dec 31, 2004) ---- Ranked List of Organizations with 1000 or More Patents ----

Pre

1991 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 TOTAL

WISCONSIN ALUMNI RESEARCH FOUNDATION

Patents By Year of Grant: 337 44 39 53 48 44 64 62 83 86 64 72 80 84 64 1224

Patents By Year of Application: 420 41 48 55 59 88 69 84 69 92 83 79 32 5 0 1224

FUJINON CORPORATION (FORMERLY FUJI PHOTO OPTICAL CO. LTD.)

Patents By Year of Grant: 210 7 8 22 44 26 44 76 102 86 114 94 126 130 124 1213

Patents By Year of Application: 217 21 27 45 40 67 86 107 93 130 117 112 102 49 0 1213

DAEWOO ELECTRONICS COMPANY, LTD.

Patents By Year of Grant: 4 0 3 1 19 47 129 215 319 274 120 54 15 4 7 1211

Patents By Year of Application: 6 2 6 44 150 214 300 282 170 19 7 5 4 2 0 1211

BASF CORP.

Patents By Year of Grant: 185 46 56 91 63 71 99 91 95 88 82 58 83 55 45 1208

Patents By Year of Application: 269 76 80 68 74 151 103 107 68 60 68 49 27 8 0 1208

STANDARD OIL COMPANY

Patents By Year of Grant: 1016 33 41 20 11 9 7 15 10 11 11 8 9 2 2 1205

Patents By Year of Application: 1080 30 11 3 10 16 10 11 12 11 6 5 0 0 0 1205

ALLIS-CHALMERS CORPORATION

Patents By Year of Grant: 1202 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1202

Patents By Year of Application: 1202 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1202

MEAD CORPORATION

Patents By Year of Grant: 879 44 34 33 31 19 16 28 31 23 12 18 16 11 0 1195

Patents By Year of Application: 942 31 32 28 19 29 21 30 18 13 23 7 2 0 0 1195

DAIKIN INDUSTRIES LIMITED

Patents By Year of Grant: 433 45 57 50 36 30 31 52 60 43 60 80 68 65 76 1186

Patents By Year of Application: 528 48 38 29 46 62 46 59 73 71 60 69 50 7 0 1186

MILES INC.

Patents By Year of Grant: 792 34 95 105 86 60 6 7 0 0 0 0 0 0 0 1185

Patents By Year of Application: 900 100 82 65 33 5 0 0 0 0 0 0 0 0 0 1185

L'AIR LIQUIDE, SOCIETE ANONYME POUR L'ETUDE ET L'EXPLOITATION DES PROCEDES GEORGES CLAUDE

Patents By Year of Grant: 353 29 44 42 44 58 52 35 49 75 74 129 81 79 39 1183

Patents By Year of Application: 409 37 51 47 63 47 55 71 78 113 102 74 27 9 0 1183

TEXTRON INC.

Patents By Year of Grant: 961 13 20 20 21 14 14 13 19 11 19 12 10 16 17 1180

Patents By Year of Application: 983 26 16 23 9 18 15 18 14 9 19 13 14 3 0 1180

---- Organizational Patenting (Granted: Jan 01, 1969 - Dec 31, 2004) ---- Ranked List of Organizations with 1000 or More Patents ----

|  | Pre<br>1991 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | TOTAL |
|--|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
|--|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|

GAF CHEMICALS CORPORATION

|                                 |      |    |   |   |   |   |   |   |   |   |   |   |   |   |   |      |
|---------------------------------|------|----|---|---|---|---|---|---|---|---|---|---|---|---|---|------|
| Patents By Year of Grant:       | 1137 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1177 |
| Patents By Year of Application: | 1177 | 0  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1177 |

BOEHRINGER MANNHEIM G.M.B.H.

|                                 |     |    |    |    |    |    |    |    |    |    |    |   |   |   |   |      |
|---------------------------------|-----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|------|
| Patents By Year of Grant:       | 641 | 53 | 54 | 47 | 60 | 58 | 53 | 61 | 80 | 42 | 16 | 7 | 0 | 2 | 1 | 1175 |
| Patents By Year of Application: | 765 | 53 | 43 | 56 | 69 | 74 | 64 | 35 | 10 | 3  | 3  | 0 | 0 | 0 | 0 | 1175 |

GULF RESEARCH AND DEVELOPMENT COMPANY

|                                 |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |      |
|---------------------------------|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|------|
| Patents By Year of Grant:       | 1175 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1175 |
| Patents By Year of Application: | 1175 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1175 |

