Dual protection of patentable innovations in the US and Europe has long strengthened the relationship between those economic markets and affected competition therein. However, patent applicants beginning their pursuit of protection with US origin applications at the United States Patent and Trademark Office (USPTO) often face significant but often avoidable challenges in protecting their innovations in the European Patent Office (EPO).

Whether a patent applicant is a sole inventor or a multi-national conglomerate, strategic planning at the application drafting stage and prior to European application filing can minimize or eliminate pitfalls that have claimed the aspirations of many an applicant both during European prosecution and long after as well. It’s been said that failing to plan is planning to fail.¹ Truer words could not have been spoken than when considering how to protect patentable innovations in both the US and Europe.

¹ First attributed, more or less, to Benjamin Franklin and subsequently restated by efficiency expert Alan Laiken.
THE BUSINESS CASE FOR US/EP PROTECTION: WHY SHOULD WE CARE?

Consider the desirability of dual patent protection throughout the US and European market places. To most business entities, obtaining such patent protection in these two markets alone is perhaps the gold standard for their patent portfolio. However, it should also be appreciated that, because of the differing approaches these two jurisdictions take to determining patentability, fulfilling the requirements of both jurisdictions almost guarantees success in virtually all other patent offices around the world. As that famous song says “if I can make it there, I can make it anywhere.”

This global recognition, and, in some situations, even reliance on the examination performed at the USPTO and the EPO is partly due to the long term dedication of significant resources dedicated by those offices and partly due to the expertise that results from that dedication. As a result of the well-earned recognition of these patent offices’ expertise, other patent offices have modelled their examination procedures and substantive requirements on one or the other of the EPO or the USPTO. As a result, drafting a patent application to be well received in one of these organizations is likely to have positive results in other countries around the world. For example, fulfillment of USPTO requirements is recognized to be effective at also fulfilling the requirements of the Canadian Patent Office. Likewise, fulfilling the written support requirements of the EPO is likely to provide effective preparation for examination in the Chinese Patent Office. As a result, if a patent applicant can draft an application that is tailored for success in both the USPTO and the EPO, the likelihood of success in the rest of the patent offices around the world is quite high (with sufficient capital).

However, setting the goal is one thing and achieving that goal is something entirely different. As with most things worth doing, the devil is in the details. Moreover, what may appear, initially, to be almost inconsequential choices can jeopardize the chances for protection and enforcement long after anything can be done to address the issue.

2 That great song, New York, New York written by John Kander and Fred Ebb and performed by Frank Sinatra.
**THE PATH (OR PATHS) TO PURGATORY AND PERDITION**

Without reviewing the minutia of the many ways a patent applicant may find their way to the doors of the EPO, it should be understood that different challenges can face an applicant depending on how they have filed their application.

For example, consider the applicant who first files a US non-provisional, or “regular,” application and, within one year, files corresponding sister applications in most other patent offices around the world (also known as “direct filing”), under the Paris Convention for the Protection of Industrial Property. Article 4 of the Paris Convention established how a patent applicant could leverage the filing on an initial patent application to gain the benefit on an early filing date in other jurisdictions. In particular, Sections A(1)-(2) establish the “right of priority” which enables multi-national patent portfolios today.

(A)(1) Any person who has duly filed an application for a patent, or for the registration of a utility model, or of an industrial design, or of a trademark, in one of the countries of the Union, or his successor in title, shall enjoy, for the purpose of filing in the other countries, a right of priority during the periods hereinafter fixed.

(A)(2) Any filing that is equivalent to a regular national filing under the domestic legislation of any country of the Union or under bilateral or multilateral treaties concluded between countries of the Union shall be recognized as giving rise to the right of priority.

As a result, by virtue of this “right of priority” subsequently filed sister applications have the same temporal affect as the originally filed, initial application as stated in Section B.

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3 21 UST 1583, 828 UNTS 305.
(B) Consequently, any subsequent filing in any of the other countries of the Union before the expiration of the periods referred to above shall not be invalidated by reason of any acts accomplished in the interval, in particular, another filing, the publication or exploitation of the invention, the putting on sale of copies of the design, or the use of the mark, and such acts cannot give rise to any third-party right or any right of personal possession. Rights acquired by third parties before the date of the first application that serves as the basis for the right of priority are reserved in accordance with the domestic legislation of each country of the Union.

Thus, the Paris Convention established mechanisms for countries signing onto this treaty to recognize rights established in fellow countries by establishing policies for national treatment of rights, priority rights and common rules.

