

RISIS



RESEARCH INFRASTRUCTURE FOR SCIENCE
AND INNOVATION POLICY STUDIES

DOCUMENTATION OF RISIS DATASETS: *ISI-Trademark Data Collection (ISI-TM)*

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Version 1.0, 24/03/2021



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 824091



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1 The ISI-Trademark Data Collection (ISI-TM)

The ISI-Trademark Data Collection (ISI-TM) provides detailed information on trademarks filed at the EUIPO and at the USPTO. It includes information on all trademarks filed at the EUIPO since 1996 and at the USPTO since the early 19th century onwards. The data provided are the trademark number, as a unique identifier, applicant and representative information, several relevant dates application, registration,...), trademark type (word, figurative, sound,...), the language of the trademark, information on opposition and information on relevant classifications. The trademark information is processed and set-up into an Oracle relational database system (RDBMS). The ISI-Trademark Data Collection (ISI-TM) offers using trademarks as a complementary and relatively "close to the market" indicator for new products and innovation activities, especially in the service sector. It offers the possibility to be linked to other datasets at the organizational level, within the RCF as well as externally.

2 The EUIPO Trademark Database Module

2.1 Basic Characteristics

The EUIPO Trademark database is created on the basis of all trademark filings at the European Union Intellectual Property Office (EUIPO). The EUIPO provides .xml data, which is processed and set-up into an Oracle relational database system (RDBMS). It includes information on all trademarks filed at the EUIPO since 1996. Overall, these are 1,887,238 million filings.

The basic information covered in the database is the following:

Bibliographic information

- Trademark number (ID) --> the application number of the trademark
- Applicant/owner, incl. address --> the name and address of the trademark applicant
- Representative, incl. address --> the name and address of the representative who filed the trademark
- Dates (application, registration,...) --> several dates, associated with the trademark
- Type (word, figurative, sound,...) --> the type of the trademark
- Language --> the language of the trademark
- Opposition --> information whether an opposition has been filed against the trademark

Classifications

- 45 NICE classes
- Vienna classes (figurative elements)

The database is updated periodically (annually) and new information from the EUIPO is added. The database is developed and maintained by Fraunhofer ISI. The database is located on the servers of Fraunhofer ISI in Karlsruhe, Germany.

2.2 Database content

2.2.1 Definition and description of observations

The observations included in the database are single trademarks, uniquely identified by an application number. In the most recent (October 2019) version, 1,887,238 million filings are included.

2.2.2 Data acquisition and processing

a) Data sources

EUIPO Open Dataset Download

<https://euipo.europa.eu/ohimportal/en/open-data>

- xml Datafile for each Trademark from 1996 - onwards (1738984 files October2019)
- xml Datafile for each Applicant (1028501 files October2019)
- xml Datafile for each Representative (90479 files October2019)

b) Data processing:

- extracting all relevant information using a xml_to_csv converter tool
- loading the data into the tables

2.2.3 Information on all variables/indicators

For a more detailed description of all indicators, please refer to section 3.2 below.

Database coverage

trd101_main

appln_nr: 1.738.984 (number of unique trademarks)
operation_key: Insert 1.738.918 / Delete 66 (if Delete only the appln_nr is available)
with application_date: 1.734.649
with registration_date: 1.479.238
with appln_language_code: 1.738.918
with second_language_code: 1.738.917
with expiry_date 1.475.152
with current_status_code: 1.738.918
with kindmark: 1.738.915
with mark_verbal_element_text: 1.664.750

trd102_app_detail

applicant_id: 1.028.501 (number of applicants)
with app_national_code: 910.514
with app_legal_entity: 910.514

with app_incorp_country_code: 910.511
with last_name: 694.415
with organization_name: 694.415
with legal_form: 356.277
with address_country_code: 694.414
with address_street: 694.416
with address_city: 693.609
with address_state: 118.102
with address_postcode: 616.950

trd102_rep_detail

representative_id: 90.479 (number of representatives)
with rep_kind_code: 71.119
with rep_national_code: 71.119
with rep_legal_entity: 71.119
with rep_incorp_country_code: 71.119

2.2.4 Sectorial, temporal and geographical coverage

Table 1 Trademark filings by filing year

Filing year	Nr. of filings	Nr. of filings w/ country code information	Share of filings w/ country code information
1996	41,853	37,716	90%
1997	26,724	23,349	87%
1998	31,341	27,333	87%
1999	40,415	35,565	88%
2000	56,342	49,565	88%
2001	47,926	42,909	90%
2002	44,114	40,080	91%
2003	56,283	51,394	91%
2004	57,003	51,612	91%
2005	56,554	51,130	90%
2006	64,044	57,619	90%
2007	72,199	64,448	89%
2008	69,907	62,600	90%
2009	71,498	63,436	89%
2010	80,053	70,748	88%
2011	84,962	75,055	88%
2012	86,779	76,490	88%
2013	90,246	78,817	87%
2014	94,738	83,056	88%
2015	105,016	92,643	88%
2016	112,709	99,074	88%
2017	117,215	102,597	88%
2018	122,965	106,937	87%
2019	103,763	87,413	84%
n.a.	4,335	1,047	24%

Table 2 Trademark filings by filing country

Country	Nr. of filings	Share in total filings of all countries	Country	Nr. of filings	Share in total filings of all countries
DE	241,012	15%	GT	80	0.005%
US	238,482	15%	SY	72	0.005%
GB	161,102	10%	TC	69	0.004%
IT	126,303	8%	SV	64	0.004%
ES	116,424	7%	GE	61	0.004%
FR	96,504	6%	AW	53	0.003%
NL	53,678	3%	KZ	53	0.003%
CN	45,176	3%	KE	51	0.003%
SE	38,889	2%	PY	50	0.003%
CH	34,971	2%	LR	46	0.003%
JP	31,246	2%	TT	46	0.003%
AT	30,177	2%	OM	45	0.003%
PL	26,453	2%	LC	42	0.003%
BE	24,959	2%	PF	37	0.002%
DK	22,241	1%	VC	37	0.002%
CA	18,561	1%	BY	36	0.002%
FI	17,389	1%	CK	36	0.002%
PT	15,618	1%	NI	34	0.002%
IE	15,475	1%	AM	33	0.002%
LU	14,005	1%	AO	33	0.002%
HK	12,840	1%	BD	33	0.002%
TW	11,166	1%	SN	32	0.002%
KR	10,570	1%	TG	32	0.002%
CZ	8,617	1%	DM	29	0.002%
AU	7,064	0%	IO	29	0.002%
GR	6,773	0%	MK	29	0.002%
CY	5,568	0%	AL	28	0.002%
RO	5,123	0%	BA	28	0.002%
IL	4,918	0%	CI	27	0.002%
VG	4,767	0%	DZ	26	0.002%
BR	4,749	0%	BN	23	0.001%
BG	4,510	0%	VA	23	0.001%
TR	4,398	0%	MD	22	0.001%
HU	4,207	0%	CD	21	0.001%
MT	4,189	0%	LY	21	0.001%
EE	3,431	0%	NA	21	0.001%
NO	3,429	0%	SR	21	0.001%
MX	3,403	0%	YE	21	0.001%
ZA	3,270	0%	GL	20	0.001%
IN	3,143	0%	TZ	20	0.001%
SG	2,992	0%	VI	20	0.001%



SK	2,717	0%	AF	19	0.001%
AE	2,639	0%	ME	19	0.001%
SI	2,629	0%	FO	18	0.001%
NZ	2,527	0%	LA	17	0.001%
LT	2,429	0%	UG	17	0.001%
KY	2,261	0%	HN	16	0.001%
CL	1,957	0%	IQ	15	0.001%
AR	1,659	0%	KH	15	0.001%
LI	1,524	0%	KP	15	0.001%
TH	1,482	0%	MR	15	0.001%
BM	1,340	0%	NC	15	0.001%
PA	1,212	0%	GH	14	0.001%
LV	1,165	0%	NP	14	0.001%
IM	1,161	0%	SB	14	0.001%
MC	1,041	0%	BO	13	0.001%
MY	1,019	0%	MV	12	0.001%
BS	982	0%	BJ	11	0.001%
RU	982	0%	ET	11	0.001%
GI	930	0%	FJ	11	0.001%
JE	894	0%	CM	10	0.001%
SA	890	0%	MN	10	0.001%
CO	838	0%	SZ	10	0.001%
BB	676	0%	VU	10	0.001%
MU	651	0%	ZW	9	0.001%
HR	645	0%	BQ	7	0.000%
GG	576	0%	GY	7	0.000%
LB	568	0%	MG	7	0.000%
SM	545	0%	MZ	7	0.000%
CW	468	0%	CC	6	0.000%
IS	409	0%	CV	6	0.000%
ID	406	0%	DJ	5	0.000%
AD	385	0%	GN	5	0.000%
SC	371	0%	GQ	5	0.000%
JO	366	0%	HT	5	0.000%
LK	345	0%	AZ	4	0.000%
UY	308	0%	TF	4	0.000%
QA	297	0%	TO	4	0.000%
BZ	291	0%	PG	3	0.000%
KW	280	0%	RW	3	0.000%
EG	259	0%	SX	3	0.000%
DO	251	0%	UZ	3	0.000%
EC	247	0%	BW	2	0.000%
TN	246	0%	CG	2	0.000%
PE	236	0%	CX	2	0.000%
PK	197	0%	SD	2	0.000%
CU	192	0%	ST	2	0.000%

VE	187	0%	TL	2	0.000%
CR	178	0%	AS	1	0.000%
MA	170	0%	ER	1	0.000%
PH	157	0%	GA	1	0.000%
UA	145	0%	GD	1	0.000%
PR	142	0%	GU	1	0.000%
AG	132	0%	KM	1	0.000%
RS	130	0%	LS	1	0.000%
BH	125	0%	ML	1	0.000%
WS	125	0%	MM	1	0.000%
JM	123	0%	MS	1	0.000%
KN	119	0%	NE	1	0.000%
MH	113	0%	NU	1	0.000%
IR	107	0%	PN	1	0.000%
AI	106	0%	RE	1	0.000%
MO	101	0%	TD	1	0.000%
VN	98	0%	XX	1	0.000%
NG	89	0%	n.a.	20.286	1.304%

Table 3 Trademark filings by type of mark

Type of mark	Nr. of filings	Share in total filings
Word	1,004,450	57.76%
Figurative	722,305	41.54%
3D shape	9,566	0.55%
Other	996	0.06%
Colour	985	0.06%
Sound	331	0.02%
Position	131	0.01%
Motion	67	0.00%
n.a.	66	0.00%
Pattern	41	0.00%
Multimedia	34	0.00%
Hologram	12	0.00%

