



OECD DATABASE ON TRIADIC PATENT FAMILIES

September 2017 edition

BACKGROUND INFORMATION

A patent family is defined as a set of patents taken in various countries for protecting a same invention, i.e. related patents are regrouped into a single record to derive a unique patent family. The OECD "Triadic" Patent Families consists in a set of patents filed for at the [European Patent Office \(EPO\)](#), the [Japan Patent Office \(JPO\)](#) and the [United States Patent and Trademark Office \(USPTO\)](#) that share one or more priority applications.

Note that the coverage of the Triadic Patent Families includes patent applications published by the USPTO from the early 2000s. Before the 2000s, only USPTO granted patents are covered.

The [EPO's Worldwide Statistical Patent Database \(PATSTAT\)](#), Spring 2017) is the primary data source: PATSTAT database provides a harmonised and comparable set of information on EPO, JPO and USPTO patents.

DATABASE STRUCTURE & COVERAGE

The [OECD Triadic Patent Families database \(TPF\)](#) mostly rely on the [INPADOC](#) family table provided in PATSTAT, that is further consolidated in order to integrate patent families linkages using PCT information when existing. Data is presented according to a unique family identifier ([Family_id](#)) that is automatically generated for each new version of the database (it is therefore not possible to compare identifiers from one edition to another). The TPF data can be linked to [PATSTAT](#) recent editions, using the surrogate key [Appln_id](#) of each family member.

The OECD TPF dataset is provided as 9 distinct files, according to the levels of information on each family. Bibliographic information is provided for all triadic patent families, in sets of flat files based on UTF-8 format, using a pipe character ("|") field separator, text being enclosed with quotes "". The data is organised as a set of relational tables that can be connected using the unique [Family identifier \(Family_id\)](#). Mind that the [Family_id](#) is automatically generated for each version of the OECD TPF Dataset and should not be compared from one version to another. The current edition covers [1,386,474 distinct patent families](#), broken down by earliest priority date as shown in the table opposite.

REFERENCES

Martinez, C. (2010) "[Insight into different types of patent families](#)", STI Working Paper 2010/2, OECD, Paris.

OECD (2009) [OECD Patent Statistics Manual](#), OECD, Paris

Dernis, H. & M. Khan (2004) "[Triadic Patent Families Methodology](#)", STI Working Paper 2004/2, OECD, Paris

RESTRICTIONS SOURCE & CONTACT

Please note that the raw data on OECD Triadic Patent Families are provided for research and analytical work. Make sure it is quoted as "[OECD, Triadic Patent Families database, September 2017](#)" when publishing the results of your analysis.

For further information about the OECD patent project, the methodology developed for building triadic patent families and access to [pre-defined patent indicators \(families by technologies, by country, nowcasted figures...\)](#), please visit our web page at [oe.cd/ipstats](#).

Comments and questions about this dataset should be sent to STI.Microdatalab@oecd.org.

For further information on EPO's PATSTAT, please contact patstat@epo.org.

Earliest priority date	First Family-id	Last Family-id	Number of Families USPTO application	Number of Families USPTO grants
All	1	1,386,474	1,386,474	1,101,283
2015	1,382,297	1,386,474	4,178	176
2014	1,371,642	1,382,296	10,655	1,948
2013	1,324,065	1,371,641	47,577	11,257
2012	1,270,169	1,324,064	53,896	22,072
2011	1,217,250	1,270,168	52,919	30,150
2010	1,165,104	1,217,249	52,146	34,411
2009	1,113,411	1,165,103	51,693	35,989
2008	1,062,539	1,113,410	50,872	35,926
2007	1,009,555	1,062,538	52,984	37,243
2006	952,749	1,009,554	56,806	39,169
2005	891,995	952,748	60,754	40,814
2004	831,179	891,994	60,816	41,304
2003	773,061	831,178	58,118	40,804
2002	717,076	773,060	55,985	41,248
2001	662,548	717,075	54,528	42,189
2000	606,919	662,547	55,629	45,715
1999	559,471	606,918	47,448	45,059
1998	514,551	559,470	44,920	43,604
1997	471,917	514,550	42,634	41,844
1996	432,143	471,916	39,774	39,336
1995	395,796	432,142	36,347	36,122
1994	362,748	395,795	33,048	32,939
1993	331,422	362,747	31,326	31,247
1992	300,991	331,421	30,431	30,377
1991	270,127	300,990	30,864	30,805
1990	237,575	270,126	32,552	32,508
1989	204,628	237,574	32,947	32,882
1988	174,261	204,627	30,367	30,294
1987	146,205	174,260	28,056	27,991
1986	121,813	146,204	24,392	24,329
1985	99,091	121,812	22,722	22,668
1984	78,061	99,090	21,030	20,987
1983	59,439	78,060	18,622	18,576
1982	43,471	59,438	15,968	15,917
1981	29,706	43,470	13,765	13,728
1980	17,831	29,705	11,875	11,857
1979	8,310	17,830	9,521	9,507
pre-1978	1	8,309	8,309	8,291