Before the EPO, an applicant has slightly different requirements, opportunities, and challenges with a so-called “direct filing” or when he “enters the national/regional stage” in a Patent Cooperation Treaty (PCT) application.

As the EPO is an organization, it cannot be part of the Paris Convention, which, thus, does not directly apply to European patent applications. However, Article 87 of the European Patent Convention (EPC) does recognize a priority right for applications for a patent, a utility model or a utility certificate in the same terms as in Article 4 of the Paris Convention for “any person who has duly filed [the application], in or for (a) any State party to the Paris Convention for the Protection of Industrial Property”. Article 87 of the EPC does further extends this priority right to “any person who has duly filed [the application], in or for (b) any Member of the World Trade Organization”.

PCT applications entering the European regional stage are regulated under the auspices of the Patent Cooperation Treaty.4 Ratified in 1970, this mechanism for patent protection enables the World Intellectual Property Organization (WIPO) to facilitate the

International Patent System, which enables applicants seeking patent protection internationally for their inventions.

In the same way that a patent applicant can claim priority under the Paris Convention, the PCT provides for right of priority to parent applications filed prior to the PCT application and claimed priority under the Paris Convention. Article 8, Section 1 of the PCT prescribes:

- **Article 8: Claiming Priority**

  (1) The international application may contain a declaration, as prescribed in the Regulations, claiming the priority of one or more earlier applications filed in or for any country party to the Paris Convention for the Protection of Industrial Property.

The PCT provides for right of priority for national/regional stage applications, which may be conceptually thought of as merely an extension to the PCT application rather than an entirely new but related application. PCT Article 11, sections 3 and 4 provide:

(3) Subject to Article 64(4), any international application fulfilling the requirements listed in items (i) to (iii) of paragraph (1) and accorded an international filing date shall have the effect of a regular national application in each designated State as of the international filing date, which date shall be considered to be the actual filing date in each designated State.

(4) Any international application fulfilling the requirements listed in items (i) to (iii) of paragraph (1) shall be equivalent to a regular national filing within the meaning of the Paris Convention for the Protection of Industrial Property.

Thus, the PCT provides a unified procedure for filing patent applications to protect inventions in each of its contracting states. A patent application filed under the PCT is called an international application, or PCT application. By filing a single PCT application, an applicant take a first step in simultaneously seeking protection for an invention in 150 countries around the world. Such PCT applications proceed from an “international” stage to a “national/regional stage” during which the application is examined in individual patent
offices around the world for suitability for grant. That national/regional stage examination is often virtually identical to examination of other applications; however, there are some differences due to the constraints imposed by the PCT and how those constraints are managed by the EPO.

- **YOU COME TO A FORK IN THE ROAD... TAKE IT**

  Theodore Roosevelt said “[i]n any situation, the best thing you can do is the right thing; the next best thing you can do is the wrong thing; the worst thing you can do is nothing.” Such advice is appropriate for patent prosecutors day in and day out. You may not know if you made the right decision on any issue until well into the future but actions must be taken to move the docket along nonetheless. Determining to file a PCT application versus a direct filed EPO application is one such decision.

  Nevertheless, the decision to file a PCT application rather than a “direct” European application can, in itself, provide the opportunity to address, or at least earlier recognize the likelihood of facing a number of EPO-specific pitfalls. Following filing of a PCT application, applicants receive a non-binding, International Search Report (ISR), which identifies prior art that is considered relevant to the patentability of the pending claims. Such ISR is established by the International Search Authority (ISA) selected upon filing of the PCT application, which ISA can be the EPO for any PCT application filed before the USPTO. This ISR is often issued in advance of any substantive examination performed by the USPTO. As a result, the ISR may be the first opportunity for the applicant to surmise whether and how the scope of their claims may fare during examination. With that information, the Applicant may amend the claims in the international stage or at the time of national/regional stage entry to address potential lack of novelty or inventive step (provided the ever-present concern that the application provides adequate support for such amendments, as discussed herein). Additionally, and potentially, more importantly, the claims may be amended to more effectively conform with requirements specific to the EPO.

  This ISR preview, in combination with the ability to delay filing and examination fees required for national examination by filing under the PCT may be sufficient basis for an applicant deciding to file a PCT application rather than direct filings. However, at the EPO,

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5 Attributed to Lawrence Peter “Yogi” Berra.
this decision can come at a price. Firstly, filing a PCT application rather than a “direct” European application prevents the applicant from claiming priority from an application filed for a Member of the World Trade Organization, which would not be member of the Paris Convention, which is the case of Taiwan for instance. Secondly, filing directly before the EPO reduces the overall costs of the application, as there is no international stage to handle, nor the corresponding official fees to pay, and it certainly reduces the time needed up to grant of a European patent which is often important for enforcement of the patent rights in Europe.

