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Benjamin Halpern



Brian Comack

# The Software Challenge: How International Applicants can still Succeed in Obtaining Software Patents in the U.S.

Benjamin Halpern and Brian Comack from Amster, Rothstein & Ebenstein LLP discuss factors that should be considered when drafting software patent applications filed in jurisdictions outside of the U.S., which are intended for subsequent filing in the U.S.

**I**nventors often file for patent protection in the U.S. and other countries. Although the America Invents Act of 2011 sought to harmonize U.S. patent laws with the rest of the world, there remain differences. As a result, patent applicants still face the challenge of conforming their patent applications to the specific patent laws of their home country and the U.S. This is particularly difficult when filing software applications due to the recent changes to legal standards in the U.S. governing software patent eligibility.

This article discusses factors that should be considered when drafting software patent applications filed in jurisdictions outside of the U.S. which are intended for subsequent filing in the U.S. The information provided here is useful for non-U.S. applicants and patent practitioners in obtaining strong U.S. patent protection on software inventions.

## Software Applications Can Have Different Outcomes In Different Jurisdictions

Although the heightened scrutiny of software inventions in the U.S. is relatively recent, we are already seeing examples of software applications that have been allowed in other jurisdictions such as Europe, Japan, and China, while the U.S. counterpart applications have been rejected by the U.S. Patent Office. Unfortunately, this sometimes forces the applicant to abandon the U.S. application or navigate through a costly appeal process. These applications can be directed to true “software” in which the invention is integrally tied to a computer, or a business method-type invention that is implemented using a computer, or both.

Recently, a patent application directed to software for analyzing UV-VIS spectrophotometer data of a DNA/RNA sample was initially filed as a PCT application. This application was filed in 2012 and has since been granted in Australia, China, Japan, and Europe.<sup>1</sup> Meanwhile, the still pending U.S. counterpart is mired down by a final rejection based upon patent ineligibility and other grounds.<sup>2</sup>

Similarly, an application directed to a computerized method and computer readable storage medium for

## Résumés

### Benjamin Halpern

Benjamin focuses his practice on strategic patent prosecution, and has prepared and successfully prosecuted hundreds of patent applications in the U.S. and internationally in a broad range of technologies. Particularly in the realm of software, Benjamin has obtained patents for his clients on inventions related to database management, Internet and other network-based search algorithms, graphic user interfaces, and computerized manufacturing environments. Benjamin is a former Patent Examiner at the U.S. Patent Office, and this experience allows him to effectively negotiate with Office personnel to obtain strong patent protection for his clients.

### Brian Comack

Brian has nearly 20 years of experience working on all facets of intellectual property matters, with a heavy emphasis on patent litigation before U.S. District Courts, the Court of Appeals for the Federal Circuit and the Patent Trial and Appeal Board. He also spends much of his time negotiating intellectual property licenses, overseeing the prosecution of patent portfolios, and providing legal opinions and counseling to his clients. Brian's practice focuses on a wide range of technologies, including software applications relating to video imaging, JPEG imaging, laser-induced fluorescence detection, web-based systems, telephony, and computer-based business methods.

<sup>1</sup> EP 2 681 532 B1; AU 2012222403 B2; CN 103403530 B; JP 6148986 B2.

<sup>2</sup> US 2013/0332084 A1

offering social deals in a social networking system was filed in the U.S. in 2011. Its Japanese counterpart was granted in 2016, but the U.S. application was finally rejected based on patent ineligibility and other grounds.<sup>3</sup> The U.S. rejection is currently on appeal to the U.S. Patent Office's Patent Trial and Appeal Board ("PTAB").

While these differing results may be surprising to non-U.S. applicants, they are not surprising to U.S. practitioners who specialize in software patents. For software applications that originate outside of the U.S., consulting with a U.S. patent lawyer before filing a software application abroad can make the difference between successfully obtaining a software patent in the U.S. or suffering the same fate as the applicants described in the above examples.

