

TECHNOLOGY ASSESSMENT AND FORECAST REPORT

ELECTRICAL CLASSES

1/1992 – 12/2011



May 2012

U.S. PATENT AND TRADEMARK OFFICE
ELECTRONIC INFORMATION PRODUCTS DIVISION- PTMT
P.O. Box 1450
ALEXANDRIA, VA 22313-1450
tel (571) 272-5600 / FAX (571) 273-0110

A PATENT TECHNOLOGY MONITORING TEAM REPORT

Technology Profile Report - ELECTRICAL Classes

Explanation of Data

This Technology Profile Report profiles the patent activity for U.S. utility patents granted between **1992 and December 2011** in ELECTRICAL technology discipline classes within the U.S. Patent Classification System (USPCS).

The report is generated by identifying appropriate Patent and Trademark Office (PTO) classes, i.e., those entirely or substantially pertinent to the technology discipline of interest. The patents in these classes are then included in the profile. This procedure results, in most cases, in the inclusion of the majority of patents relevant to the technology discipline and few, if any, patents which are not relevant. However, any patent listing provided should not be considered to be inclusive of all relevant patents, nor exclusive of all irrelevant patents.

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 patent 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 1998**" column, correspond to selected patents in the database which were granted during the period **1992 to 1997**.

Part B

Part B of this report distributes patent GRANT data for organizations that have received U.S. patents since 1992. 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 35% 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 **34** months, the patented application data for applications filed in the most recent years are incomplete.* This is because the patents included in this report are limited to those granted during the specified time period. However, a significant number of the applications filed during the most recent years of this time period were still pending at the end of the period. While many of these applications eventually will be patented, they will not be patented until sometime following the end of the period displayed 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 PTO processing such as occurred in 1986 and 2005 when the PTO issued fewer patents than would normally have been expected because of administrative reasons. 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 1998**" column, correspond to patent grants in the report which were filed prior to **1998**.

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 Corporation ownership categories count predominantly corporate patents; however, patents assigned to other organizations such as small businesses, nonprofit organizations, universities, etc. are also included in these categories. While U.S. Government patent ownership includes only patents granted to the Federal Government, no similar distinction is made for Foreign Government patents.

Note that for a patent, the country of origin may differ from the country of ownership. Therefore, **the sum of U.S. origin patents does not equal the sum of U.S. ownership category patents**.

Part B is a ranked listing of national and international organizations (i.e., corporations, universities, government agencies) that have received 200 or more U.S. utility patents since 1992. 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 regarding 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.

* For example, in a report profiling utility patents granted through December 2011, patent grant data, as distributed by year of application are approximately 90% complete for utility patent applications filed in 2003, 82% complete for applications filed in 2004, 72% complete for applications filed in 2005, 61% complete for applications filed in 2006, 49% complete for applications filed in 2007, 34% complete for applications filed in 2008, and 17% complete for applications filed in 2009; data are essentially complete for applications filed prior to 2003.

CHEMICAL, ELECTRICAL, MECHANICAL CLASSES

DECEMBER 2011

CHEMICAL	8	23	44	48	51	55	65	71	75	95	96	106	117	127	136	148
	149	156	159	162	196	201	202	203	204	205	208	210	216	252	260	264
	376	419	420	422	423	424	426	427	428	429	430	435	436	438	442	501
	502	503	504	507	508	510	512	514	516	518	520	521	522	523	524	525
	526	527	528	530	532	534	536	540	544	546	548	549	552	554	556	558
	560	562	564	568	570	585	588	800	930	976	977	987				

The following subclasses are also Chemical: 29/2, 25.01-25.03, 623.1-623.5; 118/47, 715-733; 131/274 279; 134/1 42; 505/100-126, 300-512, 725-785, 800-824, 951

ELECTRICAL	174	177	178	191	200	218	219	235	250	257	290	307	310	313	314	315
	318	320	322	323	324	326	327	329	330	331	332	333	334	335	336	337
	338	340	341	342	343	345	346	347	348	349	352	355	356	358	359	360
	361	362	363	365	367	368	369	370	372	373	375	377	378	379	380	381
	382	385	386	388	392	396	398	399	455	505	700	701	702	703	704	705
	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	725
	726	850	902													

The following subclasses are also Electrical: 84/600-746; 204/157.2-157.22; 209/ 127.1-131, 511, 524-528, 536, 563-590; 244/3.1-3.14; 434/1-10, 307R-321, 350-362; 600/310-361, 372-397, 407-436, 473-480, 509-525, 544-548; 604/20-21; 607/2-76, 98-103, 115-156; 968/446-604, 783, 802, 820-830, 837-856, 876-977; 977/720-723, 839, 849-881, 901, 932-960; 984/300-398

MECHANICAL	2	4	5	7	12	14	15	16	19	24	26	27	28	29	30	33
	34	36	37	38	40	42	43	47	49	52	53	54	56	57	59	60
	62	63	66	68	69	70	72	73	74	76	79	81	82	83	84	86
	87	89	91	92	99	100	101	102	104	105	108	109	110	111	112	114
	116	118	119	122	123	124	125	126	128	131	132	134	135	137	138	139
	140	141	142	144	147	150	152	157	160	163	164	165	166	168	169	171
	172	173	175	180	181	182	184	185	186	187	188	190	192	193	194	198
	199	206	209	211	212	213	215	217	220	221	222	223	224	225	226	227
	228	229	231	232	234	236	237	238	239	241	242	244	245	246	248	249
	251	254	256	258	261	266	267	269	270	271	273	276	277	278	279	280
	281	283	285	289	291	292	293	294	295	296	297	298	299	300	301	303
	305	312	351	353	366	374	383	384	400	401	402	403	404	405	406	407
	408	409	410	411	412	413	414	415	416	417	418	425	431	432	433	434
	439	440	441	445	446	449	450	451	452	453	454	460	462	463	464	470
	472	473	474	475	476	477	482	483	492	493	494	600	601	602	604	606
	607	623	901	903	968	984										

The following subclasses are also Mechanical: 8/147-159; 156/349-584; 210/348-540; 346/139R-145; 347/1-109; 352/143-197, 204-243; 359/503-553, 600-617, 838-883; 368/89-106, 124-154, 168-202, 206-216, 276-326; 378/167-209; 385/53-99; 396/341-372, 411-428, 439-543, 564-660; 588/249-250, 252-260; 726/35; 977/724-733, 904-913, 919, 962

TECHNOLOGY ASSESSMENT AND FORECAST PROGRAM TECHNOLOGY DISCIPLINES FOR
U.S. PATENT CLASSIFICATION SYSTEM CLASSES AS OF DECEMBER 2011
CHEMICAL, ELECTRICAL, MECHANICAL

| Class |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 2M | 66M | 124M | 181M | 228M | 289M | 343E | 398E | 441M | 522C | 707E |
| 4M | 68M | 125M | 182M | 229M | 290E | 345E | 399E | 442C | 523C | 708E |
| 5M | 69M | 126M | 184M | 231M | 291M | 346E* | 400M | 445M | 524C | 709E |
| 7M | 70M | 127C | 185M | 232M | 292M | 347E* | 401M | 446M | 525C | 710E |
| 8C* | 71C | 128M | 186M | 234M | 293M | 348E | 402M | 449M | 526C | 711E |
| 12M | 72M | 131M* | 187M | 235E | 294M | 349E | 403M | 450M | 527C | 712E |
| 14M | 73M | 132M | 188M | 236M | 295M | 351M | 404M | 451M | 528C | 713E |
| 15M | 74M | 134M* | 190M | 237M | 296M | 352E* | 405M | 452M | 530C | 714E |
| 16M | 75C | 135M | 191E | 238M | 297M | 353M | 406M | 453M | 532C | 715E |
| 19M | 76M | 136C | 192M | 239M | 298M | 355E | 407M | 454M | 534C | 716E |
| 23C | 79M | 137M | 193M | 241M | 299M | 356E | 408M | 455E | 536C | 717E |
| 24M | 81M | 138M | 194M | 242M | 300M | 358E | 409M | 460M | 540C | 718E |
| 26M | 82M | 139M | 196C | 244M* | 301M | 359E* | 410M | 462M | 544C | 719E |
| 27M | 83M | 140M | 198M | 245M | 303M | 360E | 411M | 463M | 546C | 720E |
| 28M | 84M* | 141M | 199M | 246M | 305M | 361E | 412M | 464M | 548C | 725E |
| 29M* | 86M | 142M | 200E | 248M | 307E | 362E | 413M | 470M | 549C | 726E* |
| 30M | 87M | 144M | 201C | 249M | 310E | 363E | 414M | 472M | 552C | 800C |
| 33M | 89M | 147M | 202C | 250E | 312M | 365E | 415M | 473M | 554C | 850E |
| 34M | 91M | 148C | 203C | 251M | 313E | 366M | 416M | 474M | 556C | 901M |
| 36M | 92M | 149C | 204C* | 252C | 314E | 367E | 417M | 475M | 558C | 902E |
| 37M | 95C | 150M | 205C | 254M | 315E | 368E* | 418M | 476M | 560C | 903M |
| 38M | 96C | 152M | 206M | 256M | 318E | 369E | 419C | 477M | 562C | 930C |
| 40M | 99M | 156C* | 208C | 257E | 320E | 370E | 420C | 482M | 564C | 968M* |
| 42M | 100M | 157M | 209M* | 258M | 322E | 372E | 422C | 483M | 568C | 976C |
| 43M | 101M | 159C | 210C* | 260C | 323E | 373E | 423C | 492M | 570C | 977C* |
| 44C | 102M | 160M | 211M | 261M | 324E | 374M | 424C | 493M | 585C | 984M* |
| 47M | 104M | 162C | 212M | 264C | 326E | 375E | 425M | 494M | 588C* | 987C |
| 48C | 105M | 163M | 213M | 266M | 327E | 376C | 426C | 501C | 600M* | |
| 49M | 106C | 164M | 215M | 267M | 329E | 377E | 427C | 502C | 601M | |
| 51C | 108M | 165M | 216C | 269M | 330E | 378E* | 428C | 503C | 602M | |
| 52M | 109M | 166M | 217M | 270M | 331E | 379E | 429C | 504C | 604M* | |
| 53M | 110M | 168M | 218E | 271M | 332E | 380E | 430C | 505E* | 606M | |
| 54M | 111M | 169M | 219E | 273M | 333E | 381E | 431M | 507C | 607M* | |
| 55C | 112M | 171M | 220M | 276M | 334E | 382E | 432M | 508C | 623M | |
| 56M | 114M | 172M | 221M | 277M | 335E | 383M | 433M | 510C | 700E | |
| 57M | 116M | 173M | 222M | 278M | 336E | 384M | 434M* | 512C | 701E | |
| 59M | 117C | 174E | 223M | 279M | 337E | 385E* | 435C | 514C | 702E | |
| 60M | 118M* | 175M | 224M | 280M | 338E | 386E | 436C | 516C | 703E | |
| 62M | 119M | 177E | 225M | 281M | 340E | 388E | 438C | 518C | 704E | |
| 63M | 122M | 178E | 226M | 283M | 341E | 392E | 439M | 520C | 705E | |
| 65C | 123M | 180M | 227M | 285M | 342E | 396E* | 440M | 521C | 706E | |

*8/147-159 are mechanical

*29/2, 25.01-25.03, 623.1-623.5 are chemical

*84/600-746 are electrical

*118/47, 715-733 are chemical

*131/274-279 are chemical

*134/1-42 are chemical

*156/349-584 are mechanical

*204/157.2-157.22 are electrical

*209/ 127.1-131, 511, 524-528, 536, 563-590 are electrical

*210/348-540 are mechanical

*244/3.1-3.14 are electrical

*346/139R-145 are mechanical

*347/1-109 are mechanical

*352/143-197, 204-243 are mechanical

*359/503-553, 600-617, 838-883 are mechanical

*368/89-106, 124-154, 168-202, 206-216, 276-326 are mechanical

*378/167-209 are mechanical

*385/53-99 are mechanical

*396/341-372, 411-428, 439-543, 564-660 are mechanical

*434/1-10, 307R-321, 350-362 are electrical

*505/100-126, 300-512, 725-785, 800-824, 951 are chemical

*588/249-250,252-260 are mechanical

*600/310-361, 372-397, 407-436, 473-480, 509-525, 544-548 are electrical

*604/20-21 are electrical

*607/2-76, 98-103, 115-156 are electrical

*726/35 is mechanical

*968/446-604, 783, 802, 820-830, 837-856, 876-977 are electrical

*977/720-723, 839, 849-881, 901, 932-960 are electrical

*977/724-733, 904-913, 919, 962 are mechanical

*984/300-398 are electrical

Part A1

Patent Grants as Distributed By Year of Patent Grant

---- Patents Granted By Date Of Patent Grant (Granted: Jan 01, 1992 - Dec 31, 2011) ----

----- PERCENT OF PATENTS -----
 Pre 1998 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 Total

Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
-------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

U.S. Origin	49	51	52	52	51	50	50	51	51	49	48	48	48	47	50
-------------	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

Foreign Origin	51	49	48	48	48	50	50	49	49	51	52	52	52	53	50
----------------	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

JAPAN	33	30	28	27	26	27	26	26	25	25	24	24	23	23	26
-------	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

KOREA, SOUTH	2	4	4	3	3	3	4	4	4	5	6	7	7	7	4
--------------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

GERMANY	4	4	4	4	4	5	5	5	4	4	4	4	4	4	4
---------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

TAIWAN	1	2	2	2	2	3	3	3	4	4	4	4	4	5	3
--------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

UNITED KINGDOM	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
----------------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

FRANCE	2	2	2	2	2	2	2	2	2	2	2	1	2	2	2
--------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

CANADA	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2
--------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

NETHERLANDS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
-------------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

ISRAEL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
--------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

SWEDEN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
--------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

FINLAND					1	1	1	1	1	1	1	1	1	1	1
---------	--	--	--	--	---	---	---	---	---	---	---	---	---	---	---

ITALY	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
-------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

CHINA, PEOPLE'S REPUB										1	1	1	1	2	1
-----------------------	--	--	--	--	--	--	--	--	--	---	---	---	---	---	---

SWITZERLAND	1													0	
-------------	---	--	--	--	--	--	--	--	--	--	--	--	--	---	--

AUSTRALIA										1	1	1		1	0
-----------	--	--	--	--	--	--	--	--	--	---	---	---	--	---	---

INDIA												1	1	0	
-------	--	--	--	--	--	--	--	--	--	--	--	---	---	---	--

SINGAPORE														0	
-----------	--	--	--	--	--	--	--	--	--	--	--	--	--	---	--

AUSTRIA														0	
---------	--	--	--	--	--	--	--	--	--	--	--	--	--	---	--

BELGIUM														0	
---------	--	--	--	--	--	--	--	--	--	--	--	--	--	---	--

CHINA, HONG KONG S.A.														0	
-----------------------	--	--	--	--	--	--	--	--	--	--	--	--	--	---	--

DENMARK														0	
---------	--	--	--	--	--	--	--	--	--	--	--	--	--	---	--

IRELAND														0	
---------	--	--	--	--	--	--	--	--	--	--	--	--	--	---	--

RUSSIAN FEDERATION														0	
--------------------	--	--	--	--	--	--	--	--	--	--	--	--	--	---	--

NORWAY														0	
--------	--	--	--	--	--	--	--	--	--	--	--	--	--	---	--

SPAIN														0	
-------	--	--	--	--	--	--	--	--	--	--	--	--	--	---	--

MALAYSIA														0	
----------	--	--	--	--	--	--	--	--	--	--	--	--	--	---	--

NEW ZEALAND														0	
-------------	--	--	--	--	--	--	--	--	--	--	--	--	--	---	--

BRAZIL														0	
--------	--	--	--	--	--	--	--	--	--	--	--	--	--	---	--

SOUTH AFRICA														0	
--------------	--	--	--	--	--	--	--	--	--	--	--	--	--	---	--

HUNGARY														0	
---------	--	--	--	--	--	--	--	--	--	--	--	--	--	---	--

MEXICO														0	
--------	--	--	--	--	--	--	--	--	--	--	--	--	--	---	--

CZECH REPUBLIC														0	
----------------	--	--	--	--	--	--	--	--	--	--	--	--	--	---	--

BULGARIA														0	
----------	--	--	--	--	--	--	--	--	--	--	--	--	--	---	--

GREECE														0	
--------	--	--	--	--	--	--	--	--	--	--	--	--	--	---	--

POLAND														0	
--------	--	--	--	--	--	--	--	--	--	--	--	--	--	---	--

THAILAND														0	
----------	--	--	--	--	--	--	--	--	--	--	--	--	--	---	--

Others (92)														0	
---------------	--	--	--	--	--	--	--	--	--	--	--	--	--	---	--

Ownership:

U.S. Corporations	45	48	49	49	49	47	47	47	48	48	46	46	46	45	47
-------------------	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

U.S. Government	1	1	1	1	1	1								1	
-----------------	---	---	---	---	---	---	--	--	--	--	--	--	--	---	--

U.S. Individuals	6	5	5	5	4	4	4	3	3	3	3	3	3	3	4
------------------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Foreign Corporations	46	44	44	44	45	47	47	48	47	47	49	50	50	50	47
----------------------	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

Foreign Government														0	
--------------------	--	--	--	--	--	--	--	--	--	--	--	--	--	---	--

Foreign Individuals	2	2	2	2	2	2	2	2	2	1	1	1	1	1	2
---------------------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Part A2

Patent Grants as Distributed By Year of Patent Application

---- Patents Granted By Date Of Patent Application (Granted: Jan 01, 1992 - Dec 31, 2011) ----

	Pre 1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Total
--	----------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

Total	323885	66941	73091	82589	89664	90802	91594	94130	95256	90065	77894	54446	25595	9851	833	1266636
U.S. Origin	164272	35624	39025	43638	45539	45397	44989	45173	44923	41391	36356	24431	11181	4922	452	627313
Foreign Origin	159613	31317	34066	38951	44125	45405	46605	48957	50333	48674	41538	30015	14414	4929	381	639323
JAPAN	100787	17184	17797	20446	22799	21635	22211	22632	24470	22361	19130	14002	6846	2467	183	334950
KOREA, SOUTH	8384	2546	2166	2472	2840	3380	4340	5699	6040	6694	5679	3814	1918	629	46	56647
GERMANY	11663	2558	3221	3774	4217	5001	4385	4423	4078	3712	2869	1807	649	192	9	52558
TAIWAN	3766	1260	1631	1627	2237	2934	3334	3870	3945	4340	4335	3796	1951	490	26	39542
UNITED KINGDOM	6668	1386	1581	1745	2049	2068	1827	1636	1460	1272	1017	708	237	112	5	23771
FRANCE	7152	1205	1422	1612	1595	1760	1677	1451	1435	1302	1020	535	214	75	5	22460
CANADA	4659	1260	1300	1482	1552	1668	1748	1818	1751	1850	1480	1010	523	275	30	22406
NETHERLANDS	3095	536	554	623	817	885	907	1097	740	646	402	191	79	29	3	10604
ISRAEL	1769	498	736	784	912	911	783	769	871	874	780	488	213	85	5	10478
SWEDEN	2293	708	738	773	710	598	563	538	494	474	352	196	88	26		8551
FINLAND	1352	352	604	782	896	706	666	661	510	424	297	178	73	20		7521
ITALY	1894	386	425	471	589	569	588	481	477	428	340	249	103	23		7023
CHINA, PEOPLE'S REPUB	105	23	45	122	189	289	382	592	823	1268	1123	1015	608	144	22	6750
SWITZERLAND	1714	261	366	370	449	476	435	396	395	409	323	276	107	28	3	6008
AUSTRALIA	700	223	222	384	344	454	463	547	444	280	282	280	142	109	10	4884
INDIA	64	20	77	118	162	256	386	397	475	510	520	417	126	53	5	3586
SINGAPORE	315	129	155	213	274	280	264	284	282	278	225	154	76	26	1	2956
AUSTRIA	427	94	147	136	193	238	235	231	221	215	219	125	58	15	1	2555
BELGIUM	649	151	158	159	161	184	233	190	189	168	115	77	37	14		2485
CHINA, HONG KONG S.A.	288	63	82	101	162	142	159	153	133	165	163	117	59	10	2	1799
DENMARK	246	73	132	111	199	215	140	142	128	148	82	71	36	16	3	1742
IRELAND	203	68	70	119	107	135	95	112	131	82	88	62	45	11	4	1332
RUSSIAN FEDERATION	225	74	87	110	114	71	114	96	95	105	84	55	36	13	10	1289
NORWAY	207	45	65	85	92	105	121	103	130	121	92	44	17	6	1	1234
SPAIN	179	32	58	62	95	94	111	95	126	101	90	47	34	9	1	1134
MALAYSIA	45	9	24	23	30	38	92	125	120	114	107	70	25	4		826
NEW ZEALAND	107	28	29	42	53	52	53	47	32	26	32	15	9	4		529
BRAZIL	55	10	17	16	22	28	39	38	30	25	31	18	8	1		338
SOUTH AFRICA	119	15	20	25	30	24	18	24	19	19	13	4	2	5		337
HUNGARY	49	11	21	20	30	31	22	25	32	19	18	17	4	5	1	305
MEXICO	39	14	20	23	34	20	26	14	20	25	14	14	3	2		268
CZECH REPUBLIC	11	6	9	12	19	15	11	19	21	24	29	28	12	3		219
BULGARIA	3		1	1	1	4	15	62	35	17	7	6	4	2		158
GREECE	27	8	4	1	5	11	13	12	10	17	13	9	4	2	1	137
POLAND	8	4	4	6	10	17	17	15	22	15	6	6	7			137
THAILAND	8	6	4	22	8	8	6	7	13	8	12	10	7	2		121
Others (92)	338	71	74	79	129	103	126	156	136	138	149	104	54	22	4	1683

Ownership:

U.S. Corporations	151837	33309	36401	40560	42864	43214	42664	42593	42962	39515	34685	23947	10582	4577	418	590128
U.S. Government	3301	377	314	349	349	343	320	324	342	272	280	201	110	20	2	6904
U.S. Individuals	16585	2626	2895	3227	2985	2932	2893	2762	2746	2671	2350	1567	719	333	41	47332
Foreign Corporations	145190	29554	32196	37038	41868	42754	44242	47223	47988	46441	39677	28123	13899	4823	366	601382
Foreign Government	733	36	32	35	32	35	41	43	40	35	35	31	11	2		1141
Foreign Individuals	6239	1039	1253	1380	1566	1524	1434	1185	1178	1131	867	577	274	96	6	19749

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 ----

ELECTRICAL CLASSES (12-31-2011)

Page B - 1

---- Organizational Patenting (Granted: Jan 01, 1992 - Dec 31, 2011) ---- Ranked List of Organizations with 200 or More Patents ----

	Pre																
	1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL	

INTERNATIONAL BUSINESS MACHINES CORPORATION

Patents By Year of Grant:	6594	2257	2224	2249	2662	2621	2814	2774	2540	3204	2755	3654	4344	5185	5526	51403
Patents By Year of Application:	12924	3129	3668	3706	3437	3071	3369	3154	3089	2916	3771	4250	768	139	12	51403

SAMSUNG ELECTRONICS CO., LTD.

