

Institute of Intellectual Property Patent Database User's Manual⁺

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⁺ The Japan Patent Office (JPO) and the National Institute of Science and Technology Policy (NISTEP) provided very helpful comments. We are very grateful to Yusuke Naito (Artificial Life Laboratory, Inc.) for sharing the JPO standardized data and to Koichiro Onishi (Osaka Institute of Technology) for detailed comments on this manual.

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1. Overview

The Institute of Intellectual Property Patent Database (IIP-DB) was developed based on the Japan Patent Office (JPO) standardized data (*Seiri Hyojunka* data, in Japanese), which is patent process information disclosed by the JPO. Since 2005, the IIP has made the database available to help enhance the research infrastructure for patent statistics.

The development of IIP-DB 2017, the newly revised and updated version of IIP-DB, was completed in August 2017 using the above-mentioned JPO data released at the end of the fiscal year 2016 (March 2017). The revised database consists of bibliographic and citation data for patent applications dating to 1964. It is organized into five tab-delimited text files in UTF-8 character set format, as outlined in Table 1. The missing numerical, string, and date values are represented as a blank in each file.

Table 1: Tables in IIP-DB 2017

	Table Name	File Name	Number of Records
1	Application	ap.txt	13,606,306
2	Applicant	applicant.txt	14,676,561
3	Inventor	inventor.txt	27,795,642
4	Rights Holder	hr.txt	5,575,260
5	Citation	cc.txt	23,377,968

2. Table Description

2.1. Application Table

The Application table contains bibliographic data, such as the application number, application date, patent number, the International Patent Classification (IPC) symbols, and the number of claims. The “ida” application number identifies a unique record in the table. See Table 2.

Table 2: Application

	Field	Description	Note
1	ida	Application number	Ten digits, beginning with the application year (four digits) followed by six digits (application serial number)
2	adate	Application date	YYYY-MM-DD format
3	sdate	Examination request date	YYYY-MM-DD format
4	idr	Patent number	Maximum seven digits
5	rdate	Registration date	YYYY-MM-DD format
6	tdate	Expiration date	YYYY-MM-DD format
7	class1	Primary IPC at patent publication	Subclass level (first four digits)
8	group1	Primary IPC at patent publication	Fifth and subsequent digits of the IPC
9	class2	Primary IPC at patent announcement (<i>koukoku</i>) ¹	As for “class1”
10	group2	Primary IPC at patent announcement (<i>koukoku</i>)	As for “group1”
11	claim1	Number of claims at patent application ²	
12	claim2	Number of claims at patent announcement (<i>koukoku</i>)	
13	claim3	Number of claims at decision to grant a patent	

¹ Or, primary IPC at decision to grant a patent. The same in the case with “group2.”

² In the case of PCT applications predating 1999, the number of claims at application may be listed as one in the JPO data despite the actual number of claims.

2.2. Applicant Table

The Applicant table contains detailed information, including the names, locations, and types of applicants for a patent application (Table 3). The unit of record is a unique combination of the application number (“ida”) and applicant sequence number (“seq”) for a patent. The “ida_seq” is a stable identifier for the combination and is used against future updates.

Table 3: Applicant

	Field	Description	Note
1	ida	Application number	
2	seq	Applicant sequence number	
3	ida_seq	Identifier (application number + sequence)	Concatenating the values of “ida” and “seq” with an underscore () in between
4	name	Name of applicant	
5	address	Address of applicant	
6	idname	JPO identification code	
7	country_pref	Location code ³	Country code (Appendix 1) and prefecture code for Japanese applicants (Appendix 2)
8	kohokan	Applicant type	1, individual; 2, private companies; 3, government or non-profit organization; 9, others

³ In general, the location code “country_pref” is available only when the JPO identification code “idname” is blank.

2.3. Inventor Table

The Inventor table contains the names and addresses of inventors who have submitted patent applications (Table 4). The unit of record is a unique combination of the application number (“ida”) and inventor sequence number (“seq”) in the patent. The “ida_seq” is a stable identifier for the combination, and it is used against future updates.

Table 4: Inventor

	Field	Description	Note
1	ida	Application number	
2	seq	Inventor sequence number	
3	ida_seq	Identifier (application number + sequence)	Concatenating the values of “ida” and “seq” with an underscore () in between
4	name	Name of inventor	
5	address	Address of inventor	

2.4. Rights Holder Table

The Rights Holder table contains the names and addresses of the rights holder reflecting the latest information or changes (Table 5). The unit of record is a unique combination of the application number (“ida”) and the rights holder sequence number (“seq”) in a patent. The “ida_seq” is the combination identifier; however, it is not static.

