The Cooperative Patent Classification on STN

Terri Dockter – FIZ Karlsruhe
Cooperative Patent Classification System (CPC)

- Description
  - Comparison to other classification systems
  - CPC structure
  - Timeline for implementation
  - Current issuing authorities and timeliness
- Implementation on STN
- CPC Thesaurus
- Search examples
- STN database timeline
Cooperative Patent Classification (CPC)

• CPC is a new bilateral classification system managed and maintained by EPO and USPTO
  – Entered into force January 2013
• Based on ECLA, CPC incorporates the best classification practices of EPO and USPTO
  – Has an IPC-like structure
  – Includes all EPO classified documents
  – Will include all US documents
• Like ECLA and USPC, the new CPC has many more subdivisions than IPC
USPTO and EPO Work Toward Joint Patent Classification System

"In view of the significant benefit to stakeholders of developing a transparent and harmonized approach to a global classification system for patent documents; in order to make the search process more effective; and in the belief that cooperation between their two offices will facilitate progress in undertaking classification harmonization projects under the IP5 Common Hybrid Classification initiative, the USPTO and the EPO have agreed together to 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 system would be aligned with the World Intellectual Property Organization (WIPO) classification standards and the International Patent Classification (IPC) structure. Accordingly, they have initiated discussions on governance and operational aspects of such a partnership.

The IP5 partner offices will be continually apprised of progress at appropriate IP5 forums. Stakeholders will receive regular updates on the substance and progress of classification partnership discussions between the two offices."

October 25, 2010

David J. Kappos  
Benoît Battistelli
CPC scheme

• In one scheme CPC incorporates:
  – **ECLA** (~140K entries)
  – **ICO** (EPO indexing codes, ~40K entries)
  – **Expanded G06Q** scheme (Business Methods)
    • Covering most USPC 705 subdivisions
  – USPC special collections and digests
• In total ~250,000 CPC subdivisions

CPC > JPO (FI + FT) > EPO (ECLA + ICO) > USPC >> IPC

250K  187K  180K  167K  70K

See full CPC scheme here:
### Example: The IPC-like CPC hierarchy

- The "root" of the hierarchically closest IPC symbol is used

<table>
<thead>
<tr>
<th>IPC</th>
<th>ECLA</th>
<th>CPC</th>
</tr>
</thead>
<tbody>
<tr>
<td>H01L21/027</td>
<td>H01L21/027</td>
<td>H01L21/027</td>
</tr>
<tr>
<td></td>
<td>H01L21/027B</td>
<td>H01L21/02709</td>
</tr>
<tr>
<td></td>
<td>H01L21/027B2</td>
<td>H01L21/02718</td>
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<td>H01L21/027B6</td>
<td>H01L21/02727</td>
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<tr>
<td></td>
<td>H01L21/027B6B</td>
<td>H01L21/02736</td>
</tr>
<tr>
<td></td>
<td>H01L21/027B6B2</td>
<td>H01L21/02745</td>
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<tr>
<td></td>
<td>H01L21/027B6B4</td>
<td>H01L21/02754</td>
</tr>
<tr>
<td></td>
<td>H01L21/027B6C</td>
<td>H01L21/02763</td>
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<tr>
<td></td>
<td>H01L21/027B6D</td>
<td>H01L21/02772</td>
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<tr>
<td></td>
<td>H01L21/027B6E</td>
<td>H01L21/02781</td>
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<tr>
<td></td>
<td>H01L21/033</td>
<td>H01L21/033</td>
</tr>
</tbody>
</table>

- H01L21/033
IPC, ECLA, and CPC formats

IPC

Section  Class  Subclass  Group  Subgroup

ECLA

IPC

Section  Class  Subclass  Group  Subgroup

CPC

Section  Class  Subclass  Group  Subgroup
<table>
<thead>
<tr>
<th>Sections A - H</th>
<th>Section Y</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main trunk</strong></td>
<td><strong>Additional (A) information only</strong></td>
</tr>
<tr>
<td>Invention (I) or <strong>Additional (A) information</strong></td>
<td>Emerging technology</td>
</tr>
<tr>
<td><strong>160,496 symbols</strong></td>
<td>USPC XRACs &amp; digests</td>
</tr>
</tbody>
</table>

| **Indexing codes (“2000”-series, i.e., ANNA2NNN/NNNNNNN)** |
| **Breakdown & Orthogonal ICO IPC indexing** |
| **Additional (A) information only** |
| **82,223 symbols** | **7,330 symbols** |
Characteristics of CPC

