Searching Japanese patent information on STN®

Robert Austin – FIZ Karlsruhe

Agenda

- Overview of the patent system in Japan
- Coverage of Japan in patent databases on STN
- Searching Japanese File Index (FI) codes and File Forming Terms (F-Terms)

Outline of procedures for obtaining a Patent right at the Japan Patent Office (JPO)

i. Application, Formality examination
ii. Publication of unexamined application
iii. Request for examination, Deemed withdrawal
iv. Substantive examination
v. Notification of reasons for refusal, Written argument/Amendment, Appeal examination
vi. Entry in the Register, publication of patent gazette
vii. Appeal for invalidation, Appeal examination, Intellectual property High Court

See also: “Procedures for Obtaining a Patent Right”: http://www.jpo.go.jp/tetuzuki_e/t_gaiyo_e/pa_right.htm

Japanese patent publication terminology

- Kokai = unexamined application (JP-A)
- Kokoku = examined application (old law JP-B)
- Toroku = granted patent (new law JP-B)

The Japanese Patent Office switched from a three stage publication process (JP-A, JP-B, JP-C) to a two stage publication process (JP-A, JP-B) from May 1996.

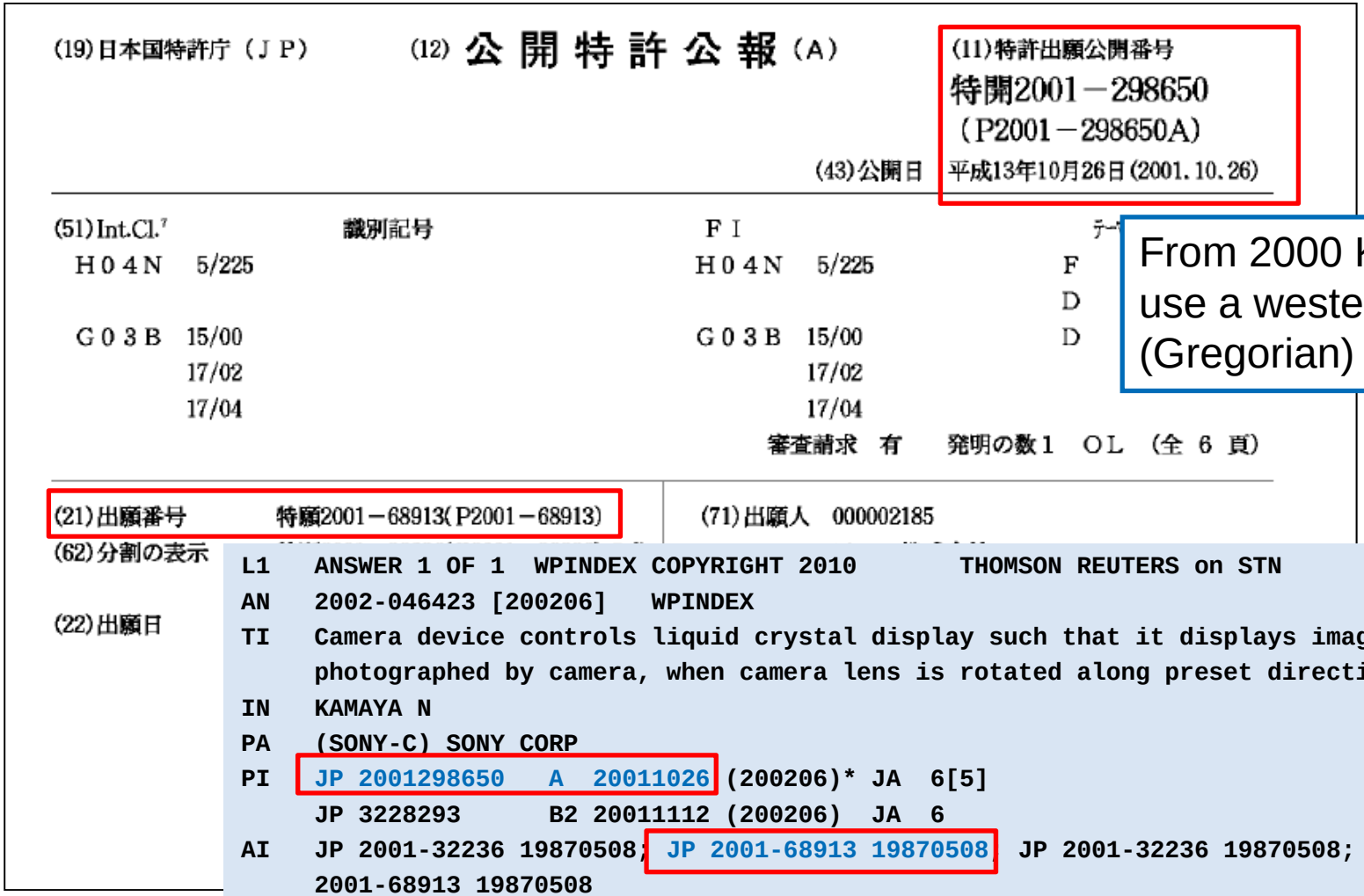
Japanese patent publication numbers

- Unexamined applications (Kokai) (JP-A)
  - JPEENNNNNN/PN (to 12/1999)
  - JPYYYYNNNNNN/PN (from 01/2000)
- Examined Applications (Kokoku) (JP-B)
  - JPEENNNNNNB/PN (to 03/1996)
- Granted Patents (Toroku) (JP-B1, JP-B2)
  - JPNNNNNNNB/PN (from 05/1996)

Note: Japanese application (/AP) and priority (/PRN) numbers on STN, always use the western year (YYYY).

* Hirohito 01 to 63 = 1926-1988, and Akihito 01 to 11 = 1989-1999

Example: modern JP-A (Kokai)



(19)日本国特許庁（ＪＰ）　(12) 公開特許公報（Ａ）　(11)特許出願公開番号 特開2001－298650 (P2001－298650A)

(43)公開日　平成13年10月26日(2001.10.26)

(51)Int.Cl.[7]	識別記号	FI		テー
H04N 5/225		H04N 5/225	F	
			D	
G03B 15/00		G03B 15/00	D	
17/02		17/02		
17/04		17/04		

審査請求　有　発明の数1　ＯＬ　（全 6 頁）

(21)出願番号　特願2001－68913(P2001－68913)

