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# ANALYSIS OF PATENT PUBLICATION

## VOLUME DEVELOPMENT IN GERMANY

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# GENERAL INFORMATION

Germany's industrial property system has a long history. As early as 1876 and 1877, Germany successively implemented the design and patent law. After more than a century of development, Germany has an impressive number of patents. At present, Germany has published more than 11 million patents, including 7 million patent families.

After 2015, the patent publication volume in Germany increased significantly every year, and exceeded 200,000 in 2019. In the following two years, the number of patents published in Germany decreased, which may be affected by COVID-19 (as shown in **Figure 1**).

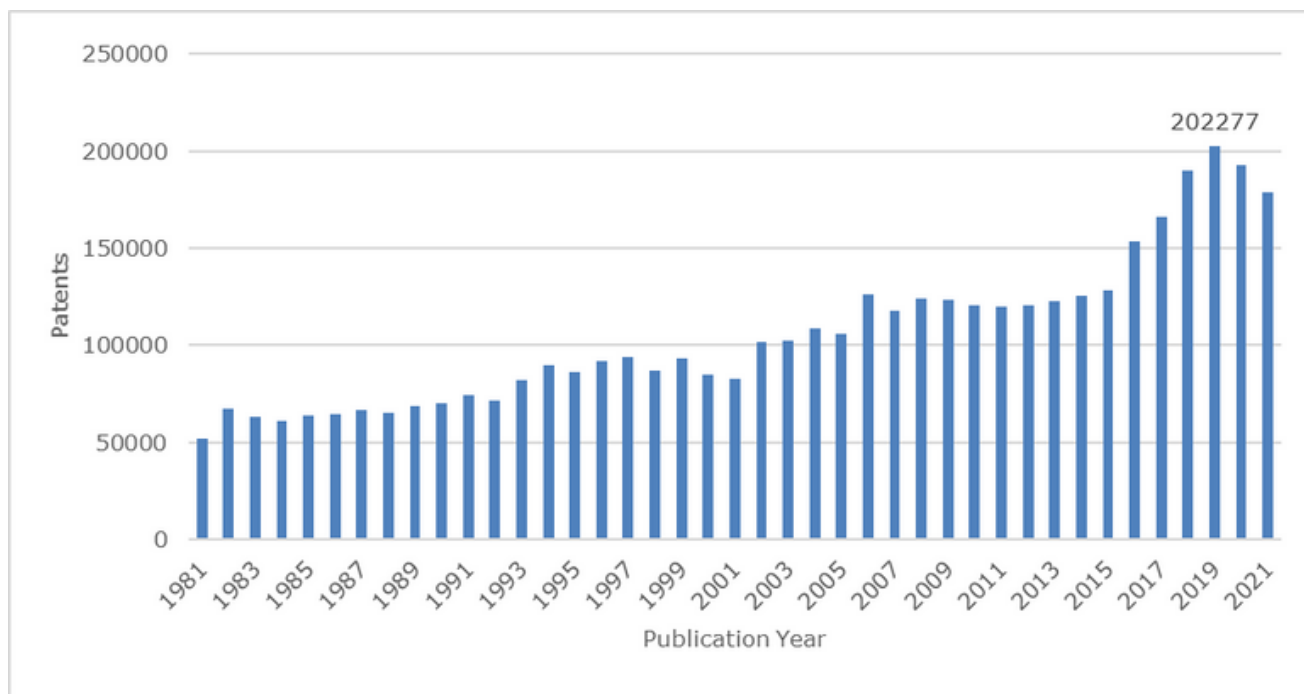
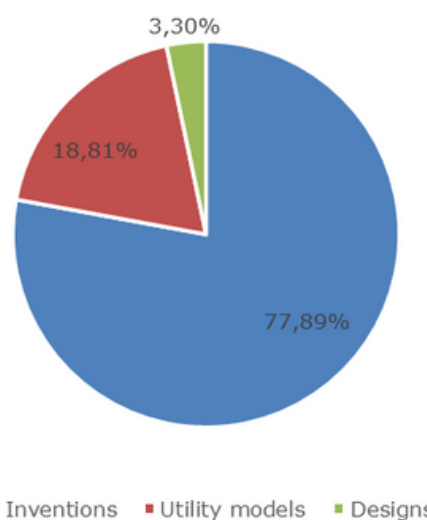


