COOPERATIVE PATENT CLASSIFICATION

Prepared by USPTO and EPO

CPC Scheme Files Specification

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March 3, 2021	USPTO	0.1	Draft	Creation
May 28, 2021	USPTO	1.0	Revised	Clarified description
December 4, 2023	USPTO/vho	1.1	Revised	Clarified description, particularly with respect to the sort-key attribute and class-title elements

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1. INTRODUCTION

The purpose of this document is to describe the structure and content of the Cooperative Patent Classification (CPC) scheme files corresponding to the following W3C XML Schema:

- cpc-scheme-v1_7.xsd (effective beginning with the 2016.11 CPC release).

2. BACKGROUND

In January 2013, the CPC was launched as a joint patent classification system based on the European classification system (ECLA), also including practices from the United States Patent Classification (USPC) system. The CPC is based on the International Patent Classification (IPC) system, and shares the same general structure of the IPC Scheme and Definitions.

The CPC Scheme XML files serve as the authoritative data source of the CPC Scheme. The CPC Scheme XML is intended for upload into IT systems each time a new version of the CPC becomes available.

This specification describes the Scheme information exchanged as well as notable differences from the IPC XML structure.

3. CONTENT OF THE XML FILES

The XML files are encoded in Unicode UTF-8 character set. Special characters beyond the Basic Latin character set are encoded using numeric character references.

3.1 Information hierarchy

The CPC Scheme is subdivided into one section index file (cpc-scheme.xml), a set of files corresponding to each Section (e.g. cpc-scheme-B.xml, ...), and a set of files corresponding to each Subclass (e.g. cpc-scheme-A61K.xml, …).

The CPC Scheme XML is arranged hierarchically (from top-down):

- (for section files): Section, Subsection (including placeholders), Class, Subclass
- (for subclass files): Subclass, Guidance heading (including placeholders), Main group, Subgroups (up to 12 dots)

Contrary to the IPC Scheme XML, the CPC Scheme XML consists only of "structured" entries. In the IPC Scheme XML, non-structured entries include: Subsections, Guidance headings, Notes, Subclass Indices (not adopted in CPC).

In order to maintain the hierarchical structure, placeholders are given for entries corresponding subsections and guidance headings in the CPC XML where no subsections or guidance headings occur within the scope of the Section or Subclass.

In addition, Notes (and Warnings) are always located with the CPC entry (symbol, or rarely, guidance headings).

In the CPC Scheme XML, properties are defined in attributes.

3.2 CPC class scheme object

The file contains a list of CPC class scheme objects, each including

- One CPC entry (`classification-item`)
  - Properties of the CPC entry (symbol, level, …)
  - Descriptive part of the CPC entry (title, note, warning)

3.3 Root element

In the CPC Scheme, the root element name is `class-scheme`. The root element contains `classification-item` elements, which are hierarchically arranged.

3.3.1   CPC class-scheme element properties

Name: publication-date

Indicates the date of entry into force of the corresponding CPC version.

Name: scheme-type

Value: "cpc" corresponds to the classification scheme system.

Name: publication-type

Value: "official". Indicates the type of publication.

3.4 CPC classification-item entry properties

Within the `classification-item` element, the following properties exist:

3.4.1   breakdown-code

Name: breakdown-code

Value: Originally intended to distinguish breakdown indexing codes from orthogonal indexing codes. Breakdown indexing codes are 2000-series (additional-only) subgroups of main groups used to represent invention information. Orthogonal indexing codes correspond to those 2000-series main groups and their subgroups, which are used to identify additional-only information. This attribute is currently used to indicate any indexing code.

- true = Any indexing code (includes **both** breakdown codes and orthogonal codes).
- false (default) = A entry which does not correspond to an indexing code.

3.4.2   not-allocatable

Name: not-allocatable

Value: Used to indicate that documents cannot be allocated to this symbol for classification. A symbol is allocatable only when it corresponds to a group or subgroup.

- true = documents cannot be allocated to this entry
- false (Default) = documents can be allocated to the symbol of this entry

3.4.3   level

Name: level

Value: Indicates the hierarchical indent level of the entry. Note that Guidance and Subsection headings are considered part of the hierarchy in the CPC (contrary to the IPC).

