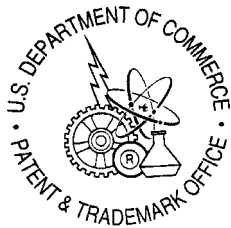


TAF SPECIAL REPORT

PATENT COUNTS BY CLASS BY YEAR

INDEPENDENT INVENTOR PATENTS

JANUARY 1977 -- DECEMBER 1998



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

Patent Counts By Class By Year, Patents By Independent Inventors, 1977 - 1998

Background

An independent inventor patent is a patent for which ownership is either unassigned (i.e., patent rights are held by the inventor) or assigned to an individual at the time of grant. This report includes only such independent inventor patents. Patents for which ownership is assigned to an organization at the time of grant are excluded from this report.

Classes are major divisions of technology in the U.S. Patent Classification System (USPCS). Each class is further divided into smaller divisions of technology called subclasses. The USPCS currently contains approximately 440 total classes and 140,000 total subclasses. Copies of each patent are placed (classified) in those subclasses which have been identified as pertinent to the information disclosed in the patent. One, and only one, of these subclasses is designated as the "original classification" (OR), and the remainder (if any) are designated as "cross-reference classifications" (XR). Counting patents by original classifications will ensure that each patent is counted only once. However, if a patent teaches more than one concept, e.g., table and chair, only one concept, e.g., table, will be counted. To ensure that all concepts are counted, patents should be counted in all of their classifications.

This report counts all patent documents including utility, design, plant, and reissue patents as well as statutory invention registrations and defensive publications.

This report has been generated from data contained in the U.S. Patent and Trademark Office TAF data base.

Part I

Part I (OR's only) considers only the original classification of each patent. If the patent record is incomplete and contains no OR designation, the patent is counted in "dummy" class 1 or "dummy" design Class D00.

Part II

Part II (OR's + XR's, Duplicates Eliminated) looks at original and cross-reference classifications. Duplicate counts are eliminated within each class, but not among classes. For example, the same patent could be counted in Class 2 and Class 4 if it contained disclosure relating to both classes. If the patent record contains no classification data, the patent is counted in "dummy" Class 1 or "dummy" design Class D00.

PART I

PATENT COUNTS BY CLASS BY YEAR

ORIGINAL CLASSIFICATIONS ONLY

1/1/1977 - 12/31/1998

PATENTS GRANTED BY CLASS BY YEAR (ORs only)

CLASS	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	TOTAL
001	0	1	0	0	1	1	1	0	2	0	0	2	0	2	1	3	0	1	1	1	24	72	113
002	93	108	68	99	104	71	85	99	120	142	197	147	189	175	255	220	161	176	152	266	296	350	3573
004	99	107	127	117	78	95	91	94	108	108	96	118	150	176	182	148	174	190	152	136	152	211	2909
005	88	116	51	113	79	73	64	73	82	96	166	134	161	191	193	214	165	157	152	208	175	178	2929
007	15	14	6	14	13	12	3	12	10	17	17	13	22	19	25	15	28	21	12	24	17	23	352
008	11	18	9	23	13	12	19	11	9	12	7	12	19	11	9	11	14	18	14	17	14	22	305
012	7	6	6	7	11	3	4	2	7	5	8	4	8	7	4	2	5	5	3	2	3	5	114
014	8	12	3	2	6	7	8	5	10	6	18	8	11	8	11	4	8	12	16	15	10	10	198
015	134	134	118	148	112	134	103	129	158	118	142	154	154	143	166	134	144	193	199	236	181	237	3371
016	36	58	26	38	26	21	33	15	18	18	47	43	86	39	54	38	40	63	55	70	66	92	982
019	12	7	6	14	9	6	9	6	16	9	6	3	14	15	14	6	5	13	10	6	8	5	199
023	1	3	0	2	3	3	1	1	1	0	0	0	0	0	0	2	0	3	1	0	0	2	23
024	73	81	44	65	68	53	54	81	76	59	91	65	89	111	125	103	79	81	98	95	131	121	1843
026	1	5	5	3	2	2	3	5	1	1	2	4	4	4	4	2	1	1	1	4	5	1	61
027	5	4	9	5	5	7	7	1	2	1	2	7	6	11	9	6	7	7	5	5	12	11	134
028	11	8	5	7	4	4	1	3	4	1	4	2	1	6	6	6	2	9	6	5	4	4	103
029	140	155	85	127	148	94	88	119	135	159	178	150	173	156	169	146	169	128	135	132	144	138	3068
030	104	98	66	107	97	95	70	93	97	130	127	107	145	151	155	118	104	109	98	124	97	136	2428
033	99	124	144	152	112	117	127	134	159	161	170	119	142	195	186	175	119	123	174	126	99	134	3091
034	53	56	33	59	45	45	47	47	49	45	50	40	40	36	46	47	50	52	49	43	55	59	1046
036	58	54	39	73	69	64	50	63	52	71	81	72	75	81	61	47	69	73	64	65	86	126	1493
037	38	37	29	31	37	41	29	30	26	32	31	28	43	37	36	43	38	23	31	47	29	35	751
038	4	7	6	7	8	8	5	9	12	15	13	13	14	13	13	9	8	12	9	13	7	11	216
040	127	80	94	126	110	79	68	83	72	58	90	100	145	112	111	79	95	113	100	92	97	125	2156
042	49	53	36	30	40	35	57	55	47	46	67	51	76	83	103	60	55	63	75	59	81	87	1308
043	166	119	133	151	110	68	83	150	143	184	243	228	331	231	208	217	221	219	163	224	139	139	3870
044	15	18	10	15	19	19	20	13	19	17	14	16	13	14	8	9	13	13	14	12	9	4	304
047	81	84	53	71	78	71	39	47	48	61	50	54	91	82	100	79	82	109	106	100	61	89	1636
048	9	9	8	13	7	12	6	15	8	6	8	3	9	7	3	4	0	4	6	0	2	7	146
049	43	51	28	40	56	32	36	40	43	54	77	38	53	44	50	48	33	51	60	61	41	56	1035
051	11	6	5	9	11	2	3	3	7	5	5	7	11	11	11	14	18	7	8	5	14	3	176
052	326	368	191	246	297	182	184	305	239	350	376	309	389	352	305	261	309	348	301	383	431	497	6949
053	60	67	41	53	48	38	32	35	59	68	77	52	57	56	76	52	46	45	65	60	51	71	1209
054	9	3	9	9	10	8	12	10	13	14	8	13	13	14	19	18	14	15	12	13	9	20	265
055	16	18	26	24	27	18	13	19	20	19	23	25	28	24	30	31	28	9	15	25	17	35	490
056	69	45	44	81	95	57	38	60	66	42	61	52	63	91	88	77	78	72	88	75	39	65	1446
057	30	32	28	14	24	13	22	21	24	36	33	27	30	28	13	26	39	32	14	8	16	34	544
059	7	13	7	6	3	1	3	8	2	3	5	3	9	8	4	2	4	9	7	6	10	4	124
060	148	137	94	147	99	98	104	89	98	87	105	96	85	64	68	77	88	61	56	61	69	82	2013
062	93	74	70	97	114	99	93	106	112	116	114	112	139	145	130	105	142	141	110	127	122	150	2511
063	14	17	7	22	16	6	8	7	19	16	13	27	21	19	27	35	25	14	30	25	31	21	420
065	11	15	14	20	21	26	20	10	20	11	7	3	14	10	4	13	9	13	4	6	5	11	267
066	35	19	10	10	17	11	9	5	9	13	18	12	13	2	19	4	12	4	3	12	15	10	262
068	7	23	16	10	9	6	6	8	14	3	5	13	6	6	9	10	9	9	12	11	7	15	214
069	2	2	1	4	5	5	5	2	4	2	1	3	3	2	4	0	0	1	0	2	1	0	49
070	90	104	54	65	78	71	49	68	64	76	118	112	139	116	123	102	104	105	122	103	128	172	2163
071	10	14	9	9	15	13	9	16	8	7	6	7	10	9	3	18	6	10	16	14	18	17	244
072	115	95	60	92	99	84	55	57	81	75	73	60	87	73	72	42	60	53	40	57	63	84	1577
073	234	211	171	180	160	180	162	188	184	202	187	163	240	187	204	167	159	173	203	217	188	208	4168
074	95	102	62	63	92	47	38	59	62	78	80	73	106	81	80	116	94	91	85	109	90	103	1806
075	25	30	22	22	17	22	27	29	25	15	18	17	16	15	10	12	13	21	25	12	14	17	424

PATENTS GRANTED BY CLASS BY YEAR (ORs only)

CLASS	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	TOTAL
076	17	13	6	11	12	15	12	11	9	20	11	11	13	6	15	13	5	10	16	10	10	7	253
081	69	62	52	71	88	79	72	98	123	112	88	124	152	126	134	109	115	129	91	116	79	118	2207
082	22	26	22	22	23	20	16	15	15	23	25	15	15	10	15	16	12	14	7	9	19	19	380
083	100	75	67	92	87	60	49	75	77	87	88	67	85	92	100	84	76	58	51	58	47	72	1647
084	123	110	95	104	125	114	71	92	94	75	129	101	112	114	109	91	87	104	124	128	95	130	2327
086	5	4	9	8	5	6	6	6	9	6	1	4	10	3	9	4	9	3	2	1	4	4	118
087	2	3	2	0	2	1	0	4	4	5	1	2	4	2	1	2	5	0	0	1	2	1	44
089	27	20	10	19	17	13	11	16	15	22	22	22	33	43	22	23	28	24	34	18	21	29	489
091	23	35	23	36	23	25	22	21	13	15	22	27	15	19	18	17	19	18	4	9	9	10	423
092	7	15	12	15	19	12	11	17	22	10	14	33	20	33	29	16	12	25	22	16	7	18	385
095	22	11	11	24	22	10	21	18	15	14	19	22	24	23	20	27	19	13	14	16	21	23	409
096	25	32	19	25	36	37	19	19	28	16	29	27	33	41	25	27	29	19	21	27	19	18	571
099	53	79	73	76	43	64	46	86	73	69	86	75	73	78	72	88	92	93	126	102	130	148	1825
100	28	47	22	41	49	28	30	47	34	25	29	25	18	17	40	45	40	37	29	28	34	39	732
101	61	61	28	32	38	18	29	41	40	38	43	37	44	43	53	49	49	51	69	39	49	67	979
102	21	21	14	21	12	10	17	18	17	18	29	31	31	30	33	36	31	28	32	18	15	19	502
104	26	20	18	24	20	16	13	14	11	22	30	21	17	23	27	20	14	16	24	20	25	22	443
105	7	5	6	7	11	13	4	10	7	9	11	7	9	10	11	13	13	6	8	13	11	12	203
106	36	34	32	46	32	29	23	18	13	17	24	16	25	27	31	31	34	59	35	44	34	39	679
108	43	63	32	47	34	29	28	20	24	30	43	37	63	44	42	51	28	62	62	83	77	77	1019
109	12	11	6	5	11	6	16	12	11	9	14	9	15	11	5	2	10	5	3	5	11	9	198
110	20	14	9	21	35	33	34	34	29	29	31	36	28	42	36	36	29	44	29	23	19	30	641
111	22	27	13	18	34	12	7	15	8	18	19	18	15	26	18	16	12	18	23	28	22	10	399
112	30	26	19	21	31	21	22	28	26	31	25	18	27	16	34	28	19	20	16	20	18	32	528
114	124	117	61	83	112	113	85	99	119	111	184	139	172	179	181	148	139	144	138	147	140	141	2876
116	54	41	44	36	20	19	19	24	19	37	19	26	45	49	62	34	34	49	38	35	28	23	755
117	7	5	7	8	5	2	5	4	5	6	8	8	2	6	4	2	2	6	7	3	4	8	114
118	37	38	23	26	42	26	28	21	36	32	39	29	27	25	48	36	33	37	43	32	37	40	735
119	123	67	98	131	122	121	75	103	119	89	101	128	133	169	200	209	180	185	164	194	186	288	3185
122	14	11	14	23	27	13	29	32	20	20	21	13	18	18	10	5	8	16	7	9	5	13	346
123	199	216	143	168	154	199	190	209	165	132	160	117	173	139	182	159	142	126	131	138	123	159	3524
124	34	33	30	31	34	39	23	33	35	47	58	44	61	44	54	51	53	60	67	70	91	59	1051
125	15	14	7	8	7	9	8	6	13	8	10	8	8	14	6	9	9	11	8	10	15	10	213
126	192	266	218	279	340	249	220	244	183	148	134	112	117	116	98	63	85	83	78	68	62	77	3432
127	1	6	9	3	7	1	1	4	1	3	1	1	1	2	2	7	4	5	3	2	1	4	69
128	77	58	48	82	75	75	49	72	80	84	111	66	156	141	184	140	145	178	184	207	193	237	2642
131	40	25	39	52	45	22	12	26	26	34	29	22	31	25	24	26	7	15	22	23	22	41	608
132	60	14	30	42	69	53	40	34	52	66	59	41	61	76	92	68	73	85	72	87	88	169	1431
134	46	43	35	39	35	35	41	23	34	33	49	70	71	57	83	68	62	65	90	68	56	75	1178
135	21	34	18	37	30	19	20	28	25	29	31	50	73	60	50	52	60	101	62	77	84	88	1049
136	10	18	25	15	19	20	18	8	8	10	12	7	9	8	10	6	4	10	13	16	11	14	271
137	123	172	96	177	206	138	96	135	169	149	178	163	217	185	190	195	183	181	147	141	143	171	3555
138	29	30	24	23	34	26	23	32	15	26	28	24	26	14	32	28	20	31	30	28	23	45	591
139	17	26	15	10	13	12	17	7	9	12	15	4	13	5	14	10	3	5	11	11	7	7	243
140	13	11	5	6	10	10	10	8	10	6	8	8	3	8	4	4	3	9	8	7	5	9	165
141	34	51	48	49	55	54	19	35	34	42	57	27	56	44	50	53	54	73	68	72	68	62	1105
142	1	3	0	1	1	1	2	0	4	5	1	1	1	1	3	4	1	1	1	1	2	1	36
144	38	56	43	43	69	53	47	60	51	64	53	65	63	59	56	69	46	52	50	40	44	53	1174
147	0	0	0	0	1	0	0	0	0	1	0	1	0	1	0	0	0	1	0	0	0	0	4
148	16	10	8	13	11	12	16	22	6	8	9	10	14	15	11	18	15	24	14	9	15	15	291
149	3	9	5	6	5	4	5	1	4	2	6	2	4	3	3	1	1	2	1	4	3	3	77

PATENTS GRANTED BY CLASS BY YEAR (ORs only)

