

The legal and technical framework for patents

What do patent numbers mean?

Hello everyone and welcome to our course covering the basics in terms of the technical and legal framework for patents. My name is Duncan Clark and I'll be guiding you through this topic in this six-part series.

In this module, we'll explore how patents are assigned numbers and what the numbers and codes can tell us about the invention or technology being protected. We'll investigate how to use 'kind codes' to determine the type of publication that's being referred to. So, when we conduct a search for patents, you'll see that databases will include a publication number, which we have in this column here in PatSnap, for example.

The screenshot shows a PatSnap search interface for the keyword 'nanotechnology'. The search results table is as follows:

| # | Publication Number | Title | Assignee Name | Application Date | Publication Date | Standardized Assignee |
|---|--------------------|---|----------------------------------|------------------|------------------|----------------------------------|
| 1 | CN107446120A | Phosphorous epoxy resin and the resin composition and curing substance | | 2012-02-22 | 2017-12-08 | |
| 2 | CN105377575B | Including the fiber structure of precipitated calcium carbonate, amorphous silica by its material composition, manufacture and use method thereof | 太平洋纳米产品公司 | 2014-04-26 | 2017-12-08 | G R TECH |
| 3 | US20170353524A1 | PARALLEL AND SEQUENTIAL EXECUTION OF AUTOMATED ONLINE CHARGING TEST PROCEDURES | T-MOBILE U.S.A., INC. | 2017-03-31 | 2017-12-07 | T MOBILE U S A |
| 4 | US20170352550A1 | DEPOSITION OF ORGANIC FILMS | ASM IP HOLDING B.V. | 2017-04-12 | 2017-12-07 | ASM IP HLDG |
| 5 | US20170353842A1 | SECURE COMMUNICATIONS VIA A MOBILE KEYBOARD APPLICATION OF A MOBILE DEVICE | NUANCE COMMUNICATIONS, INC. | 2016-06-07 | 2017-12-07 | NUANCE COMMUNICATIONS |
| 6 | DE112016001403T5 | Photo-acoustic imaging device and method for their operation | Nanyang Technological University | 2016-03-22 | 2017-12-07 | NANYANG TECHNOLOGICAL UNIVERSITY |
| 7 | US20170352533A1 | DEPOSITION OF ORGANIC FILMS | ASM IP HOLDING B.V. | 2016-06-01 | 2017-12-07 | ASM IP HLDG |

The first digits are not part of the patent number, but they indicate the patent's jurisdiction. In this case, for instance, we have patents one and two commencing with CN, for China. We have US, for the USA, so these are patents three, four and five here; and DE appears on this list, for Germany.

These country prefix codes are based on World Intellectual Property Organization or WIPO standards.¹

¹ http://www.wipo.int/pct/guide/en/gdvol1/annexes/annexk/ax_k.pdf

Some of the other more common ones would be EM, for European Union Intellectual Property; EP for the European Patent Office; JP, obviously this one for Japan and WO, for the World Intellectual Property Organization. In fact the complete list can be found in the WIPO's Patent Applications Guide, in Annex K, which can be found at this link showing on screen now.

Now, the jurisdiction is important, because the meaning of the kind codes – these are the letters that are appended to the patent number at the end – will change based on the specific jurisdiction.

For example, in the top two hits on the list, which are two Chinese patents, we can see that a single letter follows the patent number in each case. Meanwhile the US patents in this list have A1 and the German patent has T5. The same letters may be used by different patent offices, however the meaning is not always the same, so we do have to take a geographical approach.

Now there are a huge number of kind codes, so let's just refine down to the United States first of all.

We can see that, by far, the most common kind code for the US patents is A1, which represents a Patent Application Publication, so this refers to a Utility Patent Application that was published on or after January 2, 2001. Before this date, the code would have just been A. We can also see from the patent number that it is a 2017 application. Meanwhile A2 would represent a republication, while the code A9 would represent a corrected application publication.

US Utility Patents themselves do not have kind codes, so are simply represented by a sequential number,² so the higher the number, the more recent the patent – although the USPTO points out that “Some numbers within a series may be unused. Therefore, the number of patents granted during a year cannot be determined by simply subtracting the number of the first patent issued in one year from the number of the first patent issued in the next year.”³ Design patents follow exactly the same pattern in terms of numbering in the US system. But they can also be designated with a kind code, so for instance we can see that ‘S’ is used in this case.

As we mentioned, kind codes can mean different things according to the jurisdiction in question. Here in this list, for instance, we can see the kind codes and their meanings for documents published by the WIPO. This list is not exhaustive, but the ones that you'll encounter most of the time include:

- First, A1: So this will be an International Application that includes its corresponding search report
- A2, meanwhile, is the code for an International Application with no search report
- A3 is the code for a search report that is associated with an international application

² <https://www.uspto.gov/patents-application-process/applying-online/patent-number>

³ <https://www.uspto.gov/web/offices/ac/ido/oeip/taf/issuyear.htm>

- And A9 covers an International Application or International Search Report republished with corrections, alterations or supplements.

If we consider now, the EPO, the codes have a similar structure for A1 through to A9, while B1 represents a document that constitutes a European Patent and B2 refers to a European patent that has been modified...

So in order to accurately interpret kind codes, it is worth following these three steps: Firstly, check the jurisdiction that you're dealing with using its two-letter designation, for which the full list can be found in Annex K, under the link provided here on screen. Next, cross-reference this with the WIPO list that details the kind code for each designated jurisdiction.

Once you've located the right jurisdiction, look up the kind code on your document under the jurisdiction in question and you'll find an indication of the document type you're looking at.

So that concludes our whistle-stop tour of kind codes. Of course, once we know the type of document that we're looking at, we also need to know its legal status, which is something we'll cover in the next module.

In the meantime, thanks for watching and we look forward to seeing you on the next module.