Table 4 Trademark filings by Nice class

Class Nr.	Class name (short)	Nr. of filings	Share in total filings (incl. double counts)
1	Chemicals	71,471	1.7%
2	Paints, varnishes, lacquers	23,047	0.6%
3	Cosmetics and toiletry	124,677	3.0%
4	Industrial oils and greases	24,517	0.6%
5	Pharmaceuticals	148,346	3.6%
6	Metal products	68,236	1.6%

7	Machines, machine tools	98,046	2.3%
8	Hand tools and implements	35,552	0.9%
9	Electronics (incl. computers)	433,189	10.4%
10	Medical technology	76,370	1.8%
11	Electric devices	98,602	2.4%
12	Vehicles (land, air or water)	70,517	1.7%
13	Firearms; ammunition and projectiles	4,638	0.1%
14	Precious metals and their alloys	52,778	1.3%
15	Musical instruments	5,826	0.1%
16	Paper and cardboard; printed matter;	188,539	4.5%
17	Unprocessed and semi-processed rubber	40,663	1.0%
18	Leather and imitations of leather	90,499	2.2%
19	Building materials (non-metallic)	50,650	1.2%
20	Furniture	77,523	1.9%
21	Household or kitchen utensils and containers	73,016	1.7%
22	Ropes and string	14,464	0.3%
23	Yarns and threads	5,375	0.1%
24	Textiles and substitutes for textiles	49,225	1.2%
25	Clothing, footwear, headgear.	169,175	4.0%
26	Lace and embroidery	14,316	0.3%
27	Carpets, rugs, mats and matting	17,244	0.4%
28	Games, toys and playthings	102,712	2.5%
29	Meat, fish, poultry and game	92,331	2.2%
30	Coffee, tea, cocoa and artificial coffee; spices	107,821	2.6%
31	Raw [...] agricultural, aquacultural [...] products	51,624	1.2%
32	Beers; mineral and aerated waters	68,400	1.6%
33	Alcoholic beverages (except beers).	69,203	1.7%
34	Tobacco; smokers' articles; matches.	17,721	0.4%
35	Management	358,127	8.6%
36	Finance	117,574	2.8%
37	Repair	102,441	2.5%
38	Telecommunications	134,916	3.2%
39	Transport	90,851	2.2%
40	Material treatment	47,775	1.1%
41	Education; providing of training	229,899	5.5%
42	Scientific and technological services	292,878	7.0%
43	Services for providing food and drink	65,967	1.6%
44	Medical services; veterinary services	57,458	1.4%
45	Legal services	42,972	1.0%
n.a.	n.a.	52	0.0%

Table 5 Trademark filings by type of applicant

Type of applicant	Nr. of filings	Share in total filings (incl. double counts)
Legal Entity	1,532621	98.6%
Physical Person	1,820	0.1%
Undefined	4	0.0%
n.a.	20,286	1.3%

Table 6 Trademark filings by current status

Current status	Nr. of filings	Share in total filings
Appeal pending	722	0.0%
Application filed	4180	0.2%
Application opposed	20137	1.2%
Application published	34860	2.0%
Application refused	65059	3.7%
Application under examination	13454	0.8%
Application withdrawn	121410	7.0%
Registered	1212107	69.7%
Registration cancellation pending	3167	0.2%
Registration cancelled	3459	0.2%
Registration expired	254935	14.7%
Registration pending	256	0.0%
Registration surrendered	5172	0.3%
n.a.	66	0.0%

2.2.5 Quality and accuracy of data

Since the October 2019 version, the representative names, address information, web contact information are no longer available. That means all data are fully anonymized.

2.3 Technical Specifications

2.3.1 Information on the data base system

The database system used is based on the relational database management system (RDBMS) from Oracle. It allows for an intensive usage and can easily be accessed.

2.3.2 Technical variable definition

Information on all Variables and Datatypes

trd101_main

- **TRANSACTION_CODE** Parameter value "EM-Trade Mark", if available in the future "IM-Trade Mark" for international applications - **VARCHAR2(15 BYTE)**
- **OPERATION_KEY** Parameter value INSERT/DELETE (if DELETE there are no entries except APPL_NR) - **VARCHAR2(20 BYTE)**
- **REG_OFFICE_CODE** Code of the Registration Office; European Trademark EM, if available in the future International Trademark IM - **CHAR(2 BYTE)**
- **APPLN_NR** unique Application Number equates to the official trademark number without leading zeros - **NUMBER(38,0)**
- **APPLICATION_DATE** Date the trademark was applied - **DATE**
- **REGISTRATION_DATE** Date the trademark was registered - **DATE**
- **APPLN_LANGUAGE_CODE** Language Code of the application - **CHAR(2 BYTE)**
- **SECOND_LANGUAGE_CODE** Second Language Code of the application - **CHAR(2 BYTE)**
- **EXPIRY_DATE** Date when the application will expire - **DATE**
- **STATUS_KEY** numeric status key - **NUMBER(38,0)**
- **CURRENT_STATUS_CODE** Description of the trademark status, there are 11 different status types each has a unique STATUS_KEY - **VARCHAR2(40 BYTE)**
- **CURRENT_STATUS_DATE** Date of the trademark status - **DATE**
- **KINDMARK** Kind of Trademark (Individual, Collective, EU Certificate) - **VARCHAR2(20 BYTE)**
- **MARK_FEATURE** Feature of Trademark (Figurative, Word, 3D Shape) - **VARCHAR2(20 BYTE)**
- **DISTINCTIVENESS_INDICATOR** parameter value TRUE/FALSE - **VARCHAR2(50 BYTE)**
- **MARK_VERBAL_ELEMENT_TEXT** Name of Trademark - **VARCHAR2(400 BYTE)**
- **APPLICATION_YEAR** Year the trademark was applied - **NUMBER(4,0)**
- **REGISTRATION_YEAR** Year the trademark was registered - **NUMBER(4,0)**
- **EXPIRY_YEAR** year the trademark will expire - **NUMBER(4,0)**

trd102_app_detail

- **APPLICANT_ID** Applicant unique Identifier - **NUMBER(38,0)**
- **APP_NATIONAL_CODE** 2 digit ISO3166 Country Code of the Applicant - **CHAR(2 BYTE)**
- **APP_LEGAL_ENTITY** parameter value Legal Entity/Physical Person/Undefined - **VARCHAR2(20 BYTE)**
- **APP_INCORP_COUNTRY_CODE** Incorporation Country Code (2 Digits ISO3166) - **CHAR(2 BYTE)**
- **LAST_NAME** Last Name - **VARCHAR2(400 BYTE)**
- **ORGANIZATION_NAME** Organization Name - **VARCHAR2(400 BYTE)**
- **LEGAL_FORM** Legal Form of the Applicant - **VARCHAR2(100 BYTE)**
- **ADDRESS_COUNTRY_CODE** Address Country Code - **CHAR(2 BYTE)**
- **ADDRESS_STREET** Name of the Street - **VARCHAR2(400 BYTE)**
- **ADDRESS_CITY** Name of the City - **VARCHAR2(200 BYTE)**
- **ADDRESS_STATE** US States, French Departements, Federal States - **VARCHAR2(100 BYTE)**
- **ADDRESS_POSTCODE** Postal Code - **VARCHAR2(20 BYTE)**

trd102_rep_detail

- **REPRESENTATIVE_ID** Representative unique Identifier - **NUMBER(38,0)**
- **REP_KIND_CODE** Kind of Representative - **VARCHAR2(100 BYTE)**
- **REP_NATIONAL_CODE** 2 digit ISO3166 Country Code of the Representative - **CHAR(2 BYTE)**
- **REP_LEGAL_ENTITY** parameter value "Legal Person/Natural Person" - **VARCHAR2(20 BYTE)**
- **REP_INCORP_COUNTRY_CODE** Representative Incorporation Country Code (2 Digits ISO3166) - **CHAR(2 BYTE)**

trd102_app_id

- **TRANSACTION_CODE** Parameter value "EM-Trade Mark", if available in the future "IM-Trade Mark" for international applications - **VARCHAR2(15 BYTE)**
- **APPLN_NR** unique Application Number equates to the official trademark number without leading zeros - **NUMBER(38,0)**
- **APPLICANT_ID** Applicant unique Identifier - **NUMBER(38,0)**

trd102_rep_id

- **TRANSACTION_CODE** Parameter value "EM-Trade Mark", if available in the future "IM-Trade Mark" for international applications - **VARCHAR2(15 BYTE)**
- **APPLN_NR** unique Application Number equates to the official trademark number without leading zeros - **NUMBER(38,0)**
- **REPRESENTATIVE_ID** Representative unique Identifier - **NUMBER(38,0)**

trd109_nice_class

- **APPLN_NR** unique Application Number equates to the official trademark number without leading zeros - **NUMBER(38,0)**
- **CLASS_VERSION** Class Version of the Nice Classification System - **CHAR(2 BYTE)**
- **CLASS_NR** Class Number (1-45) of the Nice Classification System - **NUMBER(38,0)**
- **GOODS_SERVICES_DESCRIPTION** Description text of the trademark depending on the Nice Class Number - **CLOB**

trd109_vienna_class

- **APPLN_NR** unique Application Number equates to the official trademark number without leading zeros - **NUMBER(38,0)**
- **CATEGORY_CODE** Category Code of the Vienna Classification System - **CHAR(8 BYTE)**

