

Appendix table 5-59

U.S. utility patents citing S&E literature, by patent assignee sector, article author sector, and patent issue year: 2003–12

Patent assignee sector and article sector	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
USPTO utility patents										
All utility patents	169,009	164,285	143,802	173,780	157,282	157,772	167,349	219,612	224,504	253,152
Patents citing S&E literature, all assignee sectors	20,026	19,053	17,445	23,148	21,517	21,860	24,469	32,895	33,479	36,925
Foreign	6,308	6,226	5,721	7,695	7,225	7,590	8,613	12,032	12,622	13,932
United States	13,719	12,827	11,724	15,453	14,291	14,270	15,856	20,863	20,857	22,993
Government	188	223	180	217	194	218	250	348	311	329
Private	11,425	10,607	9,775	13,006	12,082	12,076	13,394	17,463	17,631	19,367
Academic	2,106	1,998	1,769	2,230	2,016	1,976	2,212	3,052	2,916	3,297
S&E articles										
All S&E articles, all article author sectors	5,904,436	6,055,266	6,201,116	6,333,831	6,461,493	6,601,419	6,753,101	6,906,527	7,082,299	7,259,142
All cited S&E articles, all article author sectors	95,741	87,118	84,139	110,082	100,878	107,323	120,826	154,249	156,435	163,225
Foreign	44,924	41,213	40,235	53,743	49,406	53,238	61,288	79,803	82,649	86,295
United States	50,817	45,905	43,904	56,339	51,472	54,085	59,538	74,446	73,786	76,930
Federal government	3,796	3,183	2,970	3,817	3,519	3,595	3,958	4,901	4,790	4,704
Industry	9,168	8,421	8,221	10,124	9,107	9,392	9,824	11,783	11,452	11,220
Academic	31,561	28,787	27,488	35,556	32,578	34,486	38,314	48,503	48,423	51,521
FFRDCs	1,065	1,030	896	1,290	1,122	1,192	1,369	1,583	1,506	1,621
Nonprofit	4,813	4,143	3,993	5,095	4,722	5,026	5,635	7,090	7,058	7,309
State/local government	246	186	197	274	248	222	260	338	334	325
Joint/unknown sectors	168	155	138	183	175	171	178	248	224	231
Citations from USPTO utility patents to S&E articles										
All citations, all article author sectors	164,283	143,718	135,427	191,725	190,996	198,191	221,456	305,873	323,073	332,778
Foreign	72,031	64,037	62,199	87,954	88,463	94,643	105,242	147,096	158,870	165,271
United States	92,252	79,681	73,228	103,771	102,533	103,548	116,214	158,777	164,203	167,507
Federal government	6,584	5,290	4,483	6,533	6,654	6,590	7,416	10,078	9,806	9,767
Industry	18,870	16,660	15,338	21,409	19,800	19,514	22,021	28,822	28,814	28,156
Academic	54,685	47,735	44,509	63,087	63,380	64,379	72,235	99,771	104,748	108,660
FFRDCs	2,146	2,049	1,695	2,480	2,420	2,456	2,662	3,455	3,464	3,533
Nonprofit	9,325	7,396	6,682	9,494	9,566	9,976	11,139	15,576	16,289	16,192
State/local government	351	278	276	421	398	328	409	573	582	628
Joint/unknown sectors	292	274	246	347	315	305	332	502	499	571

FFRDC = federally funded R&D center; USPTO = U.S. Patent and Trademark Office.

NOTES: Article/citation counts are from the set of journals covered by the Science Citation Index (SCI) and Social Sciences Citation Index (SSCI). Articles are assigned to a sector on the basis of the institutional address(es) listed in the article. Article/citations are credited on a fractional-count basis (i.e., for articles with collaborating institutions from multiple sectors, each sector receives fractional credit on the basis of the proportion of its participating institutions). Citation counts are based on an 11-year window with a 5-year lag (e.g., citations for 2012 are references in U.S. patents issued in 2012 to articles published in 1997–2007). Article counts are a sum of articles in the cited-year window. Detail may not add to total because of rounding. Data in the table are not comparable to previous versions due to changes in the cited-year window.

SOURCES: National Science Foundation, National Center for Science and Engineering Statistics, and The Patent Board™, special tabulations (2013) from USPTO, Patent Grant Bibliographic Data, and Thomson Reuters, SCI and SSCI, http://www.thomsonreuters.com/products_services/science/.