**I Have Priority...**

We should all be aware by now that the America Invents Act\(^6\) changed the US requirement that a patent applicant must be an inventor. As a result, over the last few years, even practitioners dealing with only US patent portfolios have become familiar and accustomed to issues resulting from listing an assignee as a patent applicant. This change served to harmonize US law with the rest of the world, which has been recognizing employers of inventors as owners of invention rights and as patent applicants for some time. Nevertheless, the issue of timely and properly executed assignments remains a problem for a number of reasons, particularly for assignees of US priority patent applications wishing to file and prosecute applications at the EPO.

One reason for this continuing issue is that, unlike other countries around the world, the US does not have a statutory requirement that an employer owns an employee inventor’s innovations. Although the AIA enables the employer to be named as an applicant for the patent application covering that invention, the burden remains on the employer to secure the ownership interest in the patent application. This may be performed in a number of different ways that extend beyond the scope of this paper; however, the most straightforward approach to obtaining ownership is through the inventor(s) executing a written assignment.

Nevertheless, owing to busy inventors, patent practitioners and dockets, execution of the necessary assignment paperwork often takes a lower priority\(^7\) than getting an application of file at the patent office. However, there is a risk that a European patent priority claim

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may be deemed invalid on the grounds that, the “applicant” did not have the right to claim priority on the filing date of the EPO application.

Losing one’s priority claim creates the very real risk that a patent can be revoked in view of intervening prior art. This risk of priority claim loss at the EPO is based on the recognition that all priority claims have their basis in the Paris Convention or EPC, which state that any person who has filed a patent application, or his successor in title, shall enjoy a right of priority. As such, the EPO has held that the right to priority requires a valid transfer of the ownership of the priority application in order for the priority right to be transferred at the latest at the time of filing the sister application.

Thus, the best approach is to obtain, and preferably record, a written assignment of a US priority application and of the corresponding priority right under the provisions of the Paris Convention and EPC, prior to filing of an EPO direct filing or PCT application. Such an assignment should, ideally, specify the application number, filing data and title of the invention to clearly identify the application rights being transferred. By ensuring that a properly formulated, written assignment of the priority right is executed prior to the filing of a PCT or direct filed EPO application, the formal claim of the priority right should be safe.

In case there is any doubt as to the transfer of the priority right, it may be advisable for the PCT or the direct filing should be made in the name(s) of the inventor(s) and the assignee, and the application regularized after filing.

**YOU CAN PAY ME NOW OR PAY ME LATER...**

Ask any US patent counsel with a substantial European portfolio and they will tell you how expensive European patent practice is. However, what many of those patent counsels don’t fully appreciate is that proper drafting of claims in EPO format can reduce claim fees and examination delays.

For example, with the EPO charging excess claim fees for any claim over a total of fifteen, US style claiming can significantly affect the cost of examination at the EPO. US Fram® oil filters were marketed in the 1960’s and 70’s with a famous marketing slogan “You can pay me now, or pay me later”, conveying the idea that you can either pay a small sum now (in that case, to replace a car’s oil and filter) or a far larger sum later (for the replacement of the vehicle’s engine).
origin applications also run into obstacles based on the US practice of including multiple independent claims in the same category, e.g., products, process, apparatus or use.

Rule 43(2) of the European Patent Convention (EPC) specifies that only one independent claim may be included per category. Although some US applications are intentionally drafted to have multiple claims sets, thereby violating this provision, in some situations, the claims can be drafted, or amended in such a way as to conform with the requirement. For example, the EPO provides certain exceptions to the one-claim-per-category requirement including innovations that pertain to, for example, a plug-and-socket configuration, a transmitter-receiver, an intermediate(s) and final chemical product, and gene-gene construct-host-protein-medicament. However, effective assertion of such exceptions requires unity of invention for the disclosed inventive concepts as well.

Accordingly, drafting claims and an underlying specification to support such requirements takes skill, experience and attention. Once the EPO application is on file, it is too late to maximize the impact of such activities. The better approach is to work with a European patent attorney to formulate an alternative set of claims tailored to EPO examination prior to filing of the EPO application. Ideally, such an exercise could be performed in conjunction with or shortly after the preparation and filing of the US priority application.

