

OVERVIEW OF PATENT PROCESS

This document provides an overview of the process for obtaining patents in the United States and international countries. This overview is divided into three main areas. The first area provides definitions for key terms. The second area contains a summary in narrative form of the patent process in the United States and abroad. The third area provides a summary in diagram form of the patent process in the United States and abroad.¹

1. *Key Definitions*

Provisional Application: a U.S. utility patent application filed under Rule 53(c). A provisional application establishes a filing date but does not begin the examination process. A provisional application has simple filing requirements and lower filing fees. A provisional application must include a satisfactory description and drawings. Claims are not required.

Non-Provisional Application: a U.S. utility patent application filed under Rule 53(b). A non-provisional application begins the examination process and must be filed within one year of a corresponding provisional application. The non-provisional application must include a specification, including satisfactory description, drawings, and claims. Filing requirements include submission of an executed Declaration and appropriate filing fee.

Published Patent Application: a non-provisional patent application published by the United States Patent and Trademark Office (USPTO). This publication is generally scheduled 18 months from the earliest filing date and is published electronically. Many international patent offices also publish pending applications.

Continuation/Divisional Application: a non-provisional application that continues a pending “parent” application. Often a continuation or divisional application consists of a copy of the parent specification with a different set of claims.

Patent Cooperation Treaty (PCT) Application: an international patent application filed under the Patent Cooperation Treaty. A PCT application can claim the benefit of priority to non-provisional and provisional applications. The PCT application must be filed within one year of any corresponding provisional and/or non-provisional application. A PCT application enables a company or inventor to designate approximately 100 PCT member countries. Direct filing in PCT member states can be delayed for up to 30 months by following the PCT process. At the end of the PCT process, the PCT application must enter “national phase” in selected member states. This national stage entry is similar to directly filing applications in those countries. The PCT process terminates with entry into National Phase, and

¹ More detailed information including case studies and approximate budgets of representative applications filed in the United States, Australia, Canada, Europe, Japan or any other country is available upon request.

does not result in a substantive grant of patent rights.

Direct-Filed Application: a patent application filed directly in an international country. Each direct-filed application is examined in accordance with the particular international country's patent laws and procedures. Examination and approval of a direct-filed application leads to a grant of an international patent in the respective country.

Office Action: a communication from the USPTO regarding the substantive examination of a non-provisional application. A non-final Office Action sets forth a *prima facie* position of the USPTO. A final Office Action generally closes prosecution of a claim set.

Amendment and Reply: a reply filed by Applicants to an Office Action. The reply can include amended claims, newly added claims and arguments or remarks traversing rejections or objections made in an Office Action.

Information Disclosure Statement (IDS): a statement that lists items of information which Applicants wish to bring to the attention of the Examiner under Rule 56.

2. *United States Patent Process*

The process for preparing and obtaining a United States patent can be divided into four stages: a drafting stage, filing stage, examination stage, and extracting value stage.

(a) *Drafting Stage*

During the drafting stage, innovation of value to the company is identified. This can include regular evaluation of product development and research to capture innovation of value. Information provided directly by inventors, such as, completed Invention Disclosure Forms, is also reviewed. Innovation of value is best identified by a team that includes technical staff, business decision makers, and an intellectual property (IP) attorney.

Once the innovation has been identified, a personal or telephonic meeting is conducted between the drafting patent attorney and the inventors to discuss the innovation. An efficient meeting can identify a set of drawings and claims appropriate for a patent application. Next, the patent attorney prepares a first draft patent application. The first draft patent application is sent for review by the inventors or other reviewers. Any comments or suggestions are incorporated into a final draft patent application. This ends the drafting stage. The drafting stage can typically take from one to three months to complete.

(b) Filing Stage

Different types of patent applications can be filed during the filing stage, depending on a particular strategy being pursued. For example, a non-provisional application can be filed at the outset when innovation has been identified and no further developments are expected in the near term. When additional developments are expected, a provisional application covering initial innovation may be filed. As further developments occur, one or more subsequent provisional applications are prepared and filed. Within one year of the first filed provisional, a non-provisional patent application is filed that incorporates the subject matter of all of the preceding provisional patent applications. In this way, provisional applications are used to obtain a filing date on innovation and developments as they occur. This is cost-effective, since provisional application filing fees are less expensive and provisional applications do not initiate the examination process.

The filing stage in the United States also requires a Declaration signed by the inventors to be filed. Other documentation that may be filed are an Assignment document that assigns the rights of the inventors in a patent application to a company, and a Power of Attorney from Assignee document that permits a registered patent attorney or agent to represent the Applicants before the United States Patent and Trademark Office (USPTO).

International applications typically must be filed within one year of the earliest-filed application (provisional or non-provisional). Two approaches can be used in the filing of an international application: direct filing or PCT. Both of these approaches are discussed further below.