FUJI JUKOGYO KABUSHIKI KAISHA

|                                 |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |      |
|---------------------------------|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|------|
| Patents By Year of Grant:       | 422 | 136 | 56 | 37 | 29 | 33 | 34 | 37 | 40 | 32 | 43 | 54 | 50 | 83 | 81 | 1167 |
| Patents By Year of Application: | 598 | 35  | 35 | 35 | 38 | 40 | 36 | 42 | 44 | 51 | 52 | 86 | 54 | 20 | 1  | 1167 |

SUMITOMO RUBBER INDUSTRIES, LTD.

|                                 |     |    |    |    |    |    |    |    |    |    |    |     |    |     |     |      |
|---------------------------------|-----|----|----|----|----|----|----|----|----|----|----|-----|----|-----|-----|------|
| Patents By Year of Grant:       | 134 | 40 | 50 | 60 | 62 | 72 | 66 | 55 | 76 | 57 | 71 | 82  | 83 | 125 | 125 | 1158 |
| Patents By Year of Application: | 224 | 61 | 64 | 66 | 82 | 61 | 65 | 84 | 79 | 86 | 95 | 113 | 64 | 14  | 0   | 1158 |

CASE CORPORATION

|                                 |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |      |
|---------------------------------|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|------|
| Patents By Year of Grant:       | 562 | 29 | 23 | 35 | 17 | 20 | 26 | 23 | 37 | 67 | 78 | 69 | 51 | 73 | 45 | 1155 |
| Patents By Year of Application: | 607 | 23 | 31 | 17 | 28 | 37 | 53 | 53 | 67 | 74 | 51 | 66 | 39 | 9  | 0  | 1155 |

NIPPON GAKKI SEIZO KABUSHIKI KAISHA

|                                 |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |      |
|---------------------------------|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|------|
| Patents By Year of Grant:       | 1152 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1155 |
| Patents By Year of Application: | 1154 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1155 |

RAYCHEM CORPORATION

|                                 |     |    |    |    |    |    |    |    |    |    |   |   |   |   |   |      |
|---------------------------------|-----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|------|
| Patents By Year of Grant:       | 763 | 57 | 53 | 39 | 35 | 39 | 32 | 34 | 50 | 36 | 5 | 0 | 0 | 0 | 0 | 1143 |
| Patents By Year of Application: | 865 | 38 | 46 | 36 | 30 | 48 | 41 | 35 | 4  | 0  | 0 | 0 | 0 | 0 | 0 | 1143 |

3COM CORPORATION

|                                 |   |   |    |    |    |    |    |     |     |     |     |     |     |     |     |      |
|---------------------------------|---|---|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Patents By Year of Grant:       | 3 | 1 | 0  | 2  | 7  | 15 | 20 | 22  | 35  | 90  | 155 | 220 | 188 | 200 | 182 | 1140 |
| Patents By Year of Application: | 4 | 3 | 14 | 10 | 19 | 36 | 40 | 149 | 269 | 321 | 194 | 57  | 17  | 7   | 0   | 1140 |

OUTBOARD MARINE CORPORATION

|                                 |     |    |    |    |    |    |    |    |    |    |    |    |   |   |   |      |
|---------------------------------|-----|----|----|----|----|----|----|----|----|----|----|----|---|---|---|------|
| Patents By Year of Grant:       | 832 | 58 | 38 | 41 | 22 | 31 | 29 | 14 | 21 | 13 | 18 | 17 | 2 | 1 | 0 | 1137 |
| Patents By Year of Application: | 915 | 32 | 33 | 33 | 26 | 29 | 16 | 17 | 16 | 14 | 5  | 1  | 0 | 0 | 0 | 1137 |

SQUARE D COMPANY

|                                 |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |      |
|---------------------------------|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|------|
| Patents By Year of Grant:       | 586 | 42 | 59 | 39 | 33 | 49 | 35 | 33 | 48 | 47 | 19 | 44 | 33 | 32 | 24 | 1123 |
| Patents By Year of Application: | 684 | 39 | 39 | 41 | 47 | 40 | 42 | 40 | 44 | 40 | 28 | 28 | 11 | 0  | 0  | 1123 |