CLASS	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	TOTAL
150	11	6	12	7	5	6	3	2	5	7	9	13	14	19	15	14	16	15	10	14	6	13	222
152	18	27	24	29	39	21	23	15	11	10	17	16	30	17	16	16	25	19	14	13	16	16	432
156	100	127	63	102	153	112	85	91	111	100	100	93	117	100	89	100	99	111	136	107	110	127	2333
157	8	8	8	6	11	3	5	3	8	4	4	11	5	7	7	7	5	3	5	4	1	2	125
159	8	2	1	4	6	5	1	2	4	2	2	4	2	1	0	5	6	3	3	2	0	3	66
160	39	35	21	30	37	52	36	34	34	23	51	50	76	60	78	74	60	52	70	69	80	81	1142
162	9	17	11	23	11	8	3	9	14	9	11	12	14	16	14	11	18	14	12	15	12	20	283
163	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
164	39	32	29	40	29	20	10	30	25	40	35	24	36	33	21	13	29	26	12	31	13	21	588
165	57	49	57	71	83	61	65	51	67	64	73	60	72	58	46	59	39	67	52	48	26	49	1274
166	61	37	27	53	53	39	44	78	58	57	88	52	58	64	71	78	71	79	67	58	53	73	1319
168	2	4	2	7	5	2	4	2	6	5	3	8	7	4	13	13	10	5	2	4	6	6	120
169	17	20	12	17	18	12	11	10	14	16	19	11	21	16	27	30	22	13	9	25	31	31	402
171	9	7	8	8	8	5	1	2	1	5	2	3	0	8	4	3	2	6	3	1	1	2	89
172	83	80	61	70	58	58	37	52	49	53	35	28	56	51	34	39	34	38	50	47	41	65	1119
173	25	28	13	19	20	18	13	14	16	23	23	15	36	17	23	20	9	14	16	15	15	28	420
174	25	16	23	27	25	30	24	25	26	38	32	34	31	42	39	37	45	46	48	40	48	83	784
175	35	58	30	46	50	29	52	54	51	41	35	40	50	50	52	52	36	44	46	45	29	53	978
177	24	17	10	14	15	17	25	14	18	18	28	23	27	20	11	16	20	12	11	2	12	19	373
178	2	3	4	5	4	3	0	2	4	3	5	3	1	3	3	3	2	1	4	5	3	3	66
180	71	77	78	77	64	66	64	53	66	75	56	74	65	55	71	60	58	76	59	66	35	61	1427
181	25	28	26	41	36	35	29	36	33	33	35	30	39	35	33	22	42	30	24	26	32	38	708
182	56	90	54	54	79	38	58	98	90	118	102	84	90	91	110	106	61	100	74	75	78	112	1818
184	18	16	7	8	7	15	5	7	10	8	9	8	11	21	15	16	15	14	23	25	11	14	283
185	2	3	1	2	1	2	3	1	1	0	4	0	2	3	0	1	1	1	0	0	3	0	31
186	5	5	4	3	4	3	1	1	1	4	2	3	2	1	2	7	3	1	6	5	5	4	72
187	12	15	7	10	7	10	5	18	11	7	12	9	7	8	17	14	15	21	12	22	16	16	271
188	45	31	28	29	25	19	16	24	21	31	21	26	52	41	31	29	26	44	46	58	43	41	727
190	7	9	9	10	12	5	9	10	10	14	10	16	16	11	10	21	13	17	22	23	19	16	289
191	4	10	7	5	4	2	4	4	2	2	3	4	2	4	4	6	3	8	4	3	7	4	96
192	13	27	12	21	32	19	9	21	17	21	25	5	17	19	34	17	11	17	18	30	20	14	419
193	13	7	6	6	8	8	9	2	3	4	11	4	6	3	8	5	7	3	3	3	2	1	122
194	11	11	16	16	10	13	16	9	13	12	7	12	9	7	14	12	14	9	18	15	7	7	258
196	1	2	1	3	2	2	1	0	0	0	1	1	1	1	1	0	1	1	1	1	0	4	25
198	55	49	42	71	51	60	45	35	57	52	57	68	60	67	67	72	59	81	48	43	43	57	1239
200	57	49	47	41	54	44	27	40	41	29	31	35	33	38	43	31	30	32	32	32	32	54	852
201	2	5	1	8	7	2	4	1	0	4	2	0	3	0	0	5	0	2	2	0	3	2	53
202	23	15	16	26	27	22	23	10	17	15	10	13	11	19	8	6	10	11	9	8	15	8	322
203	8	3	3	10	14	18	5	7	12	21	27	12	17	25	14	25	24	9	43	7	12	28	344
204	50	61	37	48	44	49	41	40	37	39	37	30	58	52	46	57	37	44	58	33	51	36	985
205	28	48	24	38	51	19	30	21	19	21	34	22	22	27	26	30	41	40	38	24	19	24	646
206	132	126	119	158	135	125	118	121	141	153	186	214	273	251	244	208	238	239	231	217	235	343	4207
208	14	17	19	13	19	13	18	18	7	7	4	4	14	14	7	10	3	11	6	16	6	7	247
209	34	49	50	58	61	42	33	40	42	36	32	35	44	40	42	36	48	45	34	28	32	36	897
210	168	144	156	208	198	156	142	145	143	167	190	206	264	232	248	300	276	225	249	264	255	258	4594
211	63	70	42	43	56	67	40	69	62	80	74	81	92	103	134	133	114	126	98	144	133	190	2014
212	9	11	10	15	15	6	6	8	11	9	12	13	9	7	12	8	10	6	4	5	8	17	211
213	2	3	1	5	0	4	3	1	1	3	2	1	1	0	3	2	0	2	0	2	0	1	37
215	29	39	27	25	29	28	23	49	63	42	50	76	66	51	50	42	34	33	51	33	35	43	918
216	3	3	3	1	2	6	4	5	10	5	5	12	8	5	8	8	9	14	9	4	6	10	140
217	2	2	1	5	0	0	0	4	0	1	5	3	2	1	0	1	1	2	2	1	0	2	35

PATENTS GRANTED BY CLASS BY YEAR (ORs only)

CLASS	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	TOTAL
218	5	0	1	0	2	3	1	0	3	3	1	2	2	2	1	1	2	2	0	2	0	0	33
219	83	78	70	80	83	92	81	77	111	80	94	92	118	132	114	94	89	83	99	93	82	109	2034
220	82	79	62	87	74	88	51	71	94	95	91	111	153	203	176	159	174	158	155	155	145	181	2644
221	32	39	29	45	43	25	25	28	36	41	35	25	35	38	44	45	39	48	44	44	35	47	822
222	149	150	116	136	136	83	95	132	104	105	123	104	163	151	194	179	171	170	175	168	141	168	3113
223	32	27	16	16	15	18	9	15	25	30	31	20	15	30	40	32	18	17	21	34	45	39	545
224	77	87	66	65	113	76	66	108	70	55	60	118	144	159	153	114	142	150	184	177	181	202	2567
225	9	10	4	11	11	6	11	7	12	9	13	10	17	10	16	24	10	8	10	12	6	12	238
226	20	8	14	15	16	24	12	11	7	6	11	14	6	4	1	2	5	5	3	4	3	6	197
227	16	20	11	21	18	19	16	22	23	22	25	22	36	18	18	18	15	14	17	17	24	22	434
228	23	20	18	18	12	21	18	8	18	30	28	23	32	35	24	25	27	20	29	22	22	13	486
229	23	27	13	28	27	19	14	17	17	28	32	47	50	52	68	50	49	53	44	35	37	63	793
231	0	1	1	0	0	0	0	1	2	0	1	1	1	0	2	0	0	0	0	0	1	0	11
232	14	18	14	15	7	16	16	9	16	9	18	28	26	29	23	18	12	12	34	16	19	15	384
234	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	3
235	36	31	27	30	33	41	25	29	29	34	34	29	43	28	25	26	28	32	50	38	40	39	727
236	19	20	23	29	25	33	32	15	31	18	22	16	20	12	11	18	19	19	15	8	10	15	430
237	19	14	31	12	17	24	19	19	15	13	11	8	10	11	12	7	9	6	5	9	6	11	288
238	5	16	12	14	14	10	5	11	4	2	6	6	13	10	6	12	3	7	8	13	6	15	198
239	107	101	95	118	131	88	76	74	76	101	74	98	118	111	114	103	105	125	96	64	104	152	2231
241	62	52	34	58	57	39	43	31	35	53	52	51	70	69	63	58	87	68	59	70	59	61	1231
242	101	96	79	74	67	61	62	69	92	52	87	86	82	74	54	60	71	67	49	66	72	92	1613
244	72	69	40	48	46	38	50	48	32	56	74	75	79	55	83	91	76	62	53	58	39	86	1330
245	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
246	1	10	2	3	4	2	2	2	1	2	2	5	2	1	3	3	5	5	11	4	6	11	87
248	149	164	93	127	133	124	102	133	141	170	218	196	265	294	366	357	252	248	244	250	242	369	4637
249	59	48	37	36	34	21	21	27	24	19	37	27	29	21	23	19	17	12	14	16	22	24	587
250	90	64	40	64	72	60	37	65	53	57	73	59	111	95	111	90	79	69	88	80	76	92	1625
251	39	43	29	39	47	37	33	59	53	40	47	32	46	39	34	47	49	54	39	32	33	39	910
252	19	14	16	15	20	13	35	38	18	20	24	15	23	18	21	26	10	19	19	30	23	31	467
254	86	63	38	61	62	44	31	57	59	38	54	50	65	47	44	47	71	42	35	34	57	49	1134
256	29	34	24	17	26	14	14	20	25	15	26	20	31	20	25	26	21	29	25	26	37	34	538
257	12	7	7	5	5	3	8	9	8	8	18	10	18	23	24	31	21	24	36	29	46	44	396
258	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
261	49	36	32	49	49	41	30	31	32	27	30	18	26	36	31	31	25	15	23	26	24	23	684
264	73	111	70	88	107	77	78	78	65	62	51	72	74	102	89	103	111	89	99	90	91	122	1902
266	31	20	15	23	22	26	32	27	18	24	16	17	18	7	15	9	8	10	20	13	13	13	397
267	22	14	8	12	6	5	2	9	7	15	24	19	32	16	10	12	14	14	13	17	12	15	298
269	41	50	54	55	55	28	29	42	46	43	56	50	74	64	40	52	39	33	28	48	25	47	999
270	7	7	6	3	9	1	7	7	9	8	4	3	2	9	6	2	5	3	3	3	2	4	110
271	23	7	7	12	8	20	10	13	16	20	28	13	22	13	19	18	22	10	13	15	7	9	325
273	224	168	141	189	178	145	109	153	168	126	142	133	208	218	220	209	189	245	247	214	223	253	4102
277	10	27	19	42	31	28	26	33	30	23	18	21	23	13	18	20	16	18	17	21	24	21	499
278	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
279	10	17	6	21	18	5	9	9	19	24	20	11	14	16	19	18	16	16	15	13	10	14	320
280	234	265	212	225	250	236	202	209	211	259	268	282	315	268	323	276	323	363	345	342	251	409	6068
281	1	8	10	6	14	8	10	14	17	25	23	18	31	25	26	24	29	19	26	24	30	34	422
283	11	9	9	18	8	9	4	7	15	27	26	11	36	32	37	36	43	43	45	34	29	46	535
285	56	63	45	47	62	40	39	57	50	54	88	49	71	47	61	59	64	70	65	59	40	71	1257
289	8	9	2	4	2	5	7	2	3	6	2	2	2	1	4	2	1	1	1	3	5	2	74
290	23	29	21	35	59	48	36	41	29	22	23	21	16	7	9	10	7	12	23	8	7	22	508

PATENTS GRANTED BY CLASS BY YEAR (ORs only)

CLASS	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	TOTAL
291	1	1	0	0	1	1	0	1	1	1	0	1	0	1	0	1	0	0	0	3	0	0	13
292	52	88	47	68	52	25	44	49	36	59	79	43	65	64	86	77	36	37	45	63	73	43	1231
293	12	8	4	10	4	9	6	4	5	6	14	6	12	14	17	12	11	6	3	5	12	8	188
294	97	90	73	102	90	60	50	88	82	70	91	90	90	79	74	81	101	97	106	117	109	150	1987
295	0	1	0	0	0	0	0	1	1	2	0	0	0	1	2	0	0	0	0	1	1	0	10
296	79	84	80	86	77	57	41	57	57	63	103	85	125	148	138	128	100	85	96	117	113	139	2058
297	90	85	57	95	60	58	49	62	82	101	116	107	147	118	115	118	82	165	120	171	161	183	2342
298	14	15	9	5	10	6	7	5	4	8	11	8	9	5	8	5	8	7	9	5	5	8	171
299	22	18	17	26	33	14	25	26	15	12	25	21	17	18	15	16	16	7	11	8	11	10	383
300	1	2	2	3	1	0	0	0	1	2	3	0	1	2	2	4	5	5	5	1	4	2	46
301	14	16	9	13	17	10	9	16	8	14	19	17	16	28	25	31	24	25	17	26	13	27	394
303	7	14	13	7	5	4	4	3	2	6	7	4	6	12	7	10	13	6	15	7	14	6	172
305	8	8	4	4	3	2	2	5	2	4	1	5	5	3	0	1	3	5	6	4	7	8	90
307	40	39	25	24	30	24	23	23	22	12	42	42	41	17	14	19	30	25	22	47	47	50	658
310	35	39	23	56	39	48	40	40	33	41	47	45	60	33	43	43	48	40	34	42	51	73	953
312	63	98	43	59	59	35	43	60	31	46	48	49	58	42	45	71	63	54	68	66	57	87	1245
313	17	17	7	7	11	13	6	12	7	11	9	15	21	14	21	14	8	10	11	21	18	23	293
314	2	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	5
315	24	37	24	24	44	35	35	33	30	33	42	32	54	66	74	44	50	37	64	46	29	59	916
318	41	42	23	32	27	38	28	34	36	38	45	43	39	54	39	32	34	39	48	38	34	46	830
320	10	7	8	11	6	14	12	7	7	18	22	7	12	6	6	21	30	21	10	24	32	31	322
322	8	6	3	7	10	4	7	10	7	3	9	5	3	4	4	3	5	4	1	4	5	5	117
323	14	4	8	8	12	7	8	9	6	8	13	8	16	9	10	15	10	7	7	11	12	13	215
324	87	78	48	54	59	55	48	67	65	48	66	69	117	84	69	95	74	81	99	109	51	97	1620
326	1	1	2	1	2	1	1	3	2	1	2	4	1	6	3	9	4	10	7	7	5	11	84
327	13	19	14	23	14	19	10	9	6	5	5	11	18	11	8	21	13	16	10	16	11	20	292
329	1	2	0	1	3	0	2	3	3	0	0	1	2	0	3	0	1	2	1	2	1	0	28
330	13	9	14	10	10	6	8	17	17	10	14	18	17	8	10	12	7	8	8	12	12	10	250
331	9	5	6	3	2	5	3	8	3	6	11	2	5	4	9	3	3	2	2	6	5	8	110
332	3	0	0	2	3	0	2	3	2	1	0	0	0	2	3	1	0	1	5	3	0	2	33
333	8	16	3	9	17	8	13	7	7	10	13	8	18	8	10	15	11	11	10	10	4	8	224
334	0	0	1	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	4
335	15	17	7	21	16	20	14	13	11	9	14	11	7	8	11	11	13	12	10	16	14	9	279
336	6	7	5	3	8	7	4	4	5	3	2	1	4	7	1	3	3	6	5	6	8	6	104
337	11	10	13	3	14	14	18	10	17	5	11	2	11	7	7	6	5	4	7	4	14	17	210
338	7	7	7	10	6	6	8	7	3	3	8	11	13	9	12	6	8	6	0	6	3	4	150
340	146	142	100	156	177	146	124	97	112	112	179	151	256	203	226	179	161	167	225	270	313	369	4011
341	13	13	6	5	13	7	9	3	11	11	19	14	29	23	10	14	21	17	24	23	32	33	350
342	20	28	15	21	19	18	5	16	17	16	31	14	20	21	19	21	28	28	28	37	24	41	487
343	21	32	26	29	26	22	15	17	14	22	26	27	31	30	31	9	25	19	27	31	24	29	533
345	6	11	12	12	16	18	10	10	6	12	15	38	39	27	27	31	27	51	52	57	92	111	680
346	11	8	4	9	7	2	3	4	6	4	7	6	5	4	3	0	0	1	2	2	0	1	89
347	6	2	1	3	5	9	6	5	4	5	8	11	7	8	7	6	1	6	5	4	9	17	135
348	28	22	28	35	50	36	31	16	40	42	54	27	47	67	72	49	40	60	68	76	67	79	1034
349	1	2	1	4	3	0	4	0	5	3	8	7	10	7	4	12	6	4	17	19	11	9	137
351	24	26	28	27	40	25	40	27	33	30	46	56	99	78	66	66	59	58	81	69	70	83	1131
352	15	15	14	16	6	6	12	12	15	11	18	1	4	8	16	10	6	1	3	6	10	7	212
353	16	23	12	15	17	6	19	12	10	12	6	11	8	13	10	10	15	12	16	13	12	13	281
355	31	42	22	39	28	26	13	24	38	28	22	22	21	12	20	18	14	14	13	3	11	8	469
356	45	43	34	56	63	36	38	37	45	31	49	36	63	55	62	57	48	38	66	62	61	72	1097
358	6	8	3	4	6	6	8	6	8	9	9	7	6	8	7	8	15	22	15	21	10	11	203

PATENTS GRANTED BY CLASS BY YEAR (ORs only)