- 2 = Section
- 3 = Subsection, or a subsection placeholder in order to maintain the hierarchical structure)
- 4 = Class
- 5 = Subclass
- 6 = Guidance heading, or a guidance heading placeholder in order to maintain the hierarchical structure
- 7 = Main group
- 8-19 = Subgroups from 1 dot to 12 dots (respectively)

3.4.4   additional-only

Name: additional-only

Value: Used to indicate symbols which can only have a classification value of "additional information." All 2000-series symbols (indexing codes) and Y-series symbols are given a value of "true". All other symbols should be given a value of "false". Applies only when attribute `not-allocatable` indicates that documents may be allocated.

- true = the corresponding group can only be allocated as "additional information"
- false = the corresponding group can be allocated as either of "additional information" or "invention information"

3.4.5   link-file

OPTIONAL

Name: link-file

Value: name of the corresponding subclass XML file, when the `classification-item` element appears in a section XML file. Used to link section and subclass XML together. For example, Section B would contain a link to the file "cpc-scheme-B01K.xml" corresponding to the subclass entry.

3.4.6   sort-key

Name: sort-key

Scheme symbols are arranged in alphanumeric order according to their sort-keys.

Value: sort-keys always have the same subclass value and subgroup value as in the symbol. "Main trunk" symbols have sort-keys which are identical to the symbol. Indexing codes have sort-keys where "2000" is subtracted from the numeric value of the main group part of the symbol. For example, group A61K 2039/505 has a sort-key of 'A61K 39/505'.

The rules of sorting by sort-key are as follows:

1. Alphabetically according to the subclass value (e.g. symbols in the subclass B29K appear in the CPC Scheme after all symbols of B01D)
2. In numeric order according to the main group value of the sort-key (e.g. symbol A01D 93/00 is sorted before symbol A01D 101/00; symbol A61K 2039/10 is sorted before symbol A61K 41/00, since A61K 2039/10 has a sort-key main group value of '39')
3. In text order according to the subgroup value of the sort-key (e.g. for A61K 2039/10, the subgroup value is '10' and A61K 2039/10 follows A61K 39/099 and appears before A61K 39/155).

Note: the sorting of steps 2 and 3 have the same effect as sorting the group value of the sort-key as a decimal value (e.g. the slash is treated as a decimal point; the group value of the sort-key for A61K 2039/10 is '39.10', which is less than '39.099' and greater than '39.155').

3.4.7   definition-exists

OPTIONAL

Name: definition-exists

Value:

- true = A Definition exists for this symbol. In CPC, Definitions are only available at the Subclass or Group level.
- false = No Definition exists for this symbol.

3.4.8   ipc-concordant

OPTIONAL

Name: ipc-concordant

Value: Indicates the symbol in the IPC Scheme where the subject-matter corresponds. Where there is no IPC Scheme equivalent, CPCONLY is given (e.g. Y-series symbols and CPC-only orthogonal indexing codes). The full collection of IPC-concordant values comprises the master CPC-to-IPC Concordance List (CICL). IPC-concordant values are provided for all allocatable CPC symbols (groups and subgroups). Since CPC is in most of the cases a refinement of the current IPC, this attribute typically reflects this extension of IPC. In most cases, the value of this attribute corresponds to the closest IPC parent group from which CPC extends.

- CPCONLY, or
- an existing IPC symbol (corresponding to IPC numbering. For instance, if an indexing code corresponds to an IPC indexing group, the CPC classification symbol will have CPC's 2000-series numbering convention, but the IPC-concordant value will correspond to the symbol number as it appears in IPC).

The IPC-concordant values are updated when the IPC scheme is updated and/or through revision of the CPC. The IPC-concordant value is provided through intellectual feedback, and cannot be used to infer the hierarchical relationship between the CPC and IPC schemes.

3.4.9   c-set-base-allowed

OPTIONAL

Name: c-set-base-allowed

Value: Indicates if a symbol is allowed for allocation as the first symbol in any combination set (rank 1). The symbol should only be used as a base symbol in accordance with the particular C-Set rule governing the area. This information corresponds to the "List of technical areas where Combination Sets are authorised for classification" available on cpcinfo.org.