trd111_pub

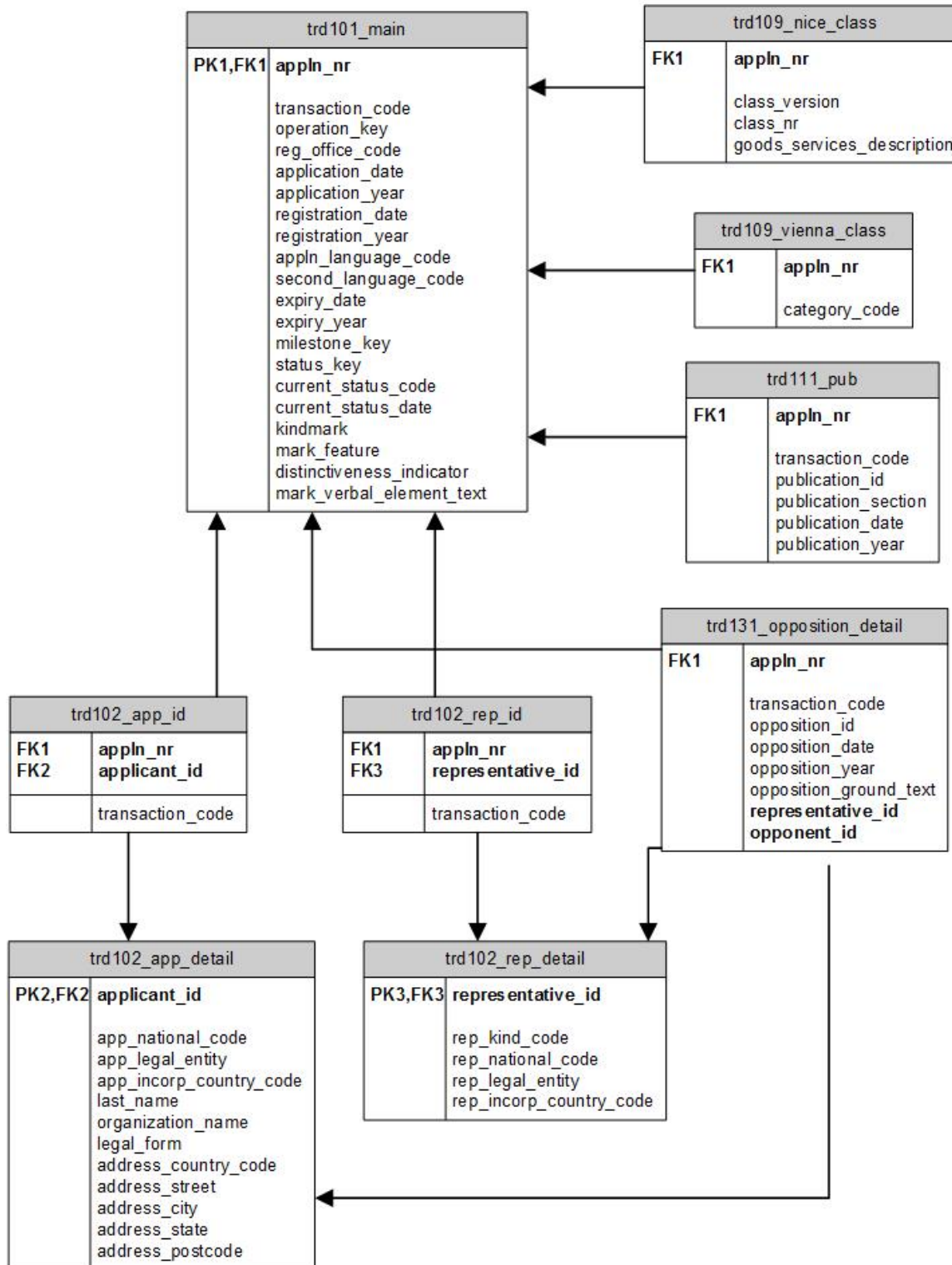
- **TRANSACTION_CODE** Parameter value "EM-Trade Mark", if available in the future "IM-Trade Mark" for international applications - **VARCHAR2(15 BYTE)**
- **APPLN_NR** unique Application Number equates to the official trademark number without leading zeros - **NUMBER(38,0)**
- **PUBLICATION_ID** Publication Identifier - **VARCHAR2(12 BYTE)**
- **PUBLICATION_SECTION** Section of Publication (corresponds with the Publication Identifier) - **VARCHAR2(10 BYTE)**
- **PUBLICATION_DATE** Date of Publication - **DATE**
- **PUBLICATION_YEAR** Year of Publication - **NUMBER(4,0)**

trd131_opposition_detail

- **TRANSACTION_CODE** Parameter value "EM-Trade Mark", if available in the future "IM-Trade Mark" for international applications - **VARCHAR2(15 BYTE)**
- **APPLN_NR** unique Application Number equates to the official trademark number without leading zeros - **NUMBER(38,0)**
- **OPPOSITION_IDENTIFIER** Opposition Unique Identifier - **NUMBER(38,0)**
- **OPPOSITION_DATE** Date of Opposition - **DATE**
- **OPPOSITION_GROUND_TEXT** Opposition Text (fixed selection of terms) - **VARCHAR2(1000 BYTE)**
- **OPPONENT_ID** Opponent Identifier equates to the Application Identifier - **NUMBER(38,0)**
- **REPRESENTATIVE_ID** Representative unique Identifier - **NUMBER(38,0)**
- **OPPOSITION_YEAR** Year of Opposition - **NUMBER (4,0)**

Database Overview Diagram, including all identifiers and relations

EUIPO - Trademark - Database



Database Examples

Insight view of Table trd101_main

TRANSACTION_CODE	OPERATION_KEY	REG_OFFICE_CODE	APPLN_NR	APPLICATION_DATE	REGISTRATION_DATE	APPLN_LANGUAGE_CODE	SECOND_LANGUAGE_CODE	EXPIRY_DATE	STATUS_KEY
EM-Trade Mark	Insert	EM	283580	03.06.96	(null)	de	en	(null)	3
EM-Trade Mark	Insert	EM	401455	29.10.96	20.07.98	en	fr	29.10.06	11
EM-Trade Mark	Insert	EM	141069	01.04.96	29.07.98	nl	en	01.04.06	11
EM-Trade Mark	Insert	EM	252239	02.05.96	07.01.99	de	en	02.05.06	11
EM-Trade Mark	Insert	EM	340513	09.08.96	17.12.98	de	en	09.08.26	1
EM-Trade Mark	Insert	EM	142612	01.04.96	(null)	nl	en	(null)	3
EM-Trade Mark	Insert	EM	391557	07.10.96	25.01.99	de	en	07.10.06	11
EM-Trade Mark	Insert	EM	362269	26.08.96	13.01.00	da	en	26.08.06	11
EM-Trade Mark	Insert	EM	227967	01.04.96	30.09.98	da	en	01.04.06	11
EM-Trade Mark	Insert	EM	371146	30.09.96	01.06.99	en	es	30.09.06	11
EM-Trade Mark	Insert	EM	368233	30.08.96	(null)	de	en	(null)	4
EM-Trade Mark	Insert	EM	147660	02.10.96	(null)	sv	en	(null)	3
EM-Trade Mark	Insert	EM	179978	01.04.96	02.02.99	en	fr	01.04.06	11
EM-Trade Mark	Insert	EM	185702	01.04.96	13.12.99	nl	fr	01.04.26	1
EM-Trade Mark	Insert	EM	86983	01.04.96	18.05.98	en	fr	01.04.26	1
EM-Trade Mark	Insert	EM	438838	27.11.96	19.11.98	de	en	27.11.06	11
EM-Trade Mark	Insert	EM	172437	01.04.96	20.08.01	en	es	01.04.26	1
EM-Trade Mark	Insert	EM	23440	01.04.96	08.09.98	de	en	01.04.26	1
EM-Trade Mark	Insert	EM	340117	06.08.96	08.11.99	en	fr	06.08.16	11
EM-Trade Mark	Insert	EM	16204	01.04.96	10.02.99	en	de	01.04.26	1
EM-Trade Mark	Insert	EM	126664	01.04.96	13.08.99	en	es	01.04.26	1
EM-Trade Mark	Insert	EM	186452	01.04.96	19.06.98	nl	en	01.04.26	1
EM-Trade Mark	Insert	EM	390096	28.10.96	18.05.99	nl	en	28.10.06	11
EM-Trade Mark	Insert	EM	82834	01.04.96	01.06.99	de	en	01.04.26	1
EM-Trade Mark	Insert	EM	146696	01.04.96	16.07.99	en	fr	01.04.26	1

CURRENT_STATUS_CODE	CURRENT_STATUS_DATE	KINDMARK	MARK_FEATURE	DISTINCTIVENESS_INDICATOR	MARK_VERBAL_ELEMENT_TEXT	APPLICATION_YEAR	REGISTRATION_YEAR	EXPIRY_YEAR
Application withdrawn	04.03.02	Individual	Colour	false	(null)	1996	(null)	(null)
Registration expired	02.09.07	Individual	Figurative	false	(null)	1996	1998	2006
Registration expired	04.02.07	Individual	Figurative	false	(null)	1996	1998	2006
Registration expired	05.03.07	Individual	Figurative	false	(null)	1996	1999	2006
Registered	18.02.99	Individual	Word	false	RC-Corner	1996	1998	2026
Application withdrawn	31.08.00	Individual	Colour	false	(null)	1996	(null)	(null)
Registration expired	12.08.07	Collective	Figurative	false	(null)	1996	1999	2006
Registration expired	01.07.07	Individual	Figurative	false	(null)	1996	2000	2006
Registration expired	04.02.07	Individual	Figurative	false	(null)	1996	1998	2006
Registration expired	05.08.07	Individual	Figurative	false	(null)	1996	1999	2006
Application refused	04.12.01	Individual	3D shape	false	(null)	1996	(null)	(null)
Application withdrawn	28.10.99	Individual	Figurative	false	(null)	1996	(null)	(null)
Registration expired	04.02.07	Individual	Figurative	false	(null)	1996	1999	2006
Registered	28.01.00	Individual	Word	false	VITAMEX	1996	1999	2026
Registered	24.08.98	Individual	Figurative	false	UNIVERSITY OF WASHINGTON 1861 LVX SIT	1996	1998	2026
Registration expired	30.09.07	Individual	Figurative	false	(null)	1996	1998	2006
Registered	04.09.01	Individual	Word	false	VIÉCH	1996	2001	2026
Registered	22.01.99	Individual	Figurative	false	VOGELE	1996	1998	2026
Registration expired	28.06.17	Individual	Figurative	false	(null)	1996	1999	2016
Registered	11.03.99	Individual	Word	false	WELD-KLEEN	1996	1999	2026
Registered	22.09.99	Individual	Word	false	WAVE PULSE	1996	1999	2026
Registered	13.08.98	Individual	Word	false	WILD TURKEY	1996	1998	2026
Registration expired	02.09.07	Individual	Word	false	CASTAÑO	1996	1999	2006
Registered	22.07.99	Individual	Word	true	ZURICH	1996	1999	2026

Insight view of Table trd102_rep_detail

REPRESENTATIVE_ID	REP_KIND_CODE	REP_NATIONAL_CODE	REP_LEGAL_ENTITY	REP_INCORP_COUNTRY_CODE
1	0 (null)	(null)	(null)	(null)
2	1 (null)	(null)	(null)	(null)
3	2 Professional Representative	FR	Natural Person	FR
4	3 (null)	(null)	(null)	(null)
5	4 Professional Representative	FR	Natural Person	FR
6	5 (null)	(null)	(null)	(null)
7	6 (null)	(null)	(null)	(null)
8	7 Professional Representative	FR	Natural Person	FR
9	8 (null)	(null)	(null)	(null)
10	9 Professional Representative	DE	Natural Person	DE
11	10 (null)	(null)	(null)	(null)
12	11 Professional Representative	DE	Natural Person	DE
13	12 (null)	(null)	(null)	(null)
14	13 Professional Representative	DE	Natural Person	DE
15	14 Professional Representative	DE	Natural Person	DE
16	15 (null)	(null)	(null)	(null)

Insight view of Table trd109_nice_class

APPLN...	CLASS_VERSION	CLASS_NR	GOODS_SERVICES_DESCRIPTION
1	1.7	16	Publications, books, magazines, newspapers, bulletins and brochures; pap...
2	1.7	42	The services rendered by an international association engaged in the stu...
3	1.7	41	The organization and management of congresses, conferences, talks, sympo...
4	2.7	16	Publications and other printed matter.
5	2.7	42	Services rendered by an association to their members including provision...
6	2.7	41	Education and training services, all relating to intellectual and indus...
7	3.7	16	Paper, cardboard and goods made from these materials, not included in ot...
8	3.7	41	Education, instruction and teaching services; arranging and conducting s...
9	4.7	16	Books, periodicals and printed matter particularly concerning industrial...
10	4.7	42	Industrial and intellectual property consultancy, constitution of arbitr...
11	4.7	41	Arranging and conducting of conferences, congresses and seminars, educat...
12	4.7	35	Establishment of statistics, business management and organization consul...
13	5.7	9	Scientific, nautical, surveying, electric, photographic, cinematographic...
14	5.7	42	Providing of food and drink; temporary accommodation; medical, hygienic ...
15	5.7	41	Education; providing of training; entertainment; sporting and cultural a...
16	5.7	35	Advertising; business management; business administration; office functi...
17	5.7	16	Paper, cardboard and goods made from these materials, not included in ot...
18	6.7	16	Printed matter; printed publications, books, newspapers, periodicals, bu...
19	6.7	42	Services of international organisations concerned with the investigation...
20	6.7	41	Arranging, management and conducting of congresses, conferences, seminar...