Patents By Year of Grant:	1912	949	1130	1029	1075	952	938	1171	1210	1814	2127	2769	2875	3730	4075	27756
Patents By Year of Application:	4379	1395	1123	1040	1212	1505	2211	2778	2937	3418	3014	1727	768	239	10	27756

CANON KABUSHIKI KAISHA

Patents By Year of Grant:	5059	1441	1257	1257	1218	1201	1296	1249	1320	1858	1558	1638	1678	1919	2124	26073
Patents By Year of Application:	9454	1277	1396	1300	1491	1271	1568	1638	1995	1530	1436	1003	521	178	15	26073

SONY CORPORATION

Patents By Year of Grant:	3274	1108	1155	1119	1141	1189	1078	1078	949	1534	1225	1307	1477	1845	2026	21505
Patents By Year of Application:	6537	1315	1432	1439	1591	1282	1302	1293	1785	1264	1088	683	346	142	6	21505

TOSHIBA CORPORATION

Patents By Year of Grant:	4424	925	948	960	864	870	965	1085	1073	1400	1274	1355	1401	1778	2008	21330
Patents By Year of Application:	6665	1020	892	959	1141	1260	1276	1468	1371	1482	1448	1110	844	377	17	21330

HITACHI, LTD

Patents By Year of Grant:	4115	851	790	794	904	1181	1360	1142	959	1397	1130	1094	887	1216	1252	19072
Patents By Year of Application:	6188	758	1004	1218	1598	1438	1199	1381	1075	1049	876	811	289	176	12	19072

FUJITSU LIMITED

Patents By Year of Grant:	3240	1040	1023	957	1015	1037	1128	1125	1013	1339	1148	1303	1074	1187	1283	18912
Patents By Year of Application:	6046	1271	1118	1273	1442	1215	1052	1231	1431	1044	797	573	332	82	5	18912

INTEL CORPORATION

Patents By Year of Grant:	1349	660	662	700	717	947	1394	1378	1293	1671	1572	1514	1325	1439	1113	17734
Patents By Year of Application:	3294	1011	1265	1585	1596	1744	1836	1597	1321	1109	771	341	179	80	5	17734

NEC CORPORATION

Patents By Year of Grant:	4325	1377	1495	1576	1510	1439	1011	743	603	686	560	490	475	605	554	17449
Patents By Year of Application:	7812	1908	1739	1452	1168	746	570	514	565	420	278	179	76	21	1	17449

MICROSOFT CORPORATION

Patents By Year of Grant:	382	330	348	342	393	495	493	618	732	1451	1613	2011	2879	3039	2274	17400
Patents By Year of Application:	1455	634	760	1057	919	1102	1694	2814	3167	1786	1173	573	165	92	9	17400

MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.

Patents By Year of Grant:	3120	731	763	794	1012	1148	1314	1432	1273	1791	1555	1183	32	8	5	16161
Patents By Year of Application:	5015	993	1192	1522	1733	1529	1602	1319	753	393	104	3	1	2	0	16161

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

ELECTRICAL CLASSES (12-31-2011)

Page B - 2

---- Organizational Patenting (Granted: Jan 01, 1992 - Dec 31, 2011) ---- Ranked List of Organizations with 200 or More Patents ----

	Pre																
	1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL	

MITSUBISHI DENKI KABUSHIKI KAISHA

Patents By Year of Grant:	4121	877	809	772	854	1043	963	610	487	478	377	394	413	553	471	13222
Patents By Year of Application:	6041	807	845	1007	1137	807	487	503	436	413	414	201	98	24	2	13222

MOTOROLA, INC.

Patents By Year of Grant:	4327	1177	985	993	641	554	496	494	416	532	396	317	330	384	26	12068
Patents By Year of Application:	6921	852	585	803	560	628	530	391	336	303	131	25	3	0	0	12068

MICRON TECHNOLOGY, INC.

Patents By Year of Grant:	428	339	528	659	833	946	946	1009	929	976	939	828	633	573	652	11218
Patents By Year of Application:	1464	834	842	956	1049	1123	910	1020	854	917	495	369	232	146	7	11218

HEWLETT-PACKARD DEVELOPMENT COMPANY, L.P.

Patents By Year of Grant:	0	0	0	0	0	0	882	1245	1328	1703	1168	1159	992	1156	1057	10690
Patents By Year of Application:	31	93	312	930	1751	1674	1940	1336	1083	623	552	219	118	26	2	10690

TEXAS INSTRUMENTS, INCORPORATED

Patents By Year of Grant:	2037	487	457	492	584	557	607	677	590	703	602	622	530	674	647	10266
Patents By Year of Application:	3349	520	626	657	768	771	743	555	594	508	468	368	228	97	14	10266

SIEMENS AKTIENGESELLSCHAFT

Patents By Year of Grant:	1565	409	440	571	513	472	452	535	504	635	530	542	533	675	648	9024
Patents By Year of Application:	2529	620	711	662	718	710	615	629	548	495	376	260	133	16	2	9024

SHARP KABUSHIKI KAISHA (SHARP CORPORATION)

Patents By Year of Grant:	1861	460	398	451	414	404	384	435	387	583	544	487	534	656	737	8735
Patents By Year of Application:	2938	493	384	552	544	485	640	617	609	601	423	251	130	61	7	8735

RICOH COMPANY, LTD.

Patents By Year of Grant:	1334	307	288	306	263	233	287	420	359	565	615	678	825	982	974	8436
Patents By Year of Application:	2031	320	355	352	443	545	690	663	705	836	726	542	184	42	2	8436

SEIKO EPSON CORPORATION

Patents By Year of Grant:	595	183	154	187	247	312	446	489	538	764	734	773	843	882	887	8034
Patents By Year of Application:	1035	273	331	421	577	628	737	932	876	747	638	501	244	85	9	8034

LUCENT TECHNOLOGIES INC.

Patents By Year of Grant:	876	802	911	1078	895	600	581	505	389	541	418	387	4	0	0	7987
Patents By Year of Application:	3062	1371	1160	778	399	379	457	230	107	33	11	0	0	0	0	7987

GENERAL ELECTRIC COMPANY

Patents By Year of Grant:	1774	296	292	310	461	526	402	416	387	482	433	445	491	575	665	7955
Patents By Year of Application:	2409	395	573	608	460	410	499	489	549	506	487	339	178	52	1	7955

Technology Assessment and Forecast Report

ELECTRICAL CLASSES (12-31-2011)

Page B - 3

Organizational Patenting (Granted: Jan 01, 1992 - Dec 31, 2011)														Ranked List of Organizations with 200 or More Patents			
	Pre 1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL	
SUN MICROSYSTEMS, INC.																	
Patents By Year of Grant:	489	415	540	449	421	481	539	658	625	765	602	505	550	196	3	7238	
Patents By Year of Application:	1915	487	555	671	850	969	605	488	359	253	64	22	0	0	0	7238	
XEROX CORPORATION																	
Patents By Year of Grant:	2029	490	398	313	387	363	368	299	273	340	331	326	328	460	492	7197	
Patents By Year of Application:	2932	582	541	451	318	332	314	281	492	343	261	266	63	20	1	7197	
KONINKLIJKE PHILIPS ELECTRONICS N.V.																	
Patents By Year of Grant:	0	0	0	0	6	695	1112	1044	684	824	502	436	437	577	575	6892	
Patents By Year of Application:	72	163	548	971	1520	1213	725	597	454	336	207	41	30	15	0	6892	
CISCO TECHNOLOGY, INC.																	
Patents By Year of Grant:	0	19	42	103	158	216	330	424	438	642	572	698	902	1109	966	6619	
Patents By Year of Application:	167	277	522	677	628	638	684	656	886	701	438	228	92	24	1	6619	
LG ELECTRONICS INC.																	
Patents By Year of Grant:	83	151	164	171	186	234	294	320	312	523	431	561	791	1140	1118	6479	
Patents By Year of Application:	514	243	248	380	498	480	527	716	695	801	659	319	265	126	8	6479	
EASTMAN KODAK COMPANY																	
Patents By Year of Grant:	1952	455	364	332	249	209	234	325	313	393	268	175	174	196	148	5787	
Patents By Year of Application:	2857	443	235	385	299	352	338	286	213	156	110	66	31	15	1	5787	
INFINEON TECHNOLOGIES AG																	
Patents By Year of Grant:	0	0	0	26	164	321	459	563	572	679	675	657	493	612	485	5706	
Patents By Year of Application:	11	59	121	350	653	828	723	735	781	639	452	241	83	30	0	5706	
Panasonic Corporation																	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	205	1432	1979	2087	5703	
Patents By Year of Application:	0	3	2	10	26	77	235	601	1072	1202	1075	809	385	191	15	5703	
BROADCOM CORPORATION																	
Patents By Year of Grant:	2	2	0	6	42	74	166	296	408	655	524	634	709	954	1156	5628	
Patents By Year of Application:	12	14	92	230	357	650	672	870	720	621	638	309	265	158	20	5628	
TELEFONAKTIEBOLAGET LM ERICSSON																	
Patents By Year of Grant:	466	192	346	437	469	484	451	384	326	353	247	262	247	387	529	5580	
Patents By Year of Application:	1384	616	603	683	520	361	300	353	260	205	146	108	33	8	0	5580	
ADVANCED MICRO DEVICES, INC.																	
Patents By Year of Grant:	663	409	533	591	514	556	478	475	334	276	216	111	113	109	126	5504	
Patents By Year of Application:	1895	563	542	657	524	459	265	191	135	98	86	55	24	10	0	5504	

Technology Assessment and Forecast Report

ELECTRICAL CLASSES (12-31-2011)

Page B - 4

Organizational Patenting

(Granted: Jan 01, 1992 - Dec 31, 2011) Ranked List of Organizations with 200 or More Patents

	Pre 1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL
--	-------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

AT&T CORP.

Patents By Year of Grant:	2089	146	274	288	280	279	205	212	197	264	272	247	140	84	5	4982
Patents By Year of Application:	2865	337	290	267	301	217	139	148	242	94	58	22	2	0	0	4982

HEWLETT-PACKARD COMPANY

Patents By Year of Grant:	1738	566	578	590	584	640	220	0	5	8	3	0	0	9	24	4965
Patents By Year of Application:	3152	667	539	337	225	15	2	2	7	5	4	5	4	0	1	4965

U.S. PHILIPS CORPORATION

Patents By Year of Grant:	2308	610	603	597	594	215	3	2	0	2	0	0	0	1	0	4935
Patents By Year of Application:	3810	599	380	132	14	0	0	0	0	0	0	0	0	0	0	4935

NOKIA CORPORATION

Patents By Year of Grant:	0	0	0	0	5	41	201	348	323	586	662	596	638	744	573	4717
Patents By Year of Application:	4	19	205	397	719	757	695	656	479	395	233	120	28	10	0	4717

NIKON CORPORATION

Patents By Year of Grant:	1290	496	307	220	220	194	251	199	165	132	122	148	143	201	274	4362
Patents By Year of Application:	2162	226	237	280	255	169	158	121	212	193	148	127	43	30	1	4362

QUALCOMM, INC.

Patents By Year of Grant:	139	82	105	98	171	195	178	282	200	398	276	286	353	654	916	4333
Patents By Year of Application:	429	175	280	224	414	415	361	382	439	514	326	242	94	38	0	4333

NORTEL NETWORKS LIMITED

Patents By Year of Grant:	0	0	88	376	455	400	429	489	372	314	268	270	245	180	178	4064
Patents By Year of Application:	514	651	688	694	306	329	319	232	104	104	45	38	26	14	0	4064

SANYO ELECTRIC CO., LTD.

Patents By Year of Grant:	453	167	150	144	182	219	226	261	237	373	319	320	321	361	320	4053
Patents By Year of Application:	832	220	217	291	318	328	325	318	340	310	261	185	87	18	3	4053

ROBERT BOSCH GMBH

Patents By Year of Grant:	539	115	171	219	277	276	282	336	276	262	278	191	212	307	283	4024
Patents By Year of Application:	876	242	298	353	377	548	395	246	256	163	146	87	30	5	2	4024

DENSO CORPORATION

Patents By Year of Grant:	0	41	131	152	191	230	239	303	267	367	377	346	418	481	382	3925
Patents By Year of Application:	181	166	211	214	300	317	333	355	469	468	457	333	108	12	1	3925

FUJI PHOTO FILM CO., LTD

Patents By Year of Grant:	955	214	226	219	252	282	363	435	355	453	146	5	6	0	0	3911
Patents By Year of Application:	1538	270	356	464	463	312	258	163	75	12	0	0	0	0	0	3911

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

ELECTRICAL CLASSES (12-31-2011)

Page B - 5

---- Organizational Patenting (Granted: Jan 01, 1992 - Dec 31, 2011) ---- Ranked List of Organizations with 200 or More Patents ----

	Pre																
	1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL	

FUJI XEROX CO., LTD.

Patents By Year of Grant:	613	217	168	124	108	119	117	128	129	178	236	228	321	433	447	3566
Patents By Year of Application:	1069	127	159	169	160	141	276	212	313	409	253	169	87	21	1	3566

SEMICONDUCTOR ENERGY LABORATORY CO., LTD.

Patents By Year of Grant:	209	60	95	94	127	145	173	209	198	249	261	287	343	485	495	3430
Patents By Year of Application:	489	115	173	183	228	248	272	375	315	334	288	195	124	82	9	3430

Apple, Inc.

Patents By Year of Grant:	584	247	165	84	94	72	74	90	82	104	109	178	274	534	634	3325
Patents By Year of Application:	1124	86	81	75	107	139	192	205	235	339	345	180	135	74	8	3325

HONEYWELL INTERNATIONAL INC.

Patents By Year of Grant:	0	0	0	33	117	142	163	276	210	291	288	354	386	494	474	3228
Patents By Year of Application:	33	75	106	209	234	286	275	357	456	412	396	285	86	18	0	3228

SEAGATE TECHNOLOGY, LLC

Patents By Year of Grant:	294	117	130	208	223	261	300	327	213	196	118	147	163	224	274	3195
Patents By Year of Application:	652	252	276	292	378	262	254	138	139	147	161	131	81	27	5	3195

HYNIX SEMICONDUCTOR INC.

Patents By Year of Grant:	0	0	0	0	3	44	121	160	190	286	274	294	394	686	692	3144
Patents By Year of Application:	2	5	10	26	129	207	222	313	305	398	539	601	289	91	7	3144

NATIONAL SEMICONDUCTOR CORPORATION

Patents By Year of Grant:	743	143	157	144	136	159	187	179	193	223	186	157	168	155	136	3066
Patents By Year of Application:	1042	182	142	177	199	225	233	239	209	125	168	87	26	12	0	3066

RENESAS TECHNOLOGY CORPORATION

Patents By Year of Grant:	0	0	0	0	0	0	11	707	482	484	407	413	273	280	8	3065
Patents By Year of Application:	4	11	25	77	218	572	593	379	388	350	282	129	36	0	1	3065

MINOLTA CAMERA CO., LTD.

Patents By Year of Grant:	943	243	298	247	221	182	172	191	140	164	109	48	38	32	21	3049
Patents By Year of Application:	1586	318	280	287	243	164	112	18	11	9	10	7	1	3	0	3049

MURATA MANUFACTURING CO., LTD.

Patents By Year of Grant:	405	145	202	213	229	312	305	253	169	124	79	124	130	143	148	2981
Patents By Year of Application:	790	205	235	330	287	253	208	137	71	52	125	134	101	49	4	2981

UNITED STATES OF AMERICA, NAVY

Patents By Year of Grant:	899	172	155	178	139	178	158	159	140	143	156	108	109	137	145	2976
Patents By Year of Application:	1330	175	131	157	171	162	162	144	131	106	136	99	59	11	2	2976

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

ELECTRICAL CLASSES (12-31-2011)

Page B - 6

---- Organizational Patenting (Granted: Jan 01, 1992 - Dec 31, 2011) ---- Ranked List of Organizations with 200 or More Patents ----

Pre

	1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL
--	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

AGILENT TECHNOLOGIES, INC.

Patents By Year of Grant:	0	0	0	82	240	236	303	538	456	376	219	207	128	95	76	2956
Patents By Year of Application:	31	191	257	291	380	544	457	277	237	164	74	35	16	2	0	2956

LSI LOGIC CORPORATION

Patents By Year of Grant:	306	177	261	239	235	236	294	310	280	342	92	98	26	7	1	2904
Patents By Year of Application:	914	312	179	214	416	372	269	125	73	18	8	4	0	0	0	2904

OKI ELECTRIC INDUSTRY CO., LTD.

Patents By Year of Grant:	437	112	168	190	241	251	217	210	235	249	213	174	78	59	60	2894
Patents By Year of Application:	790	252	213	259	230	282	273	210	169	110	58	30	16	2	0	2894

HONDA GIKEN KOGYO KABUSHIKI KAISHA (HONDA MOTOR CO., LTD.)

Patents By Year of Grant:	379	114	121	125	148	149	120	158	166	185	184	175	179	255	291	2749
Patents By Year of Application:	617	151	122	195	149	220	235	219	249	187	170	158	58	17	2	2749

BROTHER KOGYO KABUSHIKI KAISHA

Patents By Year of Grant:	434	84	104	80	86	55	52	72	63	102	128	210	265	411	515	2661
Patents By Year of Application:	672	120	71	57	52	75	151	175	234	385	278	239	107	38	7	2661

XILINX, INC.

Patents By Year of Grant:	163	76	92	114	122	140	130	129	168	255	229	239	257	256	201	2571
Patents By Year of Application:	346	108	113	181	144	197	262	290	285	208	171	163	82	21	0	2571

BOEING COMPANY

Patents By Year of Grant:	217	43	33	35	53	70	101	167	169	245	211	219	283	333	348	2527
Patents By Year of Application:	318	37	47	77	184	241	293	243	280	307	238	172	68	21	1	2527

ELECTRONICS AND TELECOMMUNICATIONS RESEARCH INSTITUTE

Patents By Year of Grant:	83	92	99	94	56	76	81	63	91	153	181	229	279	432	450	2459
Patents By Year of Application:	306	126	62	71	93	171	231	273	313	324	249	161	68	10	1	2459

INDUSTRIAL TECHNOLOGY RESEARCH INSTITUTE, TAIWAN

Patents By Year of Grant:	289	124	106	100	81	105	96	101	78	150	139	188	267	300	323	2447
Patents By Year of Application:	529	104	117	107	114	119	142	173	208	262	262	199	86	24	1	2447

OLYMPUS OPTICAL CO., LTD.