---- Organizational Patenting (Granted: Jan 01, 1969 - Dec 31, 2004) ---- Ranked List of Organizations with 1000 or More Patents ----

|                                    | Pre<br>1991 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | TOTAL |
|------------------------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| AJINOMOTO COMPANY INCORPORATED     |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:          | 482         | 33   | 25   | 32   | 41   | 34   | 42   | 37   | 53   | 51   | 46   | 60   | 64   | 48   | 66   | 1114  |
| Patents By Year of Application:    | 545         | 30   | 36   | 36   | 43   | 48   | 52   | 60   | 40   | 54   | 71   | 57   | 39   | 3    | 0    | 1114  |
| VLSI TECHNOLOGY, INC.              |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:          | 18          | 26   | 44   | 68   | 89   | 112  | 100  | 93   | 150  | 158  | 134  | 88   | 27   | 0    | 0    | 1107  |
| Patents By Year of Application:    | 98          | 77   | 90   | 89   | 102  | 116  | 161  | 185  | 108  | 69   | 11   | 1    | 0    | 0    | 0    | 1107  |
| ROUSSEL-UCLAF                      |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:          | 771         | 40   | 45   | 40   | 40   | 57   | 34   | 26   | 39   | 8    | 0    | 0    | 0    | 0    | 0    | 1100  |
| Patents By Year of Application:    | 857         | 27   | 48   | 44   | 43   | 44   | 28   | 9    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 1100  |
| UNITED STATES SURGICAL CORPORATION |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:          | 153         | 27   | 50   | 52   | 115  | 158  | 139  | 95   | 92   | 95   | 39   | 33   | 17   | 16   | 14   | 1095  |
| Patents By Year of Application:    | 218         | 58   | 111  | 161  | 139  | 128  | 97   | 82   | 37   | 23   | 14   | 20   | 6    | 1    | 0    | 1095  |
| NESTEC, S.A.                       |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:          | 200         | 40   | 56   | 64   | 46   | 64   | 50   | 45   | 67   | 107  | 72   | 90   | 64   | 73   | 56   | 1094  |
| Patents By Year of Application:    | 280         | 61   | 68   | 54   | 62   | 63   | 78   | 84   | 83   | 67   | 87   | 68   | 34   | 5    | 0    | 1094  |
| SEAGATE TECHNOLOGY, INCORPORATED   |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:          | 50          | 39   | 49   | 62   | 48   | 40   | 64   | 98   | 163  | 190  | 235  | 29   | 15   | 8    | 3    | 1093  |
| Patents By Year of Application:    | 147         | 43   | 43   | 47   | 86   | 121  | 140  | 246  | 160  | 46   | 9    | 5    | 0    | 0    | 0    | 1093  |
| GTE LABORATORIES, INC.             |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:          | 856         | 63   | 49   | 31   | 25   | 9    | 12   | 8    | 8    | 15   | 15   | 1    | 0    | 0    | 0    | 1092  |
| Patents By Year of Application:    | 964         | 35   | 25   | 16   | 9    | 14   | 7    | 11   | 9    | 2    | 0    | 0    | 0    | 0    | 0    | 1092  |
| ETHICON, INC.                      |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:          | 267         | 22   | 32   | 48   | 66   | 71   | 44   | 60   | 55   | 60   | 75   | 73   | 68   | 90   | 60   | 1091  |
| Patents By Year of Application:    | 303         | 32   | 68   | 83   | 57   | 55   | 73   | 61   | 87   | 84   | 79   | 83   | 21   | 5    | 0    | 1091  |
| HALLIBURTON ENERGY SERVICES, INC.  |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:          | 0           | 0    | 0    | 1    | 0    | 2    | 0    | 25   | 75   | 115  | 140  | 169  | 166  | 186  | 209  | 1088  |
| Patents By Year of Application:    | 0           | 0    | 2    | 2    | 3    | 16   | 72   | 127  | 153  | 158  | 160  | 180  | 185  | 29   | 1    | 1088  |
| DYNAMIT NOBEL AKTIENGESELLSCHAFT   |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:          | 1020        | 9    | 8    | 16   | 9    | 9    | 6    | 1    | 4    | 0    | 1    | 1    | 0    | 1    | 0    | 1085  |
| Patents By Year of Application:    | 1037        | 15   | 8    | 7    | 9    | 4    | 1    | 2    | 0    | 1    | 0    | 0    | 1    | 0    | 0    | 1085  |
| FURUKAWA ELECTRIC CO., LTD.        |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:          | 235         | 19   | 32   | 55   | 61   | 47   | 44   | 26   | 41   | 53   | 40   | 52   | 85   | 134  | 160  | 1084  |
| Patents By Year of Application:    | 278         | 42   | 63   | 56   | 45   | 39   | 44   | 60   | 40   | 50   | 98   | 159  | 92   | 16   | 2    | 1084  |

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

ALL TECHNOLOGIES (UTILITY PATENTS) REPORT (PARTS A1, A2, B)