- true = the symbol may be used as a base symbol in a C-Set, in accordance with the relevant C-Set rules
- false = the symbol cannot be used as a base symbol in any C-Set

3.4.10   c-set-subsequent-allowed

<u>OPTIONAL</u>

Name: c-set-subsequent-allowed

Value: Indicates if a symbol is allowed for allocation as a subsequent symbol in any combination set (rank 2 and further). The symbol should only be used as a subsequent symbol in accordance with the particular C-Set rule governing the area.

Due to current limitations with the data available in the "List of technical areas where Combination Sets are authorised for classification", this attribute is currently set to "true" for all groups which are not in Section Y.

-   true = the symbol may be used as a subsequent symbol in a C-Set, in accordance with the relevant C-Set rules
-   false = the symbol cannot be used as a subsequent symbol in any C-Set

3.4.11   date-revised

Name: date-revised

Value: Indicates the CPC publication version where an update to the symbol, indent, title, or notes/warnings may have been made. This is <u>not</u> an authoritative indication of revision.

3.4.12   status

Name: status

Value: Indicates the status of the symbol as published or frozen.

-   published (Default) = Symbol is active in the published scheme.
-   frozen = Indicates that the group will be deleted after reclassification of documents is completed in a process known as "finalisation". Documents currently allocated to a frozen group will be reclassified according to the Revision Concordance List. When a symbol is frozen, new documents cannot be allocated.

3.5 Descriptive part of the CPC entry

CPC descriptive elements are content-oriented, rather than data-oriented. Therefore, components of a title, such as title parts and reference parts (as governed by the "Guide to the IPC"), are not directly reflected in the title components.

For example, the title for A23F 5/243 is "{Liquid, semi-liquid or non-dried semi-solid coffee extract preparations; Coffee gels; Liquid coffee in solid capsules (A23F 5/246 takes precedence)}"

This group has three title parts, and one reference part associated with the last title part. This title is represented in XML in the following manner, with a single `title-part` element:

```
<class-title date-revised="2013-01-01">
    <title-part>
        <CPC-specific-text>
            <text>Liquid, semi-liquid or non-dried semi-solid coffee extract
preparations; Coffee gels; Liquid coffee in solid capsules </text>
            <reference>
                <text><class-ref scheme="cpc">A23F5/246</class-ref> takes
precedence</text>
            </reference>
        </CPC-specific-text>
    </title-part>
</class-title>
```

3.5.1   classification-symbol

The CPC symbol of the entry. For guidance or subsection heading entries, or their respective placeholder entries, the element `classification-symbol` corresponds to the first main group (or first class symbol for subsection headings). The `classification-symbol` is <u>not displayed</u> for heading entries or their placeholders (corresponding to `classification-item` attribute `level` of '3' or '6') in the presentation of the CPC Scheme.

3.5.2   class-title

Text content for every CPC symbol title and guidance or subsection heading starts with a `class-title`.

3.5.2.1   title-part

Component of a title.

> "37. The titles of classification places may indicate their intended content by using a single phrase or several related phrases linked together... However, titles may also indicate their content using two or more distinct parts separated by semicolons. Each part of such a multipart title should be interpreted as a separate title."
>
> Guide to the IPC, "PRESENTATION OF TITLES"

In the CPC Scheme XML, emphasis is placed on distinguishing between the IPC and CPC schemes in the titles and Notes. As a result, the content model for a multipart title will not always be directly reflected by the `title-part` elements.

3.5.2.2   CPC-specific-text

Contains `text` or `reference` elements. Represents text which should be specific only to CPC (and is not present in IPC). This element is used to indicate text which extends from the existing IPC title text. In addition, CPC-only groups which are breakouts (i.e. subgroups) of IPC groups would have the entire title text captured in a `CPC-specific-text` element. Due to legacy data quality issues, the presence or absence of `CPC-specific-text` cannot be interpreted as an authoritative indicator of differences between CPC and IPC. For presentation purposes, curly brackets (braces) surround text in this element.