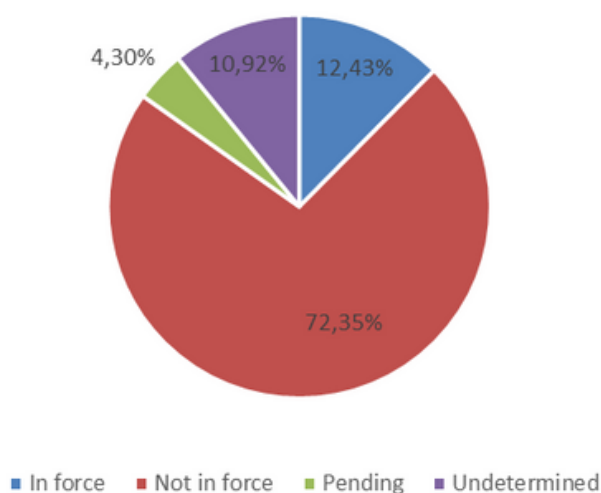
Figure 1 Patent publication trend

# GENERAL INFORMATION

From the publications, invention patents account for 77.89%, reflecting Germany's strong innovation ability (as shown in **Figure 2**).



**Figure 2 Patent type**



**Figure 3 Legal status**

Among the published patents, 12.43% are active, 72.35% are not in force, 4.30% are pending and 10.92% are undetermined (as shown in **Figure 3**).

# GEOGRAPHIC TERRITORIES

When analyzing the complete historic German patent publications, it is clear that Germany was the largest country of origin, accounting for 66.75% of the total.

The United States was historically the country with the largest number of foreign patent applications in Germany, accounting for 10.90% of the total, followed by Japan, accounting for 7.12% of the total (as shown in **Figure 4**).