2.3.3 Description of the Entity Relationship Model

All tables can be related via unique identifiers, i.e. trademark application number, in the respective tables.

Database Tables

- **trd101_main**: main table of the database including information about the trademark status, relevant trademark dates (for example application, registration, expiry dates), trademark kind, trademark name and trademark feature
- **trd102_app_detail**: contains information about the trademark applicant, including organization name, applicant name, country codes and address information
- **trd102_rep_detail**: contains anonymized information about the representative and the country code of the representative
- **trd102_app_id**: includes all trademark application numbers combined with the corresponding ID of the applicant
- **trd102_rep_id**: includes all trademark application numbers combined with the corresponding ID of the representative
- **trd109_nice_class**: includes all trademark application numbers with their corresponding nice classes (classification of goods and services applied for the registration of marks) and additional goods and services description
- **trd109_vienna_class**: includes all trademark application numbers with their corresponding vienna classes (classification of the figurative elements of marks)

- **trd111_pub:** contains all trademark application numbers with information about the publication section the publication date
- **trd131_opposition_detail:** includes all trademark application numbers with existing information about the opposition date, opposition text and the opponent ID which is the ID of the applicant and the ID of the representative

3 The USPTO Trademark Database Module

3.1 Basic Characteristics

The USPTO Trademark database is created on the basis of all trademark filings at the United States Patent and Trademark Office (USPTO). The USPTO provides .csv data, which is processed and set-up into an Oracle relational database system (RDBMS). It includes information on all trademarks filed at the USPTO since the early 19th century, covering 8,508,501 filings.

The basic information covered in the database is the following:

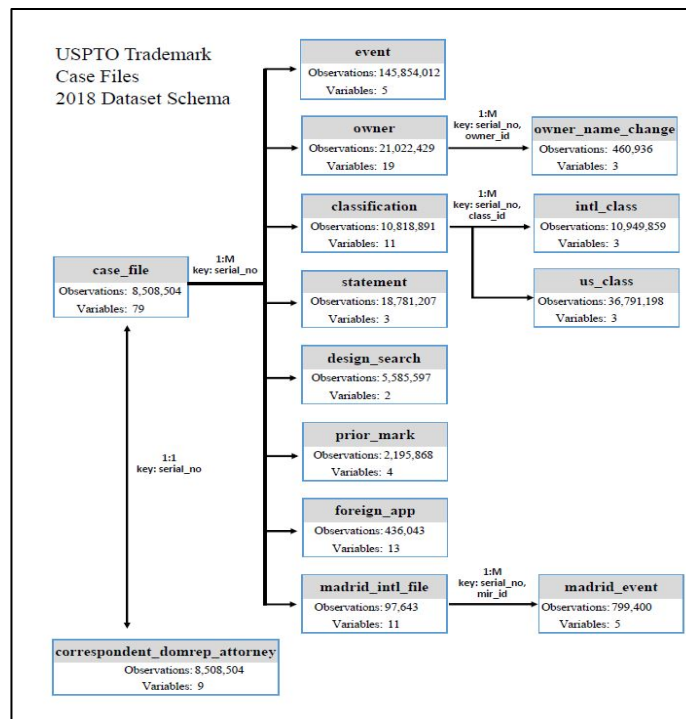
Bibliographic information

- Trademark number (ID) --> the application number of the trademark
- Applicant/owner, incl. address --> the name and address of the trademark applicant
- Dates (application, registration,...) --> several dates, associated with the trademark
- Attorney name
- Information on the legal status of a trademarks

Classifications

- Classification (45 NICE classes)
- U.S. trademark classification

Trademark Case Files Dataset organizational structure (source: USPTO)



The database will be updated periodically (annually) and new information from the USPTO is added. The database is developed and maintained by Fraunhofer ISI. The database is located on the servers of Fraunhofer ISI in Karlsruhe, Germany.

3.2 Database content

3.2.1 Definition and description of observations

The observations included in the database are single trademarks, uniquely identified by an application number. In the most recent (January 2019) version, 8,508,501 million filings are included.

3.2.2 Data acquisition and processing

a) Data sources

EUIPO Open Dataset Download

- USPTO Homepage
- Bulk Data Portal <https://bulkdata.uspto.gov>
- Trademark Case File Data for Academia and Researchers
- Currently contains detailed information on 8.5 million trademark applications filed with or registrations issued by the USPTO between 1870 and January 2018

b) Data processing:

- download and extract the file
https://bulkdata.uspto.gov/data/trademark/casefile/economics/2018/case_file.csv.zip
-

3.2.3 Information on all variables/indicators

For a more detailed description of all indicators, please refer to section 3.2 below.

Database coverage (July 2019)

case_file

serial_no: 8.508.501* (number of unique trademarks)
with filing_year not null: 8.508.501
with publication_year: 6.123.533
with registration_year: 4.981.165
with abandon_year: 3.072.284
with renewal_year: 879.384
with mark_id_char: 8.225.033

* there are three serial_no which could not be loaded into the database, therefore the count differs from the diagram on page one. This has also an effect on all other tables

using the serial_no. The missing three serial_no are marked abandoned and dead on the USPTO Online Portal TESS

owner

istinct own_name: 3.931.395 (number of applicants)

own_id: 21.022.426 (every combination serial_no - own_name gets his distinct own_id)

distinct serial_no: 8.500.118

with own_addr_1: 7.588.317

with own_addr_2: 2.941.963

with own_addr_city: 8.279.181

with own_addr_postal: 7613542

with own_addr_country_code: 1.408.251 (there are only 3.064 for owner from the US)

with own_addr_state_cd: 7.094.271 (only US States and organized, unincorporated US territory)

with own_nalty_country_cd: 2.598.084 251 (there are 1.123.500 for owner from the US)

with own_nalty_state_cd: 5.961.150 (only US States and organized, unincorporated US territory)

correspondent_domrep_attorney

attorney_no: 2.888.745 (number of attorneys, not every attorney_no has a attorney_name - and vice versa)

distinct attorney_name: 335.725

distinct serial_no: 8.508.501

with caddr_1 (name): 8.496.963

with caddr_2 (organization name): 8.239.166

with caddr_3 (street): 8.235.573

with caddr_4 (street/location/city/state): 6.766.727

with caddr_5 (city/state): 1.844.330

3.2.4 Sectorial, temporal and geographical coverage

Table 7 Trademark filings by filing year 1823-1948

YEAR	Nr. of filings	YEAR	Nr. of filings	YEAR	Nr. of filings
1823	2	1903	36	1926	1230
1824	1	1904	34	1927	1171
1832	1	1905	1036	1928	1183
1875	1	1906	433	1929	1082
1884	6	1907	341	1930	1021
1885	6	1908	252	1931	1025
1886	6	1909	177	1932	859
1887	5	1910	169	1933	975
1888	8	1911	262	1934	1144
1889	5	1912	238	1935	1035
1890	7	1913	249	1936	1027
1891	15	1914	340	1937	924
1892	30	1915	278	1938	931
1893	47	1916	216	1939	892
1894	37	1917	234	1940	995
1895	44	1918	155	1941	1416
1896	42	1919	338	1942	1422
1897	30	1920	530	1943	1427
1898	25	1921	882	1944	1693
1899	47	1922	1026	1945	2117
1900	30	1923	1098	1946	2607
1901	31	1924	1241	1947	7106
1902	40	1925	1318	1948	5477

Table 8 Trademark filings by filing year 1823-1948

YEAR	Nr. of filings	YEAR	Nr. of filings	YEAR	Nr. of filings
1949	3837	1972	14017	1995	156150
1950	3665	1973	13742	1996	178317
1951	3180	1974	14034	1997	190562
1952	3610	1975	18968	1998	198667
1953	4014	1976	28156	1999	263860
1954	4704	1977	31764	2000	285858
1955	4928	1978	32346	2001	218587
1956	5044	1979	32751	2002	214502
1957	4908	1980	36349	2003	225183
1958	5034	1981	47656	2004	251372
1959	5529	1982	62108	2005	266766
1960	6685	1983	51439	2006	280773
1961	11650	1984	56695	2007	306601
1962	13332	1985	59917	2008	294318

1963	12644	1986	61872	2009	269397
1964	13171	1987	65488	2010	284559
1965	13359	1988	68543	2011	308760
1966	13086	1989	82438	2012	317022
1967	12829	1990	110830	2013	328182
1968	13341	1991	106586	2014	346943
1969	14215	1992	109767	2015	380171
1970	13919	1993	129969	2016	401219
1971	13215	1994	137629	2017	451242
				2018	466419

Table 9 Trademark filings by country US - country outside US (total)

US		not US	
YEAR	Nr. of filings	YEAR	Nr. of filings
1990	95899	1990	16225
1991	93291	1991	14453
1992	96642	1992	14273
1993	116178	1993	15073
1994	121910	1994	17102
1995	138931	1995	18787
1996	158348	1996	21889
1997	167134	1997	25533
1998	173986	1998	26965
1999	233075	1999	33485
2000	246268	2000	42639
2001	183699	2001	37364
2002	183946	2002	33280
2003	193425	2003	34633
2004	214065	2004	40235
2005	226460	2005	43125
2006	237500	2006	46517
2007	258956	2007	50687
2008	247348	2008	49816
2009	228137	2009	43796
2010	239172	2010	47979
2011	259289	2011	52005
2012	264846	2012	54542
2013	273531	2013	56811
2014	286311	2014	62434
2015	306450	2015	75493
2016	306186	2016	96555
2017	331736	2017	120612
2018	342992	2018	124017

