

TABLE S8-40

Unclassified USPTO patents and patent families granted, by region, country, or economy: 1998–2018

(Number)

Region, country, or economy	1998		1999		2000		2001		2002		2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		2018			
	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families				
World	259	1,844	321	2,446	411	2,681	433	4,607	428	4,068	467	3,443	554	6,021	555	3,943	620	6,295	564	10,835	588	10,468	821	9,248	1,109	7,571	1,272	7,009	1,390	7,059	1,307	8,327	871	7,828	1,254	3,922	1,476	444	1,645	1,245	1,535	887		
North America	115	54	164	90	168	58	192	38	162	48	180	42	185	45	189	60	218	83	192	110	160	86	248	98	362	439	55	528	58	471	66	326	45	461	23	564	11	696	16	611	9			
Canada	11	2	13	7	6	5	3	5	7	2	4	3	4	3	6	1	4	3	3	3	3	3	5	7	1	13	1	17	1	23	4	11	2	21	2	29	0	32	1	26	1			
Mexico	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0			
Puerto Rico	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
United States	103	52	151	83	162	53	189	32	155	45	176	40	181	42	183	60	214	80	189	106	157	84	244	93	355	64	426	54	511	56	448	62	315	43	440	20	533	11	664	14	584	8		
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Central and South America	0	1	0	2	1	2	0	8	0	4	0	5	0	7	0	0	11	0	7	0	12	0	9	5	1	8	1	8	2	1	8	1	5	1	1	0	2	1	0	2	0	2	0	
Argentina	0	0	0	0	0	0	0	2	0	3	0	4	0	2	0	1	0	2	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brazil	0	1	0	0	0	1	0	4	0	0	0	3	0	0	0	2	0	0	6	0	9	0	2	0	3	1	0	2	1	6	2	1	4	1	0	1	0	2	0	2	0	2	0	
All others	0	0	0	2	1	1	0	2	0	1	0	0	0	0	0	4	0	5	1	0	1	0	3	0	1	0	4	0	2	1	6	2	1	0	0	0	0	0	0	0	0	0	0	
Europe	15	1,423	21	1,875	24	2,168	38	3,529	27	3,378	24	2,538	33	5,103	24	2,864	31	5,011	24	9,960	29	9,685	39	8,613	75	7,281	87	6,729	99	6,858	113	8,124	72	7,715	127	3,796	147	168	147	899	168	722		
EU	14	1,410	20	1,858	23	2,140	38	3,055	26	3,313	23	2,504	33	5,066	23	2,833	30	4,978	24	9,916	28	9,640	39	8,571	73	7,253	82	6,699	90	6,823	106	8,067	67	7,669	114	3,773	138	154	139	882	151	709		
Austria	0	4	0	7	0	2	0	8	0	7	0	1	1	2	0	1	1	220	1	325	0	5	0	8	3	2	1	2	0	2	5	2	0	3	6	2	6	9	1	5	2	7	14	
Belgium	0	0	0	0	1	0	1	0	0	0	2	1	0	0	0	1	0	2	2	0	1	5	2	1	6	3	1	2	0	2	5	3	0	2	7	7	1	6	3	6	0	0		
Denmark	0	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	3	0	1	1	0	2	3	1	0	1	5	1	0	3	2	1	5	2	1	3	2	3	0	0		
Finland	0	0	0	1	0	0	0	1	0	1	0	2	1	2	1	0	1	1	0	1	1	1	0	3	2	1	0	3	2	1	3	2	0	6	3	2	0	4	1	7	0	0		
France	1	5	2	5	1	6	5	10	4	9	4	18	5	24	0	20	7	36	4	85	4	50	8	57	4	30	11	34	12	20	9	15	5	16	18	10	18	5	16	1	10	5		
Germany	6	23	9	10	8	10	13	6	12	14	8	6	10	3	9	8	6	31	12	31	12	13	7	16	23	5	28	22	30	11	43	20	22	19	46	6	51	6	48	1	50	2		
Hungary	0	3	0	4	0	1	0	1	0	2	0	3	0	0	0	2	0	2	0	0	0	0	1	0	1	0	2	0	1	0	1	0	1	0	1	0	1	2	0	1	2	0	0	
Ireland	0	5	0	2	0	1	1	0	0	2	1	0	1	0	0	1	0	0	1	0	0	1	0	3	1	0	0	3	1	1	0	1	0	1	1	0	1	0	1	0	4	0	0	
Italy	1	1,311	2	1,758	2	2,063	5	2,955	1	3,117	0	2,433	0	4,991	1	2,749	1	4,571	0	9,315	2	9,366	4	8,420	5	7,164	4	6,609	5	6,743	5	7,981	3	7,575	4	3,707	6	103	3	845	7	666		
Netherlands	3	1	3	0	1	1	2	0	1	5	2	5	3	2	4	1	6	2	6	2	6	5	5	9	2	9	7	6	4	9	0	5	5	5	2	7	10	13	7	5	7	6		
Spain	0	14	0	25	0	13	0	14	1	13	0	12	0	10	0	15	0	7	0	17	0	12	0	13	0	7	0	4	1	6	2	5	0	3	2	0	3	2	3	5	3	1	0	
Sweden	3	5	1	2	0	0	3	0	4	0	2	0	2	0	2	0	8	1	8	1	8	2	10	4	1	5	1	3	2	1	5	1	3	2	1	7	0	8	0	11	2	0		
United Kingdom	0	3	3	9	10	2	7	3	5	13	4	6	7	4	5	3	13	7	6	12	5	15	8	22	15	4	19	5	19	4	16	8	16	8	24	5	24	1	23	3	35	0	0	
All others	0	36	0	34	0	42	0	55	0	127	1	20	2	28	0	31	0	106	0	110	0	158	1	13	2	33	3	9	1	21	0	29	1	20	2	23	5	9	1	12	0	0		
Other Europe	1	13	1	17	1	28	0	474	1	66	1	34	0	36	1	31	2	32	1	44	1	45	0	41	2	28	5	30	8	35	7	56	5	45	13	23	9	15	17	17	13	0	0	
Former Soviet Union	0	3	0	2	0	9	0	19	0	26	0	20	0	9	0	13	0	0	2	0	5	0	8	0	10	0	9	1	8	0	6	0	0	0	0	0	0	0	1	1	0	1	0	
Norway	1	1	0	0	1	0	0	0	0	0	1	0	1	0	0	1	0	1	0	0	0	0	3	1	0	1	0	4	0	1	1	1	3	2	0	1	0	2	1	2	1	2	0	0
Russia	0	5	0	1	0	1	0	433	0	4	0	1	0	5	0	3	0	7	0	7	0	10	0	3	0	1	2	4	1	4	2	1	4	1	6	4	10	4	10	4	4	4	4	0
Switzerland	0	2	1	8	1	5	0	10	1	12	0	5	0	11	1	7	2	22	0	26	1	22	0	20	1	11	3	11	6	17	4	36	2	34	7	19	5	4	3	11	5	4	5	
All others	0	2	1	6	0	12	0	24	0	24	0	8	0	11	0	8	0	6	9	0	8	0	7	0	6	0	5	0	9	1	6	0	3	0	3	0	2	1	1	1	2	0	0	
Asia	128	201	133	365	216	378	202	955	238	475	260	646	335	693	339	839	368	941	345	591	396	528	528	337	665	145	728	155	748	96	702	104	450	26	625	43	738	178	774	216	725	149		

