Searching - classification symbols – tips for experts

(IPC, CPC and FI/F-terms)

Thierry Bec,
Directorate Classification & Documentation
European Patent Office

EPO Patent Information Conference 2018
Brussels 11 November 2018
Introduction
Content (1/2)

- Introduction
- Search strategy
- Searching with IPC, CPC and FI/F-terms
  - identifying relevant classification schemes & symbols
  - combined use of different classification schemes
- Basics of IPC, CPC and FI/F-terms
  - how to read classification symbols
  - methods of classifying by different offices
  - some special features (2000-series, FI facets, broad facets)
- Revision & reclassification
  - revision cycles & reclassification work
  - finding revision information
Content (2/2)

- Search examples
- Further information
  JPO web page: English Information on classification
- Further information:
  coverage
- Further information:
  History of the classification
Search Strategy
What is classification?

- It is one search tool among other search tools.
- It is a powerful tool that enables fast and efficient search starting with a limited set of documents which have been pre-organized by experts.
- It enables searching in languages we don’t understand e.g. Chinese, Korea, Russian
- It can be complex e.g. biometric authentication: G06F21/32; H04L63/0861; H04L9/3231; G06Q20/40145; G06K9/00885....
- So we need to know where to start: we need a “Search Strategy”
How to develop a search strategy

1. Identify the field of the Application
2. Search for the relevant Section/classes/sub-classes
3. Find the relevant symbols
4. Search for relevant groups

Examples:
- Int. Cl. B63B 35/79
- U.S. Cl. 114/39.2; 114/97
- Field of Search 114/39.1, 39.2, 114/102, 103, 97,98, 115
- Bioinformatics → G16H
- Antenna → H 01Q1
- Food composition → A23
- Blockchain → Cryptography H04L9/G06F21
- video streaming
- Graphene
- Pain killer

Unambiguous keywords or acronyms
- Explicit reference to an entry
- Indirect indication
- Keywords/acronyms
- classification structure, Technical Areas
- Indirect indication
- Indirect reference to a symbol for example via a cited document
- Explicit reference to an entry

Unambiguous keywords or acronyms
- Explicit to a symbol e.g. on the cover sheet of an application
Search strategy (1/2)

- Some pointer for the strategy
  - Names of the inventor, of the company
  - Field of technology
  - Geographic origin (e.g. Brasil, India ...)
  - Recent trends (Warning: buzz words e.g. AI can lead wrong path)

- The documentation or databases to use: patent or non-patent literature.
- Which search tool to use (Espacenet, internet search engines, private company tools).
Search strategy (2/2)

Once we know what our search strategy is we can decide:

- Which search tools to use including classification or not
- Which classification symbols to use and how to use them.
- In which language to search
## Search Tools

<table>
<thead>
<tr>
<th>Search Type</th>
<th>Boolean search</th>
<th>Non-Boolean search</th>
<th>Web based</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Features</strong></td>
<td>Based on Boolean logic e.g. ‘and/or/not’</td>
<td>Based on minimum-interval semantics</td>
<td>Non-Boolean</td>
</tr>
<tr>
<td><strong>Advantages / Drawbacks</strong></td>
<td>Very precise when knowing what to search</td>
<td>Allows a widen scope of search</td>
<td>Generates a high level of noise</td>
</tr>
<tr>
<td><strong>Relation to classification</strong></td>
<td>Allows an extremely precise search</td>
<td>Can be combined with classification symbols - classification symbols can be used as a further filter.</td>
<td>Difficult</td>
</tr>
<tr>
<td><strong>Type of documents</strong></td>
<td>All</td>
<td>All</td>
<td>All</td>
</tr>
</tbody>
</table>
CPC & IPC & FI

Section A

A61

A61K

A61K38/00

. 38/16
. . 38/17
. . . 38/1703
. . . . 38/1709
. . . . . 38/1758
F-terms: (Multi-dimensional viewpoints)
The language question

- Don’t be afraid of foreign languages: you are not alone: examiners have the same problem as you.
- How do we proceed at the EPO
  - Automatic translation from patent offices or private suppliers
  - Human enhanced translation (2-3 days)
  - Translation performed by colleagues.
  - Official / Legal human translation
  - If you ever receive from the EPO a document in a non-official language, when ever possible at least an automated translation can be attached.
- If you retrieve a document you don’t understand, you can use online translate services e.g. the Google Translate engine, which takes web pages or some documents in particular formats as input e.g. pdf, word ..
Searching with IPC, CPC & FI/F-terms

- identifying relevant classification schemes & symbols
- combined use of different classification schemes
Finding relevant classification schemes

IPC
A01B1/00
A01B1/01
A01B1/02
A01B1/03
A01B1/04

CPC
257/100
257/101
257/102
257/103
257/104

FTerm
2B002/A00
2B002/A01
2B002/A02
2B002/A03
2B002/A04

FI
A01B1/00  Classification
A01B1/01 . Classification
A01B1/02 . Classification
A01B1/03 . Classification
A01B1/04 . Classification

My expertise ?
Countries ?
Technical field ?
Characteristics of the different Classification schemes

- Size of documentation (*number of entries, number of documents indexed*)

- Different practices regarding documentation (*different field approach, different versioning of schemes ...*)

- Document structure (e.g. coversheet)
# Finding relevant classification schemes

<table>
<thead>
<tr>
<th>Scheme</th>
<th>IPC</th>
<th>CPC</th>
<th>FI</th>
<th>F-TERM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of entries</strong></td>
<td>74 700</td>
<td>260 800</td>
<td>190 000</td>
<td>375 000</td>
</tr>
<tr>
<td><strong>Hierarchy</strong></td>
<td>one dimensional, dots</td>
<td>one/multi dimensional, dots</td>
<td>one dimensional, dots</td>
<td>multi dimensional, viewpoints, dots</td>
</tr>
<tr>
<td><strong>Concordance</strong></td>
<td>IPC 2018.01</td>
<td>IPC 2018.01</td>
<td>IPC 4 – 2018.01</td>
<td>FI</td>
</tr>
<tr>
<td><strong>Coverage of patent docs.</strong></td>
<td>more than 100 countries</td>
<td>EP, US, DE, FR, GB, NPL,..</td>
<td>JP</td>
<td>JP</td>
</tr>
<tr>
<td><strong>Coverage of technical fields</strong></td>
<td>all fields</td>
<td>all fields</td>
<td>all fields</td>
<td>approx 70% of all fields</td>
</tr>
<tr>
<td><strong>Revision</strong></td>
<td>annual</td>
<td>4-5 times per year</td>
<td>biannual</td>
<td>annual</td>
</tr>
<tr>
<td><strong>Reclassification</strong></td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
</tbody>
</table>
Identifying relevant classification symbols

Possible approaches:

- You already know the classification in your technical field, or how to work with correspondence tables (requires experience)
- Perform a keyword search in classification schemes (can be risky)
- Run a statistical analysis on a representative set of search results (safest option, but requires good analysis tools!)
- Using web based search (can be risky, but can provide fast results)
Identifying relevant classification symbols

- **hierarchical**
  - don't get lost....
- by statistical analysis (IPC) *(STATS)*
  - searches IPC titles (reliable?)
- by text categorization *(IPCCAT)*
  - needs a minimum amount of text
- German Patent Office *(DPMA)*
  - good catchword index
Finding IPC symbols

Attention:

- Printed on documents
- in Espacenet, all IPCs displayed
Finding IPC symbols

Bibliographic data: EP1045272 (A2) — 2000-10-18

Reflective color liquid crystal display device

Classification:
- international: G02F1/133; G02F1/1335; G02F1/13363; (IPC1-7): G02F1/1333; G02F1/1335
- cooperative: G02F1/13371; G02F1/133514; G02F1/13377; G02F2203/02; G02F2413/09

Abstract of EP1045272 (A2)

Translate this text into [ ]

Finding CPC symbols

- not printed on EP documents (but printed on US documents)!
  - frequent changes
  - also applied to non-EPO documents
- updated picture in database only:

Bibliographic data: EP1045272 (A2) — 2000-10-18

Reflective color liquid crystal display device

Page bookmark
- EP1045272 (A2) - Reflective color liquid crystal display device

Inventor(s):
- IWAI YOSHIO [JP]; YAMAGUCHI HISANORI [JP]; SEKIME TOMOAKI [JP]; SAKURAI YOSHIHIRO [JP]; [JP] ±

Applicant(s):
- MATSUSHITA ELECTRIC IND CO LTD [JP] ±

Classification:
- international: G02F1/1333; G02F1/1335; G02F1/13363 (IPC1-7): G02F1/1333; G02F1/1335
- cooperative: G02F1/133371; G02F1/133514; G02F1/133377; G02F2203/02; G02F2413/09

Finding FI/F-terms

FI symbols on Japanese first pages (laid-open publications) since 1992
Finding FI/F-terms
Finding FI/F-terms

F-term theme

F-terms on Japanese first pages (laid-open publications) since 2000

full list of term codes
Combined use of classification schemes

- coverage overlap
  - CPC covers US documents
  - family members in other systems
  - IPC covers all documents
  - redundancy
  - can also be an advantage...
Combined use of classification schemes

- no public search system has all 3 Classification schemes
  - Espacenet: CPC & IPC
  - USPTO: CPC & IPC
  - J-Plat Pat: FI, F-terms & IPC

- CPC-IPC-FI parallel scheme viewers:
  - [http://web2.wipo.int/ipcpub/#refresh=page&fipcpc=yes&notice=scheme&version=20150101](http://web2.wipo.int/ipcpub/#refresh=page&fipcpc=yes&notice=scheme&version=20150101) (WIPO)
  - [http://www.jpo.go.jp/cgi/cgi-bin/search-portal/narabe_tool_e/narabe_e.cgi](http://www.jpo.go.jp/cgi/cgi-bin/search-portal/narabe_tool_e/narabe_e.cgi) (JPO)

- you need to switch between websites to search all 3
Basics of the IPC, CPC and FI/F-terms

- How to read classification symbols (IPC, CPC, FI/F)
- Methods of classifying by different offices
- Some special features of each system (2000-series, FI facets, broad facets)
How to read symbols: IPC
IPC-based systems: Layout of Symbols

- **Section**: A
- **Class**: A47
- **Subclass**: A47G ~ 660 subclasses

**Guidance Heading**

- **Main group**: A47G 1/00 ~ 10,000 main groups
- **Subgroups**: A47G 1/02, A47G 1/04, A47G 1/06 ~ 70,000 groups
Hierarchy

- A63B 23/00  Exercising apparatus specially adapted for particular parts of the body
- A63B 23/02  · for the abdomen, the spinal column, the torso, or the shoulders
- A63B 23/025 · for the head or neck [5]
- A63B 23/03  · · for face muscles [5]
- A63B 23/035 · for limbs, i.e. upper or lower limbs, e.g. simultaneously [5]
- A63B 23/04  · · for lower limbs [5]

Hierarchy only determined by number of dots, not by the numbering of the subgroups

→ [IPC Guide §26]
Notes

- define technical terms in context
- signal special classification rules, e.g. last place priority rule
- give more information, e.g. on related subject matter

→ [IPC Guide §41]

Example
A61C 17/00
Devices for cleaning, polishing, rinsing or drying teeth, teeth cavities or prostheses ...

Note
Cleaning of prostheses using ultrasonic techniques similar to those used for natural teeth is classified in this group. Other ultrasonic cleaning of prostheses is classified in group B08B 3/12.
References

Refer (point) to other places in IPC [IPC Guide (2014) §39]

- Limiting references (scope limitation, precedence references)
- Non-limiting references (application-oriented, out-of-a residual place and informative references)

Example

A61C 17/00

Devices for cleaning, polishing, rinsing or drying teeth, teeth cavities or prostheses (instruments acting like a sandblast machine A61C 3/025; tooth polishing discs or holders therefor A61C 3/06; devices for cleaning between the teeth A61C 15/00) ...
Definitions

- available in the **electronic layer of the IPC** for ~230 definitions
- **clarify** classification entries
- **do not change the scope** of classification entries
- **explain meaning of limiting and non-limiting references**
- **explain special classification rules** affecting the classification place
- **define terms used** in the classification place / technical context

→ [IPC Guide §§45-47]
Definitions - example for G01T

 click on "D" to see the definitions

http://web2.wipo.int/ipcpub/#refresh-page&notion=scheme&version=20150101&symbol=G01T
Definitions - example for G01T

Measurement of nuclear or X-radiation

- Definition statement
  - This subclass covers methods and instruments for measurement and detection of X-radiation, gamma radiation, corpuscular radiation, cosmic radiation, or neutron radiation.

