

POST *ALICE* APPLICATION FILING AND PROSECUTION DECISION MAKING

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Introduction

Patent prosecution attorneys working internally in a company provide a variety of types of support to their client. Important components of the support provided include engaging with product development teams to motivate them to make invention disclosure submissions for their innovations, making decisions on whether to proceed with application preparation for those invention disclosure submissions, and making decisions on whether to proceed with prosecution on applications. Of course, multiple factors are considered when making the invention disclosure filing decisions or continuing prosecution, including the importance of attempting to protect the invention disclosure subject matter in a product market space, the prior art of the specific technology space, and over the last several years, concerns about the eligibility of the subject matter for patenting under 35 U.S.C. § 101 after the United States Supreme Court *Alice Corp. v. CLS Bank International*² decision issued on June 19, 2014.

I. 35 U.S.C. § 101 Related Application Filing Decisions

A relatively wide range of invention disclosure submissions are made, including those related to one or more of mechanical hardware, electrical hardware, or software related technology. In some cases, the description included in the invention disclosures submitted is made at a relatively high level. For example, the information provided in the invention disclosure may be directed to explaining the result of use of the technique rather than details about the method and/or structure used to achieve the result. With respect to the degree of detail of information needed to be included in the invention disclosure to have a reasonable chance of correctly assessing the 35 U.S.C. § 101 subject matter eligibility under *Alice*, this is, of course, significantly influenced by the technology space. For example, if an invention disclosure submission was made describing the result of presenting an advertisement to a user of a web browser making use of collected data without providing detail explaining the technical aspects of how the technique is implemented, it would be unlikely that a reasonably accurate assessment of the *Alice* 35 U.S.C. § 101 patent eligibility of the subject matter could be made (as well as an assessment of the likely challenges from the prior art space) without that significant technical detail. In contrast, with respect to the 35 U.S.C. § 101 patent eligibility issue, if an invention disclosure submission was made for an input device (e.g. gaming controller) explaining a functional performance benefit of the input device without a lot of disclosure about the hardware structure developed to implement the performance benefit, there would be a solid basis to infer that this is *Alice* 35 U.S.C. § 101 eligible subject matter.

For the invention disclosure submissions having significant uncertainty about the *Alice* 35 U.S.C. § 101 patent eligibility of what is disclosed, a follow up discussion is typically held with one or more of the inventors to explain the need to disclose more detail about the technical

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² *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2356 (US 2014).

performance benefit provided to assess the *Alice* 35 U.S.C. § 101 patent eligibility. Of course, this additional information is also useful for estimating whether there is likely a patentable innovation over the prior art. A request is frequently made that this additional information be included in an updated invention disclosure submission. Although this approach certainly adds overhead to those making invention disclosure submissions, it assists in accomplishing the objectives of reducing the risk that patent application filings are not pursued on important *Alice* 35 U.S.C. § 101 patent eligible innovations. It also helps to calibrate product development team members on the importance of disclosing the technical aspects of their innovations to better support the application preparation decision process.

Invention disclosure submissions are occasionally made for subject matter that has a high likelihood of not being *Alice* 35 U.S.C. § 101 patent eligible subject matter. Patent application filings are not pursued for these invention disclosure submissions. In making the decisions to not pursue application filings for invention disclosures (processed through an internal online tool), there is a risk that product development team members reach a general conclusion something like “why should I waste my time making an invention disclosure submission when it will just get knocked out by the patent group”. With the shift in what is regarded as 35 U.S.C. § 101 patent eligible subject matter over the years, to reduce the risk that these decisions are misunderstood as being arbitrarily made, the basis for deciding not to pursue an application filing is typically explained to the product development team members who made the rejected invention disclosure submission. In addition, guidance is provided to product development teams explaining that because the evaluation to conclude whether or not the subject matter of an invention disclosure is 35 U.S.C. § 101 patent eligible can be nuanced and we certainly do not want to miss important patent application filing opportunities for their innovations, they should always make invention disclosure submissions even if they conclude, based on their experiences of not having patent application filing pursued for their invention disclosures for 35 U.S.C. § 101 non-patent eligibility reasons, that it is likely the subject matter of a current innovation is not likely to be regard as 35 U.S.C. § 101 patent eligible. Additionally, those who submit invention disclosures are encouraged, if they believe that some aspects of their innovations may not have been considered or correctly understood in deciding not to pursue a patent application filing based on assessing the subject matter to not be 35 U.S.C. § 101 patent eligible, to provide their insights on the technology to assist those who make the filing decisions on the invention disclosures in making appropriate decisions.