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	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families			
China	0	41	0	80	0	111	1	98	0	45	0	74	1	102	0	120	1	9	2	15	3	56	10	31	14	14	20	38	22	34	47	29	64	4	72	12	87	10	94	26	82	1	
India	0	1	0	1	0	1	0	1	0	1	0	1	0	0	2	0	4	1	11	3	5	5	4	10	9	3	13	3	18	8	15	3	17	5	11	1	11	1	11	0			
Japan	91	67	89	72	145	66	132	55	77	151	77	145	60	199	32	187	39	178	23	142	44	146	82	222	80	273	81	384	7	430	7	403	4	195	1	382	3	402	3	421	1	367	4
Malaysia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Singapore	0	0	0	0	3	1	3	0	7	1	2	0	2	1	1	0	0	1	1	2	2	5	4	5	3	0	4	1	2	0	5	0	4	3	3	0	2	0	6	0	2	0	
South Korea	24	72	29	168	41	161	45	724	61	219	82	371	87	448	100	579	105	788	118	442	151	130	182	30	244	17	195	5	174	18	118	1	118	8	195	8	195	115	193	163	224	98	
Taiwan	13	19	15	41	27	37	21	76	19	130	30	133	43	108	48	75	80	89	67	99	87	99	103	50	121	29	116	51	106	6	75	7	53	4	30	5	40	19	48	10	36	22	
All others	0	0	0	3	0	1	0	1	0	2	1	2	0	0	0	17	0	24	0	4	1	2	0	2	0	0	0	0	0	0	1	2	0	0	0	1	2	0	1	2	0		
Middle East	0	1	1	0	0	10	1	6	1	5	4	2	1	1	3	4	1	3	2	2	3	5	4	3	3	7	6	9	6	13	2	13	6	9	6	13	2	20	1	21	5	23	0
Israel	0	1	1	0	0	0	1	0	1	1	3	0	1	0	3	1	1	3	2	1	3	0	4	1	3	3	4	11	12	6	11	0	14	0	19	0	18	0	21	0	21	0	
All others	0	0	0	0	0	10	0	6	0	4	1	2	0	1	0	3	0	3	0	1	0	5	0	2	0	2	0	1	6	1	1	2	2	0	1	2	0	1	2	0	2	0	
Africa	0	32	0	29	0	31	0	35	0	37	0	46	0	42	0	29	0	206	0	162	0	132	0	183	0	63	0	51	0	11	0	34	0	0	0	57	0	75	0	100	0	4	
South Africa	0	20	0	17	0	6	0	7	0	9	0	21	0	18	0	10	0	38	0	21	0	22	0	27	0	11	0	49	0	8	2	14	0	0	0	14	0	74	0	97	0	4	
All others	0	12	0	12	0	25	0	28	0	28	0	25	0	24	0	19	0	168	0	141	0	110	0	156	0	53	0	2	0	3	0	14	0	20	0	5	0	1	0	3	0	4	
Australia and Oceania	0	4	1	2	1	7	0	25	0	60	0	93	0	69	0	79	1	5	1	1	7	1	2	8	2	1	4	4	6	21	7	1	8	2	26	1	6	4	7	7	7	1	
Australia	0	4	0	2	1	7	0	25	0	60	0	93	0	69	0	79	1	5	1	1	6	1	2	6	2	1	4	3	6	20	7	8	2	24	1	6	4	4	5	7	5	1	
New Zealand	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	2	0	0	1	0	1	0	0	0	0	0	2	0	2	0	2	0	2	0	
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Unclassified	0	127	0	83	0	26	0	11	0	60	0	71	0	62	0	62	0	34	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

