



IV. Patent Application and Examination

1 Patent Application and Granting

In 2016, the number of patent applications in China was 3,465,000, up by 23.8% compared with the previous year. As *the Opinions of the State Council on Accelerating the Construction of an IP Powerhouse under the New Circumstances* being steadily implemented, the indicators of IP development witnessed growth in China. The number of invention patent applications increased steadily and the number of valid domestic patent exceeded 1 million for the first time. Enterprises' dominant position in IP creation was further consolidated. The number of valid invention patents divided by every 10,000 population reached 8.0, a sound beginning for the 13th Five Year Plan.

(1) Patent Application

Latest statistics show that the number of invention patent applications received by SIPO was 1,339,000, up by 21.5% year-on-year. The number of domestic



Deputy Commissioner Zhang Maoyu chaired the meeting on the quality of patent applications.

applications for invention patents was 1,205,000, accounting for 90.0% of the total and up by 24.4% year-on-year. The number of application from overseas was 134,000, accounting for 10.0%, representing a 0.1% decrease compared with the previous year.

Among the domestic invention patent applications, 983,000 were service applications, accounting for 81.6% and representing a year-on-year growth of 26.7%. The number of non-service applications was 222,000, accounting for 18.4% and showing a year-on-year growth of 15.5%.

In 2016, SIPO received 1,476,000 utility model applications, increasing by 30.9% year-on-year, and 650,000 industrial design applications, up by 14.3% year-on-year.

No.	Name of Applicant	Number of Applications
1	Huawei Technologies Co., Ltd.	4906
2	China Petroleum & Chemical Corporation	4405
3	LeTV Holdings Co., Ltd.	4197
4	ZTE Corporation	3941
5	Guangdong OPPO Mobile Telecommunications Co., Ltd.	3778
6	BOE Technology Group Co., Ltd.	3569
7	Gree Electric Appliances Inc. of Zhuhai	3299
8	Beijing Xiaomi Mobile Software Co., Ltd.	3280
9	Nubia Technology	2912
10	State Grid Corporation of China	2784

No.	Country of Registration	Name of Applicant	Number of Applications
1	Cayman Islands	Alibaba Group Holding Limited	2974
2	Korea	Samsung Electronics Corporation	2396
3	USA	Qualcomm Incorporated	1936
4	Japan	Toyota Motor Corporation	1831
5	Germany	Robert Bosch GmbH	1524
6	Korea	Hyundai Motor Group Ltd.	1347
7	USA	General Electric Company	1295
8	Korea	LG Electronics Inc.	1198
9	Japan	Mitsubishi Electric Corporation	1164
10	USA	Ford Global Technologies, LLC	1082

No.	Name of Applicant	Number of Applications
1	Guangxi University	3181
2	Zhejiang University	3143
3	South China University of Technology	2654
4	Southeast University	2526
5	Tianjin University	2512
6	Shanghai Jiao Tong University	2249
7	Tsinghua University	2145
8	University of Electronic Science and Technology of China	2034
9	Jilin University	1808
10	Jiangsu University	1781

No.	Name of Applicant	Number of Applications
1	Dalian Institute of Chemical Physics, Chinese Academy of Sciences (CAS)	1035
2	China Electric Power Research Institute	948
3	China Mobile Research Institute	573
4	Changchun Institute of Optics, Fine Mechanics and Physics, CAS	490
5	Institute of Telecommunication Technologies	449
6	Hefei Institutes of Physical Science, CAS	412
7	Ningbo Institute of Industrial Technology, CAS	378
8	Research Institute of Yunnan Power Grid Company	376
8	Shenzhen Institutes of Advanced Technology, CAS	347
10	Institute of Aviation Computing Technology, Aviation Industry Corporation of China	342

(2) Geographical Distribution of Origins of Invention Patent Applications

In 2016, the top ten provinces, autonomous regions and municipalities in terms of quantity of invention patent applications were Jiangsu, Guangdong, Beijing, Anhui, Zhejiang, Shandong, Shanghai, Sichuan, Hubei, and Guangxi.