Table 10 Trademark filings by Country outside US (selection)

Year	AT	AU	BE	BR	CA	CH
2000	330	1524	415	354	6714	1975
2001	342	1164	364	380	5237	1877
2002	290	1194	352	340	4667	1848
2003	261	1377	298	377	5273	1890
2004	397	1632	367	378	5788	2487
2005	444	1645	402	426	6197	2214
2006	513	1965	437	410	6341	2747
2007	523	2271	523	375	6878	3008
2008	488	1982	536	398	6823	2857
2009	451	1809	403	360	6019	2398
2010	474	1936	456	425	6301	2683
2011	434	2094	522	459	6804	2713
2012	483	2299	503	451	6890	2747
2013	557	2476	556	518	6876	2882
2014	530	2679	466	567	7188	2952
2015	591	3131	557	604	7536	2950
2016	595	3327	687	654	8144	2690
2017	592	3867	882	623	9130	2828
2018	597	4399	572	585	9147	2883
Year	CN	DE	DK	ES	FI	FR
2000	338	4823	393	886	279	2685
2001	373	4223	334	692	261	2260
2002	457	3410	329	602	245	2104
2003	554	3730	342	773	180	2000
2004	963	4302	331	1058	185	2501
2005	1406	4845	430	949	217	2639
2006	1597	4757	465	1089	247	2783
2007	1886	5560	479	1264	257	2990
2008	1903	5565	565	1183	256	3132
2009	1777	4272	443	1054	278	2822
2010	2415	4661	500	1103	329	2809
2011	3004	4774	477	1306	291	3029
2012	3429	4508	558	1404	313	3011
2013	4019	4725	567	1307	308	3147
2014	6305	4626	599	1408	327	2925
2015	14234	5025	659	1576	412	3343
2016	31681	5544	614	1505	494	3380
2017	51456	5373	662	1456	462	3415
2018	52604	5254	625	1585	439	3444
Year	GB	HK	IE	IL	IN	IT
2000	3427	910	397	899	217	1532
2001	2708	803	313	599	184	1332
2002	2650	772	297	423	250	1306



2003	2887	713	361	345	203	1351
2004	3049	817	376	471	246	1871
2005	3306	987	377	467	200	2164
2006	3746	998	475	549	303	2309
2007	4243	1073	478	625	341	2362
2008	4251	900	520	583	379	2322
2009	3477	917	387	504	391	1917
2010	4009	1066	437	488	352	2231
2011	4298	1263	490	588	547	2183
2012	4643	1364	500	725	473	2353
2013	4817	1466	520	730	486	2394
2014	5210	1901	680	859	650	2541
2015	5654	2121	631	899	704	2548
2016	6227	2631	717	965	794	2813
2017	6578	3077	711	1373	819	2692
2018	6200	3194	758	1459	913	2788
Year	JP	KR	KY	MX	NL	NZ
2000	3087	732	212	648	1402	245
2001	4546	674	134	748	1083	269
2002	2768	666	135	898	997	243
2003	2969	682	123	860	1025	297
2004	3377	564	116	1018	1154	339
2005	3235	854	174	1086	1214	326
2006	3276	915	198	1218	1257	366
2007	3128	1142	266	1347	1489	397
2008	3312	999	225	1154	1344	354
2009	2832	1313	237	1304	1222	349
2010	3159	1403	132	1536	1319	314
2011	3119	1521	234	1511	1380	324
2012	3608	1699	248	1630	1181	340
2013	3500	1977	247	1528	1282	385
2014	3515	2041	344	1676	1308	471
2015	3742	2992	491	1904	1441	487
2016	3701	2969	585	1886	1447	518
2017	4052	3133	409	1671	1609	574
2018	4119	3775	605	1836	1410	692
Year	PR	RU	SE	SG	TR	TW
2000	281	64	970	365	48	1149
2001	231	63	660	236	98	1028
2002	235	88	593	183	74	1065
2003	179	120	585	208	136	1172
2004	258	224	644	237	255	1177
2005	267	166	715	265	294	1111
2006	310	220	746	325	278	1206
2007	290	239	779	388	284	1067
2008	282	263	881	361	306	1152



2009	325	238	773	357	251	987
2010	371	318	820	382	249	1129
2011	390	394	876	423	338	1265
2012	370	412	909	530	421	1329
2013	415	412	898	502	413	1136
2014	498	419	937	630	482	1330
2015	481	322	988	758	515	1268
2016	551	370	1017	752	558	1229
2017	523	542	1165	716	638	1433
2018	636	549	972	969	617	1455

Table 11 Trademark filings by nice class

Nice Class	2000	2004	2008	2012	2016	2018
1	4032	4197	4947	5169	5768	5989
2	1227	1401	1469	1308	1629	1606
3	8394	11054	12028	12621	16441	22204
4	1314	1404	1780	1630	2160	2411
5	11077	12823	14590	14938	18437	22842
6	3080	3179	3894	3621	4594	4971
7	5049	5144	6335	6102	7679	9087
8	1680	2077	2020	2168	3823	4973
9	54432	35744	39011	45597	59693	67826
10	5152	5740	6595	7272	9449	11585
11	4254	5128	6186	6380	10493	12749
12	4280	4686	5074	4920	7329	8232
13	471	583	843	929	1533	1521
14	3525	4724	5099	5870	8260	8918
15	580	658	727	749	925	937
16	19771	17992	18196	15026	15763	18635
17	1548	1641	2209	1987	2458	2479
18	3249	4398	5825	6032	9147	11874
19	2381	2857	3448	2682	3512	3634
20	4763	5343	5670	5862	8399	11417
21	4409	4947	5479	6141	11149	16304
22	569	729	856	919	1461	1758
23	195	302	325	267	364	357
24	2379	2786	2993	3145	5018	6985
25	16376	22717	27263	31463	44679	54296
26	813	960	1204	1388	2432	2983
27	808	852	1054	901	1469	2119
28	10919	11651	10457	11671	14774	18624
29	4163	5584	5681	6494	8558	9095
30	6805	8969	9300	11066	14104	15958

31	2350	2740	3024	3112	4443	5144
32	2526	3742	5061	6162	9778	9557
33	2262	4452	5909	7780	9600	10503
34	804	1010	1392	1883	3178	3732
35	44696	28897	41054	44206	50900	57511
36	20563	14301	16710	15639	18819	23323
37	6320	5565	8012	7446	9254	10294
38	14510	5139	6970	6709	7068	7133
39	5809	3601	5034	4990	6405	7110
40	2793	2731	4805	4229	5125	5796
41	27073	26115	35560	39846	49319	56880
42	57017	14509	20615	26212	33568	39202
43	132	6467	8328	9867	14407	15739
44	95	5956	9016	10594	14198	16747
45	67	2553	7037	8473	9386	9903

3.2.5 Quality and accuracy of data

All the data in the USPTO trademark database directly come from the USPTO.

3.3 Technical Specifications

3.3.1 Information on the data base system

The database system used is based on the relational database management system (RDBMS) from Oracle. It allows for an intensive usage and can easily be accessed.

3.3.2 Technical variable definition

Information on all Variables and Datatypes

case_file

- **SERIAL_NO** unique serial number <serial-number> **NUMBER(38,0)**
- **ABANDON_DT** Date mark abandoned <abandonment-date> **DATE**
- **AMEND_REG_DT** Date file amendment to register <amend-to-register-date> **DATE**
- **AMEND_LB_FOR_APP_IN** Amend to foreign application priority basis <amended-to-44d-application-in> **NUMBER(38,0)**
- **AMEND_LB_FOR_REG_IN** Amend to foreign registration basis <amended-to-44e-application-in> **NUMBER(38,0)**
- **AMEND_LB_ITU_IN** Amend to intent to use basis <amended-to-itu-application-in> **NUMBER(38,0)**
- **AMEND_LB_USE_IN** Amend to use basis <amended-to-use-application-in> **NUMBER(38,0)**
- **REG_CANCEL_CD** Identifies section under which reg is cancelled <cancellation-code> **VARCHAR2(10 BYTE)**

- **REG_CANCEL_DT** Date cancellation of entire registration recorded <cancellation-date> **DATE**
- **CANCEL_PEND_IN** Cancellation proceeding pending <cancellation-pending-in> **NUMBER(38,0)**
- **CERT_MARK_IN** <certification-mark-in> **NUMBER(38,0)**
- **CHG_REG_IN** Any amendment, correction, less goods, less classes <change-registration-in> **NUMBER(38,0)**
- **COLL_MEMB_MARK_IN** <collective-membership-mark-in> **NUMBER(38,0)**
- **COLL_SERV_MARK_IN** <collective-service-mark-in> **NUMBER(38,0)**
- **COLL_TRADE_MARK_IN** <collective-trademark-in> **NUMBER(38,0)**
- **DRAW_COLOR_CUR_IN** Color drawing currently <color-drawing-current-in> **NUMBER(38,0)**
- **DRAW_COLOR_FILE_IN** Color drawing at filing <color-drawing-filed-in> **NUMBER(38,0)**
- **CONCUR_USE_IN** Subject to concurrent use <concurrent-use-in> **NUMBER(38,0)**
- **CONCUR_USE_PEND_IN** Concurrent use proceeding pending <concurrent-use-proceeding-in> **NUMBER(38,0)**
- **FILE_LOCATION** Current location of application or registration file <current-location> **VARCHAR2(100 BYTE)**
- **DRAW_3D_CUR_IN** 3D drawing currently <drawing-3d-current-in> **NUMBER(38,0)**
- **DRAW_3D_FILE_IN** 3D drawing at filing <drawing-3d-filed-in> **NUMBER(38,0)**
- **EXM_ATTORNEY_NAME** Name of USPTO employee assigned to file <employee-name> **VARCHAR2(200 BYTE)**
- **LB_USE_FILE_IN** Use application at filing <filed-as-use-application-in> **NUMBER(38,0)**
- **LB_FOR_APP_CUR_IN** Foreign application priority basis currently <filing-basis-current-44d-in> **NUMBER(38,0)**
- **LB_FOR_REG_CUR_IN** Foreign registration basis currently <filing-basis-current-44e-in> **NUMBER(38,0)**
- **LB_INTL_REG_CUR_IN** International registration basis currently <filing-basis-current-66a-in> **NUMBER(38,0)**
- **LB_FOR_APP_FILE_IN** Foreign application priority basis at filing <filing-basis-filed-as-44d-in> **NUMBER(38,0)**
- **LB_FOR_REG_FILE_IN** Foreign registration basis at filing <filing-basis-filed-as-44e-in> **NUMBER(38,0)**
- **LB_INTL_REG_FILE_IN** International registration basis at filing <filing-basis-filed-as-66a-in> **NUMBER(38,0)**
- **LB_NONE_CUR_IN** No basis claim currently <filing-current-no-basis-in> **NUMBER(38,0)**
- **FILING_DT** Date the trademark was filed <filing-date> **DATE**
- **FOR_PRIORITY_IN** Contains foreign app info and priority claim <foreign-priority-in> **NUMBER(38,0)**
- **LB_ITU_CUR_IN** Intent to use application currently <intent-to-use-current-in> **NUMBER(38,0)**
- **LB_ITU_FILE_IN** Intent to use application at filing <intent-to-use-in> **NUMBER(38,0)**
- **INTERFER_PEND_IN** Interference proceeding pending <interference-pending-in> **NUMBER(38,0)**
- **EXM_OFFICE_CD** USPTO examining law office assigned code <law-office-assigned-location-code> **VARCHAR2(10 BYTE)**
- **FILE_LOCATION_DT** Date arrived at current location <location-date> **DATE**
- **MARK_DRAW_CD** Identifies mark physical characteristics <mark-drawing-code> **VARCHAR2(10 BYTE)**