• Improved alignment to current IPC
• Indication of “invention information” vs. “additional information” as in IPC
• Hierarchical CPC structure makes it very easy to broaden or narrow the scope of a search
  – Use the STN CPC thesaurus and relationship codes
    • To narrow the search +NT
    • To broaden the search +BT

Detailed explanation of how ECLA and ICO were mapped into CPC:
http://www.cooperativepatentclassification.org/publications/WorkshopMarchVienna.pdf
EPO/USPTO* CPC implementation timeline

November 2010
Freeze USPC scheme

June 2012
Freeze ECLA scheme

1 January 2013
EPO only uses CPC

USPTO transition period begins for Utility patents only*

14 March 2013
First US A docs with USPTO-assigned CPCs publish

1 April 2013
Joint CPC revisions begin (monthly)

January 2015
USPTO transition period ends and only CPC* is used

* Excludes US Plant and Design patents, which continue to receive USPC only.
CPC implementation for US Utility patents
2013 – 2015

• Newly filed applications receive both CPC & USPC beginning January 2, 2013
• B documents receive USPC PLUS
  – Any CPCs assigned to A document
  – Optionally, additional CPCs may be assigned
• Searches are performed with USPC &/or CPC
• EPO ensures CPC quality
• By end of 2014, exclusively CPC is used

Until beginning of 2015, comprehensive and timely searches require use of BOTH USPC and CPC!
## Patent offices assigning CPC (January 2013)

<table>
<thead>
<tr>
<th>Patent Office</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>European Patent Office (EPO)</td>
<td>EP</td>
</tr>
<tr>
<td>United States</td>
<td>US</td>
</tr>
<tr>
<td>Great Britain</td>
<td>GB</td>
</tr>
<tr>
<td>Spain</td>
<td>ES</td>
</tr>
<tr>
<td>Sweden</td>
<td>SE</td>
</tr>
</tbody>
</table>
The EPO also applies CPC to a subset of *The PCT Minimum Documentation*

<table>
<thead>
<tr>
<th>Regional system</th>
<th>Begin Date</th>
<th>National Authority</th>
<th>Begin Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP</td>
<td>1978 (start)</td>
<td>CH</td>
<td>1920*</td>
</tr>
<tr>
<td>WO</td>
<td>1978 (start)</td>
<td>DE</td>
<td>1920*</td>
</tr>
<tr>
<td>AP</td>
<td>1984</td>
<td>DE-U</td>
<td>1985</td>
</tr>
<tr>
<td>OA</td>
<td>1966</td>
<td>FR</td>
<td>1902</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GB</td>
<td>1909</td>
</tr>
<tr>
<td></td>
<td></td>
<td>US</td>
<td>1920*</td>
</tr>
</tbody>
</table>

For historical reasons, coverage is also available for BE, NL and LU, and also partial coverage is available for AT, AU and CA.
Timeliness of CPC

• Available on day of publication for all documents published by the CPC-issuing authorities
  – PCT-publications with the EPO as searching authority

• Up to 6 month delay for all other documents classified by the EPO, i.e., PCT-minimum documentation authorities
  – all other PCT-publications, AP, OA, CH, DE, DE-U, FR

IMPORTANT, especially when setting up ALERTS!!
Agenda

• Description
  – Comparison to other classification systems
  – CPC structure
  – Timeline for implementation
  – Current issuing authorities and timeliness

• Implementation on STN
• CPC Thesaurus
• Search examples
• STN database timeline
Implementation of CPC on STN

• CPC codes are provided in WIPO ST. 8
  – Same standard as IPC reform codes
  – Attributes are very similar to IPC attributes

• Search and display of CPC is therefore very similar to the implementation of IPC on STN
  – Analogous search, display and analysis options