Such joint drafting exercises help ensure that claims filed at the EPO (either via PCT national stage or direct filing) comply with EPO requirements for support and maximize scope by taking advantage of the ability to include multiply-dependent claims under EPO practice. Additionally, working in teams of US/European practitioners prior to filing and examination serves the team members from both jurisdictions in that they can learn from one another regarding the both the roots and solutions for problems in a way that fosters understanding and collegiality rather than resentment.

It is not sufficient to perform such activities after the European application is on file because the EPO has different, and more stringent, requirements for support for claim amendments during examination. Indeed, in Europe the right to amend the patent application has been limited to preserve the rights of third-parties so that they can predict what possible amendments could be made by the applicant based on the patent application which has been filed. The corresponding safeguard is provided in the EPC through Article
123(2) that states that “the European patent application or European patent may not be amended in such a way that it contains subject-matter which extends beyond the content of the application as filed” (see Regimbeau’s article of March 2015 for more detailed information on “Amendments before the EPO”).

Applicants routinely run afoul of such requirement because they are contrary to the US practice of reciting broad terminology in the claims while disclosing very specific, detailed terminology in specification. Disparities and inconsistencies between claim and specification terminology can also result in clarity objections and assertions that claim amendments added during EPO examination amount to added or unsupported subject matter.

For example, the common US practice of combining features described in the specification and/or illustrated in the drawings to overcome cited prior art can trigger attacks for added or unsupported subject matter both during the examination stage and following grant during an opposition proceeding. To ease amendments before the EPO, it is recommended to have a description that not only focusses on specific detailed embodiments of the invention combining all features, but also discloses the invention in a broader way while indicating which feature is optional relative to another one.

This long lasting risk is particularly problematic because, during opposition, a patent owner’s right to amend the claims is severely curtailed. Indeed, in addition to the limitations of Article 123(2) EPC, another restriction in respect to amendments of claims in post-grant proceedings is established by Article 123(3) EPC that forbids any amendment that would extend the protection conferred by the European patent. Consequently, amending the claims during opposition to defend again newly cited art or a new interpretation thereof or to remedy a problem of unallowable added subject matter under the provisions of Article 123(2) EPC, can create a trap for the unwary wherein the new amendments unwittingly extend the scope of the claims rendering those new amendments unacceptable. Such a trap often irremediably leads to revocation of the European patent.

Accordingly, patent applicants would do well to tailor their description and claims to the EPO requirements prior to their PCT or direct-filed European application. Doing so reduces the risk that any resulting EPO application will suffer from such problems. Such preemptive analysis not only cuts claim fees up front but also reduces the risk of incurring unnecessary costs during examination, or opposition or litigation that result from an
insufficiently defined relationship between claim terminology and the underlying specification description. It cannot be overstated that consistency is key to effective examination and asserting of European patent applications.

- **Can I Say What He Said?**

  In the US, the need for adequate support for claim features has long relied on the practice of incorporating articles, papers and other patent applications by reference in patent applications. Indeed, the USPTO is quite lenient with regard to incorporating material necessary for the enablement and support of claimed subject matter. Given the US accepted practice of adding technical details disclosed only briefly in an applicant’s specification, it should not be surprising that the USPTO recognized the effect of incorporating teachings by reference and has a mechanism in place for allowing amendment of a specification to expressly incorporate what it had previously incorporated by reference. Whether that generosity is warranted is outside the scope of this discussion. What is within consideration is the fact that the EPO is not similarly lenient or generous and will ignore, almost always, any attempt to incorporate subject matter by reference.

  Thus, when drafting a specification with an eye toward examination before the EPO, Applicants should ensure that all details necessary to support, define, enable and properly interpret a claimed invention are included expressly in the figures and most preferably in the text of the application’s specification.

  Such is particularly true for software implemented inventions and other technological innovations that are at risk of slipping outside the EPO’s requirement for “technical effect.”

  The potential for patentability of software, computer programs and computer-implemented inventions under the European Patent Convention (EPC) has been somewhat suspect since initial recognition under the Convention on the Grant of European Patents of October 5, 1973. Article 52 of the EPC has been discussed at length by practitioners, examiners and judges alike but with mixed results over the last thirty years.