- **MARK_ID_CHAR** Actual characters of mark text <mark-identification>
VARCHAR2(4000 BYTE)
- **OPPOSIT_PEND_IN** Opposition proceeding pending <opposition-pending-in>
NUMBER(38,0)
- **AMEND_PRINCIPAL_IN** Amend to principal register <principal-register-amended-in>
NUMBER(38,0)
- **CONCUR_USE_PUB_IN** Published subject to concurrent use <published-concurrent-in>
NUMBER(38,0)
- **PUBLICATION_DT** Date mark published for opposition <published-for-opposition-date>
DATE
- **REGISTRATION_DT** Date the trademark was registered <registration-date>
DATE
- **RENEWAL_DT** Date the trademark was renewed <renewal-date>
DATE
- **RENEWAL_FILE_IN** Renewal application filed <renewal-filed-in>
NUMBER(38,0)
- **REPub_12C_DT** Date of republication of registered mark <republished-12c-date>
DATE
- **REPub_12C_IN** Republication of registered mark <section-12c-in>
NUMBER(38,0)
- **INCONTEST_ACK_IN** Affidavit of incontestability acknowledged <section-15-acknowledged-in>
NUMBER(38,0)
- **INCONTEST_FILE_IN** Affidavit of incontestability filed <section-15-filed-in>
NUMBER(38,0)
- **ACQ_DIST_IN** Acquired distinctiveness entry <section-2f-in>
NUMBER(38,0)
- **ACQ_DIST_PART_IN** Acquired distinctiveness entry to part of mark <section-2f-in-part-in>
NUMBER(38,0)
- **USE_AFDV_ACC_IN** Continued use or excuse affidavit accepted <section-8-accepted-in>
NUMBER(38,0)
- **USE_AFDV_FILE_IN** Continued use or excuse affidavit filed <section-8-filed-in>
NUMBER(38,0)
- **USE_AFDV_PAR_ACC_IN** Continued use or excuse affidavit partially accept <section-8-partial-accept-in>
NUMBER(38,0)
- **SERV_MARK_IN** <service-mark-in>
NUMBER(38,0)
- **STD_CHAR_CLAIM_IN** Standard characters claim <standard-characters-claimed-in>
NUMBER(38,0)
- **CFH_STATUS_CD** Case file current status <status-code>
VARCHAR2(10 BYTE)
- **CFH_STATUS_DT** Date case file current status recorded <status-date>
DATE
- **AMEND_SUPP_REG_IN** Amend to supplemental register <supplemental-register-amended-in>
NUMBER(38,0)
- **SUPP_REG_IN** Filed for or registered on supplemental register <supplemental-register-in>
NUMBER(38,0)
- **TRADE_MARK_IN** <trademark-in>
NUMBER(38,0)
- **LB_USE_CUR_IN** Use application currently <use-application-currently-in>
NUMBER(38,0)
- **LB_NONE_FILE_IN** No basis claim at filing <without-basis-currently-in>
NUMBER(38,0)
- **IR_AUTO_REG_DT** Date assigned US registration unless first refusal <auto-protection-date>
DATE
- **IR_FIRST_REFUS_IN** US issued notice of first refusal to IB <first-refusal-in>
NUMBER(38,0)
- **IR_DEATH_DT** Date international registration expired <international-death-date>
DATE
- **IR_PUBLICATION_DT** Date international registration published <international-publication-date>
DATE

- **IR_REGISTRATION_DT** Date of international registration <international-registration-date> **DATE**
- **IR_REGISTRATION_NO** <international-registration-number> **VARCHAR2(20 BYTE)**
- **IR_RENEWAL_DT** Date international registration must be renewed <international-renewal-date> **DATE**
- **IR_STATUS_CD** <international-status-code> **VARCHAR2(10 BYTE)**
- **IR_STATUS_DT** Effective date of international registration status <international-status-date> **DATE**
- **IR_PRIORITY_DT** Date international registration priority claimed <priority-claimed-date> **DATE**
- **IR_PRIORITY_IN** International registration priority claimed <priority-claimed-in> **CHAR(10 BYTE)**
- **RELATED_OTHER_IN** Words 'and others' appear in list of prior registrations <other-related-in> **NUMBER(38,0)**
- **REGISTRATION_NO** <registration-number> **VARCHAR2(20 BYTE)**
- **TAD_FILE_ID** Points to the XML file from which the data was extracted **NUMBER(38,0)**

-- Year columns added --

- **FILING_YEAR** Year the trademark was filed **NUMBER(4)**
- **ABANDON_YEAR** Year mark abandoned **NUMBER(4)**
- **REG_CANCEL_YEAR** Year cancellation of entire registration recorded **NUMBER(4)**
- **PUBLICATION_YEAR** Year mark published for opposition **NUMBER(4)**
- **REGISTRATION_YEAR** Year the trademark was registered **NUMBER(4)**
- **RENEWAL_YEAR** Year the trademark was renewed **NUMBER(4)**
- **IR_DEATH_YEAR** Year international registration expired **NUMBER(4)**
- **IR_PUBLICATION_YEAR** Year international registration published **NUMBER(4)**
- **IR_REGISTRATION_YEAR** Year of international registration **NUMBER(4)**
- **IR_RENEWAL_YEAR** Year international registration must be renewed **NUMBER(4)**
- **IR_STATUS_YEAR** Effective date of international registration status **NUMBER(4)**
- **IR_PRIORITY_YEAR** Date international registration priority claimed **NUMBER(4)**

classification

- **FIRST_USE_ANY_DT** First use anywhere date, converted to date <first-use-anywhere-date> **DATE**
- **FIRST_USE_ANY_DT_RAW** First use anywhere date, as entered in XML <first-use-anywhere-date> **NUMBER(38,0)**
- **FIRST_USE_COM_DT** First use in commerce date, converted to date <first-use-in-commerce-date> **DATE**
- **FIRST_USE_COM_DT_RAW** First use in commerce date, as entered in XML <first-use-in-commerce-date> **NUMBER(38,0)**
- **CLASS_INTL_COUNT** Number of international classes <international-code-total-no> **NUMBER(38,0)**
- **CLASS_PRIMARY_CD** Classification primary code <primary-code> **VARCHAR2(4 BYTE)**
- **CLASS_STATUS_CD** Classification status <status-code> **VARCHAR2(4 BYTE)**
- **CLASS_STATUS_DT** Date classification status recorded <status-date> **DATE**
- **CLASS_US_COUNT** Number of US classes <us-code-total-no> **NUMBER(38,0)**
- **CLASS_ID** Unique identifier for classification observation **NUMBER(38,0)**

- **SERIAL_NO** Corresponding case file serial number <serial-number> **NUMBER(38,0)**

us_class

- **US_CLASS_CD** US class code <us-code> **CHAR(3 BYTE)**
- **CLASS_ID** Corresponding classification ID **NUMBER(38,0)**
- **SERIAL_NO** Corresponding case file serial number <serial-number> **NUMBER(38,0)**

intl_class

- **INTL_CLASS_CD** international class code <intl-code> **CHAR(3 BYTE)**
- **CLASS_ID** Corresponding classification ID **NUMBER(38,0)**
- **SERIAL_NO** Corresponding case file serial number <serial-number> **NUMBER(38,0)**

statement

- **STATEMENT_TYPE_CD** Statement type category code <type-code> **CHAR(6 BYTE)**
- **STATEMENT_TEXT** Statement <text> **CLOB**
- **SERIAL_NO** Corresponding case file serial number <serial-number> **NUMBER(38,0)**

owner

- **OWN_ADDR_1** Owner address line 1 <address-1> **VARCHAR2(400 BYTE)**
- **OWN_ADDR_2** Owner address line 2 <address-2> **VARCHAR2(400 BYTE)**
- **OWN_ADDR_CITY** City or foreign designation of owner address <city> **VARCHAR2(50 BYTE)**
- **OWN_COMPOSED_OF** Owner composed of statement <composed-of-statement> **CLOB**
- **OWN_ADDR_COUNTRY_CD** Country code of owner address <country> **VARCHAR2(4 BYTE)**
- **OWN_ALTN_NAME** Owner alternative names <dba-aka-text> **VARCHAR2(1000 BYTE)**
- **OWN_ENTITY_DESC** Owner entity description or statement <entity-statement> **VARCHAR2(4000 BYTE)**
- **OWN_SEQ** Sequence of owner records within same party type <entry-number> **NUMBER(38,0)**
- **OWN_ENTITY_CD** Owner legal entity code <legal-entity-type-code> **VARCHAR2(4 BYTE)**
- **OWN_NALTY_COUNTRY_CD** Country code of owner place of origin <country> **VARCHAR2(4 BYTE)**
- **OWN_NALTY_OTHER_CD** Other region, non-country code of owner place of origin <other> **VARCHAR2(4 BYTE)**
- **OWN_NALTY_STATE_CD** State code of owner place of origin <state> **VARCHAR2(4 BYTE)**
- **OWN_ADDR_OTHER_CD** Other region, non-country code of owner address <other> **VARCHAR2(4 BYTE)**
- **OWN_NAME** Name of owning party <party-name> **VARCHAR2(4000 BYTE)**
- **OWN_TYPE_CD** Owning party type code <party-type> **VARCHAR2(4 BYTE)**
- **OWN_ADDR_POSTAL** US or foreign postal code of owner address <postcode> **VARCHAR2(50 BYTE)**
- **OWN_ADDR_STATE_CD** State code of owner address <state> **VARCHAR2(4 BYTE)**
- **OWN_ID** Unique identifier for owner observation **NUMBER(38,0)**

