IPC - International Patent Classification

Introduction

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History of the IPC

✓ IPOs handling huge numbers of patent documents were faced with:
  ▪ administrative processing of patent applications
  ▪ maintenance of search files containing published patent documents

✓ National classification systems created at:
  ▪ the Patent Office of United States of America in 1831
  ▪ the German Patent Office in 1877
  ▪ the United Kingdom Patent Office in 1880

✓ Inclusion of the universal state of the art:
  ▪ Establish concordance tables between two different national classifications
  ▪ Reclassify foreign patent documents according to its own national classification
    ➢ Inefficient
    ➢ Need for International Patent Classification system
Modern History of the IPC

1952  Council of Europe initiates work on patent classification
1968  European Classification of Patents for Invention – 1st edition
1971  Diplomatic Conference on the IPC Strasbourg
1975  Strasbourg Agreement entered into force
   New editions of the IPC – every 5 years
2006  8th edition of the IPC – IPC Reform
   Publication cycle – every 3 years(Core) to 3 months(Advanced)
2009  Yearly publications
2011  IPC Simplification
   Discontinuation of Advanced/Core levels (full IPC/main group)
2013  IPC Revision Roadmap
   Identify areas for revision / Accelerate the publication procedure
Strasbourg Agreement

1975 - Strasbourg Agreement entered into force

IPC Union
- initially 13 members
- currently 62 member states (as of November 2013)
- in addition 4 organizations (EPO, EAPO, ARIPO, OAPI)

Rights of Member States - participate in improving the IPC

Obligation of Member States - allot IPC symbols to national published patent documents

IPC applied by more than 100 countries
(e.g. 148 PCT members as of November 2013)
# Bodies of IPC Union

**Assembly of IPC Union** - every two years with WIPO General Assembly

**Committee of Experts (CE)** - once a year
- executive body which adopts IPC new versions and general rules (IPC Guide, Guidelines, etc.),
- create new revision projects, etc.

**IPC Revision Working Group (WG)** - twice a year
- technical body which approves IPC new versions, Definitions, etc.

**Ad hoc Task Forces** - particular tasks, e.g. systematic maintenance, etc.

**International Bureau (IB) at WIPO**
- administrative support,
- prepare IPC-related meetings and provide secretariat,
- preparation of IPC publication,
- maintenance of Master Files and IPC-related IT systems, etc.
What is the IPC?

✔ Similar to library classification systems, e.g.
  - Dewey Decimal Classification (DDC)
  - Library of Congress Classification (LCC)

✔ Somehow similar to other classification systems:
  - ICD: International Classification of Diseases (WHO)
  - ISCO: International Standard Classification of Occupations (ILO)
  - CAS registry numbers (Chemical Abstracts Service)
  - Nice Classification: International Classification of Goods and Services for the Purposes of the Registrations of Marks
  - Locarno Classification: International Classification for Industrial Designs
  - Vienna Classification: International Classification of the Figurative Elements of Marks (WIPO)
What is the IPC?

✓ System for classifying technical subject matter, mainly patent documents

- Specially adapted for needs of patent documents
- Applied to >95% of patent documents worldwide
- Available in most databases for patent search

➢ Efficient tool for searching patent documents
Purposes of the IPC

✓ Primary purposes:
  - effective search tool for the retrieval of patent documents
  - ordering patent documents in order to facilitate access to the technological and legal information

✓ Other purposes:
  - selective dissemination of patent information
  - investigation of the state of the art
  - preparation of industrial property statistics
What is the IPC?

- Large set of symbols/codes (~70000)
  - e.g.: A23G 9/00
- Title for each symbol
  - A23G 9/00 Frozen sweets, e.g. ice confectionery, ice-cream; Mixtures therefor

- "IPC scheme": all symbols and titles
  + hierarchy
  + additional elements
Symbols presented on front pages of patent documents
Symbols presented in International Search Reports

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<thead>
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<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
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Symbols presented as database contents