<u>Note</u>: when the CPC-specific text consists of a complete title or reference part and there are multiple parts, the delimiting semicolon appears within the `CPC-specific-text` element (refer to Examples for the titles of A01K 15/02 and F16B 5/00 below in "class-title model and examples").

3.5.2.3 reference

Contains `text` or `CPC-specific-text` elements. For presentation purposes, parentheses surround text in this element. Reference parts are separated by a semicolon in the `text` element.

3.5.2.4 text

mixed content model:

- UTF-8 encoded Unicode characters
- reference symbol element `class-ref`
- rich text elements: (u)nderline, (sub)script, (sup)erscript
- external image references: `media`

Note: the use of inline underline formatting is generally reserved to Latin phrases and certain standard expressions in the CPC Scheme.

3.5.3 class-title model and examples

The content model of the title elements depends on the following scenarios:

a. title with no CPC-specific indicators
b. title of CPC-only groups which extend from IPC groups
c. title with both IPC and CPC text

For a title with no CPC-specific indicators:

class-title :== (title-part+)

title-part :== (text, reference?)

reference :== text   where multiple reference parts are delimited by a semicolon

Example 1: the title of G06F 8/76 after adoption into IPC (refer to Example 3 for title prior to adoption into IPC)

"Adapting program code to run in a different environment; Porting"

```
<class-title date-revised="2018-02-01">
    <title-part>
        <text>Adapting program code to run in a different environment</text>
    </title-part>
    <title-part>
        <text>Porting</text>
    </title-part>
</class-title>
```

Example 2: title of G06F 21/78 after adoption into IPC (refer to Example 4 for title prior to adoption into IPC)

"to assure secure storage of data (address-based protection against unauthorised use of memory G06F 12/14; record carriers for use with machines and with at least a part designed to carry digital markings G06K 19/00)"

```
<class-title date-revised="2015-11-01">
    <title-part>
        <text>to assure secure storage of data </text>
        <reference>
            <text>address-based protection against unauthorised use of memory <class-ref
```

```
scheme="cpc">G06F12/14</class-ref>; record carriers for use with machines and with at
least a part designed to carry digital markings <class-ref scheme="cpc">G06K19/00</class-
ref></text>
        </reference>
    </title-part>
</class-title>
```

For a title of a CPC-only group which extends from an IPC group:

class-title :== title-part

title-part :== CPC-specific-text

CPC-specific-text :== (text, reference?)+   where one or more title-parts are delimited by a semicolon

reference :== text   where multiple reference parts are delimited by a semicolon

Example 3: the title of G06F 8/76 as a CPC-only group prior to adoption into IPC

"{Adapting program code to run in a different environment; Porting}"

```
<class-title date-revised="2013-01-01">
    <title-part>
        <CPC-specific-text>
            <text>Adapting program code to run in a different environment; Porting</text>
        </CPC-specific-text>
    </title-part>
</class-title>
```

Example 4: title of G06F 21/78 **as a** CPC-only group prior to adoption into IPC

"{to assure secure storage of data (address-based protection against unauthorised use of memory G06F 12/14; record carriers for use with machines and with at least a part designed to carry digital markings G06K 19/00)}"

```
<class-title date-revised="2013-01-01">
    <title-part>
        <CPC-specific-text>
            <text>to assure secure storage of data </text>
            <reference>
                <text>address-based protection against unauthorised use of memory <class-
ref scheme="cpc">G06F12/14</class-ref>; record carriers for use with machines and with at
least a part designed to carry digital markings <class-ref scheme="cpc">G06K19/00</class-
ref></text>
            </reference>
        </CPC-specific-text>
    </title-part>
</class-title>
```

Example 5: title of CPC-only group F02M 21/0287

"{characterised by the transition from liquid to gaseous phase (F02M 21/06 takes precedence); Injection in liquid phase; Cooling and low temperature storage}"

```
<class-title date-revised="2013-01-01">
    <title-part>
        <CPC-specific-text>
            <text>characterised by the transition from liquid to gaseous phase </text>
            <reference>
                <text><class-ref scheme="cpc">F02M21/06</class-ref> takes
precedence</text>
            </reference>
            <text>; Injection in liquid phase; Cooling and low temperature storage</text>
        </CPC-specific-text>
```

```
        </title-part>
    </class-title>
```