(c) Examination Stage

(i) United States Examination

Once the United States patent application is filed, prosecution proceeds in a “back-and-forth” manner between the Applicants and USPTO. First, an application number is assigned and the USPTO issues an Official Filing Receipt. The Official Filing Receipt confirms the filing date and indicates the assigned application number. Within 18 months of filing, the non-provisional application is published. The USPTO provides a Notice of Publication indicating electronic publishing information. Once or more Information Disclosure Statements (IDSs) are often filed. These IDSs list information that Applicants wish to be considered by the Examiner during examination.

Examiners at the USPTO typically examine cases in the order in which they are filed. Due to a backlog in high technology areas, such as biotechnology and advanced electronics devices, substantive action by the Examiner can be delayed as much as one to two years. At the outset, an Examiner often makes a restriction requirement when more than one invention is being claimed and a search of the different inventions is considered to be burdensome. An Applicant then elects an invention and its associated claims. An

Applicant can pursue prosecution of the non-elected claims in a divisional application. The Examiner then proceeds to search the originally-filed claim set when no restriction has been made, or the elected claim set when a restriction has been made.

Once a search is complete, the Examiner typically issues a first Office Action. The Office Action presents the initial *prima facie* case made by the USPTO on the patentability of the patent application. The Office Action may identify which claims are rejected and provide the grounds on which these claims are rejected. Common rejections are that the claimed invention lacks novelty (35 U.S.C. § 102) or is obvious in view of prior art (35 U.S.C. § 103). Applicants then have a period of time (typically three months but extendable with a fee payment to six months) to reply to the office action.

Preparation of the reply involves an analysis of the Office Action and information cited therein. Inventors or other technical contacts may be called upon to provide technical analysis and work with a patent attorney to prepare an appropriate reply. A personal interview with the Examiner is also possible. Such an interview can be especially helpful to facilitate communication and expedite prosecution of the application. Once a reply is filed by the Applicant, the Examiner typically prepares either a Notice of Allowance or a Final Office Action. Both of these notices conclude prosecution of a claim set. In the case of a Notice of Allowance, the application is passed to allowance. In the case of a Final Office Action, Applicants have limited ways in which they can reply to move the application forward. Applicants can try to prepare an additional amendment or have a personal interview with the Examiner. An Advisory Action is often sent to summarize the final status of the pending claims. One common approach to responding to a Final Office Action is also to file a Request for Continued Examination (RCE). This RCE re-opens prosecution and allows the Examiner to issue further office actions and the Applicants to provide further amendments and remarks to advance prosecution. An appeal process is also available when agreement is not reached with the Examiner.

Once a Notice of Allowance is issued, Applicants must submit an issue fee and publication fee to the USPTO. Formal drawings must also be submitted, if not already done. At this juncture, the patent application is forwarded for publication as a U.S. patent. Any continuing or divisional applications must also be filed before the U.S. patent is issued. Once the U.S. patent issues, a review of the issued patent is made to identify any printing errors made by the Patent Office or other errors which need to be corrected. A Certificate of Correction may be filed as needed.

(ii) *International Examination*

International examination can proceed in either of two approaches: direct filing or PCT filing.

A) Direct Filing

In a direct filing, an international application is filed directly in a selected foreign country or region of interest. For example, if Australia, Canada, Europe and Japan were of interest to a particular company, direct applications would be filed in each of these areas. Each country then conducts its own examination process. Translations of the patent application may be required in certain countries. Annuities often must be paid to maintain the pendency of each international application. Also, many international countries allow an examination to be deferred until an Applicant requests that examination be initiated. This can serve to postpone costs associated with examination of the international case. Substantive examination of an international examination is frequently similar to that in the U.S. in that the Examiners will issue reports regarding the patentability of the claims and invite amendments and/or replies by Applicants. Once the application has been examined and indicated as allowable, the application then proceeds to a patent grant. Additional grant fees are charged. This patent grant results in a foreign patent, which provides exclusive rights in the respective foreign country. In the case of Europe, the European Patent Office allows examination to first proceed on a regional basis. If successful at the regional level, then patent protection is obtained in particular European countries by submitting appropriate grant fees and/or translations. Otherwise, further prosecution may be continued in available individual patent offices, such as, the British Patent Office.

B) Patent Cooperation Treaty (PCT)

