

Table SINV-47

## USPTO utility patents granted in telecommunications, by region, country, or economy: 1998–2020

(Number)

Region, country, or economy	Economy by income status	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
World	na	5,030	5,457	5,497	5,737	5,877	6,037	6,514	5,992	8,311	6,920	7,067	7,220	8,570	9,195	11,362	12,134	12,528	11,759	11,183	11,690	11,079	12,124	11,334
North America	na	2,600	2,949	3,003	3,159	3,190	3,180	3,536	3,197	4,400	3,587	3,458	3,561	4,142	4,500	5,299	5,796	6,007	5,550	5,220	5,409	5,073	5,535	5,174
Canada	High	114	155	161	169	147	158	183	175	246	206	195	225	252	306	395	440	457	395	349	325	269	314	286
Mexico	Upper middle	0	1	2	1	1	3	5	3	2	1	0	0	1	0	1	2	3	2	10	5	7	11	6
United States	High	2,487	2,792	2,841	2,989	3,042	3,019	3,348	3,018	4,152	3,380	3,263	3,336	3,889	4,194	4,902	5,353	5,547	5,153	4,861	5,079	4,797	5,211	4,883
Central America and Caribbean	na	0	1	1	0	0	0	1	0	1	0	0	2	3	1	3	2	3	4	3	4	4	1	3
Puerto Rico	High	0	1	1	0	0	0	1	0	1	0	0	1	0	0	2	1	1	1	1	1	0	0	1
South America	na	1	3	2	0	2	0	1	0	1	1	4	5	3	6	6	4	16	11	8	11	12	11	10
Argentina	Upper middle	0	0	1	0	0	0	0	0	0	0	0	3	0	2	2	2	3	2	3	3	4	4	3
Brazil	Upper middle	1	2	1	0	1	0	0	0	1	1	3	2	2	4	4	2	13	8	6	7	7	6	6
Europe	na	621	727	766	856	892	926	929	820	1,087	878	875	828	1,025	989	1,243	1,368	1,503	1,474	1,490	1,501	1,384	1,516	1,383
EU-27 + UK <sup>a</sup>	na	608	702	743	829	862	897	886	783	1,041	848	842	797	978	945	1,192	1,317	1,447	1,404	1,403	1,407	1,298	1,418	1,305
United Kingdom	High	120	159	162	174	179	156	173	144	197	167	152	147	150	169	211	231	243	240	217	221	197	220	188
EU-27 <sup>b</sup>	na	488	542	581	655	683	741	713	639	844	682	690	650	828	776	981	1,086	1,203	1,164	1,186	1,187	1,101	1,198	1,117
Austria	High	10	8	8	3	7	13	10	17	13	7	16	12	18	20	29	19	34	26	27	37	30	34	37
Belgium	High	32	17	12	14	8	15	19	19	24	18	21	17	17	14	13	24	27	31	32	31	28	33	36
Denmark	High	2	13	12	13	16	17	12	14	19	15	15	11	13	12	26	34	44	27	37	44	24	34	35
Finland	High	70	82	95	97	108	131	119	101	138	131	111	116	124	112	98	122	110	105	113	93	92	78	65
France	High	91	114	117	139	136	130	134	108	163	110	113	111	142	132	181	196	184	216	204	217	179	186	168
Germany	High	131	138	149	198	206	242	263	233	296	256	217	218	256	210	274	283	360	304	305	314	317	361	341
Hungary	High	1	1	1	1	0	6	1	1	2	2	1	2	3	0	4	2	6	2	6	5	3	7	2
Ireland	High	3	2	3	4	4	5	11	6	9	5	9	10	17	14	22	20	23	37	30	34	34	32	32
Italy	High	24	16	16	20	19	25	29	28	37	30	44	30	49	47	55	75	79	65	66	72	59	67	57
Netherlands	High	52	48	33	27	27	21	34	19	29	27	46	26	33	41	59	68	62	66	66	59	73	61	51
Spain	High	7	3	5	6	3	10	7	9	23	18	26	18	15	27	45	41	39	47	35	36	38	41	43
Sweden	High	63	99	130	131	146	125	70	78	84	56	65	68	127	127	152	176	216	212	232	211	188	215	208
Other Europe	na	13	25	23	28	30	29	43	36	46	30	33	31	47	44	52	51	57	70	87	93	86	98	78
Other Europe-2020 <sup>b</sup>	na	133	184	185	202	208	184	216	180	243	196	185	178	197	213	263	283	300	310	304	314	283	318	266
Belarus	Upper middle	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1	0
Moldova	Lower middle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Norway	High	1	1	2	3	6	7	6	5	8	7	6	3	7	7	5	5	7	8	9	7	6	13	7
Russia	Upper middle	2	5	3	7	4	2	8	6	7	8	6	10	10	11	12	13	18	28	33	40	29	33	27
Switzerland	High	10	18	16	15	17	18	22	23	27	13	20	17	27	20	29	32	29	27	37	40	41	42	33