No.	Province/Autonomous Region/Municipality	Number of Applications
1	Jiangsu	184632
2	Guangdong	155581
3	Beijing	104643
4	Anhui	95963
5	Zhejiang	93254
6	Shandong	88359
7	Shanghai	54339
8	Sichuan	54277
9	Hubei	43789
10	Guangxi	43078

In 2016, the top ten foreign countries in terms of quantity of invention patent applications were Japan, the United States of America, Germany, Republic of Korea, France, Switzerland, the Netherlands, the United Kingdom, Sweden and Italy.

No.	Country	Number of Applications
1	Japan	39207
2	United States of America	35895
3	Germany	14158
4	Republic of Korea	13764
5	France	4631
6	Switzerland	3453
7	The Netherlands	3155
8	United Kingdom	2372
9	Sweden	1919
10	Italy	1610

(3) Patent Granting

In 2016, SIPO granted 404,000 invention patents, up by 12.5% year-on-year, of which 302,000 were granted to domestic applicants, accounting for 74.8% of the total, and 102,000 were granted to foreign applicants, accounting for 25.2% of the total. Among the domestic invention patents granted by SIPO, 276,000 were service inventions, accounting for 91.4% of the total, 26,000 or 8.6% were non-service inventions.

In 2016, SIPO granted 903,000 utility models, up by 3.1% year-on-year, and 446,000 industrial designs, representing a decrease of 7.6% year-on-year.

No.	Name of Patentee	Number of Granted Patents
1	State Grid Corporation of China	4146
2	Huawei Technologies Co., Ltd.	2690
3	China Petroleum & Chemical Corporation	2555
4	ZTE Corporation	1587
5	BOE Technology Group Co., Ltd.	1228
6	Tencent Technology (Shenzhen) Company Ltd.	1027
7	Gree Electric Appliances Inc. of Zhuhai	871
8	PetroChina Company Limited	867
9	Lenovo (Beijing) Limited	763
10	Hua Hong Semiconductor Limited (Shanghai)	721

No.	Country of Registration	Name of Patentee	Number of Granted Patents
1	USA	Qualcomm Incorporated	1468
2	Germany	Robert Bosch GmbH	1413
3	Japan	Toyota Motor Corporation	1155
4	USA	General Motors Global Technology Operations	1143
5	Japan	Mitsubishi Electric Corporation	1142
6	Germany	Siemens AG	1108
7	Korea	Samsung Electronics Corporation	1073
8	Japan	Canon Inc.	1051
9	USA	General Electric Company	1039
10	Japan	Sony Corporation	935

No.	Name of Patentee	Number of Granted Patents
1	Zhejiang University	1730
2	Harbin Institute of Technology	1389
3	Tsinghua University	1245
4	Shanghai Jiao Tong University	1201
5	Southeast University	1200
6	South China University of Technology	1000
7	Beijing University of Aeronautics and Astronautics	956
8	Jiangsu University	884
9	Beijing University of Technology	878
10	Xi'an Jiaotong University	870

No.	Name of Patentee	Number of Granted Patents
1	Institute of Microelectronics, CAS	375
2	Dalian Institute of Chemical Physics, CAS	364
3	Industrial Technology Research Institute	337
4	Changchun Institute of Optics, Fine Mechanics and Physics, CAS	258
5	Institute of Telecommunication Technologies	222
6	Changchun Institute of Applied Chemistry, CAS	201
7	Shenzhen Institute of Advanced Technology, CAS	200
8	Institute of Chemistry, CAS	199
9	Hefei Institutes of Physical Science, CAS	192
10	Institute of Process Engineering, CAS	187

Table 11 Top 10 Provinces, Autonomous Regions and Municipalities in Terms of the Number of Invention Patents Granted in 2016

No.	Province/Autonomous Region/Municipality	Number of Granted Patents
1	Jiangsu	40952
2	Beijing	40602
3	Guangdong	38626
4	Zhejiang	26576
5	Shanghai	20086
6	Shandong	19404
7	Anhui	15292
8	Sichuan	10350
9	Hubei	8517
10	Shanxi	7503

(4) Number of Valid Patents

By the end of 2016, a total of 1,772,000 granted invention patents had remained valid, representing a year-on-year growth of 20.4%. Among the total number of valid patents, 1,158,000 were held by domestic patentees, accounting for 65.3% of the total and representing a year-on-year growth of 25.7%; 614,000 were held by foreign patentees, accounting for 34.7% of the total and representing a year-on-year growth of 11.5%. By the end of 2016, the valid invention patents divided by every 10 thousand Chinese population (excluding the population of the Hong Kong SAR, the Macau SAR and Taiwan Province) had reached 8.0 (based on the China Statistical Yearbook 2016).