CLASS	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	TOTAL
359	84	81	74	83	94	72	57	72	79	109	95	104	124	142	112	132	110	100	96	104	86	144	2154
360	34	28	23	27	21	21	12	18	16	30	43	21	29	28	20	23	25	25	22	23	15	25	529
361	57	43	34	49	38	53	32	37	41	45	50	61	79	59	44	66	70	45	71	89	87	117	1267
362	71	98	64	102	101	86	65	92	113	108	104	156	179	183	207	219	141	176	207	219	221	268	3180
363	11	9	10	13	16	18	8	16	15	12	18	17	26	21	19	16	25	16	14	23	22	25	370
364	23	24	14	30	16	26	17	28	32	26	31	41	53	36	45	46	53	60	44	75	60	80	860
365	7	8	7	8	4	8	7	6	4	4	4	6	9	9	11	10	20	24	17	26	27	32	258
366	50	68	43	61	38	48	47	63	48	47	35	50	53	57	43	33	33	47	55	66	44	57	1086
367	12	17	11	31	19	17	5	8	19	15	29	18	23	41	23	41	36	23	26	19	16	19	468
368	35	42	18	24	25	24	26	41	34	29	35	40	32	38	47	43	45	51	27	25	39	43	763
369	19	34	18	24	20	26	17	13	19	12	10	18	16	11	16	12	18	15	35	22	24	30	429
370	5	6	6	7	11	14	9	9	10	14	13	9	15	10	9	13	12	8	33	28	26	33	300
371	9	2	0	5	2	2	5	3	2	2	9	3	9	5	3	5	3	5	9	7	2	10	102
372	5	13	6	11	8	5	10	19	8	10	9	21	25	36	24	13	14	21	26	17	22	19	342
373	16	9	10	11	5	4	2	9	3	3	4	5	3	4	3	5	5	3	5	3	0	0	112
374	20	28	18	11	22	17	12	17	28	17	13	13	20	13	22	13	15	15	8	10	18	29	379
375	8	3	3	12	2	9	5	3	7	17	12	8	16	11	16	18	15	15	21	28	23	29	281
376	13	13	9	19	16	21	15	12	5	11	9	9	8	13	9	18	14	10	12	9	4	12	261
377	16	12	10	10	18	13	10	8	10	4	9	5	13	5	5	9	5	3	5	6	1	1	178
378	29	28	17	19	16	17	11	15	18	32	21	26	27	31	42	35	31	28	24	33	22	36	558
379	47	55	34	33	28	30	44	46	36	57	47	66	87	57	74	64	34	51	74	76	79	101	1220
380	1	5	10	8	7	7	1	6	6	12	16	12	14	31	41	25	34	36	18	28	45	44	407
381	54	40	34	45	45	38	27	48	33	37	39	33	60	50	33	47	43	47	40	57	63	112	1025
382	4	7	9	4	6	4	3	8	12	14	11	9	16	15	22	24	23	16	26	33	38	50	354
383	11	16	21	15	9	11	11	9	13	16	20	27	32	30	40	29	28	37	27	21	21	24	468
384	33	30	8	31	29	23	25	26	41	32	28	17	24	31	26	31	21	34	37	25	16	25	593
385	5	3	2	8	8	4	7	7	7	14	32	42	33	43	48	26	30	31	31	40	32	67	520
386	4	3	3	7	2	4	6	6	8	6	6	9	17	11	13	7	7	4	4	5	11	7	150
388	3	1	1	1	5	4	0	6	3	1	3	2	0	2	3	1	1	7	2	4	1	0	51
392	16	18	14	15	14	22	20	16	20	20	20	22	18	20	14	22	19	20	21	12	16	26	405
395	8	1	1	6	10	13	6	17	13	10	13	19	23	26	26	31	24	35	53	77	79	142	633
396	40	54	45	61	57	50	23	32	44	29	35	46	33	43	44	26	20	29	15	34	27	62	849
399	7	3	6	5	4	3	4	3	4	2	3	2	6	6	6	10	11	10	13	6	11	9	134
400	20	12	9	13	20	8	12	33	25	19	19	17	22	22	27	19	31	23	31	22	15	20	439
401	38	32	29	28	26	21	23	22	28	32	31	39	41	56	78	45	37	59	46	33	23	35	802
402	2	3	5	9	11	7	9	8	10	18	14	12	20	18	20	19	15	15	11	18	17	23	284
403	51	75	53	41	49	53	54	51	54	73	63	45	49	69	60	63	55	46	49	52	57	60	1222
404	34	43	21	31	36	46	25	27	29	45	65	43	72	73	80	52	72	59	61	50	51	45	1060
405	114	115	62	73	84	82	63	92	66	78	127	86	134	120	167	150	148	88	91	146	98	134	2318
406	22	9	18	21	11	6	6	10	10	5	9	8	15	12	19	13	10	4	5	8	6	6	233
407	11	9	8	8	5	5	5	9	7	11	9	2	4	5	12	7	9	3	2	2	8	8	149
408	36	61	35	41	40	26	24	27	31	44	31	37	34	51	57	43	32	45	44	25	34	56	854
409	21	18	13	17	18	13	11	8	21	38	25	23	27	31	20	18	18	13	17	19	27	29	445
410	25	23	10	17	10	16	12	9	8	9	11	22	20	23	22	16	16	20	29	23	17	28	386
411	42	40	17	33	35	28	17	31	23	27	43	47	50	60	39	53	55	42	50	52	52	63	899
412	1	5	4	2	1	0	1	3	4	0	3	1	2	7	3	4	6	3	4	4	6	7	71
413	4	2	0	2	2	1	1	0	0	1	1	0	0	0	1	2	1	2	0	2	1	2	25
414	196	182	91	113	160	127	119	106	116	118	134	131	114	128	154	134	125	138	144	143	114	131	2918
415	29	24	21	32	31	18	29	21	30	13	25	32	22	15	22	32	24	22	22	29	13	13	519
416	27	32	24	32	31	38	25	26	29	22	29	26	29	22	9	22	40	30	36	31	24	17	601
417	78	80	51	63	62	59	80	75	90	82	58	83	82	66	75	64	76	58	69	69	68	71	1559

PATENTS GRANTED BY CLASS BY YEAR (ORs only)

CLASS	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	TOTAL
418	34	31	25	28	16	15	21	28	25	15	23	23	19	24	20	23	18	25	22	19	17	17	488
419	3	10	1	2	4	6	2	2	5	7	4	2	1	9	6	2	1	7	4	7	7	4	96
420	15	12	14	10	12	8	15	7	2	2	4	5	5	7	7	6	4	8	6	1	3	2	155
422	42	46	42	42	63	46	49	34	33	39	44	46	54	60	69	95	81	83	108	77	71	90	1314
423	57	59	41	33	39	39	35	33	28	27	36	32	27	40	33	28	26	30	28	24	17	27	739
424	55	40	58	69	86	67	51	78	69	74	87	105	150	126	130	151	153	125	142	186	249	290	2541
425	110	98	64	81	104	64	89	66	79	62	89	99	100	93	84	75	81	83	69	67	57	76	1790
426	84	61	71	74	95	63	50	55	74	58	70	90	117	115	104	98	94	88	98	111	106	105	1881
427	40	47	40	48	69	39	48	41	60	38	64	57	48	37	53	60	38	64	74	59	63	81	1168
428	97	90	81	100	132	127	105	111	172	149	131	145	172	188	158	165	173	181	209	207	213	259	3365
429	27	24	12	25	28	19	24	24	21	10	13	18	22	19	18	17	20	22	35	71	30	29	528
430	23	15	11	22	31	22	33	21	22	19	19	18	10	23	23	14	12	15	23	28	13	23	440
431	33	41	22	23	43	23	43	35	35	34	37	28	41	37	31	33	30	40	39	42	25	51	766
432	22	12	10	35	40	16	22	32	20	26	22	20	18	16	16	12	9	6	3	2	10	11	380
433	92	47	56	135	122	94	81	122	122	109	111	125	139	118	184	173	143	157	108	145	133	222	2738
434	99	86	67	75	70	64	53	80	72	55	94	84	107	81	82	100	130	107	85	107	96	145	1939
435	28	38	28	46	66	58	44	44	24	43	68	61	64	71	66	73	88	99	114	131	185	227	1666
436	18	27	19	22	31	19	12	24	17	22	23	27	32	16	23	24	33	32	29	42	39	53	584
438	3	9	3	7	10	8	13	6	15	6	14	12	9	10	15	19	20	16	33	23	20	35	306
439	84	68	57	51	46	39	44	47	70	77	106	126	116	130	116	141	117	137	120	133	130	175	2130
440	28	33	10	17	29	27	22	24	35	34	56	36	48	49	57	39	53	44	45	48	50	55	839
441	26	22	12	13	23	16	15	19	35	43	49	45	54	61	45	51	41	65	59	51	57	66	868
442	10	6	5	13	11	7	7	11	19	10	11	10	15	7	5	11	8	13	16	10	9	22	236
445	3	3	1	1	0	0	1	1	0	1	1	1	1	2	1	2	2	3	2	1	5	2	34
446	75	91	79	139	119	65	56	51	73	69	85	77	106	131	126	123	107	122	103	109	78	140	2124
449	2	3	6	10	11	9	10	10	9	4	5	7	1	0	6	3	0	3	2	1	5	2	109
450	7	6	4	10	14	12	11	4	5	9	7	6	8	7	6	8	9	4	11	6	14	20	188
451	71	70	43	69	56	41	34	50	63	66	87	78	85	88	84	81	96	69	73	81	88	81	1554
452	29	26	17	33	42	32	27	24	37	50	41	29	22	38	28	40	36	40	31	33	21	17	693
453	0	7	3	5	3	1	4	4	6	5	2	4	4	3	9	4	3	4	5	2	4	0	82
454	29	24	30	39	25	21	20	26	46	29	42	38	39	50	38	54	34	42	24	36	34	44	764
455	26	32	23	29	22	27	16	14	13	14	16	25	42	19	36	35	26	15	36	53	33	61	613
460	4	1	6	2	7	4	9	5	7	4	2	3	5	11	8	8	5	4	8	12	1	9	125
462	4	3	3	5	3	0	2	0	4	3	4	2	4	3	1	8	10	3	5	3	1	1	72
463	19	18	14	8	17	15	9	13	21	9	23	16	27	17	30	24	28	40	25	36	28	65	502
464	19	15	8	12	12	11	11	12	4	5	7	12	8	10	3	8	8	10	11	10	7	10	213
470	18	7	3	1	3	6	3	3	1	2	3	3	1	1	1	3	6	3	4	2	2	4	80
472	16	13	12	17	26	12	9	15	13	12	12	9	28	33	21	18	29	21	22	24	26	47	435
473	179	174	155	154	155	135	94	134	174	142	162	180	262	307	321	327	301	386	423	395	363	469	5392
474	28	18	12	19	17	5	9	13	24	16	35	19	35	30	27	13	24	33	34	23	24	17	475
475	17	12	8	25	15	16	5	10	16	18	27	35	38	25	36	33	26	20	22	25	19	24	472
476	3	4	1	5	2	2	1	3	2	3	3	0	4	0	3	3	2	0	4	7	1	2	55
477	2	6	2	4	11	7	4	12	8	5	3	3	6	8	7	2	1	4	6	8	6	5	120
482	57	81	53	99	96	113	82	103	119	171	167	177	208	226	220	227	218	249	221	275	281	324	3767
483	0	0	0	3	1	1	1	2	4	2	4	2	0	2	4	2	0	3	1	1	3	1	37
492	3	7	2	4	5	6	2	2	1	3	3	2	4	4	1	1	5	2	8	3	6	5	79
493	38	19	15	24	19	22	13	14	25	23	23	10	16	16	24	41	19	23	17	16	11	30	458
494	9	7	10	9	7	6	1	3	4	2	5	6	7	3	6	1	7	8	3	4	5	8	121
501	8	10	6	5	7	3	6	9	5	1	5	9	11	11	9	12	6	13	11	13	7	10	177
502	6	9	9	15	13	12	9	8	12	10	10	5	9	12	17	17	21	9	10	8	8	12	241
503	2	1	1	0	1	2	4	0	1	2	0	2	3	4	3	1	2	4	0	4	2	4	43

PATENTS GRANTED BY CLASS BY YEAR (ORs only)

CLASS	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	TOTAL
504	5	8	5	3	4	5	1	4	6	5	3	2	6	9	8	18	8	5	5	8	11	10	139
505	1	0	0	0	0	1	0	0	0	0	0	0	1	4	5	10	8	6	9	7	8	3	63
507	1	3	0	1	1	0	4	4	8	4	4	3	5	3	2	5	3	0	1	1	3	7	63
508	0	6	4	5	5	4	4	5	6	2	8	3	7	6	6	7	7	5	9	8	8	11	126
510	7	12	3	11	11	6	11	7	12	8	13	14	13	13	15	10	11	12	18	22	23	34	286
512	0	0	0	0	0	2	0	0	0	1	1	2	0	2	0	2	0	3	0	0	1	1	15
514	69	80	41	86	75	74	74	91	85	84	92	90	156	151	173	126	120	118	148	185	210	246	2574
516	2	2	0	2	2	1	4	3	2	1	3	0	1	1	1	3	2	1	2	3	3	1	40
518	0	0	0	1	0	0	0	0	0	3	1	0	1	0	0	1	0	2	2	1	0	1	13
521	11	20	9	18	26	16	14	17	18	11	7	16	12	8	14	20	17	8	16	8	13	17	316
522	2	3	1	0	1	1	1	0	2	1	2	1	1	1	1	3	2	1	6	5	1	2	38
523	13	28	12	9	11	7	15	15	8	10	8	13	9	16	12	11	12	11	16	12	11	19	278
524	26	16	19	29	22	30	26	15	17	14	14	10	20	16	24	33	22	27	26	32	24	40	502
525	13	24	16	11	28	7	10	13	10	3	14	6	9	24	20	19	19	12	13	11	11	15	308
526	6	7	2	10	9	8	6	7	9	3	4	9	3	5	9	5	10	9	1	7	4	9	142
527	2	0	3	4	0	4	3	0	0	1	0	1	3	2	1	1	2	1	3	0	1	1	33
528	20	20	7	17	19	10	10	7	7	8	5	7	11	11	15	14	23	13	11	6	11	15	267
530	8	20	13	23	16	8	14	14	9	11	11	7	14	6	13	20	13	17	13	14	36	45	345
534	1	3	0	0	5	0	0	0	0	4	3	1	4	4	3	1	1	1	1	1	2	2	37
536	5	11	7	13	5	5	6	6	6	7	2	4	7	12	7	11	11	5	15	24	18	34	221
540	13	5	4	4	0	4	1	1	0	4	6	2	2	3	4	2	3	1	3	1	8	2	73
544	6	6	1	6	10	7	3	4	6	4	2	4	2	4	4	3	6	6	4	3	2	2	95
546	4	8	7	6	3	5	3	3	6	1	3	1	1	4	1	2	7	7	3	8	8	6	97
548	3	5	6	6	3	4	2	4	5	7	3	3	5	6	5	7	4	4	5	6	2	4	99
549	13	4	3	8	11	5	3	4	3	2	2	3	3	3	6	2	9	3	1	1	7	6	102
552	6	2	2	2	4	1	0	4	0	0	1	0	2	0	5	1	0	0	1	0	0	1	32
554	6	6	2	4	5	4	0	4	1	3	1	0	2	4	3	3	2	7	4	3	3	4	71
556	8	2	5	1	6	4	1	2	2	4	4	3	1	3	6	4	5	2	6	6	6	3	84
558	7	2	5	4	4	2	2	6	1	2	0	2	4	5	2	2	3	1	2	5	1	4	66
560	9	1	3	4	7	4	10	2	3	1	4	3	4	8	7	4	3	5	6	5	6	4	103
562	3	5	5	3	7	5	5	4	3	3	3	3	5	4	4	3	9	5	3	4	8	5	99
564	3	7	3	2	6	3	4	3	1	4	3	1	5	4	4	6	2	2	10	3	4	3	83
568	10	13	6	8	5	7	6	2	5	5	4	4	5	1	11	9	5	5	4	6	3	10	134
570	4	2	0	4	1	1	2	1	0	0	0	0	2	1	0	5	0	0	0	1	4	2	30
585	7	11	6	4	4	1	8	5	6	4	3	1	10	8	9	6	7	1	6	10	8	17	142
588	2	4	4	8	4	13	8	10	11	7	12	11	9	7	2	5	10	14	17	16	23	19	216
600	100	101	82	121	125	95	109	106	124	145	180	114	194	200	218	195	228	246	266	216	198	362	3725
601	43	33	32	46	26	20	16	25	33	40	39	55	51	48	62	67	41	36	60	51	40	72	936
602	36	28	33	41	52	30	43	47	59	65	64	60	65	72	80	62	56	62	76	58	71	121	1281
604	121	90	60	118	119	138	114	108	132	182	224	210	290	289	297	327	352	400	335	295	284	356	4841
606	56	56	48	85	84	63	60	101	110	168	159	148	168	154	210	230	249	291	270	309	393	441	3853
607	22	22	25	23	32	28	22	21	41	53	40	43	49	55	59	54	47	47	58	61	43	75	920
623	35	42	38	37	58	49	29	46	49	78	90	92	101	111	80	119	90	94	136	115	128	1712	
701	7	10	5	3	4	7	5	7	8	5	6	5	19	11	11	15	16	18	28	22	23	31	266
702	4	7	13	14	11	12	12	8	16	14	10	21	23	24	25	18	24	29	15	38	38	40	416
704	2	5	5	2	4	4	3	6	2	6	11	4	10	12	14	13	9	14	12	12	15	34	199
705	2	1	2	7	1	6	4	6	6	6	10	10	15	15	12	19	23	31	11	24	37	71	319
706	0	0	0	0	0	0	0	0	0	1	1	3	4	6	8	5	7	7	14	15	11	34	116
707	2	6	0	1	1	2	0	5	6	2	4	3	7	11	9	10	17	22	25	18	30	61	242
711	3	2	1	0	6	2	3	5	2	4	3	5	6	5	7	5	6	7	10	13	15	15	125
800	0	1	0	1	0	0	0	0	1	3	2	2	1	1	2	0	2	3	5	2	7	26	59