Table 5: Rights Holder

	Field	Description	Note
1	ida	Application number	
2	seq	Rights holder sequence number	
3	ida_seq	Identifier (application number + sequence)	Concatenating the values of “ida” and “seq” with an underscore () in between
4	name	Name of rights holder	
5	address	Address of rights holder	
6	idname	JPO identification code	

2.5. Citation Table

IIP-DB includes examiner citation data. The unit of record is a unique combination of the application number of the citing patent (“citing”) and the application number of the cited patent (“cited”).

Table 6: Citation

	Field	Description	Note
1	citing	Application number of citing patent	
2	cited	Application number of cited patent	
3	reason	Citation type	1, if examiner notified the applicant of a reason for refusal on the cited document; otherwise, “blank.”
4	search	Citation type ⁴	1, the cited patent is cited only in the “record of the result of prior art search”; otherwise, “blank.”

3. For More Information

Akira Goto, Kazuyuki Motohashi, “Construction of a Japanese Patent Database and a First Look at Japanese Patenting Activities,” *Research Policy*, Vol. 36, Issue 9, November 2007, pp. 1431-1442.

Kenta Nakamura, “Development, Complication and Use of IIP Patent Database,” *Journal of economics & business administration*, Vol. 214, Issue 2, 2016, pp. 75-90, [<http://www.lib.kobe-u.ac.jp/repository/E0040989.pdf>] (in Japanese).

⁴ Since 2006, prior art documents in the “record of the result of prior art search”, which is in a notification of reasons for refusal, have been added to the JPO citation data. The citation of such prior art does not constitute the reasons for refusal but is considered to be useful for an applicant in amending. As the number of citations of this type is very large, the cited patent that is cited only in the “record of the result of prior art search” is flagged.

Appendix 1: Country Code (Source: Table C0050 in the “Data Specification for the Japan Patent Office (JPO) Standardized Data, XML 2.2”)

<u>Country Code</u>			
id	Code	English short name	Notes
1	AD	Andorra	
2	AE	United Arab Emirates	
3	AF	Afghanistan	
4	AG	Antigua and Barbuda	Algeria, before January 1, 1978.
5	AI	Anguilla	
6	AL	Albania	
7	AM	Armenia	
8	AN	Netherlands Antilles	Before January 1, 1978.
9	AO	Angola	
10	AP	African Regional Intellectual Property Organization	
11	AR	Argentina	
12	AT	Austria	
13	AU	Australia	
14	AZ	Azerbaijan	
15	BA	Bosnia and Herzegovina	Bangladesh, before January 1, 1978.
16	BB	Barbados	Bahrain, before January 1, 1978.
17	BD	Bangladesh	Barbados, before January 1, 1978.
18	BE	Belgium	
19	BF	Burkina Faso	
20	BG	Bulgaria	
21	BH	Bahrain	Kingdom of Bhutan, before January 1, 1978.
22	BI	Burundi	
23	BJ	Benin	
24	BM	Bermuda	
25	BN	Brunei Darussalam	
26	BO	Bolivia	
27	BR	Brazil	
28	BS	Bahamas	
29	BT	Bhutan	

30	BU	Union of Burma	
31	BW	Botswana	
32	BX	Benelux Trademarks and Design Offices	
33	BY	Belarus	
34	BZ	Belize	
35	CA	Canada	
36	CB	Congo, the Democratic Republic of the	Before January 1, 1978.
37	CD	Congo, the Democratic Republic of the	Kingdom of Cambodia, before January 1, 1978.
38	CE	Chile	Before January 1, 1978.
39	CF	Central African Republic	Congo, before January 1, 1978.
40	CG	Congo	
41	CH	Switzerland	
42	CI	Côte d'Ivoire Côte d'Ivoire	
43	CL	Chile	Sri Lanka, before January 1, 1978.
44	CM	Cameroon	
45	CN	China	
46	CO	Colombia	
47	CR	Costa Rica	
48	CS	Czech and Slovak Federal Republic	
49	CU	Cuba	
50	CV	Cape Verde	Vatican City, before January 1, 1978.
51	CY	Cyprus	
52	CZ	Czech Republic	
53	DA	Benin	Before January 1, 1978.
54	DD	German Democratic Republic	East Germany
55	DE	Germany	United Germany
56	DJ	Djibouti	
57	DK	Denmark	
58	DM	Dominica	
59	DO	Dominican Republic	
60	DR	Dominica	Before January 1, 1978.
61	DT	Federal Republic of Germany	West Germany
62	DZ	Algeria	