Patents By Year of Grant:	956	214	169	222	200	205	170	91	66	48	22	13	13	6	4	2399
Patents By Year of Application:	1424	203	215	215	158	91	47	15	13	9	5	1	0	3	0	2399

YAMAHA CORPORATION

Patents By Year of Grant:	613	148	151	80	77	91	77	83	110	135	139	161	159	143	160	2327
Patents By Year of Application:	927	103	91	117	135	143	175	142	161	114	101	85	19	14	0	2327

Technology Assessment and Forecast Report

ELECTRICAL CLASSES (12-31-2011)

Page B - 7

Organizational Patenting												(Granted: Jan 01, 1992 - Dec 31, 2011)						
	Pre 1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL		
TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.																		
Patents By Year of Grant:	42	55	74	60	89	113	127	128	183	248	269	220	211	274	228	2321		
Patents By Year of Application:	162	65	97	94	129	201	241	362	272	265	234	121	35	43	0	2321		
Fujifilm Corporation																		
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	333	428	493	565	492	2311		
Patents By Year of Application:	1	2	4	37	72	110	191	253	433	467	319	277	118	25	2	2311		
TDK CORPORATION																		
Patents By Year of Grant:	139	33	51	80	120	137	129	114	97	201	229	224	229	243	252	2278		
Patents By Year of Application:	231	106	137	139	157	107	155	273	244	256	251	146	62	13	1	2278		
ALCATEL																		
Patents By Year of Grant:	0	0	41	189	252	230	227	266	195	234	149	149	126	85	23	2166		
Patents By Year of Application:	107	307	373	311	284	247	189	186	103	54	3	1	1	0	0	2166		
ROHM COMPANY LIMITED																		
Patents By Year of Grant:	470	94	87	94	108	125	110	117	102	140	122	136	107	143	195	2150		
Patents By Year of Application:	682	99	111	141	123	118	139	170	177	142	93	105	32	17	1	2150		
ALTERA CORPORATION																		
Patents By Year of Grant:	118	48	64	95	111	84	62	83	109	193	257	251	217	236	220	2148		
Patents By Year of Application:	279	84	82	77	98	149	216	281	260	221	175	133	61	28	4	2148		
EMC CORPORATION																		
Patents By Year of Grant:	56	57	65	74	83	91	130	123	127	155	161	183	245	305	278	2133		
Patents By Year of Application:	260	97	118	172	187	157	145	224	192	305	190	46	20	19	1	2133		
MEDTRONIC INC.																		
Patents By Year of Grant:	294	109	100	116	95	94	86	99	97	161	163	87	141	239	228	2109		
Patents By Year of Application:	500	121	118	132	174	149	229	144	163	173	121	37	30	17	1	2109		
RAYTHEON COMPANY																		
Patents By Year of Grant:	225	85	164	145	144	115	137	149	106	166	93	97	126	140	194	2086		
Patents By Year of Application:	602	106	100	124	146	166	148	143	136	108	127	99	67	12	2	2086		
ALPS ELECTRIC CO., LTD.																		
Patents By Year of Grant:	219	68	111	132	190	164	197	199	173	153	143	118	75	42	52	2036		
Patents By Year of Application:	435	128	184	217	230	169	188	152	140	73	56	40	12	11	1	2036		
HON HAI PRECISION IND. CO., LTD.																		
Patents By Year of Grant:	1	1	12	30	46	76	93	157	77	152	125	203	292	365	397	2027		
Patents By Year of Application:	6	28	57	54	110	168	117	190	135	337	294	295	180	55	1	2027		

Technology Assessment and Forecast Report

ELECTRICAL CLASSES (12-31-2011)

Page B - 8

Organizational Patenting

(Granted: Jan 01, 1992 - Dec 31, 2011) ---- Ranked List of Organizations with 200 or More Patents ----

	Pre 1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL
--	-------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

SAP AKTIENGESELLSCHAFT

Patents By Year of Grant:	0	0	0	2	7	7	2	8	19	52	149	244	380	647	476	1993
Patents By Year of Application:	0	12	4	3	19	168	311	509	397	299	177	52	20	21	1	1993

DELL PRODUCTS, L.P.

Patents By Year of Grant:	235	94	80	80	118	96	121	116	119	106	119	147	177	170	208	1986
Patents By Year of Application:	445	85	191	120	139	99	153	124	151	167	154	125	29	2	2	1986

NEC ELECTRONICS CORPORATION

Patents By Year of Grant:	0	0	0	0	0	0	188	204	164	179	222	233	332	411	7	1940
Patents By Year of Application:	0	7	42	112	162	184	209	188	347	312	213	135	27	2	0	1940

RESEARCH IN MOTION LIMITED

Patents By Year of Grant:	6	6	4	7	8	15	12	14	24	80	125	198	303	471	652	1925
Patents By Year of Application:	20	5	10	17	39	62	91	312	311	334	258	164	168	121	13	1925

LOCKHEED MARTIN CORPORATION

Patents By Year of Grant:	45	64	82	102	89	103	111	121	137	164	167	152	151	201	208	1897
Patents By Year of Application:	231	98	120	105	177	177	196	170	150	169	130	125	39	10	0	1897

FREESCALE SEMICONDUCTOR, INC.

Patents By Year of Grant:	0	0	0	0	0	0	0	91	172	210	218	228	252	350	371	1892
Patents By Year of Application:	1	0	7	42	71	170	213	180	318	305	243	199	112	29	2	1892

ASAHI KOGAKU KOGYO KABUSHIKI KAISHA

Patents By Year of Grant:	854	209	215	179	163	184	6	4	0	0	0	0	0	0	0	1814
Patents By Year of Application:	1296	183	151	134	49	1	0	0	0	0	0	0	0	0	0	1814

PIONEER CORPORATION

Patents By Year of Grant:	0	0	0	3	40	118	189	224	201	248	209	150	135	135	157	1809
Patents By Year of Application:	1	5	106	217	285	311	252	183	229	134	79	4	2	1	0	1809

ERICSSON, INC.

Patents By Year of Grant:	99	200	277	300	256	247	178	109	59	46	24	8	2	1	1	1807
Patents By Year of Application:	828	366	303	159	104	33	8	5	0	1	0	0	0	0	0	1807

LG Display Co., Ltd.

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	214	482	594	511	1801
Patents By Year of Application:	0	1	1	8	25	27	52	236	404	525	219	159	84	57	3	1801

TOYOTA JIDOSHA K.K.

Patents By Year of Grant:	178	79	105	85	82	74	57	61	68	90	86	102	134	238	349	1788
Patents By Year of Application:	381	91	71	74	83	65	108	130	156	247	215	113	48	6	0	1788

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

ELECTRICAL CLASSES (12-31-2011)

Page B - 9

---- Organizational Patenting

(Granted: Jan 01, 1992 - Dec 31, 2011) ---- Ranked List of Organizations with 200 or More Patents ----

	Pre															
	1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL

ORACLE INTERNATIONAL CORPORATION

Patents By Year of Grant:	0	0	0	0	0	2	36	93	93	174	168	201	203	371	438	1779
Patents By Year of Application:	4	3	37	111	201	233	249	237	220	160	194	92	23	14	1	1779

STMICROELECTRONICS S.R.L.

Patents By Year of Grant:	0	3	52	125	179	211	175	133	144	139	137	121	88	125	141	1773
Patents By Year of Application:	63	136	178	214	225	169	186	141	144	112	92	82	27	4	0	1773

AGERE SYSTEMS INC.

Patents By Year of Grant:	0	0	0	0	10	35	247	223	144	211	171	163	189	221	152	1766
Patents By Year of Application:	8	43	208	210	228	150	150	185	181	182	107	75	27	11	1	1766

HITACHI GLOBAL STORAGE TECHNOLOGIES NETHERLANDS B.V.

Patents By Year of Grant:	0	0	0	0	0	0	39	102	143	222	236	243	288	251	238	1762
Patents By Year of Application:	1	7	5	32	99	116	212	291	345	278	223	104	44	5	0	1762

UNIVERSITY OF CALIFORNIA, THE REGENTS OF

Patents By Year of Grant:	329	100	87	87	79	100	112	121	128	144	96	76	92	98	108	1757
Patents By Year of Application:	555	102	100	116	166	131	136	104	111	103	63	44	22	4	0	1757

COMPAQ COMPUTER CORPORATION, INC.

Patents By Year of Grant:	427	236	242	302	347	155	23	0	0	0	0	0	0	0	0	1732
Patents By Year of Application:	1169	382	122	48	10	1	0	0	0	0	0	0	0	0	0	1732

AT&T Intellectual Property I, L.P.

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	134	412	471	714	1731	
Patents By Year of Application:	0	0	6	13	36	70	164	165	280	283	268	247	156	39	4	1731

NCR CORPORATION

Patents By Year of Grant:	343	133	152	106	107	138	136	112	75	105	95	71	66	44	41	1724
Patents By Year of Application:	750	138	155	174	147	116	43	50	66	39	23	21	2	0	0	1724

MARVELL INTERNATIONAL LTD.

Patents By Year of Grant:	0	0	0	0	5	21	17	27	51	107	160	178	241	379	500	1686
Patents By Year of Application:	0	1	3	51	21	89	119	179	172	215	324	263	125	116	8	1686

CYPRESS SEMICONDUCTOR CORP.

Patents By Year of Grant:	88	94	106	100	92	108	158	140	117	146	103	95	59	131	126	1663
Patents By Year of Application:	344	86	112	173	237	193	23	143	87	121	92	38	9	5	0	1663

SUMITOMO ELECTRIC INDUSTRIES, LTD.

Patents By Year of Grant:	493	55	43	55	52	93	102	102	109	103	87	87	88	84	104	1657
Patents By Year of Application:	612	48	51	106	111	118	150	105	99	90	67	45	39	13	3	1657

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

ELECTRICAL CLASSES (12-31-2011)

Page B - 10

----- Organizational Patenting

(Granted: Jan 01, 1992 - Dec 31, 2011) ----- Ranked List of Organizations with 200 or More Patents -----

Pre

	1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL
--	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

LG. PHILIPS LCD CO., LTD.

Patents By Year of Grant:	0	0	0	7	45	106	166	238	264	302	333	189	0	1	0	1651
Patents By Year of Application:	11	42	71	196	273	296	326	309	93	27	7	0	0	0	0	1651

UNISYS CORPORATION

Patents By Year of Grant:	518	114	83	83	88	106	84	109	82	102	77	87	51	38	23	1645
Patents By Year of Application:	800	132	149	113	89	105	115	59	38	22	9	11	3	0	0	1645

HARRIS CORP.

Patents By Year of Grant:	367	100	102	58	82	76	70	85	118	85	80	80	96	102	113	1614
Patents By Year of Application:	576	85	73	85	84	118	148	76	76	124	104	46	16	3	0	1614

ANALOG DEVICES, INC.

Patents By Year of Grant:	257	66	57	50	60	57	105	109	113	124	136	107	78	135	117	1571
Patents By Year of Application:	388	59	65	77	102	167	109	151	116	98	90	86	57	6	0	1571

NOKIA MOBILE PHONES LTD.

Patents By Year of Grant:	207	103	149	160	178	193	192	161	103	93	16	5	5	3	0	1568
Patents By Year of Application:	640	213	225	278	171	19	8	9	5	0	0	0	0	0	0	1568

CARDIAC PACEMAKERS, INC.

Patents By Year of Grant:	73	20	27	52	58	84	86	70	96	126	140	125	150	193	263	1563
Patents By Year of Application:	116	57	92	121	129	135	170	176	194	142	100	51	46	29	5	1563

SAMSUNG SDI CO., LTD.

Patents By Year of Grant:	0	0	0	0	13	68	70	100	69	102	230	339	285	190	91	1557
Patents By Year of Application:	0	3	20	90	84	102	136	336	379	228	124	40	11	4	0	1557

PIONEER ELECTRONIC CORPORATION

Patents By Year of Grant:	881	124	128	122	111	63	33	26	11	8	5	7	3	3	0	1525
Patents By Year of Application:	1176	149	136	16	16	15	8	7	1	1	0	0	0	0	0	1525

DIGITAL EQUIPMENT CORPORATION

Patents By Year of Grant:	1118	157	120	91	15	0	0	0	0	0	0	0	0	0	0	1501
Patents By Year of Application:	1449	47	5	0	0	0	0	0	0	0	0	0	0	0	0	1501

STMICROELECTRONICS S.A.

Patents By Year of Grant:	0	1	21	67	86	116	123	128	123	146	140	129	137	158	119	1494
Patents By Year of Application:	9	93	141	170	119	182	171	154	132	139	108	45	21	10	0	1494

EATON CORPORATION

Patents By Year of Grant:	381	99	118	97	86	88	69	70	64	74	62	76	89	59	58	1490
Patents By Year of Application:	565	103	100	103	69	68	81	85	81	77	88	52	17	1	0	1490

Technology Assessment and Forecast Report

ELECTRICAL CLASSES (12-31-2011)

Page B - 11

Organizational Patenting													(Granted: Jan 01, 1992 - Dec 31, 2011)							Ranked List of Organizations with 200 or More Patents						
	Pre 1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL										
OLYMPUS CORPORATION																										
Patents By Year of Grant:	2	0	0	0	0	0	3	129	106	172	185	218	209	206	215	1445										
Patents By Year of Application:	3	11	16	38	31	128	176	252	250	191	153	130	45	21	0	1445										
DELPHI TECHNOLOGIES, INC.																										
Patents By Year of Grant:	0	0	2	19	88	174	172	158	127	143	131	116	129	106	61	1426										
Patents By Year of Application:	4	16	100	185	187	178	165	146	181	107	96	50	9	2	0	1426										
HYUNDAI ELECTRONICS INDUSTRIES CO., LTD.																										
Patents By Year of Grant:	219	122	149	199	323	188	93	72	14	9	2	1	0	0	0	0	1391									
Patents By Year of Application:	538	242	282	230	68	20	4	3	2	2	0	0	0	0	0	0	1391									
SILVERBROOK RESEARCH PTY. LTD																										
Patents By Year of Grant:	0	0	0	3	10	15	26	68	70	165	185	164	149	231	305	1391										
Patents By Year of Application:	0	44	8	134	7	100	120	224	183	70	101	194	105	93	8	1391										
NISSAN MOTOR COMPANY, LIMITED																										
Patents By Year of Grant:	293	45	51	72	78	87	71	83	93	113	70	72	85	101	71	1385										
Patents By Year of Application:	401	73	55	77	98	112	120	123	137	63	85	35	4	2	0	1385										
ASML NETHERLANDS B.V.																										
Patents By Year of Grant:	5	1	3	7	6	30	33	62	82	203	195	246	180	182	143	1378										
Patents By Year of Application:	12	8	14	35	37	60	153	418	219	225	103	62	20	10	2	1378										
AU OPTRONICS CORP.																										
Patents By Year of Grant:	0	0	0	0	0	7	29	58	79	137	147	138	192	287	292	1366										
Patents By Year of Application:	0	0	1	11	36	38	159	201	186	227	211	157	86	49	4	1366										
VICTOR COMPANY OF JAPAN, LIMITED																										
Patents By Year of Grant:	351	72	74	74	55	54	61	79	69	84	78	89	81	77	67	1365										
Patents By Year of Application:	530	85	65	62	102	53	89	84	65	71	67	54	30	8	0	1365										
CASIO COMPUTER CO. LTD.																										
Patents By Year of Grant:	362	65	71	72	61	48	31	33	26	43	57	79	143	136	124	1351										
Patents By Year of Application:	549	82	44	53	31	33	61	91	102	102	99	53	44	7	0	1351										
ADVANTEST CORP.																										
Patents By Year of Grant:	110	74	71	60	90	108	81	67	50	76	90	106	111	134	118	1346										
Patents By Year of Application:	266	94	119	83	84	55	75	94	110	109	116	82	54	5	0	1346										
INTERDIGITAL TECHNOLOGY CORPORATION																										
Patents By Year of Grant:	56	14	22	17	27	40	54	103	106	181	137	135	158	140	146	1336										
Patents By Year of Application:	107	12	31	39	92	242	163	183	171	107	89	58	34	8	0	1336										

Technology Assessment and Forecast Report

ELECTRICAL CLASSES (12-31-2011)

Page B - 12

Organizational Patenting

(Granted: Jan 01, 1992 - Dec 31, 2011) Ranked List of Organizations with 200 or More Patents

	Pre 1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL
--	-------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

THOMSON LICENSING

Patents By Year of Grant:	0	0	0	0	0	0	0	1	24	229	203	185	179	251	260	1332
Patents By Year of Application:	6	11	37	87	157	206	257	241	139	93	53	23	12	10	0	1332

3COM CORPORATION

Patents By Year of Grant:	64	34	80	129	194	158	190	181	87	83	33	34	31	22	0	1320
Patents By Year of Application:	263	248	303	235	129	63	40	21	10	6	1	1	0	0	0	1320

NVIDIA CORPORATION

Patents By Year of Grant:	10	11	5	6	14	15	25	42	50	101	108	174	267	228	258	1314
Patents By Year of Application:	26	16	24	32	52	93	160	186	225	245	185	43	25	2	0	1314

VIA TECHNOLOGIES, INC.

Patents By Year of Grant:	0	0	2	15	18	42	48	104	117	179	182	161	177	143	114	1302
Patents By Year of Application:	1	19	44	43	72	175	169	202	160	219	123	48	23	4	0	1302

NORTHROP GRUMMAN CORPORATION

Patents By Year of Grant:	163	114	86	69	41	55	107	133	112	128	98	85	73	28	4	1296
Patents By Year of Application:	383	82	60	118	119	100	147	94	106	68	13	3	2	1	0	1296

SCHLUMBERGER TECHNOLOGY CORPORATION

Patents By Year of Grant:	186	26	34	63	48	54	79	78	79	93	76	81	115	145	138	1295
Patents By Year of Application:	271	59	58	72	79	119	107	78	89	125	128	77	26	6	1	1295

SYMBOL TECHNOLOGIES, INC.

Patents By Year of Grant:	214	62	62	47	38	38	59	79	57	118	118	107	98	97	101	1295
Patents By Year of Application:	361	57	37	86	91	86	102	110	114	99	86	54	9	3	0	1295

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Patents By Year of Grant:	312	70	64	54	53	73	74	61	66	68	74	68	73	94	79	1283
Patents By Year of Application:	472	73	70	78	76	91	89	61	73	83	51	40	19	7	0	1283

NTT DOCOMO, INC.

Patents By Year of Grant:	0	0	0	1	0	4	6	18	65	134	143	152	201	277	268	1269
Patents By Year of Application:	2	2	9	37	111	172	179	161	174	192	120	65	35	8	2	1269

HUGHES AIRCRAFT COMPANY

Patents By Year of Grant:	1224	30	6	1	0	0	0	0	0	0	0	0	0	0	0	1261
Patents By Year of Application:	1261	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1261

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

Patents By Year of Grant:	162	71	65	92	77	80	90	94	64	74	68	66	93	93	71	1260
Patents By Year of Application:	290	72	104	94	76	100	87	74	71	88	84	64	51	4	1	1260

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

ELECTRICAL CLASSES (12-31-2011)

Page B - 13

---- Organizational Patenting (Granted: Jan 01, 1992 - Dec 31, 2011) ---- Ranked List of Organizations with 200 or More Patents ----

	Pre																
	1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL	

YAZAKI CORP.

Patents By Year of Grant:	195	76	74	70	97	106	126	90	67	63	61	60	58	54	43	1240
Patents By Year of Application:	354	78	81	128	105	111	83	76	70	51	48	46	9	0	0	1240

SPRINT COMMUNICATIONS COMPANY L.P.

Patents By Year of Grant:	10	14	13	22	29	42	54	84	69	106	111	115	125	202	237	1233
Patents By Year of Application:	60	53	52	89	80	133	147	147	136	127	109	64	29	7	0	1233

SEIKO INSTRUMENTS INC.

Patents By Year of Grant:	216	41	47	73	108	108	110	95	43	49	50	44	73	77	90	1224
Patents By Year of Application:	341	81	105	113	105	71	58	43	59	66	73	61	36	12	0	1224

SAMSUNG ELECTRO-MECHANICS CO., LTD.

Patents By Year of Grant:	31	32	18	14	23	26	58	56	62	97	119	135	167	168	198	1204
Patents By Year of Application:	88	12	23	17	61	71	92	123	122	178	156	169	74	16	2	1204

FUNAI ELECTRIC CO., LTD.

Patents By Year of Grant:	34	10	13	20	31	29	28	50	51	94	102	116	200	203	183	1164
Patents By Year of Application:	64	40	31	33	54	72	79	129	197	191	152	99	19	4	0	1164

ADOBE SYSTEMS, INC.

Patents By Year of Grant:	34	19	28	31	41	27	28	42	40	56	56	86	145	227	291	1151
Patents By Year of Application:	129	53	53	57	54	57	75	76	149	173	152	63	45	14	1	1151

GENERAL MOTORS CORPORATION

Patents By Year of Grant:	300	42	42	39	53	48	54	71	87	147	113	75	53	2	0	1126
Patents By Year of Application:	381	36	37	71	74	110	157	181	62	14	3	0	0	0	0	1126

3M INNOVATIVE PROPERTIES COMPANY

Patents By Year of Grant:	0	0	19	59	50	66	96	97	87	124	113	115	81	105	109	1121
Patents By Year of Application:	54	53	64	84	121	115	131	109	107	139	68	42	21	11	2	1121

Hong Fu Jin Precision Industry (Shenzhen) Co., Ltd.

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	20	80	163	214	320	321	1118
Patents By Year of Application:	0	0	0	0	0	5	4	79	122	245	227	231	178	27	0	1118

PACESETTER, INC.

Patents By Year of Grant:	108	76	41	29	45	70	66	75	71	90	105	65	69	119	89	1118
Patents By Year of Application:	226	34	61	60	134	116	79	99	100	94	85	19	6	5	0	1118

CIRRUS LOGIC, INC.

Patents By Year of Grant:	198	127	108	100	81	84	83	44	45	40	62	42	33	44	24	1115
Patents By Year of Application:	528	96	75	68	53	42	40	43	51	52	37	20	9	1	0	1115

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

ELECTRICAL CLASSES (12-31-2011)

Page B - 14

---- Organizational Patenting (Granted: Jan 01, 1992 - Dec 31, 2011) ---- Ranked List of Organizations with 200 or More Patents ----

Pre	1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL
-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

AVAYA TECHNOLOGY CORP.

