Often when I am doing work related to patents and IP, I find myself talking a different language. It is a strange legal dialect that patent lawyers have developed over many years. Now while its original purpose was likely to abstract the legal process and define a set of legal concepts that simplified discussions of cases, it has achieved a secondary goal of confounding and confusing engineers the world over.

In fact, when I am asked for an opinion on a typical office action, I realize after skimming the first few paragraphs that I am actually only scratching the surface of the legal technicalities underlying the patent system. I am only an expert in baby talk!

But even the small knowledge that I have may help some of you make sense of those meetings with your local patent lawyer, so I thought it might be useful to create a short lexical handbook of legal terms with an explanation of each of these terms. To some extent, this is a work in progress, so please feel free to send me comments or request additional terms to be added.

**LEGAL PROCESS**

The process by which a formal application is made to a patent office involves several predefined steps. Some of these are prelegal, others are mandatory, and some are optional. Let us take a look at the main steps with a short explanation of how each of these works. As a default, I will consider the U.S. process with comments where this deviates significantly from European practices.

**INVENTION DISCLOSURE**

This is a document provided by the inventor or engineering team that describes the patentable concept. It is not a formal legal document but does serve to inform the patent attorney regarding the technical details of the invention. Ideally, it also highlights knowledge the inventor has of the prior art, specifies the main inventive step(s), and contains sufficient technical detail to support a set of legal claims.

**PATENT APPLICATION**

This document is a formal legal document, which is ideally prepared by a patent attorney, but it can also be prepared and submitted by the inventor. In most jurisdictions, there are two kinds of patent applications: 1) the provisional application does not require a full set of legal claims, and additional material may be added to the specification up to the point where a final application is filed and 2) a standard or final application must contain both specification and legal claims and differs from the provisional patent in that it cannot be modified and serves as a document of legal record.

**CONTINUATION APPLICATION**

In certain jurisdictions, a patent application can be filed as a continuation of a previous application. Such an application is a convenient method of including material from a previous application in a new application when the priority year has expired and further refinement is needed. Alternatively, not all of the patent subject matter may have been claimed in a first prosecution, so a new claim set, without additional subject matter, may allow the original priority date to be retained. Again, the exact details depend on the jurisdiction.

Various types of continuation application are possible. For example, in the United States, there are two distinct forms of continuation—a standard continuation, which retains the original subject matter, and a continuation-in-part, which requires new subject matter to be introduced.

**DIVISIONAL APPLICATION**

This is an application that has been divided from an existing application. A divisional application can only contain subject matter in the application from which it is divided (its parent), but retains the filing and priority date of that parent.

A divisional application is useful if a unity of invention objection is issued, in which case the second (and third, fourth, etc.) inventions can be protected in divisional applications. Sometimes a patent attorney will file multiple inventions within the specification of a single patent application—this is a useful technique to reduce the initial costs of patenting, keeping an option open to file multiple inventions should the underlying product/technology become commercially successful.

**PROSECUTION**

The prosecution process involves the relevant patent office that typically commences the examination of a patent at any time from nine months after receiving the original application up to three years later.
Often, the time frame is dependent on the availability of patent examiners within a certain field of expertise. It is also possible to request an accelerated examination, but this incurs additional costs.

SEARCH AND EXAMINATION
The search and examination phases constitute the main part of the prosecution of a patent application leading to grant or refusal.

SEARCH REPORT
This is conducted by the patent office for any prior art that is relevant to the application in question, and the results of that search are notified to the applicant in a search report. This report indicates the relevance of any cited documents that may be simply background art or may provide perspective on the novelty or nonobviousness of the claims. In principle, the materials cover all published patent applications and technical publications.

PRELIMINARY OPINION
Some patent offices will provide a provisional, nonbinding opinion to indicate to the applicant its views on the patentability and let the applicant decide how to proceed at an early stage. In Europe, this can be obtained in six to nine months but the examiner may later change their opinion.

EXAMINATION PROCESS
The examination of patent applications may either be conducted at the same time as the search (as in the United States, where a search report is not issued) or at a later date after the applicant has requested examination (as, for example, under the EPC).

The examination involves considering whether the invention meets the criteria for inventiveness, whether the invention is in an excluded area, and if it complies with the various formalities of the relevant patent law.

OFFICE ACTION
If the examiner finds that the application does not comply with the requirements, an examination report, or office action, is issued, drawing the examiner’s objections to the attention of the applicant and requesting that they be addressed. The applicant may respond to the objections by arguing in support of the application or making amendments to the application to bring it in conformity. Alternatively, if the examiner’s objections are valid and cannot be overcome, the application may be abandoned.

The process of objection and response is repeated until either 1) the patent is considered suitable for grant, 2) the applicant abandons the application, or 3) an appeal hearing is arranged to resolve the matter.

FILE WRAPPER
All details of searches and communications, including office actions and responses, between the patent office and the applicant or their attorney are made publicly available. In the United States, this documentation is now available online. Originally, a written request for paper copies had to be made to the patent office and a mailed package with copies of all correspondence and public documents involved in the prosecution were sent to the applicant. The term for this documentation has stuck, and it continues to be known as the file wrapper.

PATENT (GRANTED)
Let us assume that you have worked through the examination process and you have just received a shiny new patent grant. There are still interesting things that can happen that you will need to know about.