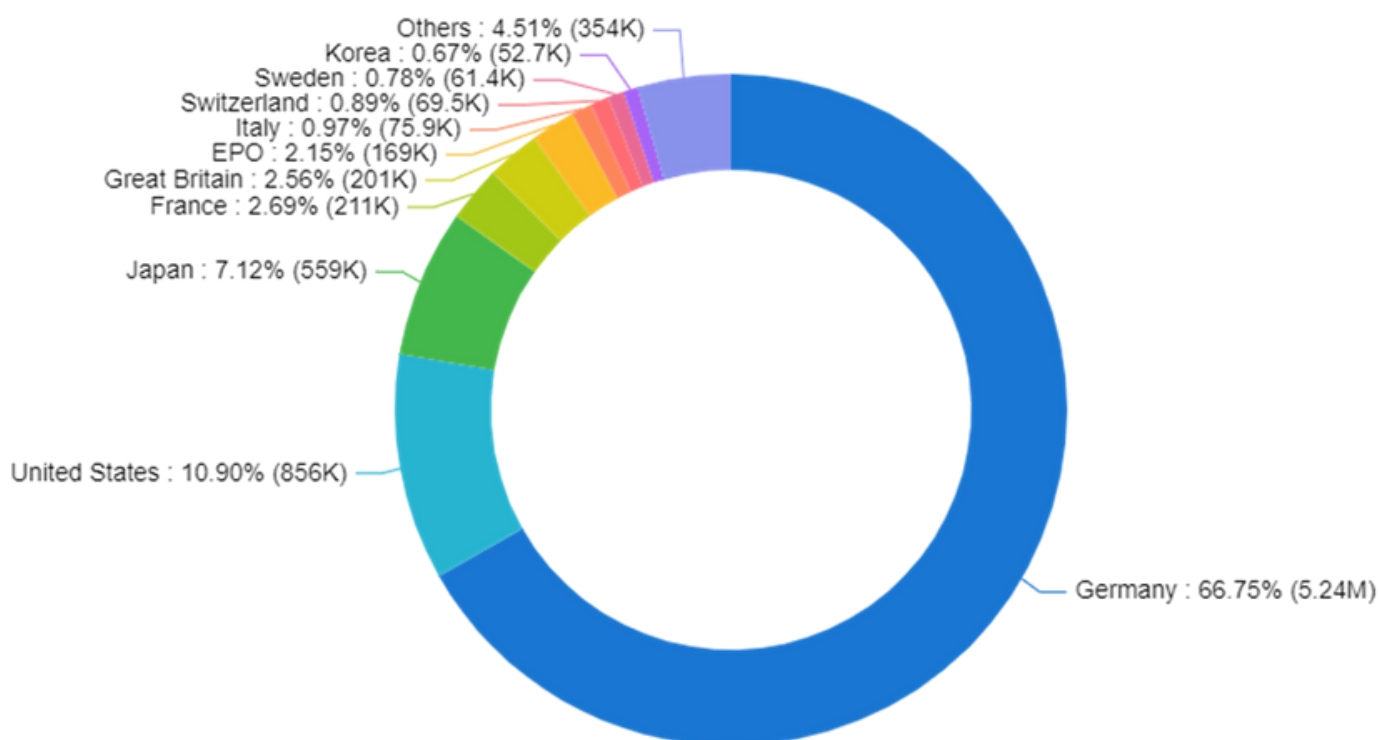


Figure 4 Top countries of origin

# GEOGRAPHIC TERRITORIES

However, that trend has changed dramatically. Historically Germany was the main driver of patent applications in Germany. Today only about 30% of all patents applications done in Germany are by German companies. The remaining 70% come from abroad (as shown in **Figure 5**).