Patents By Year of Grant:	0	0	0	3	103	89	81	71	42	70	68	74	79	199	233	1112
Patents By Year of Application:	24	89	156	110	43	97	99	113	130	122	69	44	10	6	0	1112

APPLIED MATERIALS, INC.

Patents By Year of Grant:	80	47	50	52	63	106	116	77	79	88	61	71	67	83	64	1104
Patents By Year of Application:	203	68	101	110	96	102	65	78	73	72	83	36	10	6	1	1104

KONICA CORPORATION

Patents By Year of Grant:	401	62	65	60	65	80	61	96	62	62	43	22	10	5	9	1103
Patents By Year of Application:	531	86	70	77	88	109	104	5	11	5	10	5	1	1	0	1103

SANDISK CORPORATION

Patents By Year of Grant:	18	7	16	17	25	20	34	35	61	77	124	201	214	148	104	1101
Patents By Year of Application:	43	29	19	25	48	63	69	90	165	252	164	78	44	12	0	1101

UNITED STATES OF AMERICA, ARMY

Patents By Year of Grant:	416	72	56	61	61	46	36	34	37	61	47	35	43	51	37	1093
Patents By Year of Application:	552	60	68	55	34	40	41	65	65	36	34	25	16	2	0	1093

MEDIATEK INC.

Patents By Year of Grant:	0	0	1	3	3	1	5	24	31	106	126	164	156	228	239	1087
Patents By Year of Application:	2	4	6	3	16	65	109	142	155	180	156	141	77	30	1	1087

Alcatel-Lucent USA Inc.

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	27	401	437	216	1081	
Patents By Year of Application:	0	1	3	15	20	41	139	200	241	223	118	50	21	9	0	1081

CORNING INCORPORATED

Patents By Year of Grant:	120	24	30	31	82	134	129	117	58	71	57	43	53	67	62	1078
Patents By Year of Application:	173	39	111	124	132	124	71	54	52	41	63	53	35	6	0	1078

NXP B.V.

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	4	169	177	247	205	272	1074
Patents By Year of Application:	0	0	2	5	29	82	219	274	185	141	82	35	15	5	0	1074

NIPPON TELEGRAPH & TELEPHONE CORP.

Patents By Year of Grant:	250	78	50	52	70	45	53	58	45	72	60	51	59	64	58	1065
Patents By Year of Application:	420	71	69	71	55	79	67	95	59	32	23	13	7	4	0	1065

UNITED MICROELECTRONICS CORPORATION

Patents By Year of Grant:	180	84	76	76	91	75	62	27	40	44	50	53	52	76	64	1050
Patents By Year of Application:	330	86	91	70	64	44	35	65	62	45	73	63	15	7	0	1050

Technology Assessment and Forecast Report

ELECTRICAL CLASSES (12-31-2011)

Page B - 15

Organizational Patenting													(Granted: Jan 01, 1992 - Dec 31, 2011)					Ranked List of Organizations with 200 or More Patents				
	Pre 1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL						
MACRONIX INTERNATIONAL CO., LTD.																						
Patents By Year of Grant:	25	18	24	28	25	43	76	68	57	73	92	104	110	145	157	1045						
Patents By Year of Application:	66	24	36	14	70	103	70	88	109	142	145	96	55	24	3	1045						
TOKYO ELECTRON LIMITED																						
Patents By Year of Grant:	106	24	28	35	38	46	38	58	63	89	73	72	108	122	113	1013						
Patents By Year of Application:	166	38	29	55	63	73	98	82	68	113	115	81	25	7	0	1013						
KOITO MANUFACTURING COMPANY LIMITED																						
Patents By Year of Grant:	182	38	39	52	56	75	85	58	49	63	82	68	52	63	50	1012						
Patents By Year of Application:	265	57	45	74	72	76	76	68	88	63	59	51	18	0	0	1012						
PITNEY-BOWES, INC.																						
Patents By Year of Grant:	237	78	54	51	46	46	48	68	68	59	41	57	44	58	54	1009						
Patents By Year of Application:	430	59	86	65	67	70	64	45	42	41	27	8	2	3	0	1009						
BRITISH TELECOMMUNICATION, PLC																						
Patents By Year of Grant:	235	70	78	69	90	55	46	31	31	40	56	45	47	52	58	1003						
Patents By Year of Application:	444	180	37	75	82	53	39	33	24	23	12	1	0	0	0	1003						
SHARP LABORATORIES OF AMERICA, INC.																						
Patents By Year of Grant:	0	2	15	21	36	46	59	54	72	111	117	106	77	117	166	999						
Patents By Year of Application:	28	42	99	75	100	84	122	130	107	78	78	41	9	6	0	999						
TRW INC.																						
Patents By Year of Grant:	244	71	116	146	172	137	68	24	9	6	0	0	0	0	0	993						
Patents By Year of Application:	472	145	178	120	63	15	0	0	0	0	0	0	0	0	0	993						
FANUC LTD.																						
Patents By Year of Grant:	410	56	39	35	43	27	20	23	42	68	61	41	31	42	53	991						
Patents By Year of Application:	518	49	44	16	18	28	50	64	68	53	31	33	8	11	0	991						
JUNIPER NETWORKS, INC.																						
Patents By Year of Grant:	0	0	2	0	1	6	12	13	44	86	82	80	136	220	278	960						
Patents By Year of Application:	3	3	19	37	104	118	57	64	95	109	110	89	96	53	3	960						
GOOGLE, INC.																						
Patents By Year of Grant:	0	0	0	0	0	0	4	3	7	16	32	58	140	275	423	958						
Patents By Year of Application:	1	0	0	15	11	11	106	160	149	156	160	89	39	54	7	958						
HONEYWELL INC.																						
Patents By Year of Grant:	619	92	84	63	38	22	17	12	4	2	0	0	0	0	0	953						
Patents By Year of Application:	834	63	42	8	3	3	0	0	0	0	0	0	0	0	0	953						

Technology Assessment and Forecast Report

ELECTRICAL CLASSES (12-31-2011)

Page B - 16

Organizational Patenting

(Granted: Jan 01, 1992 - Dec 31, 2011) **Ranked List of Organizations with 200 or More Patents**

	Pre 1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL
--	-------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

GE MEDICAL SYSTEMS GLOBAL TECHNOLOGY COMPANY, LLC

Patents By Year of Grant:	0	0	0	0	23	127	118	152	125	109	68	74	60	46	28	930
Patents By Year of Application:	0	9	48	129	142	199	153	78	38	47	43	35	9	0	0	930

Renesas Electronics Corp.

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	0	0	116	811	927
Patents By Year of Application:	0	0	0	0	0	1	1	5	19	67	133	264	266	159	12	927

BELLSOUTH INTELLECTUAL PROPERTY CORPORATION

Patents By Year of Grant:	0	0	12	19	23	46	82	167	165	288	113	3	1	1	2	922
Patents By Year of Application:	36	30	93	157	208	220	102	53	16	7	0	0	0	0	0	922

NORTHERN TELECOM LIMITED

Patents By Year of Grant:	405	184	222	67	19	11	2	1	0	0	0	0	0	0	0	911
Patents By Year of Application:	859	49	3	0	0	0	0	0	0	0	0	0	0	0	0	911

TEKTRONIX INC.

Patents By Year of Grant:	272	43	56	43	51	50	50	52	44	33	47	44	40	44	41	910
Patents By Year of Application:	390	77	29	61	56	54	43	46	55	46	28	23	2	0	0	910

AT&T Intellectual Property II, L.P.

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	37	160	282	429	908
Patents By Year of Application:	1	1	1	4	14	27	39	72	202	110	149	136	129	23	0	908

COMMISSARIAT A L'ENERGIE ATOMIQUE

Patents By Year of Grant:	194	46	35	28	41	43	31	47	47	46	42	55	63	96	94	908
Patents By Year of Application:	279	37	56	48	47	59	75	60	71	50	62	50	11	3	0	908

STMICROELECTRONICS, INC.

Patents By Year of Grant:	0	33	93	93	72	74	91	82	52	71	59	58	28	51	47	904
Patents By Year of Application:	186	97	90	99	93	72	70	76	30	32	22	21	12	2	2	904

YAHOO, INC.

Patents By Year of Grant:	0	0	2	0	2	5	8	4	13	30	28	67	125	290	330	904
Patents By Year of Application:	4	3	14	19	29	20	52	83	137	172	218	104	32	16	1	904

OMRON CORPORATION

Patents By Year of Grant:	140	42	19	22	24	32	37	59	65	87	96	79	68	75	57	902
Patents By Year of Application:	224	17	29	31	65	73	100	75	75	118	57	26	11	1	0	902

Alcatel Lucent

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	39	97	147	225	388	896
Patents By Year of Application:	0	0	3	2	9	54	104	120	131	195	155	74	44	4	1	896

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

ELECTRICAL CLASSES (12-31-2011)

Page B - 17

---- Organizational Patenting

(Granted: Jan 01, 1992 - Dec 31, 2011) ---- Ranked List of Organizations with 200 or More Patents ----

	Pre																
	1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL	

Oracle America, Inc.

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	0	0	438	456	894
Patents By Year of Application:	0	0	3	9	13	19	35	93	143	200	179	134	57	7	2	894

CADENCE DESIGN SYSTEMS, INC.

Patents By Year of Grant:	33	10	8	11	11	21	41	55	94	117	57	68	91	127	130	874
Patents By Year of Application:	56	17	19	62	60	178	82	55	68	105	105	47	11	7	2	874

CATERPILLAR INC.

Patents By Year of Grant:	173	37	72	51	54	39	27	39	42	41	46	41	53	60	90	865
Patents By Year of Application:	297	57	47	50	40	60	36	46	52	54	78	42	4	1	1	865

CALIFORNIA INSTITUTE OF TECHNOLOGY

Patents By Year of Grant:	111	35	47	52	60	45	65	60	59	65	52	49	43	61	54	858
Patents By Year of Application:	219	66	59	65	80	60	56	51	57	62	36	35	6	6	0	858

UNITED STATES OF AMERICA, NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Patents By Year of Grant:	297	37	26	33	38	32	37	46	41	38	37	28	46	55	56	847
Patents By Year of Application:	364	47	30	47	39	45	47	41	43	59	32	30	19	4	0	847

GM Global Technology Operations, Inc.

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	6	48	91	142	241	315	843
Patents By Year of Application:	0	0	0	1	0	0	3	11	152	146	234	214	74	7	1	843

DAEWOO ELECTRONICS COMPANY, LTD.

Patents By Year of Grant:	286	184	169	84	44	11	1	3	11	11	8	12	8	7	3	842
Patents By Year of Application:	651	112	12	4	2	7	6	21	9	12	5	1	0	0	0	842

LEXMARK INTERNATIONAL, INC.

Patents By Year of Grant:	57	26	43	35	45	39	47	43	38	61	90	76	77	90	75	842
Patents By Year of Application:	132	23	39	71	61	48	61	125	109	76	51	37	6	3	0	842

ROCKWELL AUTOMATION TECHNOLOGIES, INC.

Patents By Year of Grant:	0	0	0	0	8	48	55	54	49	80	84	69	104	148	143	842
Patents By Year of Application:	1	12	40	73	60	60	94	86	106	124	100	59	15	11	1	842

LSI CORPORATION

Patents By Year of Grant:	0	0	1	0	0	0	1	0	0	1	131	129	155	197	216	831
Patents By Year of Application:	1	0	2	1	6	35	84	127	195	94	79	135	59	12	1	831

RAMBUS, INC.

Patents By Year of Grant:	35	13	19	34	28	41	55	63	58	100	85	68	79	70	83	831
Patents By Year of Application:	77	30	38	66	71	56	82	106	103	56	50	41	40	12	3	831

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

ELECTRICAL CLASSES (12-31-2011)

Page B - 18

---- Organizational Patenting (Granted: Jan 01, 1992 - Dec 31, 2011) ---- Ranked List of Organizations with 200 or More Patents ----

	Pre																
	1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL	

ADC TELECOMMUNICATIONS, INC.

Patents By Year of Grant:	37	6	14	14	35	48	61	59	52	52	52	98	106	106	85	825
Patents By Year of Application:	70	30	43	59	83	58	30	38	61	72	119	86	56	18	2	825

HAMAMATSU PHOTONICS KABUSHIKI KAISHA

Patents By Year of Grant:	187	34	42	11	13	23	46	38	48	67	48	48	65	83	68	821
Patents By Year of Application:	272	6	9	48	55	77	66	93	66	53	31	23	15	6	1	821

STANFORD UNIVERSITY

Patents By Year of Grant:	171	36	31	48	39	43	35	43	43	47	44	63	53	59	53	808
Patents By Year of Application:	253	51	48	44	59	45	54	47	38	54	55	39	15	6	0	808

FURUKAWA ELECTRIC CO., LTD.

Patents By Year of Grant:	134	24	33	18	23	49	93	103	71	54	34	27	41	55	47	806
Patents By Year of Application:	198	16	28	56	126	107	61	31	37	32	25	59	22	6	2	806

KONICA MINOLTA BUSINESS TECHNOLOGIES, INC.

Patents By Year of Grant:	0	0	0	0	0	0	0	0	4	61	63	78	130	218	246	800
Patents By Year of Application:	0	0	0	1	0	0	13	202	131	141	147	105	45	13	2	800

HUAWEI TECHNOLOGIES CO., LTD.

Patents By Year of Grant:	0	0	0	0	0	1	1	5	9	19	21	48	81	248	355	788
Patents By Year of Application:	0	0	0	1	10	37	61	40	61	146	168	128	70	49	17	788

UNITED STATES OF AMERICA, AIR FORCE

Patents By Year of Grant:	350	44	44	34	52	34	30	20	23	31	25	21	24	26	24	782
Patents By Year of Application:	452	43	42	30	35	26	23	25	44	18	23	11	9	1	0	782

THOMSON LICENSING S.A.

Patents By Year of Grant:	0	0	0	43	86	132	172	175	114	17	10	7	6	14	4	780
Patents By Year of Application:	51	102	175	171	127	100	40	6	2	4	1	1	0	0	0	780

FORD MOTOR COMPANY

Patents By Year of Grant:	426	66	47	29	12	8	26	36	24	20	14	23	16	19	13	779
Patents By Year of Application:	536	26	14	64	12	28	32	15	18	18	6	6	2	2	0	779

SIEMENS MEDICAL SOLUTIONS USA, INC.

Patents By Year of Grant:	0	0	0	0	1	20	19	23	22	21	45	132	135	193	162	773
Patents By Year of Application:	0	3	5	14	43	45	39	83	158	169	133	52	26	3	0	773

KYOCERA CORPORATION

Patents By Year of Grant:	67	20	17	33	28	33	40	28	30	32	50	50	77	106	158	769
Patents By Year of Application:	117	36	27	36	31	36	45	86	125	110	69	30	16	4	1	769

Technology Assessment and Forecast Report

ELECTRICAL CLASSES (12-31-2011)

Page B - 19

Organizational Patenting													(Granted: Jan 01, 1992 - Dec 31, 2011)				
	Pre 1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL	
VLSI TECHNOLOGY, INC.																	
Patents By Year of Grant:	372	117	107	89	61	16	0	0	0	0	0	0	0	0	0	0	762
Patents By Year of Application:	643	73	40	5	1	0	0	0	0	0	0	0	0	0	0	0	762
ROCKWELL COLLINS, INC.																	
Patents By Year of Grant:	0	0	2	24	48	73	57	52	37	50	53	59	115	96	92	758	
Patents By Year of Application:	10	29	81	96	53	47	59	78	81	90	71	49	14	0	0	758	
INTERNATIONAL RECTIFIER CORPORATION																	
Patents By Year of Grant:	47	34	23	25	31	37	42	55	53	57	72	78	76	45	64	739	
Patents By Year of Application:	105	32	29	33	46	52	80	67	94	78	71	43	7	2	0	739	
WINBOND ELECTRONICS CORP.																	
Patents By Year of Grant:	39	41	78	85	77	80	57	76	54	57	43	23	9	8	12	739	
Patents By Year of Application:	154	122	93	60	70	86	53	40	24	17	9	4	7	0	0	739	
FRANCE TELECOM																	
Patents By Year of Grant:	157	57	43	34	30	19	22	33	18	30	43	44	51	82	73	736	
Patents By Year of Application:	275	37	29	62	47	56	46	74	48	35	22	3	2	0	0	736	
FINISAR CORPORATION																	
Patents By Year of Grant:	5	0	1	1	1	5	22	43	86	105	99	102	98	98	69	735	
Patents By Year of Application:	6	3	3	19	54	105	150	119	118	41	60	49	6	2	0	735	
GENERAL INSTRUMENT CORPORATION																	
Patents By Year of Grant:	158	30	26	24	23	28	33	49	52	60	52	48	34	70	41	728	
Patents By Year of Application:	228	36	43	78	63	62	47	55	50	36	21	9	0	0	0	728	
PHILIPS ELECTRONICS NORTH AMERICA CORP.																	
Patents By Year of Grant:	167	110	110	120	154	61	1	1	0	0	1	0	0	0	2	727	
Patents By Year of Application:	468	121	87	44	5	0	0	0	0	1	0	1	0	0	0	727	
HITACHI HIGH-TECHNOLOGIES CORPORATION																	
Patents By Year of Grant:	0	0	0	0	0	0	3	18	31	65	67	113	112	154	160	723	
Patents By Year of Application:	0	0	0	0	3	21	53	84	95	115	144	123	61	24	0	723	
ELPIDA MEMORY, INC.																	
Patents By Year of Grant:	0	0	0	0	0	0	1	19	45	39	74	82	107	194	160	721	
Patents By Year of Application:	1	0	0	2	4	28	48	55	61	134	142	150	83	13	0	721	
NGK INSULATORS LTD.																	
Patents By Year of Grant:	136	22	25	28	48	54	56	50	41	45	43	49	48	38	35	718	
Patents By Year of Application:	200	29	46	54	60	57	51	39	53	35	49	23	17	5	0	718	

Technology Assessment and Forecast Report

ELECTRICAL CLASSES (12-31-2011)

Page B - 20

Organizational Patenting

(Granted: Jan 01, 1992 - Dec 31, 2011) Ranked List of Organizations with 200 or More Patents

	Pre 1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL
TRIMBLE NAVIGATION, LTD.																
Patents By Year of Grant:	124	62	70	79	54	46	38	30	20	22	34	22	36	32	45	714
Patents By Year of Application:	293	66	62	45	31	18	36	26	37	36	30	23	8	2	1	714
SONY ERICSSON MOBILE COMMUNICATIONS AB																
Patents By Year of Grant:	0	0	0	0	0	0	0	4	9	34	46	63	129	198	229	712
Patents By Year of Application:	0	0	0	0	3	29	76	99	92	180	129	76	22	6	0	712
HUGHES ELECTRONICS CORP.																
Patents By Year of Grant:	3	70	104	120	140	121	61	52	26	10	0	3	1	0	0	711
Patents By Year of Application:	235	144	127	138	43	18	5	1	0	0	0	0	0	0	0	711
Samsung Mobile Display Co., Ltd.																
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	0	151	248	310	709
Patents By Year of Application:	0	0	0	0	0	1	3	59	163	191	139	88	59	6	0	709
SGS-THOMSON MICROELECTRONICS S.R.L.																
Patents By Year of Grant:	358	157	91	58	24	11	4	1	1	0	0	0	0	0	0	705
Patents By Year of Application:	648	44	5	5	2	1	0	0	0	0	0	0	0	0	0	705
WESTERN DIGITAL TECHNOLOGIES, INC.																
Patents By Year of Grant:	0	0	0	0	12	36	56	80	113	101	54	52	53	58	78	693
Patents By Year of Application:	1	6	27	52	78	105	85	87	68	46	47	54	28	8	1	693
HITACHI DISPLAYS, LTD.																
Patents By Year of Grant:	0	0	0	0	0	0	0	2	13	47	61	84	93	167	219	686
Patents By Year of Application:	0	0	0	0	1	2	59	90	85	109	144	125	47	18	6	686
NOKIA TELECOMMUNICATIONS OYJ																
Patents By Year of Grant:	115	91	116	110	104	93	43	8	2	1	1	0	1	0	0	685
Patents By Year of Application:	415	131	133	3	2	0	1	0	0	0	0	0	0	0	0	685
FUJI ELECTRIC CO., LTD.																
Patents By Year of Grant:	304	46	59	41	32	45	47	48	27	16	6	3	1	0	9	684
Patents By Year of Application:	411	34	32	48	56	49	34	5	4	2	2	3	4	0	0	684
DELTA ELECTRONICS INC.																
Patents By Year of Grant:	5	7	7	13	17	34	48	60	46	69	72	63	76	74	92	683
Patents By Year of Application:	16	9	20	22	62	52	84	82	70	82	73	67	38	6	0	683
SYMANTEC CORPORATION																
Patents By Year of Grant:	8	14	12	10	5	6	9	6	12	19	34	63	114	165	199	676
Patents By Year of Application:	39	14	12	26	14	27	66	89	130	68	98	61	31	1	0	676

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

ELECTRICAL CLASSES (12-31-2011)

Page B - 21

---- Organizational Patenting (Granted: Jan 01, 1992 - Dec 31, 2011) ---- Ranked List of Organizations with 200 or More Patents ----

	Pre															
	1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL

PENTAX CORPORATION

Patents By Year of Grant:	0	0	0	0	0	12	142	163	142	113	76	26	0	0	0	674
Patents By Year of Application:	3	11	37	61	143	131	126	85	56	18	3	0	0	0	0	674

NIPPONDENSO CO., LTD.