- Relationship between large subject matter areas
  - Apparatus for radiation diagnostics or therapy in medical and veterinary science are classified in A61B 5/00 or A61M 5/00. The borderline between G01T and A61B should be determined based on whether the apparatus is purely medical or the fixture is more of a general technical nature.
  - There exists a certain overlap between radiation and X-radiation, where a measurement of the radiation is generally classified in G01J.
  - Nuclear magnetic resonance is classified in G01N 23/20, G01N 24/00 or A61B 5/005.

- References relevant to classification in this subclass
  - This subclass does not cover:
    - Radiation analysis of materials, mass spectrometry
    - Exposed charge tubes for analysing radiation or particles
    - Construction of radiation chambers
    - Detectors (charged particles) gas
    - Semiconductor detectors gasless
    - Secondary-electron-emitting electrodes in general

- Informative references
  - Attention is drawn to the following topics which may be of interest for search:
    - Measuring exposure time to X-rays
    - Photobiologically sensitive materials or processes for photographic purposes
    - Pulse rate meters in general
    - Applying radioactive material to the body
    - Radio isotopes
    - Tracers
    - Counters per se
    - Computed tomography
    - Nuclear magnetic computer tomography
    - Nuclear magnetic resonance
    - Radiography using electric radiation detectors which use the ionisation of gases
    - Investigating or analyzing materials by the use of nuclear magnetic resonance, electron paramagnetic resonance or other spin effects

Glossary of terms

In this subclass, the following terms or expressions are used with the meaning indicated:

IPC
'Invention’ vs. ‘Additional’ Information

Invention information

- For both IPC and CPC, this is technical information that represents an addition to the prior art (all novel and nonobvious subject matter)
  - is determined by using the claims as guidance, for example

Additional information

- non-trivial features non-relevant *per se*, yet interesting for search when considered together with the invention information
  - it complements the invention information
  - e.g. elements, components, applications

→ [IPC Guide §§ 77-80]
How to read symbols: CPC
CPC vs. IPC

- CPC = IPC (latest version)
  + further subdivisions
  + further text additions in IPC groups
    (titles/notes/references/warnings)

  exceptions
  - IPC of former editions can be used
  - future IPC groups formally approved, but not published yet, can be introduced in CPC before their publication

- CPC 260,000 entries vs. IPC 70,000 entries
- both are reclassified documentations
  - CPC revised 4-5 times per year vs. IPC revised on a yearly basis
How to read CPC (vs. IPC) symbols

**Rules:**
- Similar to IPC
- More subdivisions
- IPC type numbering
- Hierarchy determined **solely** by the number of dots

<table>
<thead>
<tr>
<th>IPC, CPC</th>
<th>F01N1/00</th>
<th>Silencing apparatus characterised by method of silencing</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPC</td>
<td>F01N1/003 •</td>
<td>{by using dead chambers communicating with gas flow passages…}</td>
</tr>
<tr>
<td>CPC</td>
<td>F01N1/006 • •</td>
<td>{comprising at least one perforated tube extending from inlet to outlet of the silencer}</td>
</tr>
<tr>
<td>IPC, CPC</td>
<td>F01N1/02 •</td>
<td>by using resonance</td>
</tr>
<tr>
<td>CPC</td>
<td>F01N1/023 • •</td>
<td>{Helmholtz resonators}</td>
</tr>
<tr>
<td>CPC</td>
<td>F01N1/026 • •</td>
<td>{Annular resonance chambers arranged concentrically to an exhaust passage and communicating with it…}</td>
</tr>
</tbody>
</table>
### CPC scheme layout

<table>
<thead>
<tr>
<th>Sections A-H</th>
<th>Section Y</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main trunk</strong></td>
<td><strong>Tagging of emerging cross-sectional technologies</strong></td>
</tr>
<tr>
<td>• 647 subclasses</td>
<td>• Y02B, C, E, T, W</td>
</tr>
<tr>
<td>• For invention or additional information</td>
<td>• Y04S</td>
</tr>
<tr>
<td>• (...) and green colour used to distinguish CPC text from IPC one</td>
<td><strong>USPC-related</strong></td>
</tr>
<tr>
<td>• “Breakdown” indexing codes</td>
<td>• Y10S, T</td>
</tr>
<tr>
<td>• for additional information only</td>
<td><strong>For additional information only</strong></td>
</tr>
<tr>
<td><strong>About 162 000 symbols</strong></td>
<td><strong>About 17 000 symbols</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>“2000 series”</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• IPC-based indexing codes (numbering 2100+)</td>
<td><strong>For additional information only</strong></td>
</tr>
<tr>
<td>• “Orthogonal” indexing codes (numbering: 2200+)</td>
<td></td>
</tr>
<tr>
<td>• For additional information only</td>
<td></td>
</tr>
<tr>
<td><strong>About 80 500 symbols</strong></td>
<td></td>
</tr>
</tbody>
</table>
## Terminology and usage of CPC symbols

<table>
<thead>
<tr>
<th>CPC symbol</th>
<th>Terminology</th>
<th>Allocation value</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>G02F 1/011</td>
<td>main trunk</td>
<td>invention information</td>
<td>to classify a contribution over the prior art</td>
</tr>
<tr>
<td>G02F 1/011</td>
<td>main trunk</td>
<td>additional information</td>
<td>to classify an aspect which brings no contribution over the prior art, but is useful for search</td>
</tr>
<tr>
<td>G02F 2001/0113</td>
<td>Further breakdown code (main trunk)</td>
<td>additional information</td>
<td>to classify a refinement or a detail specific (contextual) to the group in consideration</td>
</tr>
<tr>
<td>G02F 2201/00</td>
<td>Orthogonal code (Indexing area)</td>
<td>additional information</td>
<td>to classify a refinement or a detail not specific to the group in consideration, i.e. crossing over (going orthogonal to) more main groups</td>
</tr>
</tbody>
</table>
The presentation of the CPC scheme

A61M 1/00 Suction or pumping devices for medical purposes; Devices for carrying-off, for treatment of, or for carrying-over, body-liquids; Drainage systems

A61M 1/0001 . {Containers for suction drainage, e.g. rigid containers}
A61M 1/0003 .. {Self-contained vacuum aspirators}
A61M 1/0005 .. {with means for emptying the suction container, e.g. by interrupting suction}
A61M 2001/0007 ... Emptying the suction container without interrupting suction
A61M 1/0009 .. {incorporating a movable wall to create suction, e.g. syringes}
A61M 1/0011 .. {Drainage containers incorporating a flexible member creating suction, e.g. bags in a low-pressure chamber, bellows}
A61M 1/0013 .. {Two- or three-bottle systems for underwater drainage, e.g. for chest cavity drainage}

A61M 2001/0015 .. Mechanical means for preventing flexible containers from collapsing when vacuum is applied inside
A61M 2001/0017 .. Bag or liner in a rigid container, with suction applied to both
A61M 1/0019 .. {Drainage containers not being adapted for subjection to vacuum, e.g. bags

A61M 39/00 Tubes, tube connectors, tube couplings, valves, access sites or the like, specially adapted for medical use

A61M 2250/00 Specially adapted for animals
CPC scheme — Y section

- is used to tag new technological developments which span over several sections of the IPC
- follows the same approach as IPC and is part of CPC but is complementary to the existing A-H classes
  - **Y02**: Climate change mitigation technologies (CCMTs)
  - **Y04**: Smart grids
- Technical subjects covered by former USPC cross-reference art collections [XRACs] and Digests or temporary schemes originating from the USPC
  - **Y10S**
  - **Y10T** (temporary, USPTO transition)
CPC WARNINGS & Notes

• **WARNINGS:** deviations from IPC, or incompleteness:
  – IPC groups not used in CPC
  – deleted / transferred CPC groups
  – reclassification in progress

• **Notes:** CPC classification rules
  – CPC classification rule (different from IPC)
CPC WARNINGS & Notes

- **WARNINGS**: indicate deviations from IPC, or incompleteness:
  - IPC groups not used in CPC
  - deleted / transferred CPC groups
  - reclassification in progress

- **Notes**: CPC classification rules
  - CPC classification rule
CPC WARNINGS - example B01D

- The following IPC groups are not used in the CPC scheme. Subject matter covered by these groups is classified in the following groups:

<table>
<thead>
<tr>
<th>IPC groups not used in CPC</th>
</tr>
</thead>
<tbody>
<tr>
<td>B01D9/00</td>
</tr>
<tr>
<td>B01D19/0454</td>
</tr>
<tr>
<td>B01D15/04</td>
</tr>
<tr>
<td>B01J49/02</td>
</tr>
<tr>
<td>B01J17/022</td>
</tr>
<tr>
<td>B01J17/025</td>
</tr>
<tr>
<td>B01J17/029</td>
</tr>
<tr>
<td>B01J17/032</td>
</tr>
<tr>
<td>B01J17/035</td>
</tr>
<tr>
<td>B01J17/038</td>
</tr>
<tr>
<td>B01J17/05</td>
</tr>
<tr>
<td>B01J17/09</td>
</tr>
<tr>
<td>B01J17/12</td>
</tr>
<tr>
<td>B01D23/133</td>
</tr>
<tr>
<td>B01D25/168</td>
</tr>
<tr>
<td>B01D25/21</td>
</tr>
<tr>
<td>B01D23/075</td>
</tr>
<tr>
<td>B01D29/76</td>
</tr>
<tr>
<td>B01D29/35</td>
</tr>
<tr>
<td>B01D29/37</td>
</tr>
<tr>
<td>B01D29/052</td>
</tr>
<tr>
<td>B01D35/01</td>
</tr>
<tr>
<td>B01D61/26</td>
</tr>
<tr>
<td>B01D61/34</td>
</tr>
</tbody>
</table>

1. The groups B01D29/01 to B01D29/43 and B01D29/50 to B01D29/965 were introduced in March 1989; these subgroups include the subject matter of the subgroups of groups B01D29/0002, which are from this date no longer used for the classification of new documents.

2. The documents from the backlog of the subgroups of group B01D29/0002 are in the process of being systematically transferred to the other subgroups of group B01D29/00.

3. The documents from the backlog of the subgroups of group B01D33/0003 are in the process of being systematically transferred to the other subgroups of group B01D33/00.

4. Groups B01D25/16, B01D25/18 and B01D25/20 are no longer used for the classification of new. Patent documents are continuously being reclassified to groups B01D29/44, B01D29/46 and B01D29/48.

5. The groups B01D25/04, B01D25/08, B01D25/121, B01D25/122, B01D25/124, B01D25/125, B01D25/14, are no longer used for classification of new documents from December 1, 2011 onwards. The backlog of those groups are being continuously reclassified to groups B01D29/00, B01D29/00 and subgroups.
CPC Notes - example B32B

Layered Products, i.e. Products built-up of strata of flat or non-flat, e.g. cellular or honeycomb, form

Notes

1. This subclass covers:
   - Layered products comprising different kinds of material or layers, characterised by the particular kind of material used;
   - A product similar to a layered product but comprising only a sheet or network embedded in a mass of plastics or of physically-similar substances which mass penetrates the said sheet or network and lies on both sides of the latter (e.g. so that the sheet or network reinforces the plastics substance) PROVIDED THAT the embedded sheet or network extends coherently or connected over substantially the whole of the surface of the product or its parts, or in the case of materials, fibres being interengaged or connected, e.g. by adhesive.

5. In this subclass,
   - "First place rule" is used in the following groups B32B9/04, B32B11/04, B32B13/04, B32B15/04, B32B19/04, B32B21/04, B32B23/046, B32B23/12, B32B25/04, B32B27/06, B32B29/002.