Members of product development teams participate in the process for evaluating invention disclosure submissions to make patent application filing decisions. Discussions are conducted on a regular basis with these technical team members to gain insight on the significance of the invention disclosure subject matter relative to the projects being worked on by members of their product development teams. Their insights on the importance of the innovation submitted in the invention disclosure to product and service performance are very useful in making decisions on whether to proceed with patent application filings. As the range of patent eligible subject matter under 35 U.S.C. § 101 has shifted, this challenge has been explained to these technical team members so that they can provide their valuable insights on the likely underlying technical aspects of the subject matter included in the invention disclosure to assist in making appropriate application filing decisions or further consulting with the invention disclosure submitters to learn about those technical aspects.

II. Application Preparation

For the preparation of any patent application for filing directed to any technology space, there is an objective to include in depth detail about the technical innovation to provide support for claimed subject matter that passes the novelty/non-obviousness/inventive step threshold in various jurisdictions around the world to improve the likelihood of getting to allowance. When decisions are made to pursue patent application filings for invention disclosure submissions that are estimated to have any significant likelihood of encountering 35 U.S.C. § 101 patent eligibility struggles in getting to allowance at the USPTO, there is an increased focus on attempting to obtain, from the inventors, as much detail as possible directed to the technical aspects of the performance improvement and/or the problems solved that are provided by the innovation for inclusion into the application. The motivation for inclusion of this technical detail goes beyond the 35 U.S.C. § 101 patent eligibility concerns in the United States patent realm. For example, there are concerns after the *Williamson v. Citrix Online*³ Court of Appeals for the Federal Circuit decision about reducing the risk of claim invalidity if a claim element is interpreted as a nonce term and after the 35 U.S.C. § 112(f) means plus function evaluation an Examiner (or others) determines that there is not sufficient disclosure of algorithms and/or structure to implement the functions recited that are associated with the element. And, for example, in the European Patent Office, related to the 35 U.S.C. §101 patent eligibility concern, there is the technical effect standard⁴ applied⁵ by the European Patent Office to the claimed subject matter to assess whether that subject matter is patent eligible under the European Patent Convention.

There is, of course, a significant degree of uncertainty in certain technology areas about whether an innovation in those areas is currently 35 U.S.C. § 101 patent eligible or will be in the future. For example, in a technical area related to the computer analysis of data to generate an output for review by a user, there is a risk that the United States Patent and Trademark Office would conclude that the computer analysis of data is nothing more than a conventional use of a computing device to process information and is therefore not 35 U.S.C. § 101 patent eligible. However, the *Enfish, LLC v. Microsoft*⁶ Court of Appeals for the Federal Circuit decision provides important insight on why innovative technical improvements to a data processing technique implemented on a generic computing device can possibly be 35 U.S.C. § 101 patent eligible subject matter. Deciding whether to proceed with application preparation and filing includes a business aspect related to balancing the risk of not attempting to protect what would have been 35 U.S.C. § 101 patent eligible subject matter in an important service or product market space with the risk of wasting resources in an attempting to protect subject matter that is not 35 U.S.C. § 101 patent eligible. With the various precedential Federal Circuit decisions that have issued over the years since the Supreme Court *Alice* decision that have provided clarification in the way in which the *Alice* 35 U.S.C. § 101 patent eligible subject matter test is applied, this has motivated attorneys to lean toward proceeding with entry into the application

³ *Williamson v. Citrix Online, LLC*, 115 USPQ2d 1105 (Fed. Cir. 2015)

⁴ <https://www.epo.org/law-practice/legal-texts/html/epc/2016/e/ar52.html>

⁵ http://www.epo.org/law-practice/legal-texts/html/caselaw/2016/e/clr_i_d_9_1_5.htm

⁶ *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1337 (Fed. Cir. 2016)

filing process if there is at least a medium likelihood of success in convincing the patent office that the claimed subject matter is 35 U.S.C. § 101 patent eligible. Not being certain about whether there may be changes to the patent statute or how the *Alice* 35 U.S.C. § 101 subject matter eligibility test applied may evolve over the next decade, there is a reluctance to not pursue patent application filings on important innovations for which there is at least some aspect that provides a technical performance benefit.