(71)出願人　000002185

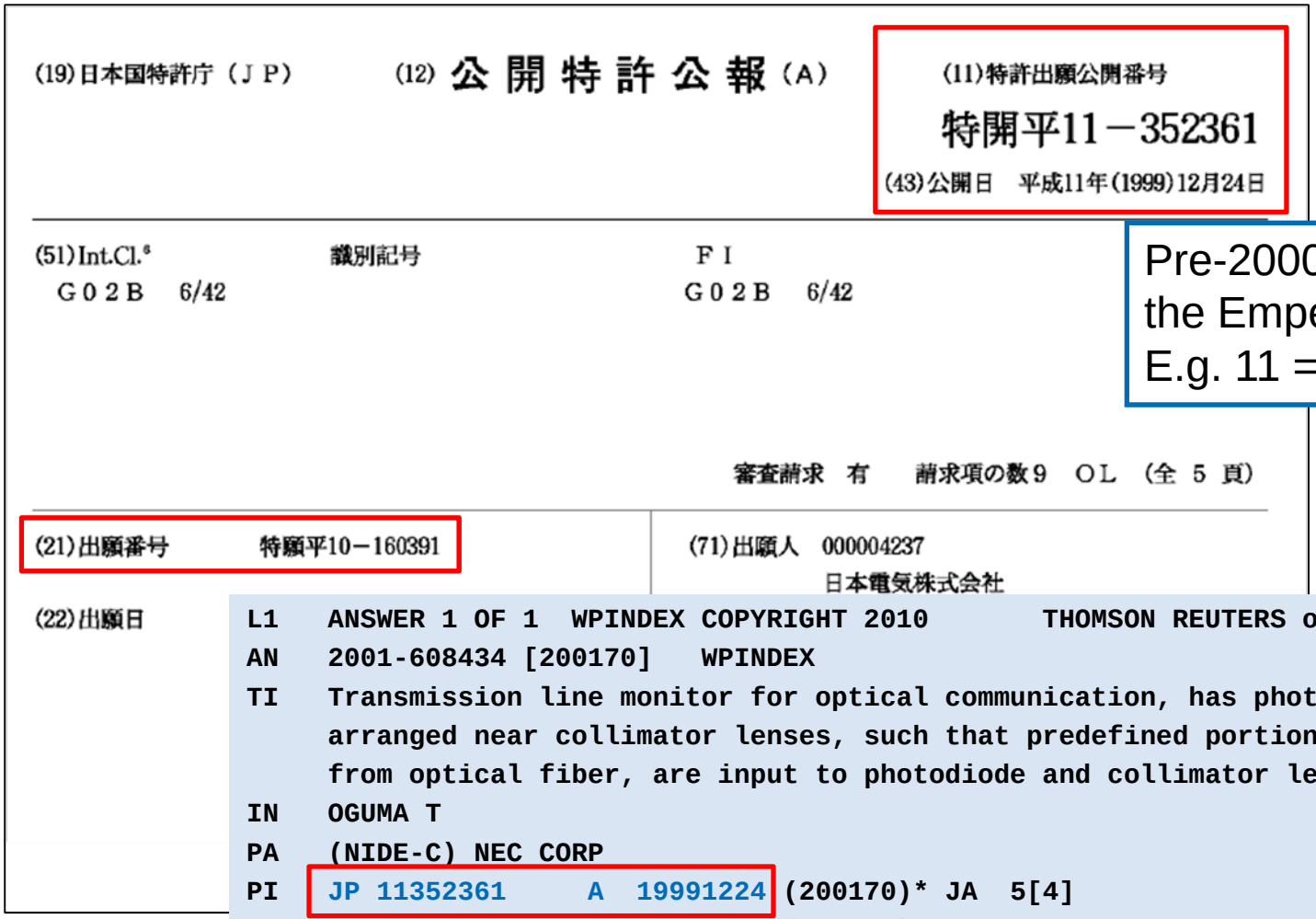
(62)分割の表示

(22)出願日

From 2000 Kokai use a western (Gregorian) year.

```
L1    ANSWER 1 OF 1  WPINDEX COPYRIGHT 2010       THOMSON REUTERS on STN
AN    2002-046423 [200206]   WPINDEX
TI    Camera device controls liquid crystal display such that it displays image
      photographed by camera, when camera lens is rotated along preset direction
IN    KAMAYA N
PA    (SONY-C) SONY CORP
PI    JP 2001298650   A  20011026 (200206)* JA  6[5]
      JP 3228293      B2 20011112 (200206)  JA  6
AI    JP 2001-32236 19870508; JP 2001-68913 19870508; JP 2001-32236 19870508; JP
      2001-68913 19870508
PRAI JP 2001-32236        19870508
      JP 2001-68913        19870508
```

Example: pre-2000 JP-A (Kokai)



(19)日本国特許庁（ＪＰ）　(12) 公開特許公報（A）

(11)特許出願公開番号
特開平11－352361
(43)公開日　平成11年(1999)12月24日

(51)Int.Cl.[6]　識別記号　F I
Ｇ０２Ｂ　6/42　Ｇ０２Ｂ　6/42

審査請求　有　請求項の数9　ＯＬ　（全　5　頁）

(21)出願番号　特願平10－160391

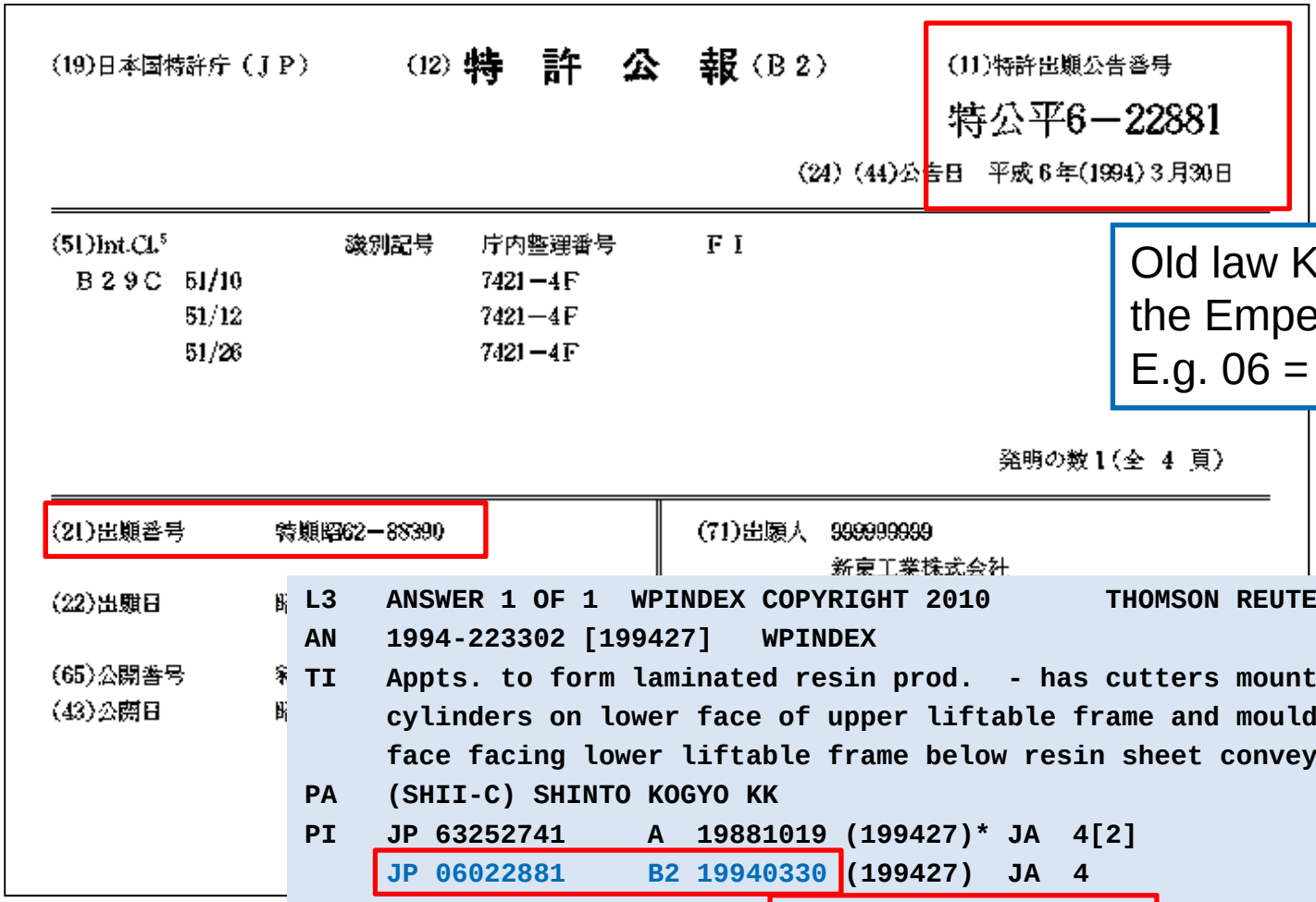
(71)出願人　000004237
日本電気株式会社

(22)出願日

Pre-2000 Kokai used the Emperor's year. E.g. 11 = 1999.

```
L1   ANSWER 1 OF 1  WPINDEX COPYRIGHT 2010       THOMSON REUTERS on STN
AN   2001-608434 [200170]   WPINDEX
TI   Transmission line monitor for optical communication, has photodiode
     arranged near collimator lenses, such that predefined portions of light
     from optical fiber, are input to photodiode and collimator lens
IN   OGUMA T
PA   (NIDE-C) NEC CORP
PI   JP 11352361      A  19991224 (200170)* JA  5[4]
     JP 3120842       B2 20001225 (200170)  JA  5
AI   JP 1998-160391 19980609; JP 1998-160391 19980609
PRAI JP 1998-160391       19980609
```

Example: old law JP-B (Kokoku)



(19)日本国特許庁（ＪＰ）　(12) 特　許　公　報（Ｂ２）

(11)特許出願公告番号

特公平6－22881

(24)(44)公告日　平成６年(1994)３月30日

(51)Int.Cl.[5]	識別記号	庁内整理番号	ＦＩ
Ｂ２９Ｃ　51/10		7421－4Ｆ	
51/12		7421－4Ｆ	
51/26		7421－4Ｆ	

発明の数１(全　４　頁)

(21)出願番号　特願昭62－88390

(22)出願日　昭

(65)公開番号

(43)公開日　昭

(71)出願人　999999999
新東工業株式会社

Old law Kokoku used the Emperor's year. E.g. 06 = 1994.

```
L3   ANSWER 1 OF 1  WPINDEX COPYRIGHT 2010       THOMSON REUTERS on STN
AN   1994-223302 [199427]   WPINDEX
TI   Appts. to form laminated resin prod.  - has cutters mounted through
     cylinders on lower face of upper liftable frame and mould mounted on top
     face facing lower liftable frame below resin sheet conveyors
PA   (SHII-C) SHINTO KOGYO KK
PI   JP 63252741     A  19881019 (199427)* JA  4[2]
     JP 06022881     B2 19940330 (199427)  JA  4
AI   JP 1987-88390 19870410; JP 1987-88390 19870410
PRAI JP 1987-88390        19870410
```