However, when these groups are not characterised by the specific material adjacency to be classified, then, multiple classification is given, e.g. a layered product having a stone layer next to a bituminous layer would be classified in B32B9/04 and in B32B11/04. For acellulosic plastic layer next to a metal layer or to a wood layer B32B23/042 or B32B23/044, respectively, take precedence (i.e. first rule does not apply). For layered products comprising at least two ceramic layers, products comprising only ceramic layers are classified in group B32B18/00 and products comprising two ceramics layers and at least one layer of another material are classified in B32B18/00 and B32B9/04.
CPC Definitions (CPC has 626 Definitions – format similar to that of IPC Definitions)

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Classification and description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Separating; Mixing</td>
</tr>
<tr>
<td></td>
<td>PHYSICAL OR CHEMICAL PROCESSES OR APPARATUS IN GENERAL (furnaces, kilns, ovens, retorts in general F27)</td>
</tr>
<tr>
<td></td>
<td>SEPARATION (separating solids from solids by wet methods B03B, B03D; by pneumatic jigs or tables B03B; by other dry methods B07; magnetic or electric fields B04; presses per se for squeezing-out liquid from liquids B04; separation of solid materials or fluids, separation by high-voltage electrical fields B04; separators, centrifuges C02F, e.g. softening by ion-exchange C02F 1/4; distillation plants F02C 7/05; arrangements or mounting for extraction or condensation; evaporators; ventilation F24F 13/28)</td>
</tr>
</tbody>
</table>

- **B01D 1/00** Evaporating (evaporation in general, e.g. of liquids for gas phase reactions B01B 1/005; removal of incrustation B08B; preparation of starch C08B 30/00; sugar industry C13; prevention of incrustation C23F; drying solid materials or objects by evaporating liquids therefrom F26)

- **B01D 3/00** Distillation or related exchange processes in which liquids are contacted with gaseous media, e.g. stripping (evaporation in general, e.g. of liquids for gas phase reactions B01B 1/005; gas chromatography B01D 15/08; destructive distillation C10B; preparation of alcoholic beverages by distillation C12G 3/12)

- **B01D 5/00** Condensation of vapours; Recovering volatile solvents by condensation (B01D 8/00 takes precedence; condensers F28B)

- **B01D 7/00** Sublimation (B01D 8/00 takes precedence; freeze-drying F26)

- **B01D 8/00** Cold traps; Cold baffles (pumps for evacuating by condensing or freezing F04B 37/08)

- **B01D 9/00** Crystallisation (crystallisation directly from the vapour phase B01D 7/02; making single crystals C30B; crystallisation as part of the Bayer process also classified in C01F 7/14)

Click on "D" to see the definitions.

PDF Embedded
How to read symbols: Fi-F-Terms
## Patent Classification Systems in IPC and FI/F-term

<table>
<thead>
<tr>
<th>System</th>
<th>Governance</th>
<th>Number of Entries</th>
<th>Documentation coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>IPC</strong></td>
<td>IPC/CE (Committee of Experts); Administered by WIPO</td>
<td>70K</td>
<td>almost all patent docs published worldwide</td>
</tr>
<tr>
<td><strong>FI/F-term</strong></td>
<td>JPO</td>
<td>190K/380K</td>
<td>JP docs</td>
</tr>
</tbody>
</table>
Underlying concept: FI

- FI (File Index) classification:
  - only applies to JP documents!
  - an extension to the IPC
  - consists of IPC entries & "IPC-based subdivisions"
  - single viewpoint
  - uses a dot hierarchy
  - alphanumeric

Note: FI classification was largely based on previous editions of the IPC – it is now getting closer to latest version
What is FI? Characteristics of FI

- Subdivision of IPC (around 190,000 items)
- Covers all technical fields
- Covers all JP patent documents
- Backlog reclassification
- Biannual revise to keep pace with technology development

IPC

FI (File Index)

[Features]

70,000 entries
190,000 entries
FI - symbol

- IPC symbol
  - ex) G06F 9/00

- IPC symbol + extension symbol
  - ex) G06F 9/00, 320

- IPC symbol + extension symbol + file discrimination symbol
  - ex) G06F 9/00, 320 A

- IPC symbol + file discrimination symbol
  - ex) B60G 17/015 A

example of FI subdivisions for G06F9/00

9/00 Arrangements for programme control, e.g. control unit (programme control for peripheral devices
G 06 F 13/10; in regulating or control systems G 05 B)
101. Consoles
310. Operation control
320... Related to display control
  A Operations in general
  B Inputting guidance or automatic operation
  C Continuous operating status display
  Z Others
Underlying concept: F-terms

- F-terms (File Forming terms):
  - only applies to JP documents
  - an indexing system
  - to cope with emerging technologies
  - applied to patent documents in parallel with IPC & FI
  - multiple viewpoints
  - contents analysed -> divided into different technological fields (= themes)
  - themes further split into terms (= term codes)

Note: assignment of F-terms based on FI classification
What is F-term?

- The entire technical field of FI, which has section A to section H, is divided into about 2600 areas and the areas are called “theme”.

- About 1800 themes out of 2600 themes have “F-terms”, which are search keys and we analyze patent documents in each “theme”.

- The F-term indexing system is based on multiple viewpoints differing from those in FI.
Underlying concept: F-terms

- F-terms charts
  - list of all term codes for a theme
- F-terms descriptions
  - F-terms manuals for examiners
  - explanation on F-terms search keys
  - examples
  - explanations of assignment, etc.
### What is F-term?

**Sample of F-term List**

#### Viewpoint

<table>
<thead>
<tr>
<th>Viewpoint</th>
<th>F-term Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>AA</td>
<td></td>
</tr>
<tr>
<td>TECHNICAL SUBJECT</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Catalyst carriers or bases</td>
</tr>
<tr>
<td></td>
<td>Non-supported catalysts</td>
</tr>
<tr>
<td></td>
<td>Supported catalysts</td>
</tr>
<tr>
<td></td>
<td>Immobilised catalysts</td>
</tr>
<tr>
<td></td>
<td>Precursors</td>
</tr>
<tr>
<td></td>
<td>Homogeneous catalysts</td>
</tr>
<tr>
<td>AA00</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>BA00</td>
<td></td>
</tr>
<tr>
<td>COMPONENT I SPECIFIC SUBSTANCE</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Alumina</td>
</tr>
<tr>
<td></td>
<td>Silica excluding diatom earth</td>
</tr>
<tr>
<td></td>
<td>Silica alumina excluding clays or zeolites</td>
</tr>
<tr>
<td></td>
<td>Titania</td>
</tr>
<tr>
<td></td>
<td>Zirconia</td>
</tr>
<tr>
<td></td>
<td>Magnesio</td>
</tr>
<tr>
<td></td>
<td>Zeolites (ZA-ZF are also assigned.)</td>
</tr>
<tr>
<td>BA11</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mica</td>
</tr>
<tr>
<td></td>
<td>Ironaiation compounds</td>
</tr>
<tr>
<td></td>
<td>Cordierite, mullite or ceramics</td>
</tr>
<tr>
<td></td>
<td>Glass</td>
</tr>
<tr>
<td></td>
<td>Other silicates</td>
</tr>
<tr>
<td></td>
<td>Other inorganic natural products</td>
</tr>
<tr>
<td></td>
<td>Metals or alloys used for catalyst carriers or bases</td>
</tr>
</tbody>
</table>
How to read FI symbols

Example: **G06F9/00, 320 A**

- **IPC**
- **IPC-subdivision symbol**
- **file discrimination symbol**

**9/00** Arrangements for programme control, e.g. control unit (programme control for peripheral devices G 06 F 13/10; in regulating or control systems G 05 B)

- 101. Consoles
- 310. Operation control
- 320. Related to display control
  - A Operations in general
  - B Inputting guidance or automatic operation
  - C Continuous operating status display
  - Z Others

**example of FI subdivisions for G06F9/00**

(source: [https://www.j-platpat.inpit.go.jp/web/all/top/BTmTopEnglishPage](https://www.j-platpat.inpit.go.jp/web/all/top/BTmTopEnglishPage))
How to read F-terms

Example: **3E067 AB 01**

- **theme code**: represents a technological field
- **view point**: analyses the theme (material, purpose, operation, manufacturing, etc.)
- **figure**: subdivides the viewpoint
How to read F-terms

Example: \textcolor{red}{3E067} \textcolor{blue}{AB} \textcolor{green}{01}

<table>
<thead>
<tr>
<th>Theme Code</th>
<th>View Point</th>
<th>Figure</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Residual technology (2B, 2C, 2D, ...)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Mechanics (3B, 3C, 3D, 3E, ...)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Chemistry (4B, 4C, 4D, 4E, 4F, ...)</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Electricity (5B, 5C, 5D, 5E, ...)</td>
<td></td>
</tr>
</tbody>
</table>
Some special features
### Special features (CPC): 2000-series

**F01N 2240/00**

Combination or association of two or more different exhaust treating devices, or of at least one such device with an auxiliary device, not covered by indexing codes F01N 2230/00 or F01N 2250/00, one of the devices being:

- a heat exchanger
- an electric, e.g. electrostatic, device other than a heater
- a magnetic, e.g. electromagnetic, device other than a valve
- an inertial, e.g. centrifugal, device
- a heat accumulator
- a thermal reactor
- a fuel burner
- an electric heater, i.e. a resistance heater
- an adsorber or absorber
- a flow director or deflector
- a condensation chamber
- an ammonia generator
- an exhaust gas reservoir, e.g. emission buffer
- a plasma reactor
- a fuel reformer
- a fuel cell
- an electrolyser
- an exhaust flap
- an ozone (O₃) generator, e.g. for adding ozone after generation of ozone from air
- a hydrolysis catalyst

---

# Terminology and usage of 2000-series

<table>
<thead>
<tr>
<th>CPC symbol</th>
<th>Terminology</th>
<th>Allocation value</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>G02F 1/011</td>
<td>main trunk</td>
<td>invention information</td>
<td>to classify a contribution over the prior art</td>
</tr>
<tr>
<td>G02F 1/011</td>
<td>main trunk</td>
<td>additional information</td>
<td>to classify an aspect which brings no contribution over the prior art, but is useful for search</td>
</tr>
<tr>
<td>G02F 2001/0113</td>
<td>2000 series breakdown code</td>
<td>additional information</td>
<td>to classify a refinement or a detail specific (contextual) to the group in consideration</td>
</tr>
<tr>
<td>G02F 2201/00</td>
<td>2000 series orthogonal code</td>
<td>additional information</td>
<td>to classify a refinement or a detail not specific to the group in consideration, i.e. crossing over (going orthogonal to) more main groups</td>
</tr>
</tbody>
</table>
Special features: FI facet & broad facet

- **FI facet:**
  - allows searches from different viewpoints than FI
  - covers entire or specific range of FI
  - facet symbol consists of 3 alphabetic letters
  - first letter concurs with corresponding FI section
  - single viewpoint
  - only available in some technical areas!

- **Broad facet:**
  - for lateral searches across technological fields
  - 3-letter symbol starting with "Z"
What are Broad Facets?

Part of JPO’s classification system, in addition to FIs and F-terms

- Facets cover all the fields of FI (A section to H section) or the part of the fields of FI, e.g. plurality of subclasses or groups. Facets can cover areas larger than F-terms
- Facets enable prior art searches using viewpoints different from those available in FI and F-term

Broad Facet symbols:

- Three Alphabet symbols
- Leftmost symbol is “Z”
- JPO has 14 Broad Facets including ZIT, which is related to the Internet of Things (IoT)
Special features: FI facet

FI Main Group/Facet Selection

A main group or Facet contained in "B65D".
Click on a main group or Facet to display the available data.

<table>
<thead>
<tr>
<th>FI Main Group/Facet</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Facet</em></td>
<td>Applicable area: &quot;1/00-85/84&quot;</td>
</tr>
<tr>
<td><em>Facet</em></td>
<td>Applicable area: &quot;1/00-85/84&quot;</td>
</tr>
<tr>
<td><em>Facet</em></td>
<td>Applicable area: &quot;1/00-85/84&quot;</td>
</tr>
<tr>
<td><em>Facet</em></td>
<td>Applicable area: &quot;1/00-85/84&quot;</td>
</tr>
<tr>
<td><em>Facet</em></td>
<td>Applicable area: &quot;1/00-85/84&quot;</td>
</tr>
<tr>
<td><em>Facet</em></td>
<td>Applicable area: &quot;1/00-85/84&quot;</td>
</tr>
<tr>
<td><em>Facet</em></td>
<td>Applicable area: &quot;1/00-85/84&quot;</td>
</tr>
<tr>
<td><em>Facet</em></td>
<td>Applicable area: &quot;1/00-85/84&quot;</td>
</tr>
<tr>
<td><em>Facet</em></td>
<td>Applicable area: &quot;1/00-85/84&quot;</td>
</tr>
<tr>
<td><em>Facet</em></td>
<td>Applicable area: &quot;1/00-85/84&quot;</td>
</tr>
</tbody>
</table>

General kinds of rigid or semi-rigid containers

<table>
<thead>
<tr>
<th>Facet</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facet</td>
<td>Containers having body of moldable plastics, by blowing vitreous material, by deep-drawn, folding paper B65D 3/00, B65D 5/00; specially constructed to prevent tearing of wall portions B65D 17/00; pallets B65D 19/00; detailed 23/00</td>
</tr>
</tbody>
</table>

Facet List

This screen shows Facet list contained in "B65D".