PATENTS GRANTED BY CLASS BY YEAR (ORs only)

CLASS	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	TOTAL
D01	4	7	5	5	3	5	4	1	3	4	7	4	3	17	17	8	12	12	8	17	19	20	185
D02	54	54	34	59	53	51	72	56	74	64	73	68	86	94	107	71	152	162	173	187	168	277	2189
D03	47	71	65	67	92	83	75	64	81	63	70	72	62	146	171	158	210	203	192	201	197	256	2646
D04	10	13	5	6	9	9	8	18	21	29	34	30	22	32	35	35	57	39	62	62	44	62	642
D05	13	3	3	3	2	4	2	2	2	0	2	4	5	4	2	5	4	2	6	2	9	9	88
D06	225	279	193	213	275	272	263	251	292	287	285	252	221	314	389	404	559	448	596	543	485	624	7670
D07	88	89	92	113	123	108	86	93	82	149	142	123	152	156	156	170	251	237	229	310	197	276	3422
D08	92	110	85	108	158	153	118	189	137	139	165	189	193	254	301	294	380	352	397	354	300	452	4920
D09	49	60	31	52	89	57	65	67	56	64	77	68	54	110	151	106	141	142	141	145	152	144	2021
D10	89	79	69	83	90	82	78	71	81	62	99	76	72	110	187	147	241	244	240	172	160	242	2774
D11	102	102	93	81	123	139	102	67	90	76	60	60	82	88	132	111	145	163	172	153	161	185	2487
D12	124	93	72	89	93	114	100	89	88	81	133	110	136	221	210	241	253	251	234	298	245	337	3612
D13	20	16	10	13	20	23	22	22	20	26	18	23	18	27	48	41	52	55	64	47	60	65	710
D14	42	50	37	36	71	57	39	54	50	52	60	54	58	89	106	89	138	120	144	149	145	178	1818
D15	48	38	36	35	42	58	52	69	43	45	41	38	46	64	44	102	99	61	116	78	65	88	1308
D16	24	14	14	16	23	16	17	26	17	24	24	19	14	55	34	49	43	52	43	74	58	75	731
D17	11	15	9	28	21	21	24	17	37	15	17	18	12	33	29	27	28	27	24	19	19	33	484
D18	13	15	12	14	19	12	6	17	15	21	17	8	7	15	23	14	19	13	11	18	12	17	318
D19	29	56	53	49	39	49	54	42	49	60	52	42	56	62	112	91	115	119	137	95	112	142	1615
D20	22	22	12	16	15	12	24	18	30	23	18	22	17	43	47	34	57	55	56	40	75	85	743
D21	188	171	148	183	233	253	228	174	196	182	231	211	268	299	423	392	384	433	423	378	383	544	6325
D22	42	47	34	62	67	37	64	46	30	44	49	46	75	54	49	66	89	96	103	113	81	87	1381
D23	86	89	88	98	102	116	79	87	61	82	87	74	74	109	204	157	145	201	204	155	159	214	2671
D24	74	66	38	64	75	92	90	95	67	102	99	84	89	102	129	159	184	186	186	185	175	212	2553
D25	95	33	67	43	70	71	43	82	26	70	32	41	54	44	50	52	78	103	83	93	108	115	1453
D26	51	40	39	29	40	42	27	42	46	43	55	58	62	62	99	88	84	128	137	174	146	209	1701
D27	30	35	10	17	18	22	14	11	6	13	8	8	4	9	13	4	7	14	18	19	17	44	341
D28	26	23	30	27	38	34	33	46	44	62	28	49	64	126	52	35	65	86	76	74	90	89	1197
D29	14	7	5	19	6	17	10	10	18	16	12	24	17	36	23	31	44	42	54	47	45	41	538
D30	61	39	19	47	38	25	43	24	34	18	43	53	32	41	68	62	88	83	77	82	92	69	1138
D32	22	25	12	23	20	20	26	19	22	26	51	27	28	61	53	37	54	81	88	70	84	86	935
D34	29	22	19	13	26	32	26	29	28	38	34	49	51	54	81	111	114	94	98	65	57	101	1171
D99	10	12	11	18	7	13	10	11	13	12	18	3	14	16	16	24	34	28	42	29	37	39	417
PLT	78	51	55	41	81	56	60	58	77	73	66	132	188	98	119	75	101	97	78	83	91	124	1882
TOTAL	16010		12159		16469		12601		14903		17587		20467		21886		21043		22220		21949		403617
		16119		15664		14109		14350		15447		16543		20466		20839		21804		22855		28127	

PART II

PATENT COUNTS BY CLASS BY YEAR

ORIGINAL AND CROSS REFERENCE CLASSIFICATIONS

(DUPLICATES ELIMINATED)

1/1977 - 12/31/1998

PATENTS GRANTED BY CLASS BY YEAR (ORs + XRs)

CLASS	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	TOTAL
001	0	1	0	0	1	1	1	0	2	0	0	2	0	2	1	3	0	1	1	1	24	72	113
002	139	147	101	142	146	102	121	136	170	196	257	208	275	263	356	307	254	268	272	363	400	471	5094
004	154	151	177	179	126	131	133	125	150	152	150	174	225	228	259	218	246	270	217	204	222	271	4162
005	136	172	94	191	142	110	98	118	150	161	236	207	245	285	282	281	242	235	235	276	245	266	4407
007	27	22	8	27	21	22	10	30	36	36	35	36	48	46	51	39	62	56	38	51	41	53	795
008	21	30	31	39	25	21	33	21	13	19	20	18	27	23	16	18	26	26	24	28	20	28	527
012	15	7	8	13	20	8	8	7	13	10	15	11	9	10	7	4	8	8	6	4	6	8	205
014	12	25	5	7	13	14	11	9	17	15	25	15	19	15	25	18	13	16	26	27	19	15	361
015	216	206	200	234	187	211	157	191	243	195	261	259	293	272	319	255	252	297	290	317	267	359	5481
016	88	101	65	89	71	56	69	80	79	84	128	90	163	94	112	94	99	126	113	159	135	180	2275
019	15	12	11	18	12	7	10	9	22	13	12	4	18	19	15	9	8	17	17	8	12	9	277
023	6	7	6	4	6	7	5	2	2	3	4	4	4	3	2	5	0	6	3	1	1	4	85
024	179	190	123	163	151	126	121	161	165	173	229	183	218	257	245	219	185	201	201	224	240	244	4198
026	6	10	7	3	4	5	5	12	3	3	6	5	12	5	7	2	4	3	5	7	7	4	125
027	7	9	11	7	6	8	9	1	4	3	3	7	9	12	11	7	8	11	11	5	16	16	181
028	23	24	17	20	13	12	5	9	11	8	8	8	11	15	7	14	13	10	14	13	13	11	279
029	258	294	185	249	267	207	208	251	270	303	329	264	322	295	308	255	283	245	241	226	255	234	5749
030	160	145	112	172	146	135	101	151	171	182	188	178	219	217	253	190	180	192	184	209	167	218	3870
033	167	183	186	216	174	165	179	205	216	234	234	187	225	267	266	245	196	196	240	205	157	214	4557
034	75	82	63	87	78	74	65	69	85	80	83	72	66	67	70	76	89	79	77	69	71	79	1656
036	67	70	51	83	88	74	56	78	62	89	109	92	110	111	80	77	90	92	100	96	113	173	1961
037	68	62	44	53	59	64	51	45	48	59	50	50	72	63	64	67	64	41	50	62	53	64	1253
038	12	10	9	13	12	13	9	13	19	20	21	18	21	16	23	15	14	17	12	19	15	14	335
040	200	156	167	221	200	139	118	147	150	146	176	176	277	223	263	220	231	259	247	233	232	260	4441
042	67	70	46	50	55	46	70	67	60	64	76	64	93	98	117	67	70	97	93	83	94	106	1653
043	194	145	157	182	129	93	98	173	170	201	266	248	367	264	234	255	243	258	186	252	162	165	4442
044	21	29	17	27	25	27	27	21	26	22	20	22	25	17	15	17	18	19	16	16	11	13	451
047	132	138	77	109	115	99	71	69	73	97	81	91	127	125	142	123	124	143	143	134	104	155	2472
048	39	35	21	31	22	27	32	41	21	13	20	10	21	10	9	11	4	10	14	6	5	8	410
049	97	111	63	79	102	74	70	90	83	97	131	91	131	99	97	96	70	92	108	127	104	104	2116
051	16	11	9	15	15	5	6	8	10	6	9	11	13	13	14	22	18	15	14	10	22	7	269
052	509	543	307	406	453	347	306	440	373	507	543	441	580	542	493	426	453	495	481	580	591	698	10514
053	89	92	63	82	85	69	51	55	97	108	122	86	96	87	105	78	79	70	91	93	83	97	1878
054	11	6	16	10	14	12	16	14	19	15	15	18	15	14	23	28	19	22	20	15	11	26	359
055	71	75	73	90	90	69	50	64	68	52	67	81	94	94	88	105	91	49	71	72	55	90	1659
056	104	75	68	116	133	73	58	77	84	68	94	75	84	122	117	105	95	95	118	96	54	84	1995
057	34	37	30	19	30	18	27	32	27	44	37	35	38	32	17	34	41	39	16	13	25	36	661
059	16	20	11	14	6	7	8	12	10	10	11	8	12	12	8	5	6	13	13	8	14	5	229
060	226	215	152	228	177	166	167	152	141	119	149	138	130	102	108	114	121	101	95	89	93	130	3113
062	146	112	110	134	157	135	126	146	160	158	156	151	188	196	165	163	189	188	165	174	154	202	3475
063	25	26	11	33	24	15	11	17	26	22	20	45	31	31	37	48	39	25	49	39	47	39	660
065	23	22	17	31	25	31	32	23	26	19	18	7	22	19	12	19	20	17	15	8	11	15	432
066	38	25	14	14	25	14	14	7	12	17	25	16	19	6	27	15	16	10	14	16	16	21	381
068	14	41	28	26	21	13	22	23	26	16	12	32	27	20	13	22	20	20	29	25	14	26	490
069	3	3	3	5	5	7	6	5	6	4	4	3	4	2	6	1	0	1	1	2	1	2	74
070	128	151	76	104	110	100	76	102	108	117	176	162	190	168	177	149	155	153	167	161	165	218	3113
071	19	29	15	24	26	22	14	19	19	16	15	10	21	15	11	30	16	18	21	20	26	23	429
072	146	119	79	112	133	98	76	89	112	114	112	85	122	103	97	69	78	73	63	80	91	106	2157
073	325	322	254	281	259	268	245	280	281	305	323	274	410	318	364	285	288	292	305	337	269	334	6619
074	201	222	155	176	228	143	131	179	204	221	251	207	260	209	226	230	201	195	185	214	183	203	4424
075	36	41	30	31	31	33	44	38	29	26	33	24	29	25	24	25	22	32	32	20	20	29	654

PATENTS GRANTED BY CLASS BY YEAR (ORs + XRs)

CLASS	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	TOTAL
076	24	20	12	21	23	26	19	22	29	36	22	27	28	24	22	28	21	14	22	17	27	15	499
079	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
081	110	98	75	98	134	111	106	141	161	167	148	177	201	188	204	160	183	179	143	186	149	190	3309
082	35	37	30	32	26	27	29	23	25	39	35	23	18	21	29	30	19	22	10	22	30	35	597
083	178	152	123	148	155	116	101	134	149	169	160	145	171	167	176	172	141	122	102	115	102	135	3133
084	141	122	102	117	149	129	85	101	117	88	161	120	134	129	136	112	111	128	145	162	118	167	2774
086	7	8	11	10	8	9	7	7	10	8	3	6	13	3	13	7	12	7	3	1	4	8	165
087	4	5	3	1	3	2	2	5	6	8	3	4	6	3	4	3	7	5	0	5	7	5	91
089	35	29	20	30	25	29	23	24	29	36	36	36	42	70	35	43	50	43	51	35	47	46	814
091	50	78	69	69	82	55	57	56	47	44	63	56	45	37	39	42	42	40	19	21	26	25	1062
092	50	74	45	55	76	45	50	55	68	47	61	75	71	65	70	46	49	59	46	38	25	40	1210
095	34	25	19	34	30	24	29	29	29	23	34	37	39	38	43	48	46	30	41	51	46	37	766
096	58	67	43	60	69	63	53	50	53	42	65	64	63	82	60	75	65	41	41	56	54	53	1277
099	96	131	108	123	85	112	87	137	133	123	139	130	146	148	141	130	144	147	179	173	182	213	3007
100	70	90	42	78	91	55	58	76	75	58	70	50	71	61	68	91	77	75	67	58	75	71	1527
101	98	87	46	61	62	44	50	65	63	64	62	55	69	68	73	69	66	78	85	53	55	82	1455
102	29	36	21	25	25	25	23	23	26	29	44	50	39	41	43	50	43	37	43	24	30	31	737
104	53	45	33	55	43	38	28	30	34	38	56	39	46	36	39	36	33	32	47	36	41	39	877
105	31	39	24	40	38	38	25	33	29	35	34	25	31	30	21	26	28	21	24	26	22	26	646
106	68	73	77	106	86	74	76	49	59	39	58	52	59	44	79	64	82	95	76	66	73	81	1536
108	95	128	74	94	84	79	70	80	88	111	102	101	144	116	122	134	89	129	125	145	143	161	2414
109	17	20	17	7	25	8	21	14	21	19	30	25	28	20	19	9	16	15	14	11	17	22	395
110	44	29	26	51	75	51	73	76	56	48	71	57	44	61	59	53	62	76	44	41	34	44	1175
111	36	41	19	34	45	22	21	24	22	26	27	27	22	34	24	26	18	27	32	36	27	22	612
112	37	33	25	28	44	26	26	32	38	42	34	27	35	22	39	35	26	22	27	31	29	46	704
114	186	174	92	133	166	151	129	139	171	167	255	195	262	260	245	198	199	199	182	198	192	212	4105
116	115	99	80	92	70	65	46	71	67	86	76	105	124	119	142	86	98	117	95	110	93	85	2041
117	9	8	11	8	10	6	9	4	7	8	11	14	2	9	7	7	5	8	13	7	5	15	183
118	73	91	51	67	96	62	58	50	82	71	88	76	73	68	98	69	76	84	79	67	77	93	1649
119	146	97	124	172	150	157	96	127	138	111	122	161	169	205	248	264	212	222	202	237	227	341	3928
122	35	33	35	44	54	46	70	63	43	35	43	27	42	30	25	19	19	35	18	20	18	25	779
123	245	279	187	219	193	249	231	240	212	181	207	161	218	197	224	199	181	177	165	179	160	194	4498
124	54	50	50	45	53	51	26	46	53	59	71	61	86	64	72	76	79	82	91	87	105	82	1443
125	23	26	11	19	11	14	14	16	18	14	18	13	16	20	16	18	15	13	14	13	20	15	357
126	286	368	307	374	463	346	326	338	277	239	220	180	204	183	152	130	160	151	142	156	126	160	5288
127	4	11	11	4	15	2	3	5	2	4	3	1	1	4	4	11	5	7	8	5	4	7	121
128	153	116	110	147	151	124	113	139	155	183	224	153	283	284	353	307	294	367	363	368	336	428	5151
131	50	34	48	58	57	26	14	26	28	42	32	26	34	27	28	29	10	20	22	27	29	51	718
132	69	23	39	57	82	62	47	49	77	84	90	63	99	109	133	97	97	115	102	129	127	200	1950
134	85	92	65	98	75	68	80	62	69	73	88	103	122	104	140	120	109	110	137	125	104	140	2169
135	46	69	34	59	64	45	29	45	47	51	56	75	123	98	102	89	109	139	101	128	133	136	1778
136	22	41	53	41	38	42	40	20	26	22	28	22	29	21	24	23	19	22	24	26	24	26	633
137	271	317	211	328	374	263	205	261	295	286	326	296	385	325	329	344	311	335	264	259	265	309	6559
138	83	101	77	90	89	89	67	87	71	98	93	71	94	79	92	84	74	75	76	74	58	81	1803
139	22	31	22	15	16	16	19	12	14	12	20	7	22	9	21	16	12	15	23	15	11	15	365
140	19	23	12	15	17	17	17	11	20	17	19	14	10	15	10	8	8	13	12	12	10	15	314
141	82	82	71	84	88	86	47	67	78	83	105	80	114	92	109	103	102	115	120	123	98	108	2037
142	4	3	1	2	2	1	2	0	6	6	3	3	1	5	7	5	2	3	4	3	5	3	71
144	64	94	63	76	111	81	75	94	87	86	89	101	98	90	98	97	74	82	72	68	82	82	1864
147	0	0	1	1	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	7
148	32	32	20	19	25	22	26	29	15	15	28	19	23	31	27	36	32	39	29	16	23	26	564