For a title with both IPC and CPC text:

class-title :== title-part+

title-part :== ((text | CPC-specific-text)+, reference?)+

CPC-specific-text := (text, reference?)   CPC-only title part / IPC title part with CPC text/references

title-part/CPC-specific-text/reference :== text   title part only having CPC references

reference :== (text | CPC-specific-text)+   IPC title part having both IPC and CPC references

reference/CPC-specific-text :== text   IPC title part having both IPC and CPC references

Example 6: A01K 15/02 having additional CPC-only title parts, one CPC-only title part having a reference

"Training or exercising equipment, e.g. mazes or labyrinths for animals (A01K 15/04 takes precedence){; Electric shock devices (circuits therefor H03K 3/537); Toys specially adapted for animals}"

```
<class-title date-revised="2020-08-01">
    <title-part>
        <text>Training or exercising equipment, e.g. mazes or labyrinths for animals
</text>
        <reference>
            <text><class-ref scheme="cpc">A01K15/04</class-ref> takes precedence</text>
        </reference>
        <CPC-specific-text>
            <text>; Electric shock devices </text>
            <reference>
                <text>circuits therefor <class-ref scheme="cpc">H03K3/537</class-
ref></text>
            </reference>
            <text>; Toys specially adapted for animals</text>
        </CPC-specific-text>
    </title-part>
</class-title>
```

Example 7: A01D 9/00 having IPC title part and CPC-only references

"Forks {(making forks from sheet metal B21D 53/68; making forks by rolling B21H 7/08)}"

```
<class-title date-revised="2013-01-01">
    <title-part>
        <text>Forks </text>
        <CPC-specific-text>
            <reference>
                <text>making forks from sheet metal <class-ref
scheme="cpc">B21D53/68</class-ref>; making forks by rolling <class-ref
scheme="cpc">B21H7/08</class-ref></text>
            </reference>
        </CPC-specific-text>
    </title-part>
</class-title>
```

Example 8: F16B 5/00 having IPC title part with CPC-only text and CPC-only references

"Joining sheets or plates {, e.g. panels,} to one another or to strips or bars parallel to them ({F16B 17/00 takes precedence;} by sticking together F16B 11/00; dowel connections F16B 13/00; pins, including deformable elements F16B 19/00; covering of walls E04F 13/00; fastening signs, plates, panels or boards to a supporting structure, fastening readily-detachable elements, e.g. letters to signs, plates, panels, or boards, G09F 7/00)"

```
<class-title date-revised="2019-01-01">
    <title-part>
        <text>Joining sheets or plates </text>
        <CPC-specific-text>
            <text>, e.g. panels,</text>
        </CPC-specific-text>
        <text> to one another or to strips or bars parallel to them </text>
        <reference>
            <CPC-specific-text>
                <text><class-ref scheme="cpc">F16B17/00</class-ref> takes
precedence;</text>
            </CPC-specific-text>
            <text> by sticking together <class-ref scheme="cpc">F16B11/00</class-ref>;
dowel connections <class-ref scheme="cpc">F16B13/00</class-ref>; pins, including
deformable elements <class-ref scheme="cpc">F16B19/00</class-ref>; covering of walls
<class-ref scheme="cpc">E04F13/00</class-ref>; fastening signs, plates, panels or boards
to a supporting structure, fastening readily-detachable elements, e.g. letters to signs,
plates, panels, or boards, <class-ref scheme="cpc">G09F7/00</class-ref></text>
        </reference>
    </title-part>
</class-title>
```

3.5.4   notes-and-warnings

Text content for all Scheme Notes or Warnings start with a `notes-and-warnings` element.

3.5.4.1   note

Contains one or more Notes or Warnings (each immediate child `note-paragraph` element within the `note` element). Multiple Notes and Warnings are automatically numbered in presentational views. For presentation purposes, a heading (e.g. "Note" or "Warning") precedes the `note` element content.

type attribute:

Value: value of "note" is to indicate Note content or value of "warning" to indicate Warning content.