Patents By Year of Grant:	437	167	43	15	6	3	1	0	0	0	0	0	0	0	0	672
Patents By Year of Application:	662	5	2	1	2	0	0	0	0	0	0	0	0	0	0	672

SYNOPSYS INC.

Patents By Year of Grant:	20	19	21	26	25	31	20	21	35	37	65	57	67	78	136	658
Patents By Year of Application:	83	26	40	22	34	45	34	56	72	47	80	72	36	9	2	658

THOMSON-CSF

Patents By Year of Grant:	389	56	56	40	44	39	20	10	1	1	0	0	0	0	0	656
Patents By Year of Application:	513	49	39	36	19	0	0	0	0	0	0	0	0	0	0	656

FORD GLOBAL TECHNOLOGIES, L.L.C.

Patents By Year of Grant:	0	0	0	0	0	0	47	102	81	87	72	44	59	69	89	650
Patents By Year of Application:	0	0	6	33	54	126	94	74	51	57	59	42	25	26	3	650

SILICON GRAPHICS, INC.

Patents By Year of Grant:	111	83	54	65	79	50	50	52	28	27	14	24	9	0	2	648
Patents By Year of Application:	329	78	71	58	34	38	18	4	9	6	1	2	0	0	0	648

STORAGE TECHNOLOGY CORPORATION

Patents By Year of Grant:	136	13	25	42	50	50	50	67	52	60	42	31	17	7	3	645
Patents By Year of Application:	191	38	77	78	65	64	39	45	36	10	0	1	1	0	0	645

DAI NIPPON PRINTING CO. LTD

Patents By Year of Grant:	58	25	27	46	22	25	40	53	38	48	47	42	52	62	57	642
Patents By Year of Application:	128	39	27	30	53	53	74	58	58	50	42	17	7	4	2	642

SONY COMPUTER ENTERTAINMENT INC.

Patents By Year of Grant:	0	0	0	5	18	33	44	62	40	56	48	46	63	107	119	641
Patents By Year of Application:	7	14	34	64	96	61	28	53	98	90	55	16	15	10	0	641

ITT MANUFACTURING ENTERPRISES, INC.

Patents By Year of Grant:	0	10	40	58	49	40	30	40	42	57	66	36	58	64	50	640
Patents By Year of Application:	71	58	40	50	56	57	47	33	79	58	53	23	14	1	0	640

INTEGRATED DEVICE TECHNOLOGY, INC.

Patents By Year of Grant:	73	51	41	26	33	18	23	24	34	51	44	34	48	79	58	637
Patents By Year of Application:	175	28	25	21	39	35	40	48	49	63	60	34	18	2	0	637

Technology Assessment and Forecast Report

ELECTRICAL CLASSES (12-31-2011)

Page B - 22

Organizational Patenting

(Granted: Jan 01, 1992 - Dec 31, 2011)

Ranked List of Organizations with 200 or More Patents

	Pre												200	or More Patents		
	1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL
BAKER HUGHES INCORPORATED																
Patents By Year of Grant:	42	11	11	24	21	39	38	30	39	30	62	65	62	89	69	632
Patents By Year of Application:	69	22	29	39	41	41	44	46	64	53	107	59	15	3	0	632
AOL LLC																
Patents By Year of Grant:	0	1	9	7	3	14	17	26	18	54	82	87	80	104	127	629
Patents By Year of Application:	19	11	21	46	67	88	96	70	33	68	38	31	21	17	3	629
MITSUMI ELECTRIC CO., LTD.																
Patents By Year of Grant:	58	27	43	36	42	39	43	42	35	49	37	45	48	44	38	626
Patents By Year of Application:	136	34	44	49	38	49	31	61	55	37	55	26	11	0	0	626
SGS-THOMSON MICROELECTRONICS S.A.																
Patents By Year of Grant:	272	110	105	76	33	13	8	2	4	2	0	0	0	0	0	625
Patents By Year of Application:	543	61	9	6	2	0	1	3	0	0	0	0	0	0	0	625
DIGIMARC CORPORATION																
Patents By Year of Grant:	1	11	2	7	16	27	50	51	34	75	59	55	59	65	105	617
Patents By Year of Application:	17	13	40	65	83	72	46	40	41	40	63	34	39	24	0	617
CONEXANT SYSTEMS, INC.																
Patents By Year of Grant:	0	0	20	65	115	131	81	50	26	25	22	23	13	17	26	614
Patents By Year of Application:	43	158	132	110	55	14	30	19	21	7	5	11	7	1	1	614
ARM LIMITED																
Patents By Year of Grant:	25	16	17	15	17	15	13	16	24	59	60	66	61	100	105	609
Patents By Year of Application:	66	20	22	16	30	35	70	78	71	64	53	53	26	5	0	609
LG SEMICON CO., LTD.																
Patents By Year of Grant:	75	138	195	154	18	16	3	3	1	0	1	0	1	0	0	605
Patents By Year of Application:	404	147	42	4	5	1	0	1	0	1	0	0	0	0	0	605
KYOCERA MITA CORPORATION																
Patents By Year of Grant:	0	0	0	6	14	11	6	13	8	21	31	88	121	155	130	604
Patents By Year of Application:	5	2	10	16	12	13	19	24	91	133	135	105	33	5	1	604
MAXTOR CORPORATION																
Patents By Year of Grant:	70	12	15	17	35	64	52	56	47	76	64	47	42	5	2	604
Patents By Year of Application:	101	26	92	58	78	52	40	55	51	37	14	0	0	0	0	604
SILICON LABORATORIES INC.																
Patents By Year of Grant:	0	0	1	14	20	19	20	32	27	56	90	91	69	72	82	593
Patents By Year of Application:	3	37	13	28	29	34	66	79	100	89	53	49	9	4	0	593

Technology Assessment and Forecast Report ----

ELECTRICAL CLASSES (12-31-2011)

Page B - 23

Technology Assessment and Forecast Report

ELECTRICAL CLASSES (12-31-2011)

Page B - 24

---- Organizational Patenting

(Granted: Jan 01, 1992 - Dec 31, 2011) ---- Ranked List of Organizations with 200 or More Patents ----

	Pre 1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL
--	-------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

GOLDSTAR COMPANY, LTD.

Patents By Year of Grant:	520	33	10	1	2	0	0	0	0	0	0	0	0	0	0	566
Patents By Year of Application:	566	0	0	0	0	0	0	0	0	0	0	0	0	0	0	566

FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V.

Patents By Year of Grant:	67	18	22	24	18	40	28	34	25	35	34	39	36	61	81	562
Patents By Year of Application:	115	23	41	48	38	46	36	33	56	45	47	25	8	1	0	562

PATENT-TREUHAND-GESELLSCHAFT FUR ELEKTRISCHE GLUHLAMPEN MBH

Patents By Year of Grant:	88	33	26	30	55	43	46	55	30	56	45	43	6	5	0	561
Patents By Year of Application:	143	37	45	49	46	56	46	52	56	28	3	0	0	0	0	561

CIENA CORPORATION

Patents By Year of Grant:	11	11	10	20	20	30	33	41	56	76	56	39	31	64	55	553
Patents By Year of Application:	38	34	23	88	100	56	51	49	20	28	34	24	4	4	0	553

KLA-TENCOR TECHNOLOGIES CORP.

Patents By Year of Grant:	0	0	0	0	1	3	13	53	52	98	89	92	62	60	23	546
Patents By Year of Application:	1	1	3	11	40	60	82	100	101	69	60	13	4	1	0	546

ALCATEL N. V.

Patents By Year of Grant:	403	91	37	8	2	2	0	0	0	0	0	1	0	0	0	544
Patents By Year of Application:	540	2	2	0	0	0	0	0	0	0	0	0	0	0	0	544

WESTINGHOUSE ELECTRIC CORP.

Patents By Year of Grant:	515	26	3	0	0	0	0	0	0	0	0	0	0	0	0	544
Patents By Year of Application:	544	0	0	0	0	0	0	0	0	0	0	0	0	0	0	544

LITTON SYSTEMS INC.

Patents By Year of Grant:	244	36	46	49	67	25	22	18	8	10	9	4	3	0	1	542
Patents By Year of Application:	328	55	65	34	22	7	14	6	6	1	4	0	0	0	0	542

SANDIA CORPORATION

Patents By Year of Grant:	60	31	35	31	36	43	44	36	26	33	30	42	27	37	27	538
Patents By Year of Application:	141	34	41	32	54	28	41	34	33	36	27	26	8	3	0	538

MITA INDUSTRIAL COMPANY LTD.

Patents By Year of Grant:	336	125	54	17	1	0	0	0	0	0	0	0	0	0	0	533
Patents By Year of Application:	502	23	8	0	0	0	0	0	0	0	0	0	0	0	0	533

BAE SYSTEMS INFORMATION AND ELECTRONIC SYSTEMS INTEGRATION, INC.

Patents By Year of Grant:	0	0	0	0	4	48	32	54	52	51	71	35	55	45	83	530
Patents By Year of Application:	17	1	4	30	42	74	78	58	66	45	24	41	42	5	3	530

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

ELECTRICAL CLASSES (12-31-2011)

Page B - 25

----- Organizational Patenting

(Granted: Jan 01, 1992 - Dec 31, 2011) ----- Ranked List of Organizations with 200 or More Patents -----

	Pre															
	1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL

SCIENTIFIC-ATLANTA, INC.

Patents By Year of Grant:	161	29	28	27	39	33	34	24	16	26	33	22	27	31	0	530
Patents By Year of Application:	250	28	39	46	47	35	22	21	11	21	5	4	1	0	0	530

MINNESOTA MINING AND MANUFACTURING COMPANY

Patents By Year of Grant:	391	85	28	12	2	7	2	0	0	0	0	0	0	0	0	527
Patents By Year of Application:	514	5	3	4	1	0	0	0	0	0	0	0	0	0	0	527

OSRAM SYLVANIA INC.

Patents By Year of Grant:	63	22	28	23	27	18	23	40	27	52	49	35	34	39	43	523
Patents By Year of Application:	111	26	36	12	28	37	24	54	68	42	39	33	11	2	0	523

THOMSON CONSUMER ELECTRONICS, INC.

Patents By Year of Grant:	362	65	61	26	1	1	0	0	0	0	0	0	0	0	0	516
Patents By Year of Application:	507	9	0	0	0	0	0	0	0	0	0	0	0	0	0	516

HRL LABORATORIES, LLC

Patents By Year of Grant:	0	0	0	1	12	31	45	41	42	54	60	54	45	70	59	514
Patents By Year of Application:	0	0	26	51	53	47	60	81	49	50	36	44	15	2	0	514

SHIMADZU CORPORATION

Patents By Year of Grant:	117	19	19	16	16	30	39	22	22	43	30	30	34	38	39	514
Patents By Year of Application:	156	19	20	27	36	26	29	44	50	51	40	14	1	1	0	514

NOVELL, INC.

Patents By Year of Grant:	26	28	54	45	17	22	27	24	14	25	29	29	39	84	48	511
Patents By Year of Application:	153	26	36	37	29	41	35	30	28	39	34	11	8	4	0	511

MCI COMMUNICATIONS CORP.

Patents By Year of Grant:	51	116	105	73	58	43	19	17	8	6	3	2	1	2	5	509
Patents By Year of Application:	379	97	14	2	3	1	7	4	1	0	0	1	0	0	0	509

METROLOGIC INSTRUMENTS INC.

Patents By Year of Grant:	19	15	22	18	18	32	39	28	44	47	33	28	67	68	30	508
Patents By Year of Application:	78	7	36	30	31	73	29	39	13	34	100	36	2	0	0	508

DAIMLER-CHRYSLER AKTIENGESELLSCHAFT

Patents By Year of Grant:	0	0	7	62	97	77	55	39	61	54	38	13	0	1	0	504
Patents By Year of Application:	32	53	111	83	60	69	55	31	9	1	0	0	0	0	0	504

NITTO DENKO CORPORATION

Patents By Year of Grant:	13	5	5	12	16	23	32	44	42	47	39	50	57	53	66	504
Patents By Year of Application:	26	11	22	40	45	56	44	49	44	45	41	40	35	5	1	504

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

ELECTRICAL CLASSES (12-31-2011)

Page B - 26

----- Organizational Patenting

(Granted: Jan 01, 1992 - Dec 31, 2011) ----- Ranked List of Organizations with 200 or More Patents -----

Pre

	1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL
--	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

UNITED STATES OF AMERICA, DEPARTMENT OF ENERGY

Patents By Year of Grant:	339	20	16	15	16	12	13	11	8	7	6	8	8	16	9	504
Patents By Year of Application:	375	22	12	17	8	11	11	3	9	9	13	11	2	1	0	504

SARNOFF CORPORATION

Patents By Year of Grant:	0	5	39	68	66	70	67	42	34	26	16	22	20	24	0	499
Patents By Year of Application:	100	84	65	92	38	20	13	25	28	17	12	2	3	0	0	499

FAIRCHILD SEMICONDUCTOR CORPORATION

Patents By Year of Grant:	1	3	10	14	15	39	35	48	35	30	19	29	50	82	83	493
Patents By Year of Application:	14	19	30	32	38	43	44	31	26	37	61	70	38	10	0	493

HOYA CORPORATION

Patents By Year of Grant:	29	2	3	3	7	5	8	12	6	4	11	64	126	123	89	492
Patents By Year of Application:	35	4	7	7	12	11	22	25	91	84	100	42	37	15	0	492

NETWORK APPLIANCE, INC.

Patents By Year of Grant:	0	1	3	3	3	6	10	22	30	60	77	112	61	61	40	489
Patents By Year of Application:	4	8	11	21	41	83	67	65	76	45	43	17	3	5	0	489

SQUARE D COMPANY

Patents By Year of Grant:	213	42	43	16	39	26	28	21	7	16	14	9	7	3	4	488
Patents By Year of Application:	297	38	37	24	30	13	16	7	7	10	6	2	1	0	0	488

MATSUSHITA ELECTRIC WORKS, LTD.

Patents By Year of Grant:	110	21	30	30	25	32	35	34	40	40	28	35	20	5	0	485
Patents By Year of Application:	164	26	26	46	50	41	38	46	28	11	9	0	0	0	0	485

NGK SPARK PLUG CO., LTD.

Patents By Year of Grant:	84	26	29	24	30	21	45	48	22	25	20	26	22	33	30	485
Patents By Year of Application:	143	25	30	26	47	50	22	33	26	29	23	24	7	0	0	485

FORD GLOBAL TECHNOLOGIES, INC.

Patents By Year of Grant:	16	66	61	58	91	112	38	1	1	0	2	1	3	12	21	483
Patents By Year of Application:	158	56	55	107	48	19	2	6	4	6	9	4	2	7	0	483

QUANTUM CORP. (CA)

Patents By Year of Grant:	133	52	35	43	29	9	15	20	16	28	25	19	21	23	14	482
Patents By Year of Application:	233	39	25	18	26	22	24	23	22	14	14	15	5	2	0	482

TEAC CORPORATION

Patents By Year of Grant:	177	11	23	17	28	19	21	23	23	38	24	17	22	14	25	482
Patents By Year of Application:	220	22	21	26	27	57	23	26	17	11	12	9	9	2	0	482

Technology Assessment and Forecast Report

ELECTRICAL CLASSES (12-31-2011)

Page B - 27

Organizational Patenting													(Granted: Jan 01, 1992 - Dec 31, 2011)					
	Pre 1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL		
THALES																		
Patents By Year of Grant:	0	0	0	0	0	0	12	24	37	45	54	60	71	81	93	477		
Patents By Year of Application:	0	0	0	2	34	77	76	63	72	62	45	31	15	0	0	477		
ATI TECHNOLOGIES INC.																		
Patents By Year of Grant:	15	15	17	39	37	21	11	28	26	36	24	31	54	54	55	463		
Patents By Year of Application:	84	64	11	26	39	30	33	48	46	41	21	6	12	2	0	463		
NEC LCD TECHNOLOGIES, LTD.																		
Patents By Year of Grant:	0	0	0	0	0	0	38	67	74	57	31	30	59	55	52	463		
Patents By Year of Application:	0	0	6	42	63	67	46	52	58	51	41	20	8	8	1	463		
ORACLE CORPORATION																		
Patents By Year of Grant:	18	58	85	77	67	85	50	5	1	7	1	3	4	1	1	463		
Patents By Year of Application:	237	85	79	29	16	11	1	3	1	1	0	0	0	0	0	463		
SGS-THOMSON MICROELECTRONICS, INC.																		
Patents By Year of Grant:	391	66	1	2	0	0	0	0	0	0	0	0	0	0	0	0	460	
Patents By Year of Application:	460	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	460	
DAINIPPON SCREEN MFG. CO., LTD.																		
Patents By Year of Grant:	181	28	25	14	13	7	7	17	18	31	24	31	19	23	19	457		
Patents By Year of Application:	241	22	4	5	10	28	39	36	20	19	18	13	2	0	0	457		
SPANSION LLC																		
Patents By Year of Grant:	0	0	0	0	0	0	0	2	3	40	81	66	68	94	100	454		
Patents By Year of Application:	0	0	0	1	0	5	13	53	102	102	75	68	24	10	1	454		
AISIN SEIKI KABUSHIKI KAISHA																		
Patents By Year of Grant:	83	9	29	18	21	27	25	30	25	36	27	23	34	29	34	450		
Patents By Year of Application:	118	20	19	24	36	35	39	37	38	35	25	15	8	1	0	450		
Fu Zhun Precision Industrial (Shenzhen) Co., Ltd.																		
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	6	63	68	69	135	107	448		
Patents By Year of Application:	0	0	0	0	0	0	1	23	50	74	84	117	91	8	0	448		
MOSAID TECHNOLOGIES INC.																		
Patents By Year of Grant:	23	16	11	16	11	13	28	26	17	29	24	21	43	73	97	448		
Patents By Year of Application:	52	14	14	22	27	32	34	17	32	35	58	52	33	23	3	448		
ADAPTEC, INC.																		
Patents By Year of Grant:	30	32	45	56	46	42	22	37	34	48	21	12	12	8	1	446		
Patents By Year of Application:	126	72	50	52	31	55	19	22	13	2	3	1	0	0	0	446		

Technology Assessment and Forecast Report

ELECTRICAL CLASSES (12-31-2011)

Page B - 28

Organizational Patenting

(Granted: Jan 01, 1992 - Dec 31, 2011) Ranked List of Organizations with 200 or More Patents

	Pre 1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL
LATTICE SEMICONDUCTOR CORPORATION																
Patents By Year of Grant:	32	3	2	15	12	22	36	43	47	48	41	41	47	34	23	446
Patents By Year of Application:	43	15	14	18	32	58	63	34	51	41	32	17	22	5	1	446
JDS UNIPHASE CORPORATION																
Patents By Year of Grant:	0	0	1	7	17	49	46	44	47	36	38	25	22	46	65	443
Patents By Year of Application:	4	6	35	47	50	59	48	39	40	34	33	35	11	2	0	443
Avago Technologies ECBU IP (Singapore) Pte. Ltd.																
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	16	102	79	100	89	55	441
Patents By Year of Application:	0	0	0	1	3	1	45	100	122	54	70	29	14	2	0	441
AMERICAN EXPRESS TRAVEL RELATED SERVICES COMPANY, INC.																
Patents By Year of Grant:	4	0	3	5	2	1	2	8	4	24	38	64	75	100	109	439
Patents By Year of Application:	11	4	2	10	24	33	37	63	51	40	73	36	21	29	5	439
SIEMENS ENERGY & AUTOMATION, INC.																
Patents By Year of Grant:	79	28	27	27	35	21	29	20	30	27	36	40	37	1	0	437
Patents By Year of Application:	133	33	38	32	30	31	30	36	35	26	12	1	0	0	0	437
ALPINE ELECTRONICS INC.																
Patents By Year of Grant:	36	13	15	11	14	21	19	34	34	31	33	38	50	48	38	435
Patents By Year of Application:	71	10	14	28	38	39	47	47	51	43	31	13	3	0	0	435
BEA SYSTEMS, INC.																
Patents By Year of Grant:	0	0	4	2	3	2	4	4	19	37	56	78	95	126	4	434
Patents By Year of Application:	9	1	4	5	35	57	78	88	87	46	19	4	1	0	0	434
NetApp, Inc.																
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	15	75	147	194	431
Patents By Year of Application:	0	0	0	0	8	27	24	39	73	70	73	69	31	14	3	431
LENOVO (SINGAPORE) PTE LTD																
Patents By Year of Grant:	0	0	0	0	0	0	0	0	9	75	89	71	59	67	54	424
Patents By Year of Application:	0	2	7	6	50	45	83	65	53	47	32	25	7	2	0	424
TOSHIBA TEC KABUSHIKI KAISHA																
Patents By Year of Grant:	0	0	1	13	69	95	63	17	9	24	22	22	21	27	40	423
Patents By Year of Application:	5	5	34	124	95	33	5	17	17	28	28	13	16	3	0	423
INTERSIL AMERICAS INC.																
Patents By Year of Grant:	0	0	0	0	3	20	39	42	33	50	37	34	42	52	68	420
Patents By Year of Application:	0	3	8	22	41	40	35	62	42	36	43	45	24	19	0	420

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

ELECTRICAL CLASSES (12-31-2011)

Page B - 29

---- Organizational Patenting

(Granted: Jan 01, 1992 - Dec 31, 2011) ---- Ranked List of Organizations with 200 or More Patents ----

	Pre																
	1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL	

Symantec Operating Corporation

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	18	86	93	147	76	420
Patents By Year of Application:	0	0	0	0	2	36	62	117	76	74	31	16	6	0	0	420

DELCO ELECTRONICS CORPORATION

Patents By Year of Grant:	251	62	63	34	6	1	0	0	0	0	0	0	0	0	0	417
Patents By Year of Application:	373	33	11	0	0	0	0	0	0	0	0	0	0	0	0	417

EMERSON ELECTRIC CO.