PATENTS GRANTED BY CLASS BY YEAR (ORs + XRs)

CLASS	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	TOTAL
149	5	15	6	13	9	7	9	3	5	3	7	4	5	4	5	2	4	5	3	8	5	7	134
150	20	16	23	29	16	13	10	7	16	17	22	34	43	62	62	40	45	43	46	57	52	61	734
152	20	35	35	39	52	29	30	21	14	16	29	24	47	28	28	23	29	33	19	25	19	27	622
156	204	218	143	214	246	206	154	148	213	210	196	182	216	206	183	208	190	207	226	186	176	240	4372
157	11	12	9	7	11	3	7	5	8	4	5	13	6	8	7	8	6	4	5	6	3	4	152
159	20	9	12	25	21	18	10	6	12	13	11	16	12	17	8	10	14	11	14	7	11	15	292
160	72	74	47	72	72	76	65	74	71	57	102	104	137	129	150	128	111	104	129	138	125	145	2182
162	17	25	18	34	25	21	11	21	24	17	22	23	20	26	22	20	27	26	21	24	28	29	501
163	0	0	0	0	0	1	0	0	1	0	1	0	1	1	0	0	0	0	0	1	1	0	7
164	62	60	41	50	46	27	16	41	42	53	51	34	43	43	27	21	32	34	25	34	23	28	833
165	156	169	160	210	221	179	161	163	146	135	158	134	117	111	91	115	99	117	103	107	67	125	3044
166	83	70	52	88	74	64	77	106	94	83	116	77	93	88	100	116	89	107	91	89	76	108	1941
168	2	6	2	9	5	2	5	3	7	5	4	8	10	10	16	14	11	5	2	6	8	7	147
169	33	28	15	21	27	18	14	22	16	24	30	17	27	26	36	38	26	24	19	38	41	41	581
171	13	10	12	14	14	10	3	6	7	5	6	4	0	10	7	9	10	13	4	3	2	5	167
172	131	134	93	108	103	102	65	78	81	91	71	61	95	110	75	68	64	67	95	82	66	97	1937
173	42	58	33	38	51	40	27	30	26	45	45	27	50	37	43	38	24	30	30	34	23	41	812
174	77	63	53	60	68	71	67	73	66	106	85	96	97	86	97	94	91	90	76	87	87	147	1837
175	75	98	48	79	88	49	93	93	78	58	79	65	85	81	82	84	61	61	73	68	48	74	1620
177	32	27	17	20	25	28	30	25	24	26	34	34	38	26	22	21	24	16	16	10	19	27	541
178	7	9	10	9	9	8	4	3	8	5	9	8	6	3	8	4	6	4	4	11	5	8	148
180	131	155	126	146	120	119	108	100	111	141	146	134	156	112	141	127	114	146	141	150	118	142	2884
181	54	58	50	83	57	60	41	51	55	55	59	51	73	74	54	58	69	52	44	47	51	66	1262
182	94	121	80	85	109	68	83	127	128	166	133	116	128	137	155	150	99	134	101	111	111	154	2590
184	26	30	16	14	20	28	19	20	32	28	28	23	37	48	39	37	37	38	53	55	28	35	691
185	8	12	2	9	9	5	4	5	3	4	5	2	7	5	2	4	2	1	1	4	5	2	101
186	5	6	7	5	5	4	2	3	3	7	4	5	3	2	6	9	4	3	11	7	6	5	112
187	25	24	13	19	17	16	16	24	19	14	25	17	16	19	27	27	29	37	25	30	27	24	490
188	118	87	78	77	78	64	52	71	77	79	86	73	113	88	76	70	77	96	95	101	83	110	1849
190	20	24	16	28	22	11	19	21	20	29	29	37	43	42	42	41	40	36	48	57	49	50	724
191	8	18	14	10	9	6	8	8	4	8	9	7	5	8	5	9	5	12	8	6	10	9	186
192	45	55	32	39	74	48	31	46	56	48	49	24	53	42	61	45	34	40	31	67	46	31	997
193	32	18	12	15	20	20	18	13	12	14	22	22	16	14	16	16	19	10	16	11	9	10	355
194	16	15	21	20	14	13	20	13	19	16	13	18	11	13	21	16	18	14	21	23	16	12	363
196	5	4	2	3	8	7	6	0	4	0	3	3	2	6	1	2	2	4	4	3	1	9	79
198	128	117	91	138	120	127	101	85	122	128	114	128	130	137	128	135	110	117	84	76	74	89	2479
200	148	130	110	116	124	117	89	98	100	82	106	94	137	118	118	104	93	94	92	95	92	119	2376
201	18	17	8	15	20	12	14	9	5	9	9	2	11	3	2	10	3	6	7	3	3	5	191
202	43	28	30	56	56	45	36	23	25	31	20	22	22	32	15	17	21	19	21	15	21	23	621
203	25	16	16	34	37	42	21	24	33	35	43	28	31	48	22	35	39	25	52	19	30	40	695
204	92	99	65	91	94	72	76	87	55	65	78	64	107	102	81	108	88	95	116	85	88	92	1900
205	43	79	33	51	66	37	46	39	32	30	49	30	33	36	32	47	51	59	54	41	38	46	972
206	255	251	226	314	286	258	210	251	276	309	335	411	535	504	510	461	493	456	447	431	440	625	8284
208	26	27	29	25	34	23	24	29	18	9	9	8	26	22	16	19	12	15	15	26	12	18	442
209	60	74	77	90	100	73	67	71	74	68	62	69	80	74	81	75	97	74	64	53	57	59	1599
210	244	226	218	309	286	241	207	220	238	226	263	286	356	324	362	403	372	324	334	368	344	366	6517
211	168	174	108	149	129	143	101	138	149	154	177	190	236	214	270	251	221	214	197	262	219	300	4164
212	30	31	14	26	38	17	15	20	21	18	29	30	30	24	24	17	19	17	23	25	19	25	512
213	2	5	1	6	1	6	5	3	3	4	3	2	3	1	3	3	0	2	0	2	0	2	57
215	70	74	46	66	66	59	51	97	104	74	103	131	134	117	118	97	91	87	103	89	96	101	1974
216	11	7	7	7	10	13	10	11	16	12	15	24	12	13	18	17	11	21	24	10	10	17	296

PATENTS GRANTED BY CLASS BY YEAR (ORs + XRs)

CLASS	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	TOTAL
217	17	17	10	16	9	8	5	12	6	5	15	10	13	11	7	8	9	8	4	5	6	7	208
218	8	1	1	0	4	4	1	0	4	6	2	2	3	2	1	1	3	3	1	6	1	1	55
219	156	166	134	153	157	171	142	133	185	145	173	158	204	201	177	155	167	154	169	153	148	205	3606
220	204	205	177	232	224	218	157	204	243	242	255	293	381	402	401	384	412	368	348	388	327	413	6478
221	63	63	54	65	68	50	46	50	57	72	71	54	61	69	86	81	70	78	65	76	49	81	1429
222	257	273	230	246	251	175	177	229	207	211	217	207	306	283	334	309	293	325	292	296	249	291	5658
223	42	39	24	30	33	26	15	22	36	48	48	35	41	50	56	45	30	29	32	47	64	51	843
224	136	137	96	133	183	135	132	168	133	122	140	214	263	289	285	245	262	266	288	309	298	328	4562
225	15	19	7	15	22	13	21	23	24	17	22	22	32	21	27	32	14	17	15	22	10	22	432
226	49	26	26	33	34	33	25	31	29	18	29	29	24	24	13	11	17	10	18	14	14	17	524
227	27	33	19	29	33	28	26	32	32	31	38	29	43	23	29	30	37	31	33	26	36	30	675
228	40	42	41	43	34	49	41	31	45	54	48	43	49	47	36	43	43	30	42	39	32	25	897
229	62	74	33	72	64	52	47	65	63	77	83	98	131	118	138	104	105	98	93	79	82	113	1851
231	1	1	2	1	0	0	1	2	3	0	1	1	1	1	2	3	0	1	0	0	1	0	22
232	24	28	18	19	16	22	21	11	24	13	28	33	32	42	44	25	27	18	39	23	29	19	555
234	0	1	1	0	0	0	1	0	1	2	1	1	2	0	0	2	0	0	0	0	0	2	14
235	66	67	46	53	56	61	47	55	50	54	58	60	86	64	55	55	53	67	93	83	76	80	1385
236	37	40	41	53	62	60	56	50	61	42	44	36	49	32	23	33	27	38	29	20	18	25	876
237	56	100	92	40	50	65	56	53	46	36	34	36	39	36	29	19	24	19	12	18	15	14	889
238	9	18	12	21	19	14	8	15	8	4	14	8	16	18	14	17	13	9	15	21	10	22	305
239	205	202	155	218	217	156	140	146	145	180	167	187	224	223	201	195	201	252	168	138	191	248	4159
241	97	76	51	83	90	58	63	44	63	73	76	76	95	89	89	90	128	107	99	96	83	94	1820
242	176	154	108	116	121	90	102	111	144	97	145	134	139	124	111	97	112	115	97	114	118	127	2652
244	96	98	66	72	74	67	68	84	61	82	110	94	114	79	114	127	102	86	67	81	59	107	1908
245	1	2	0	1	1	2	0	3	1	0	1	2	2	0	2	0	3	2	1	2	2	0	28
246	4	14	3	7	6	8	2	3	3	2	5	8	5	6	7	3	8	7	14	6	9	15	145
248	363	413	245	370	347	318	265	357	369	408	482	452	597	632	713	659	569	577	548	604	551	747	10586
249	93	97	54	65	58	49	46	62	57	41	66	58	72	54	57	48	44	57	35	45	61	60	1279
250	161	121	91	136	145	127	77	115	112	117	160	114	206	169	182	165	147	125	174	150	154	176	3124
251	116	141	96	129	147	103	112	130	172	139	163	133	169	136	135	165	141	153	138	117	107	124	2966
252	58	57	49	60	68	38	72	79	50	61	69	57	60	56	56	60	46	49	64	80	68	66	1323
254	137	117	74	104	118	93	70	117	103	87	111	106	115	105	92	99	114	96	102	89	101	95	2245
256	45	54	33	27	44	29	24	30	39	26	42	30	49	33	54	52	34	52	52	54	61	55	919
257	30	27	23	20	31	19	30	26	29	26	39	29	41	39	40	51	39	48	62	58	72	85	864
258	1	1	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5
260	5	7	8	8	5	0	6	3	3	2	0	4	3	2	3	1	1	1	0	0	1	0	63
261	153	118	98	118	129	103	100	93	68	73	72	58	70	72	80	81	57	54	57	56	54	58	1822
264	178	238	151	227	275	178	169	174	178	176	193	204	234	252	221	225	257	248	209	225	201	267	4680
266	40	28	19	33	34	42	53	48	25	37	26	30	29	15	22	19	19	22	30	19	26	21	637
267	53	44	30	35	32	29	26	30	36	45	74	51	71	46	47	36	33	43	38	42	28	36	905
269	70	104	85	99	99	75	68	86	102	98	134	108	148	146	95	121	93	95	72	108	77	106	2189
270	10	12	7	5	13	2	10	8	12	10	7	9	8	12	6	5	6	9	5	5	3	7	171
271	41	23	24	27	25	34	20	38	35	40	48	30	34	26	31	33	33	19	29	21	11	19	641
273	303	243	194	258	259	216	156	210	243	188	209	210	301	300	341	307	295	359	325	302	303	370	5892
277	37	52	40	65	59	46	46	56	65	47	42	47	53	55	49	47	36	50	41	45	38	27	1043
278	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	1	0	0	0	0	4
279	30	44	18	42	44	30	29	30	44	56	51	27	39	44	53	34	28	34	31	30	24	34	796
280	390	420	300	348	365	345	295	315	323	396	387	429	506	415	480	442	495	565	515	518	391	596	9236
281	11	17	23	18	24	19	24	39	40	50	49	39	61	62	61	52	57	47	58	49	59	73	932
283	25	25	32	32	49	32	33	42	46	64	67	39	73	89	67	81	89	84	73	67	65	100	1274
285	117	124	97	125	131	102	78	111	109	126	152	110	159	112	138	125	114	133	109	95	91	120	2578

PATENTS GRANTED BY CLASS BY YEAR (ORs + XRs)