## U.S. Law Governing Software Patents

In the U.S., inventions of a "new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof" are eligible for patent protection. 35 U.S.C. §101. Over the last few decades, many applicants in the U.S. have sought to protect "software" that simply automates known processes with a computer. Much debate arose as to whether such processes were new and useful. In attempt to weed out "do it with a computer" software applications, the U.S. Supreme Court's *Alice* decision, which issued in 2014, established a special test which software patent claims must pass to be eligible for patent protection under Section 101. *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347 (2014).

In *Alice*, the Supreme Court held that abstract ideas, natural phenomena, and laws of nature do not qualify as patentable subject matter under Section 101, unless certain conditions are met. Software inventions are usually not directed to laws of nature or natural phenomena, but do often involve an abstract idea.

Under *Alice*, when software is directed to an abstract idea, it is not patentable unless the patent claim recites additional elements that amount to significantly more than an abstract idea. There are no "hard and fast rules" as to what constitutes an abstract idea or when a software claim adds "significantly more".

U.S. courts have attempted to provide clarity to this analysis by identifying examples of concepts that will ordinarily be deemed an abstract idea. The examples include: fundamental economic practices; organizing human activities; and mathematical concepts/formulas. Courts have also identified general categories of software functionality that may be deemed to "add significantly more" and therefore make the abstract idea patentable, including, for example: improvements to another technology or technical field; improvements to the functioning of the computer itself; applying the abstract idea with a particular machine; and adding unconventional steps to a useful application.

While certainly helpful, these categories are very broad and generic and it will not always be clear to the untrained eye whether software claims fall under these categories. Thus, it often takes the skill and experience of a U.S. practitioner who specializes in software patents to make the proper judgment as to what constitutes an abstract idea and when a claim adds "significantly more" to the idea.

Since the Supreme Court's decision in 2014, there have been over 100 decisions by the U.S. Court of Appeal for the Federal Circuit – the appeals court for patent cases – applying the *Alice* test to computer-related patents. Of these, only about seven have found the computer-related patents to pass the *Alice* test. In the U.S. district courts, of the

approximately 400 decisions since *Alice*, more than half have found the patents-at-issue to be patent ineligible. At the U.S. Patent Office, it is far more likely that a Section 101 rejection will be affirmed by the PTAB on appeal than reversed. These decisions need to be accounted for and should guide the practitioner with respect to the "dos" and "don'ts" when drafting the application. This is standard practice for U.S. law – we monitor and account for every decision issued by the Federal Circuit, U.S. District Courts and the PTAB on software applications when drafting software applications.

The practitioner should also consider the "guidance on patent subject matter eligibility" issued by the U.S. Patent Office, which provides instructions to U.S. patent examiners regarding how to handle software claims in view of *Alice*.<sup>4</sup> While U.S. patent examiners have been inconsistent in applying these guidelines and the *Alice* framework to software claims, we have noted a recent trend where the rate of allowance of software applications has increased.

Generally speaking, when software claims provide a technological solution to a technological problem, it is more likely that the claims will pass the *Alice* test. By contrast, when software claims merely automate business methods or conventional processes using generic computer components, it is more likely that the claims will fail the *Alice* test. Below, we compare examples of software claims that were found patent eligible under U.S. law against software claims that were not.

PATENT ELIGIBLE CLAIMS	PATENT INELIGIBLE CLAIMS
Matching website "look and feel" (not abstract)	Telephony device and system for entering transaction data into database
Self-referential data table (not abstract)	Computer systems for optimizing sales organizations and activities
Rules for lip sync and facial expression animation (not abstract)	Methods and investment instruments for performing tax-deferred real estate exchanges
Filtering internet content (abstract, but recites an inventive concept)	Safe transaction guaranty
Field enhancements in distributed network (abstract, but recites an inventive concept)	Dynamic tabs for a graphical user interface

See <https://www.uspto.gov/sites/default/files/documents/ieg-qrs.pdf>.