Patents By Year of Grant:	104	33	36	29	24	22	17	36	22	18	16	15	18	19	7	416
Patents By Year of Application:	177	25	26	20	25	39	22	24	11	22	6	16	3	0	0	416

HUBBELL INCORPORATED

Patents By Year of Grant:	105	20	26	33	28	37	23	22	17	20	17	20	8	22	18	416
Patents By Year of Application:	156	33	30	28	33	20	21	24	18	18	12	18	4	1	0	416

CITIZEN WATCH CO., LTD.

Patents By Year of Grant:	68	25	42	45	47	33	44	47	20	29	14	1	0	0	0	415
Patents By Year of Application:	147	54	58	46	43	36	25	3	3	0	0	0	0	0	0	415

Fujitsu Semiconductor Limited

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	0	0	141	274	415
Patents By Year of Application:	0	0	0	0	1	0	1	10	32	69	85	117	75	23	2	415

GATEWAY 2000, INC.

Patents By Year of Grant:	5	14	21	24	29	46	47	56	44	39	28	27	14	20	0	414
Patents By Year of Application:	67	62	81	47	38	46	31	34	3	1	1	3	0	0	0	414

SUMITOMO WIRING SYSTEMS, LTD.

Patents By Year of Grant:	78	37	31	33	26	41	33	31	21	19	12	8	13	16	15	414
Patents By Year of Application:	153	23	33	34	28	31	27	20	23	11	20	5	6	0	0	414

AGERE SYSTEMS GUARDIAN CORP.

Patents By Year of Grant:	0	0	0	0	167	236	5	1	0	0	0	1	0	0	0	410
Patents By Year of Application:	23	97	179	95	15	1	0	0	0	0	0	0	0	0	0	410

SEMICONDUCTOR COMPONENTS INDUSTRIES, LLC

Patents By Year of Grant:	0	0	0	6	14	43	23	26	20	28	26	34	53	62	75	410
Patents By Year of Application:	5	7	9	33	32	29	33	34	51	65	41	44	16	10	1	410

KABUSHIKI KAISHA TOPCON

Patents By Year of Grant:	59	27	26	33	16	21	13	25	19	26	27	25	32	32	26	407
Patents By Year of Application:	120	27	17	24	19	26	28	24	45	23	21	23	9	1	0	407

Technology Assessment and Forecast Report

ELECTRICAL CLASSES (12-31-2011)

Page B - 30

Organizational Patenting

(Granted: Jan 01, 1992 - Dec 31, 2011) Ranked List of Organizations with 200 or More Patents

Pre

1998 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 TOTAL

DONNELLY CORPORATION

Patents By Year of Grant:	45	13	16	21	31	35	21	26	22	22	24	33	30	30	35	404
Patents By Year of Application:	75	13	37	31	32	38	25	19	16	19	37	20	23	15	4	404

E. I. DU PONT DE NEMOURS AND COMPANY

Patents By Year of Grant:	134	12	6	11	5	5	7	18	16	29	39	29	31	36	25	403
Patents By Year of Application:	152	11	10	9	10	20	28	49	42	32	20	11	6	2	1	403

SHINKO ELECTRIC INDUSTRIES CO., LTD.

Patents By Year of Grant:	24	7	12	10	24	26	30	20	15	22	25	30	36	62	59	402
Patents By Year of Application:	45	11	24	32	30	19	20	29	38	46	48	36	19	5	0	402

THE DIRECTV GROUP, INC.

Patents By Year of Grant:	0	0	0	0	0	0	0	21	35	46	50	54	56	73	66	401
Patents By Year of Application:	1	1	6	65	50	39	49	44	33	42	46	18	5	2	0	401

ACTEL CORPORATION

Patents By Year of Grant:	80	8	9	6	8	8	15	24	26	35	26	49	51	26	28	399
Patents By Year of Application:	101	7	4	21	5	32	20	33	33	34	45	41	14	9	0	399

FUJITSU TEN LIMITED

Patents By Year of Grant:	28	6	4	8	1	5	15	28	25	46	43	33	60	57	40	399
Patents By Year of Application:	43	4	9	7	11	53	47	58	46	48	44	17	11	1	0	399

MITUTOYO CORPORATION

Patents By Year of Grant:	22	6	22	13	17	26	42	22	16	42	26	46	39	29	31	399
Patents By Year of Application:	47	22	22	31	37	31	20	34	38	40	32	25	19	1	0	399

WISCONSIN ALUMNI RESEARCH FOUNDATION

Patents By Year of Grant:	80	14	13	16	12	19	23	15	16	25	20	27	32	42	43	397
Patents By Year of Application:	109	14	20	27	23	21	18	26	30	46	33	19	7	4	0	397

HALLIBURTON ENERGY SERVICES, INC.

Patents By Year of Grant:	4	8	12	14	25	21	32	43	36	44	30	25	29	45	28	396
Patents By Year of Application:	33	14	30	23	33	55	37	53	36	36	18	14	12	2	0	396

ALLIED-SIGNAL INC.

Patents By Year of Grant:	249	24	24	42	32	13	6	3	0	0	0	0	0	0	0	393
Patents By Year of Application:	312	32	42	4	0	3	0	0	0	0	0	0	0	0	0	393

Oki Semiconductor Co., Ltd.

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	6	142	137	107	392	
Patents By Year of Application:	0	0	0	0	0	3	10	15	44	77	119	83	31	10	0	392

Technology Assessment and Forecast Report

ELECTRICAL CLASSES (12-31-2011)

Page B - 31

Organizational Patenting (Granted: Jan 01, 1992 - Dec 31, 2011)														Ranked List of Organizations with 200 or More Patents			
	Pre 1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL	
CARL ZEISS SMT AG																	
Patents By Year of Grant:	0	0	0	0	0	0	5	28	35	57	61	69	56	71	9	391	
Patents By Year of Application:	0	0	1	2	25	32	49	73	75	51	41	35	7	0	0	391	
COMPUTER ASSOCIATES THINK, INC.																	
Patents By Year of Grant:	0	0	0	5	11	24	10	5	15	24	26	34	52	101	84	391	
Patents By Year of Application:	9	26	27	18	28	31	44	60	65	38	19	14	5	7	0	391	
UNITED TECHNOLOGIES CORPORATION																	
Patents By Year of Grant:	220	6	12	9	8	13	6	8	13	12	18	12	11	19	22	389	
Patents By Year of Application:	244	16	9	6	8	12	15	20	10	16	16	15	2	0	0	389	
AMKOR TECHNOLOGY, INC.																	
Patents By Year of Grant:	0	1	5	5	10	50	63	44	36	45	17	16	15	35	46	388	
Patents By Year of Application:	7	6	21	63	65	37	38	33	25	26	15	28	15	9	0	388	
DEUTSCHE THOMSON-BRANDT GMBH																	
Patents By Year of Grant:	183	35	45	42	46	20	0	3	3	9	1	0	0	0	0	387	
Patents By Year of Application:	301	42	28	11	3	2	0	0	0	0	0	0	0	0	0	387	
INTERMEC IP CORP.																	
Patents By Year of Grant:	0	1	40	73	57	33	20	16	16	20	21	27	18	13	29	384	
Patents By Year of Application:	75	70	69	26	10	9	19	30	23	19	18	11	4	1	0	384	
ZENITH ELECTRONICS CORPORATION																	
Patents By Year of Grant:	197	25	21	22	16	8	16	14	10	7	14	8	4	5	8	375	
Patents By Year of Application:	260	19	22	15	12	10	11	8	4	5	7	1	1	0	0	375	
CHUNGHWIA PICTURE TUBES, LTD.																	
Patents By Year of Grant:	31	1	2	7	2	5	4	10	16	23	34	59	55	65	57	371	
Patents By Year of Application:	34	9	2	1	9	15	21	32	78	65	34	39	24	8	0	371	
PALO ALTO RESEARCH CENTER INCORPORATED																	
Patents By Year of Grant:	0	0	0	0	0	0	1	1	7	34	36	44	53	100	95	371	
Patents By Year of Application:	0	0	0	0	1	21	54	73	51	48	66	26	17	13	1	371	
ANDO ELECTRIC CO., LTD.																	
Patents By Year of Grant:	89	28	35	38	32	49	46	36	16	0	0	0	0	0	0	369	
Patents By Year of Application:	146	60	34	55	40	29	5	0	0	0	0	0	0	0	0	369	
GEORGIA TECH RESEARCH CORP.																	
Patents By Year of Grant:	47	8	15	13	15	19	20	20	26	32	28	20	28	36	42	369	
Patents By Year of Application:	76	17	14	28	23	21	39	16	34	42	24	16	12	7	0	369	

Technology Assessment and Forecast Report

ELECTRICAL CLASSES (12-31-2011)

Page B - 32

Organizational Patenting

(Granted: Jan 01, 1992 - Dec 31, 2011) Ranked List of Organizations with 200 or More Patents

	Pre 1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL
--	-------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

AT&T Mobility II LLC

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	8	69	74	84	132	367
Patents By Year of Application:	1	0	1	2	11	20	34	54	50	47	55	42	36	13	1	367

TERADYNE, INC.

Patents By Year of Grant:	30	11	11	12	17	29	30	37	27	30	22	27	35	19	30	367
Patents By Year of Application:	58	16	31	42	28	38	21	24	44	16	23	14	3	9	0	367

FUJITSU MICROELECTRONICS LIMITED

Patents By Year of Grant:	0	0	1	0	0	0	0	0	0	0	0	0	214	151	0	366
Patents By Year of Application:	1	0	0	0	1	6	6	28	70	123	86	41	4	0	0	366

STANLEY ELECTRIC CO., LTD.

Patents By Year of Grant:	72	7	17	26	16	19	17	6	9	12	18	17	30	50	47	363
Patents By Year of Application:	95	25	20	15	18	5	17	19	20	34	32	37	23	2	1	363

Amazon Technologies, Inc.

Patents By Year of Grant:	0	0	0	0	0	0	0	0	4	5	14	45	116	178	362	
Patents By Year of Application:	0	0	0	2	4	6	13	29	44	91	74	50	26	20	3	362

NIPPON SHEET GLASS CO., LTD.

Patents By Year of Grant:	61	2	16	15	21	19	27	44	36	36	30	23	10	11	10	361
Patents By Year of Application:	73	17	22	27	54	39	44	24	26	18	7	6	3	1	0	361

SKYWORKS SOLUTIONS, INC.

Patents By Year of Grant:	0	0	0	0	0	10	55	74	37	42	23	23	41	19	35	359
Patents By Year of Application:	0	17	28	45	57	32	31	34	33	24	22	16	9	10	1	359

AISIN AW CO., LTD.

Patents By Year of Grant:	44	26	31	29	18	8	19	14	15	24	13	21	16	34	46	358
Patents By Year of Application:	123	16	7	17	15	17	30	23	29	26	24	21	10	0	0	358

BELL COMMUNICATIONS RESEARCH, INC.

Patents By Year of Grant:	301	42	14	1	0	0	0	0	0	0	0	0	0	0	0	358
Patents By Year of Application:	357	1	0	0	0	0	0	0	0	0	0	0	0	0	0	358

QIMONDA AG

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	1	30	39	158	129	357
Patents By Year of Application:	0	0	0	1	0	1	3	3	12	70	148	117	2	0	0	357

ADVANCED SEMICONDUCTOR ENGINEERING, INC.

Patents By Year of Grant:	1	0	1	6	18	22	7	31	24	51	46	35	30	39	45	356
Patents By Year of Application:	1	2	21	20	13	19	50	60	36	42	34	34	23	1	0	356

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

ELECTRICAL CLASSES (12-31-2011)

Page B - 33

---- Organizational Patenting

(Granted: Jan 01, 1992 - Dec 31, 2011) ---- Ranked List of Organizations with 200 or More Patents ----

	Pre																
	1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL	

ANDREW CORPORATION

Patents By Year of Grant:	21	8	8	10	6	14	31	39	29	41	30	26	23	30	40	356
Patents By Year of Application:	38	9	13	18	30	64	55	32	25	23	16	20	9	4	0	356

LINEAR TECHNOLOGY CORPORATION

Patents By Year of Grant:	43	14	9	28	15	19	27	13	19	16	33	37	24	33	25	355
Patents By Year of Application:	70	21	18	22	23	15	23	19	55	43	18	15	10	3	0	355

USHIO DENKI KABUSHIKI KAISYA

Patents By Year of Grant:	23	11	23	13	16	30	43	39	32	25	12	19	24	22	21	353
Patents By Year of Application:	56	18	22	38	34	38	31	24	17	23	23	20	8	1	0	353

AUTODESK, INC.

Patents By Year of Grant:	5	8	8	18	19	21	18	19	30	37	26	21	40	47	35	352
Patents By Year of Application:	36	22	37	33	44	32	24	39	20	33	18	10	3	1	0	352

ASEA BROWN BOVERI AB

Patents By Year of Grant:	76	9	28	15	29	34	23	22	24	32	17	7	11	8	16	351
Patents By Year of Application:	111	38	31	29	43	38	25	16	11	5	2	0	2	0	0	351

KLA-TENCOR CORPORATION

Patents By Year of Grant:	0	4	10	10	14	12	38	23	9	20	8	34	50	60	53	345
Patents By Year of Application:	23	13	16	31	21	14	19	17	27	30	47	69	13	4	1	345

SIEMENS CORPORATE RESEARCH, INC.

Patents By Year of Grant:	37	17	34	22	23	15	27	22	22	46	34	19	25	1	0	344
Patents By Year of Application:	113	20	32	23	39	41	26	12	28	7	3	0	0	0	0	344

MAXIM INTEGRATED PRODUCTS, INC.

Patents By Year of Grant:	26	19	22	22	31	31	20	12	16	23	15	10	16	42	38	343
Patents By Year of Application:	60	31	34	21	33	16	23	14	24	18	17	32	14	6	0	343

POWER INTEGRATIONS, INC.

Patents By Year of Grant:	15	0	3	4	9	14	19	30	14	31	31	28	39	47	59	343
Patents By Year of Application:	16	7	5	13	12	26	28	30	37	34	36	44	34	18	3	343

LEVITON MANUFACTURING CO. INC.

Patents By Year of Grant:	45	30	19	16	16	12	11	10	23	29	35	25	22	24	24	341
Patents By Year of Application:	91	20	19	9	19	13	16	32	41	35	25	14	6	1	0	341

CREE, INC.

Patents By Year of Grant:	0	0	0	0	8	7	8	13	21	20	25	33	42	72	91	340
Patents By Year of Application:	2	5	2	5	18	18	29	44	44	54	65	24	21	8	1	340

Technology Assessment and Forecast Report

ELECTRICAL CLASSES (12-31-2011)

Page B - 34

Organizational Patenting

(Granted: Jan 01, 1992 - Dec 31, 2011) Ranked List of Organizations with 200 or More Patents

Pre

1998 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 TOTAL

CYMER, INC.

Patents By Year of Grant:	4	14	23	30	23	19	31	24	16	25	32	33	16	34	16	340
Patents By Year of Application:	34	31	42	21	31	18	29	26	35	30	26	12	3	2	0	340

UNIVERSITY OF TEXAS

Patents By Year of Grant:	68	18	13	10	14	18	17	20	14	19	20	22	22	30	35	340
Patents By Year of Application:	106	13	17	21	26	18	22	20	21	29	20	19	6	2	0	340

PALM, INC.

Patents By Year of Grant:	0	0	0	2	12	31	29	6	19	35	29	37	59	67	10	336
Patents By Year of Application:	4	7	22	32	74	25	18	25	44	49	22	10	4	0	0	336

ABB RESEARCH LTD.

Patents By Year of Grant:	16	15	28	17	16	18	24	29	15	19	19	14	16	36	53	335
Patents By Year of Application:	63	19	17	17	31	32	32	32	17	16	21	16	15	6	1	335

Aptina Imaging Corporation

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	16	100	134	84	334	
Patents By Year of Application:	0	1	0	1	2	4	13	30	47	56	86	65	29	0	0	334

FIRST DATA CORPORATION

Patents By Year of Grant:	1	1	0	8	7	7	6	17	20	54	32	45	53	45	38	334
Patents By Year of Application:	5	10	22	9	26	56	60	36	27	39	31	9	4	0	0	334

ATI INTERNATIONAL SRL

Patents By Year of Grant:	0	0	6	11	44	72	70	59	30	20	12	4	4	0	1	333
Patents By Year of Application:	9	55	145	101	13	3	0	4	3	0	0	0	0	0	0	333

KONICA MINOLTA OPTO, INC

Patents By Year of Grant:	0	0	0	0	0	0	0	2	5	12	43	56	64	74	76	332
Patents By Year of Application:	0	0	0	0	0	3	4	41	68	67	70	50	20	9	0	332

NETLOGIC MICROSYSTEMS, INC.

Patents By Year of Grant:	0	0	0	6	16	8	11	27	23	23	35	35	27	56	65	332
Patents By Year of Application:	2	4	15	19	22	31	33	35	28	31	43	35	15	18	1	332

BENQ CORPORATION

Patents By Year of Grant:	0	0	0	0	0	5	18	36	50	74	107	32	5	4	0	331
Patents By Year of Application:	1	0	9	12	21	36	87	101	43	15	6	0	0	0	0	331

GENTEX CORPORATION

Patents By Year of Grant:	15	9	10	19	26	28	40	20	31	23	17	32	23	21	17	331
Patents By Year of Application:	36	14	31	30	39	29	30	35	20	25	17	17	6	1	1	331

Technology Assessment and Forecast Report -----

ELECTRICAL CLASSES (12-31-2011)

Page B - 35

Technology Assessment and Forecast Report

ELECTRICAL CLASSES (12-31-2011)

Page B - 36

Organizational Patenting

(Granted: Jan 01, 1992 - Dec 31, 2011) Ranked List of Organizations with 200 or More Patents

	Pre 1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL
--	-------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

WHITAKER CORPORATION

Patents By Year of Grant:	150	45	36	39	28	12	4	2	1	1	0	0	0	0	0	318
Patents By Year of Application:	249	37	26	4	2	0	0	0	0	0	0	0	0	0	0	318

SENSORMATIC ELECTRONICS CORPORATION

Patents By Year of Grant:	66	26	38	23	14	9	9	10	12	21	14	8	20	26	21	317
Patents By Year of Application:	131	26	12	14	15	15	17	16	25	22	6	12	5	1	0	317

NOKIA NETWORKS OY

Patents By Year of Grant:	0	0	0	5	40	85	37	58	37	41	8	0	0	4	0	315
Patents By Year of Application:	0	7	73	140	89	4	0	1	0	0	1	0	0	0	0	315

ASUSTEK COMPUTER INC.

Patents By Year of Grant:	0	0	1	3	4	13	7	19	16	25	25	39	46	43	73	314
Patents By Year of Application:	0	7	11	7	23	16	19	28	22	56	40	48	27	9	1	314

HITACHI MEDICAL CORPORATION

Patents By Year of Grant:	66	9	20	9	10	20	18	13	12	16	16	21	22	30	32	314
Patents By Year of Application:	104	11	10	18	27	25	28	28	19	24	14	3	3	0	0	314

OSRAM OPTO SEMICONDUCTORS GMBH

Patents By Year of Grant:	0	0	0	0	1	4	13	21	32	25	28	44	48	48	49	313
Patents By Year of Application:	0	0	2	9	20	52	48	44	58	35	22	19	3	1	0	313

SANKYO SEIKI MFG. CO., LTD.

Patents By Year of Grant:	99	26	23	17	26	20	35	30	25	10	1	0	1	0	0	313
Patents By Year of Application:	146	29	18	34	30	31	18	6	1	0	0	0	0	0	0	313

HITACHI CABLE, LTD.

Patents By Year of Grant:	35	9	12	11	11	9	17	12	14	16	19	28	36	48	35	312
Patents By Year of Application:	60	12	10	6	22	17	11	22	31	36	39	28	14	4	0	312

HYUNDAI MOTOR COMPANY

Patents By Year of Grant:	12	10	9	14	16	24	14	25	30	33	23	19	14	34	35	312
Patents By Year of Application:	41	2	19	21	24	31	40	20	27	19	27	32	8	1	0	312

KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY

Patents By Year of Grant:	5	9	7	11	13	21	29	22	18	26	18	21	29	41	38	308
Patents By Year of Application:	25	10	22	39	28	26	16	15	23	34	42	17	10	1	0	308

MCAFEE, INC.