• Both current and original CPC are available

• CPC includes version indicator and action dates
One field does it all - CPC

• Search for both original and reclassified codes in one field /CPC
• Access CPC thesaurus to browse hierarchy and definitions by expanding in /CPC
• Search for keywords appearing anywhere within the code definitions by expanding in /CPC using the relationship +KT
## Common search commands using CPC

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>=&gt; S D03D0015-0011/CPC</code></td>
<td>CPC search in <em>STN-standard format.</em></td>
</tr>
<tr>
<td><code>=&gt; S D03D0015/CPC</code></td>
<td>CPC search at <em>main group level.</em></td>
</tr>
<tr>
<td><code>=&gt; S D03D/CPC</code></td>
<td>CPC search at <em>subclass level.</em></td>
</tr>
<tr>
<td><code>=&gt; S D03D0015-0011/CPC(S)I/CPC.KW</code></td>
<td>CPC search + <em>attributes.</em></td>
</tr>
<tr>
<td><code>=&gt; S H01L0021-027+NT/CPC</code></td>
<td>CPC search with all <em>narrower terms.</em></td>
</tr>
</tbody>
</table>
Search for keywords in CPC descriptions using STN Thesaurus

```plaintext
=> E TRANSDERMAL+KT/CPC

<table>
<thead>
<tr>
<th>E#</th>
<th>FREQUENCY</th>
<th>TERM</th>
</tr>
</thead>
<tbody>
<tr>
<td>--</td>
<td>---------</td>
<td>----</td>
</tr>
<tr>
<td>E1</td>
<td>0</td>
<td>--&gt; TRANSDERMAL/CPC</td>
</tr>
<tr>
<td>E2</td>
<td>0</td>
<td>KT A61L0024-00; TRANSDERMAL DRUG ADMINISTRATION A61M0035-00/CPC</td>
</tr>
<tr>
<td>E3</td>
<td>0</td>
<td>KT TRANSDERMAL PATCHES/CPC</td>
</tr>
<tr>
<td>E4</td>
<td>0</td>
<td>KT TRANSDERMAL PATCHES DRUG-IN-ADHESIVE TYPE, I.E..</td>
</tr>
<tr>
<td>E6</td>
<td>0</td>
<td>KT TRANSDERMAL PATCHES HAVING MULTIPLE DRUG LAYERS OR RESERVOIRS, E.G. OBTAINING SPECIFIC RELEASE PATTERN, FOR COMBINING DIFFERENT DRUGS/CPC</td>
</tr>
<tr>
<td>E7</td>
<td>0</td>
<td>KT TRANSDERMAL PATCHES SIMILAR DRUG-CONTAINING COMPOSITE DEVICES, E.G. CATAPLASMS GALENICAL ASPECTS OF IONTOPHORETIC DEVICES A61K0009-0009; MICRONEEDLE ARRAYS/CPC</td>
</tr>
</tbody>
</table>

********** END **********
```
Expand on E# of interest +ALL to find code and full definition

<table>
<thead>
<tr>
<th>E#</th>
<th>FREQUENCY</th>
<th>TERM</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1</td>
<td>0</td>
<td>TRANSDERMAL PATCHES SIMILAR DRUG-CONTAINING COMPOSITE DEVICES, E.G. CATAPLASMS GALENICAL ASPECTS OF IONTOPHORETIC DEVICES A61K0009-0009; MICRONEEDLE ARRAYS/CPC</td>
</tr>
<tr>
<td>E2</td>
<td>4071</td>
<td>A61K0009-7023/CPC</td>
</tr>
</tbody>
</table>