Scope of application/ Facet/Description

Applicable area: "1/00-85/84"

- BRA Reduce
- BRB Reducing material
- BRC Omitting parts

Applicable area: "1/00-85/84"

- BRD Reuse
- BRE Uses for other purposes
- BRF Returnable
- BRG Refilling

https://www5.j-platpat.inpit.go.jp/pms/tokujitsu/pmgs_en/PMGS_EN_GM101_FISearch.action
### Broad-Facet List

This screen shows the list of Broad-Facet

<table>
<thead>
<tr>
<th>Broad-Facet</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZAA</td>
<td>Superconductivity [Applicable area: all areas]</td>
</tr>
<tr>
<td>ZAB</td>
<td>Environmental protection technology [Applicable area: all areas]</td>
</tr>
<tr>
<td>ZBP</td>
<td>Biodegradable polymer [Applicable area: all areas]</td>
</tr>
<tr>
<td>ZDM</td>
<td>The request for which patent right was granted includes inventions involving claims corresponding to the method of collecting various data from the human body by measuring structure and functions of each organ, etc. (The method described in the examination standard for patent and utility model Part II, chapter 1, section 2. 1. 1. 2(3)).</td>
</tr>
<tr>
<td>ZHV</td>
<td>Hybrid vehicles [vehicles with both an engine and an electric motor as driving power source] [Applicable area: all areas]</td>
</tr>
<tr>
<td>ZIT</td>
<td>Internet of Things [IoT] [Applicable area: all areas]</td>
</tr>
<tr>
<td>ZJA</td>
<td>. for agriculture; for fishing; for mining [Applicable area: all areas]</td>
</tr>
<tr>
<td>ZJC</td>
<td>. for manufacturing [Applicable area: all areas]</td>
</tr>
<tr>
<td>ZJE</td>
<td>. for supplying electricity, gas or water [Applicable area: all areas]</td>
</tr>
<tr>
<td>ZJG</td>
<td>. for home and building; for home electric appliances [Applicable area: all areas]</td>
</tr>
<tr>
<td>ZJI</td>
<td>. for construction [Applicable area: all areas]</td>
</tr>
<tr>
<td>ZJK</td>
<td>. for finance [Applicable area: all areas]</td>
</tr>
<tr>
<td>ZJM</td>
<td>. for services [Applicable area: all areas]</td>
</tr>
<tr>
<td>ZJP</td>
<td>. for health care, e.g. hospitals, medical treatments or diagnosis; for social work [Applicable area: all areas]</td>
</tr>
<tr>
<td>ZJR</td>
<td>. for logistics, e.g. warehousing, loading, distribution or shipping [Applicable area: all areas]</td>
</tr>
<tr>
<td>ZJT</td>
<td>. for transportation [Applicable area: all areas]</td>
</tr>
<tr>
<td>ZJV</td>
<td>. for communication [Applicable area: all areas]</td>
</tr>
<tr>
<td>ZJX</td>
<td>. for amusements; for sports; for games [Applicable area: all areas]</td>
</tr>
<tr>
<td>ZMD</td>
<td>The request for which patent right was granted includes inventions involving claims corresponding to the medical inventions where novelty was recognized on the direction of usage or dosage. (Medical inventions where novelty was recognized as the invention corresponds to the examination standard for patent and utility model Part VII, chapter 3, section 2. 2. 2. (3-2-2) which states that “the invention is different in the medical use that is the mode of applying medicines at specific usage or dosage to the specific illness).</td>
</tr>
<tr>
<td>ZNA</td>
<td>Nucleic acid or amino acid sequence [Applicable area: all areas]</td>
</tr>
<tr>
<td>ZNM</td>
<td>Nano-technology application technology [Applicable area: all areas]</td>
</tr>
<tr>
<td>ZYW</td>
<td>Yaw movement control of vehicles [yaw rate, slip angle, steering characteristics, etc.] [Applicable area: B60G, B60K, B60L, B60T, B62D, F02D, F16D, F16H]</td>
</tr>
</tbody>
</table>
Special features: F-terms additional codes

<table>
<thead>
<tr>
<th>Package bodies</th>
<th>F-term</th>
<th>FI Cover Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>B65D67/00-79/02</td>
<td></td>
<td>B65D67/00-79/02</td>
</tr>
<tr>
<td>B81/18-81/3907</td>
<td></td>
<td>B81/18-81/3907</td>
</tr>
<tr>
<td>B81/38-81/3907</td>
<td></td>
<td>B81/38-81/3907</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>viewpoint</th>
<th>A000</th>
<th>A001</th>
<th>A002</th>
<th>A003</th>
<th>A004</th>
<th>A005</th>
<th>A006</th>
<th>F-term</th>
</tr>
</thead>
<tbody>
<tr>
<td>AA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A21</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A21</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A22</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A22</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A26</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A26</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A27</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A27</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A28</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A28</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A29</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A29</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A31</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A31</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A32</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A32</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A33</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A33</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A34</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A34</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A36</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A36</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A37</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A37</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A38</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A38</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A39</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A39</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB04</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB04</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB06</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB06</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB07</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB07</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB08</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB08</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB09</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB09</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

[Click on viewpoint hyperlink to see additional codes](https://www5.j-platpat.inpit.go.jp/pms/tokujitsu/pmgs_en/PMGS_EN_GM101_FISearch.action)
# How to read F-terms

F-Terms: [Link](https://www.j-platpat.inpit.go.jp/web/all/top/BTmTopEnglishPage)

<table>
<thead>
<tr>
<th>Viewpoint</th>
<th>F-term</th>
</tr>
</thead>
<tbody>
<tr>
<td>AA</td>
<td></td>
</tr>
<tr>
<td>BB</td>
<td></td>
</tr>
<tr>
<td>AB</td>
<td></td>
</tr>
</tbody>
</table>

### Theme
- Fluids
- Gases
- Liquids
- Materials
- Regulars
- Solids
- Solid-like objects
- Disk-like objects
- Rod-like objects
- Needle-like objects
- Flat body objects, cop bodies
- Spherical objects
- Linear objects
- Flex-like objects

### Term Codes
- Tubular objects
- Cylindrical objects
- Cup-and-bottom-shaped objects
- Tetrahedral objects
- Ring-shaped objects
- Cards
- Others

### Viewpoints
- Foods: Fish and shellfish
- Sashimi
- Meats
- Ham
- Sausage
- Skewered foods
- Vegetables
- Fruits
- Eggs

- Fermented soybeans
- Tofu
- Rice balls and sushi
- Butter and cheese
- Rice cakes
- Confections and frozen confections
- Confections with shells
- Cakes
- Chocolate
- Ice cream

- Consistent substances such as mayonnaise
- Sugar and salt
- Powdered coffee, powdered soup stock and seasonings
- Coffee beans, green tea, black tea, and soup stock (tea)
- Spices
- Beverages
- Dream for coffee such as soft drink and [other] sauces

- Electronic products
- Batteries
- Small objects such as electronic calculators
- Lamps
- Flexible-pipe fluorescent lamps
- Cathode-ray tubes
- Carriers for recording use (optical disks and recorders)
- Optical (film and sensitized paper)
- Electromagnetic (magneto, tape, and cards)

- Electronic parts
- Radial-type
- Parts with three or more leads to
- Axial-type
- Dual inline packages
- Flat packages
- Chips
- Machine tools
- Machine parts
FI/F-terms: Conclusion

FI/F-terms:
- are not a ‘miracle solution’
- do not necessarily save time
- are not a solution to all problems

FI/F-terms provide:
- a possibility to get a ‘quick win’
- a means of accessing Japanese patent documentation without the "noise" of free-text searches
# Special features: F-terms additional codes

<table>
<thead>
<tr>
<th>THEME CODE</th>
<th>THEME NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>3E067</td>
<td>Package bodies</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VIEWPOINT</th>
<th>DESCRIPTION</th>
<th>ADDITIONAL CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA</td>
<td>TYPES OF UNIT, INTERIOR AND EXTERIOR CONTAINERS OR WRAPPING MATERIALS</td>
<td>A: Simple containers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B: Inner containers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C: Outer containers</td>
</tr>
<tr>
<td>BB</td>
<td>COMPOSITION OF UNIT, INTERIOR AND EXTERIOR CONTAINERS OR WRAPPING MATERIALS</td>
<td></td>
</tr>
<tr>
<td>BC</td>
<td>CONFIGURATIONS OF UNIT, INTERIOR AND EXTERIOR CONTAINERS OR WRAPPING MATERIALS</td>
<td></td>
</tr>
</tbody>
</table>

Further information
Classification
Methodology
Methods of classifying: IPC, CPC

same for both IPC and CPC

- invention vs. additional information
- function vs. application
- apparatus or processes
- multi-step processes; plants
- directives for chemistry

see guide to the IPC (2014)
see guide to the CPC (2015)
Methods of classifying: IPC, CPC

- The principles set out in the “Guide to the IPC” also apply to the use of the CPC:
  - invention vs. additional information
  - function vs. application
  - apparatus or processes
  - multi-step processes; plants
  - directives for Chemistry

- CPC-specific and complementary principles are found in the “Guide to the CPC”

http://www.cpcinfo.org/publications/GuideToTheCPC.pdf
1. HISTORY

On 25 October 2010, the European Patent Office (EPO) and the U.S. Patent and Trademark Office (USPTO) issued a joint statement that both Offices would “work toward the formation of a partnership to explore the development of a joint classification system based on the European Classification system (ECLA) that will incorporate the best classification practices of the two offices” This marked the beginning of the development of what is now known as the Cooperative Patent Classification (CPC), a patent classification system based on the European classification system, but including practices from the United States Patent Classification (USPC). Brief histories of these two systems are now presented.

1.1. EUROPEAN CLASSIFICATION (ECLA)

Initially, the former “Institut International des Brevets” (IIB) used a classification system called “Indeling der Techniek” (IdT), developed by the Dutch Patent Office, and largely based on the “Deutsche Patentklassifikation” (DPK). After the first edition of the International Patent Classification (IPC) had entered into force in 1968, the IIB decided to convert its search documentation from IdT to a system based on IPC. This classification system would later become the “European Classification” (ECLA) system. In view of the large differences between both systems, and in order to guarantee the quality of the system, it was decided to transfer the documents gradually, by “closing” the IdT at a certain date (different per technical field), and “opening” ECLA at the same time. Subsequently, new documents were then classified according to ECLA, the “backfile” being reclassified systematically or “ad hoc”, e.g. during searches.

From 1991 all the documents were classified via EC codes according to ECLA only. An additional indexing system of “In Computer Only” codes (ICO codes) was also developed.
Methods of classifying: FI/F-terms

- FI/F-term classified simultaneously by a registered outsourcing organisation
  - classified before publication

- FI: classification based on claim
  - description considered

- F-term: based on all description (in many cases)
  - find details in F-term description

- multitude of classification symbols assigned
  - all relevant classifications given
Revision and reclassification

- revision cycles
- reclassification work
- finding revision information
Revision cycles: IPC

- until 2006 ("old" IPC)
  - 5 years

- 2006 - 2010 (IPC Reform)
  - 3 years (core level)
  - 3 months (advanced level)

- from 2011 onwards (simplified IPC Reform)
  - yearly
Revision cycles: CPC

- Four to five times per year (4 times in 2018 and 2019)
  - Published on www.cpcinfo.org (pre-released one month in advance)
  - also on Espacenet and USPTO site

- by EPO & USPTO examiners
  - examiner's proposals
  - recommendation by classification directorates or management or other National Offices

- 3-step checking procedure:
  - Directorate
  - Technical area
  - Bilateral Joint Editorial Board
Revision cycles: FI/F-terms

- F-terms are revised once a year, and FI-terms twice a year
- upon proposal of JPO examiners
- information on revisions available from the JPO's website

http://www.jpo.go.jp/torikumi_e/searchportal_e/fi_revision.htm
Reclassification work: IPC

- **until 2006 ("old" IPC)**
  - no reclassification
  - new IPC Edition published every 5 years
  - to be searched separately

- **since 2006 (IPC reform)**
  - reclassification work shared between offices
  - using projects’ revision concordance lists (RCLs)
  - reclassification working lists are created by the EPO for all other Patent Offices
Reclassification work: CPC

- reclassification by the EPO or USPTO
- old groups are kept until reclassification finished
- warnings added in CPC

Example:

[Image: H04L 29/06027]  ● ● ● {Protocols for multimedia communication}

**Warnings**

⚠️ This group is no longer used for the classification of new documents as from April 21, 2008. The backlog of this group is being continuously reclassified to subgroups of [H04L29/06176](http://example.com/h04l29/06176)
Reclassification work at the EPO

- done by EPO examiners
- Examiner Assistance Programme (EAP)
- European Patent Network (EPN)

- NEW! Automatic Reclassification Tool
Reclassification work: FI/F-terms (1)

- back-file reclassification
  - basically, all past JP patent documents are reclassified