CLASS	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	TOTAL
289	13	13	4	8	5	7	9	4	5	8	6	2	6	3	6	5	3	4	7	7	11	5	141
290	45	60	47	64	74	64	48	51	41	32	31	31	25	18	18	19	10	24	30	13	18	34	797
291	2	3	1	0	1	2	0	2	1	2	0	2	2	1	0	2	0	0	0	3	0	0	24
292	85	124	74	100	87	64	82	90	64	101	137	98	123	101	137	122	84	88	90	115	110	98	2174
293	20	14	14	19	10	14	13	11	10	16	18	13	22	28	23	22	18	13	8	10	19	17	352
294	182	191	124	182	185	122	101	166	167	157	200	211	229	199	187	177	182	175	203	191	175	229	3935
295	2	2	2	1	0	2	0	2	3	3	3	1	0	2	2	1	0	0	2	3	1	0	32
296	113	140	110	132	134	102	81	91	112	110	161	155	199	226	231	188	159	157	155	184	168	214	3322
297	155	147	89	154	121	101	92	115	148	183	200	188	268	233	235	224	182	280	224	280	247	294	4160
298	22	21	13	18	19	15	16	12	11	25	25	13	20	16	26	15	19	13	15	13	11	16	374
299	35	42	28	37	45	18	38	40	25	20	34	32	34	26	27	24	32	12	20	13	22	20	624
300	5	4	4	6	3	0	3	4	3	5	6	1	4	3	9	5	5	5	6	2	6	6	95
301	26	28	16	28	36	19	16	30	18	28	32	33	27	43	45	44	39	42	37	52	30	43	712
303	13	16	18	13	11	7	4	6	6	11	13	9	11	16	9	14	21	16	21	13	17	13	278
305	10	16	5	9	5	3	5	15	5	10	7	9	10	6	6	3	9	11	13	4	8	10	179
307	78	74	59	58	68	67	55	63	42	43	80	69	95	59	63	63	61	59	72	106	103	120	1557
310	77	77	44	94	68	68	69	75	62	84	82	78	93	60	70	79	78	66	72	69	72	104	1641
312	116	153	96	113	124	85	87	104	89	96	114	114	122	119	103	138	125	117	125	144	126	174	2584
313	39	42	22	19	34	36	22	27	26	30	37	36	40	42	34	30	21	22	32	39	27	41	698
314	6	1	1	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	11
315	53	61	45	50	69	52	48	50	49	45	73	57	89	91	104	64	66	50	85	74	49	79	1403
318	58	71	35	55	57	69	45	61	55	60	68	64	68	78	61	45	49	65	69	62	44	71	1310
320	13	11	12	16	11	20	14	12	10	20	26	12	19	14	13	29	41	28	19	36	42	41	459
322	14	12	8	14	16	11	9	14	10	6	14	9	8	6	11	10	10	4	3	13	11	8	221
323	23	13	16	16	22	18	17	22	19	33	15	34	21	27	23	20	18	11	25	19	27	27	461
324	130	120	70	95	101	92	77	107	104	83	114	115	171	134	128	130	112	108	146	148	104	148	2537
326	4	1	3	3	2	5	3	4	2	5	6	6	7	8	6	11	9	18	8	11	12	15	149
327	54	46	39	49	38	38	28	30	22	17	32	23	37	34	26	37	26	35	29	37	18	42	737
329	3	4	2	4	4	3	2	5	5	7	3	3	3	0	6	4	3	3	8	4	2	2	80
330	30	15	19	16	19	13	8	21	20	16	25	23	31	12	17	16	8	9	9	19	16	22	384
331	25	23	13	19	16	14	8	21	7	13	23	4	14	13	15	6	8	7	6	13	9	17	294
332	5	2	3	6	7	2	4	6	3	9	2	3	3	3	6	2	2	3	7	6	2	2	88
333	18	24	8	22	27	16	20	22	23	26	24	26	32	23	24	25	25	23	25	25	19	30	507
334	1	2	1	2	6	0	3	4	1	2	1	0	0	1	0	0	0	0	2	0	0	0	26
335	31	35	17	37	34	38	30	24	28	19	32	33	26	19	23	20	25	27	21	29	26	23	597
336	22	13	8	16	17	15	12	18	18	11	17	10	17	15	10	11	10	15	15	19	13	17	319
337	22	19	21	11	21	30	26	15	22	9	17	15	16	13	15	15	10	7	10	11	18	21	364
338	31	23	25	28	36	25	25	15	25	23	23	26	28	31	25	21	17	12	6	14	13	14	486
340	280	253	179	272	301	267	210	176	204	206	312	300	467	350	357	320	276	304	363	432	456	546	6831
341	29	27	14	16	27	20	19	13	24	25	38	30	52	33	23	30	37	23	37	40	54	54	665
342	33	42	19	35	32	35	9	25	21	23	44	21	30	37	28	35	44	47	39	62	46	74	781
343	31	50	33	38	35	28	18	20	18	35	37	33	44	35	45	13	31	26	38	38	30	47	723
345	24	28	25	16	31	31	22	26	23	29	40	61	79	58	49	62	46	82	84	107	133	173	1229
346	20	25	12	24	25	9	18	13	20	14	14	18	19	13	14	8	5	4	5	7	2	2	291
347	13	12	5	6	14	17	10	8	11	9	15	18	20	15	14	14	10	17	19	18	21	30	316
348	38	46	41	56	71	58	50	37	60	74	76	63	103	125	118	101	84	93	118	146	130	155	1843
349	8	9	5	11	7	3	9	2	9	7	12	12	13	14	9	17	8	7	26	23	17	16	244
351	30	37	37	35	59	35	47	40	46	42	71	72	122	100	90	88	73	78	98	85	93	101	1479
352	40	33	24	32	22	13	24	18	23	28	26	11	16	26	32	18	19	11	13	16	15	17	477
353	31	39	30	20	30	19	29	20	20	19	14	14	14	19	15	16	21	17	25	15	15	17	459
355	40	57	31	49	40	33	21	34	50	36	32	30	34	19	29	25	17	23	15	10	16	15	656

PATENTS GRANTED BY CLASS BY YEAR (ORs + XRs)

CLASS	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	TOTAL
356	75	84	60	93	115	62	64	68	84	62	87	78	110	100	115	108	108	87	111	115	112	130	2028
358	9	10	9	11	16	11	8	7	15	25	14	18	20	23	26	21	22	33	40	31	26	30	425
359	151	162	126	139	159	124	116	121	134	157	172	169	202	233	176	193	169	173	162	165	136	202	3541
360	51	46	35	45	34	38	27	33	44	52	64	40	59	47	46	42	50	43	40	47	31	45	959
361	112	98	74	88	77	98	72	93	93	87	129	106	153	105	118	131	112	102	139	145	148	205	2485
362	113	139	100	143	136	118	87	120	146	160	163	211	254	266	298	274	214	272	300	324	314	400	4552
363	23	14	14	17	26	23	13	27	23	20	36	30	43	29	30	26	36	25	22	31	32	35	575
364	66	64	44	68	66	74	47	82	86	75	104	102	155	134	116	118	120	152	145	185	144	160	2307
365	13	14	11	11	7	12	10	12	8	8	8	8	19	11	23	19	31	33	28	34	37	40	397
366	78	92	77	110	73	81	75	96	77	80	71	95	91	92	80	68	70	79	93	97	77	99	1851
367	24	39	22	51	40	35	21	24	34	29	50	31	45	65	40	59	63	30	38	38	38	37	853
368	51	67	28	39	34	30	35	48	40	40	44	54	48	56	56	56	58	65	37	38	53	62	1039
369	25	49	26	35	29	34	24	22	33	19	27	39	30	22	32	25	28	28	47	30	33	48	685
370	11	10	7	11	15	18	17	15	12	18	18	13	28	19	19	23	19	12	43	57	41	62	488
371	10	5	1	7	4	3	7	4	4	9	16	9	17	6	11	11	6	12	17	19	10	18	206
372	11	17	9	15	13	13	15	22	18	15	14	31	34	46	31	16	24	28	32	28	31	27	490
373	24	15	15	15	12	5	10	12	4	6	7	9	6	9	6	9	5	9	9	7	2	4	200
374	41	42	30	22	43	37	35	33	51	30	33	40	46	39	32	34	28	29	17	27	31	48	768
375	17	14	8	23	6	18	13	13	14	22	17	13	32	19	31	29	18	24	33	46	39	39	488
376	33	24	18	42	31	37	33	24	20	20	21	18	16	22	16	22	15	16	21	14	17	17	502
377	43	42	25	28	35	20	25	27	23	10	17	16	31	13	13	15	14	12	12	12	6	4	443
378	43	37	26	32	25	30	21	25	26	45	32	36	40	43	55	50	44	35	33	48	26	47	799
379	65	70	42	49	49	45	53	55	47	75	82	102	128	98	103	94	56	81	108	123	111	145	1781
380	3	7	13	12	11	11	4	8	14	17	20	18	20	37	49	38	41	47	30	42	61	60	563
381	78	53	50	62	58	56	42	64	50	56	69	49	102	85	59	68	69	65	56	72	81	150	1494
382	8	8	11	11	10	4	6	12	15	18	22	19	26	25	38	30	37	23	43	54	57	72	549
383	42	50	49	54	57	33	34	37	56	62	73	92	108	107	120	83	91	92	103	83	75	99	1600
384	43	47	23	51	49	39	41	39	59	56	53	49	53	57	48	51	46	65	56	44	33	47	1049
385	16	11	7	20	17	11	11	21	23	22	49	59	49	57	63	34	39	57	42	56	46	87	797
386	7	6	5	12	8	6	16	14	14	13	16	12	21	17	19	13	14	10	9	10	15	10	267
388	6	5	1	1	7	7	2	10	4	5	3	3	2	5	10	2	4	9	4	8	3	4	105
392	54	46	38	41	44	61	49	29	47	50	45	46	50	40	28	43	44	48	48	34	32	58	975
395	9	2	2	10	14	14	9	18	14	13	18	24	31	32	33	44	30	46	69	101	118	190	841
396	68	73	69	88	76	63	36	47	67	39	59	63	52	64	70	40	35	52	28	47	38	81	1255
399	12	5	9	13	8	5	8	4	5	5	7	3	9	13	10	16	16	16	21	7	13	19	224
400	40	30	18	25	35	19	21	52	53	31	43	35	43	39	40	37	47	35	59	43	37	42	824
401	66	60	55	65	62	57	46	46	67	68	67	79	95	115	133	99	83	112	80	91	52	83	1681
402	6	6	9	12	18	13	15	16	21	30	24	16	32	26	37	27	26	28	20	31	33	43	489
403	188	236	150	164	164	162	162	184	206	233	266	217	259	239	204	212	203	210	210	214	201	211	4495
404	58	86	36	59	61	71	45	55	46	72	92	78	97	117	108	92	105	90	106	87	96	85	1742
405	175	170	94	126	148	136	98	136	97	118	180	142	205	187	222	208	210	152	162	223	158	192	3539
406	37	22	23	34	19	16	17	20	24	13	22	15	27	20	27	21	17	6	15	18	12	10	435
407	21	20	14	18	19	18	12	19	12	28	20	15	12	18	29	22	17	11	10	6	22	19	382
408	73	89	53	69	65	62	52	64	70	97	79	59	74	87	107	74	53	71	67	58	66	91	1580
409	41	32	30	34	42	36	22	29	42	67	54	49	46	58	52	44	40	26	33	33	55	57	922
410	30	34	19	30	27	25	27	23	24	21	27	34	46	43	45	35	37	31	51	46	35	47	737
411	78	82	45	63	73	64	56	66	67	76	101	93	98	130	79	106	113	82	96	120	103	118	1909
412	2	8	6	5	6	5	5	6	8	4	6	4	4	10	7	7	11	4	9	6	10	8	141
413	4	2	2	3	3	8	2	1	2	4	2	1	1	1	3	3	1	5	0	5	1	3	57
414	311	276	154	214	256	206	188	192	213	217	226	241	225	227	265	261	223	232	226	217	199	210	4979
415	80	64	55	67	79	59	61	59	63	30	45	63	40	30	42	46	50	49	51	51	29	32	1145

PATENTS GRANTED BY CLASS BY YEAR (ORs + XRs)

CLASS	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	TOTAL
416	85	76	68	78	82	78	66	63	74	62	77	58	68	54	39	58	69	64	68	57	41	48	1433
417	143	156	101	145	146	114	140	135	160	147	138	150	151	106	140	121	134	122	118	118	107	119	2911
418	67	54	42	45	32	28	34	43	39	23	46	31	30	44	32	45	36	37	40	30	32	35	845
419	8	15	5	9	5	7	6	9	7	11	12	7	9	13	14	8	3	13	7	12	10	7	197
420	24	24	21	17	17	12	23	12	8	3	12	7	20	14	20	13	8	18	16	8	11	11	319
422	133	133	119	108	157	134	119	111	96	122	122	131	147	146	169	187	180	181	211	178	178	213	3275
423	101	107	73	68	84	62	80	68	70	48	64	66	67	63	56	65	61	75	61	69	44	66	1518
424	76	77	83	101	117	94	85	105	99	109	126	137	209	183	192	196	196	174	213	251	335	391	3549
425	192	177	119	156	193	123	148	143	154	137	168	201	202	177	158	148	152	150	151	141	131	156	3477
426	129	113	118	133	139	115	96	100	129	104	132	140	204	181	180	143	144	120	147	162	175	181	3085
427	123	144	95	142	175	119	122	108	148	110	147	119	144	126	136	128	113	129	134	123	132	167	2884
428	319	322	242	324	351	310	264	268	351	333	329	350	417	399	353	333	338	342	354	350	341	392	7382
429	34	34	19	29	34	23	34	31	27	25	24	27	32	24	28	35	34	31	42	94	43	45	749
430	37	27	21	35	45	35	45	28	33	27	29	37	19	34	36	18	18	22	32	32	22	41	673
431	59	69	42	45	75	46	65	69	61	61	62	51	64	59	51	58	49	64	59	62	44	75	1290
432	49	32	29	62	67	44	57	58	35	47	41	39	34	31	29	30	23	26	18	15	20	24	810
433	105	67	69	162	143	109	93	137	139	131	132	151	160	152	213	196	170	183	132	171	150	245	3210
434	154	120	93	121	130	120	103	130	123	109	157	136	189	142	162	170	200	161	162	189	179	227	3277
435	74	62	45	77	104	99	74	79	55	66	99	91	118	114	114	131	151	155	171	189	247	364	2679
436	34	52	42	42	62	38	38	58	35	49	56	69	81	53	78	72	89	93	87	114	116	143	1501
438	13	16	11	12	19	17	21	11	21	15	24	18	16	19	25	30	25	34	47	29	25	50	498
439	124	100	95	77	78	65	61	87	102	112	148	162	180	188	164	187	161	183	176	187	189	246	3072
440	49	37	26	33	41	37	38	37	48	50	75	53	69	73	85	65	69	64	62	68	70	77	1226
441	47	37	21	34	42	38	31	31	59	71	73	72	83	92	86	79	70	96	84	76	84	91	1397
442	19	18	17	28	25	23	17	25	33	20	25	25	35	28	19	22	23	32	42	28	27	49	580
445	6	6	4	4	4	1	4	4	1	5	3	4	3	4	2	4	2	3	5	3	6	5	83
446	149	167	129	203	187	118	104	103	135	141	185	158	221	243	244	245	220	243	206	225	178	260	4064
449	3	3	6	10	11	10	12	10	11	4	5	7	1	1	7	3	0	3	4	1	5	2	119
450	8	9	8	14	19	14	15	4	7	10	12	8	20	14	14	16	18	7	17	18	21	28	301
451	123	115	71	107	96	71	56	76	100	105	131	117	122	124	126	107	142	94	103	109	113	107	2315
452	38	32	22	38	48	36	33	26	46	58	47	35	28	47	32	47	41	42	34	36	22	23	811
453	4	12	6	7	5	3	6	5	9	7	2	5	8	5	11	6	4	5	7	5	4	2	128
454	75	69	58	68	59	63	56	61	89	60	75	72	84	98	70	94	62	71	52	75	59	87	1557
455	58	54	36	53	60	49	34	39	26	37	53	60	76	57	75	74	60	54	83	118	84	122	1362
460	4	2	8	4	10	5	11	6	10	6	3	5	5	12	12	11	6	6	10	17	2	11	166
462	7	3	6	6	6	3	7	4	9	8	13	7	10	8	2	11	19	12	12	6	5	6	170
463	27	22	15	12	21	18	10	24	25	16	33	24	38	26	37	39	37	50	31	45	50	94	694
464	30	39	22	29	30	22	15	20	16	18	25	22	33	22	21	19	15	24	18	16	26	19	501
470	24	17	6	5	11	15	6	6	9	8	12	9	16	18	7	8	11	13	8	7	6	8	230
472	33	34	23	31	47	18	19	22	26	35	24	30	41	66	41	40	48	49	46	47	48	75	843
473	238	242	200	220	221	165	119	162	204	166	210	211	326	368	386	382	368	450	483	449	431	541	6542
474	39	32	25	30	33	23	17	29	42	35	48	33	55	38	47	24	36	45	44	36	33	25	769
475	23	23	12	29	28	21	15	17	23	22	34	46	49	36	44	44	30	26	28	39	26	30	645
476	7	4	1	9	5	3	2	5	3	7	5	5	6	1	6	3	4	5	6	10	5	3	105
477	10	8	7	7	19	12	8	18	10	7	6	7	10	12	9	4	4	5	11	14	9	10	207
482	77	111	68	138	133	137	107	126	153	207	206	224	260	276	286	283	283	305	265	316	331	395	4687
483	0	0	1	6	1	3	2	2	4	2	5	4	1	2	5	3	1	5	2	1	3	5	58
492	8	15	7	9	14	13	6	8	8	11	8	7	13	17	6	6	13	5	16	15	11	15	231
493	54	37	22	37	36	46	29	28	43	46	49	29	39	43	55	61	45	44	33	33	30	53	892
494	12	15	14	14	13	12	4	6	7	6	8	8	11	10	17	10	12	17	8	9	10	15	238
501	18	19	14	17	14	8	19	24	17	15	15	14	18	26	24	24	26	28	25	27	22	22	436

PATENTS GRANTED BY CLASS BY YEAR (ORs + XRs)