Patents By Year of Grant:	0	0	0	0	0	0	0	0	9	65	52	27	31	62	62	308
Patents By Year of Application:	0	0	1	11	88	53	17	26	32	41	33	1	3	2	0	308

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

ELECTRICAL CLASSES (12-31-2011)

Page B - 37

---- Organizational Patenting

(Granted: Jan 01, 1992 - Dec 31, 2011) ---- Ranked List of Organizations with 200 or More Patents ----

	Pre																
	1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL	

LEAR CORPORATION

Patents By Year of Grant:	0	3	5	7	9	11	17	19	29	60	43	28	32	21	23	307
Patents By Year of Application:	7	10	11	20	17	26	57	54	44	28	20	8	5	0	0	307

Himax Technologies Limited

Patents By Year of Grant:	0	0	0	0	0	0	2	4	7	10	23	41	38	87	94	306
Patents By Year of Application:	0	0	1	0	1	14	7	21	41	51	83	52	27	8	0	306

TOKAI RIKA DENKI SEISAKUSHO K.K.

Patents By Year of Grant:	64	16	10	11	20	11	23	23	15	25	26	14	18	18	11	305
Patents By Year of Application:	95	6	24	15	23	21	29	28	16	18	13	13	4	0	0	305

NIPPON STEEL CORP.

Patents By Year of Grant:	165	38	20	16	14	11	8	5	5	5	3	2	0	4	7	303
Patents By Year of Application:	234	18	9	7	4	13	5	6	2	1	1	0	1	2	0	303

JOHANNES HEIDENHAIN GMBH

Patents By Year of Grant:	47	9	11	10	14	19	25	17	22	36	27	20	15	20	8	300
Patents By Year of Application:	71	14	24	23	20	37	27	24	17	20	9	13	1	0	0	300

SCHNEIDER ELECTRIC SA

Patents By Year of Grant:	31	29	46	26	23	22	23	15	13	9	14	12	8	14	15	300
Patents By Year of Application:	99	32	26	17	28	19	20	6	16	13	11	9	4	0	0	300

DEERE + COMPANY

Patents By Year of Grant:	17	7	6	4	14	12	12	18	19	29	36	25	19	42	39	299
Patents By Year of Application:	29	6	11	10	17	17	34	24	49	39	36	17	8	2	0	299

PICKER INTERNATIONAL, INC.

Patents By Year of Grant:	153	25	25	51	38	7	0	0	0	0	0	0	0	0	0	299
Patents By Year of Application:	223	50	25	0	1	0	0	0	0	0	0	0	0	0	0	299

UNIVERSITY OF WASHINGTON

Patents By Year of Grant:	40	17	15	19	21	13	19	17	18	10	18	21	20	34	17	299
Patents By Year of Application:	78	28	17	28	16	11	14	21	21	18	22	16	9	0	0	299

YOKOGAWA ELECTRIC CORP.

Patents By Year of Grant:	43	11	6	6	11	7	12	6	30	23	21	22	27	40	33	298
Patents By Year of Application:	59	7	12	10	19	15	20	28	34	30	31	25	6	2	0	298

IOMEGA CORPORATION

Patents By Year of Grant:	46	18	44	53	45	19	25	21	7	8	5	3	2	1	0	297
Patents By Year of Application:	133	47	40	30	25	1	11	3	2	4	1	0	0	0	0	297

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

ELECTRICAL CLASSES (12-31-2011)

Page B - 38

----- Organizational Patenting

(Granted: Jan 01, 1992 - Dec 31, 2011) ----- Ranked List of Organizations with 200 or More Patents -----

Pre

	1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL
--	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

MATSUSHITA ELECTRONICS CORPORATION

Patents By Year of Grant:	78	39	48	53	52	18	6	2	0	0	0	0	0	0	0	296
Patents By Year of Application:	166	75	33	15	5	1	1	0	0	0	0	0	0	0	0	296

IMMERSION CORPORATION

Patents By Year of Grant:	0	1	9	23	30	18	8	25	14	30	25	21	23	31	37	295
Patents By Year of Application:	27	19	29	39	37	21	17	37	12	20	22	10	3	2	0	295

DIEBOLD INCORPORATED

Patents By Year of Grant:	1	0	5	13	15	9	16	18	17	26	23	32	42	37	40	294
Patents By Year of Application:	10	30	18	16	23	33	19	18	23	25	25	23	17	11	3	294

MARVELL WORLD TRADE LTD.

Patents By Year of Grant:	0	0	0	0	0	0	0	6	9	23	34	45	83	94	294	
Patents By Year of Application:	0	0	0	0	0	3	18	24	32	74	60	51	16	16	0	294

APPLIED MICRO CIRCUITS CORPORATION

Patents By Year of Grant:	0	1	6	5	11	17	29	35	30	31	32	21	15	31	29	293
Patents By Year of Application:	3	14	16	34	32	68	39	9	3	14	19	22	12	7	1	293

BELL ATLANTIC NETWORK SERVICES, INC.

Patents By Year of Grant:	104	63	32	43	36	9	1	2	1	0	0	0	0	0	0	291
Patents By Year of Application:	245	31	11	4	0	0	0	0	0	0	0	0	0	0	0	291

Motorola-Mobility, Inc.

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	0	0	51	240	291
Patents By Year of Application:	0	0	1	2	1	6	7	12	25	72	87	50	20	8	0	291

BLACK & DECKER INC.

Patents By Year of Grant:	42	12	7	19	11	10	18	17	21	31	18	23	15	28	18	290
Patents By Year of Application:	65	11	18	13	14	27	26	24	33	23	8	19	7	2	0	290

MURATA KIKAI KABUSHIKI KAISHA

Patents By Year of Grant:	60	11	6	11	11	10	14	11	23	29	33	23	19	22	7	290
Patents By Year of Application:	84	16	16	16	27	30	24	21	18	25	12	1	0	0	0	290

SIEMENS INFORMATION AND COMMUNICATIONS NETWORKS, INC.

Patents By Year of Grant:	0	0	58	40	48	49	33	57	2	0	2	1	0	0	0	290
Patents By Year of Application:	113	81	46	19	23	5	2	0	1	0	0	0	0	0	0	290

CARL ZEISS STIFTUNG

Patents By Year of Grant:	92	20	23	13	22	33	37	17	12	8	8	2	0	2	0	289
Patents By Year of Application:	133	20	19	39	43	13	13	8	1	0	0	0	0	0	0	289

Technology Assessment and Forecast Report

ELECTRICAL CLASSES (12-31-2011)

Page B - 39

Organizational Patenting

(Granted: Jan 01, 1992 - Dec 31, 2011)

Ranked List of Organizations with 200 or More Patents

	Pre 1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL
ASMO CO., LTD.																
Patents By Year of Grant:	34	13	10	12	21	18	18	33	20	14	19	12	19	25	19	287
Patents By Year of Application:	56	12	14	21	29	20	22	26	12	30	10	23	8	4	0	287
TOYODA GOSEI KABUSHIKI KAISHA																
Patents By Year of Grant:	19	3	7	6	9	15	20	27	39	32	28	23	22	14	23	287
Patents By Year of Application:	38	4	8	28	20	40	39	31	26	19	15	14	4	1	0	287
Avago Technologies General IP (Singapore) Pte. Ltd.																
Patents By Year of Grant:	0	0	0	0	0	0	0	0	39	76	54	52	47	16	284	
Patents By Year of Application:	0	0	1	3	8	15	44	48	67	79	10	9	0	0	0	284
FUJIKURA LTD.																
Patents By Year of Grant:	27	4	4	3	5	6	17	29	27	25	31	28	19	26	33	284
Patents By Year of Application:	37	4	5	8	18	47	29	25	30	14	31	17	13	6	0	284
THE MATH WORKS, INC.																
Patents By Year of Grant:	0	0	0	0	0	0	0	0	3	10	13	32	54	73	99	284
Patents By Year of Application:	0	0	0	3	19	3	44	52	45	39	56	9	7	7	0	284
JP MORGAN CHASE BANK, N.A.																
Patents By Year of Grant:	0	0	0	0	0	0	2	8	4	9	27	45	41	84	60	280
Patents By Year of Application:	1	1	8	22	25	27	35	32	33	32	32	10	13	9	0	280
BULL S.A.																
Patents By Year of Grant:	114	25	20	15	19	21	8	9	6	14	6	6	8	2	6	279
Patents By Year of Application:	176	20	21	20	15	9	6	3	2	2	3	2	0	0	0	279
FISHER-ROSEMOUNT SYSTEMS, INC.																
Patents By Year of Grant:	7	11	7	4	7	7	13	16	22	27	21	19	30	42	46	279
Patents By Year of Application:	30	7	22	19	17	24	39	29	20	29	24	11	4	4	0	279
IBIDEN CO., LTD.																
Patents By Year of Grant:	23	2	3	2	12	13	17	22	21	6	6	27	19	48	58	279
Patents By Year of Application:	34	7	12	17	26	26	10	14	17	33	29	32	16	6	0	279
AGFA-GEVAERT N.V.																
Patents By Year of Grant:	65	52	24	18	14	20	13	11	8	17	20	6	3	5	2	278
Patents By Year of Application:	150	22	14	19	10	14	20	8	11	8	1	0	0	1	0	278
DIEBOLD SELF SERVICE SYSTEMS, A DIVISION OF DIEBOLD, INCORPORATED																
Patents By Year of Grant:	0	0	0	0	0	0	0	3	12	32	39	43	30	50	68	277
Patents By Year of Application:	0	0	0	0	0	1	32	42	32	53	51	32	9	22	3	277

Technology Assessment and Forecast Report

ELECTRICAL CLASSES (12-31-2011)

Page B - 40

Organizational Patenting

(Granted: Jan 01, 1992 - Dec 31, 2011) Ranked List of Organizations with 200 or More Patents

	Pre 1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL
--	-------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

ZYGO CORPORATION

Patents By Year of Grant:	22	10	7	7	17	5	17	32	28	27	29	25	23	11	17	277
Patents By Year of Application:	36	11	16	7	21	46	27	25	24	22	21	11	7	3	0	277

QUANTA COMPUTER INC.

Patents By Year of Grant:	2	0	0	3	0	2	8	25	23	30	31	32	28	39	53	276
Patents By Year of Application:	2	2	2	0	5	44	25	26	47	42	40	27	14	0	0	276

TYCO ELECTRONICS CORPORATION

Patents By Year of Grant:	0	0	0	2	21	29	34	20	22	22	23	21	22	31	29	276
Patents By Year of Application:	1	5	20	37	33	22	29	22	23	21	23	22	17	1	0	276

HEIDELBERGER DRUCKMASCHINEN AG

Patents By Year of Grant:	39	14	3	10	5	33	48	34	17	12	14	16	13	8	8	274
Patents By Year of Application:	62	11	15	49	40	33	24	11	12	8	6	3	0	0	0	274

NORITSU KOKI CO., LTD.

Patents By Year of Grant:	60	36	27	20	15	13	7	7	7	8	19	24	16	12	2	273
Patents By Year of Application:	129	23	17	6	13	17	9	26	21	10	1	0	1	0	0	273

SANKEN ELECTRIC COMPANY LIMITED

Patents By Year of Grant:	6	4	1	4	2	8	11	15	10	21	38	31	37	40	45	273
Patents By Year of Application:	10	2	3	8	12	22	18	29	44	46	28	33	15	3	0	273

VALEO VISION

Patents By Year of Grant:	37	5	15	13	18	18	17	16	17	18	16	24	21	21	16	272
Patents By Year of Application:	63	15	15	22	14	19	27	17	19	30	18	12	0	1	0	272

SONY UNITED KINGDOM LIMITED

Patents By Year of Grant:	51	3	0	6	7	19	23	24	6	22	20	20	26	21	23	271
Patents By Year of Application:	58	22	19	40	27	19	27	21	18	11	6	1	0	2	0	271

COHERENT, INC.

Patents By Year of Grant:	58	12	7	17	9	6	13	13	7	21	20	24	18	26	19	270
Patents By Year of Application:	79	11	19	5	9	15	17	22	12	25	22	24	9	0	1	270

JEOL LTD.

Patents By Year of Grant:	50	14	12	14	10	13	16	27	17	21	9	18	15	17	16	269
Patents By Year of Application:	77	15	10	19	16	24	10	19	21	18	20	14	6	0	0	269

ASAHI GLASS COMPANY, LTD.

Patents By Year of Grant:	53	13	11	16	17	13	23	20	10	15	10	17	11	22	17	268
Patents By Year of Application:	84	15	19	11	20	22	12	14	15	13	26	11	6	0	0	268

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

ELECTRICAL CLASSES (12-31-2011)

Page B - 41

---- Organizational Patenting

(Granted: Jan 01, 1992 - Dec 31, 2011) ---- Ranked List of Organizations with 200 or More Patents ----

	Pre																
	1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL	

ASML HOLDING N.V.

Patents By Year of Grant:	0	0	0	0	0	0	2	28	36	52	41	32	29	28	20	268
Patents By Year of Application:	0	0	1	3	7	23	47	69	47	32	23	12	4	0	0	268

KABUSHIKI KAISHA YASKAWA DENKI

Patents By Year of Grant:	14	14	4	12	15	10	8	26	16	20	23	22	21	23	40	268
Patents By Year of Application:	31	9	16	11	21	29	44	24	25	19	14	2	15	8	0	268

STATS CHIPPAC LTD.

Patents By Year of Grant:	0	0	0	0	0	0	0	0	1	2	14	20	33	77	121	268
Patents By Year of Application:	0	0	0	0	0	0	0	3	16	83	57	65	31	13	0	268

L-3 COMMUNICATIONS CORPORATION

Patents By Year of Grant:	0	6	10	10	17	12	17	14	12	30	30	21	33	33	22	267
Patents By Year of Application:	22	11	17	20	29	22	25	21	25	37	17	13	5	3	0	267

MICREL INCORPORATED

Patents By Year of Grant:	15	2	0	4	11	10	17	25	24	31	27	29	27	26	18	266
Patents By Year of Application:	17	4	5	14	23	23	31	33	32	34	22	19	9	0	0	266

COLUMBIA UNIVERSITY

Patents By Year of Grant:	35	9	9	12	8	5	10	13	18	15	22	22	21	35	31	265
Patents By Year of Application:	63	8	21	19	15	17	18	26	18	13	27	12	6	2	0	265

INTERUNIVERSITAIR MICRO-ELEKTRONICA CENTRUM (IMEC VZW)

Patents By Year of Grant:	14	6	11	10	17	10	26	23	15	24	12	13	14	38	32	265
Patents By Year of Application:	38	18	18	25	19	23	20	22	15	16	22	18	10	1	0	265

POLAROID CORPORATION

Patents By Year of Grant:	96	35	33	24	10	6	13	13	9	15	4	5	2	0	0	265
Patents By Year of Application:	173	18	9	20	15	5	11	8	4	1	1	0	0	0	0	265

UNIVERSITY OF MICHIGAN

Patents By Year of Grant:	47	16	6	8	13	10	22	21	25	17	11	11	15	16	27	265
Patents By Year of Application:	73	10	10	15	22	25	31	18	15	14	7	19	5	0	1	265

CHRYSLER MOTORS CORPORATION

Patents By Year of Grant:	121	53	53	28	7	2	0	0	0	0	0	0	0	0	0	264
Patents By Year of Application:	231	31	0	2	0	0	0	0	0	0	0	0	0	0	0	264

O2 MICRO INTERNATIONAL LTD.

Patents By Year of Grant:	0	0	1	1	8	8	8	20	21	26	19	41	43	44	24	264
Patents By Year of Application:	1	1	5	9	18	23	37	33	43	44	23	11	9	7	0	264

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

ELECTRICAL CLASSES (12-31-2011)

Page B - 42

----- Organizational Patenting

(Granted: Jan 01, 1992 - Dec 31, 2011) ----- Ranked List of Organizations with 200 or More Patents -----

Pre

	1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL
--	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

TRADING TECHNOLOGIES INTERNATIONAL, INC.

Patents By Year of Grant:	0	0	0	0	0	0	0	2	1	4	4	15	76	96	66	264
Patents By Year of Application:	0	0	1	3	3	18	31	16	15	96	9	6	28	32	6	264

ELECTRONIC DATA SYSTEMS CORPORATION

Patents By Year of Grant:	20	53	48	18	13	21	7	12	11	16	22	16	4	0	0	261
Patents By Year of Application:	155	21	17	4	8	22	17	9	4	3	1	0	0	0	0	261

FORM FACTOR, INC.

Patents By Year of Grant:	1	1	3	3	10	13	21	24	20	20	25	21	28	40	31	261
Patents By Year of Application:	14	9	9	20	25	23	16	25	21	35	23	26	14	1	0	261

WESTERNGECO, LLC

Patents By Year of Grant:	0	0	0	0	4	9	16	15	18	9	13	43	30	59	45	261
Patents By Year of Application:	0	0	5	19	18	16	35	21	29	40	34	35	9	0	0	261

TAIYO YUDEN CO., LTD.

Patents By Year of Grant:	15	5	6	13	19	27	12	11	8	19	12	16	13	33	51	260
Patents By Year of Application:	29	11	22	32	11	10	13	17	19	21	29	27	13	6	0	260

HITACHI KOKUSAI ELECTRIC INC.

Patents By Year of Grant:	0	0	0	0	0	8	7	27	37	32	26	25	23	36	38	259
Patents By Year of Application:	0	0	1	10	50	44	33	17	30	22	17	19	14	2	0	259

PRIMAX ELECTRONICS LTD.

Patents By Year of Grant:	10	10	17	23	14	9	16	13	7	9	16	18	22	34	41	259
Patents By Year of Application:	41	30	11	3	10	19	22	15	17	31	23	20	15	2	0	259

EBAY INC.

Patents By Year of Grant:	0	0	0	1	0	2	2	3	2	9	6	19	23	81	110	258
Patents By Year of Application:	0	2	5	23	13	13	22	30	20	38	32	22	19	18	1	258

NINTENDO CO., LTD.

Patents By Year of Grant:	26	4	9	7	7	15	19	16	12	22	11	17	22	36	35	258
Patents By Year of Application:	47	6	10	38	22	11	10	12	21	38	19	16	6	2	0	258

UNIVERSITY OF CENTRAL FLORIDA

Patents By Year of Grant:	25	7	4	7	13	7	13	18	17	23	15	27	28	28	25	257
Patents By Year of Application:	36	6	12	13	11	19	25	30	21	28	31	16	7	2	0	257

BATTELLE MEMORIAL INSTITUTE

Patents By Year of Grant:	28	6	4	8	9	11	19	23	27	31	18	17	18	16	20	255
Patents By Year of Application:	40	10	15	15	26	33	30	21	23	19	10	8	5	0	0	255

Technology Assessment and Forecast Report

ELECTRICAL CLASSES (12-31-2011)

Page B - 43

Organizational Patenting

(Granted: Jan 01, 1992 - Dec 31, 2011)

Ranked List of Organizations with 200 or More Patents

	Pre 1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL
--	-------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

RF MICRO DEVICES, INC.

Patents By Year of Grant:	2	0	0	1	9	10	14	31	13	21	20	28	31	24	51	255
Patents By Year of Application:	2	0	7	20	20	26	20	24	27	34	38	23	7	5	2	255

EPCOS AG

Patents By Year of Grant:	0	0	0	0	6	16	9	18	23	21	13	23	27	33	65	254
Patents By Year of Application:	0	0	4	19	19	30	39	30	28	35	15	4	24	7	0	254

SUNPLUS TECHNOLOGY CO., LTD.

Patents By Year of Grant:	0	0	0	0	7	8	5	8	9	20	31	43	33	44	46	254
Patents By Year of Application:	0	0	6	14	9	3	11	52	63	36	36	15	6	3	0	254

UNIVERSITY OF ILLINOIS

Patents By Year of Grant:	29	6	10	9	11	13	11	21	11	22	15	14	21	31	29	253
Patents By Year of Application:	51	7	18	19	15	19	14	25	22	20	18	13	9	3	0	253

ALCATEL USA SOURCING, L.P.

Patents By Year of Grant:	0	0	52	61	60	43	19	5	3	5	0	4	0	0	0	252
Patents By Year of Application:	138	52	32	20	2	2	3	1	2	0	0	0	0	0	0	252

IMATION CORP.

Patents By Year of Grant:	10	17	32	23	13	11	21	23	15	29	17	15	9	8	9	252
Patents By Year of Application:	69	17	20	20	20	15	20	29	14	10	7	6	4	1	0	252

QINETIQ LIMITED

Patents By Year of Grant:	0	0	0	0	0	15	24	25	25	34	28	31	23	25	22	252
Patents By Year of Application:	3	3	12	18	31	57	56	34	12	15	10	0	1	0	0	252

COOPER TECHNOLOGIES COMPANY

Patents By Year of Grant:	0	2	9	8	7	6	19	10	7	6	10	21	45	43	58	251
Patents By Year of Application:	5	12	8	9	18	13	9	20	23	43	28	37	14	12	0	251

HITACHI METALS LTD.

Patents By Year of Grant:	82	20	9	8	9	7	7	6	11	14	8	12	16	15	27	251
Patents By Year of Application:	117	3	10	8	12	10	9	18	13	18	20	4	7	1	1	251

Qualcomm MEMS Technologies, Inc.