- at least 3 years (in many cases)
  - about 2 years in case of automatic reclassification
  - need to search with both new and old FI/F-term in this period

- reclassified by outsourcing organisation
  - in some exceptional cases, reclassified by examiners or researchers in JPO (under quality control by examiners)

(source: JPO)
Reclassification work: FI/F-terms (2)

To work on the quality of outsourcing organisation

- **stringent check by examiner**
  - certain percentage checked
  - feedback and advice given
  - percentage changed according to the result of check

- **registered outsourcing organisation**
  - having experience in scientific field
  - double-check system

(source: JPO)
## Finding revision information: IPC

**Revision Concordance List (RCL)**

### Version 2014.01

<table>
<thead>
<tr>
<th>A61K</th>
<th>A61K 35/00</th>
</tr>
</thead>
</table>

### Version 2015.01

<table>
<thead>
<tr>
<th>A61K</th>
<th>A61K 35/00</th>
</tr>
</thead>
</table>

[http://web2.wipo.int/ipcpub/#refresh=page](http://web2.wipo.int/ipcpub/#refresh=page)
## Finding revision information: IPC

### Compilation File

#### Compilation of amendments between 2014.01 and 2015.01 advanced level IPC

<table>
<thead>
<tr>
<th>Scheme</th>
<th>RCL</th>
<th>Compilation</th>
<th>Catchwords</th>
<th>Guide to the IPC</th>
</tr>
</thead>
</table>

### A01N

<table>
<thead>
<tr>
<th>Note(s)</th>
<th>25/00</th>
<th>Attention is drawn to the definitions of groups of chemical elements following the title of section C.</th>
<th>65/00</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td>In groups A01N 27/00-A01N 65/00, the last place priority rule is applied, i.e. at each hierarchical level in the absence of an indication to the contrary.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td>A composition, i.e. a mixture of two or more active ingredients is classified in the last of groups A01N 27/00-A01N 65/00 that that provisionally</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td>Any part of a composition which is not identified by the classification according to Note (3), and which itself is determined to be novel at A01N 27/00-A01N 65/00. The part can be either a single ingredient or a composition in itself.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td>Any part of a composition which is not identified by the classification according to Note (3) or (4), and which is considered to represent a class A01N 27/00-A01N 65/00. This can, for example, be the case when it is considered of interest to enable searching of co-classification should be given as “additional information”.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td>2008.01</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td>Where a compound is described as existing in tautomeric forms, it is classified as if existing in the form which is classified last in the sequence.</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td></td>
<td>Compounds covered by different main groups according to alternatively specified parts of their formulae are classified in every one of the main groups, and the last classificatory decision is decisive.</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td></td>
<td>Salts formed between two or more organic compounds are classified as the compound providing the essential ion and it is also classified as such as if existing in the form which is classified last in the sequence.</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td></td>
<td>Salts or metal chelates of an organic compound are classified as that compound</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td></td>
<td>In this subclass, a foodstuff is not considered as an active ingredient.</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td></td>
<td>Different materials applied in sequence, at different times, are considered as a mixture of all materials employed</td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td></td>
<td>Synergistic or potentiated compositions are classified as if the synergist or potentiator were an active ingredient.</td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td></td>
<td>In groups A01N 25/00-A01N 65/00, the symbol X means nitrogen, oxygen, sulfur or a halogen; Y means nitrogen, oxygen, sulfur or a halogen. A double bond is considered as if existing in the form which is classified last in the sequence.</td>
<td></td>
</tr>
</tbody>
</table>

### A21D

<table>
<thead>
<tr>
<th>Note(s)</th>
<th>2/02</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/40</td>
<td>In groups A21D 2/02-A21D 2/40, the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary.</td>
</tr>
</tbody>
</table>

### A23J

<table>
<thead>
<tr>
<th>Note(s)</th>
<th>3/04</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/20</td>
<td>In groups A23J 3/04-A23J 3/20, the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary.</td>
</tr>
</tbody>
</table>

### A23L

<table>
<thead>
<tr>
<th>Note(s)</th>
<th>3/3472-3/3562</th>
</tr>
</thead>
<tbody>
<tr>
<td>In groups A23L 3/3472-A23L 3/3562, the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary.</td>
<td></td>
</tr>
</tbody>
</table>

[http://web2.wipo.int/ipcpub/#refresh=page](http://web2.wipo.int/ipcpub/#refresh=page)
Finding revision information: CPC

- www.cpcinfo.org
- worldwide.espacenet.com/classification
- www.uspto.gov/web/patents/classification/index.html
CPC changes

- CPC **Revision** Projects (RP), **Maintenance** projects (MP) and **Definition** projects (DP)
- Advance information for the public?  [www.cpcinfo.org](http://www.cpcinfo.org)

List of the ongoing CPC revision projects:

---

**Ongoing CPC Projects**

The CPC areas currently undergoing maintenance (MP) or revision (RP) are listed in the table below together with the corresponding project number. Once finalized, the outcome of these projects will be summarized in a Notice of Change to be published one to two months before the corresponding changes are implemented in the CPC Scheme.

<table>
<thead>
<tr>
<th>Project number</th>
<th>Status</th>
<th>CPC</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>RP0221</td>
<td>active</td>
<td>A01G</td>
<td>Horticulture; Cultivation of vegetables, flowers, rice, fruit, vines, etc.</td>
</tr>
</tbody>
</table>
### Notice of Changes

- CPC Notice of Changes 457-DP0187 (A01K)
- CPC Notice of Changes 458-DP0188 (B60Q)
- CPC Notice of Changes 461-MP0388 (F21K)
- CPC Notice of Changes 471-RP0483 (VARIOUS)
- CPC Notice of Changes 472-RP0485 (VARIOUS)
- CPC Notice of Changes 474-RP0487 (VARIOUS)
- CPC Notice of Changes 481-RP0495 (B60N)
- CPC Notice of Changes 484-RP0498 (H04W)
- CPC Notice of Changes 485-RP0501 (H04W)
- CPC Notice of Changes 488-RP0504 (G06F)
- CPC Notice of Changes 491-RP0507 (VARIOUS)
- CPC Notice of Changes 493-MP0387 (B29C)
- CPC Notice of Changes 495-MP0349 (H01T)
- CPC Notice of Changes 496-MP0355 (A41C)
- CPC Notice of Changes 497-MP0365 (E04C)
- CPC Notice of Changes 500-RP0480 (A45C)
- CPC Notice of Changes 503-RP0500 (G01N)
- CPC Notice of Changes 505-MP0348 (H01S)

### CPC Projects

<table>
<thead>
<tr>
<th>Year</th>
<th>Maintenance Projects (MP)</th>
<th>Revision Projects (RP)</th>
<th>Definition Projects (DP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>47</td>
<td>67</td>
<td>11</td>
</tr>
<tr>
<td>2017</td>
<td>61</td>
<td>29</td>
<td>09</td>
</tr>
<tr>
<td>2016</td>
<td>68</td>
<td>55</td>
<td>52</td>
</tr>
<tr>
<td>2015</td>
<td>16</td>
<td>57</td>
<td>21</td>
</tr>
<tr>
<td>2014</td>
<td>06</td>
<td>31</td>
<td>00</td>
</tr>
<tr>
<td>2013</td>
<td>03</td>
<td>09</td>
<td>00</td>
</tr>
</tbody>
</table>

http://www.cooperativepatentclassification.org/CPCRevisions/NoticeOfChanges.html
Pre-publication of CPC revisions

- New CPC scheme is pre-published **one month before entry into force** (i.e. on the first Tuesday of the month preceding entry into force)

- In the **CPC pre-release area** on [www.cpcinfo.org](http://www.cpcinfo.org), together with other products ...

- Available on [www.cpcinfo.org](http://www.cpcinfo.org) ➤ CPC Revisions ➤ Pre-release
CPC Pre-Release section

Pre-release

In this area of the website, CPC related material such as scheme files, notices of changes, concordances, etc., will be published about one month before official entry into force of this material.

The publication of the "pre-released" material started on 6 May 2014 concerning the June 2014 CPC scheme version (2014-08).

The "pre-release" will normally happen on the first Tuesday of a given month (for example Tuesday 6 May 2014) for entry into force on the first day of the following month (for example 1 June 2014).

16 January 2018: 2018.02 pre-released material:

- 2018.02 CPC Scheme in PDF and in XML
- Notices of Changes related to the "2018.02 CPC Scheme"
- CPC Notice of Changes 456-DP0198 (IPFQ)
- CPC Notice of Changes 481-MP0082 (E21K)
- CPC Notice of Changes 481-RP0049 (E21K)
- Notice of Editorial Corrections February 2018

Full list available at the CPC Pre-release section.
Machine-readable products

- Already being delivered in machine-readable format:
  - Scheme and Definitions (along with corresponding XML Schemas)
  - RCL (Revision Concordance List)
  - CICL (CPC-to-IPC Concordance List)
  - List of Valid CPC Symbols
  - Validity File
  - CPC titles (text file)

- In progress...
  - Compilation of changes (expected for CPC 2019.01)
  - CRL (Cross-Reference List)
CPC Bulk Data Products

- Available on www.cpcinfo.org ➔ CPC Scheme and Definitions ➔ Bulk

Bulk data

- CPC XML Schemas
  - For the CPC Scheme
  - For the CPC Definitions

- List of CPC valid symbols (2018.02)
- CPC Validity file (2018.02)
- Revision Concordance list (2018.02)
- Complete CPC scheme in XML format (2018.02)
- Complete CPC scheme in PDF format (2018.02)

CPC Definitions in PDF format (Last updated 01 February 2018)

- For the A section: A01B-A45F, A46B-A53K
- For the B section: B01B-B20B, B29C-B65C, B65D, B65F-B82Y
- For the C section
- For the D section
- For the E section
- For the F section
- For the G section
- For the H section

CPC Definitions in XML format (Last updated 01 February 2018)

- For the A section: A01B-A45F, A46B-A53K
- For the B section: B01B-B20B, B29C-B65C, B65D, B65F-B82Y
- For the C section
- For the D section
- For the E section
- For the F section
- For the G section
- For the H section
Compilation of changes to the CPC Scheme between 2018.05 and 2018.08

Presentation details
Entries for new symbols and headings
Entries for existing symbols and headings — text insertions
— text deletions
Entries for deleted symbols and headings

- In cases where the originating project could not be found, "N/A" is given for the Project information (e.g. the change could be due to an Editorial Correction).
- Projects ending in "F" indicate finalisation after reclassification was completed.

Project: N/A (A01B)
A01B

SOIL WORKING IN AGRICULTURE OR FORESTRY; PARTS, DETAILS, OR ACCESSORIES OF AGRICULTURAL MACHINES OR IMPLEMENTS, IN GENERAL (making or covering furrows or holes for sowing, planting, or manuring A01C 5/00; soil working for engineering purposes E01, E02, E21;
Connecting constructional elements or machine parts by a part of or on one member entering a hole in the other \{and involving plastic deformation\}(construction of pins, bolts or rivets F16B 19/00; riveting F16B 19/04; means for preventing withdrawal of a pin, spigot or the like from its operative position, stud-and-socket releasable fastenings F16B 21/00)

**WARNING**

Group F16B 17/00 is impacted by reclassification into groups F16B 9/02, F16B 9/05 - F16B 9/09.

All groups listed in this Warning should be considered in order to perform a complete search.

- <administratively transferred to F16B 17/00>
  \{Non-releasable connections, i.e. by means of plastic deformation\}

- \{of rods or tubes mutually\}

- \{of rods or tubes to sheets or plates\}

- \{of sheets or plates mutually\} \{joining sheets by riveting without the use of separate rivets F16B 5/045\}
**CPC data from National Offices**

- Currently, CPC data from National Offices are stored at document level, in the CPCNO fields.