2 Patent Examination

(1) Number of Examined and Concluded Applications

In 2016, the number of examined and concluded patent applications for invention patents, utility models and industrial designs was 2.31 million, representing a year-on-year growth of 11%, of which 675,000 were invention patent applications. SIPO received 13,141 requests for priority examination of invention patent applications, showing an increase of 31% year-on-year.

(2) Examination Quality

In 2016, the social satisfaction rate for patent examination was 82.7, maintaining within the range of “satisfied” for 7 consecutive years. SIPO further improved the feedback mechanisms and make full use of the patent examination complaint platform to widely collect opinions and recommendations of the public about patent examination. In 2016, SIPO processed a total of 2,050 complaints from the public.

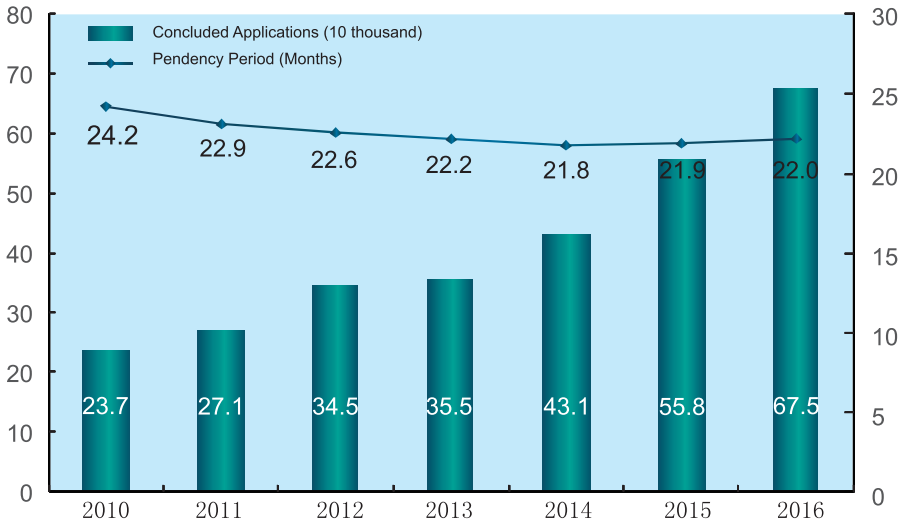
In 2016, SIPO formulated the Examination Quality Guarantee Manual, continuously improved and made full use of the examination quality guarantee system and the examination affairs guidance system, and enhanced the quality assurance work as well as coordination and communication on the same technical field in the examination departments. In the meantime, SIPO continued to intensify capacity building concentrating on the three pillars of examination — “morality, law and expertise”, and took effective steps to continuously comprise examination quality and ensure consistent application of examination standard and ultimately ensure high quality patent examination.

(3) Pendency Period

Against the background of growing patent applications, the examination pendency periods for the applications for invention patents, utility models and industrial designs maintained stability. The average pendency period for the substantive examination of invention patent applications was approximately 22 months. And the average pendency period for the examination of utility model and industrial design applications was approximately 3 months.

(4) Examination Capacity

In 2016, there were 2600 patent examiners in the departments under the headquarters of SIPO. As of 2016, SIPO has 7 examination cooperation centers in Beijing, Jiangsu, Guangdong, Henan, Hubei, Tianjin and Sichuan, which employed a combined total of 9,000 patent examiners.



Trend of concluded substantive examination of invention patent applications and pendency period from 2010 to 2016

3 PCT Applications

As an International Search Authority, SIPO delivered 37,332 international search reports in 2016, representing a 33.7% year-on-year growth. Since 1994, SIPO had delivered an accumulative total of 183,628 PCT international search reports.