3.5.4.1.1 note-paragraph

mixed content model:

- UTF-8 encoded Unicode characters
- reference symbol element `class-ref`
- rich text elements: (u)nderline, (sub)script, (sup)erscript
- line break element `br`
- external image references: `media`
- `CPC-specific-note` element
- `subnote` list-style content
- `table` content
- (pre)formatted content: deprecated element used to convey content which should be displayed as a table. This element is being progressively removed or replaced with the `table` element.
- `reclassification-date` element

CPC-specific-note: Represents Note or Warning text which should be specific only to CPC (and is not present in IPC). Analogous to `CPC-specific-text`, CPC-only groups which are breakouts (i.e. subgroups) of IPC groups would have the entire Note (or Warning) text captured in a `CPC-specific-note` element. Due to legacy data quality issues, the presence or absence of `CPC-specific-note` cannot be interpreted as an authoritative indicator of differences between CPC and IPC. For presentation purposes, curly brackets (braces) surround text in this element.

Mixed content model:

- UTF-8 encoded Unicode characters
- reference symbol element `class-ref`
- rich text elements: (`u`)nderline, (`sub`)script, (`sup`)erscript
- external image references: `media`
- nested lists: `subnote`
- nested `table`
- subnote: nested list within a Note. Each list-item is contained in one or more `note-paragraph` elements. The list style is indicated with the `type` attribute. Possible `type` attribute values are "bullet", "Alpha" (uppercase), "alpha" (lowercase), "Roman" (uppercase), "roman" (lowercase), and "number".
- table: nested table content within a Note or Warning. Contains one or more `row` elements, which in turn contain table cell content in `entry` elements.
- entry: mixed content model:
    - UTF-8 encoded Unicode characters
    - reference symbol element `class-ref`
    - rich text elements: (`u`)nderline, (`sub`)script, (`sup`)erscript
    - external image references: `media`

a.

Scheme Notes and Warnings share common content models, wherein the Warning content model is a subset of the content model used for Notes.

b.

3.5.5   meta-data:

Not used.

3.6 Common elements

These elements are used within note and title elements described above.

- reference symbol element: `class-ref`
- rich text elements: (`u`)nderline, (`sub`)script, (`sup`)erscript
- external image references: `media`

3.6.1   class-ref

A reference to a CPC entry by its classification symbol.

3.6.1.1   CPC reference symbol properties

b.   Classification scheme of origin

Name: scheme

Value: cpc, ipc, not-mapped.

Purpose: Indicates the classification system to which the referenced symbol belongs. Almost all reference symbols correspond to the CPC system.

In cases where CPC deviates from IPC, a Scheme Warning will provide details on this deviation from IPC. In this case, references to symbols in the IPC system which are not adopted in the CPC system have a value of 'ipc'.

References to symbols which do not correspond to valid CPC entries are set to 'not-mapped', and are being progressively removed or replaced with valid reference symbols.

3.6.2   media

A reference to an image

c.   Image properties

3.6.2.1   alternative text

Name: alt

Value: Contains alternative text describing the image.

3.6.2.2   image file name

Name: file-name

Value: Contains the image file name (following the convention: "cpc-sch-<subclass>-<####>.ext", where ext refers to the extension corresponding to the image type).

3.6.2.3   image id

Name: id

Value: identifier associated with the image.

3.6.2.4   image file type

Name: type

Value: Indicates the image type: 'gif', 'jpeg', 'tif', 'bmp', 'png', or 'unknown'. Typical Scheme images correspond to gif type.

3.7 Use of special characters for the representation of chemical bonds

The following characters/images are derived from IPC convention, and describe the intended representation of chemical bonds when they appear inline in Scheme titles or Notes

— (em dash), represented as "—"	simple bond in inline chemical formulae
= (equal sign)	double bond in inline chemical formulae
≡ (identical to sign), represented as "≡"	triple bond in inline chemical formulae
⌡ (image only, corresponding to llinkthree.gif used in IPC)	left triple hydrogen bond in inline chemical formulae
⌠ (image only, corresponding to rlinkthree.gif used in IPC)	right triple hydrogen bond in inline chemical formulae
⟩ (image, corresponding to llinkt.gif used in IPC) or special character such as right-pointing angle bracket, represented as "〉", or > (greater than), represented with reserved entity ">"	left double hydrogen bond in inline chemical formulae
⟨ (image, corresponding to rlinkt.gif used in IPC) or special character such as left-pointing angle bracket, represented as "〈", or < (less than), represented with reserved entity "<"	right double hydrogen bond in inline chemical formulae

4. NOTABLE DIFFERENCES FROM IPC SCHEME XML

IPC Warnings are stored separately from the Scheme. In CPC, Warnings are considered to be part of the Scheme content, and therefore are included in the scheme data files.