63	EA	Eurasian Patent Office	Ethiopia, before January 1, 1978.
64	EC	Ecuador	
65	EE	Estonia	
66	EG	Egypt	
67	EI	Ireland	Before January 1, 1978.
68	EM	Office for Harmonization in the Internal Market (Trade Marks and Designs)	
69	EP	European Patent Office	
70	ER	Eritrea	
71	ES	Spain	
72	ET	Ethiopia	Arab Republic of Egypt, before January 1, 1978.
73	FI	Finland	
74	FJ	Fiji	
75	FK	Falkland Islands	
76	FL	Liechtenstein	Before January 1, 1978.
77	FR	France	
78	GA	Gabon	
79	GB	United Kingdom	
80	GC	The Patent Office for the Cooperation Council for the Arab States of the Gulf	
81	GD	Grenada	
82	GE	Georgia	Republic of Gambia, before January 1, 1978.
82-1	GG	Guernsey	
83	GH	Ghana	
84	GI	Gibraltar	Republic of Guinea, before January 1, 1978.
85	GM	Gambia	
86	GN	Guinea	
87	GQ	Equatorial Guinea	
88	GR	Greece	
89	GT	Guatemala	
90	GU	Guatemala	Before January 1, 1978.
91	GW	Guinea-Bissau	
92	GY	Guyana	
93	HI	Haiti	Before January 1, 1978.

94	HK	Hong Kong	
95	HN	Honduras	
96	HO	Honduras	Before January 1, 1978.
97	HR	Croatia	
98	HT	Haiti	
99	HU	Hungary	
100	HV	Upper Volta	
101	IB	International Bureau	
102	ID	Indonesia	
103	IE	Ireland	
104	IL	Israel	
104-1	IM	Isle of Man	
105	IN	India	
106	IQ	Iraq	
107	IR	Iran, Islamic Republic of	
108	IS	Iceland	
109	IT	Italy	
110	JA	Japan	Before January 1, 1978.
110-1	JE	Jersey	
111	JM	Jamaica	
112	JO	Jordan	
113	JP	Japan	
114	KA	Cameroon	Before January 1, 1978.
115	KE	Kenya	
116	KG	Kyrgyzstan	
117	KH	Cambodia	
118	KI	Kiribati	
119	KM	Comoros	
120	KN	Saint Kitts and Nevis	DPR Korea, Before January 1, 1978.
121	KP	Korea, Democratic People's Republic of	
122	KR	Korea, Republic of	
123	KS	Korea, Republic of	Before January 1, 1978.
124	KU	Kuwait	Before January 1, 1978.
125	KW	Kuwait	
126	KY	Cayman Islands	

127	KZ	Kazakhstan	
128	LA	Lao People's Democratic Republic	
129	LB	Lebanon	
130	LC	Saint Lucia	
131	LI	Liechtenstein	
132	LK	Sri Lanka	
133	LR	Liberia	
134	LS	Lesotho	
135	LT	Lithuania	
136	LU	Luxembourg	
137	LV	Latvia	
138	LY	Libya	
139	MA	Morocco	
140	MC	Monaco	
141	MD	Moldova	Republic of Madagascar, before January 1, 1978.
141-1	ME	Montenegro	
142	MG	Madagascar	
143	MJ	Mali	Before January 1, 1978.
144	MK	Macedonia, Republic of	
145	ML	Mali	Republic of Malta, before January 1, 1978.
146	MM	Myanmar	
147	MN	Mongolia	
148	MO	Macao	Mongolian People's Republic, before January 1, 1978.
149	MR	Mauritania	
150	MS	Montserrat	Republic of Mauritius, before January 1, 1978.
151	MT	Malta	Islamic Republic of Mauritania, before January 1, 1978.
152	MU	Mauritius	Oman, before January 1, 1978.
153	MV	Maldives	
154	MW	Malawi	
155	MX	Mexico	
156	MY	Malaysia	
157	MZ	Mozambique	
158	NA	Namibia	Republic of Nicaragua, before January 1, 1978.
159	NE	Niger	