III. United States Patent and Trademark Office Guidance on Subject Matter Eligibility

The United States Patent and Trademark Office, over the years since the issuance of the *Alice* decision, has provided multiple useful documents⁷ that provide guidance on how the *Alice* 35 U.S.C. §101 patent eligibility standard is applied and examples of what meets the *Alice* 35 U.S.C. §101 patent eligibility standard. These documents included the application, in various technology areas, of the *Alice* 35 U.S.C. §101 patent eligibility standard from the Court of Appeals for the Federal Circuit decisions that have been made since 2014 in hypothetical claim sets and explanations of how the United States Patent and Trademark Office interprets the *Alice* 35 U.S.C. §101 analysis in the decisions. These documents have been very helpful in understanding how the various decisions from the Supreme Court and Court of Appeals for the Federal Circuit relevant to subject matter eligibility for patenting under 35 U.S.C. § 101 will be applied by the United States Patent and Trademark office during prosecution. This information provides useful guidance on how to make patent application filing decisions, application drafting approaches, and patent application prosecution decisions to reduce the risk that the claimed subject matter will never be regarded by the United States Patent and Trademark Office as *Alice* 35 U.S.C. §101 patent eligible.

A subject matter eligibility examination guidance document⁸ publicly posted by the United States Patent and Trademark Office in December of 2016 provides insight into how the *BASCOM Global Internet v. AT&T Mobility LLC*⁹ decision will be applied by Examiners at the United States Patent and Trademark Office. In addition, the document provides hypothetical subject matter eligibility example that provides insight on how the United States Patent and Trademark Office applies the *Alice* 35 U.S.C. § 101 patent eligibility standard in the context of a business related transaction is provided in the December 2016 posted document. The hypothetical example provides three independent claims directed to the disclosed technique and provides the United States Patent and Trademark Office analysis on the *Alice* 35 U.S.C. § 101 patent eligibility of each of the independent claims.

The subject matter eligibility examination guidance document references the three step process that Examiners use in making *Alice* 35 U.S.C. § 101 patent eligibility subject matter

⁷ <https://www.uspto.gov/patent/laws-and-regulations/examination-policy/subject-matter-eligibility>

⁸ <https://www.uspto.gov/sites/default/files/documents/ieg-bus-meth-exs-dec2016.pdf>

⁹ *BASCOM Global Internet v. AT&T Mobility LLC*, 119 USPQ2d 1236 (Fed. Cir. 2016)

decisions, whether the claimed subject matter is included in one of the 35 U.S.C. § 101 listed eligible categories (Step 1), whether the claim overall is directed to abstract subject matter (Step 2A), and whether any element or combination of elements amounts to significantly more than the abstract idea (Step 2B). With respect to Examiner application of Step 2A in view of the *BASCOM* decision the instructions are:

“It is noted, however, that the Federal Circuit in *BASCOM* described claim 1 as presenting a “close call” as to what it is directed to. Thus, if an examiner skilled in this art recognizes that the claim is directed to an Internet ~~centric~~ -centric problem, for example, or clearly to an improvement in the computer technology of filtering, it would be appropriate to find that the claim, while “involving” an abstract idea is not “directed” to that idea standing alone, thus ending the analysis with a finding of eligibility at Step 2A.”

This guidance is estimated to increase the likelihood, for some claims, of successfully overcoming Examiner rejections of the claimed idea, as a whole, being nothing more than an abstract idea in an office action response.

A hypothetical example provided in the subject matter eligibility examination guidance document¹⁰ is directed to performing an ATM transaction. An overall explanation of the technique is:

“Applicant has invented a method of ensuring secure transmission of data from a card using a smart label and encryption techniques. The invention leverages the wide ~~spread use of mobile devices (smart phones)~~ to facilitate the secure transmission. When a customer issued a bank card with a smart label, the financial institution also provides a downloadable software application to the customer to install on their mobile communication device. The software application is designed to assist communication with a specially outfitted ATM.

The ATM in accordance with this invention includes a controller that is programmed with a time variant random code generator. The code generator generates a random code when activated in response to the reader receiving data from the customer’s bank card. In other words, when the customer is within a certain range of the ATM with their bank card, the smart label is read from the RFID reader in the ATM, which signals the code generator to generate a time - variant random code, which can be a plurality of digits, numbers and/or letters. The ATM then provides the random code to the customer. In one embodiment, the ATM provides the random code by displaying it. The customer is prompted to enter the displayed code into their mobile device, which already has the

¹⁰ <https://www.uspto.gov/sites/default/files/documents/ieg-bus-meth-exs-dec2016.pdf>

institutional software installed. In another embodiment, the random code is transmitted by the ATM to the customer's mobile device, e.g., by a near-field communication or Bluetooth link, if the customer has installed the institutional software on their mobile device and registered their mobile device with the institution."