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<td>WO</td>
<td>WO/2012/076641 - FROZEN CONFECTIONARY PRODUCTS COMPRISING HYDROLYSED WHOLE GRAIN</td>
<td>14.06.2012</td>
<td>A23L 1/09</td>
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<td>NESTEC S.A.</td>
<td>SCHAFFER-LEQUART, Christelle</td>
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<td>EP</td>
<td>2463378 - Alpha isomaltsylglucosacharide synthase, process for producing the same and use thereof</td>
<td>13.06.2012</td>
<td>C12P 19/00</td>
<td>10184877</td>
<td>HAYASHIBARA BIOCHEM LAB</td>
<td>KUBOTA MICHO</td>
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<td>WO</td>
<td>WO/2012/037620 - FAT REPLACER COMBINATION FOR PARTIAL OR TOTAL SUBSTITUTION OF FAT IN FOOD PRODUCTS, AND A FOOD PRODUCT COMPRISING THE SAME</td>
<td>29.03.2012</td>
<td>A21D 2/16</td>
<td>T2173</td>
<td>CARGILL, INCORPORATED</td>
<td>PEIXOTO, Erivelton</td>
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<td>WO</td>
<td>WO/2012/018816 - FROZEN CONFECTIONERY PRODUCT WITH A NATURAL STABILISER</td>
<td>09.02.2012</td>
<td>A23G 9/04</td>
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<td>NESTEC S.A.</td>
<td>LALLEMAND, Maud, Isabelle</td>
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Why classification?

✓ Databases can be searched by keywords, specific terms

✓ More sophisticated approaches, e.g.
  ▪ Natural language search
  ▪ Text mining techniques

**Advantage** of using IPC in comparison to keyword search?
Advantages of using IPC

✓ Language independent

- e.g. searching Chinese, Korean, Japanese patent documents (> 50% of weekly publications)
- often only English abstracts, titles
Worldwide Patent Filing

Searching Chinese Patent Documents

SIPO
STATE INTELLECTUAL PROPERTY OFFICE OF P.R.C.

专利检索
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专利检索

分类号：G01S13/93
Searching Korean Patent Documents
Searching Japanese Patent Documents

Text Search
For 'Number Search', please click on the right button.

Applicant, Title of invention, Abstract --- e.g. computer semiconductor

Please input a SPACE between each keyword when you use more than one keyword. One letter word or stopwords are not searchable.

AND

AND

AND

AND

Date of publication of application --- e.g. 19980401 - 19980405

AND

IPC --- e.g. D01B7/04 A01C11/02

Please input a SPACE between each IPC symbol when you use more than one IPC symbol.

Search  Stored data
Advantages of using IPC

✓ Terminology / "jargon" independent

Scientific literature ↔ Patent documents/specifications

Patent documents/specifications often written by lawyers:
> non-experts: not familiar with specific terminology
> prefer generic, unspecific terminology for legal reasons,
e.g. to avoid any unnecessary limitation of the scope of
protection as defined by claims
Examples

Swimming pool = “water retaining recreational structure”

Balloon = “spherical device filled with gas for recreational purposes”

Paper bin = “arrangement for the disposal of refuse”

Shoe = “footwear”
Advantages of using IPC

✓ Terminology / "jargon" independent

Problems with keyword searching:
- Use of inappropriate terminology, avoiding appropriate terminology
- Occurring of unwanted/"competing" terminology
- Variety of options for describing features
- Different content of different parts of specification
Advantages of using IPC

✓ Standardized application to documents by experts of patent offices
  ➢ indexing, added value

  - Early classification after application
    > used for publication (18 months after filing)

  - Reviewed by examiner at examination
    > classification of granted patents may differ
Advantages of using IPC

✓ Concept search:
  title of classification entry = standardized set of keywords
  - Well defined technical subject matter
  - Stable, i.e. not changing with the times
  - Therefore useful for:
    - preparing industrial property statistics
    - monitoring the progress of technology, patent landscaping
    - selective dissemination of information (SDI) in enterprises
Advantages of using IPC

Summary

✓ Language independent
✓ Terminology / ”jargon” independent
✓ Standardized application to documents (by experts of patent offices)
✓ Available for (old) patent documents where no full text of claims / description is available
✓ Concept search

➢ More complete search results than pure text search
✓ Search in PATENTSCOPE all PCT documents with IPC:
  • Q1: A42B 3/00 (Helmets) 1015 hits

✓ Keyword search with:
  • Q2: “helmet*” 1167 hits
  • Q3: “headgear*” 343 hits
  • Q2 OR Q3 1464 hits

✓ Q1 AND (Q2 OR Q3) 755 hits

- 260 documents classified in A42B 3/00 have neither “helmet*” nor “headgear*” in their abstract!
- Search results by text search include non-relevant information