*********** END **********
Expand on CPC of interest +ALL to see full narrower and broader terms with definitions

=> E A61K009-7023+ALL/CPC

<table>
<thead>
<tr>
<th>E#</th>
<th>FREQUENCY</th>
<th>TERM</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1</td>
<td>0</td>
<td>BT7 A/CPC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HUMAN NECESSITIES (2013-01-01)</td>
</tr>
<tr>
<td>E2</td>
<td>0</td>
<td>BT6 A61-/CPC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HEALTH; AMUSEMENT (2013-01-01)</td>
</tr>
<tr>
<td>E3</td>
<td>0</td>
<td>BT5 A61/CPC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MEDICAL OR VETERINARY SCIENCE; HYGIENE (2013-01-01)</td>
</tr>
<tr>
<td>E4</td>
<td>1596379</td>
<td>BT4 A61K/CPC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PREPARATIONS FOR MEDICAL, DENTAL, OR TOILET PURPOSES REFERENCE: DEVICES OR METHODS SPECIALLY ADAPTED FOR BRINGING PHARMACEUTICAL PRODUCTS INTO PARTICULAR PHYSICAL OR ADMINISTERING FORMS A61J0003-00;</td>
</tr>
<tr>
<td>E5</td>
<td>23734</td>
<td>BT3 A61K0006/CPC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>. . .</td>
</tr>
</tbody>
</table>
Example: Display of CPC in INPADOC files

**CPC** standard display field included in ALL, MAX, IND, etc.

```plaintext
=> D TI PI PA IND
L1   ANSWER 1 OF 1    INPADOCDB COPYRIGHT 2013 EPO/FIZ KA on STN
TI   PRODUCTION SCALE FABRICATION METHOD FOR HIGH RESOLUTION AFM TIPS.
PI   US 20130019351    A1 20130117
PA   KING ABDULAZIZ CITY FOR SCIENCE AND TECHNOLOGY; INTERNATIONAL
     BUSINESS MACHINES CORPORATION
IPCI  G01Q0060-38    [I,A]; B82Y0015-00    [N,A]; G01Q0060-40    [I,A]
CPC   B82Y0035-00; B82Y0015-00; B82Y0040-00; G01Q0060-38; G01Q0070-12
INCL  INCLM 850/041.000
     INCLS 850/040.000; 977/762.000; 977/953.000
```

**CPC.TAB** custom display format including all attributes

```plaintext
=> D CPC.TAB
CPC CODE         VERSION    POS INV CC ASSIGNMENT DATE     STAT
---------------- ---------- --- --- -- ---------- -------- ----
B82Y0035-00     (20130101)  F    I     Human      20130101  O
B82Y0015-00     (20130101)  L    I     Human      20130101  O
B82Y0040-00     (20130101)  L    I     Human      20130101  O
G01Q0060-38     (20130101)  L    I     Human      20130101  O
G01Q0070-12     (20130101)  L    I     Human      20130101  O
```
One field for all CPC attributes /CPC.KW

- Classification value
  - I (Invention), A (Additional)
- Position
  - F (First), L (Later)
- Classification status
  - O (Original), R (Reclassified)
- Source of classification (H, M, G)

* Only available in CA and for member level patents in DWPI (not in INPADOCDB or full-text patent databases).

Link to CPC code using (S)-proximity.
Classification status, version, and date clearly indicated

- As in IPC, only the initial and current CPC are in the record, which is indicated by the classification status (/CPC.KW)
  - O (Original), R (Reclassified)
- **BUT** CPC code is associated with both the version and the date the CPC was applied
  - Version indicator /CPC.VER, Action date /CPC.ACD
  - Each CPC version is available at www.cpinfo.org

Link to CPC code using (S)-proximity.
Comprehensive CPC data (front & backfile) plus thesaurus available

• INPADOC files (INPADOCDB, INPAFAMDB)

• USPATFULL/USPAT2

• CA^{SM}/CAplus^{SM} family of databases
  – For details, please register for upcoming e-seminar on February 26

See http://www.stn-international.com/e-seminars.html
CPC implementation in DWPI

• Frontfile begins to appear as soon as available from USPTO (February 2013)
• Thesaurus becomes available simultaneously
• Backfile loading begins February 2013
  – Delayed by USPTO’s recent implementation of Position attribute (First, Later)
• For details, please register for upcoming joint e-seminar with Thomson on March 19

See http://www.stn-international.com/e-seminars.html
CPC implementation in progress – all remaining full-text patent databases*

- Frontfile and thesaurus available this month

- Loading of backfile begins in February/March

* Except PATDPAFULL and EPFULL.
Summary

- CPC is a new hierarchical system provided jointly by EPO and USPTO
- Fully implemented at EPO
- IN PROCESS of implementation at USPTO
- Use CPC Thesaurus to include broader and narrower terms
- For comprehensive searching, continue to use USPC also until 2015
- For more details on STN, stay tuned!