The three independent hypothetical claims provided in the subject matter eligibility examination guidance¹¹ were directed to the subject matter referenced above. An analysis of the *Alice* 35 U.S.C. § 101 patent eligibility of the three hypothetical independent claims from the perspective of the United States Patent and Trademark Office was also provided. The three hypothetical claims are examples distributed over a range of the *Alice* 35 U.S.C. § 101 patent eligibility spectrum for the three step analysis. The three hypothetical claims provided are:

1. A method of conducting a secure automated teller transaction with a financial institution by authenticating a customer's identity, comprising the steps of:

obtaining customer information from the financial institution, including specific information from a bank card,
comparing, by a processor, the obtained customer information with specific information with customer information from the financial institution to verify the customer's identity, and

determining whether the transaction should proceed when a match from the comparison verifies the authenticity of the customer's identity.

2. A method of conducting a secure automated teller transaction with a financial institution by authenticating a customer's identity, comprising the steps of:

obtaining customer information from the financial institution, including specific information from a bank card,
comparing, by a processor, the obtained customer information with specific information with customer information from the financial institution to verify the customer's identity, by

generating a random code and transmitting it to a mobile communication device that is registered to the customer associated with the bank card,

reading, by the automated teller machine, an image from the customer's mobile communication device that is generated in response to receipt of the random code, wherein the image includes encrypted code data,

decrypting the code data from the read image, and

analyzing the decrypted code data from the read image and the generated code to determine if the decrypted code data from the read image matches the generated

¹¹ <https://www.uspto.gov/sites/default/files/documents/ieg-bus-meth-exs-dec2016.pdf>

code data, and

determining whether the transaction should proceed when a match from the analysis verifies the authenticity of the customer's identity.

3. A method of conducting a secure automated teller transaction with a financial institution by authenticating a customer's identity, comprising the steps of:

obtaining customer

- specific information from a bank card,

comparing, by a processor, the obtained customer

- specific information with

customer information from the financial institution to verify the customer's identity, by

generating a random code and visibly displaying it on a customer interface of the automated teller machine,

obtaining, by the automated teller machine, a customer confirmation code from the customer's mobile communication device that is generated in response to the random code, and

determining whether the customer confirmation code matches the random code, and

automatically sending a control signal to an input for the automated teller machine to provide access to a keypad when a match from the analysis verifies the authenticity of the customer's identity, and to deny access to a keypad so that the transaction is terminated when the comparison results in no match.

The subject matter covered by the hypothetical claim 1 is not concluded in the analysis to be *Alice* 35 U.S.C. § 101 patent eligible subject matter. "The combination of elements is no more than the sum of their parts, and provides nothing more than mere automation of verification steps that were in years past performed mentally by tellers when engaging with a bank customer."¹² Hypothetical claim 2 and claim 3 provide useful additional insight into the guidance the United States Patent and Trademark Office is providing to Examiners on how to analyze a claim to determine whether it is directed to an abstract idea and, if so, whether the claim is directed to something significantly more.

Claim 2 is regarded as directed to an abstract idea. But, with all the recited operations considered as a whole, the claimed subject matter is concluded to be directed to a technical implementation to solve the problem that goes beyond the implementation of an abstract idea on a generic computing device. What is claimed is directed to a specific technical

¹² <https://www.uspto.gov/sites/default/files/documents/ieg-bus-meth-exs-dec2016.pdf>

implementation of a technique to prevent fraud. The steps recited that were related to the technical operation using information provided by a mobile device were indicated as, in combination, addressing unique problems, not just checking information for security purposes. Similar to the basis for determining that the subject matter of claim 2 is *Alice* 35 U.S.C. § 101 patent eligible subject matter, claim 3 was regarded in the analysis as directed, overall, to an abstract concept. Features were identified in the claim that in combination included substantially more than the abstract concept, specifically the steps related to the generation of multiple codes.

“Considered individually, the steps of obtaining information from a bank card and the comparing data do not provide significantly more for the same reasons as in claim 1. Similarly, the processor and the mobile communication device are recited at a high level of generality and perform programmed functions that represent conventional and generic operations for these devices, including reading data, generating random codes, and analyzing data.