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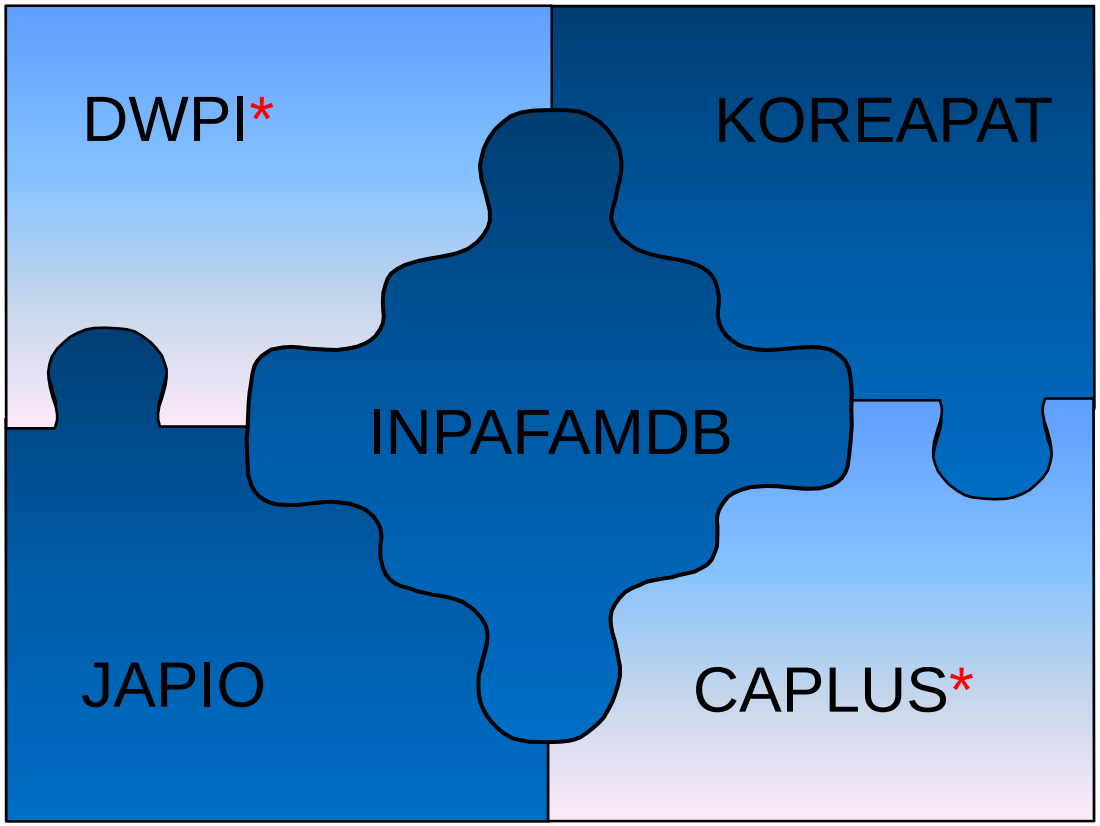
- Overview of the patent system in Japan
- Coverage of Japan in patent databases on STN
- Searching Japanese File Index (FI) codes and File Forming Terms (F-Terms)

STN integrates value-added* and first level patent information from Asia



Derwent World Patents Index (DWPI) is the largest value-added patent file

- Producer: Thomson Reuters
- Coverage: from 1963 to date
- Asian patents: JP, CN, KR, TW, SG, IN, PH
- Benefits:
  - Enhanced abstracts and titles
  - In depth indexing for chemistry and life science
  - Thesauri for classifications (IPC, NCL, F-Term)
  - Non-convention equivalent patent family members
  - Patent Assignee Codes (PACO)

CAplus is the most comprehensive chemistry bibliographic database

- Producer: Chemical Abstracts Service
- Coverage: from 1907 (or earlier) to date
- Asian patents: JP, CN, KR, TW, SG, IN, HK
- Benefits:
  - High quality title, abstract and indexing
  - Journals, patents, books, reports, disclosures, dissertations, corporate names
  - Thesauri for classifications (IPC, NCL, F-Term)
  - Company name thesaurus
  - CAS Registry substances

INPAFAMDB is The International Patent Family Database on STN

- Producer: European Patent Office / FIZ Karlsruhe
- Content: EPO DOCDB + INPADOC PRS (+ PAJ)
- Coverage: from early 1800's to date
- Benefits:
  - FIZ Karlsruhe editorial corrections and Quality Control provide accurate and comprehensive patent families
  - One-record-per-family file design for efficient multi-file searching with CAplus and DWPI
  - Applicant or translated abstracts in English
  - The complete archive of European (ECLA, ICO) and International (IPC) classifications
  - Patent and non-patent literature citations
  - Integrated Legal Status information

JAPIO is a comprehensive English abstract database of Japanese applications

- Producer: Japan Patent Information Organisation (JAPIO)
- Coverage/content:
  - PAJ (Patent Abstracts of Japan) from 10/1976 to date
  - Supplemental INPADOC data from 1973-1997
  - Update: monthly, Timeliness: 3-4 months
- Benefits:
  - Comprehensive bibliography, drawings and English abstract for published unexamined applications

Comparative Japanese patent coverage in patent files on STN

FILE	Unexamined applications (JP-A)*			Patents / Examined applications (JP-B/B1/B2)		
	BIB	Abstracts	Images	BIB	Abstracts	Images
WPINDEX**	1971-	1971-	1988-	1963-	**1963-**	**1988-**
INPAFAMDB	1973-	1976-***	-	1973-	-	-
CAPLUS	1971-	1971-	Chem. drawings	**1916-**	**1916-**	Chem. drawings
JAPIO	1973-	1976-***	**1980-**	**-**	**-**	**-**

Notes:

* WPINDEX, INPAFAMDB and CAPLUS also cover Japanese PCT transfer applications (JP-T), and INPAFAMDB covers Japanese granted patents (JP-C). JAPIO does not cover these document types.

** Years are for basic chemical (CPI) patent coverage. JP-A electronics patents are covered from 1982 and all JP-A technologies from 1996; JP-Bs are only covered for all technologies from 1999.

*** National applications. Abstracts are only provided for foreign applications from 1998 onwards.

Utility model coverage in STN databases

Utility Model	INPAFAMDB *	DWPI	CAplus
CN	1985-	2007-	2007-
JP	1965-2001	2008-	2006-
KR	1978-2004	2008-	2006-
TW	2000-2008/01	2008-	-

(* No abstracts. Bibliographic nformation only.)

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- Overview of the patent system in Japan
- Coverage of Japan in patent databases on STN
- Searching Japanese File Index (FI) codes and File Forming Terms (F-Terms)
  - Overview of Japanese classification
  - File Index (FI) and F-Term Thesauri
  - Search example

Availability of major patent classification systems in STN patent databases

	DWPI	CAplus	INPFAMDB	JAPIO
International Patent Classification (IPC)	✓	✓	✓	✓
European Patent Classification (EPC)	✓	✓	✓	
U.S. National Classification (NCL)	✓	✓	✓	
JPO File Forming (F) Terms (FTRM)	✓	✓		
JPO File Index (FI) Classification (FCL)	✓			

Japanese Patent Classifications

- International Patent Classification (IPC)
- File Index (FI) – *based on IPC*
- F-Term – *the most in-depth classification*

Japanese File Index (FI) and File Forming (F) Term patent classification

- Independent, in-depth classifications assigned by the JPO to Japanese patent publications
- File Index (FI) codes have a similar structure to IPCs, but provide more detailed subdivisions
- File Forming (F) Terms are used to index the various technical fields within an invention, not just the main inventive feature (indexed by IPC)
- Japanese FI and F-Term classifications are searchable in DWPI back to 1963
- FI and F-Term Thesauri are available in DWPI

Example: Japanese classifications

(19) 日本国特許庁(JP)　(12) 公 開 特 許 公 報(A)　(11) 特許出願公開番号

特開2006-205448

(P2006-205448A)

(43) 公開日　平成18年8月10日(2006.8.10)

(51) Int.Cl.			F I			テーマコード（参考）
B27K	5/00	(2006.01)	B27K	5/00	B	2B230
A01N	55/00	(2006.01)	A01N	55/00	E	4H011
B27K	3/34	(2006.01)	B27K	3/34	Z	

IPC codes.

FI codes.

F-Term *themes*.