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---- Organizational Patenting (Granted: Jan 01, 1969 - Dec 31, 2004) ---- Ranked List of Organizations with 1000 or More Patents ----

|                                       | Pre  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
|---------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
|                                       | 1991 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | TOTAL |
| KABUSHIKI KAISHA KOMATSU SEISAKUSHO   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:             | 625  | 34   | 60   | 82   | 72   | 55   | 77   | 42   | 29   | 6    | 1    | 1    | 0    | 0    | 0    | 1084  |
| Patents By Year of Application:       | 712  | 73   | 79   | 52   | 70   | 79   | 14   | 5    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 1084  |
| STMICROELECTRONICS S.R.L.             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:             | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 4    | 55   | 144  | 232  | 266  | 216  | 162  | 1079  |
| Patents By Year of Application:       | 0    | 0    | 1    | 0    | 0    | 8    | 17   | 47   | 158  | 230  | 260  | 226  | 111  | 21   | 0    | 1079  |
| SULZER BROTHERS LTD.                  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:             | 908  | 43   | 57   | 46   | 9    | 6    | 2    | 0    | 0    | 0    | 0    | 0    | 2    | 0    | 0    | 1073  |
| Patents By Year of Application:       | 984  | 46   | 32   | 6    | 2    | 3    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 1073  |
| TOYODA GOSEI KABUSHIKI KAISHA         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:             | 254  | 37   | 47   | 41   | 42   | 48   | 39   | 52   | 75   | 67   | 57   | 50   | 84   | 86   | 88   | 1067  |
| Patents By Year of Application:       | 304  | 64   | 38   | 51   | 45   | 65   | 77   | 68   | 67   | 45   | 81   | 79   | 69   | 14   | 0    | 1067  |
| NGK SPARK PLUG CO., LTD.              |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:             | 330  | 48   | 41   | 38   | 50   | 33   | 32   | 22   | 44   | 64   | 54   | 68   | 59   | 92   | 90   | 1065  |
| Patents By Year of Application:       | 403  | 42   | 51   | 30   | 47   | 36   | 31   | 74   | 58   | 72   | 64   | 79   | 65   | 11   | 2    | 1065  |
| PORSCHE AG                            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:             | 479  | 49   | 45   | 31   | 28   | 30   | 41   | 39   | 26   | 48   | 37   | 48   | 55   | 49   | 60   | 1065  |
| Patents By Year of Application:       | 544  | 41   | 29   | 39   | 37   | 48   | 36   | 45   | 40   | 38   | 51   | 51   | 56   | 10   | 0    | 1065  |
| MITSUBISHI GAS-CHEMICAL COMPANY, INC. |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:             | 408  | 49   | 47   | 44   | 51   | 51   | 40   | 33   | 47   | 66   | 43   | 51   | 48   | 46   | 38   | 1062  |
| Patents By Year of Application:       | 494  | 44   | 42   | 51   | 45   | 40   | 54   | 53   | 52   | 53   | 46   | 44   | 35   | 8    | 1    | 1062  |
| DELL PRODUCTS, L.P.                   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:             | 0    | 0    | 1    | 7    | 18   | 56   | 88   | 96   | 109  | 85   | 94   | 132  | 109  | 130  | 129  | 1054  |
| Patents By Year of Application:       | 8    | 15   | 3    | 63   | 77   | 127  | 89   | 118  | 93   | 196  | 117  | 92   | 39   | 17   | 0    | 1054  |
| CYPRESS SEMICONDUCTOR CORP.           |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:             | 18   | 5    | 3    | 4    | 6    | 20   | 21   | 51   | 105  | 116  | 113  | 107  | 122  | 185  | 175  | 1051  |
| Patents By Year of Application:       | 23   | 5    | 8    | 13   | 32   | 71   | 115  | 152  | 97   | 119  | 162  | 167  | 77   | 10   | 0    | 1051  |
| CONTINENTAL GROUP, INC.               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:             | 1043 | 6    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 1049  |
| Patents By Year of Application:       | 1049 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 1049  |
| LG SEMICON CO., LTD.                  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Patents By Year of Grant:             | 0    | 0    | 0    | 0    | 0    | 0    | 32   | 119  | 235  | 311  | 255  | 42   | 30   | 8    | 4    | 1036  |
| Patents By Year of Application:       | 0    | 0    | 0    | 2    | 10   | 140  | 229  | 328  | 237  | 69   | 10   | 7    | 3    | 1    | 0    | 1036  |

---- Organizational Patenting (Granted: Jan 01, 1969 - Dec 31, 2004) ---- Ranked List of Organizations with 1000 or More Patents ----

Pre

1991 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 TOTAL

BBC BROWN, BOVERI & COMPANY, LIMITED

Patents By Year of Grant: 1031 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1031

Patents By Year of Application: 1031 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1031

MATSUSHITA ELECTRIC WORKS, LTD.