As an International Preliminary Examination Authority, SIPO delivered 410 international preliminary examination reports in 2016. Since 1994, SIPO had delivered an accumulative total of 7,883 PCT international preliminary examination reports.

4 Applications for Layout Designs of Integrated Circuits

In 2016, SIPO received 2,360 applications for layout designs of integrated circuits, with 2,154 registrations being published and certificated. Since the

promulgation of *the Regulations for the Protection of Layout Design of Integrated Circuits* on 1 October 2001, SIPO had received a total of 15,535 applications for layout designs of integrated circuits, with 14,043 registrations being published and certificated.

5 Patent Reexamination and Invalidation

(1) Requests for Reexamination Received and Cases Concluded

In 2016, the Patent Reexamination Board (PRB) of SIPO received a total of 13,107 reexamination requests, representing a year-on-year growth of 3.4%. Among the reexamination requests received in 2016, 11,339 were related to invention patent applications, accounting for 86.5% of the total; 1,692 were related to utility models, accounting for 12.9% of the total; 76 were related to industrial design, accounting for 0.6%.

In 2016, 17623 requests were resolved, including 16,454 cases involving invention patent applications, 1,075 cases involving utility models and 94 cases involving industrial designs.

Since 1985, the PRB had received a total of 143,289 reexamination requests. By the end of 2016, an accumulative total of 134,234 reexamination requests were resolved.

(2) Patent Invalidation Requests Received and Cases Concluded

In 2016, the PRB received 3,969 patent invalidation requests, representing a year-on-year growth of 6.6%. Among the patent invalidation requests received in 2016, 916 were related to invention patents, accounting for 23.1% of the total, 1,831 were related to utility models, accounting for 46.1% of the total, 1,222 were related to industrial designs, accounting for 30.8% of the total.

In 2016, 4,100 invalidation requests were resolved, including 837 cases related

to invention patents, 1,933 cases related to utility models and 1,330 cases related industrial designs.

Since 1985, the PRB had received an accumulative total of 45,480 patent invalidation requests. By the end of 2016, the accumulative total of concluded patent invalidation cases was 41,637.

(3) Patent Administrative Litigation

In 2016, the Beijing Intellectual Property Court, the No.1 Intermediate People's Court of Beijing and the High People's Court of Beijing received a total of 1,490 cases of administrative litigation, of which 460 were trial and appeal cases filed against reexamination decisions, and 1,030 were trial and appeal cases against patent invalidation decisions.

In 2016, the Beijing Intellectual Property Court and the No.1 Intermediate People's Court of Beijing tried and concluded 763 cases in relation to the decisions of the PRB, of which 254 were filed against reexamination decisions and 509 were filed against patent invalidation decisions.

In 2016, the High People's Court of Beijing tried and concluded 206 cases in relation to the decisions of the PRB, of which 63 were filed against reexamination decisions and 143 were filed against patent invalidation decisions.

In 2016, the Supreme People's Court accepted 72 appeal cases and trialed and concluded 8.

(4) Revocation of Layout Designs of Integrated Circuits Registration

Since the promulgation of *the regulations on the Protection of Layout Designs of Integrated Circuits* on 1 October 2001, the PRB had accepted 13 requests for revocation of layout designs of integrated circuits registration and had examined and resolved 5 requests by the end of 2016.

(5) Establishment of Operation of Circuit Tribunals

By the end of 2016, the PRB had established 11 circuit tribunals in 10 provinces and autonomous regions and municipalities, including Guangdong, Henan, Shandong, Xinjiang and Sichuan. In 2016, the PRB's online management platform was expanded to cover the circuit tribunals in Guangdong and Jiangsu Provinces to effectuate distance hearing of cases.

(6) Ratio of Electronic Reexamination and Invalidation Requests

The ratio of reexamination and invalidation requests filed through the PRB's electronic system continued to increase. According to statistics, 71.18% of the reexamination requests and 24.27% of invalidation requests filed in 2016 were by electronic means. The system provided convenience to the parties involved and effectively reduced average acceptance period of cases.