However, the *combination* of the steps (*e.g.*, the ATM providing a random code, the mobile communication device’s generation of the image having encrypted code data in response to the random code, the ATM’s decryption and analysis of the code data, and the subsequent determination of whether the transaction should proceed based on the analysis of the code data) operates in a nonconventional and non

-generic way to ensure that

manner that is more than the conventional verification process employed by an ATM alone. In combination, these steps do not represent merely gathering data for comparison or security purposes, but instead set up a sequence of events that address unique problems associated with bank cards and ATMs (*e.g.*, the use of stolen or “skimmed” bank cards and/or customer information to perform unauthorized transactions). Thus, like in *BASCOM*, the claimed combination of additional elements presents a specific, discrete implementation of the abstract idea. Further, the combination of obtaining information from the mobile communication device (instead of the ATM keypad) and using the image (instead of a PIN) to verify the customer’s identity by matching identification information does not merely select information by content or source, in contrast to *Electric Power*, but instead describes a process that differs from the routine and conventional sequence of events normally conducted by ATM verification, such as entering a PIN, similar to the unconventional sequence of events in *DDR*. The additional elements in claim 2 thus represent significantly more (*i.e.*, provide an inventive concept) because they are a practical implementation of the abstract idea of fraud prevention that performs identity verification in a non and non processor and mobile communication device).”¹³

-though these steps are well

-conventional

-known components (a

¹³ <https://www.uspto.gov/sites/default/files/documents/ieg-bus-meth-exs-dec2016.pdf>

The standards used by the United States Patent and Trademark Office to make the *Alice* 35 U.S.C. § 101 patent eligible subject matter analysis for the hypothetical claim 3 provided above is estimated to follow the practice of the United States Court of Appeals of the Federal Circuit. The hypothetical claim 3 includes a recitation related to automatically sending a control signal to an input for the automated teller machine. Although it certainly may be that this recitation is not novel or non-obvious over what is present in the prior art space, it seems difficult to understand how the specific technical operations recited of sending a control signal to allow or deny access to a keypad based on whether or not there is a code match is by itself abstract subject matter. The standard applied appears similar to the United States Court of Appeals of the Federal Circuit analysis in that a well known feature (a feature that is routine or conventional in the technical field) in a claim results in that feature being classified as abstract by the United States Patent and Trademark Office applying the step 2B analysis. In view of this, is it likely for a significant percentage of applications including rejections based on claimed subject matter not being *Alice* 35 U.S.C. § 101 patent eligible and invalid over cited prior art references that amending the claims to include a technical feature that overcomes the prior art based rejections may also qualify the claimed subject matter as *Alice* 35 U.S.C. § 101 patent eligible, i.e. so that the claim includes at least one feature not regarded as being directed to “obviously abstract” subject matter?

The examination guidance provided by the United States Patent and Trademark Office in a document¹⁴ published in May of 2016 provides some additional insight on how an Examiner might perform the Step 2B analysis of the of the *Alice* 35 U.S.C. § 101 patent subject matter eligibility test.

“It is important to remember that a new combination of steps in a process may be patent eligible even though all the steps of the combination were individually well known and in common use before the combination was made (Diehr). Thus, it is particularly critical to address the combination of additional elements, because while individually-viewed elements may not appear to add significantly more, those additional elements when viewed in combination may amount to significantly more than the exception by meaningfully limiting the judicial exception.”

“For example, when the examiner has concluded that particular claim limitations are well understood, routine, conventional activities (or elements) to those in the relevant field, the rejection should explain why the courts have recognized, or those in the relevant field of art would recognize, those claim limitations as being well-understood, routine, conventional activities. A prior art search should not be necessary to resolve whether the additional element is a well-understood, routine, conventional activity because lack of novelty (*i.e.*, finding the element in the prior art) does not necessarily show that an element is well-understood, routine, conventional activity previously engaged in by those in the relevant field. For

¹⁴ <https://www.uspto.gov/sites/default/files/documents/ieg-may-2016-memo.pdf>

example, even if a particular laboratory technique was discussed in several widely-read scientific journals or used by a few scientists, mere knowledge of the particular laboratory technique or use of the particular laboratory technique by a few scientists is not sufficient to make the use of the particular laboratory technique routine or conventional in the relevant field. Instead, the evaluation turns on whether the use of the particular laboratory technique was well-understood, routine, conventional activity previously engaged in by scientists in the field.”

The section of the May 2016 document provided above indicates that for a particular claim recitation to qualify as more than an abstract idea, it is not necessary that the recitation is novel over the known prior art, rather it must be not routine or not conventional in the particular technical area. There is estimated to be a significant degree of uncertainty about what threshold must be passed to move a particular claim recitation into the realm of being regarded as routine or conventional in the technical area by the United States Patent and Trademark Office. This uncertainty is certainly an additional motivation to disclose significant technical detail in an application to provide support for arguments challenging *Alice* 35 U.S.C. § 101 rejections of a claim as unpatentable based on all recitations being directed to routine or conventional subject matter or provide written description support for amendments to move a claim recitation (or combinations of recitations) out of the routine or conventional realm.