160	NG	Nigeria	
161	NI	Nicaragua	Republic of Niger, before January 1, 1978.
162	NL	Netherlands	
163	NO	Norway	
164	NP	Nepal	
165	NR	Nauru	
166	NZ	New Zealand	
167	OA	African Intellectual Property Organization	
168	OE	Austria	Before January 1, 1978.
169	OM	Oman	
170	PA	Panama	
171	PE	Peru	
172	PG	Papua New Guinea	Republic of Paraguay, before January 1, 1978.
173	PH	Philippines	
174	PK	Pakistan	
175	PL	Poland	
176	PM	Panama	Before January 1, 1978.
177	PO	Poland	Before January 1, 1978.
178	PP	Papua New Guinea	Before January 1, 1978.
179	PT	Portugal	
180	PW	Palau	
181	PY	Paraguay	
182	QA	Qatar	
183	RC	China	Before January 1, 1978.
184	RH	Southern Rhodesia	
185	RO	Romania	
185-1	RS	Serbia	
186	RU	Russian Federation	Romania, before January 1, 1978.
187	RW	Rwanda	
188	SA	Saudi Arabia	
189	SB	Solomon Islands	
190	SC	Seychelles	
191	SD	Sudan	
192	SE	Sweden	

193	SF	Finland	Before January 1, 1978.
194	SG	Singapore	
195	SH	Saint Helena	
196	SI	Slovenia	
197	SK	Slovakia	
198	SL	Sierra Leone	Republic of El Salvador, before January 1, 1978.
199	SM	San Marino	
200	SN	Senegal	
201	SO	Somalia	
202	SR	Suriname	
203	ST	Sao Tome and Principe	
204	SU	Soviet Union	
205	SV	El Salvador	
206	SW	Sweden	Before January 1, 1978.
207	SY	Syrian Arab Republic	
208	SZ	Swaziland	
209	TA	Tanzania, United Republic of	Before January 1, 1978.
210	TC	Turks and Caicos Islands	
211	TD	Chad	Trinidad and Tobago, before January 1, 1978.
212	TG	Togo	
213	TH	Thailand	
214	TI	Tonga	Before January 1, 1978.
215	TJ	Tajikistan	
215-1	TL	Timor-Leste	
216	TM	Turkmenistan	
217	TN	Tunisia	
218	TO	Tonga	Republic of Togo, before January 1, 1978.
219	TR	Turkey	
220	TS	Chad	Before January 1, 1978.
221	TT	Trinidad and Tobago	
222	TV	Tuvalu	
223	TW	Taiwan, Province of China	
224	TZ	Tanzania, United Republic of	
225	UA	Ukraine	

226	UG	Uganda	
227	US	United States of America	
228	UV	Burkina Faso	Before January 1, 1978.
229	UY	Uruguay	
230	UZ	Uzbekistan	
231	VA	Holy See(Vatican City State)	
232	VC	Saint Vincent and Grenadines	
233	VE	Venezuela	
234	VG	British Virgin Islands	
235	VN	Viet Nam	
236	VU	Vanuatu	
237	WL	Sierra Leone	Before January 1, 1978.
238	WN	Nigeria	Before January 1, 1978.
239	WO	World Intellectual Property Organization	
240	WS	Samoa	
241	XX	Statelessness, Other country or region	
242	YD	Yemen, People's Democratic Republic of	
243	YE	Yemen	
244	YU	Serbia and Montenegro	
245	ZA	South Africa	
246	ZB	Zambia	Before January 1, 1978.
247	ZM	Zambia	
248	ZR	Zaire	Central African Republic, before January 1, 1978.
249	ZW	Zimbabwe	

Appendix 2: Prefecture Code (Source: Table C0050 in the “Data Specification for the Japan Patent Office (JPO) Standardized Data, XML 2.2”)

<u>Japanese Prefecture Code</u>			
id	Code	Prefecture name	Notes
1	00	Address unknown	
2	01	Hokkaido	
3	02	Aomori	
4	03	Iwate	
5	04	Miyagi	
6	05	Akita	
7	06	Yamagata	
8	07	Fukushima	
9	08	Ibaraki	
10	09	Tochigi	
11	10	Gunma	
12	11	Saitama	
13	12	Chiba	
14	13	Tokyo	
15	14	Kanagawa	
16	15	Niigata	
17	16	Toyama	
18	17	Ishikawa	
19	18	Fukui	
20	19	Yamanashi	
21	20	Nagano	
22	21	Gifu	
23	22	Shizuoka	
24	23	Aichi	
25	24	Mie	
26	25	Shiga	
27	26	Kyoto	
28	27	Osaka	
29	28	Hyogo	
30	29	Nara	
31	30	Wakayama	
32	31	Tottori	

33	32	Shimane	
34	33	Okayama	
35	34	Hiroshima	
36	35	Yamaguchi	
37	36	Tokushima	
38	37	Kagawa	
39	38	Ehime	
40	39	Kochi	
41	40	Fukuoka	
42	41	Saga	
43	42	Nagasaki	
44	43	Kumamoto	
45	44	Oita	
46	45	Miyazaki	
47	46	Kagoshima	
48	47	Okinawa	