審査請求 未請求　請求項の数 7　ＯＬ　（全 15 頁）

(21) 出願番号　特願2005-18306 (P2005-18306)

(22) 出願日　平成17年1月26日 (2005.1.26)

(71) 出願人　000002060
信越化学工業株式会社
東京都千代田区大手町二丁目６番１号

(74) 代理人　100079304
弁理士　小島　隆司

(74) 代理人　100114513
弁理士　重松　沙織

(74) 代理人　100120721
弁理士　小林　克成

(74) 代理人　100124590
弁理士　石川　武史

(72) 発明者　松村　和之
群馬県碓氷郡松井田町大字人見１番地１０
信越化学工業株式会社シリコーン電子材料技術研究所内

最終頁に続く

Example: Japanese classifications in DWPI

```
L1   ANSWER 1 OF 1  WPINDEX COPYRIGHT 2010       THOMSON REUTERS on STN
AN   2006-554139 [200657]   WPINDEX
TI   Modified timber for construction material, contains timber
     impregnated with an organosilicon compound containing
     hydrogen-silicon groups
DC   A82; C01; D22; E11; F09; P63
IN   MATSUMURA K; YAMAMOTO A
PA   (SHIE-C) SHINETSU CHEM IND CO LTD
PI   JP 2006205448   A  20060810 (200657)* JA
     JP 4320636      B2 20090826 (200956)  JA  15
ADT  JP 2006205448 A JP 2005-18306 20050126; JP
     20050126
FDT  JP 4320636      B2 Previous Publ JP 200620
PRAI JP 2005-18306        20050126
IPCI A01N0055-00 [I,A]; A01N0055-00 [I,C]; B27K0003-34 [I,A]; B27K0003-34
     [I,A]; B27K0003-34 [I,C]; B27K0003-34 [I,C]; B27K0005-00 [I,A];
     B27K0005-00 [I,C]
FCL  A01N0055-00 E; B27K0003-34 C; B27K0003-34 Z; B27K0005-00 B
     Main:      B27K0003-34 C
FTRM 2B230; 4H011; 4H011/AA02; 4H011/AA03; 2B230/AA15; 2B230/AA18;
     4H011/AC03; 2B230/BA01; 4H011/BB16; 2B230/CB23; 4H011/DA15;
     4H011/DH07; 2B230/EB01; 2B230/EB03
```

FI codes are searched and displayed in the FCL field.

F-Terms are searched and displayed in the FTRM field.

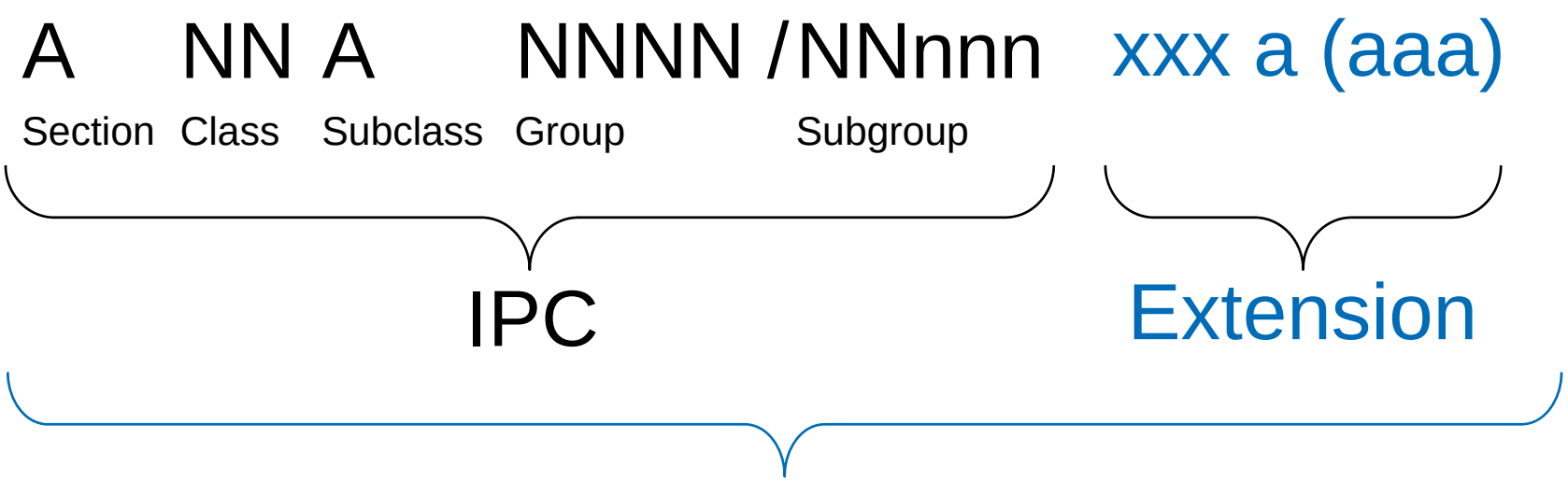
JPO File Index (FI) classification

- Introduced in 1980 as a JPO internal system
  - Based on IPC Version 4
  - There are over 192,000 codes
- Assigned to claimed content
  - Japanese patent and utility model publications
- Additional disclosed content may be indexed
  - Technology, uses, chemical substances
- Assigned by the IPCC

Look-up JPO FI and F-Term English definitions at:
http://www5.ipdl.inpit.go.jp/pmgs1/pmgs1/pmgs_E

File Index (FI) classification code format

- IPC + extension



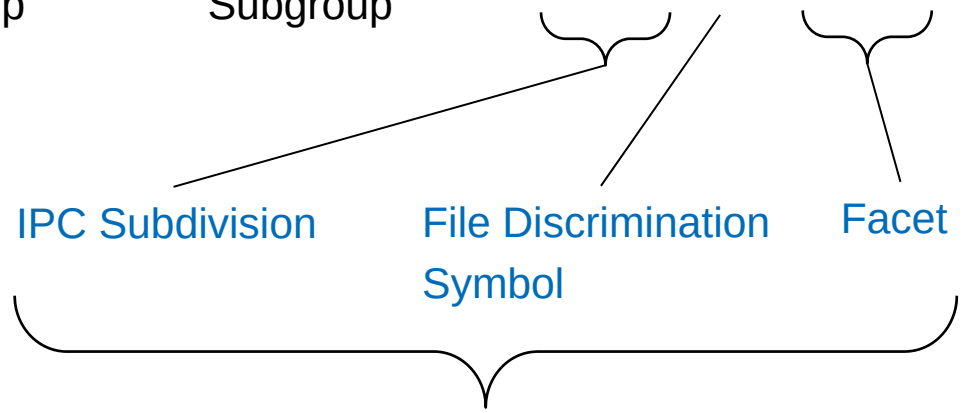
Note: when searching on STN, the forward slash in an FI code (/FCL) is automatically converted to a hyphen.

File Index (FI) classification code format

- IPC + extension

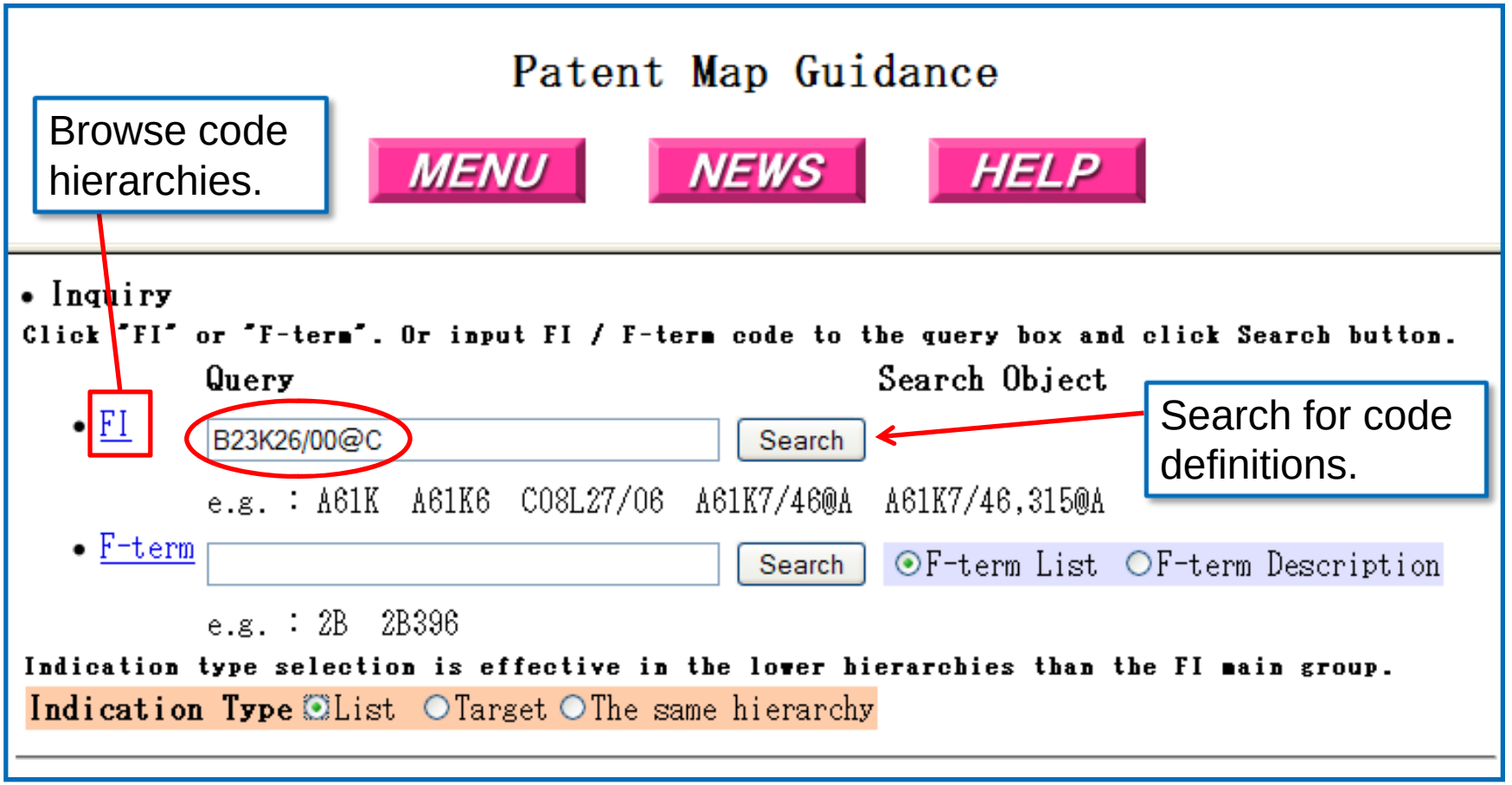
A NN A NNNN / NNnnn xxx a (aaa)