IV. Patent Application Prosecution Decisions

With the evolving standard of what is regarded as patent eligible subject matter under 35 U.S.C. § 101 and the analysis for application of that standard at the United States Patent and Trademark Office as more clarifying United States Court of Appeals for the Federal Circuit decisions are issued, there is a significant degree of uncertainty about the future of what will be regarded as sufficiently detailed technical recitations included in the claims to qualify the claimed subject matter as something more than abstract idea. In deciding whether to respond or not respond to an office action that includes a 35 U.S.C. § 101 non-patent eligible claimed subject matter rejection by the United States Patent and Trademark Office so that prosecution of an application will be continued, or the application will eventually become abandoned, a variety of factors are typically considered and balanced. These factors include both legal and business aspects. With respect to the legal aspects, the primary factors are whether in view of the prior art cited by the United States Patent and Trademark Office, the challenges, if any, in meeting the 35 U.S.C. § 101 subject matter eligibility standard, and any 35 U.S.C. § 112 issues raised by the United States Patent and Trademark Office, there is at least a reasonable chance to get a notice of allowance issued. Another factor is the ongoing issuance of Court of Appeals of the Federal Circuit decisions on how to apply, in various technology areas, the *Alice* abstract analysis to determine what is regarded to be 35 U.S.C. § 101 patent eligible subject matter. Business aspects that are considered include whether the scope of the claimed subject matter that does have a reasonable chance of getting a notice of allowance issued has sufficient relevance to the company’s product market space. Of course, in deciding on whether or not to proceed with prosecution on an application, it is not uncommon for there to be a significant degree of uncertainty about whether a correct decision is being made. In general, the degree of uncertainty

is greater early in the patent application prosecution process. An even greater degree of uncertainty can exist at the stage of making application filing decisions.

Following are some examples of prosecution decisions made on applications for which the United States Patent and Trademark Office made *Alice* 35 U.S.C. § 101 rejections of claims as non-patent eligible subject matter.

A. 13/585620

The first office action for the 13/585620 issued in early November of 2014, relatively soon after the United States Supreme Court *Alice* decision. The first office action included 35 U.S.C. § 103 of claims 17-20, rejection of claims 35 U.S.C. § 101 as non-patent eligible, and allowance of claims 1-16. Independent claim 17 as filed was:

17. A method of projecting illumination light into an image environment, the method comprising: generating light; forming illumination light exhibiting a diffractive interference of 10% or less from the light by: diverging at least a portion of the light so that light emitted by the diverging stage has a light profile that is more intense farther from an optical axis of the light than closer to the optical axis of the light, adjusting a degree of collimation of the light; and projecting the illumination light into the image environment.¹⁵

The 35 U.S.C. § 101 non-patent eligible subject matter rejection asserted that all claim elements considered individually or in combination were not directed to significantly more than an abstract idea. That first office action also included assertions that the originally filed claim 17 was invalid under 35 U.S.C. § 103 based on several prior art references cited. Amendments were made to claim 17 leading to a notice of allowance. The office action response included solid rebuttal arguments to the 35 U.S.C. § 101 *Alice* rejection. There were not comments provided in the issued notice of allowance that indicated whether the rebuttal arguments or the amendments convinced the Examiner of the *Alice* 35 U.S.C. § 101 subject matter eligibility of claim 17. With the clarification of what qualifies as an abstract idea over the years since the Supreme Court *Alice* decision from the various Court of Appeals of the Federal Circuit decisions, it is estimated that the current likelihood of rejection of claim 17 by the United States Patent and Trademark as non-patentable subject matter 35 U.S.C. § 101 is low. If the only rejection of claims of technical detail comparable to claim 17 was based on an assertion that the claimed subject matter was not patent eligible under 35 U.S.C. § 101, that is estimated to be an application suitable for appeal at the United States Patent and Trademark Office because there is a solid basis to argue that multiple of the independent claim recitations are individually and in combination significantly more than an abstract idea. For example, the claim recitations related to “diverging at least a portion of the light” and “adjusting a degree of collimation of the light” reference specific technical manipulation of projected light. However, if adding structural elements that perform the recited operations, and were not excessively limiting, provided a solid basis to convince the United States Patent and Trademark Office that the amended claims were *Alice* 35 U.S.C. § 101 patent eligible, that more efficient prosecution approach may be appropriate. Additionally, if features need to be added to differentiate over prior art, those inventive technical features would

¹⁵ <http://appft.uspto.gov/netacgi/nph-Parser?Sect1=PTO2&Sect2=HITOFF&u=%2Fnethtml%2FPTO%2Fsearch-adv.html&r=2&p=1&f=G&l=50&d=PG01&S1=585620.APN.&OS=APN/585620&RS=APN/585620>

likely provide a solid basis to argue for the *Alice* 35 U.S.C. § 101 patent eligibility of the amended claims.