IPC Notes and Guidance/Subsection headings are considered "non-structured" entries. As such, an IPC Note may encompass a range of symbols. Where such Notes also adopted in the CPC Scheme, they have been relocated to a single symbol (or guidance heading) entry, as all entries in CPC are "structured" and anchored in the Scheme hierarchy.

The IPC Scheme includes indexing codes (`ipcEntry` with `kind` attribute value "I"). Where these codes are adopted into CPC, the symbol number corresponds to a 2000-series group number, and corresponding attributes `additional-only` and `breakdown-code` are set to "true".

5. SAMPLES

5.1 Titles

Refer to "3.5.3 class-title model and examples"

5.2 Section entries with links to subclasses

```
<classification-item breakdown-code="false" not-allocatable="true" level="4"
    additional-only="false" sort-key="B04" date-revised="2019-05-01"
    status="published">
        <classification-symbol>B04</classification-symbol>
        <class-title date-revised="2019-05-01">
            <title-part>
                <text>CENTRIFUGAL APPARATUS OR MACHINES FOR CARRYING-OUT PHYSICAL OR
    CHEMICAL PROCESSES</text>
            </title-part>
        </class-title>
        <classification-item breakdown-code="false" not-allocatable="true" level="5"
```

```
                additional-only="false" link-file="cpc-scheme-B04B.xml" sort-key="B04B"
                definition-exists="true" date-revised="2018-08-01" status="published">
                        <classification-symbol>B04B</classification-symbol>
                        <class-title date-revised="2013-01-01">
                            <title-part>
                                <text>CENTRIFUGES </text>
                                <reference>
                                    <text>high-speed drum mills <class-ref
                scheme="cpc">B02C19/11</class-ref>; domestic spin driers <class-ref
                scheme="cpc">D06F</class-ref>; analysing, measuring or monitoring physical or
                chemical properties of samples during centrifuging, <u>see</u> the relevant
                subclasses for these procedures, e.g. <class-ref scheme="cpc">G01N</class-
                ref></text>
                                </reference>
                            </title-part>
                        </class-title>
                        <notes-and-warnings date-revised="2013-01-01">
                            <note type="note">
                                <note-paragraph>This subclass <u>covers</u> machines or apparatus
                for separating, mixing, drying, extracting, purifying, or like treating in which
                centrifugal effects are generated by rotary bowls or other rotors. Where such
                machines or apparatus involve pumping effects, such effects must be incidental or
                subsidiary to the treating. </note-paragraph>
                            </note>
                            <note type="warning">
                                <note-paragraph>In this subclass non-limiting references (in the
                sense of paragraph 39 of the Guide to the IPC) may still be displayed in the
                scheme.</note-paragraph>
                            </note>
                        </notes-and-warnings>
                    </classification-item>


    …


    </classification-item>
```

5.3 Guidance headings and placeholder entries

Machines for harvesting root crops

```
<classification-item breakdown-code="false" not-allocatable="true" level="6"
    additional-only="false" sort-key="A01D13/00" date-revised="2013-01-01"
    status="published">
        <classification-symbol>A01D13/00</classification-symbol>
        <class-title date-revised="2013-01-01">
            <title-part>
                <text>Machines for harvesting root crops</text>
            </title-part>
        </class-title>
        <classification-item breakdown-code="false" not-allocatable="false" level="7"
    additional-only="false" sort-key="A01D13/00" definition-exists="true"
    ipc-concordant="A01D13/00" c-set-base-allowed="false"
    c-set-subsequent-allowed="true" date-revised="2013-01-01" status="published">
            <classification-symbol>A01D13/00</classification-symbol>
            <class-title date-revised="2013-01-01">
                <title-part>
                    <text>Diggers, e.g. potato ploughs</text>
                </title-part>
            </class-title>
        </classification-item>


    …


    </classification-item>
```