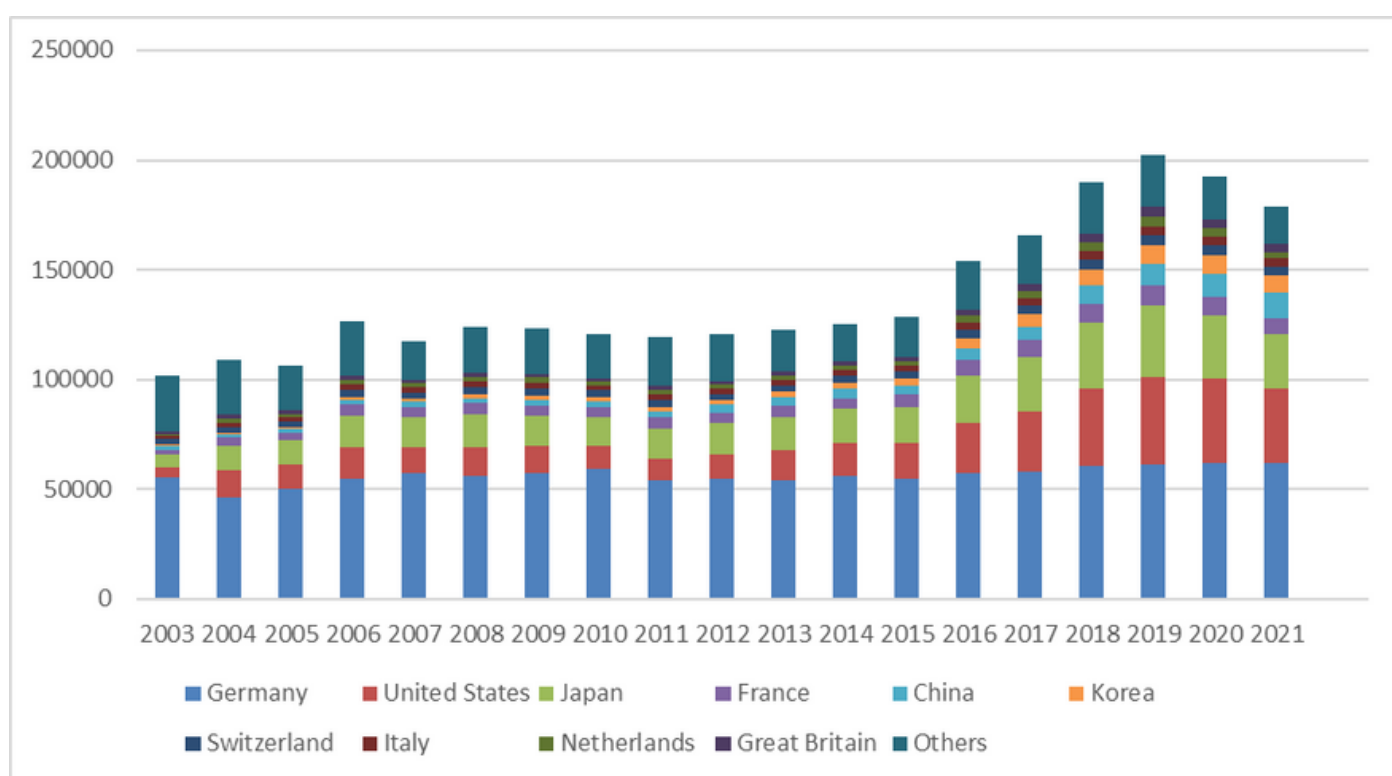


Figure 5 Top countries of origin trend

## KEY TECHNOLOGIES

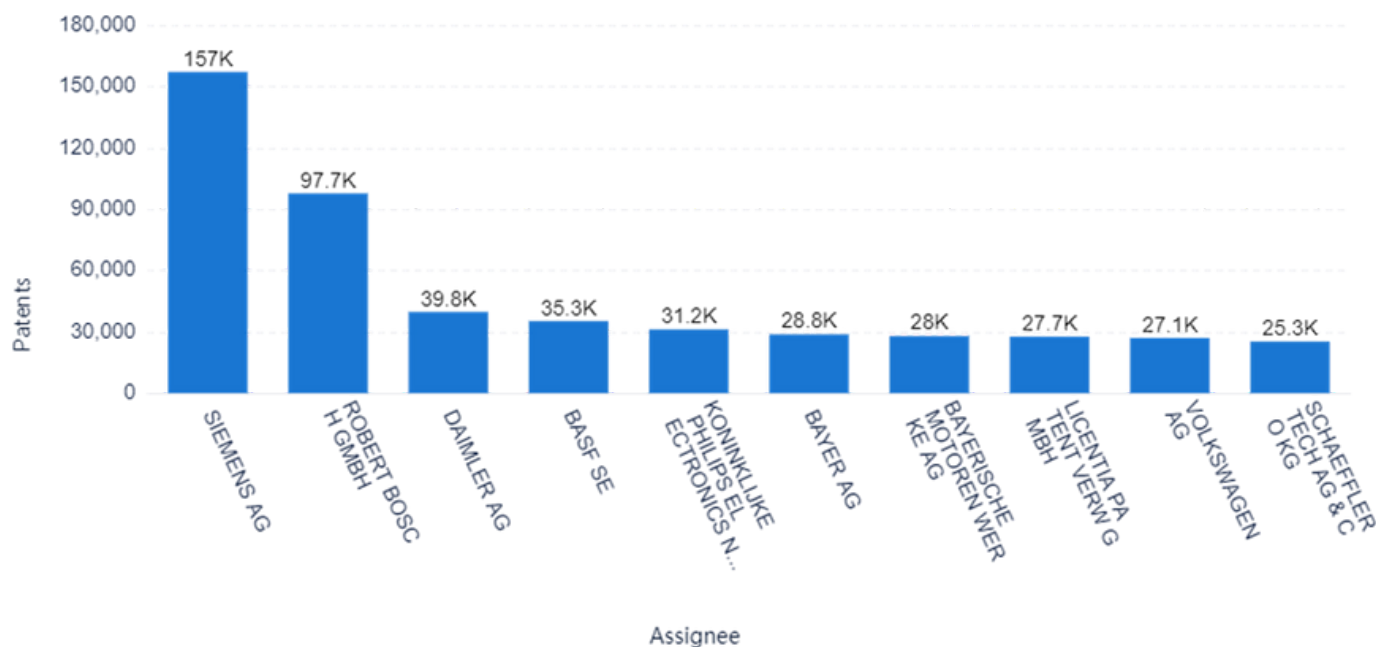
Among the patents in Germany, the top 10 IPC classification numbers are A61K31, H01L21, G01N33, etc. (as shown in **Figure 6**), indicating that Germany's patent technology has higher innovation and activity in the fields of medicine, semiconductor and new materials.



Figure 6 The top 10 IPC classification numbers

# STANDARDIZED CURRENT ASSIGNEES

Siemens AG historically holds the largest number of patent applications in Germany, with a total of 157,000 patents, followed by Robert Bosch GmbH with a total of 97,700 patents. At the same time, the patent applications of the above two companies are much higher than those of other companies (as shown in **Figure 7**).



**Figure 7 The top 10 standardized current assignees**

# STANDARDIZED CURRENT ASSIGNEES

Further analysis shows that the patented technology of Siemens AG mainly focuses on the manufacturing of semiconductor components (IPC: H01L21), and Robert Bosch GmbH mainly focuses on electrical controls (IPC: F02D41) (as shown in **Figure 8**).