Section Class Subclass Group Subgroup



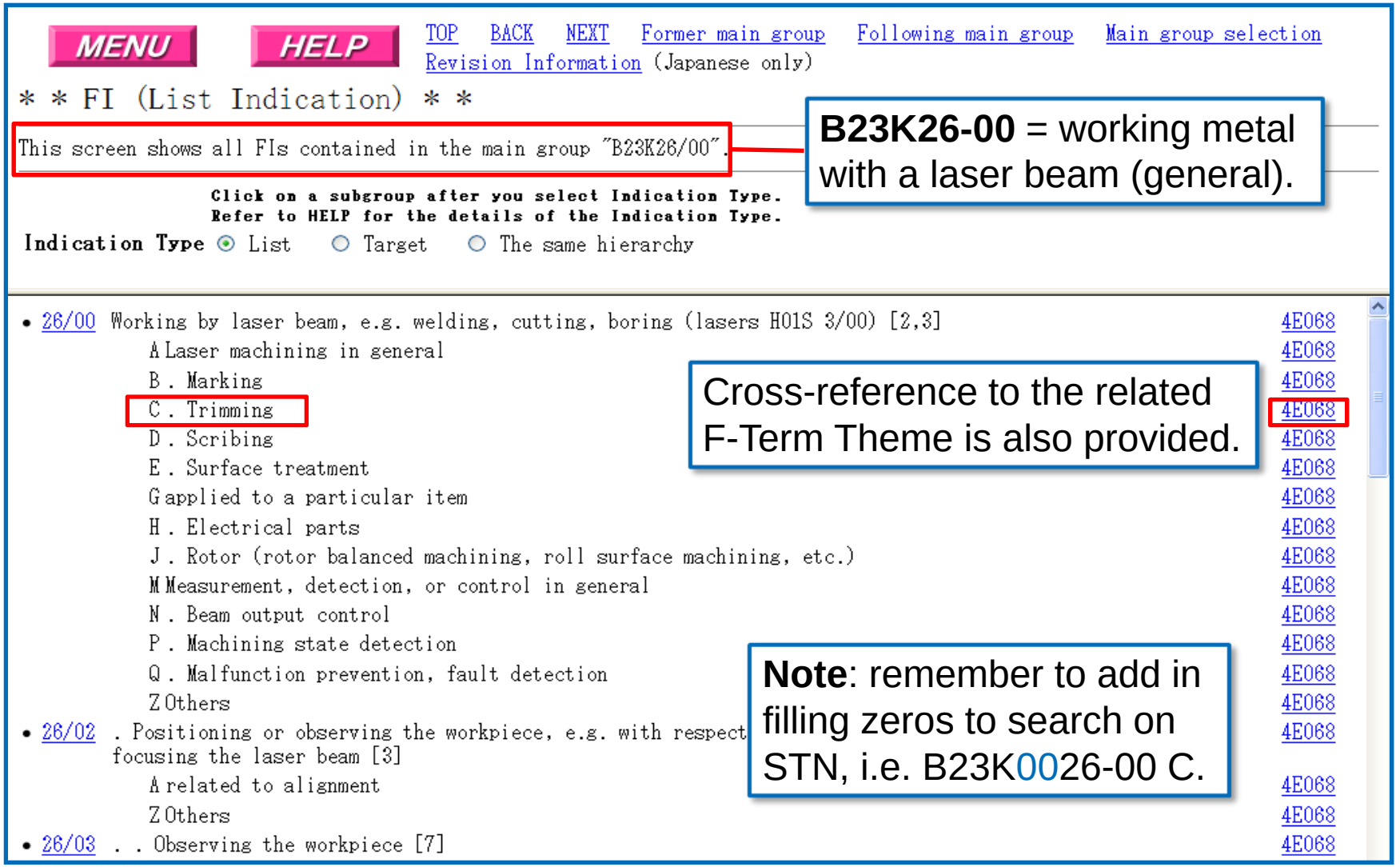
Note: Facets may be combined with an FI code using the (w) operator, e.g. => S (G03B0001-00+NT (W) GAP)/FCL

File Index (FI) example: B23K26/00 C



http://www5.ipdl.inpit.go.jp/pmgs1/pmgs1/pmgs_E

File Index (FI) example: B23K26/00 C



B23K26-00 = working metal with a laser beam (general).

Cross-reference to the related F-Term Theme is also provided.

Note: remember to add in filling zeros to search on STN, i.e. B23K0026-00 C.

Searching File Index (FI) codes (/FCL)

```
=> FILE WPINDEX

=> S B23K/IPC,FCL
        188052 B23K/IPC
         87143 B23K/FCL
L1      189176 B23K/IPC,FCL

=> S B23K0026/IPC,FCL
         36800 B23K0026/IPC
         21271 B23K0026/FCL
L2       36916 B23K0026/IPC,FCL

=> S B23K0026-00/IPC,FCL
         27606 B23K0026-00/IPC
         14596 B23K0026-00/FCL
L3       27687 B23K0026-00/IPC,FCL

=> S B23K0026-00 C/FCL
L4           466 B23K0026-00 C/FCL

=> D L4 FCL 14

L4   ANSWER 14 OF 466  WPINDEX COPYRIGHT 2010
FCL  B23K0026-00 C; B23K0026-00 N; B23K0026-03
     Main:      B23K0026-00 C
     Secondary: B23K0026-00 N; B23K0026-03
```

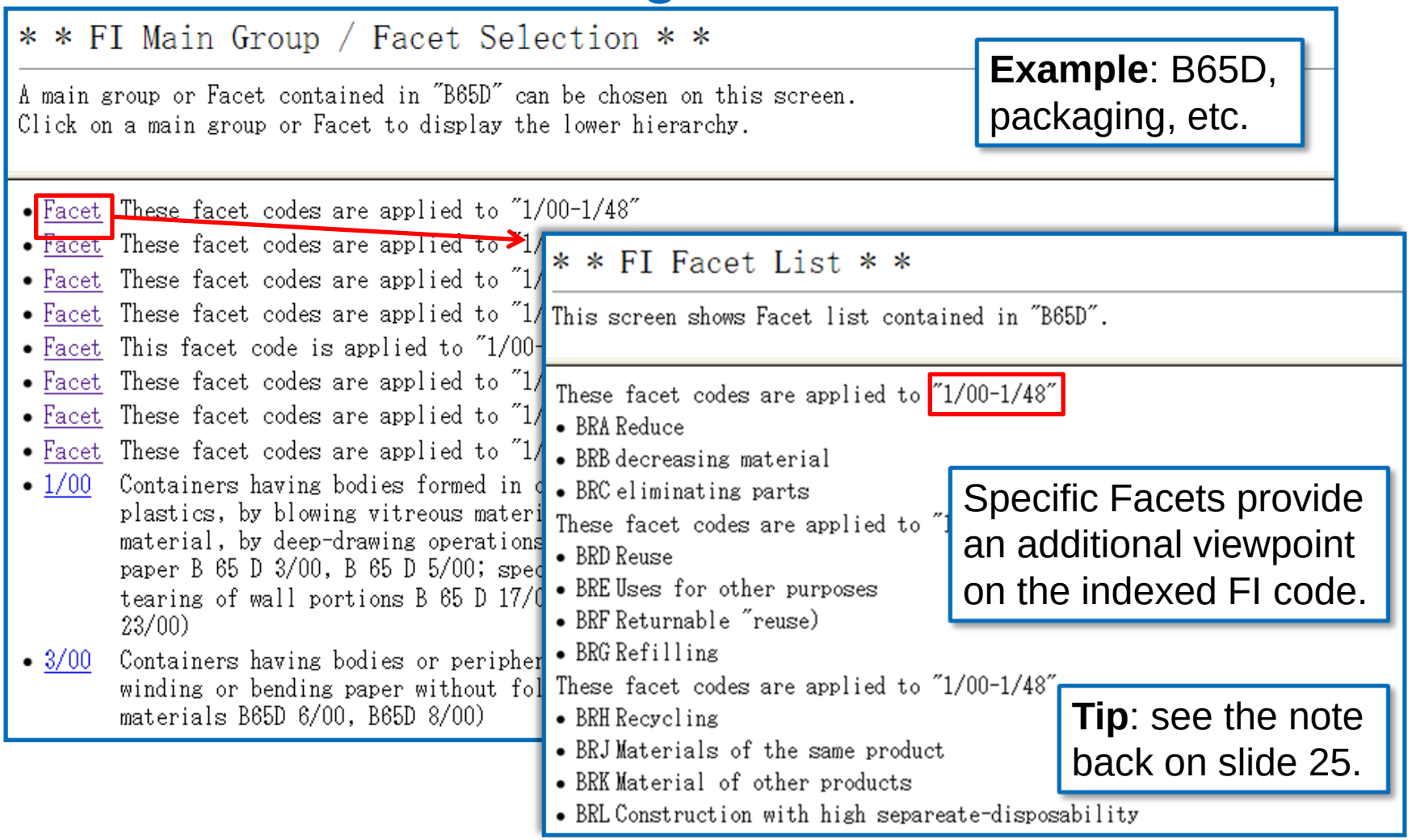
B23K0026-00 C = trimming metal with a laser beam.

