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6 Ways To Guide Applications Under New Patent Classification

By **Roberta Young and Brian Michaelis** (June 28, 2021, 5:02 PM EDT)

After 100 years of classifying patents using the U.S. Patent Classification, or USPC, system, the U.S. Patent and Trademark Office replaced that system in late 2020. The change to the Cooperative Patent Classification, or CPC, system gives patent practitioners greater opportunity to potentially direct patent applications to art units by careful drafting in conjunction with an understanding of how the CPC functions.



Roberta Young

Each year inventors and patent attorneys file thousands of new patent applications at the USPTO. Each application is reviewed multiple times by various USPTO units to verify compliance with rules and procedures. One of those reviews is a classification process. The USPTO uses classification for administrative functions, such as art unit routing, and patent examiners use it for prior art searching.

Knowing how the classification system works may allow a patent practitioner to direct the application to a particular art unit. In many cases, the art unit and the individual examiner influence whether an application is allowed, appealed or abandoned.



Brian Michaelis

Increasingly, big data trends are being used in patent prosecution to guide filing decisions, appeals and abandonments. Statistics are readily available for art units at the USPTO, showing allowance rates and numbers of office actions to allowance, among others.

Some research platforms also provide information on individual patent examiners, affording practitioners a view of how a particular examiner handles key prosecution issues, such as Section 101 issues, obviousness and Section 112 issues. Using these data points, practitioners may rate examiners as difficult, average or allowance-friendly. With examiners having significant influence on allowance, many practitioners would like to select the art unit and possibly even the examiner(s) to which an application is assigned.

This isn't a dream. It is possible for practitioners who take the time to understand and draft applications taking into consideration the patent classification system used by the USPTO to potentially influence which examiners may be assigned to their applications.

For over one hundred years, the USPTO used the USPC system. Over 150,000 possible codes were provided, and a single primary classification code was assigned to each patent application.

Staff at the USPTO reviewed each application and determined the single USPC code to apply. Each USPC code was mapped to one art unit. The USPC code could not normally be challenged by an applicant. That single USPC code determined the art unit for patent examination and had significant influence on which examiner might be assigned.

In some respects, the USPC was a black box system that would yield a code with no transparency as to how the code was determined by USPTO staff. The USPC remained in use until Oct. 1, 2020, after

which it was supplemented with the CPC system, discussed below.

Using patent classification terms in searching U.S. patents and published applications usually results in a more comprehensive search than a search using only keyword search terms. To effectively use patent classification terms, it is helpful to know about each of the patent classification systems used at the USPTO.

The USPC organized all U.S. patent documents and other technical documents into relatively small collections based on common subject matter.

Each subject matter division in the USPC includes a major component known as a class and a minor component called a subclass. A class delineates technologies from one another. Subclasses delineate processes, structural features and functional features of the subject matter encompassed within the scope of the class. A subclass is the smallest division of subject matter within the USPC.

Every class has a unique alphanumeric identifier, as do most subclasses. A class-subclass pair of identifiers uniquely identifies a subclass within a class. This unique identifier is known as a classification symbol.

A collection of documents is a set of documents sharing a common classification. Classifications are assigned to documents based on the disclosures in the document. Documents are classified to a subclass if a classification corresponding to the unique subclass has been assigned to it. A document may be a member of more than one collection, i.e., it may have more than one classification assigned to it.

A listing of the USPC classifications may be found on the USPTO website. This listing provides the published definitions of the classes and many of the subclasses. The classification listing provides the technical subject matter alphabetically using ordinary terms and lists the subclasses related to that subject matter.

A USPC classification uniquely identifies one of the more than 150,000 subclasses. Because subclass identifiers may be repeated among the more than 450 classes, a USPC classification must include both a class and a subclass. Every U.S. patent document has at least one mandatory classification and may optionally include one or more discretionary classifications.

One example of the USPC classification system is found in U.S. Patent No. 9,713,072, titled "Method of Relay Discovery and Communication in a Wireless Communications System." The U.S. classification is H04W 48/14 (2013.01), "using mutual or relative location information between multiple location-based services, targets, or of distance thresholds."