B. 12/813514

The 12/813514 application¹⁶ was filed in 2010. The first office action issued in May of 2012 included prior art rejections and did not include any 35 U.S.C. § 101 patent eligibility rejections. The second, third, and fourth office actions issued also included prior art rejections and no 35 U.S.C. § 101 patent eligibility rejections. The fifth office action issued in November of 2014 included *Alice* 35 U.S.C. § 101 patent ineligibility rejections. An example pending independent claim at the time of the that rejection was:

21. A method implemented on a computing device having at least one processor, the method comprising: providing a workflow that automates processing of an online submission to an online crowd-source competition from submission to completion of the online crowd-sourced competition, the workflow comprising: receiving the online submission through a web-based interface; evaluating the received online submission for compliance with competition rules associated with the online crowd-source competition; providing the participant with a trackable receipt upon acceptance of the evaluation of the received online submission, the trackable receipt comprising proof of the accepted online submission; and auditing participation of the participant in the online crowd-sourced competition.

After issuance of the November 2014 office action, a decision was made to terminate prosecution on the 12/813514 United States patent application. Because it was determined that there was not sufficient detail disclosed in the application related to a technical aspect of the claimed method that was likely to be regarded by the United States Patent and Trademark Office as beyond routine or conventional operation of a computing device that could be added to the independent claims to provide a solid basis to overcome the 35 U.S.C. § 101 *Alice* rejections, a decision was made to not respond to the office action.

C. 12/956162

The 12/956162 application¹⁷ was filed in 2010. The first office action was issued in June of 2012 and included 35 U.S.C. § 101 rejections of all claims for not falling into any of the 35 U.S.C. § 101 categories or not excluding only transitory signals and 35 U.S.C. § 103 rejections. After several additional office action issuances and submitted office action responses with amendments, the 35 U.S.C. § 101 rejection were overcome. In November of 2014 an office action issued with a 35 U.S.C. § 101 *Alice* rejection of all pending claims as non-patent eligible and included 35 U.S.C. § 103 and 35 U.S.C. § 112 rejections. Amendments filed in response to the November 2014 office action overcame all rejections except for the 35 U.S.C. § 101 *Alice*

¹⁶ <http://appft.uspto.gov/netacgi/nph-Parser?Sect1=PTO2&Sect2=HITOFF&u=%2Fnetacgi%2FPTO%2Fsearch-adv.html&r=3&p=1&f=G&l=50&d=PG01&S1=813514.APN.&OS=APN/813514&RS=APN/813514>

¹⁷ <http://appft.uspto.gov/netacgi/nph-Parser?Sect1=PTO2&Sect2=HITOFF&u=%2Fnetacgi%2FPTO%2Fsearch-adv.html&r=3&p=1&f=G&l=50&d=PG01&S1=956162.APN.&OS=APN/956162&RS=APN/956162>

rejection of all pending claims in a subsequent office action that issued. Additional amendments to the independent claims, for which claim 1 is provided as an example below, were necessary to convince the Examiner that the claims were 35 U.S.C. § 101 Alice patent eligible subject matter.

1. (Currently Amended) ~~A method of presenting an event plan of an event initiated~~
~~by a user of a social network who is acting as an organizer of the event, the method utilizing a~~
~~device having a processor and comprising: executing on the processor instructions that cause the~~
~~device to~~ A computer system, comprising:
one or more processors; and
one or more computer-readable media having stored thereon instructions that are executable by the one or more processors and that configure the computer system to generate a
map user interface corresponding to an event plan, including instructions that configure the
computer system to perform at least the following:
~~responsive to receiving, from the organizer,~~ receive a request to invite a contact of the
plurality of users within [[the]]a social network to [[the]]an event[[,]];
~~record each the contact plurality of users as [[an]] invitees of the event;~~
~~responsive to receiving, receive, from [[an]]at least one of the invitees of the event other~~
~~than the organizer, an event plan suggestion for an event logistic relating to at least one of a time~~
~~of the event and comprising a suggested geographical location of the event[[,]];~~
~~associate the event plan suggestion for the event logistic suggested geographical location with the event plan; [[and]]~~
identify a geographical location of each of a plurality of computing devices based on
geographical data received from each computing device, each of the plurality of computing
devices corresponding to one of the plurality of users;
generate a map user interface, including (i) generating an event location indicator on the
map user interface corresponding to the suggested geographical location, and (ii) generating a
plurality of guest location indicators on the map user interface that each correspond to one of the
plurality of geographical locations of the plurality of computing devices, including indicating
that a first one or more of the guest location indicators that are within a predetermined distance
from the suggested geographical location, and indicating that a second one or more of the guest location indicators are outside of the predetermined distance from the suggested geographical location; detect that a particular computing