CLASS	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	TOTAL
502	23	25	17	27	24	25	24	15	21	21	26	14	20	19	28	26	28	21	20	17	21	26	488
503	2	3	1	3	1	3	6	0	1	2	0	2	4	4	4	5	2	4	1	4	3	7	62
504	6	12	6	5	9	9	3	7	9	5	6	3	8	12	9	21	10	6	5	9	14	15	189
505	11	6	10	16	11	13	8	9	1	1	2	2	5	9	7	15	14	9	13	10	12	8	192
507	4	3	3	6	4	0	6	10	13	4	6	6	9	8	4	8	9	1	3	3	5	12	127
508	2	6	6	7	6	5	5	8	6	2	11	5	8	6	11	9	9	8	11	10	10	15	166
510	15	25	9	23	20	11	19	19	21	21	25	22	21	24	24	16	21	19	31	34	32	49	501
512	0	1	0	0	3	2	1	0	2	1	1	3	1	3	3	2	1	3	4	3	2	4	40
514	106	112	67	122	117	108	95	119	117	133	147	155	248	227	260	222	213	185	232	317	353	407	4062
516	5	11	5	11	8	4	13	8	8	6	7	3	7	12	12	6	10	8	7	10	10	5	176
518	1	4	1	2	1	0	3	0	3	3	3	0	2	0	0	2	1	2	2	3	0	2	35
520	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
521	24	33	20	37	51	38	29	25	26	20	16	28	22	16	18	29	29	22	22	16	21	32	574
522	8	4	7	4	7	6	5	4	8	2	8	7	3	6	2	5	5	3	12	10	5	5	126
523	26	41	26	21	27	28	29	25	20	21	17	24	26	31	27	25	37	25	39	26	32	45	618
524	69	68	44	70	51	61	60	40	39	36	44	38	52	49	56	56	43	51	53	58	55	81	1174
525	39	57	31	45	55	33	31	33	30	19	23	20	31	42	40	44	42	30	34	30	28	45	782
526	23	26	14	25	25	11	13	11	12	6	14	19	10	13	20	18	25	18	9	12	12	17	353
527	8	3	4	5	2	13	6	2	0	1	4	3	6	3	2	7	5	5	5	2	2	3	91
528	52	40	22	48	54	42	30	22	23	23	18	19	23	28	24	32	43	28	35	23	24	29	682
530	36	53	28	45	26	28	30	35	26	27	28	26	45	33	51	53	59	53	61	65	109	160	1077
534	3	7	1	4	7	1	1	5	3	4	5	3	7	7	5	4	4	3	3	2	5	8	92
536	18	23	18	30	22	17	14	18	14	16	22	23	28	31	35	43	29	29	48	81	88	145	792
540	18	13	7	5	3	10	9	3	6	5	12	6	10	8	11	5	7	4	8	6	20	10	186
544	10	17	5	17	21	11	17	17	21	18	13	10	18	22	15	18	14	14	18	23	20	19	358
546	13	16	15	14	13	14	11	13	17	16	15	12	23	21	11	20	19	16	20	30	25	23	377
548	12	13	14	16	14	12	9	21	16	17	13	17	23	15	20	26	15	21	16	30	20	17	377
549	22	10	7	15	20	11	9	8	6	13	10	5	15	17	15	10	20	12	11	15	18	27	296
552	8	4	4	11	7	4	2	9	1	4	2	2	3	6	9	3	2	1	5	2	3	2	94
554	16	10	5	8	11	8	4	6	9	7	3	3	7	7	8	5	4	11	9	10	11	8	170
556	18	16	10	12	12	12	7	4	11	7	7	7	5	8	12	10	7	7	11	12	14	7	216
558	13	7	11	6	9	10	5	16	7	5	6	7	12	10	4	10	12	4	12	11	6	10	193
560	21	9	9	8	15	9	18	13	17	8	21	12	23	16	13	16	21	15	13	21	13	13	324
562	19	10	12	11	17	13	12	14	11	11	13	15	26	14	14	14	21	13	17	13	17	15	322
564	13	14	11	7	15	9	11	14	14	8	6	6	15	13	12	12	9	8	19	19	17	11	263
568	24	23	11	11	18	15	14	6	17	17	22	10	23	20	23	31	23	17	31	15	18	34	423
570	4	2	3	4	3	2	3	1	2	1	2	0	5	3	5	15	3	0	3	3	5	2	71
585	12	15	15	7	9	7	14	16	13	11	12	5	23	20	16	25	17	9	31	16	15	26	334
588	2	5	5	12	9	15	12	11	16	14	18	12	15	10	6	11	24	35	43	40	46	35	396
600	135	136	110	168	175	131	142	153	169	207	256	190	279	283	319	281	341	372	372	314	253	494	5280
601	62	57	54	73	53	47	33	39	51	64	74	82	85	76	97	111	66	74	111	110	90	123	1632
602	42	36	37	58	60	35	53	53	69	76	81	79	88	93	108	96	99	103	118	90	115	174	1763
604	166	147	124	196	184	189	164	189	221	269	352	307	440	398	444	442	517	569	482	449	430	527	7206
606	83	83	69	114	121	91	91	143	152	207	211	208	248	238	292	344	385	440	425	461	546	605	5557
607	36	46	38	42	54	49	40	38	68	80	66	60	81	89	94	82	80	86	107	97	80	124	1537
623	55	61	49	52	85	62	53	64	74	120	129	118	138	136	126	172	137	141	127	175	153	185	2412
701	13	16	9	11	7	18	11	14	15	8	14	12	35	19	26	24	23	35	39	44	40	74	507
702	31	30	27	30	21	32	25	22	39	32	31	42	63	39	42	45	44	47	38	64	65	75	884
704	2	6	5	4	8	8	5	11	5	10	12	6	15	18	20	19	20	19	27	21	29	46	316
705	9	4	3	10	4	10	8	10	8	9	12	14	23	20	22	27	31	45	17	35	62	95	478
706	0	0	0	0	0	0	0	3	1	1	4	4	7	12	15	11	16	13	23	29	22	52	213

PATENTS GRANTED BY CLASS BY YEAR (ORs + XRs)

CLASS	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	TOTAL
707	2	9	0	1	3	3	0	5	11	3	6	4	13	13	10	12	23	33	36	25	46	91	349
711	4	6	1	0	6	3	4	7	2	4	4	7	6	5	7	6	10	10	19	19	32	31	193
800	0	1	0	1	0	0	0	0	1	3	2	2	1	1	2	1	2	3	5	4	7	29	65
901	9	6	4	11	18	9	15	11	14	26	37	26	26	17	35	26	22	18	19	19	16	20	404
902	7	5	3	2	6	10	7	11	3	23	30	8	8	5	6	4	5	6	6	2	12	9	178
930	5	25	4	14	6	5	8	6	7	9	19	19	11	0	0	3	3	3	0	0	2	4	153
968	74	81	42	50	42	36	39	52	42	32	49	53	54	46	1	0	0	0	0	1	0	2	696
976	36	31	21	45	30	33	40	32	23	29	24	31	33	16	7	5	2	1	4	4	3	3	453
984	100	99	90	109	120	114	74	91	96	80	134	106	120	76	0	0	0	0	0	0	0	0	1409
987	7	8	12	10	11	5	6	8	6	8	13	9	7	3	0	0	0	0	0	0	0	0	121
D01	7	8	8	7	3	11	4	1	5	4	10	7	6	20	22	9	13	17	10	19	24	27	242
D02	65	61	37	71	65	63	85	72	105	80	107	101	111	122	156	102	174	182	194	213	196	300	2662
D03	92	129	97	108	142	126	116	106	120	92	103	116	103	210	233	224	286	262	264	263	246	323	3761
D04	15	14	9	7	21	15	12	30	30	38	39	46	33	39	50	51	69	58	73	88	72	93	902
D05	15	6	11	8	5	5	6	6	8	2	2	6	8	6	5	5	4	5	6	5	11	15	150
D06	314	426	289	319	355	375	352	346	372	396	413	355	351	447	536	538	711	576	716	649	582	729	10147
D07	154	187	145	186	201	201	150	169	155	225	229	196	239	233	232	237	370	323	312	393	260	336	5133
D08	170	194	129	190	244	232	208	249	223	251	225	264	268	337	411	391	459	446	488	444	381	548	6752
D09	64	87	57	79	111	79	98	92	90	107	110	101	90	165	213	163	198	207	211	233	226	212	2993
D10	114	117	92	112	123	104	106	110	127	102	133	129	118	157	234	192	269	277	282	201	200	291	3590
D11	145	160	134	130	173	187	147	101	144	110	106	92	123	123	177	157	210	219	234	199	207	239	3517
D12	166	126	93	113	118	138	119	98	101	154	253	267	246	343	331	361	390	344	351	361	290	374	5137
D13	27	26	15	20	31	27	27	30	33	34	32	35	26	49	76	64	69	80	82	73	70	71	997
D14	53	56	47	47	87	69	50	71	63	76	87	80	89	119	137	124	173	150	181	181	177	200	2317
D15	86	62	48	54	70	100	101	110	82	65	54	56	62	84	55	124	139	90	152	141	86	98	1919
D16	32	20	17	22	28	23	22	33	26	36	32	29	21	63	42	57	48	55	49	80	63	82	880
D17	15	17	12	30	29	25	30	22	39	27	27	26	20	37	34	32	37	41	35	36	26	40	637
D18	31	24	24	26	27	20	13	30	26	34	38	18	22	28	43	27	51	26	28	31	17	30	614
D19	58	99	85	87	81	80	87	69	71	94	69	61	77	82	143	140	152	155	182	129	156	209	2366
D20	26	27	16	22	21	24	32	24	36	28	26	30	22	56	62	55	82	81	90	73	95	114	1042
D21	223	210	188	223	283	295	278	208	235	230	286	261	329	366	514	475	480	561	547	495	455	605	7747
D22	55	67	51	83	83	57	79	76	57	68	84	84	118	114	90	97	108	116	128	139	94	97	1945
D23	107	113	106	130	141	155	113	109	78	102	109	89	91	122	227	178	168	222	231	174	188	240	3193
D24	95	100	63	98	107	144	125	137	123	159	149	150	168	185	194	229	241	234	230	230	196	234	3591
D25	171	91	113	102	125	126	83	132	63	106	76	80	81	67	83	111	111	152	141	123	127	144	2408
D26	73	54	44	38	54	57	43	51	55	54	65	67	78	73	121	125	111	154	160	200	179	234	2090
D27	34	39	14	24	23	25	18	16	9	15	13	10	11	14	19	6	9	18	21	20	26	49	433
D28	35	31	40	38	52	44	42	55	60	78	45	58	84	147	82	57	86	130	104	112	127	114	1621
D29	18	13	11	29	12	21	26	21	35	30	27	54	37	52	33	42	57	62	74	62	59	51	826
D30	70	49	34	60	49	38	57	36	49	40	71	80	57	65	118	117	154	139	141	133	116	84	1757
D32	24	33	20	36	29	31	37	32	36	39	65	50	45	79	75	63	81	102	121	99	105	120	1322
D34	44	35	25	19	37	45	33	45	41	82	111	151	137	121	203	229	206	146	169	97	81	117	2174
D99	19	17	21	22	17	19	16	20	24	19	27	7	25	23	21	29	40	31	53	34	43	48	575
PLT	78	51	55	41	81	56	60	58	77	73	66	132	188	98	119	75	101	97	78	83	91	124	1882
TOTAL	28101		21211		28931		22191		26320		31127		36105		36630		34677		35866		34782		683854
		28686		27663		24711		24947		27146		29179		34804		34769		35509		36990		43509	

U.S. PATENT CLASSES AS OF 31-DEC-1998
TITLES ARRANGED IN CLASS NUMBER ORDER

UTILITY CLASSES

CLASS	TITLE
001	** Classification Undetermined **
002	Apparel
004	Baths, Closets, Sinks, and Spittoons
005	Beds
007	Compound Tools
008	Bleaching and Dyeing; Fluid Treatment and Chemical Modification of Textiles and Fibers
012	Boot and Shoe Making
014	Bridges
015	Brushing, Scrubbing, and General Cleaning
016	Miscellaneous Hardware
019	Textiles: Fiber Preparation
023	Chemistry: Physical Processes
024	Buckles, Buttons, Clasps, Etc.
026	Textiles: Cloth Finishing
027	Undertaking
028	Textiles: Manufacturing
029	Metal Working
030	Cutlery
033	Geometrical Instruments
034	Drying and Gas or Vapor Contact with Solids
036	Boots, Shoes, and Leggings
037	Excavating
038	Textiles: Ironing or Smoothing
040	Card, Picture, or Sign Exhibiting
042	Firearms
043	Fishing, Trapping, and Vermin Destroying
044	Fuel and Related Compositions
047	Plant Husbandry
048	Gas: Heating and Illuminating
049	Movable or Removable Closures
051	Abrasive Tool Making Process, Material, or Composition
052	Static Structures (e.g., Buildings)
053	Package Making
054	Harness
055	Gas Separation
056	Harvesters
057	Textiles: Spinning, Twisting, and Twining
059	Chain, Staple, and Horseshoe Making
060	Power Plants
062	Refrigeration
063	Jewelry
065	Glass Manufacturing
066	Textiles: Knitting
068	Textiles: Fluid Treating Apparatus
069	Leather Manufactures
070	Locks
071	Chemistry: Fertilizers
072	Metal Deforming
073	Measuring and Testing
074	Machine Element or Mechanism
075	Specialized Metallurgical Processes, Compositions for Use Therein, Consolidated Metal Powder Compositions, and Loose Metal Particulate Mixtures
076	Metal Tools and Implements, Making
079	Button Making
081	Tools
082	Turning
083	Cutting
084	Music
086	Ammunition and Explosive-Charge Making
087	Textiles: Braiding, Netting, and Lace Making

U.S. PATENT CLASSES AS OF 31-DEC-1998
TITLES ARRANGED IN CLASS NUMBER ORDER

UTILITY CLASSES

CLASS	TITLE
089	Ordnance
091	Motors: Expansible Chamber Type
092	Expansible Chamber Devices
095	Gas Separation: Processes
096	Gas Separation: Apparatus
099	Foods and Beverages: Apparatus
100	Presses
101	Printing
102	Ammunition and Explosives
104	Railways
105	Railway Rolling Stock
106	Compositions: Coating or Plastic
108	Horizontally Supported Planar Surfaces
109	Safes, Bank Protection, or a Related Device
110	Furnaces
111	Planting
112	Sewing
114	Ships
116	Signals and Indicators
117	Single-Crystal, Oriented-Crystal, and Epitaxy Growth Processes; Non-Coating Apparatus Therefor
118	Coating Apparatus
119	Animal Husbandry
122	Liquid Heaters and Vaporizers
123	Internal-Combustion Engines
124	Mechanical Guns and Projectors
125	Stone Working
126	Stoves and Furnaces
127	Sugar, Starch, and Carbohydrates
128	Surgery
131	Tobacco
132	Toilet
134	Cleaning and Liquid Contact with Solids
135	Tent, Canopy, Umbrella, or Cane
136	Batteries: Thermoelectric and Photoelectric
137	Fluid Handling
138	Pipes and Tubular Conduits
139	Textiles: Weaving
140	Wireworking
141	Fluent Material Handling, with Receiver or Receiver Coacting Means
142	Wood Turning
144	Woodworking
147	Coopering
148	Metal Treatment
149	Explosive and Thermic Compositions or Charges
150	Purses, Wallets, and Protective Covers
152	Resilient Tires and Wheels
156	Adhesive Bonding and Miscellaneous Chemical Manufacture
157	Wheelwright Machines
159	Concentrating Evaporators
160	Flexible or Portable Closure, Partition, or Panel
162	Paper Making and Fiber Liberation
163	Needle and Pin Making
164	Metal Founding
165	Heat Exchange
166	Wells
168	Ferriery
169	Fire Extinguishers