- Foreseen in April 2019:
  - Promotion of allocations from National Offices to simple patent family level
  - Visibility of name of the office endorsing allocation
  - New CPCDB infrastructure
Current situation with CPCNO data

<table>
<thead>
<tr>
<th>Current picture</th>
<th>Document level (CPCNO)</th>
<th>Family level (CPC)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INPI Brazil</strong></td>
<td>BR9910073 H01R 12/71</td>
<td></td>
</tr>
<tr>
<td><strong>SIPO</strong></td>
<td>CN1306684 H01R 13/65</td>
<td></td>
</tr>
<tr>
<td><strong>EPO</strong></td>
<td>EP1075714 H01R 12/73</td>
<td></td>
</tr>
<tr>
<td><strong>UKIPO</strong></td>
<td>GB2353908 H01R 12/73</td>
<td></td>
</tr>
<tr>
<td><strong>K IPO</strong></td>
<td>KR20010071195 H01R 13/6581</td>
<td></td>
</tr>
<tr>
<td><strong>PRV</strong></td>
<td>SE0003892 H01R 13/6581</td>
<td></td>
</tr>
<tr>
<td><strong>USPTO</strong></td>
<td>US6206729 H01R 13/6581</td>
<td></td>
</tr>
</tbody>
</table>
Future Situation with CPCNO data

Future picture

<table>
<thead>
<tr>
<th>INPI Brazil</th>
<th>SIPO</th>
<th>EPO</th>
<th>UKIPO</th>
<th>KIPO</th>
<th>PRV</th>
<th>USPTO</th>
</tr>
</thead>
<tbody>
<tr>
<td>BR9910073</td>
<td>CN1306684</td>
<td>EP1075714</td>
<td>GB2353908</td>
<td>KR20010071195</td>
<td>SE0003892</td>
<td>US6206729</td>
</tr>
<tr>
<td>H01R 12/71</td>
<td>H01R 13/65</td>
<td>H01R 12/71; H01R 13/6581</td>
<td>H01R 12/73</td>
<td>H01R 13/6581</td>
<td>H01R 13/6581</td>
<td>H01R 12/71; H01R 13/6581</td>
</tr>
</tbody>
</table>

Family level (CPC)

H01R 12/71 (EP, US, BR)
H01R 13/6581 (EP, US, SE, KR)
H01R 13/65 (CN)
H01R 12/73 (GB)

Expected in April 2019
CPC Reclassification timeline

- Entry into Force
- Reclassification Process
- USPTO/EPO Finish reclassification
- + 1 year
- National Offices Finish reclassification
- ‘Delete’ from CPCDB
- Distribute Working list (WL)
Finding revision information: CPC

Also on cpcinfo.org:

- CPC Concordances (TXT, PDF, XML)
  - CPC → IPC
    (adapted after each CPC or IPC revision)
  - CPC ↔ ECLA
    (static table, not updated after CPC revisions)
Finding revision information: CPC

Indications in the titles:

- Safety arrangements (structurally associated with burners F23D; for liquid fuel feeding F23K 5/16; involving control of combustion F23N 5/24; structurally associated with igniters F23Q) [2015-01]
- Preventing emission of flames or hot gases, or admission of air, through working or charging apertures [2013-01]
- Means for supervising combustion, e.g. window (alarm systems G08B) [2013-01]
- {Viewing ports of windows} [2013-01]
- {by observing the flame} [2013-01]
- {by observing the flue gas (controlling combustion using gas detectors F23N 5/003)} [2013-01]
- Details of combustion chambers, not otherwise provided for {, e.g. means for storing heat from flames} [2015-01]
- {Noise absorbing means} [2015-01]
Finding revision information: FI/F-terms