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	2	12	22	103	111	250
Patents By Year of Application:	0	0	0	0	0	0	1	5	34	50	50	53	38	18	1	250

LAM RESEARCH CORPORATION

Patents By Year of Grant:	10	19	13	14	10	13	22	14	26	13	18	13	17	22	25	249
Patents By Year of Application:	45	13	11	22	18	23	18	22	22	14	19	9	4	8	1	249

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

ELECTRICAL CLASSES (12-31-2011)

Page B - 44

----- Organizational Patenting

(Granted: Jan 01, 1992 - Dec 31, 2011) ----- Ranked List of Organizations with 200 or More Patents -----

	Pre 1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL
--	-------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

PMC-SIERRA LTD.

Patents By Year of Grant:	12	11	10	17	10	23	19	15	9	20	22	21	17	22	21	249
Patents By Year of Application:	40	22	18	27	26	22	9	15	12	21	15	12	6	3	1	249

MAZDA MOTOR CORPORATION

Patents By Year of Grant:	122	16	14	10	13	5	7	7	6	11	4	8	4	9	12	248
Patents By Year of Application:	157	9	7	6	15	7	10	2	5	13	9	7	1	0	0	248

SILICONWARE PRECISION INDUSTRIES CO., LTD.

Patents By Year of Grant:	0	0	0	1	16	45	49	34	20	16	23	13	9	11	11	248
Patents By Year of Application:	0	1	19	39	56	32	28	24	19	10	9	8	1	2	0	248

FARADAY TECHNOLOGY CORPORATION

Patents By Year of Grant:	0	0	3	2	2	10	14	24	18	37	31	30	23	35	18	247
Patents By Year of Application:	2	2	3	3	17	37	28	37	37	27	24	17	12	1	0	247

ADTRAN

Patents By Year of Grant:	24	12	14	4	11	18	25	17	20	26	15	10	24	16	10	246
Patents By Year of Application:	56	12	24	22	27	22	27	23	11	8	3	9	2	0	0	246

NOVATEK MICROELECTRONICS CORP.

Patents By Year of Grant:	0	0	0	1	2	1	4	4	3	8	31	29	42	59	61	245
Patents By Year of Application:	0	1	3	3	1	2	13	16	45	66	47	40	6	2	0	245

VERIZON LABORATORIES INC.

Patents By Year of Grant:	0	0	0	0	21	37	40	20	20	29	14	15	13	24	12	245
Patents By Year of Application:	11	13	67	53	20	23	21	9	12	9	3	0	1	3	0	245

Dongbu Hitek Co., Ltd.

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	3	32	91	118	244
Patents By Year of Application:	0	0	0	0	0	0	0	2	2	19	74	100	47	0	0	244

LITE-ON TECHNOLOGY CORPORATION

Patents By Year of Grant:	1	0	1	0	0	0	2	23	20	35	19	32	50	39	21	243
Patents By Year of Application:	2	0	1	5	13	21	28	36	38	40	41	17	1	0	0	243

NUANCE COMMUNICATIONS, INC.

Patents By Year of Grant:	0	0	0	1	4	1	5	5	4	7	11	3	27	71	103	242
Patents By Year of Application:	1	4	11	6	7	13	9	17	36	33	36	59	5	5	0	242

SIRF TECHNOLOGY, INC.

Patents By Year of Grant:	0	0	3	3	7	14	22	19	16	28	19	20	19	42	30	242
Patents By Year of Application:	8	2	7	19	35	43	23	25	20	27	23	8	1	1	0	242

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

ELECTRICAL CLASSES (12-31-2011)

Page B - 45

----- Organizational Patenting

(Granted: Jan 01, 1992 - Dec 31, 2011) ----- Ranked List of Organizations with 200 or More Patents -----

	Pre																
	1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL	

WALKER DIGITAL, LLC

Patents By Year of Grant:	0	0	0	13	34	22	13	11	11	11	19	18	25	34	31	242
Patents By Year of Application:	24	43	31	33	13	12	8	12	6	34	17	2	6	1	0	242

AVID TECHNOLOGY, INC.

Patents By Year of Grant:	18	12	18	32	24	25	24	21	11	10	8	6	8	14	10	241
Patents By Year of Application:	80	36	21	25	13	16	16	14	8	4	2	5	0	1	0	241

INTUIT, INC.

Patents By Year of Grant:	2	1	1	0	0	2	0	1	1	4	2	5	18	88	116	241
Patents By Year of Application:	4	0	2	3	5	6	5	11	15	74	59	52	4	1	0	241

MIPS TECHNOLOGIES INC.

Patents By Year of Grant:	1	0	3	1	6	8	8	12	4	25	29	14	40	58	32	241
Patents By Year of Application:	8	2	18	23	38	14	6	14	21	55	22	9	10	1	0	241

SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

Patents By Year of Grant:	29	6	3	8	6	8	15	22	18	30	23	29	16	13	15	241
Patents By Year of Application:	40	9	12	20	24	14	19	22	25	33	16	3	3	0	1	241

SILICON STORAGE TECHNOLOGY, INC.

Patents By Year of Grant:	14	1	2	3	10	13	19	15	32	26	26	21	14	31	14	241
Patents By Year of Application:	15	4	10	14	22	27	35	29	21	9	24	14	12	4	1	241

SRI INTERNATIONAL

Patents By Year of Grant:	27	4	4	1	8	9	14	22	14	30	19	17	17	29	26	241
Patents By Year of Application:	37	5	9	33	31	19	8	22	13	24	24	7	7	2	0	241

CORNELL RESEARCH FOUNDATION INC.

Patents By Year of Grant:	60	15	11	6	9	7	15	8	11	12	19	14	21	20	9	237
Patents By Year of Application:	89	13	6	11	16	13	15	12	17	28	9	3	3	2	0	237

CREDENCE SYSTEMS CORPORATION

Patents By Year of Grant:	9	9	29	34	21	13	6	12	18	34	25	16	6	4	0	236
Patents By Year of Application:	51	27	22	20	10	18	20	39	17	8	4	0	0	0	0	236

HAMILTON SUNDSTRAND CORPORATION

Patents By Year of Grant:	0	0	0	10	12	8	2	8	7	15	19	22	34	47	52	236
Patents By Year of Application:	7	10	7	4	7	10	9	28	27	27	38	38	21	3	0	236

MITSUBISHI HEAVY INDUSTRIES, LTD.

Patents By Year of Grant:	0	2	7	12	15	22	14	16	14	17	16	16	12	33	40	236
Patents By Year of Application:	7	23	9	14	28	26	15	16	21	15	31	16	7	7	1	236

Technology Assessment and Forecast Report

ELECTRICAL CLASSES (12-31-2011)

Page B - 46

Technology Assessment and Forecast Report

ELECTRICAL CLASSES (12-31-2011)

Page B - 47

Organizational Patenting													(Granted: Jan 01, 1992 - Dec 31, 2011)				
	Pre 1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL	
ROHDE & SCHWARZ GMBH & CO., KG																	
Patents By Year of Grant:	19	4	2	5	5	5	10	6	15	25	24	18	25	31	37	231	
Patents By Year of Application:	29	3	5	18	20	31	25	21	25	26	22	4	2	0	0	231	
TESSERA, INC.																	
Patents By Year of Grant:	13	10	7	14	28	21	15	13	21	14	16	14	13	16	16	231	
Patents By Year of Application:	40	17	20	15	23	23	16	24	19	18	9	3	0	4	0	231	
READ-RITE CORPORATION																	
Patents By Year of Grant:	37	29	28	26	44	50	15	0	1	0	0	0	0	0	0	230	
Patents By Year of Application:	97	44	58	16	10	5	0	0	0	0	0	0	0	0	0	230	
EBARA CORPORATION																	
Patents By Year of Grant:	35	15	8	9	11	12	14	14	16	23	19	18	9	11	15	229	
Patents By Year of Application:	62	8	6	24	19	13	22	17	15	13	16	12	1	1	0	229	
NDK, NIHON DEMPA KOGYO COMPANY, LTD.																	
Patents By Year of Grant:	5	0	0	1	2	4	4	25	13	28	19	17	25	37	49	229	
Patents By Year of Application:	5	1	0	2	7	28	23	16	28	23	26	34	29	7	0	229	
OCE PRINTING SYSTEMS GMBH																	
Patents By Year of Grant:	1	9	13	16	27	13	9	13	11	17	20	28	14	23	15	229	
Patents By Year of Application:	22	12	27	26	25	23	41	17	12	11	10	0	2	1	0	229	
NICHIA CORPORATION																	
Patents By Year of Grant:	0	0	0	0	0	1	9	10	24	24	21	31	27	46	35	228	
Patents By Year of Application:	0	1	2	6	9	26	26	25	31	26	36	27	11	2	0	228	
LUTRON ELECTRONICS COMPANY, INC.																	
Patents By Year of Grant:	32	6	10	5	8	5	5	9	4	16	15	18	28	35	31	227	
Patents By Year of Application:	48	7	7	5	9	5	14	15	10	41	33	20	8	5	0	227	
JAPAN SCIENCE AND TECHNOLOGY AGENCY																	
Patents By Year of Grant:	0	0	0	0	0	0	0	5	12	27	30	34	39	48	31	226	
Patents By Year of Application:	0	0	1	3	3	37	40	45	49	21	15	7	2	3	0	226	
NORTH AMERICAN PHILIPS CORPORATION																	
Patents By Year of Grant:	221	1	3	0	0	0	0	1	0	0	0	0	0	0	0	226	
Patents By Year of Application:	226	0	0	0	0	0	0	0	0	0	0	0	0	0	0	226	
NTT MOBILE COMMUNICATIONS NETWORK INC.																	
Patents By Year of Grant:	41	49	32	33	18	11	14	10	7	1	3	5	2	0	0	226	
Patents By Year of Application:	163	21	21	9	1	3	1	1	1	4	1	0	0	0	0	226	

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

ELECTRICAL CLASSES (12-31-2011)

Page B - 48

----- Organizational Patenting

(Granted: Jan 01, 1992 - Dec 31, 2011) ----- Ranked List of Organizations with 200 or More Patents -----

	Pre 1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL
--	-------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

UNITED PARCEL SERVICE OF AMERICA, INC.

Patents By Year of Grant:	50	10	11	2	5	4	6	4	7	10	16	19	25	30	27	226
Patents By Year of Application:	76	0	5	5	16	15	12	26	19	18	13	13	5	2	1	226

HITACHI KOKI COMPANY, LIMITED

Patents By Year of Grant:	74	18	15	12	14	17	13	6	8	5	2	11	7	12	11	225
Patents By Year of Application:	100	14	11	22	16	9	10	5	8	13	9	6	0	2	0	225

AIRBUS FRANCE

Patents By Year of Grant:	0	0	0	0	0	0	10	7	15	20	30	29	21	49	43	224
Patents By Year of Application:	0	0	0	0	7	22	39	30	37	32	42	13	2	0	0	224

KYOCERA WIRELESS CORP.

Patents By Year of Grant:	0	0	0	0	0	1	1	22	31	47	43	36	34	9	0	224
Patents By Year of Application:	0	0	0	0	30	48	41	36	45	20	4	0	0	0	0	224

WESTERN ATLAS INTERNATIONAL, INC.

Patents By Year of Grant:	116	37	28	34	5	0	1	0	0	1	0	0	0	0	0	222
Patents By Year of Application:	185	31	4	0	1	1	0	0	0	0	0	0	0	0	0	222

ANRITSU CORPORATION

Patents By Year of Grant:	45	11	6	10	6	11	19	22	17	11	10	15	16	9	13	221
Patents By Year of Application:	64	8	10	13	35	17	15	10	20	10	12	5	1	1	0	221

LITE-ON IT CORPORATION

Patents By Year of Grant:	0	0	0	0	0	6	9	16	17	25	34	38	26	24	26	221
Patents By Year of Application:	0	0	0	6	13	20	32	40	51	15	14	18	6	6	0	221

TELCORDIA TECHNOLOGIES, INC.

Patents By Year of Grant:	0	0	14	29	23	17	17	20	23	33	9	7	8	15	6	221
Patents By Year of Application:	26	35	34	24	36	21	5	15	9	10	2	3	1	0	0	221

UT-BATTELLE, LLC

Patents By Year of Grant:	0	0	0	2	12	15	23	21	20	23	19	16	15	28	27	221
Patents By Year of Application:	2	3	25	12	22	20	28	18	22	26	14	16	12	1	0	221

MINDSPEED TECHNOLOGIES, INC.

Patents By Year of Grant:	0	0	0	0	0	1	4	44	30	52	24	17	17	19	11	219
Patents By Year of Application:	1	0	11	39	37	39	18	23	26	11	7	1	5	1	0	219

TOSHIBA MATSUSHITA DISPLAY TECHNOLOGY CO., LTD.

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	16	25	37	55	41	45	219
Patents By Year of Application:	0	0	0	0	2	5	6	40	51	52	33	21	7	2	0	219

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

ELECTRICAL CLASSES (12-31-2011)

Page B - 50

----- Organizational Patenting

(Granted: Jan 01, 1992 - Dec 31, 2011) ----- Ranked List of Organizations with 200 or More Patents -----

Pre

	1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL
--	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

YAMAHA HATSUDOKI KABUSHIKI KAISHA, YAMAHA MOTOR CO., LTD.

Patents By Year of Grant:	9	8	7	9	13	15	14	16	17	11	18	14	16	24	23	214
Patents By Year of Application:	27	15	15	17	13	14	16	13	20	21	18	18	7	0	0	214

INSTITUT FRANCAIS DU PETROLE

Patents By Year of Grant:	34	17	8	14	11	7	15	12	16	17	10	22	11	13	6	213
Patents By Year of Application:	67	11	12	13	17	19	20	16	16	14	5	3	0	0	0	213

DEUTSCHE TELEKOM AG

Patents By Year of Grant:	2	6	9	5	22	18	24	15	16	14	21	15	11	17	17	212
Patents By Year of Application:	29	25	43	30	28	17	12	9	3	7	5	4	0	0	0	212

SAE MAGNETICS (H.K.) LTD.

Patents By Year of Grant:	0	3	1	1	0	0	8	18	13	23	23	28	33	29	32	212
Patents By Year of Application:	5	2	2	3	8	25	32	32	28	35	21	12	3	3	1	212

DONGBU ELECTRONICS CO., LTD.

Patents By Year of Grant:	0	0	0	0	2	3	3	5	5	13	36	38	47	44	15	211
Patents By Year of Application:	0	0	0	5	2	4	16	40	49	50	10	17	17	1	0	211

SIEMENS AUDIOLOGISCHE TECHNIK GMBH

Patents By Year of Grant:	8	10	3	10	4	7	10	5	7	15	22	17	22	39	30	209
Patents By Year of Application:	28	9	6	10	7	6	21	34	28	37	16	6	1	0	0	209

SIEMENS COMMUNICATIONS, INC.

Patents By Year of Grant:	0	0	0	0	0	0	0	0	26	69	42	28	35	9	0	209
Patents By Year of Application:	1	5	14	20	39	50	42	22	11	5	0	0	0	0	0	209

CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE - CNRS

Patents By Year of Grant:	25	2	6	1	11	10	9	15	16	18	14	13	17	26	24	207
Patents By Year of Application:	31	6	6	8	17	29	40	15	23	18	10	3	0	1	0	207

SBC PROPERTIES, L.P.

Patents By Year of Grant:	0	0	0	0	0	0	13	41	39	54	44	13	2	1	0	207
Patents By Year of Application:	2	5	9	18	22	57	46	24	19	2	3	0	0	0	0	207

AEROSPACE CORPORATION

Patents By Year of Grant:	13	9	10	16	10	20	6	14	12	23	11	12	19	16	15	206
Patents By Year of Application:	33	13	16	17	17	26	11	15	20	8	20	3	5	2	0	206

DISCOVISION ASSOCIATES

Patents By Year of Grant:	57	41	26	28	19	11	4	6	4	6	1	2	0	0	1	206
Patents By Year of Application:	164	9	7	7	11	4	1	2	1	0	0	0	0	0	0	206

Technology Assessment and Forecast Report

ELECTRICAL CLASSES (12-31-2011)

Page B - 51

Organizational Patenting												(Granted: Jan 01, 1992 - Dec 31, 2011)										Ranked List of Organizations with 200 or More Patents				
	Pre 1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL										
TANDEM COMPUTERS INCORPORATED																										
Patents By Year of Grant:	100	46	36	18	6	0	0	0	0	0	0	0	0	0	0	0	206									
Patents By Year of Application:	193	11	2	0	0	0	0	0	0	0	0	0	0	0	0	0	206									
CTS CORPORATION																										
Patents By Year of Grant:	17	11	25	23	30	20	19	9	12	7	4	4	7	10	7	205										
Patents By Year of Application:	41	41	24	20	19	15	9	8	3	9	6	6	3	1	0	205										
HARMAN INTERNATIONAL INDUSTRIES, INC.																										
Patents By Year of Grant:	14	1	7	0	5	7	10	11	6	27	15	30	18	19	35	205										
Patents By Year of Application:	22	5	9	14	11	25	40	16	23	23	7	5	5	0	0	205										
SHOWA DENKO KABUSHIKI KAISHA																										
Patents By Year of Grant:	5	3	7	4	5	18	15	14	11	10	6	13	25	30	39	205										
Patents By Year of Application:	13	7	5	16	16	16	21	22	33	31	11	8	4	2	0	205										
CHI MEI OPTOELECTRONICS CORP.																										
Patents By Year of Grant:	0	0	0	1	1	10	7	26	20	30	28	17	39	20	5	204										
Patents By Year of Application:	0	0	4	9	14	41	37	18	39	21	14	7	0	0	0	204										
OSRAM GMBH																										
Patents By Year of Grant:	0	0	0	0	0	0	0	0	16	16	8	12	24	59	69	204										
Patents By Year of Application:	0	1	1	3	10	9	16	14	27	60	46	12	3	2	0	204										
ALLEN-BRADLEY COMPANY																										
Patents By Year of Grant:	174	25	4	0	0	0	0	0	0	0	0	0	0	0	0	203										
Patents By Year of Application:	202	1	0	0	0	0	0	0	0	0	0	0	0	0	0	203										
COGNEX CORPORATION																										
Patents By Year of Grant:	16	16	29	26	27	18	13	23	8	12	3	1	0	2	9	203										
Patents By Year of Application:	86	32	16	34	11	3	13	0	0	3	4	1	0	0	0	203										
SUNDSTRAND CORPORATION																										
Patents By Year of Grant:	150	28	20	4	1	0	0	0	0	0	0	0	0	0	0	203										
Patents By Year of Application:	195	8	0	0	0	0	0	0	0	0	0	0	0	0	0	203										
CITIZEN ELECTRONICS CO., LTD.																										
Patents By Year of Grant:	0	1	2	6	5	7	9	26	14	23	26	12	29	30	12	202										
Patents By Year of Application:	5	1	8	5	15	29	26	24	20	28	19	18	4	0	0	202										
RESEARCH FOUNDATION OF STATE UNIVERSITY OF NEW YORK																										
Patents By Year of Grant:	39	14	12	10	7	9	9	11	9	10	7	12	18	14	21	202										
Patents By Year of Application:	69	10	11	13	18	13	16	5	9	13	15	6	2	1	1	202										

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

ELECTRICAL CLASSES (12-31-2011)

Page B - 52

----- Organizational Patenting

(Granted: Jan 01, 1992 - Dec 31, 2011) ----- Ranked List of Organizations with 200 or More Patents -----

	Pre 1998	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL
--	-------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

ATHEROS COMMUNICATIONS, INC.

Patents By Year of Grant:	0	0	0	0	2	4	11	19	10	25	20	22	22	45	21	201
Patents By Year of Application:	0	0	3	16	18	36	23	25	10	18	18	21	7	6	0	201

LG INNOTEK CO., LTD

Patents By Year of Grant:	0	0	0	0	0	0	0	0	1	1	3	9	14	52	121	201
Patents By Year of Application:	0	0	0	0	0	0	5	12	17	22	44	38	27	26	10	201

NATIONAL RESEARCH COUNCIL OF CANADA

Patents By Year of Grant:	61	5	15	9	9	9	14	19	11	9	7	11	3	13	6	201
Patents By Year of Application:	83	6	18	8	18	18	11	12	9	8	7	1	2	0	0	201

ACCENTURE LLP

Patents By Year of Grant:	0	0	0	0	2	27	42	22	20	33	9	29	6	10	0	200
Patents By Year of Application:	1	3	100	57	14	9	3	4	4	0	4	1	0	0	0	200

COMPAQ INFORMATION TECHNOLOGIES GROUP, L.P.

Patents By Year of Grant:	0	0	0	0	4	156	39	0	0	1	0	0	0	0	0	200
Patents By Year of Application:	20	54	56	36	31	3	0	0	0	0	0	0	0	0	0	200

DAIMLER-BENZ AKTIENGESELLSCHAFT

Patents By Year of Grant:	116	40	30	8	6	0	0	0	0	0	0	0	0	0	0	200
Patents By Year of Application:	188	11	1	0	0	0	0	0	0	0	0	0	0	0	0	200

Other Organizations (64933)

Patents By Year of Grant:	54254	14349	14155	14783	15929	17040	18168	19797	18263	23729	21687	22312	23983	32141	35458	346048
Patents By Year of Application:	88690	16868	19354	22449	25258	25523	24642	24827	24957	24835	22335	15141	7721	3160	288	346048