U.S. PATENT CLASSES AS OF 31-DEC-1998
TITLES ARRANGED IN CLASS NUMBER OR DER

UTILITY CLASSES

CLASS	TITLE
171	Unearthing Plants or Buried Objects
172	Earth Working
173	Tool Driving or Impacting
174	Electricity: Conductors and Insulators
175	Boring or Penetrating the Earth
177	Weighing Scales
178	Telegraphy
180	Motor Vehicles
181	Acoustics
182	Fire Escape, Ladder, or Scaffold
184	Lubrication
185	Motors: Spring, Weight, or Animal Powered
186	Merchandising
187	Elevator, Industrial Lift Truck, or Stationary Lift for Vehicle
188	Brakes
190	Trunks and Hand-Carried Luggage
191	Electricity: Transmission To Vehicles
192	Clutches and Power-Stop Control
193	Conveyors, Chutes, Skids, Guides, and Ways
194	Check-Actuated Control Mechanisms
196	Mineral Oils: Apparatus
198	Conveyors: Power-Driven
199	Type Casting
200	Electricity: Circuit Makers and Breakers
201	Distillation: Processes, Thermolytic
202	Distillation: Apparatus
203	Distillation: Processes, Separatory
204	Chemistry: Electrical and Wave Energy
205	Electrolysis: Processes, Compositions Used Therein, and Methods of Preparing the Compositions
206	Special Receptacle or Package
208	Mineral Oils: Processes and Products
209	Classifying, Separating, and Assorting Solids
210	Liquid Purification or Separation
211	Supports: Racks
212	Traversing Hoists
213	Railway Draft Appliances
215	Bottles and Jars
216	Etching a Substrate: Processes
217	Wooden Receptacles
218	High-Voltage Switches with Arc Preventing or Extinguishing Devices
219	Electric Heating
220	Receptacles
221	Article Dispensing
222	Dispensing
223	Apparel Apparatus
224	Package and Article Carriers
225	Severing by Tearing or Breaking
226	Advancing Material of Indeterminate Length
227	Elongated-Member-Driving Apparatus
228	Metal Fusion Bonding
229	Envelopes, Wrappers, and Paperboard Boxes
231	Whips and Whip Apparatus
232	Deposit and Collection Receptacles
234	Selective Cutting (e.g., Punching)
235	Registers
236	Automatic Temperature and Humidity Regulation

U.S. PATENT CLASSES AS OF 31-DEC-1998
TITLES ARRANGED IN CLASS NUMBER ORDER

UTILITY CLASSES

CLASS	TITLE
237	Heating Systems
238	Railways: Surface Track
239	Fluid Sprinkling, Spraying, and Diffusing
241	Solid Material Comminution or Disintegration
242	Winding, Tensioning, or Guiding
244	Aeronautics
245	Wire Fabrics and Structure
246	Railway Switches and Signals
248	Supports
249	Static Molds
250	Radiant Energy
251	Valves and Valve Actuation
252	Compositions
254	Implements or Apparatus for Applying Pushing or Pulling Force
256	Fences
257	Active Solid-State Devices (e.g., Transistors, Solid-State Diodes)
258	Railway Mail Delivery
260	Chemistry of Carbon Compounds
261	Gas and Liquid Contact Apparatus
264	Plastic and Nonmetallic Article Shaping or Treating: Processes
266	Metallurgical Apparatus
267	Spring Devices
269	Work Holders
270	Sheet-Material Associating
271	Sheet Feeding or Delivering
273	Amusement Devices: Games
276	Typesetting
277	Seal for a Joint or Junction
278	Land Vehicles: Animal Draft Appliances
279	Chucks or Sockets
280	Land Vehicles
281	Books, Strips, and Leaves
283	Printed Matter
285	Pipe Joints or Couplings
289	Knots and Knot Tying
290	Prime-Mover Dynamo Plants
291	Track Sanders
292	Closure Fasteners
293	Vehicle Fenders
294	Handling: Hand and Hoist-Line Implements
295	Railway Wheels and Axles
296	Land Vehicles: Bodies and Tops
297	Chairs and Seats
298	Land Vehicles: Dumping
299	Mining or In Situ Disintegration of Hard Material
300	Brush, Broom, and Mop Making
301	Land Vehicles: Wheels and Axles
303	Fluid-Pressure and Analogous Brake Systems
305	Wheel Substitutes for Land Vehicles
307	Electrical Transmission or Interconnection Systems
310	Electrical Generator or Motor Structure
312	Supports: Cabinet Structure
313	Electric Lamp and Discharge Devices
314	Electric Lamp and Discharge Devices: Consumable Electrodes
315	Electric Lamp and Discharge Devices: Systems

U.S. PATENT CLASSES AS OF 31-DEC-1998
TITLES ARRANGED IN CLASS NUMBER ORDER

UTILITY CLASSES

CLASS	TITLE
318	Electricity: Motive Power Systems
320	Electricity: Battery or Capacitor Charging or Discharging
322	Electricity: Single Generator Systems
323	Electricity: Power Supply or Regulation Systems
324	Electricity: Measuring and Testing
326	Electronic Digital Logic Circuitry
327	Miscellaneous Active Electrical Nonlinear Devices, Circuits, and Systems
329	Demodulators
330	Amplifiers
331	Oscillators
332	Modulators
333	Wave Transmission Lines and Networks
334	Tuners
335	Electricity: Magnetically Operated Switches, Magnets, and Electromagnets
336	Inductor Devices
337	Electricity: Electrothermally or Thermally Actuated Switches
338	Electrical Resistors
340	Communications: Electrical
341	Coded Data Generation or Conversion
342	Communications: Directive Radio Wave Systems and Devices (e.g., Radar, Radio Navigation)
343	Communications: Radio Wave Antennas
345	Computer Graphics Processing, Operator Interface Processing, and Selective Visual Display Systems
346	Recorders
347	Incremental Printing of Symbolic Information
348	Television
349	Liquid Crystal Cells, Elements and Systems
351	Optics: Eye Examining, Vision Testing and Correcting
352	Optics: Motion Pictures
353	Optics: Image Projectors
355	Photocopying
356	Optics: Measuring and Testing
358	Facsimile
359	Optics: Systems (Including Communication) and Elements
360	Dynamic Magnetic Information Storage or Retrieval
361	Electricity: Electrical Systems and Devices
362	Illumination
363	Electric Power Conversion Systems
364	Electrical Computers and Data Processing Systems
365	Static Information Storage and Retrieval
366	Agitating
367	Communications, Electrical: Acoustic Wave Systems and Devices
368	Horology: Time Measuring Systems or Devices
369	Dynamic Information Storage or Retrieval
370	Multiplex Communications
371	Error Detection/Correction and Fault Detection/Recovery
372	Coherent Light Generators
373	Industrial Electric Heating Furnaces
374	Thermal Measuring and Testing
375	Pulse or Digital Communications
376	Induced Nuclear Reactions: Processes, Systems, and Elements

U.S. PATENT CLASSES AS OF 31-DEC-1998
TITLES ARRANGED IN CLASS NUMBER ORDER

UTILITY CLASSES

CLASS	TITLE
377	Electrical Pulse Counters, Pulse Dividers, or Shift Registers: Circuits and Systems
378	X-Ray or Gamma Ray Systems or Devices
379	Telephonic Communications
380	Cryptography
381	Electrical Audio Signal Processing Systems and Devices
382	Image Analysis
383	Flexible Bags
384	Bearings
385	Optical Waveguides
386	Television Signal Processing for Dynamic Recording or Reproducing
388	Electricity: Motor Control Systems
392	Electric Resistance Heating Devices
395	Information Processing System Organization
396	Photography
399	Electrophotography
400	Typewriting Machines
401	Coating Implements with Material Supply
402	Binder Device Releasably Engaging Aperture or Notch of Sheet
403	Joints and Connections
404	Road Structure, Process, or Apparatus
405	Hydraulic and Earth Engineering
406	Conveyors: Fluid Current
407	Cutters, for Shaping
408	Cutting by Use of Rotating Axially Moving Tool
409	Gear Cutting, Milling, or Planing
410	Freight Accommodation On Freight Carrier
411	Expanded, Threaded, Driven, Headed, Tool-Deformed, or Locked-Threaded Fastener
412	Bookbinding: Process and Apparatus
413	Sheet Metal Container Making
414	Material or Article Handling
415	Rotary Kinetic Fluid Motors or Pumps
416	Fluid Reaction Surfaces (i.e., Impellers)
417	Pumps
418	Rotary Expansible Chamber Devices
419	Powder Metallurgy Processes
420	Alloys or Metallic Compositions
422	Chemical Apparatus and Process Disinfecting, Deodorizing, Preserving, or Sterilizing
423	Chemistry of Inorganic Compounds
424	Drug, Bio-Affecting and Body Treating Compositions
425	Plastic Article or Earthenware Shaping or Treating: Apparatus
426	Food or Edible Material: Processes, Compositions, and Products
427	Coating Processes
428	Stock Material or Miscellaneous Articles
429	Chemistry: Electrical Current Producing Apparatus, Product, and Process
430	Radiation Imagery Chemistry: Process, Composition, or Product Thereof
431	Combustion
432	Heating
433	Dentistry
434	Education and Demonstration
435	Chemistry: Molecular Biology and Microbiology

U.S. PATENT CLASSES AS OF 31-DEC-1998
TITLES ARRANGED IN CLASS NUMBER ORDER

UTILITY CLASSES

CLASS	TITLE
436	Chemistry: Analytical and Immunological Testing
438	Semiconductor Device Manufacturing: Process
439	Electrical Connectors
440	Marine Propulsion
441	Buoys, Rafts, and Aquatic Devices
442	Fabric (Woven, Knitted, or Nonwoven Textile or Cloth, Etc.)
445	Electric Lamp or Space Discharge Component or Device Manufacturing
446	Amusement Devices: Toys
449	Bee Culture
450	Foundation Garments
451	Abrading
452	Butchering
453	Coin Handling
454	Ventilation
455	Telecommunications
460	Crop Threshing or Separating
462	Books, Strips, and Leaves for Manifolding
463	Amusement Devices: Games
464	Rotary Shafts, Gudgeons, Housings, and Flexible Couplings for Rotary Shafts
470	Threaded, Headed Fastener, or Washer Making: Process and Apparatus
472	Amusement Devices
473	Games Using Tangible Projectile
474	Endless Belt Power Transmission Systems or Components
475	Planetary Gear Transmission Systems or Components
476	Friction Gear Transmission Systems or Components
477	Interrelated Power Delivery Controls, Including Engine Control
482	Exercise Devices
483	Tool Changing
492	Roll or Roller
493	Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web
494	Imperforate Bowl: Centrifugal Separators
501	Compositions: Ceramic
502	Catalyst, Solid Sorbent, or Support Therefor: Product or Process of Making
503	Record Receiver Having Plural Interactive Leaves or a Colorless Color Former, Method of Use, or Developer Therefor
504	Plant Protecting and Regulating Compositions
505	Superconductor Technology: Apparatus, Material, Process
507	Earth Boring, Well Treating, and Oil Field Chemistry
508	Solid Anti-Friction Devices, Materials Therefor, Lubricant or Separate Compositions for Moving Solid Surfaces, and Miscellaneous Mineral Oil Compositions
510	Cleaning Compositions for Solid Surfaces, Auxiliary Compositions Therefor, or Processes of Preparing the Compositions
512	Perfume Compositions
514	Drug, Bio-Affecting and Body Treating Compositions
516	Colloid Systems and Wetting Agents; Subcombinations Thereof; Processes Of
518	Chemistry: Fischer-Tropsch Processes; or Purification or Recovery of Products Thereof
520	Synthetic Resins or Natural Rubbers -- Part of the Class 520 Series

U.S. PATENT CLASSES AS OF 31-DEC-1998
 TITLES ARRANGED IN CLASS NUMBER ORDER

UTILITY CLASSES

CLASS	TITLE
521	Synthetic Resins or Natural Rubbers -- Part of the Class 520 Series
522	Synthetic Resins or Natural Rubbers -- Part of the Class 520 Series
523	Synthetic Resins or Natural Rubbers -- Part of the Class 520 Series
524	Synthetic Resins or Natural Rubbers -- Part of the Class 520 Series
525	Synthetic Resins or Natural Rubbers -- Part of the Class 520 Series
526	Synthetic Resins or Natural Rubbers -- Part of the Class 520 Series
527	Synthetic Resins or Natural Rubbers -- Part of the Class 520 Series
528	Synthetic Resins or Natural Rubbers -- Part of the Class 520 Series
530	Chemistry: Natural Resins or Derivatives; Peptides or Proteins; Lignins or Reaction Products Thereof
532	Organic Compounds -- Part of the Class 532-570 Series
534	Organic Compounds -- Part of the Class 532-570 Series
536	Organic Compounds -- Part of the Class 532-570 Series
540	Organic Compounds -- Part of the Class 532-570 Series
544	Organic Compounds -- Part of the Class 532-570 Series
546	Organic Compounds -- Part of the Class 532-570 Series
548	Organic Compounds -- Part of the Class 532-570 Series
549	Organic Compounds -- Part of the Class 532-570 Series
552	Organic Compounds -- Part of the Class 532-570 Series
554	Organic Compounds -- Part of the Class 532-570 Series
556	Organic Compounds -- Part of the Class 532-570 Series
558	Organic Compounds -- Part of the Class 532-570 Series
560	Organic Compounds -- Part of the Class 532-570 Series
562	Organic Compounds -- Part of the Class 532-570 Series
564	Organic Compounds -- Part of the Class 532-570 Series
568	Organic Compounds -- Part of the Class 532-570 Series
570	Organic Compounds -- Part of the Class 532-570 Series
585	Chemistry of Hydrocarbon Compounds
588	Hazardous or Toxic Waste Destruction or Containment
600	Surgery
601	Surgery: Kinesitherapy
602	Surgery: Splint, Brace, or Bandage
604	Surgery
606	Surgery
607	Surgery: Light, Thermal, and Electrical Application
623	Prosthesis (i.e., Artificial Body Members), Parts Thereof, or Aids and Accessories Therefor
701	Data Processing: Vehicles, Navigation, and Relative Location
702	Data Processing: Measuring, Calibrating, or Testing
704	Data Processing: Speech Signal Processing, Linguistics, Language Translation, and Audio Compression/Decompression
705	Data Processing: Financial, Business Practice, Management, or Cost/Price Determination
706	Data Processing: Artificial Intelligence
707	Data Processing: Database and File Management, Data Structures, or Document Processing
711	Electrical Computers and Digital Processing Systems: Memory
800	Multicellular Living Organisms and Unmodified Parts Thereof and Related Processes

U.S. PATENT CLASSES AS OF 31- DEC-1998
TITLES ARRANGED IN CLASS NUMBER ORDER

UTILITY CLASSES

CLASS	TITLE
901	Robots
902	Electronic Funds Transfer
930	Peptide or Protein Sequence
968	Horology
976	Nuclear Technology
984	Musical Instruments
987	Organic Compounds Containing a Bi, Sb, As, or P Atom or Containing a Metal Atom of the 6th To 8th Group of the Periodic System

U.S. PATENT CLASSES AS OF 31-DEC-1998
TITLES ARRANGED IN CLASS NUMBER ORDER

DESIGN AND PLANT CLASSES

CLASS	TITLE
D00	** Design Classification Undetermined **
D01	Edible Products
D02	Apparel and Haberdashery
D03	Travel Goods and Personal Belongings
D04	Brushware
D05	Textile or Paper Yard Goods; Sheet Material
D06	Furnishings
D07	Equipment for Preparing or Serving Food or Drink Not Elsewhere Specified
D08	Tools and Hardware
D09	Packages and Containers for Goods
D10	Measuring, Testing, or Signalling Instruments (1) (2)
D11	Jewelry, Symbolic Insignia, and Ornaments
D12	Transportation
D13	Equipment for Production, Distribution, or Transformation of Energy
D14	Recording, Communication, or Information Retrieval Equipment
D15	Machines Not Elsewhere Specified
D16	Photography and Optical Equipment
D17	Musical Instruments
D18	Printing and Office Machinery
D19	Office Supplies; Artists' and Teachers' Materials
D20	Sales and Advertising Equipment
D21	Games, Toys, and Sports Goods
D22	Arms, Pyrotechnics, Hunting and Fishing Equipment
D23	Environmental Heating and Cooling; Fluid Handling and Sanitary Equipment
D24	Medical and Laboratory Equipment
D25	Building Units and Construction Elements
D26	Lighting
D27	Tobacco and Smokers' Supplies
D28	Cosmetic Products and Toilet Articles
D29	Equipment for Safety, Protection, and Rescue (1)
D30	Animal Husbandry
D32	Washing, Cleaning, or Drying Machine
D34	Material or Article Handling Equipment
D99	Miscellaneous
PLT	Plants