Patents By Year of Grant: 394 33 41 41 43 36 42 24 44 58 60 53 48 56 54 1027

Patents By Year of Application: 461 38 44 40 42 32 45 63 57 46 67 56 28 7 1 1027

LICENTIA PATENT-VERWALTUNGS-GMBH

Patents By Year of Grant: 952 10 11 12 7 8 9 5 3 7 0 1 0 0 0 1025

Patents By Year of Application: 974 9 10 5 12 5 6 4 0 0 0 0 0 0 0 1025

SANSHIN KOGYO KABUSHIKI KAISHA

Patents By Year of Grant: 221 73 49 57 57 30 74 58 83 69 83 63 70 35 2 1024

Patents By Year of Application: 324 49 54 61 47 72 98 78 81 64 62 30 4 0 0 1024

PENNWALT CORPORATION

Patents By Year of Grant: 1021 0 1 0 0 0 0 0 0 0 0 0 0 0 0 1022

Patents By Year of Application: 1022 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1022

MITSUI PETROCHEMICAL INDUSTRIES LTD.

Patents By Year of Grant: 431 99 76 83 75 61 41 76 57 10 8 1 1 0 0 1019

Patents By Year of Application: 603 66 62 69 63 81 47 27 0 1 0 0 0 0 0 1019

NORTH AMERICAN PHILIPS CORPORATION

Patents By Year of Grant: 631 102 91 73 55 32 20 6 1 4 0 2 0 0 1 1018

Patents By Year of Application: 799 74 76 38 18 13 0 0 0 0 0 0 0 0 0 1018

STERLING DRUG INC.

Patents By Year of Grant: 970 15 22 6 3 0 1 0 0 0 0 0 0 0 0 1017

Patents By Year of Application: 1000 16 0 0 0 1 0 0 0 0 0 0 0 0 0 1017

XILINX, INC.

Patents By Year of Grant: 16 2 4 2 23 21 56 60 78 93 115 125 146 137 137 1015

Patents By Year of Application: 22 7 10 23 37 83 81 110 108 112 168 112 106 34 2 1015

ASEA AKTIEBOLAG

Patents By Year of Grant: 1012 1 0 0 0 0 0 0 0 0 0 0 0 0 0 1013

Patents By Year of Application: 1013 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1013

BELL + HOWELL COMPANY

Patents By Year of Grant: 978 4 14 8 0 1 4 0 0 0 0 1 0 0 0 1010

Patents By Year of Application: 985 16 3 0 5 0 0 0 0 0 1 0 0 0 0 1010

---- Organizational Patenting (Granted: Jan 01, 1969 - Dec 31, 2004) ---- Ranked List of Organizations with 1000 or More Patents ----

|                                      | Pre<br>1991 | 1991  | 1992  | 1993  | 1994  | 1995  | 1996  | 1997  | 1998  | 1999  | 2000  | 2001  | 2002  | 2003  | 2004  | TOTAL   |
|--------------------------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------|
| MITSUBISHI RAYON CO., LTD.           |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |         |
| Patents By Year of Grant:            | 544         | 62    | 80    | 46    | 44    | 21    | 21    | 8     | 7     | 27    | 21    | 29    | 31    | 42    | 27    | 1010    |
| Patents By Year of Application:      | 664         | 58    | 46    | 26    | 19    | 15    | 8     | 31    | 17    | 28    | 37    | 32    | 23    | 6     | 0     | 1010    |
| CIBA SPECIALTY CHEMICALS CORPORATION |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |         |
| Patents By Year of Grant:            | 0           | 0     | 0     | 0     | 0     | 0     | 0     | 23    | 164   | 182   | 158   | 114   | 142   | 124   | 98    | 1005    |
| Patents By Year of Application:      | 0           | 2     | 2     | 9     | 5     | 39    | 120   | 190   | 176   | 100   | 132   | 137   | 74    | 18    | 1     | 1005    |
| Other Organizations (220727)         |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |         |
| Patents By Year of Grant:            | 678347      | 42675 | 43378 | 43701 | 45215 | 45466 | 49483 | 52481 | 69241 | 72766 | 74874 | 81119 | 83087 | 85530 | 84545 | 1551908 |
| Patents By Year of Application:      | 753547      | 44136 | 46292 | 49294 | 56388 | 68451 | 66295 | 77971 | 78280 | 84350 | 85216 | 76298 | 51852 | 13169 | 369   | 1551908 |