Searching FI codes (/FCL) at the Subclass (L1), Group (L2) and Subgroup (L3) levels is analogous to IPC searching.

The specific FI code (/FCL) is also searchable (L4).

Note: Main (/FMCL) and Secondary (/FSCL) FI are separately searchable.

FI Specific Facets may be available for defined ranges of FI codes



FI Broad Facets are for lateral searches across technological fields

MENU HELP TOP BACK NEXT Upper hierarchy
Revision Information (Japanese only)

* * FI Broad-Facet LIST * *

This screen shows the list of Broad-Facet

Broad Facets always begin with the letter “Z”. The full list is shown here.

- ZAA Superconductivity [Applicable area: all areas]
- ZAB Environmental protection technology [Applicable area: all areas]
- ZBP Biodegradable polymer [Applicable area: all areas]
- ZCC Combinatorial chemistry related technology [Applicable area: all areas]
- ZEC Electronic commerce related technology [Applicable a
- ZHV Hybrid vehicles [vehicles with both an engine and ar
  [Applicable area: B60K, L, F02D, N, F16H, G01F, R, H
- ZNA Nucleic acid / amino acid sequence [Applicable area
- ZNM Nano-technology application technology
- ZTD Three-dimensional structures of biomolecule
- ZYW Yaw movement control of vehicles [yaw rate, slip angle, steering characteristics, etc.] [Applicable area: B60G, K, L, T, B62D, F02D, F16D, H]
- ZYY Vehicle behavior control by unspecified or multiple methods [Applicable F16DH]

Broad Facets may be searched in combination with FI codes, or as broad independent search terms, e.g. => S ZNM/FCL

Tip: see the note back on slide 25.

JPO File Forming (F) Term classification

- Introduced in 1987 as JPO internal system
  - Additional in-depth indexing for a subset of FI/IPC
- F-Terms split the FI/IPC into ~2,800 Themes
  - Themes are further subdivided into viewpoints (terms)
  - There are over 350,000 terms (symbols)
- Assigned from multiple technical perspectives, and not just to the main inventive features
  - Intended to be searched in combination with keywords, or FI/IPC classification
- Assigned by the IPCC

File Forming (F) Term format

- Alphanumerical code

NANNN / AA NN . a

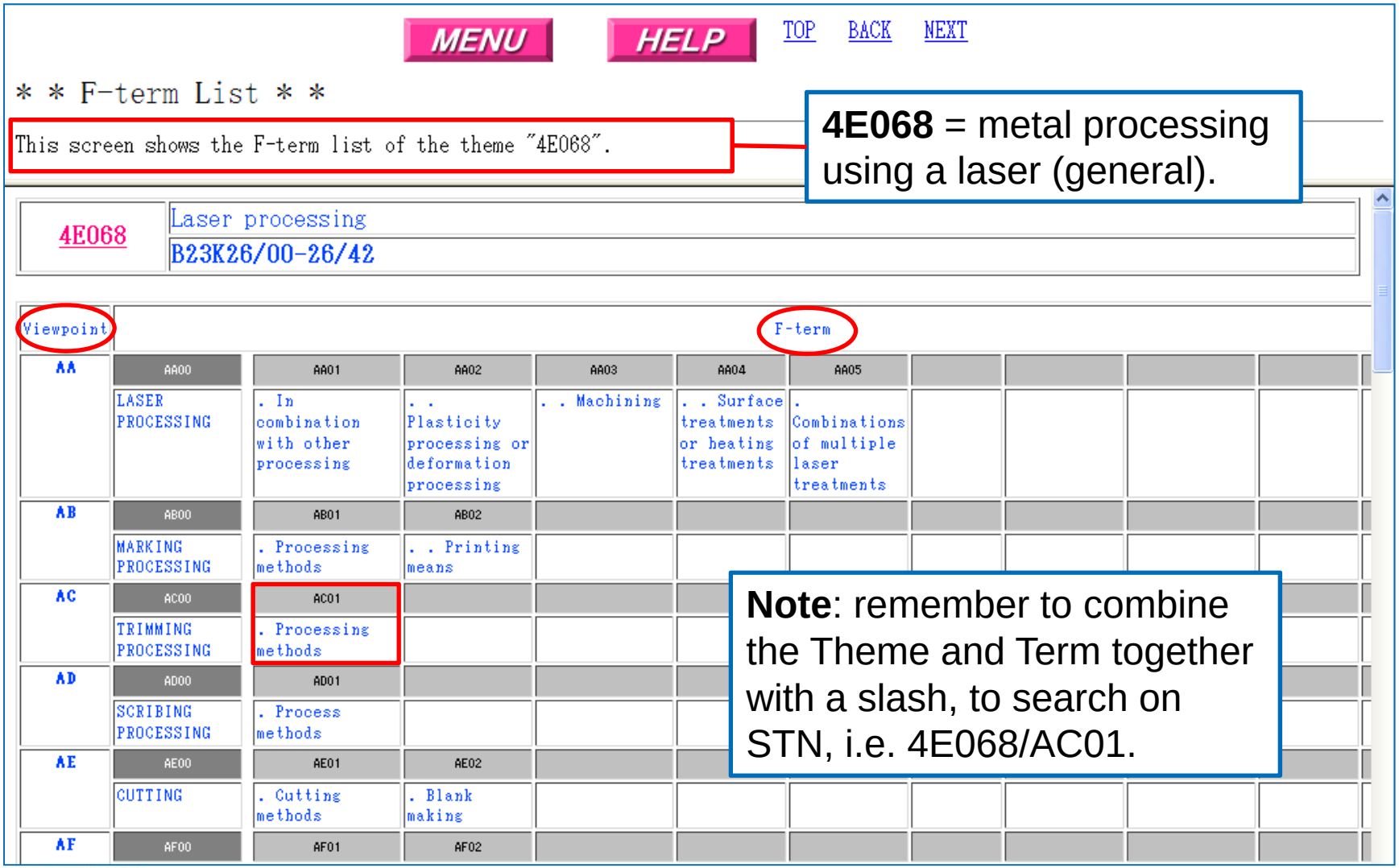
Theme Aspect (Viewpoint) Figure extension

Term

File Forming Term

Note: when searching on STN, the slash within an F-Term code (/FTRM) MUST be used for correct retrieval.

F-Term example: 4E068/AC01



MENU HELP TOP BACK NEXT

* * F-term List * *

This screen shows the F-term list of the theme "4E068".

4E068 = metal processing using a laser (general).

4E068	Laser processing
	B23K26/00-26/42

Viewpoint	F-term								
AA	AA00	AA01	AA02	AA03	AA04	AA05			
	LASER PROCESSING	. In combination with other processing	. . Plasticity processing or deformation processing	. . Machining	. . Surface treatments or heating treatments	. Combinations of multiple laser treatments			
AB	AB00	AB01	AB02						
	MARKING PROCESSING	. Processing methods	. . Printing means						
AC	AC00	AC01							
	TRIMMING PROCESSING	. Processing methods							
AD	AD00	AD01							
	SCRIBING PROCESSING	. Process methods							
AE	AE00	AE01	AE02						
	CUTTING	. Cutting methods	. Blank making						
AF	AF00	AF01	AF02						

Note: remember to combine the Theme and Term together with a slash, to search on STN, i.e. 4E068/AC01.