A review of the classifications listed on the first page of the patent reveals H04W as a primary classification. H04W covers wireless communication networks.

Another classification is Y02B, which relates to climate change mitigation technologies related to building, e.g., housing, house appliances or related end-user applications. With most of the classifications listed in the wireless communication area, a skilled patent practitioner can further home in on the subcategories that delineate the application.

The CPC system is a new patent classification system that was developed jointly by the USPTO and the European Patent Office and is an extension of the International Patent Classification system previously used by the EPO. The USPTO and EPO agreed to harmonize their existing patent classification systems and migrate toward a common classification scheme.

The USPTO currently uses the CPC only for classifying new utility patent documents; however, the USPTO will continue to use the USPC for classifying design and plant patents.

Structurally, the CPC is divided into nine sections, A-H and Y, which in turn are divided into classes, subclasses, groups and subgroups. There are approximately 250,000 entries in the CPC. The nine sections are:

A. Human necessities;

- B. Performing operations; transporting;
- C. Chemistry; metallurgy;
- D. Textiles; paper;
- E. Fixed constructions;
- F. Mechanical engineering; lighting; heating; weapons; blasting engines or pumps;
- G. Physics;
- H. Electricity; and
- Y. General tagging of cross-sectional technologies spanning several sections of the IPC; technical subjects covered by formed USPC cross-reference art collections and digests.

A CPC classification system listing is structured as shown below:

A section

A45 class

A45B sub-class

A45B 19/00 main group

A45B 19/08 subgroup

This information may be entered on the USPTO classification resources area of the USPTO website. The classification symbol lookup tool allows a concordance search using terms from either the USPC or CPC systems. This lookup tool may be used strategically to search for patents within a particular technology, such as wireless communications.

In addition, a search may be used to better understand the position of an organization or company's technology portfolio, and areas that the organization focuses research and development efforts. Using the Y section may be especially useful for understanding an emerging area of invention associated with the technology of interest.

Given the focus on subject matter eligibility in recent years, a search could also prove useful to understand the subject matter eligibility for inventions in particular areas, such as software or business methods. Searches may also be used to gain insight into technology strategies and competitive advantages and may be useful when valuing patent portfolios for acquisition or divestiture.

Based on a review of CPC classification systems, below are some examples of methods/approaches that may help guide a patent application to a particular art unit for examination.

1. Determine the key terms used to describe the invention.

What technology is the focus of the idea? It may be preferable to avoid describing an invention in software or business method terms, to avoid routing to those art units. These may face subject matter eligibility challenges early in the prosecution process.

2. Determine the specific coverage area of the application and the related areas of technology that may factor into use of the application's idea.

An application may be drafted to focus on key technical aspects that are improved by the idea, with a technical, rather than business, focus.

3. If a prior art search was performed, look at the classifications used by the searcher, and examine the classifications on the prior art references found.

This may help determine art units that may examine the application being prepared, and related statistics for that art unit may be sought to ascertain whether the application might be written with a focus on terms that might get it examined by an alternative art unit.

4. Visit the USPTO classification resources page, and use the cross-reference to enter any USPC terms found during examination of potential prior art.

Look up key technology terms already identified in Step 1, above, to understand what art units examine applications in those areas.

5. Research allowance rates for the art units determined in Step 4, above.

A variety of tools provide detailed allowance rates and statistics for each of the art units at the USPTO. This information may be used to determine if the selected key technical terms will likely guide the application to a desired art unit.

6. If the art unit statistics are undesirable, it may be beneficial to revise the selected key terms to focus the application on different technology components or aspects that are part of the disclosed invention.

For example, it may be desirable to move away from a software application to a focus on device improvements, such as improved position detection.

Using the tools and techniques described above, in conjunction with research before filing, it may be possible to avoid an especially difficult art unit or to improve your clients' patent portfolio in a newly emerging technology. Inventors advance technology through creative research and development. Patent attorneys may adopt a similar approach to creatively advance patent application drafting and prosecution.

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