- Information on revisions available from the JPO's website from technical area:

```
Patent Map Guidance (PMGS) ➔ Back  ? Help

You can refer to FI/F-term and retrieve a classification by keywords. Revision Information

FI Class (Notes) / (Index) List Indication

This screen shows the explanation sentence of "E05", a notes and an index

- **E05**

  LOCKS; KEYS; WINDOW OR DOOR FITTINGS; SAFES
  Note(s)

  In this class, the following terms are used with the meaning:
  • "wing" is a general term for swingable, slidable, or other movable structures such as drawers, lids of chests, cases, etc. Locking means covered by this class may be applied;

http://www.jpo.go.jp/torikumi_e/searchportal_e/fi_revision.htm```
Classification

FI and F-term lists (External link)

For browsing FI and F-term list, FI [File Index] and F-term [File forming term] are Japanese patent classification systems consisting of approx. 190,000 and 360,000 entries respectively, which enable the efficient search of patent documents. It is also noted that FI is based on IPC [International Patent Classification]. For more detailed information on FI and F-term (PDF 7.383KB).

IPC-FI-CPC scheme parallel viewer

For browsing IPC, FI and CPC in parallel. In this viewer, you can find the relevant entries among IPC, FI and CPC.

Bulk data

FI revision information

For obtaining information regarding FI revisions, FI scheme is revised twice a year.

F-term revision information

For obtaining information regarding F-term revisions, F-term scheme is revised once a year.

Contact
### Technical fields where FI reclassification is ongoing or planned

<table>
<thead>
<tr>
<th>Technical field</th>
<th>G01C19/56</th>
<th>Technical field</th>
<th>G06F3/033</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scheme enter into force</td>
<td>2011.5</td>
<td>Scheme enter into force</td>
<td>2011.11</td>
</tr>
<tr>
<td>Expected completion of reclassification</td>
<td>2015.3</td>
<td>Expected completion of reclassification</td>
<td>2015.3</td>
</tr>
<tr>
<td>Number of documents to be reclassified</td>
<td>5,000</td>
<td>Number of documents to be reclassified</td>
<td>12,000</td>
</tr>
<tr>
<td>Technical field</td>
<td>B62K5/</td>
<td>Technical field</td>
<td>B42D15/10</td>
</tr>
<tr>
<td>Scheme enter into force</td>
<td>2012.5</td>
<td>Scheme enter into force</td>
<td>2013.5</td>
</tr>
<tr>
<td>Expected completion of reclassification</td>
<td>2015.3</td>
<td>Expected completion of reclassification</td>
<td>2016.3</td>
</tr>
<tr>
<td>Number of documents to be reclassified</td>
<td>2,500</td>
<td>Number of documents to be reclassified</td>
<td>20,000</td>
</tr>
</tbody>
</table>

As of 2015 March

FI scheme is revised twice a year in correspondence to the progression of technology. When FI scheme is which were already classified with old FI entries are reclassified accordingly. There are cases where reclassification requires a few years. It is necessary to use both of old and new FI entries for searching while reclassification is completed.

To find FI new entries, deleted entries or changed entries, see below.

- FI revision in November 2013 (ZIP:128KB)
- FI revision in April 2014 (ZIP:115KB)

To find technical fields where FI reclassification is ongoing or planned (PDF:34KB)

Some of the publications on this site are in PDF format. To view them, you will need Acrobat Reader. Please click the graphic link to download Acrobat Reader.

http://www.jpo.go.jp/torikumi_e/searchportal_e/fi_revision.htm
F-Term revision information

For obtaining information regarding F-term revisions, F-term scheme is revised once a year.
F-Term revision information

JPO has a chance of F-term revision once a year. F-terms in some themes are revised actually to catch up the progression of technology.

When F-term is revised, documents analyzed with old F-terms in the past are reanalyzed accordingly. In some cases, the reanalysis requires a few years. It is necessary to use both of old and new F-terms for prior art search during the reanalysis.

To find theme codes where F-term revision is planned in FY2014 (PDF:25KB)

To find theme codes where F-term reclassification is planned and ongoing in FY2014 (PDF:63KB)

[Last updated 5 September 2014]

Theme where F-term reclassification is planned and ongoing

1. Theme where F-term revision was done in FY 2014 and F-term reclassification is planned from FY 2014 or FY 2015

<table>
<thead>
<tr>
<th>Theme code</th>
<th>Theme name</th>
<th>FI coverage</th>
<th>Revision information</th>
<th>Classification range</th>
<th>Reclassification start</th>
<th>Reclassification end</th>
</tr>
</thead>
<tbody>
<tr>
<td>2D032</td>
<td>Bathtubs, showers, and related attachments</td>
<td>A47K3/02-4/00</td>
<td>Partial revision of existing F-term list</td>
<td>all</td>
<td>04.2015</td>
<td>03.2016</td>
</tr>
<tr>
<td>2D035</td>
<td>Toilet paper and its holders</td>
<td>A47K10/00-10/48#Z</td>
<td>Division of themes, Overall reconstruction of existing F-term list</td>
<td>all</td>
<td>04.2015</td>
<td>To be announced</td>
</tr>
<tr>
<td>2E101</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As of 2014 September
Search examples
Identifying relevant CPC symbols

Keyword search in CPC (based on document abstracts!)

**Cooperative Patent Classification**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Classification and description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>HUMAN NECESSITIES [2013-01]</td>
</tr>
<tr>
<td>B</td>
<td>PERFORMING OPERATIONS; TRANSPORTING [2013-01]</td>
</tr>
<tr>
<td>C</td>
<td>CHEMISTRY; METALLURGY [2013-01]</td>
</tr>
<tr>
<td>D</td>
<td>TEXTILES; PAPER [2013-01]</td>
</tr>
<tr>
<td>E</td>
<td>FIXED CONSTRUCTIONS [2013-01]</td>
</tr>
<tr>
<td>F</td>
<td>MECHANICAL ENGINEERING; LIGHTING; HEATING; WEAPONS; BLASTING ENGINES OR PUMPS [2013-01]</td>
</tr>
<tr>
<td>G</td>
<td>PHYSICS [2013-01]</td>
</tr>
<tr>
<td>H</td>
<td>ELECTRICITY [2013-01]</td>
</tr>
<tr>
<td>Y</td>
<td>GENERAL TAGGING OF NEW TECHNOLOGICAL DEVELOPMENTS; GENERAL TAGGING OF CROSS-SECTIONAL TECHNOLOGIES SPANNING OVER SEVERAL SECTIONS OF THE IPC; TECHNICAL SUBJECTS COVERED BY FORMER USPC CROSS-REFERENCE ART COLLECTIONS [XRACs] AND DIGESTS [2013-01]</td>
</tr>
</tbody>
</table>

Search example - Espacenet

Advanced search

1. Database
Select the database in which you wish to search:
- Worldwide - full collection of published patent applications from 80+ countries

2. Search terms
Enter keywords in English - ctrl-enter expands the field you are in
- Keyword(s) in title: plastic and bicycle
- Keyword(s) in title or abstract: LCD micro lens array
- Publication number: WO2008014520

**Search example - Espacenet**

### Result list

<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>LED UNIT AND DISPLAY INCORPORATING THE SAME</td>
<td>2014-06-12</td>
</tr>
<tr>
<td>2</td>
<td>Tandem array lens sheet</td>
<td>2014-04-16</td>
</tr>
<tr>
<td>3</td>
<td>LIGHT DIFFUSION PLATE HAVING NON-UNIFORM LOCAL MICRO LENS ARRAY PATTERN AND LIQUID CRYSTAL DEVICE COMPRISING THE SAME</td>
<td>2014-07-01</td>
</tr>
<tr>
<td>4</td>
<td>METHOD AND APPARATUS FOR A LIQUID CRYSTAL DISPLAY (LCD) HAVING AN INPUT FUNCTION</td>
<td>2003-08-30</td>
</tr>
</tbody>
</table>

Search example - Espacenet

Cooperative Patent Classification

Search for: cd micro lens array

Symbol | Classification and description
--- | ---
G02F 1/00 | Devices or arrangements for the control of the intensity, colour, phase, polarisation or direction of light arriving from an independent light source, e.g. switching, gating, or modulating; Non-linear optics (thermometers using change of colour or translucency G01K 11/12; using changes in fluorescence G01K 11/32; light guide devices G02B 6/00; optical devices or arrangements using movable or deformable elements for controlling light independent of the light source G02B 26/00; control of light in general G05D 25/00; visible signalling systems G08B 6/00; indicating arrangements for variable information by selection or combination of individual elements G09F 9/00; control arrangements or circuits for visual indicators other than cathode-ray tubes G09G 3/00; control of light sources H01S 3/10, H05B 33/08, H05B 35/00 to H05B 43/00; {photochromic filters G02B 5/23, optical logic elements G02F 3/00}) [2013-01]
H04N 9/00 | Details of colour television systems [2013-01]
G02B 6/00 | Optical elements other than lenses (light guides G02B 6/00; optical logic elements G02F 3/00) [2013-01]
G02B 6/00 | Light guides [2013-01]
F21K 9/00 | Electric lamps using semiconductor devices as light generating elements, e.g. using light emitting diodes [LED] or lasers (light emitting diodes per se H01L 33/00, H01L 51/50; semiconductor lasers per se H01S 5/00; electric lamps using a combination of different types of light generation H05B 35/00) [2013-01]
G06F 3/00 | Input arrangements for transferring data to be processed into a form capable of being handled by the computer; Output arrangements for transferring data from processing unit to output unit, e.g. interface arrangements (typewriters B41J; conversion of physical variables F15B 5/00, G01; image acquisition G06T 1/00, G08F 9/00; coding, decoding or code conversion in general H03M; transmission of digital information H04L; [in regulating or control systems G05B]) [2013-01]

Search example - Espacenet

Devices or arrangements for the control of the intensity, colour, phase, polarisation or direction of light arriving from an independent light source, e.g. switching, gating, or modulating; Non-linear optics (thermometers using change of colour or translucency \texttt{G01K 11/12}; using changes in fluorescence \texttt{G01K 11/32}; light guide devices \texttt{G02B 6/00}; optical devices or arrangements using movable or deformable elements for controlling light independent of the light source \texttt{G02B 26/00}; control of light in general \texttt{G05D 25/00}; visible signalling systems \texttt{G08B 5/00}; indicating arrangements for variable information by selection or combination of individual elements \texttt{G09F 9/00}; control arrangements or circuits for visual indicators other than cathode-ray tubes \texttt{G09G 3/00}; control of light sources \texttt{H01S 3/10}, \texttt{H05B 33/08}, \texttt{H05B 35/00} to \texttt{H05B 43/00}; (photochromic filters \texttt{G02B 5/23}; optical logic devices \texttt{G05G 2/00}); [0042-04])

Notes

This group covers only:
- devices or arrangements, e.g. cells, the optical operation of which is modified by changing the optical properties of the medium of the devices or arrangements by the influence or control of physical parameters, e.g. electric fields, electric current, magnetic fields, sound or mechanical vibrations, stress or thermal effects;
- devices or arrangements in which the electric or magnetic field component of the light beams influences the optical properties of the medium, i.e. non-linear optics;
- control of light by electromagnetic waves, e.g. radio waves, or by electrons or other elementary particles.

Search example - Espacenet

# Search example - Espacenet

**Result list**

| 1. METHOD OF MANUFACTURING MICROLENS SUBSTRATE, MICROLENS ARRAY, SUBSTRATE, ELECTRO-OPTIC DEVICE, AND ELECTRONIC |
|---|---|---|---|---|---|---|---|

| 2. THREE-DIMENSIONAL IMAGE DISPLAY DEVICE |
|---|---|---|---|---|---|---|---|

| 3. Optical collective substrate and display device using the same, and their manufacturing methods |
|---|---|---|---|---|---|---|---|

| 4. MANUFACTURING METHOD OF ELECTRO-OPTIC DEVICE SUBSTRATE, ELECTRO-OPTIC DEVICE SUBSTRATE, ELECTRO-OPTIC DEVICE, AND ELECTRONIC DEVICE |
|---|---|---|---|---|---|---|---|

Approximately 635 results found in the Worldwide database for: array in the title or abstract AND G02F1/133526 as the Cooperative Patent Classification. Only the first 500 results are displayed.

Results are sorted by date of upload in database.

Further information
JPO web page:
English Information on classification
JPO website on Classification

Classification

FI and F-term lists (External link)

For browsing FI and F-term list. FI [File Index] and F-term [File forming term] are Japanese patent classification systems consisting of approx. 190,000 and 360,000 entries respectively, which enable the efficient search of patent documents. It is also noted that FI is based on IPC [International Patent Classification]. For more detailed information on FI and F-term (PDF:7383KB).

IPC-FI-CPC scheme parallel viewer

For browsing IPC, FI and CPC in parallel. In this viewer, you can find the relevant entries among IPC, FI and CPC.

Bulk data

FI revision information

For obtaining information regarding FI revisions. FI scheme is revised twice a year.

F-term revision information

For obtaining information regarding F-term revisions. F-term scheme is revised once a year.

http://www.jpo.go.jp/torikumi_e/searchportal_e/classification.htm
PMGS (Patent Map Guidance)

http://www.jpo.go.jp/torikumi_e/searchportal_e/classification.htm
IPC-FI-CPC scheme parallel viewer

For browsing IPC, FI and CPC in parallel. In this viewer, you can find the relevant entries among IPC, FI and CPC.

Bulk data

FI revision information

For obtaining information regarding FI revisions. FI scheme is revised twice a year.

F-term revision information

For obtaining information regarding F-term revisions. F-term scheme is revised once a year.

http://www.jpo.go.jp/torikumi_e/searchportal_e/classification.htm
### IPC-FI-CPC scheme parallel viewer

#### Scheme parallel viewer

**Display:**
- IPC: On / Off
- FI: On / Off
- CPC: On / Off

**Display details:**
- IPC: non-display
- FI: non-display
- CPC: non-display

**Search Options:**
- IPC: DVD
- FI: DVD
- CPC: DVD

**Keyword Search:**
- IPC: DVD
- FI: DVD
- CPC: DVD

**Display options:**
- IPC: non-display
- FI: non-display
- CPC: non-display

**FI dot pattern:**
- pattern 1
- pattern 2

**IPC doc number:**
- On / Off

**FI doc number:**
- On / Off

**CPC doc number:**
- On / Off

---

<table>
<thead>
<tr>
<th>IPC</th>
<th>FI</th>
<th>CPC</th>
</tr>
</thead>
<tbody>
<tr>
<td>B9G 17/016</td>
<td>the regulating means comprising electric or electronic elements (B9G 17/005 takes precedence) [B]</td>
<td>3181 docs</td>
</tr>
<tr>
<td></td>
<td>Controlling damping force (controlling damping means) [A]</td>
<td>4163 docs</td>
</tr>
<tr>
<td></td>
<td>Controlling damping fluid [control of hydro, full active, control of damping constant] [B]</td>
<td>4163 docs</td>
</tr>
<tr>
<td></td>
<td>Controlling air [C]</td>
<td>304 docs</td>
</tr>
<tr>
<td></td>
<td>Controlling air [C]</td>
<td>108 docs</td>
</tr>
<tr>
<td></td>
<td>Controlling air [C]</td>
<td>108 docs</td>
</tr>
<tr>
<td></td>
<td>Controlling air [C]</td>
<td>108 docs</td>
</tr>
<tr>
<td></td>
<td>Controlling air [C]</td>
<td>108 docs</td>
</tr>
</tbody>
</table>

---

**Related URLs:**

- [http://www.jpo.go.jp/cgi/cgi-bin/search-portal/narabe_tool_e/narabe_e.cgi](http://www.jpo.go.jp/cgi/cgi-bin/search-portal/narabe_tool_e/narabe_e.cgi)
IPC-FI-CPC parallel viewer

Keyword searchable

Link to the scheme

http://www.jpo.go.jp/cgi/cgi-bin/search-portal/narabe_tool_e/narabe_e.cgi
JPO website on classification

http://www.jpo.go.jp/torikumi_e/searchportal_e/classification.htm
Identifying relevant FI/F-terms

Publication issued, and updates schedule, please refer to the NEWS.

Query Screen
- FI
- FI Handbook
- F-term List
- F-term Description

Keyword
- e.g. JPO

AND

Search Range (Classification)
- e.g. 2B+58001

Display Type
- List
- Target
- The same Hierarchy

https://www5.j-platpat.inpit.go.jp/pms/tokujitsu/pmgs_en/PMGS_EN_GM201_Top.action
Search example - JPO's J-PlatPat website

https://www.j-platpat.inpit.go.jp/web/all/top/BTmTopEnglishPage
**FI/F-term Search**

You can retrieve a variety of patent and utility model gazettes by FI/F-term.

### Kind
(This choice can be omitted)

- [ ] Patent (A, A1, B)
- [ ] Patent specification
- [ ] Utility model (U, U1, A1, Y)
- [ ] Examined

### Theme code

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4K018</td>