Searching File Forming (F) Terms (/FTRM)

```
=> FILE WPINDEX

=> S 4E068/FTRM
L1       21280 4E068/FTRM

=> S 4E068/AC01/FTRM
L2         359 4E068/AC01/FTRM

=> S L2 NOT B23K0026-00 C/FCL
           466 B23K0026-00 C/FCL
L3         188 L2 NOT B23K0026-00 C/FCL

=> D FCL FTRM

L3   ANSWER 1 OF 188  WPINDEX COPYRIGHT 2010       THOMSON REUTERS on STN
FCL  B23K0026-06 J; B23K0026-06 Z; B23K0026-08 D; G02B0026-08 E
     Main:      B23K0026-06 J
     Secondary: B23K0026-06 Z; B23K0026-08 D; G02B0026-08 E
FTRM 2H041; 2H141; 4E068; 2H041/AA04; 2H041/AA06; 2H041/AB14; 4E068/AC01;
     2H041/AC06; 2H041/AZ00; 2H041/AZ05; 4E068/CA07; 4E068/CB01; 4E068/CD05;
     4E068/CD08; 4E068/CD10; 4E068/CE04; 4E068/DA09
```

4E068/AC01 = trimming metal with a laser beam.

Searching F-Term (/FTRM) Themes (L1) and Individual F-Terms is possible (L2).

Searching F-Terms may find additional results (L3) beyond using FI codes (/FCL) alone.

Agenda

- Overview of the patent system in Japan
- Coverage of Japan in patent databases on STN
- Searching Japanese File Index (FI) codes and File Forming Terms (F-Terms)
  - Overview of Japanese classification
  - File Index (FI) and F-Term Thesauri
  - Search example

Using the F-Term (/FTERM) and FI (/FCL) classification thesauri in DWPI

- Hierarchies of terms in both thesauri can be displayed using EXPAND followed by a plus symbol (+), a Relationship Code, and /FTERM or /FCL
  - e.g. E 2B002/AA09+TI/FTERM
  - e.g. E H01L0033+ALL/FCL
- To automatically search additional Narrower, Broader, Related, or other terms, use the SEARCH command with a term followed by a plus symbol (+), a Relationship Code, and /FTERM or /FCL
  - e.g. S 2B002/AA09+NT/FTERM
  - e.g. S H01L0033+NT/FCL

Tip: to learn more about Thesauri Relationship codes in DWPI type HELP RCODE at the STN prompt (=>).

FTERM Thesaurus Relationship codes

Code	Description
ALL	All associated terms
BT	Broader term
CODE	Code for the thesaurus text term
DEF	Definition
HIE	Hierarchy terms (all broader and narrower terms)
KT	Keyword term
NT	Narrower term
RFI	Related FI (File Indexing) classification term
TI	Complete title of the SELF term and Broader Terms

FCL (FI) Thesaurus Relationship codes

Code	Description
ALL	All usually required associated terms
MAX	All associated terms
BT	Broader term
DEF	Definition
HIE	Hierarchy terms (all broader and narrower terms)
INDX	Index Note
NOTE	Scope Notes
NT	Narrower term
RT	Related Terms
TI	Complete title of the SELF term and Broader Terms

Use the EXPAND command to access the F-Term Thesaurus (/FTERM)

```
=> E 5F041/BB00+TI/FTERM
E1       34159   BT1  5F041/FTERM
                      Light-emitting diodes
E2          10   -->  5F041/BB00/FTERM
                      DRIVE CIRCUITS FOR LIGHT-EMITTING DIODES (LED)
********** END **********

=> E 5F041/BB00+ALL/FTERM
E1       34159   BT1  5F041/FTERM
                      Light-emitting diodes
E2          10   -->  5F041/BB00/FTERM
                      DRIVE CIRCUITS FOR LIGHT-EMITTING DIODES (LED)
E3          12   NT1  5F041/BB01/FTERM
                      Types of circuits
                      . . . .

E25       1534   NT2  5F041/BB33/FTERM
                      Driving by intermittent pulses
E26        467   NT2  5F041/BB34/FTERM
                      Other drive systems
********** END **********

=> S 5F041/BB00+NT/FTERM
L1         4611 5F041/BB00+NT/FTERM  (25 TERMS)
```

+TI relationship code shows the F-Term, and its broader term definitions.

+ALL relationship code shows the F-Term, and both broader and narrower term definitions.

The thesaurus provides the efficient option to search all narrower terms (+NT) in a single search step (L1).

Use the EXPAND command to access the definitions of codes in a Thesaurus

```
=> E LED+KT/FTERM
E1            0   -->  LED/FTERM
E2          131        2C262/GA38/FTERM
E3          971        2F103/EB06/FTERM
E4          293        5G019/JJ08/FTERM
E5         1355        5K102/PB02/FTERM
E6            0   KT   Articles placed between fibers light-emitting diodes
                       (LED)/FTERM
E7            0   KT   Bonding molding to light-emitting diode (LED)
                       chips/FTERM
E8            0   KT   Bonding to molding onto light-emitting diode (LED)
                       chips/FTERM
E9            0   KT   Bulb-type light-emitting diodes (LED)/FTERM
E10           0   KT   Characteristic products after finished light-emitting
                       diodes (LED) are mounted/FTERM
E11           0   KT   DRIVE CIRCUITS LIGHT-EMITTING DIODES (LED)/FTERM
E12           0   KT   Devices mounting finished light-emitting diodes
                       (LED)/FTERM
E13           0   KT   Display devices light emitting diodes (LED)/FTERM
E14           0   KT   FORMS LIGHT-EMITTING DIODES (LED) (1)/FTERM
E15           0   KT   FORMS LIGHT-EMITTING DIODES (LED) (2)/FTERM
. . . .
```

Definitions of F-Terms are included to allow identification of appropriate codes (KT=Keyword Term).

Use EXPAND command to access the definitions of codes in a Thesaurus (cont.)

```
=> E E13+KT
E1           0   -->  Display devices light emitting diodes (LED)/FTERM
E2         224        5J055/EZ68/FTERM
********** END **********

=> E E2+ALL
E1       14836   BT2  5J055/FTERM
                      ELECTRONIC SWITCHES I
E2        1885   BT1  5J055/EZ00/FTERM
                      FUNCTIONAL CIRCUIT THAT CONSTITUTES THE INVENTION *
E3         224   -->  5J055/EZ68/FTERM
                      Display devices or light emitting diodes (LED)
E4          75   NT1  5J055/EZ69/FTERM
                      LIQUID CRYSTALS
E5          13   NT1  5J055/EZ70/FTERM
                      Cathode ray tubes
********** END **********

=> S E4+NT
L2         301 5J055/EZ68+NT/FTERM  (3 TERMS)
```

Explore the definition which fits your search question using +KT, to locate the corresponding F-Term.

Expand with +ALL to review the associated terms and definitions.

Use +NT to search the chosen F-Term, and its narrower terms in one step.

Use the EXPAND command to access the FI Thesaurus (/FCL)

```
=> E 5F041+RFI/FTERM
E1        34159    -->  5F041/FTERM
                    RFI  H01L33/00-33/00@Z
********** END **********

=> E H01L0033-00+ALL/FCL
E1            3    BT3  H/FCL
                   DEF  SECTION H - ELECTRICITY
E2            0    BT2  H01/FCL
                   DEF  BASIC ELECTRIC ELEME
E3       684794    BT1  H01L/FCL
                   DEF  SEMICONDUCTOR DEVICE
                        NOT OTHERWISE PROVIL
                        semiconductor wafers
E4        34124    -->  H01L0033-00/FCL
                   DEF  Semiconductor devices with at least one potential-
                        jump barrier or surface barrier specially adapted for
                        light emission, e.g. infra-red; Processes . . .
E5         5736    NT1  H01L0033-00 A/FCL
                   DEF  characterised by bodies (GaAs, AlGaAs, Group 4 . . .
                        . . . .

E16       11501    NT1  H01L0033-00 N/FCL
                   DEF  Mounts, packages, a
E17         204    NT1  H01L0033-00 Z/FCL
                   DEF  Others
********** END **********
```

The FTERM Relationship +RFI (Related File Index) refers to the related File Index classification: H01L0033-00 to H01L0033-00 Z.

Use the FI Thesaurus like the IPC Thesaurus, to view definitions, and to search codes from within their respective hierarchies.

Note: Where no translation is available, FI codes are not included in the STN Thesaurus.