NOTICE OF ALLOWANCE
This is basically a letter from the patent office outlining their acceptance of the validity of your claims of invention. You have not received a patent just yet—you will need to pay an issue fee before the patent becomes fully legal.

RENEWAL FEES
You will need to keep paying; in the United States, this is every four years or so, but, in many jurisdictions, you will have to pay every year to keep your patent alive. The fees vary by jurisdiction and costs can quickly rise if, for example, you wanted to file in every EU country.

OPPOSITION
Even though your patent may be granted, there are often third parties with a vested interest who may wish to oppose the grant of your patent. In the European Patent Office, for example, any person may file an opposition to the grant of a European patent within nine months from the time the grant is issued. <AU: Please check whether the preceding edited sentence conveys the intended meaning.>

REISSUE
In some jurisdictions, once a patent is issued, the patent holder may request a reissue of the patent to correct mistakes in the issued patent. In the United States,
only the patent holder may file for a reissue, and it is necessary to identify errors in the original claims to initiate this process.

RE-EXAMINATION
In the United States, this refers to the process of requesting that the patent office initiate further examination of a granted patent. This request must be accompanied by patents or printed publications showing a substantial new question of patentability. A re-examination may be requested by anyone, so it is equivalent to the opposition process in Europe. One benefit of reexamination is that it avoids the considerable costs and lengthy time required for a patent lawsuit. However, there are still fees associated with this process.

INTERFERENCE
In the United States, where two filed applications have claims directed to the same subject matter, the patent office may declare an interference and require that each of the parties appear before the patent office to determine who was the earliest to discover the claimed invention. This practice is not followed in jurisdictions where inventorship is determined by the first to file the rule and should soon be phased out in the United States, where this practice has now been introduced.

PATENTABILITY
Patentability is ultimately decided by a national body, known as a patent office, and is determined according to a set of legal conditions adopted within the jurisdiction of that patent office. The conditions for patentability are broadly similar across most jurisdictions with some differences in interpretation.

PATENTABLE SUBJECT MATTER
This varies between patent offices—for example, the European patent office specifically precludes the following categories from patent protection:
1) discoveries, scientific theories, and mathematical methods
2) aesthetic creations
3) schemes, rules and methods for performing mental acts, playing games or doing business, and programs for computers
4) presentations of information.
In the United States, business processes can be patented, but, in Europe, these are excluded from protection by category 3.

NOVELTY
An invention has to be new to be patentable. This is why your attorney will always ask if you have offered your product for sale to the public and advise you not to discuss your ideas outside his office. If something is known to the public, then it is no longer considered new and, therefore, patentable. This is also why you cannot publish your great idea in a conference before you have completed and patented it—simply disclosing an idea is sufficient even if you have not fully embodied the invention itself.

UTILITY/INDUSTRIAL APPLICABILITY
Perhaps somewhat surprisingly, the patent office won’t consider impractical or inoperable inventions. Yes, folks, things have to be useful to patent them! In Europe, the slightly different criterion of industrial applicability is used and is broadly equivalent to the U.S. test of utility. However, some matters are not patentable in Europe. In particular, many medical techniques would fail the test of industrial applicability and, thus, could not be patented in Europe.

INVENTIVE STEP/ NONOBVIOUSNESS
Here is the really tricky question, though—how do you show that something is not obvious? I could write a whole article about this, but let us keep this simple and say that, when the patent examiner runs out of other options, he will generally argue that your idea would have been obvious to a person skilled in the art. (This becomes tricky because it has to be judged based on the state of knowledge at the time of the invention, which can be very difficult to judge as many things seem obvious with hindsight.)

Proving nonobviousness is often the most important part of any patent application, and a good attorney will make sure he has some strong/convincing arguments before filing, or he will express his concerns to you before filing.

PERSON SKILLED IN THE ART
This refers to an expert in the field of the invention. This term is frequently used in arguments regarding the obviousness or not of a particular inventive step. Note that another commonly used term refers to persons of ordinary skill—typically interpreted as a technically skilled person but not a subject-matter expert.
ADDITIONAL REQUIREMENTS FOR A PATENT

SUFFICIENCY OF DISCLOSURE
A patent application is required to disclose a claimed invention with sufficient detail to enable a person skilled in the art to recreate or carry out the claimed invention. This goes to the heart of patent law—a limited time monopoly is granted on the invention in exchange for providing sufficient detail to allow the public to benefit from the invention after the period of monopoly has expired. If the disclosure violates this principle, for example, if the value of some key parameter is not disclosed, then the patent can be deemed unenforceable or even revoked.

UNITY OF INVENTION
A patent application can relate only to one invention or a group of closely related inventions. When a patent application is objected to on the grounds of a lack of unity, it may still be considered for patent protection. A divisional application can usually be filed for the second invention. Occasionally, however, a patent may be so disjointed, or include such a large number of alternative embodiments, that a prosecutor argues a broad lack of unity of invention and applications can be rejected on this basis.

COMMENTS
Well, there is my first show at explaining the language of patents. I hope you found it interesting, and I welcome your feedback and comments.

I am also interested in hearing from readers who would like to share their own patent or IP experiences. If you have a story that you think would make a good article, or if you have some specific questions on IP and patents, please feel free to write to me at cesmagazine@ieee.org or cesmagazine@gmail.com.

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