While it is may be more difficult to obtain a patent in the U.S. for software that computerizes a business method, it is not impossible if the claims and specification are properly drafted (e.g., by explaining how to address a technological problem with a technological solution using a non-routine or unconventional process). On the other hand, while more sophisticated software may seem to be clearly patent eligible to the applicant, it may not pass the *Alice* test if the claims and disclosure do not properly take the relevant legal precedent and U.S. Patent Office guidelines into account.

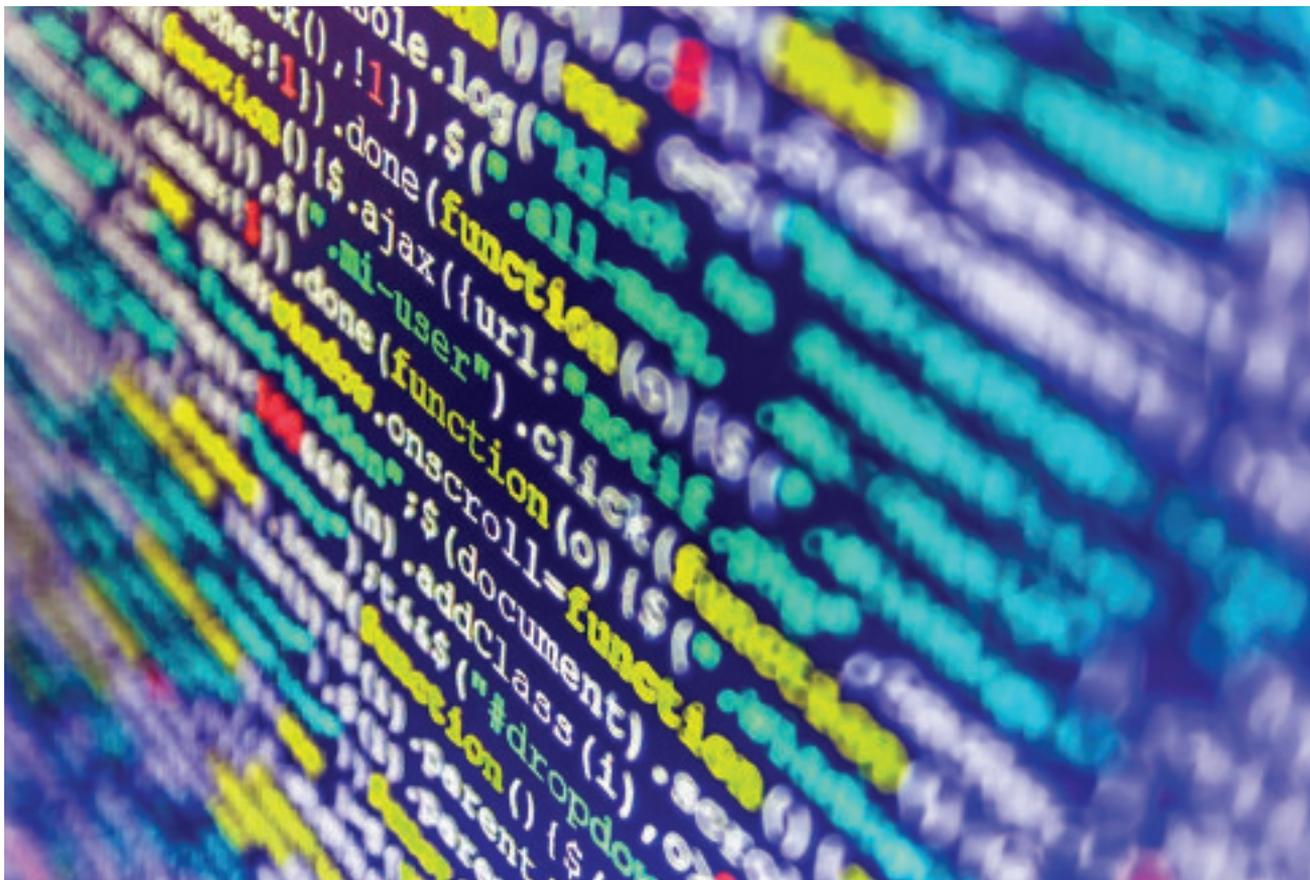
Unfortunately, software applications that are first filed in a jurisdiction other than the U.S. (e.g., Europe, Asia, etc.) often do not account for the vast landscape of district court and PTAB *Alice* decisions in the U.S. As a result, software applications originating outside of the U.S. often lack the necessary information to pass the *Alice* test. This article seeks to reverse this trend by providing tips and guidance that are intended to help reduce the occurrence of patent ineligibility issues during prosecution in the U.S.