- **SERIAL_NO** Corresponding case file serial number <serial-number> **NUMBER(38,0)**

owner_name_change

- **OWN_NAME_CHANGE** Assignment, name change description <name-change-explanation> **VARCHAR2(70 BYTE)**
- **OWN_ID** Corresponding case file owner ID **NUMBER(38,0)**
- **SERIAL_NO** Corresponding case file serial number <serial-number> **NUMBER(38,0)**

correspondent_domrep_attorney

- **SERIAL_NO** Corresponding case file serial number <serial-number> **NUMBER(38,0)**
- **CADDR_1** Correspondent address line 1 <address-1> **VARCHAR2(400 BYTE)**
- **CADDR_2** Correspondent address line 2 <address-2> **VARCHAR2(400 BYTE)**
- **CADDR_3** Correspondent address line 3 <address-3> **VARCHAR2(400 BYTE)**
- **CADDR_4** Correspondent address line 4 <address-4> **VARCHAR2(400 BYTE)**
- **CADDR_5** Correspondent address line 5 <address-5> **VARCHAR2(400 BYTE)**
- **ATTORNEY_NO** Case reference number assigned by attorney filing app <attorney-docket-number> **VARCHAR2(40 BYTE)**
- **ATTORNEY_NAME** Name of attorney filing application <attorney-name> **VARCHAR2(4000 BYTE)**
- **DOMESTIC_REP_NAME** Name of domestic representative <domestic-representative-name> **VARCHAR2(4000 BYTE)**

event

- **EVENT_CD** Prosecution history event code <code> **CHAR(4 BYTE)**
- **EVENT_DT** Date of event <date> **DATE**
- **EVENT_SEQ** Sequence of records within same type <number> **NUMBER(38,0)**
- **EVENT_TYPE_CD** Event type category code <type> **VARCHAR2(10 BYTE)**
- **SERIAL_NO** Corresponding case file serial number <serial-number> **NUMBER(38,0)**

event_description

- **EVENT_CD** Prosecution history event code <code> **CHAR(4 BYTE)**
- **EVENT_TYPE_CD** Event type category code <type> **CHAR(1 BYTE)**
- **EVENT_DESC** Event description **VARCHAR2(70 BYTE)**
- **EVENT_CT** Number of events **NUMBER(38,0)**

design_search

- **DESIGN_SEARCH_CD** Design search code <code> **VARCHAR2(10 BYTE)**
- **SERIAL_NO** Corresponding case file serial number <serial-number> **NUMBER(38,0)**

madrid_intl_file

- **MIR_REGISTRATION_SEQ** Sequence of international records <entry-number> **NUMBER(38,0)**
- **MIR_REGISTRATION_DT** Date of international registration <international-registration-date> **DATE**

- **MIR_REGISTRATION_NO** <international-registration-number> **VARCHAR2(20 BYTE)**
- **MIR_RENEWAL_DT** Date of international mark renewed <international-renewal-date> **DATE**
- **MIR_STATUS_CD** IB registration status code <international-status-code> **NUMBER(38,0)**
- **MIR_STATUS_DT** Date IB registration status recorded <international-status-date> **DATE**
- **MIR_IRREG_REPLY_DT** IB date for response to notice of irregularity <irregularity-reply-by-date> **DATE**
- **MIR_USPTO_FILE_DT** Date USPTO received intl filing request <original-filing-date-uspto> **DATE**
- **MIR_USPTO_REF_NO** USPTO assigned reference number to intl filing request <reference-number> **VARCHAR2(20 BYTE)**
- **MIR_ID** Unique identifier for Madrid international filing record observation **NUMBER(38,0)**
- **SERIAL_NO** Corresponding case file serial number <serial-number> **NUMBER(38,0)**

madrid_event

- **MIR_EVENT_CD** Madrid processing history event code <code> **CHAR(5 BYTE)**
- **MIR_EVENT_DT** Date of event <date> **DATE**
- **MIR_EVENT_SEQ** Sequence of events recorded <entry-number> **NUMBER(38,0)**
- **MIR_ID** Corresponding classification ID **NUMBER(38,0)**
- **SERIAL_NO** Corresponding Madrid international filing record ID <serial-number> **NUMBER(38,0)**

madrid_event_description

- **MADRID_EVENT_CD** Madrid processing history event code <code> **CHAR(5 BYTE)**
- **MADRID_EVENT_DESC** Madrid event description **VARCHAR2(70 BYTE)**
- **MADRID_EVENT_CT** Number of events **NUMBER(38,0)**

prior_mark

- **PRIOR_NO** Prior mark serial or registration number <number> **VARCHAR2(20 BYTE)**
- **PRIOR_TYPE_CD** Prior mark record type code <relationship-type> **NUMBER(38,0)**
- **SERIAL_NO** Corresponding case file serial number <serial-number> **NUMBER(38,0)**
- **REC_ERROR** Possible prior registration number recording error **NUMBER(38,0)**

foreign_app

- **FOR_APPL_NO** Foreign application number <application-number> **VARCHAR2(20 BYTE)**
- **FOR_APPL_COUNTRY_CD** Code of application country of origin <country> **CHAR(2 BYTE)**
- **FOR_APPL_SEQ** Sequence of foreign application record entry <entry-number> **NUMBER(38,0)**
- **FOR_APPL_FILING_DT** Foreign <filing-date> **DATE**
- **FOR_APPL_PRIORITY_IN** Foreign priority claimed <foreign-priority-claim-in> **NUMBER(38,0)**

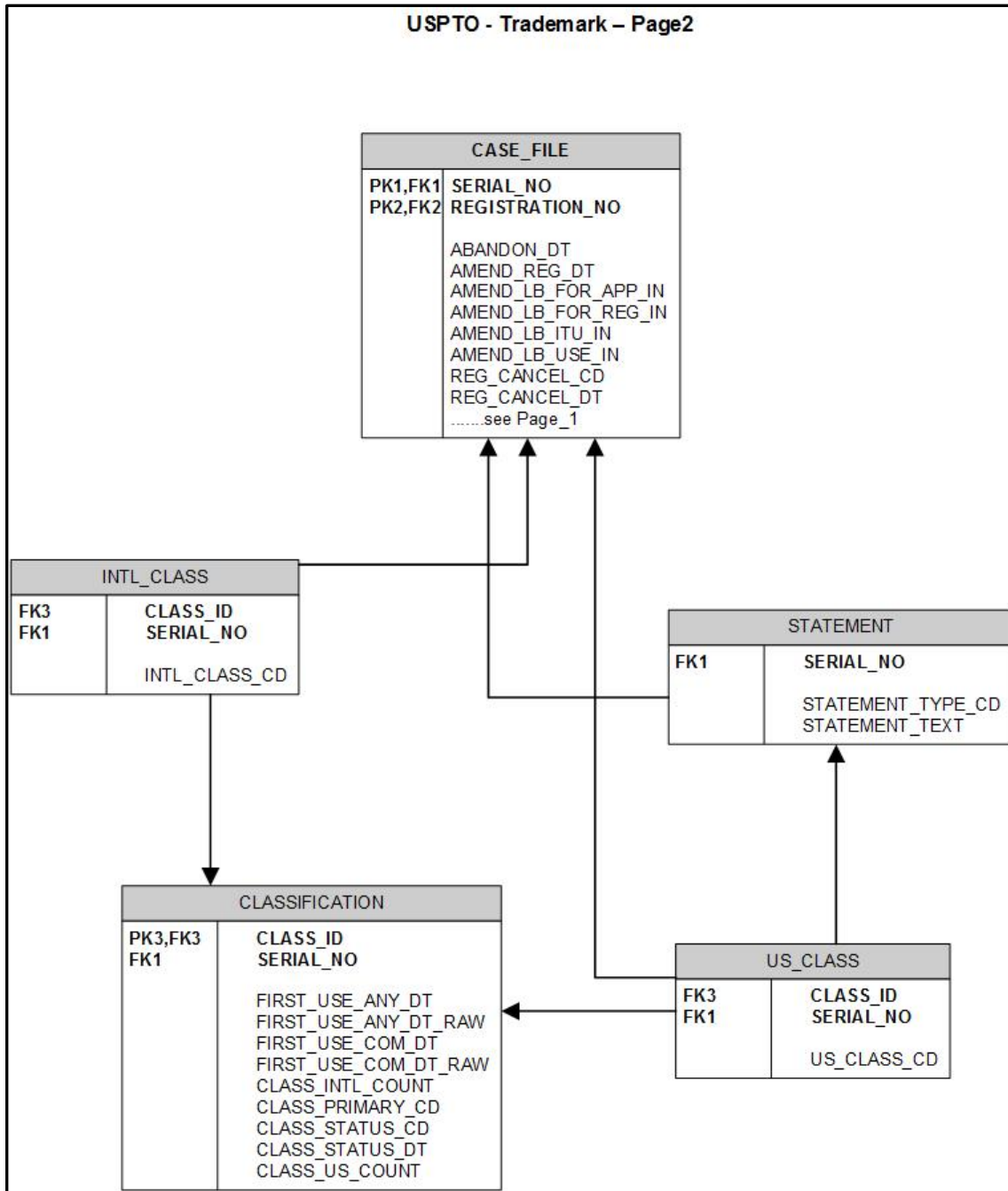
- **FOR_APPL_OTHER_CD** Other region, non-country code of application country of origin <other> **VARCHAR2(3 BYTE)**
- **FOR_REGISTRATION_DT** Foreign <registration-date> **DATE**
- **FOR_REGISTRATION_EXP_DT** Foreign <registration-expiration-date> **DATE**
- **FOR_REGISTRATION_NO** Foreign <registration-number> **VARCHAR2(20 BYTE)**
- **FOR_RENEWAL_DT** Foreign <registration-renewal-date> **DATE**
- **FOR_RENEWAL_EXP_DT** Foreign <registration-renewal-expiration-date> **DATE**
- **FOR_RENEWAL_NO** Foreign <renewal-number> **VARCHAR2(20 BYTE)**
- **SERIAL_NO** Corresponding case file serial number <serial-number> **NUMBER(38,0)**