Agenda

- Overview of the patent system in Japan
- Coverage of Japan in patent databases on STN
- Searching Japanese File Index (FI) codes and File Forming Terms (F-Terms)
  - Overview of Japanese classification
  - File Index (FI) and F-Term Thesauri
  - Search example

Search example using FI and F-Terms

Search Question:

Use Japanese patent classifications to find and explore DWPI records describing diamond coating techniques using chemical vapor deposition

Analyze a preliminary keyword answer set for relevant JPO patent classifications

```
=> S DIAMOND(3A)COAT? AND (CHEMICAL VAPOR DEPOSITION OR CVD)
L1          571 DIAMOND(3A)COAT? AND (CHEMICAL VAPOR DEPOSITION OR CVD)

=> ANA L1 IPC FCL FTERM
L2           ANALYZE L1 1- IPC FCL FTERM :    4699 TERMS

=> D TOP 5 DOC FCL
L2           ANALYZE L1 1- IPC FCL FTERM :    4699 TERMS

TERM #   # OCC  # DOC  % DOC IPC FCL FTERM
------ ------- ------ ------ ---------------
     5     172    161  28.20 C23C0016-27
     8     182    132  23.12 C30B0029-04
    12     119    119  20.84 C23C0016-26
    27      58     52   9.11 B23B0027-14
    30      51     49   8.58 B23P0015-28

=> D TOP 5 DOC IPC
L2           ANALYZE L1 1- IPC FCL FTERM :    4699 TERMS

TERM #   # OCC  # DOC  % DOC IPC FCL FTERM
------ ------- ------ ------ ---------------
     1     581    315  55.17 C23C0016-26
     2     310    270  47.29 C23C0016-27
     6     296    138  24.17 C30B0029-04
    15     221     94  16.46 C23C0016-02
    20     101     62  10.86 C23C0016-50
```

IPC and FCL code definitions can be identified using STN classification thesauri.

Use STN thesauri to review the definitions of codes identified in the analysis

```
=> E C23C0016-27+TI/FCL
. . . .

E4          287   BT3  C23C0016-00/FCL
                  DEF  Chemical coating by decomposition of gaseous . . .

E5          156   BT2  C23C0016-22/FCL
                  DEF  . characterised by the deposition of inorganic
                       material, other than metallic material (4)
E6         2133   BT1  C23C0016-26/FCL
                  DEF  . . Deposition of carbon only (4)
E7         2171   -->  C23C0016-27/FCL
                  DEF  . . . Diamond only (7)
********** END **********

=> E C23C0016-27+TI/IPC
. . . .

E8         5011   BT1   C23C0016-26/IPC
                        . . Deposition of carbon only
                        CORE
                        VALID FROM 19850101 TO PRESENT  ( IPC EDITION: 4-8 )
E9         2940   -->   C23C0016-27/IPC
                        . . . Diamond only
                        ADVANCED
                        VALID FROM 20000101 TO PRESENT  ( IPC EDITION: 7-8 )
********** END **********
```

Note: for this example, the FI and IPC code hierarchies are the same.

Use STN thesauri to review the definitions of codes identified in the analysis (cont.)

```
=> D TOP 5 DOC FTERM
L2          ANALYZE L1 1- IPC FCL FTERM :    4699 TERMS

TERM #   # OCC  # DOC  % DOC IPC FCL FTERM
------ ------- ------ ------ --------------
     3     178    178  31.17 4K030
     4     162    162  28.37 4K030/BA28
     7     135    135  23.64 4G077
     9     131    131  22.94 4G077/BA03
    10     127    127  22.24 4G077/AA03

=> E 4K030/BA28+ALL/FTERM
E1       31766   BT4  4K030/FTERM
                      Chemical vapor deposition (CVD)
E2          29   BT3  4K030/BA00/FTERM
                      Coating materials
E3         609   BT2  4K030/BA24/FTERM
                      Non-metallic components
E4        1853   BT1  4K030/BA27/FTERM
                      Carbon (C)
E5        2349   -->  4K030/BA28/FTERM
                      Carbon in the form of diamonds
********** END **********
```

There is a relevant F-Term available to add to the search.

Repeat the search including relevant Japanese patent classifications

```
=> S L1 OR C23C0016-27/IPC,FCL OR 4K030/BA28/FTERM
          2940 C23C0016-27/IPC
          2171 C23C0016-27/FCL
          2349 4K030/BA28/FTERM
L3        3494 L1 OR C23C0016-27/IPC,

=> D TI IPC FCL FTERM 3 5

L3   ANSWER 3 OF 3494  WPIX COPYRIGHT 2010       THOMSON REUTERS on STN
TI   Diamond electrode for electrolysis of oxidizing electrolyte solution,
     has diamond layer having thickness of more than specified value
IPCI C02F0001-46 [I,A]; C02F0001-46 [I,C]; C23C0016-26 [I,C];
     C23C0016-27 [I,A]; C25B0001-00 [I,C]; C25B0001-28 [I,A];
     C25B0011-00 [I,C]; C25B0011-04 [I,A]; C25B0011-12 [I,A]

L3   ANSWER 5 OF 3494  WPIX COPYRIGHT 2010       THOMSON REUTERS on STN
TI   Method for forming film e.g. continuous coating membrane on base
     material, involves making plasma to contact coating film surface
     through mask and depositing decomposition component of raw material
     on coating film surface
IPCI C23C0016-04 [I,A]; C23C0016-04 [I,C]; C23C0016-50 [I,C]; C23C0016-505
     [I,A]
FCL  Main:      C23C0016-505
     Secondary: C23C0016-04
FTRM 4K030; 4K030/AA09; 4K030/BA28; 4K030/BB14; 4K030/CA02; 4K030/CA17;
     4K030/EA00; 4K030/FA01; 4K030/KA01; 4K030/KA08
```

The IPC, FI and F-Term codes all contribute unique results to the search.

Explore F-Terms within the subject area

4K030/AA09 = Reaction gas contains hydrocarbons.

4K030	CHEMICAL VAPOUR DEPOSITION (CVD)
	C23C16/00-16/56

Viewpoint	F-term									
AA	AA00	AA01	AA02	AA03	AA04	AA05	AA06	AA07	AA08	AA09	AA10
	SPECIFIED MATERIAL GAS	. Specified main reaction gases	. . Main reaction gases containing halides	. . . Chlorides	. . . Fluorides	. . Main reaction gases containing hydrides	. . . Silanes	. . . Diboranes	. . . Phosphines	. . Main reaction gases containing hydrocarbon compounds	. . aturated ydrocarbons
		AA11	AA12	AA13	AA14		AA16	AA17	AA18		AA20
		. . Main reaction gases containing metal organic compounds	. . Main reaction gases containing metal carbonyl compounds	. . Main reaction gases containing ammonia	. . Main reaction gases containing oxygen, carbon monoxide, or carbon dioxide		. Specified carrier gases	. . Hydrogen -based carrier gases	. . Nitrogen -based carrier gases		. Specified doping gases
			AA22		AA24						
			. using sensitisers		. Others						
BA	BA00	BA01	BA02	BA03	BA04	BA05	BA06	BA07	BA08	BA09	BA10
	SPECIFIED COATING MATERIAL	. Coatings containing metal components	. . Aluminium	. . Beryllium	. . Bismuth	. . Cobalt	. . Chromium	. . Iron	. . Gallium	. . Germanium	. . Hafnium
		BA11	BA12	BA13	BA14	BA15	BA16	BA17	BA18	BA19	BA20
		. . Indium	. . Molybdenum	. . Niobium or columbium	. . Nickel	. . Antimony	. . Tin	. . Tantalum	. . Titanium	. . Vanadium	. . Tungsten
		BA21	BA22		BA24	BA25	BA26	BA27	BA28	BA29	BA30
		. . Zinc	. . Zirconium		. Coatings containing non-metal components	. . Arsenic	. . Boron	. . Carbon	. . . Diamond-like carbon	. Silicon	. . . Amorphous silicon

Combine key F-Terms to pinpoint specific records within the subject area of interest

```
=> S L3 AND (4K030/AA09 AND 4K030/CA02+NT AND 4K030/FA02)/FTERM
          4242 4K030/AA09/FTERM
          5232 4K030/CA02+NT/FTERM  (
          1512 4K030/FA02/FTERM
L4          41 L2 AND (4K030/AA09 AND

=> D TI FTERM

L4   ANSWER 1 OF 41  WPIX COPYRIGHT 2010       THOMSON REUTERS on STN
TI   Plasma process apparatus, useful to process object used in atmospheric
     environment, comprises electromagnetic wave generator, vacuum vessel,
     electromagnetic wave guiding portion, gas supplying portion,
     evacuation portion and voltage source
FTRM 2G084; 4K030; 4K030/AA06; 4K030/AA09; 4K030/BA28; 4K030/CA02;
     4K030/CA15; 4K030/FA02; 4K030/JA09; 4K030/JA18; 4K030/KA30
```

4K030/AA09 = Reaction gas contains hydrocarbons.

4K030/CA02 = Specified metal or alloy substrate.

4K030/FA02 = Excitation of material gas by ECR plasma.

Summary

- Japanese patent data are available on STN within DWPI, CAplus, INPAFAMDB and JAPIO
- Both Japanese FI and F-Term classifications are searchable in DWPI, and Thesauri are available
- File Index (FI) codes are derived from IPC codes and are straightforward to include in a search
- F-Term codes provide in-depth indexing, and may be used to retrieve additional unique results
- F-Term codes may also be combined to pinpoint records of interest within large answer sets

For more information …

CAS
E-mail: help@cas.org
Support and Training:
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