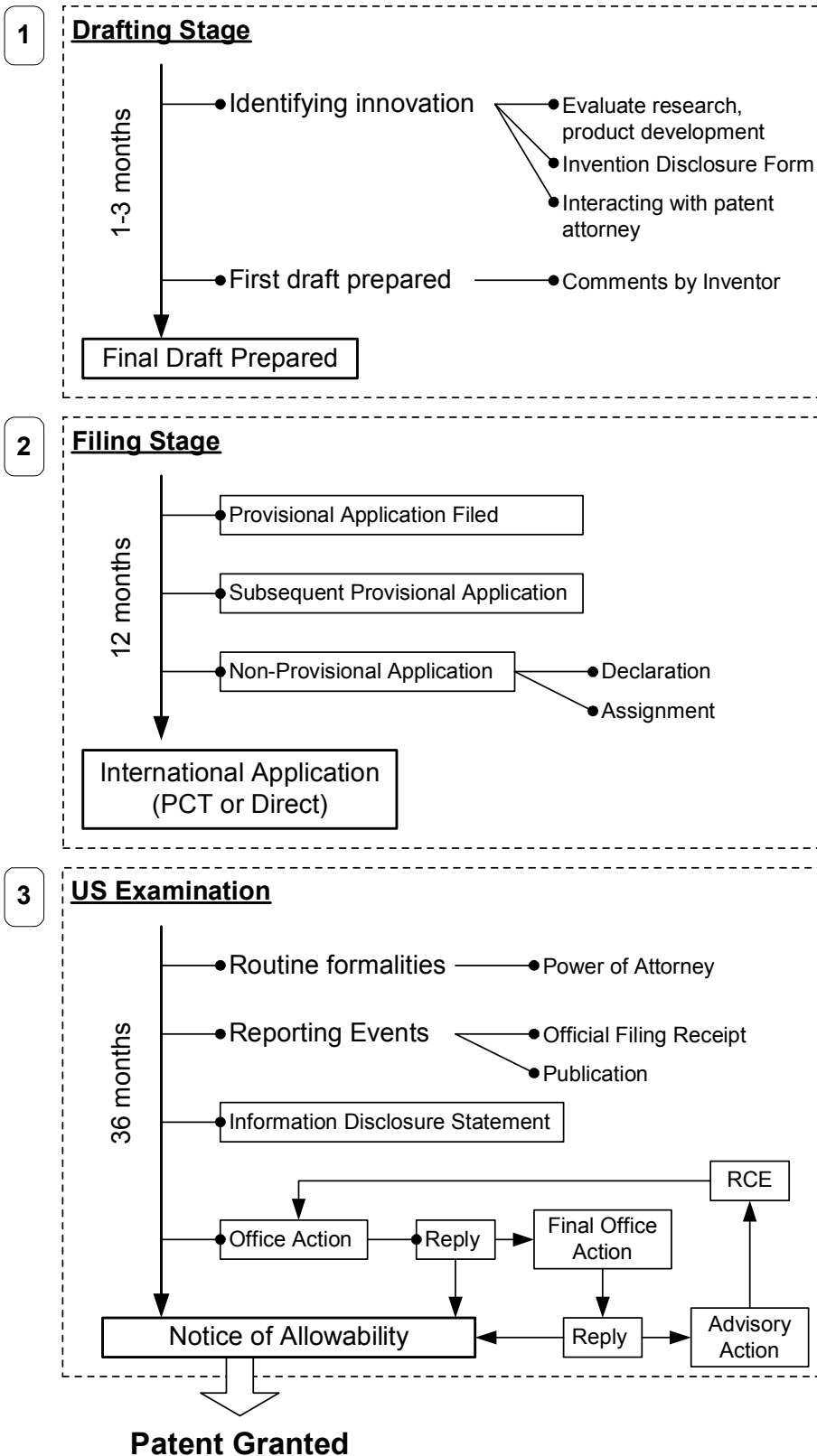
A PCT application allows a company or inventor to delay the filing of international applications directly in foreign countries. The PCT process can involve two phases: Chapter I and Chapter II. In Chapter I, the PCT application is searched by a designated Examining Authority and a Search Report is generated. The Search Report provides a summary indication of the patentability of the pending claims. In Chapter II, the PCT application is examined and a Written Opinion is generated. The Written Opinion provides a written description on the patentability of pending claims. This patentability determination is based upon principles in the PCT Treaty of novelty, inventive step, and utility. A final international preliminary examination report (IPER) is then issued at the end of Chapter II. The IPER provides a summary of the patentability of the claims according to the authorized examining officer. Both the Written Opinion and the IPER are non-binding “advisory” opinions. During Chapter I and Chapter II, opportunities are provided for Applicants to amend claims based on either the Search Report or the Written Opinion or for other reasons. Such amendments or replies, however, are generally optional.

The duration of the PCT process is 30 months (or 31 months in the case of Europe and Australia). This time period is measured from the earliest filing date to which priority is being claimed. At the end of Chapter II, the PCT application must enter National Phase, or go abandoned. Entry into National Phase requires an Applicant to prepare and file international patent applications in selected PCT member states. These National Phase filings are similar to the direct filings described above. Substantive examination occurs in the respective international countries during the National Phase.

(d) Extracting Value

Value can accrue or be extracted from a pending patent portfolio or issued patent portfolio in a number of ways. In many instances, the value can be a multiple of the cost of obtaining the patent portfolio. Common ways of extracting value based on a patent portfolio are company valuation, licensing revenue, cross-licensing, formation of strategic alliances or joint ventures, and enforcement of exclusivity. An effective patent process can ensure best practices management of intellectual property, technology development, and ownership. A culture of innovation is instilled. Appropriate resources are focused regularly on identifying and leveraging innovation.

Process Flow for Typical Patent



4 International Application