device of the plurality of computing devices that is associated with a particular second guest location indicator has moved to a new geographical location that is within the predetermined distance from the suggested geographical location; and based at least on the particular computing device having moved to the new geographical location: update the map user interface, including (i) updating the particular second guest location indicator on the map user interface to reflect the new geographical location of the particular computing device, and (ii) indicating that the particular second guest location indicator is now within the predetermined distance from the suggested geographical location; and send a notification to at least one of the plurality of computing devices apart from the particular computing device, the notification indicating that a user associated with the particular computing device has arrived at the event. responsive to receiving at least one comment about the event, associate the comment with the event; and responsive to receiving a request to present the event plan: present the at least one comment about the event; and present, apart from the at least one comment, the event plan suggestions submitted by invitees of the event for event logistics of the event relating to at least one of the time of the event and the location of the event.

The prosecution of this application is an example of the importance, in general, for having an opportunity to overcome a variety of possible rejections, to include sufficient technical detail (ideally as much detail as possible of the innovative technical aspects that can be obtained from the inventors) in the written description and drawings of the application as filed for support of amendments that can provide a solid basis to argue before the United States Patent and Trademark Office that the claimed subject matter is 35 U.S.C. § 101 *Alice* patent eligible because there is a non-conventional and non-routine technical performance improvement.

D. 13/051696

Pending application 13/051696¹⁸ filed in 2011 is pending on appeal at the United States Patent and Trademark Office Patent Trial and Appeals Board. In a final office action, all pending claims were rejected based on being asserted as non-patent eligible under 35 U.S.C. § 101 *Alice*. In the final office action, there were no assertions of claim invalidity over any cited prior art references. The application discloses a technique related to improving the user efficiency of online shopping through a virtual store. The pending claim 11¹⁹ below includes recitations related to providing, in response to user input, a higher magnification view of portions of a retail store that would permit the user to view products on shelves on their computing device. Because there is a significant technical performance benefit provided to the user of a computing device implementing what is within the scope of the claimed subject matter, there is a solid basis to argue that the claim 11 is directed to 35 U.S.C. § 101 *Alice* patent eligible subject matter. For final office actions issued by the United States Patent and Trademark Office, including *Alice* 35 U.S.C. § 101 abstract idea rejections, but not asserting any other significant claim validity issues,

¹⁸ <http://appft.uspto.gov/netacgi/nph-Parser?Sect1=PTO2&Sect2=HITOFF&u=%2Fnethtml%2FPTO%2Fsearch-adv.html&r=2&p=1&f=G&l=50&d=PG01&S1=051696.APN.&OS=APN/051696&RS=APN/051696>

¹⁹ <http://portal.uspto.gov/pair/PublicPair>

proceeding to appeal should be given significant consideration in situations in which the rejected claims include recitations covering a technical performance improvement and there is sufficient potential value for the claimed subject matter.

11. On a computing device, a method of presenting an interactive virtual shopping experience, the method comprising: receiving via a user input device a user input requesting display of a first overhead view of an interactive map of a retail store, the first overhead view showing locations of a plurality of product regions within the retail store, the interactive map including a magnification indicator; sending to a display device the first overhead view of the interactive map of the retail store comprising less detailed annotations in response to the request; receiving a user input to the magnification indicator requesting a higher magnification view of a portion of the interactive map of the retail store, the higher magnification view showing locations of product groups on shelves within one or more of the product regions; sending to the display device the higher magnification view of the portion of the interactive map of the retail store comprising more detailed annotations in response to the request; receiving a user input to the magnification indicator requesting a first-person view of the portion of the interactive map of the retail store, the first-person view showing products on the shelves at an actual estimated eye level of a user; and sending to the display device the first-person view in response to the request.

Conclusion

As has always been the case in the patent application prosecution realm, including in the filed application very detailed disclosure of the technical structure and operation of various embodiments of an innovation is a dominant aspect of creating an application with a significantly improved likelihood of getting to issuance in jurisdictions throughout the world.