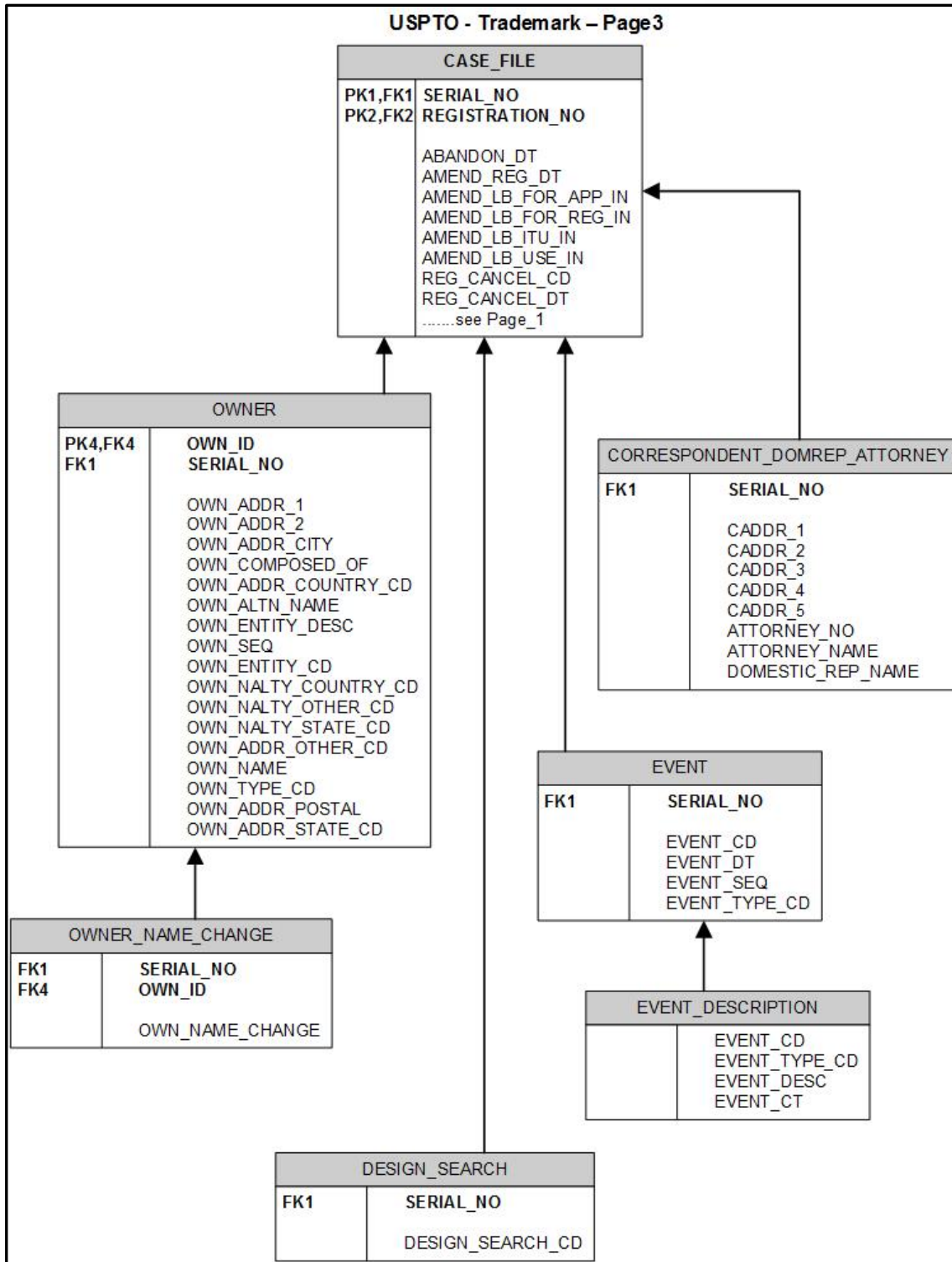
3.3.3 Description of the Entity Relationship Model

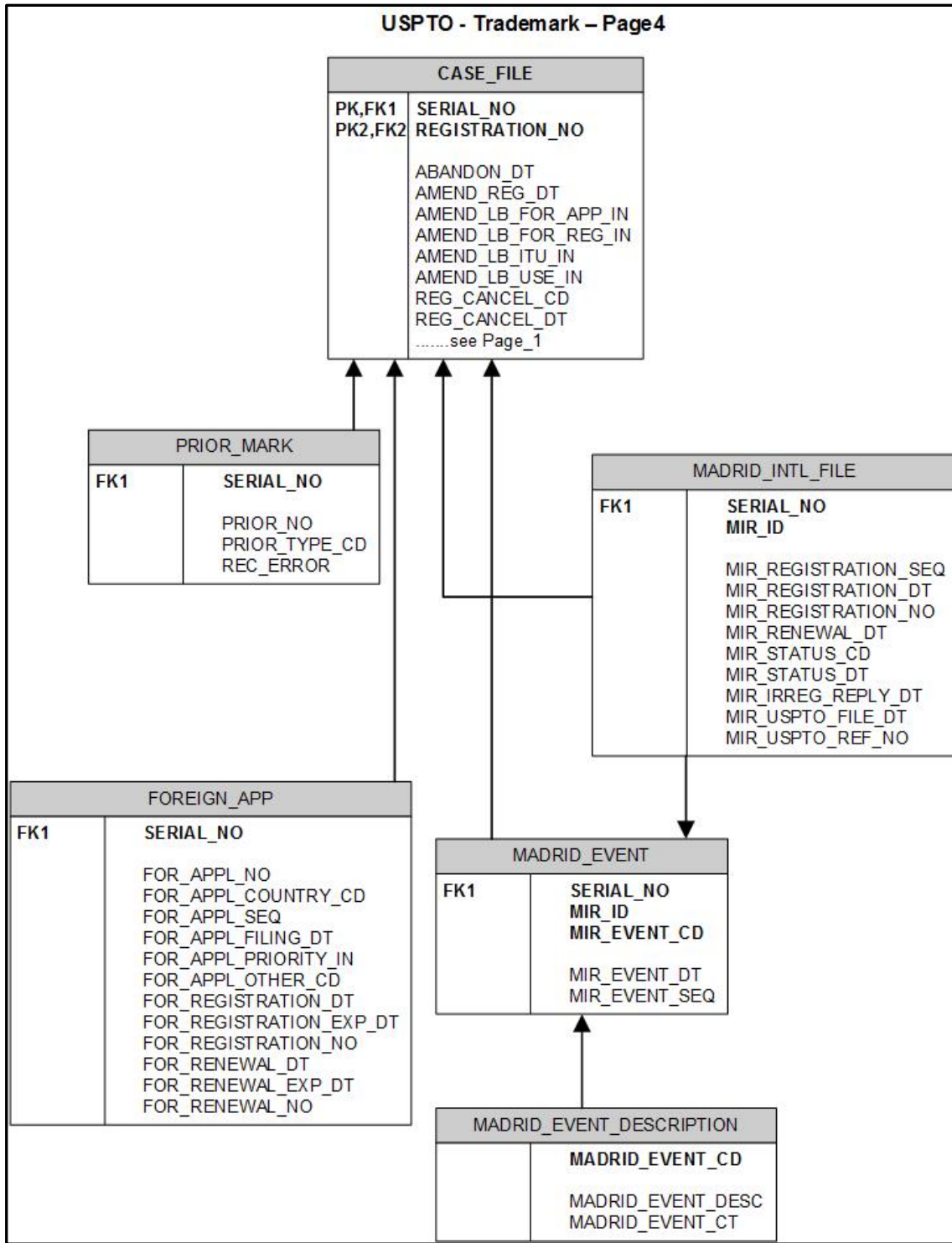
All tables can be related via unique identifiers, i.e. trademark application number, in the respective tables.

Database Overview Diagram, including all identifiers and relations

USPTO - Trademark - Page1	
CASE_FILE	
PK1,FK1 PK2,FK2	SERIAL_NO REGISTRATION_NO
	ABANDON_DT AMEND_REG_DT AMEND_LB_FOR_APP_IN AMEND_LB_FOR_REG_IN AMEND_LB_ITU_IN AMEND_LB_USE_IN REG_CANCEL_CD REG_CANCEL_DT CANCEL_PEND_IN CERT_MARK_IN CHG_REG_IN COLL_MEMB_MARK_IN COLL_SERV_MARK_IN COLL_TRADE_MARK_IN DRAW_COLOR_CUR_IN DRAW_COLOR_FILE_IN CONCUR_USE_IN CONCUR_USE_PEND_IN FILE_LOCATION DRAW_3D_CUR_IN DRAW_3D_FILE_IN EXM_ATTORNEY_NAME LB_USE_FILE_IN LB_FOR_APP_CUR_IN LB_FOR_REG_CUR_IN LB_INTL_REG_CUR_IN LB_FOR_APP_FILE_IN LB_FOR_REG_FILE_IN LB_INTL_REG_FILE_IN LB_NONE_CUR_IN FILING_DT FOR_PRIORITY_IN LB_ITU_CUR_IN LB_ITU_FILE_IN INTERFER_PEND_IN EXM_OFFICE_CD FILE_LOCATION_DT MARK_DRAW_CD MARK_ID_CHAR OPPOSIT_PEND_IN AMEND_PRINCIPAL_IN CONCUR_USE_PUB_IN PUBLICATION_DT REGISTRATION_DT
CASE_FILE	
PK1,FK1 PK2,FK2	SERIAL_NO REGISTRATION_NO
	RENEWAL_DT RENEWAL_FILE_IN REPUB_12C_DT REPUB_12C_IN INCONTEST_ACK_IN INCONTEST_FILE_IN ACQ_DIST_IN ACQ_DIST_PART_IN USE_AFDV_ACC_IN USE_AFDV_FILE_IN USE_AFDV_PAR_ACC_IN SERV_MARK_IN STD_CHAR_CLAIM_IN CFH_STATUS_CD CFH_STATUS_DT AMEND_SUPP_REG_IN SUPP_REG_IN TRADE_MARK_IN LB_USE_CUR_IN LB_NONE_FILE_IN IR_AUTO_REG_DT IR_FIRST_REFUS_IN IR_DEATH_DT IR_PUBLICATION_DT IR_REGISTRATION_DT IR_REGISTRATION_NO IR_RENEWAL_DT IR_STATUS_CD IR_STATUS_DT IR_PRIORITY_DT IR_PRIORITY_IN RELATED_OTHER_IN TAD_FILE_ID FILING_YEAR ABANDON_YEAR REG_CANCEL_YEAR PUBLICATION_YEAR REGISTRATION_YEAR RENEWAL_YEAR IR_DEATH_YEAR IR_PUBLICATION_YEAR IR_REGISTRATION_YEAR IR_RENEWAL_YEAR IR_STATUS_YEAR IR_PRIORITY_YEAR









4 Scientific use cases and main references

In quantitative innovation research, trademarks are more and more extensively used for the measurement of innovation activities (deGrazia et al., 2020). This is particularly true at the micro level, where the relationship between trademarks and innovation has been well established (Flikkema et al., 2014; Greenhalgh and Rogers, 2006; Sandner and Block, 2011). Although trademarks can also be filed for products like technical equipment or technical procedures, services are eligible for protection within the system of trademark rights. Trademarks can thus be used as a complementary and relatively "close to the market" indicator for new products and innovation activities in the service sector (Gauch, 2007; Mendonca et al., 2004; Schmoch, 2014; Sandner and Block, 2011; Schmoch, 2014). Especially in the case of knowledge-intensive business services trademarks have shown to be well applicable (Schmoch and Gauch, 2009). In the EUIPO and USPTO databases, we focus on trademarks filed for the European as well as the U.S. market.

References

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