<td></td>
</tr>
</tbody>
</table>

### FI/F-term

- 4K018AA01

### Publication Date

- from: e.g. 20150101
- to:

### Priority of search result display

- [ ] Unexamined applications (A, U, U1, A1)
- [ ] Examined/Granted applications (B, Y)

---

**Results**

Results 436 records.

<table>
<thead>
<tr>
<th>No.</th>
<th>Document Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>JP,2015-067879,A</td>
</tr>
<tr>
<td>2</td>
<td>JP,2015-017295,A</td>
</tr>
<tr>
<td>3</td>
<td>JP,2014-154045,A</td>
</tr>
<tr>
<td>4</td>
<td>JP,2014-037920,A</td>
</tr>
<tr>
<td>5</td>
<td>JP,2013/073695,A1</td>
</tr>
<tr>
<td>6</td>
<td>JP,2014-524514,A</td>
</tr>
<tr>
<td>7</td>
<td>JP,2012-000592,A</td>
</tr>
</tbody>
</table>

---

Search results: **436**

[View list]
Search example - PAJ
Searching PAJ

You can retrieve the PAJ (Patent Abstracts of Japan) by keywords.

- **Abstract**: micro lens array
- **Title of invention**: e.g. computer semiconductor
- **Applicant**: e.g. JPO
- **Publication Date**: from: e.g. 20150101 - to: e.g. 20150331
- **IPC**: 602F1/1335

Press the "Search" button to view the search results.

**Search results**: 146
FI and F-terms description

Publication issued, and updates schedule, please refer to the NEWS.

**FI (Classification)**
- **Query Screen**
  - ○FI
  - ○FI Handbook
- **Classification**
  - e.g. B22F B22F1/00 B22F1/00#A

**F-term (Classification)**
- **Query Screen**
  - ○F-term List
  - ○F-term Description
- **Classification**
  - e.g. 4K01B

**Display Type**
- ○List
- ○Target
- ○The same Hierarchy

Example of F-terms description in Japanese

https://www5.j-platpat.inpit.go.jp/pms/tokujitsu/pmgs_en/PMGS_EN_GM101_Top.action
F-terms description

- 2005: first theme descriptions available in English
- currently approx. 700 themes covered

example of F-terms description in English

https://www5.j-platpat.inpit.go.jp/pms/tokujitsu/pmgs_en/PMGS_EN_GM101_Top.action
CPC–FI–IPC Statistical Mappings

Cooperative Patent Classification (CPC)

The Cooperative Patent Classification (CPC) is an extension of the IPC and is jointly managed by the EPO and the US Patent and Trademark Office. It is divided into nine sections, A-H and Y, which in turn are sub-divided into classes, subclasses, groups and sub-groups. There are approximately 250,000 classification entries.

The nine CPC sections

A  Human necessities
B  Performing operations; transporting

http://www.epo.org/searching-for-patents/helpful-resources/first-time-here/classification/cpc.html
Statistical mapping: CPC to FI

The table is produced by using a statistical analysis of symbols allocated to families of documents present in DOCDB and classified simultaneously in the CPC and FI schemes. Each CPC symbol is statistically mapped to the first three most significant FI symbols.

For example, CPC symbol G01B 11/002 (in between brackets: first the number of families bearing this CPC allocation - 3063, then the number of families bearing this CPC allocation and classified in the FI scheme - 304) can be statistically mapped to FIs G01B11/00,H (71 families out of 304 families, i.e. 23%), G01B 11/00,A (59 families out of 304 families, i.e. 19%) and G01B 11/00,G (27 families out of 304 families, i.e. 9%).

We display the three most pertinent FI symbols, in decreasing order of relevance.

Note that the confidence level of the mapping is low when the number of families statistically processed is small and/or when the statistical dispersion of the mapping of one CPC symbol to many FI symbols is significant.

WIPO IPC/CPC/FI Parallel Viewer
JPO IPC/CPC/FI Parallel Viewer
Full data set in XML

Status: January 2018
Statistical Mapping: CPC to FI


Based on statistical analysis of symbols allocated to families of documents simultaneously classified in the CPC and FI schemes

<table>
<thead>
<tr>
<th>CPC</th>
<th>FI-1</th>
<th>FI-2</th>
<th>FI-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>A01B1/005</td>
<td>A01B33/02&amp;A</td>
<td>A01B1/00</td>
<td>A01B27/00</td>
</tr>
<tr>
<td>(480, 8)</td>
<td>(2, 33%)</td>
<td>(1, 17%)</td>
<td>(1, 17%)</td>
</tr>
<tr>
<td>A01B1/01</td>
<td>A01B1/16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(302, 3)</td>
<td>(3, 100%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A01B1/227</td>
<td>B25G1/00&amp;E</td>
<td>B25G1/10&amp;D</td>
<td>B25G3/00&amp;A</td>
</tr>
<tr>
<td>(215, 3)</td>
<td>(2, 67%)</td>
<td>(2, 67%)</td>
<td>(2, 67%)</td>
</tr>
<tr>
<td>A01B13/00</td>
<td>A01B3/36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(517, 4)</td>
<td>(2, 60%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A01B13/02</td>
<td>A01B13/02&amp;A</td>
<td>A01G1/008&amp;Z</td>
<td>A01B17/00</td>
</tr>
<tr>
<td>(320, 8)</td>
<td>(3, 38%)</td>
<td>(3, 38%)</td>
<td>(1, 17%)</td>
</tr>
<tr>
<td>A01B13/08</td>
<td>A01B35/00&amp;A</td>
<td>A01B13/08&amp;Z</td>
<td></td>
</tr>
<tr>
<td>(883, 6)</td>
<td>(2, 60%)</td>
<td>(1)</td>
<td></td>
</tr>
</tbody>
</table>
Based on statistical analysis of symbols allocated to families of documents simultaneously classified in the FI and CPC schemes

<table>
<thead>
<tr>
<th>FI</th>
<th>CPC-1</th>
<th>CPC-2</th>
<th>CPC-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>C01B13/10&amp;D (1000, 55)</td>
<td>C01B13/10 (21, 38%);</td>
<td>C02F1/78 (16, 29%);</td>
<td>C01B13/11 (16, 29%);</td>
</tr>
<tr>
<td>C01B13/10&amp;Z (1, 42)</td>
<td>C01B13/10 (15, 36%);</td>
<td>C01B13/11 (6, 14%);</td>
<td>C25B1/13 (6, 14%);</td>
</tr>
<tr>
<td>C01B13/11 (30, 9)</td>
<td>B01J19/088 (3, 33%);</td>
<td>C01B13/115 (3, 33%);</td>
<td>B01D53/047 (2, 22%);</td>
</tr>
<tr>
<td>C01B13/11&amp;A (238, 26)</td>
<td>C01B13/11 (19, 73%);</td>
<td>H01T19/04 (2, 8%);</td>
<td>H05H1/2406 (2, 8%);</td>
</tr>
<tr>
<td>C01B13/11&amp;B (39, 10)</td>
<td>C01B13/11 (7, 70%);</td>
<td>B01J19/088 (2, 20%);</td>
<td>A23B7/157 (1, 10%);</td>
</tr>
</tbody>
</table>
Statistical Mapping: IPC to CPC

http://www.epo.org/searching-for-patents/helpful-resources/first-time-here/classification/cpc/ipccpc.html

Based on statistical analysis of symbols allocated to families of documents simultaneously classified in the IPC and CPC schemes

<table>
<thead>
<tr>
<th>IPC</th>
<th>CPC-1</th>
<th>CPC-2</th>
<th>CPC-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>G01B5/06 (5287, 2265)</td>
<td>G01B5/06 (542, 24%);</td>
<td>G01B5/061 (530, 23%);</td>
<td>G01B5/068 (481, 21%);</td>
</tr>
<tr>
<td>G01B5/08 (5981, 2078)</td>
<td>G01B5/08 (1591, 77%);</td>
<td>G01B7/12 (152, 7%);</td>
<td>G01B5/12 (131, 6%);</td>
</tr>
<tr>
<td>G01B5/10 (589, 382)</td>
<td>G01B5/10 (253, 66%);</td>
<td>G01B7/125 (44, 12%);</td>
<td>B24B49/04 (31, 8%);</td>
</tr>
<tr>
<td>G01B5/12 (3985, 1397)</td>
<td>G01B5/12 (1003, 72%);</td>
<td>G01B7/13 (182, 13%);</td>
<td>G01B5/08 (120, 9%);</td>
</tr>
<tr>
<td>G01B5/14 (6622, 1767)</td>
<td>G01B5/14 (707, 40%);</td>
<td>G01B5/146 (182, 10%);</td>
<td>G01B7/14 (100, 6%);</td>
</tr>
<tr>
<td>G04D5/40 (4179); G04D5/403 (1495); G04D5/406 (1493); G04D5/408 (1494);</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Further information: coverage
CPC Coverage

Much more than simply EP and US documents ...
29 Offices participating in the CPC
... including 16 EPO Member States
# Publications with National Office (CPCNO) allocations

<table>
<thead>
<tr>
<th>Country</th>
<th>Country Code</th>
<th>Number of publications with CPCNO symbols (Document level) on 01/10/2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>AT</td>
<td>9,633</td>
</tr>
<tr>
<td>Brazil</td>
<td>BR</td>
<td>16,361</td>
</tr>
<tr>
<td>China</td>
<td>CN</td>
<td>2,903,896</td>
</tr>
<tr>
<td>Finland</td>
<td>FI</td>
<td>8,494</td>
</tr>
<tr>
<td>Greece</td>
<td>GR</td>
<td>6,135</td>
</tr>
<tr>
<td>Korea</td>
<td>KR</td>
<td>1,466,788</td>
</tr>
<tr>
<td>Mexico</td>
<td>MX</td>
<td>1,516</td>
</tr>
<tr>
<td>Norway</td>
<td>NO</td>
<td>7,457</td>
</tr>
<tr>
<td>Portugal</td>
<td>PT</td>
<td>480</td>
</tr>
<tr>
<td>Russian Fed.</td>
<td>RU</td>
<td>81,282</td>
</tr>
<tr>
<td>Spain</td>
<td>ES</td>
<td>34,204</td>
</tr>
<tr>
<td>Sweden</td>
<td>SE</td>
<td>142,366</td>
</tr>
<tr>
<td>Switzerland</td>
<td>CH</td>
<td>1,476</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>GB</td>
<td>147,443</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>4,827,531</strong></td>
</tr>
</tbody>
</table>

- **Total: 52.8 million documents classified in CPC**

- 3.91 Million documents
- 48.9 Million documents (family level only)
- 93% Documents classified in CPC (family level only)
- 7% Documents with CPCNO symbols only

Updated 19 October 2018
Systematically Classified CPC Documentation at the EPO

- **EP, US, CH, DE, FR, GB, WO (WIPO), AP (ARIPO), OA (OAPI)**
  - i.e. minimum PCT with one family member in one of the EPO languages
  - JP, RU, ES, CN are not included (other languages)
    - but WO document in these languages are classified via English Abstracts and figures

- **BE, NL, LU** (historical reasons)
- **AT, AU, CA** (first filing residents)

- **Selected Non-Patent Literature (NPL)**
  - pre-selected journals (field-dependent)
  - any article on examiner's request
  - identified by XP numbers
FI/F-terms Coverage
# FI/F-Terms coverage: JP documents

The range of stored records is following. [Click here for PAI Stored Data Information.](https://www4.j-platpat.inpit.go.jp/eng/tokujitsu/tkft_en/TKFT_EN_GM201_StoredInfo)

<table>
<thead>
<tr>
<th>Document Description</th>
<th>Coverage of Documents</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Publication of PCT application(patent)</td>
<td>1979-500001 - 2015-51181</td>
<td>03/10/2013</td>
</tr>
<tr>
<td>B: Publication of examined patent application</td>
<td>1922-000007 - 1996-034772</td>
<td>17/01/1986</td>
</tr>
<tr>
<td>B: Publication of granted patent application</td>
<td>2500001 - 5703400</td>
<td>21/08/2014</td>
</tr>
<tr>
<td>C: Patent specification</td>
<td>0000001 - 0216017</td>
<td>00/00/0000</td>
</tr>
<tr>
<td>U: Publication of registered utility model application</td>
<td>3000001 - 3197097</td>
<td>16/04/2015</td>
</tr>
<tr>
<td>Y: Publication of examined utility model application</td>
<td>1922-000001 - 1996-011090</td>
<td>31/05/1994</td>
</tr>
<tr>
<td>Y: Publication of granted utility model application</td>
<td>2500001 - 2607890</td>
<td>20/06/2000</td>
</tr>
<tr>
<td>Z: Examined utility model specification</td>
<td>0000001 - 0406283</td>
<td>29/06/1948</td>
</tr>
<tr>
<td>A1: Domestic re-publication of PCT publication</td>
<td>79/000329 - 2013-076758</td>
<td>20/05/2013</td>
</tr>
</tbody>
</table>

The coverage of machine-translatable documents is following.

<table>
<thead>
<tr>
<th>Document Description</th>
<th>Coverage of Documents</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Publication of unexamined patent application</td>
<td>1993-000001 - 2015-091219</td>
</tr>
<tr>
<td>A: Publication of PCT application(patent)</td>
<td>1996-500001 - 2015-513391</td>
</tr>
<tr>
<td>B: Publication of examined patent application</td>
<td>1994-000001 - 1996-034772</td>
</tr>
<tr>
<td>B: Publication of granted patent application</td>
<td>2500001 - 5715630</td>
</tr>
<tr>
<td>U: Publication of unexamined utility model application</td>
<td>1993-000001 - 2006-000001</td>
</tr>
<tr>
<td>U: Publication of PCT application(utility model)</td>
<td>1996-500001 - 1998-500001</td>
</tr>
<tr>
<td>U: Publication of registered utility model application</td>
<td>3000001 - 3197312</td>
</tr>
<tr>
<td>Y: Publication of examined utility model application</td>
<td>1994-000001 - 1996-011090</td>
</tr>
<tr>
<td>Y: Publication of granted utility model application</td>
<td>2500001 - 2607899</td>
</tr>
<tr>
<td>A1: Domestic re-publication of PCT publication</td>
<td>95/004550 - 2013-122068</td>
</tr>
</tbody>
</table>

* Within the above mentioned coverage, some documents are not machine-translatable.
Rate for FI corresponding to the latest IPC

Upon completion of FI revision in Nov 2016, rate of FI adopting the latest IPC reached approximately 98.5 %.
Further information: History of the classification
Why use different classification schemes?

Patent filings at IP5 Offices

- **EPO**
- **USPTO**
- **JPO**
- **KIPO**
- **SIPO**

2010: Provisional estimates by CO
Reasons for Patent Classification Systems

- to Retrieve prior-art in an efficient manner

- Under the Strasbourg Agreement there is a Legal obligation to classify patent documents under the **IPC (International Patent Classification)**
In the good old days of Paper Documentation…

- Needed to physically store printed paper documents somewhere
- Needed to classify documents according to technical content (sometimes in more than one location)
- Searches were carried out by reading documents arranged in paper groups
Now, in modern times...

Databases contain lots of prior art documents, allowing specific types of information to be searched individually, e.g.

- Titles
- Abstracts
- Full text
- Inventor names
- Citations
- etc.
Do we still need Classification?

- Certainly **Yes** for the majority of technical fields
  - Abstract / full text not available from all countries
  - Language-independent search
  - Concept-based searches

- Not so much in some technical fields, e.g.
  - organic compounds (structure searches)
  - genetic sequences

- Legal Obligation (e.g. IPC - Strasbourg Agreement)
Brief history of IPC

1954 Council of Europe (CE) decides to set up a European classification for Patents for Inventions

1954 European Convention on the International Classification of Patents for Inventions

1968 First IPC edition published

1971 Strasbourg agreement
IPC becomes a world-wide system under the supervision of WIPO

2006 IPC Reform

2011 Simplified IPC
The IPC Reform

Core level

IPC (2006-2010)
CL Revision: 3 years

IPC (pre-2006)
Revision: 5 years

IPC (2006-2010)
AL Revision: 3 months

Advanced level
Simplified IPC (1 January 2011-)

- No separate independent levels
- Classification according to full IPC or in main groups only
- Single revision body: IPC/WG (overseen by IPC/CE)
- Projects from Trilateral and IP5 have priority
- New version once a year, e.g 2015.01
Why CPC?

The EPO needed a Classification system that:

- was more detailed than the IPC
- could be changed more often
- enabled a complete search with one set of symbols (unlike in the IPC where all previous IPC editions had to be searched)

Following a Joint partnership between the EPO and the USPTO harmonizing their existing classification systems CPC was introduced on January 1 2013
History of CPC (formerly ECLA)

1877  German Patent Classification (DPK) symbols printed on German Patent documents

1912  *Indeling der Techniek* (IdT) Dutch Classification system introduced the Dutch Patent Office, based on the DPK

1947  IIB established, and uses the IdT Classification system

1968  IIB starts converting its search documentation from IdT to a system based on the IPC (International Patent Classification)

1970  IIB stops using IdT, and creates even finer IPC subgroups, thereby creating ECLA (European Classification)

1978  IIB integrated into the EPO, which uses ECLA Classification system

1985  ICO (“in computer codes only”) indexing symbols introduced in ECLA

1991  last l.d.T. symbols closed; 100% ECLA classification at EPO

28 October 2010  EPO and USPTO agreed to create CPC

1 January 2013  CPC launched
Why FI & F-terms?

- annually around 350,000 patent applications in Japan
- 2011: 342,610 applications, 2012: 342,796 applications
- huge amount of prior art!
Brief history of FI & F-terms

- 1977: start of online search system at JPO
- 1978: IPC\(^2\) officially introduced at JPO
  - ever growing numbers of applications
  - IPC paper files become too big
  - JPO examiners subdivide files (using alphabetic letters A - Z)
  - start of "File Index" (FI) classification
- 1985: "paperless office" project
  - computerised search system
  - new search indexes: File Forming Terms (F-terms)
  - to improve search efficiency
Thank you for your attention!

Questions?

cpc@epo.org