EU = European Union; USPTO = U.S. Patent and Trademark Office.

Note(s)

USPTO patents are allocated according to patent inventorship information. USPTO patents are fractionally allocated among regions, countries, or economies based on the proportion of residences of all named inventors. Patents are classified under the World Intellectual Property Organization (WIPO) classification of patents, which classifies International Patent Classification (IPC) codes under 35 technical fields. IPC reformed codes take into account changes that were made to the WIPO classification in 2006 under the eighth version of the classification and were used to prepare these data. However, because PatentsView only provides the original IPC codes as they appeared on patents and not the IPC reformed codes, current Cooperative Patent Classification codes on patents were converted back to the most recent IPC classification to prepare these statistics. Fractional counts of patents were assigned to each technological field on patents to assign the proper weight of a patent to the corresponding technological fields under the classification. International Patent Documentation (INPADOC) patent families across all patent offices covered in the Worldwide Patent Statistical Database (PATSTAT) are counted according to the year of the first granted patent in the patent family. Patent families are allocated according to patent inventorship information found on the priority patent of the INPADOC patent families. To account for missing ownership information in PATSTAT for some offices, a method designed by de Rassenfosse et al. (2012) is used to fill in missing information on priority patents using information in successive filings within the patent families (see technical documentation for details). Patent families are fractionally allocated among regions, countries, or economies based on the proportion of residences of all named inventors. Because of data coverage issues for some patent offices in PATSTAT, statistics for some countries may be underestimated partially for some years or across the whole trend. Countries with identified issues include India (missing data) and South Africa (no data for 2018). For Italy, because of data gaps regarding information on granted patents, patent applications are used instead, which slightly overestimates Italy's output and creates a small shift in the year for which its output is accounted. The EU includes 28 member countries. China includes Hong Kong.

Source(s)

Science-Matrix; PATSTAT, accessed April 2019; PatentsView, USPTO, accessed June 2019.