According to the statistics of applicants who currently hold active patent families in Germany (as shown in **Attached Table 1**). It can be seen that Huawei, Samsung and Ericsson are the top 3 enterprises, indicating that the electronic information industry in Germany is highly competitive,

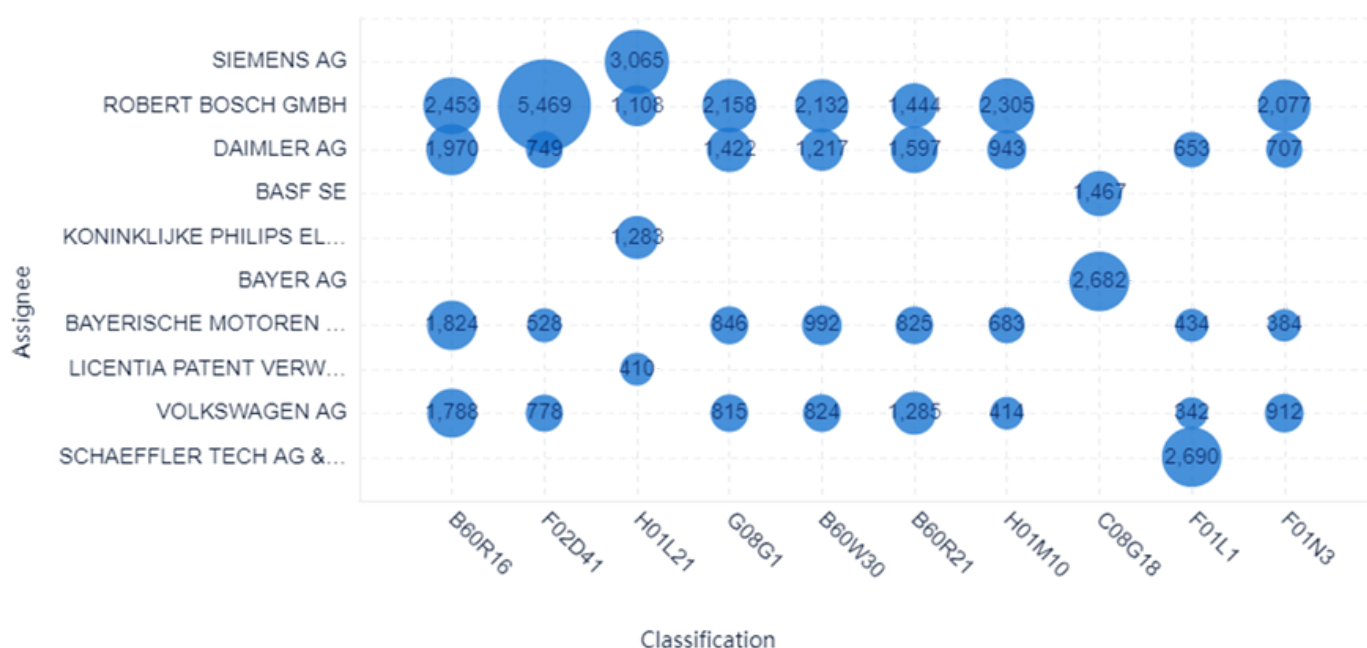


Figure 8 Technology focus of top assignees



## CONCLUSION

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Germany is an excellent example of a country with a mature and well implemented patent system. It has grown to be the largest national office in Europe and has given many companies support in achieving their strategic goals. The trend that is clearly visible is that the growth of the publication volume over the past years has not come from German based companies, but from abroad. With a growing interest from foreign companies to file directly into Germany an interesting question looms at the horizon. Is this trend also visible in the other larger national offices of the European continent? A question we will answer in the next editions of this reporting series

*Note: All numbers used and statements made in this report are indicative and for information purposes only. No warranty or liability is given nor accepted for anything published in this report.*