Placeholder (indicated by horizontal bar when preceded by a guidance heading)

```
<classification-item breakdown-code="false" not-allocatable="true" level="6"
    additional-only="false" sort-key="F02M21/00" date-revised="2019-02-01"
    status="published">
```

```
    <classification-symbol>F02M21/00</classification-symbol>
    <classification-item breakdown-code="false" not-allocatable="false" level="7"
additional-only="false" sort-key="F02M21/00" definition-exists="true"
ipc-concordant="F02M21/00" c-set-base-allowed="false"
c-set-subsequent-allowed="true" date-revised="2021-01-01" status="published">
        <classification-symbol>F02M21/00</classification-symbol>
        <class-title date-revised="2013-01-01">
            <title-part>
                <text>Apparatus for supplying engines with non-liquid fuels, e.g.
gaseous fuels stored in liquid form</text>
            </title-part>
        </class-title>
        ...
    </classification-item>
</classification-item>
```

5.4 Main trunk symbol entries

```
<classification-item breakdown-code="false" not-allocatable="false" level="10"
additional-only="false" sort-key="C01F17/241" definition-exists="false"
ipc-concordant="C01F17/241" c-set-base-allowed="false" c-set-subsequent-allowed="true"
date-revised="2020-01-01" status="published">
    <classification-symbol>C01F17/241</classification-symbol>
    <class-title date-revised="2020-01-01">
        <title-part>
            <text>containing two or more rare earth metals, e.g. NdPrO<sub>3</sub> or
LaNdPrO<sub>3</sub></text>
        </title-part>
    </class-title>
    <notes-and-warnings>
        <note type="warning">
            <note-paragraph warning-type="reclass-destination">Group <class-ref
scheme="cpc">C01F17/241</class-ref> is incomplete pending reclassification of
documents from group <class-ref scheme="cpc">C01F17/206</class-ref>. <br/>Groups
<class-ref scheme="cpc">C01F17/206</class-ref> and <class-ref
scheme="cpc">C01F17/241</class-ref> should be considered in order to perform a
complete search.</note-paragraph>
        </note>
    </notes-and-warnings>
</classification-item>
```

5.5 Indexing code entries

Breakdown indexing code

```
<classification-item breakdown-code="true" not-allocatable="false" level="10"
additional-only="true" sort-key="G01K3/145" definition-exists="false"
ipc-concordant="G01K3/14" c-set-base-allowed="false"
c-set-subsequent-allowed="true" date-revised="2013-01-01" status="published">
    <classification-symbol>G01K2003/145</classification-symbol>
    <class-title date-revised="2013-01-01">
        <title-part>
            <CPC-specific-text>
                <text>Hotspot localization</text>
            </CPC-specific-text>
        </title-part>
    </class-title>
</classification-item>
```

Orthogonal indexing code

```
<classification-item breakdown-code="true" not-allocatable="false" level="8"
additional-only="true" sort-key="B60L200/16" definition-exists="false"
ipc-concordant="CPCONLY" c-set-base-allowed="false"
c-set-subsequent-allowed="true" date-revised="2013-01-01" status="published">
    <classification-symbol>B60L2200/16</classification-symbol>
    <class-title date-revised="2013-01-01">
        <title-part>
            <text>Single-axle vehicles</text>
        </title-part>
```

```
        </class-title>
    </classification-item>
```

5.6 Sample reference to image

```
<media id="1029" file-name="cpc-sch-A61K-1029.gif" type="gif"/>
```

6. APPENDIX: REFERENCES

- Guide to the IPC (wipo.int)
- Guidelines for Revision of the IPC (wipo.int)
- IPC data files specifications (wipo.int)
- Guide to the CPC (cpcinfo.org)
- List of technical areas where Combination Sets are authorised for classification (cpcinfo.org)
- CPC Definition Files Specification (cpcinfo.org)
- CPC Compilation File Specification (cpcinfo.org)

<div align="center">

End of document

</div>

```
        </class-title>
    </classification-item>
```