  - **Article 52: Patentable inventions**

    (1) European patents shall be granted for any inventions, in all fields of technology, provided that they are new, involve an inventive step and are susceptible of industrial application.
(2) The following in particular shall not be regarded as inventions within the meaning of paragraph 1:

(a) discoveries, scientific theories and mathematical methods;
(b) aesthetic creations;
(c) schemes, rules and methods for performing mental acts, playing games or doing business, and programs for computers;
(d) presentations of information.

Paragraph 2 provides significant constraints on what can be examined and granted by the EPO. Many US applicants have fallen victim to this section even after they've spent considerable money for the filing of an EPO patent application. The EPO's recognition is particularly important considering that the validity of other, sister applications that have been termed “software patents” in national courts throughout Europe generally hinges on whether the EPO recognizes a particular invention as worthy to be patent eligible. Thus, under the EPC, programs for computers are not considered inventions. Such a conclusion would seem to end the analysis.

However, the exclusion from patentability provided under Paragraph 2 only applies to the extent that a European patent application or European patent relates “to a computer program as such.” Paragraph 3 of Article 52 further “clarifies” what is meant by paragraph 2 in that:

Paragraph 2 shall exclude the patentability of the subject-matter or activities referred to therein only to the extent to which a European patent application or European patent relates to such subject-matter or activities as such.

The “as such” language is a source of confusion and argument for applicants attempting to protect software patents in Europe. What is most certain is that the EPO has historically subjected software patents to stricter scrutiny than the USPTO. What is less certain is what is actually required of an applicant to obtain patentability.

One interpretation set forth by the EPO is that the innovation must provide a new and non-obvious “technical” solution to a technical problem. Recognized examples of this have
included innovations that improve the speed or operation of a computer, or ease of use for such a computer in a novel and inventive way.

In recent years, this EPO requirement appears to have come to proverbial patent party dressed in other clothes, i.e., the USPTO’s requirement for statutory subject matter under 35 U.S.C. 101, and the judicially created exceptions to such subject matter. The requirement that an innovation falls within the statutory requirements for patentability is not a new one.

- **35 U.S.C. 101 Inventions patentable.**

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

However, in the twenty-first century, the US federal courts have actively limited the scope of software-implemented inventions by finding certain patentable inventions invalid during litigation. Under US case law, such decisions have precedential effect beyond the parties in a litigation; as a result, the federal courts have interpreted the requirements of 35 U.S.C. § 101 with great legal and commercial impact on many technologies ranging from medical treatment and diagnosis to mobile phone applications. In turn, because the exception to subject matter eligibility is a judicially created one, the USPTO is required to alter its examination of software patents to conform with the federal courts’ interpretation. As a result of this “tail wagging the dog” approach, the USPTO has been forced to shoe horn a technical subject matter analysis into its examination protocol.

Thus, where EPO examination only allows arguments for patentability that are encompassed in the technical effects of an invention, the USPTO may now only consider patentability if one can effectively prove that a claimed invention is implemented via technology that was unknown at the time of the invention. Indeed, the two requirements may seem like different sides of the same coin.

However, this duality can actually work to the advantage of an applicant with initiative: it enables the same support and arguments to be effective at advancing an applicant’s right to patent under both rubrics. Thus, US counsel would do well to familiarize himself with the argument, style, format and content long required at the EPO. Although US
counsel have long fought against the EPO’s “problem-solution” approach for assessing inventive step, requiring for discussion of the closest prior art and how an inventive concept improves upon it, such analysis and arguments seem to be quite effective at supporting an argument for statutory subject matter eligibility in a particular technological field in the USPTO.

For this reason, early consultation with European counsel regarding not only claim format but also specification teachings provides maximum effectiveness on both sides of the Atlantic.

**We’re Together...**

As a result of such early consultation, EPO examination runs more smoothly because, for example, both the US and European counsel understand each other’s focus, agenda and constraints. That level of familiarity also enables effective communication to address specifics of EPO that are “completely foreign” to US practitioners, including the need for and benefit for auxiliary requests during examination and their impact of such arguments on US prosecution history estoppel.

**Conclusion**

Dual protection of patentable innovations in the US and Europe is often the gold standard for portfolio management. Obtaining that standard required initial and maintained focus on the relative requirements, differences and synergies of both the US and European systems. It’s been said that planning brings the future into the present, so we can actually do something about it now.⁹ By establishing a constant and collegial communication line between US and European counsel and formulating and maintaining a plan for subsequent examination and assertion, one can work to maximize the scope of an applicant’s future patent protection while simultaneously minimizing future risk.

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⁹ Another insightful point by efficiency expert Alan Lakein
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