DATABASE STRUCTURE

TPF_EPO List of EPO patents in the family 1,598,062 rows	
Family_id	Family identifier (from CORE table – repeated entry)
EPO_Nbr	EPO application number ("EPYYYYNNNNNNN")
Appln_id	Surrogate key - applications in PATSTAT, Spring 2017
Title	English title of the EPO filing

TPF_USPTO List of USPTO patents in the family 2,022,002 rows	
Family_id	Family identifier (from CORE table – repeated entry)
USPTO_Nbr	USPTO publication number ("US0NNNNNNN" for USPTO Grants "USYYYYNNNNNN" for USPTO Applications)
Appln_id	Surrogate key - applications in PATSTAT, Spring 2017
Title	English title of the USPTO patent

TPF_JPO List of JPO patents in the family 1,677,848 rows	
Family_id	Family identifier (from CORE table – repeated entry)
JPO_Nbr	JPO application number (not harmonised)
Appln_id	Surrogate key - applications in PATSTAT, Spring 2017
Title	English title of the JPO patent <i>only where an english translation is available</i>

TPF_PCT List of PCT filings in the family 880,077 rows	
Family_id	Family identifier (from CORE table – repeated entry)
PCT_Nbr	PCT publication number ("WOYYYYNNNNNN")
Appln_id	Surrogate key - applications in PATSTAT, Spring 2017

TPF_PRIORITY List of priority filings + other patent linkages 3,421,598 rows	
Family_id	Family identifier (from CORE table – repeated entry)
Patent_nbr	Priority number or related patent application (Country code 'CC'+Application number)
Parent_Type	Identification of the patent linkages using PATSTAT tables: PRIO for Paris convention links (from APPLN_PRIOR table); CONTN for continuations in part or divisions (from APPLN_CONTN table); TECH for technical relations (from TECH_REL table); PCT for links based on PCT filings (using Internat_Appln_id from APPLN table)
Appln_id	Surrogate key - applications in PATSTAT, Spring 2017

TPF_CORE Summarised composition of families 1,386,474 rows	
Family_id	Unique family identifier : 1 to 1,386,474 (from the earliest priority to the latest; mind that the identifier is automatically generated for each data release)
Count_prio	Total number of priority applications in the family (counts only the priority links Paris convention definition: count_prio=0 when other patent linkages are used – e.g. technical relations, divisions or continuations, PCT, etc.)
First_Prio	Earliest priority date – YYYYMMDD – when count_prio=0, the earliest date of patent family members,
Last_prio	Latest priority date – YYYYMMDD
USPTO_app_first	Earliest filing date at USPTO – YYYYMMDD
USPTO_app_Last	Latest filing date at USPTO – YYYYMMDD
USPTO_grant	Optional - Earliest date of grant at USPTO - YYYYMMDD
Count_USPTO	Total number of USPTO patents granted that belong to the family
EPO_app_first	Earliest filing date at EPO – YYYYMMDD
EPO_app_last	Latest filing date at EPO - YYYYMMDD
EPO_grant	Optional – Earliest date of grant at the EPO - YYYYMMDD
Count_EPO	Total number of EPO patent filings that belong to the family
JPO_app_first	Earliest filing date at JPO - YYYYMMDD
JPO_app_last	Latest filing date at JPO - YYYYMMDD
JPO_grant	Optional – Earliest date of grant at the JPO - YYYYMMDD
Count_JPO	Total number of JPO patent filings that belong to the family
PCT_app_first	Optional – Earliest PCT filing date - YYYYMMDD
Count_PCT	Optional – Total number of PCT filings that belong to the family, if any

TPF_IPC list of IPC classes of each family member 28,357,482 rows	
Family_id	Family identifier (from CORE table – repeated entry)
Appln_id	Surrogate key - applications in PATSTAT, Spring 2017
Appln_auth	Patent application authority (EP/JP/US)
IPC	International Patent Classification, 8th edition
Count_IPC	Count of IPC classes per family member

TPF_INVENTORS List of inventors ¹ in the family - from USPTO patents 4,314,428 rows	
Family_id	Family identifier (from CORE table – repeated entry)
Inventor	Name of the inventor
Address	City of residence of the inventor
Country	Country of residence of the inventor - 2 digits ISO code
Inventor_Count	Total number of inventors included in the family
Inventor_Share	Share ² of each inventor in the family (<i>for fractional counts</i>)

TPF_APPLICANTS List of applicants ¹ in the family - from USPTO patents 3,108,646 rows	
Family_id	Family identifier (from CORE table – repeated entry)
Applicant	Name of the applicant
Address	City of residence of the applicant
Country	Country of residence of the applicant - 2 digits ISO code
Applicant_Count	Total number of applicants included in the family
Applicant_Share	Share ² of each applicant in the family (<i>for fractional counts</i>)

1. When missing, inventors (respectively applicants) were added to the applicant's table (resp. inventor's table).

2. Shares of applicants/inventors are provided to facilitate fractional patent counts: e.g. for a patent family co-invented by 1 French, 1 American and 2 German residents, the respective shares will be FR=0.25, US=0.25, DE=0.25+0.25.