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Ukraine	Lower middle	0	0	0	0	0	0	0	0	0	0	0	0	0	4	3	0	0	2	2	3	2	1	1
Asia	na	1,748	1,728	1,666	1,656	1,713	1,835	1,930	1,873	2,639	2,319	2,590	2,679	3,216	3,489	4,599	4,743	4,735	4,475	4,228	4,514	4,334	4,766	4,515
China	Upper middle	7	7	8	7	3	12	20	23	41	40	59	94	165	242	388	394	538	506	535	714	724	933	980
India	Lower middle	1	1	1	2	3	2	6	7	10	18	21	16	24	34	61	84	101	123	123	152	149	178	170
Japan	High	1,521	1,452	1,399	1,367	1,412	1,451	1,543	1,472	2,005	1,614	1,753	1,785	2,098	2,158	2,802	2,779	2,697	2,453	2,107	2,139	2,064	2,190	1,975
Malaysia	Upper middle	0	3	1	3	1	0	3	2	1	4	4	6	3	5	6	5	5	11	13	10	8	14	10
Singapore	High	4	3	5	10	13	10	12	10	15	12	10	13	12	15	32	24	23	20	23	21	21	22	22
South Korea	High	139	174	158	155	157	200	179	211	317	342	412	441	567	625	825	978	916	929	987	1,060	1,018	1,060	983
Taiwan	High	76	87	91	112	124	160	168	148	249	290	331	324	345	409	479	475	451	429	437	413	346	361	363
Middle East	na	34	34	38	43	43	66	77	58	95	77	78	82	102	109	158	182	212	198	180	195	212	233	195
Israel	High	33	34	38	42	43	65	77	58	94	76	78	82	99	107	152	177	197	183	169	175	196	203	168
Africa	na	2	0	2	2	4	1	3	3	3	3	2	2	3	3	5	3	6	8	5	9	6	7	5
South Africa	Upper middle	2	0	1	2	4	1	3	2	2	2	2	2	3	2	1	1	3	5	3	4	2	5	4
Australia and Oceania	na	24	15	19	19	33	30	38	41	84	56	60	61	77	96	48	36	45	39	46	47	50	54	47
Australia	High	17	14	15	14	29	21	36	38	80	55	57	59	75	90	42	32	39	36	45	44	44	48	41
New Zealand	High	7	1	3	5	4	9	1	3	5	1	3	2	3	6	6	4	7	3	2	4	6	5	6
Unclassified	na	0	0	2	2	0	0	0	0	0	0	0	0	0	2	1	0	0	2	2	1	4	1	1

na = not applicable, metric not calculated at this level.

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

<sup>a</sup> The United Kingdom was a part of the EU for data purposes from 1973 to 2019.<sup>b</sup> Beginning in 2020, the United Kingdom was no longer a member of the EU.**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. China includes Hong Kong.

**Source(s):**

National Center for Science and Engineering Statistics; Science-Metrix; PatentsView, USPTO, accessed June 2021.