## Tips And Guidance For Passing The *Alice* Test

Below, we provide a non-exhaustive "*Alice* checklist" for practitioners in other jurisdictions who intend to file software patent applications

<sup>3</sup> JP 6017464 B2; US 2012/0239466 A1

<sup>4</sup> See May 4, 2016 Memorandum by Deputy Commissioner for Patent Examination Policy on Formulating a Subject Matter Eligibility Rejection and Evaluating the Applicant's Response to a Subject Matter Eligibility Rejection.



in the U.S. In general, such applications should include at least one, and preferably all, of the following elements.

*Explain how the invention presents a technological solution to a technological problem:*

- Explain in as much detail as possible how the invention uses unconventional and non-routine computer components and/or processes to solve a computer-centric and/or Internet-centric problem.
- Compare and contrast the inventive software with “conventional” software
- Recite the actual technological solution/result to the technological problem in the claims

*Describe computer components and their specific arrangement with a high level of detail:*

- Disclose and claim a controlled interaction, taking place between computer components to achieve a technical effect, particularly when the invention involves a unique combination of “generic” computer components.
- For example, a “calculation module” that obtains data from a client computer and calculates a result using “generic” computer components may be patent eligible if the components are arranged in an unconventional/non-routine manner such that the module is in a unique location in a computer architecture.

*Recite and clearly delineate the specific steps and sub-steps of the claimed process:*

- U.S. Examiners are more inclined to find very detailed claims patent eligible because those details may provide “something more” than an abstract idea.
- If a software process step includes sub-steps reciting how the results are achieved, disclose and claim that detail.

*Steer the application to the appropriate art unit:*

- Since *Alice*, “art units” at the U.S. Patent Office associated

primarily with software-implemented business methods have low allowance rates.

- Where appropriate, use terms and phrases relating to computer hardware and technical processes in the title and technical field sections to steer the application to a more technical art unit.
- Avoid using terms and phrases relating to financial agreements or contractual relationships, which might inappropriately suggest the invention is primarily directed to a business method rather than a technological invention.

The above checklist is intended to provide a starting point for practitioners drafting software applications, but ultimately, it may often be helpful to consult with a U.S. practitioner before filing such applications.

## Post Issuance Considerations

Even if a software patent is issued in the U.S., it could face *Alice* challenges in proceedings before U.S. district courts and/or the U.S. Patent Office (e.g., through Covered Business Method proceedings, Post Grant Review or supplemental examination proceedings). If the application is drafted properly from the outset, it will be more likely that the resulting patent will withstand post issuance challenges in the U.S.

## Conclusion

Applications originally filed outside of the U.S. should take into consideration the current state of the law in the U.S. in regards to patent eligibility. Applications should be drafted or, if possible, amended before filing in the U.S. consistent with some or all of the suggestions listed above to avoid a §101 rejection. Thus, it is good practice for a non-U.S. practitioner to at least consult with U.S. patent counsel having expertise in software patents before filing a software application intended for subsequent filing in the U.S.



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