## THE TOP 100 STANDARDIZED CURRENT ASSIGNEES

Rank	Standardized Current Assignee	Active Families
1	HUAWEI TECH CO LTD	10727
2	SAMSUNG ELECTRONICS CO LTD	9892
3	TELEFON AB LM ERICSSON (PUBL)	8498
4	TOYOTA JIDOSHA KK	7748
5	LG ELECTRONICS INC	7449
6	QUALCOMM INC	7377
7	KONINKLIJKE PHILIPS ELECTRONICS NV	7133
8	mitsubishi electric eng TOKIOTOKYO JP	5630
9	ROBERT BOSCH GMBH	4705
0	BLACKBERRY LTD	4577
11	AUDI AG	4575
12	THE BOEING CO	3989
13	MICROSOFT TECH LICENSING LLC	3949
14	LG CHEM LTD	3854
15	GM GLOBAL TECH OPERATIONS LLC	3667
16	SONY CORP	3642
17	CANON KK	3472
18	GENERAL ELECTRIC CO	3444
19	COMMISSARIAT A LENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES	3243
20	UNITED TECH CORP	3227
21	VOLKSWAGEN AG	2901
22	DENSO CORP	2868
23	FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG EV	2861
24	INFINEON TECH AG	2805
25	APPLE INC	2645
26	INTEL CORP	2579
27	BAYERISCHE MOTOREN WERKE AG	2573
28	NOKIA TECHNOLOGIES OY	2566
29	NISSAN MOTOR CO LTD	2513
30	3M INNOVATIVE PROPERTIES CO	2451
31	SCHAEFFLER TECH AG & CO KG	2376
32	HONDA MOTOR CO LTD	2368
33	PANASONIC INTELLECTUAL PROPERTY MANAGEMENT CO LTD	2276
34	RICOH KK	2203
35	CENT NAT DE LA RECHERCHE SCI	2194
36	HEWLETT-PACKARD DEV CO LP	2168
37	COVIDIEN LP	2117
38	THE PROCTER & GAMBLE CO	2066
39	FUJIFILM CORP	2043

## THE TOP 100 STANDARDIZED CURRENT ASSIGNEES

### Part 2

40	ABB SCHWEIZ AG	2008
41	GOOGLE LLC	1977
42	HONEYWELL INT INC	1937
43	VITESCO TECH GMBH	1919
44	ZTE CORP	1916
45	SIEMENS HEALTHCARE GMBH	1858
46	SN DETUDE & DE CONSTR DE MOTEURS D AVIATION	1849
47	FANUC LTD	1788
48	THE DOW CHEM CO	1788
49	PANASONIC CORP	1760
50	CISCO TECH INC	1688
51	BASF SE	1611
52	RENAULT SAS	1582
53	BROTHER KOGYO KK	1573
54	CO GENERALE DES ESTAB MICHELIN	1507
55	NXP BV	1506
56	NEC CORP	1501
57	FUJITSU LTD	1492
58	ALCATEL LUCENT	1484
59	SIEMENS AG	1466
60	SAMSUNG DISPLAY CO LTD	1466
61	IBM CORP	1460
62	BSH HAUSGERAETE GMBH	1458
63	LG DISPLAY CO LTD	1436
64	NIKE INNOVATE CV	1431
65	SHIN-ETSU CHEM CO LTD	1424
66	BRIDGESTONE CORP	1406
67	THOMSON CSF	1403
68	SEIKO EPSON CORP	1395
69	DEUTSCHES ZENTRUM FUER LUFT- & RAUMFAHRT EV	1381
70	NIPPON STEEL STAINLESS STEEL CORP	1380
71	FORD GLOBAL TECH LLC	1350
72	YAMAHA HATSUDOKI KK	1344
73	YAZAKI CORP	1332
74	DEERE & CO	1326
75	SUMITOMO RUBBER IND LTD	1316
76	DR ING H C F PORSCHE AG	1305
77	DAIKIN IND LTD	1295
78	FRANCE TELECOM	1260
79	HYUNDAI MOTOR CO	1215
80	GUANGDONG OPPO MOBILE TELECOMM CORP	1215
81	SAMSUNG SDI CO LTD	1210

## THE TOP 100 STANDARDIZED CURRENT ASSIGNEES

### Part 3

82	KK TOSHIBA	1202
83	JFE STEEL CORP	1187
84	MEDTRONIC INC	1174
85	LG INNOTEK CO LTD	1167
86	LOREAL SA	1160
87	ZF FRIEDRICHSHAFEN AG	1137
88	HITACHI LTD	1125
89	ROLLS-ROYCE PLC	1122
90	BECTON DICKINSON & CO	1086
91	BROADCOM CORP	1076
92	ILLINOIS TOOL WORKS INC	1067
93	MITSUBISHI HEAVY IND LTD	1057
94	JTEKT CORP	1057
95	CNH IND BELGIUM	1057
96	OMRON CORP	1050
97	RAYTHEON CO	1047
98	NGK INSULATORS LTD	1041
99	HAMILTON SUNDSTRAND CORP	1010
100	TORAY IND INC	996