

## **PATENTABILITY OPINIONS**

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### **I. INTRODUCTION**

“Is my invention patentable?” In the day to day practice of patent law, patent attorneys give their opinions on the answer to this question more frequently than any other type of opinion. To answer this question, the attorney must (1) understand the invention, (2) investigate the related prior art, (3) analyze the invention against the prior art under the patentability standards defined by statutes and case law, and (4) prepare a patentability opinion. In today’s market, a client will generally be expecting to pay only \$1,000 to \$2,000 for a patentability opinion depending on the technology involved.

The quality of the opinion, and ultimately the reputation of the attorney for giving such opinions, depends on decisions that the attorney makes while preparing the opinion. This paper highlights the points at which these decisions are made in order to point out where the attorney has the greatest influence on quality.

### **II. UNDERSTANDING THE INVENTIVE SUBJECT MATTER**

The first decision point is an assessment of whether the attorney understands the invention sufficiently to search, or to order a search, of the prior art. The attorney should be able to characterize the invention in one or two representative claims before initiating a prior art search; however, actual claims need not be drafted. This understanding generally comes from either of two sources: a written invention disclosure or an interview with the inventor.

#### **A. WRITTEN DISCLOSURE**

Often the request for a patentability opinion comes from a patent department of a corporate client in the form of a written invention disclosure. In addition to a description of the invention, these written disclosures typically contain other useful information such as known prior art, advantages over the prior art, first public disclosure and product release dates.

Occasionally, the written invention disclosure merely states “see attached description,” and the attachment is a large technical report from an even larger project. A large technical report is of little help to an early understanding of the invention, and the attorney is well advised to telephone the inventor for a more focused statement of the invention.

On occasion, the written invention disclosure may be too sketchy to be useful. For example, it may not be much more than a sketch and few sentences that are more descriptive of the benefits of the invention than how to make and use it. Here too, the attorney is well advised to telephone the inventor for a more particularized statement of the invention.

## B. INTERVIEW WITH INVENTOR(S)

Unless the invention disclosure is reasonably descriptive, an inventor telephone or personal interview is almost always needed to complete a well-prepared patentability opinion. However, whether the telephone interview should take place before or after conducting an independent prior art search depends on how well the attorney understands the invention from the written material provided.

If the written invention disclosure is sufficiently clear to conduct a reasonable search of the prior art, the prior art search should be conducted before an inventor interview, since an attorney should first review the located art to be fully prepared for the interview. The interview should only be conducted before the search when the invention is not sufficiently understood to conduct a reasonable prior art search. To be respectful of the inventor's time, an interview that must be held before initiating the search should be as complete as possible so that it is unlikely that another interview will be needed.

In either case, the attorney should prepare for the interview by at least reading the invention disclosure and any located prior art references. The inventor may be your client or an employee of your client. Sometimes the inventor is a highly placed key researcher of your client who has influence on the selection or retention of patent attorneys. By being prepared and respectful of the inventor's time, the attorney will show competence and efficiency.

Different inventors have different exposures to the patent system. If you are industrious, you may want to research the inventor's patent background before you set up the telephone interview. You can search the Patent Office's Internet web site to cross match the inventor's name with the assignee's name to locate his or her prior patents, if any.<sup>1</sup> The number of prior patents gives you a measure of the inventor's exposure to the patent system, and frequently, the patents provide a lexicon of the terms used by the inventor.

An experienced inventor should be able to quickly convey the invention. However, inexperienced or new inventors may find it difficult to succinctly convey the invention. When I encounter this situation, I go back to basics and ask the inventor to tell me whether the invention is best embodied in "a machine, an article of manufacture, a process or a composition of matter."<sup>2</sup> Sometimes this works; sometimes the inventor says

<sup>1</sup> [www.pto.gov](http://www.pto.gov), then navigate to the searchable patent database and search on the inventor's name ("in") and the assignee's name ("an"). For example, search on "in/john and in/jones and an/scientific".

<sup>2</sup> Statutory subject matter classes of 35 U.S.C. §101.

something like “my idea or concept is ...” or “the benefit of my invention is ... .” If I’m lucky, the inventor says “it’s software.” In any case, you must press on until you understand the invention class (e.g., a process or machine) and the invention itself. I then ask for the basic elements of the machine or steps in the process. Finally, I ask what element or step of the invention is missing from the prior art, and how similar machines or processes were achieved in the prior art without the missing element or step. A conscientious inventor may admit that all elements or steps are taught somewhere in the prior art, but not in a single reference. In this situation, you should proceed with asking why the combination is unobvious.<sup>3</sup> By this point, the attorney should understand the invention sufficiently to initiate a prior art search.

A complete interview, before or after the prior art search, should be used to discover other information relating to patentability. Product sales, offers to sell, trade show presentations or other demonstrations should be investigated as well as public use of the invention and technical presentations by the inventor or co-workers of closely related technologies. In fact, virtually all factors in a novelty determination should be asked.<sup>4</sup>

### III. INVESTIGATING RELATED PRIOR ART

The role of an independent prior art search is to locate prior art unknown to the inventor. Sometimes the inventor is well versed in the prior art. As often as not, the inventor is unaware of prior art patents, but knows of principal printed publications.

#### A. LIBRARIES AND DATABASES IN WHICH TO SEARCH

A second decision point influencing the quality of the opinion is the selection of libraries and databases in which to search. Any search involves looking in libraries and databases for relevant prior art references. For patentability searches in the U.S., it is customary to manually search issued U.S. patents in a limited number of subclasses, and/or search the Automated Patent System of the Patent Office (text searches on patents granted since 1971) although other databases may be used.

In some art areas, database searches may be ineffective. For example, some of the less complex mechanical arts may find database searches ineffective. There are many diverse reasons for this. Different words may be used to describe the same element. For example, in the automobile arts, the U.S. uses the word “hood” where the United Kingdom may use the word “bonnet.” Sometimes a key word may have multiple meanings and generate excessive “false hits.”

Specific situations may suggest that other libraries, such as specific university or public technical libraries should be searched, or the specific situation may suggest that other

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<sup>3</sup> Obviousness, 35 U.S.C. §103.

<sup>4</sup> Novelty, 35 U.S.C. §102.

databases should be searched. Many periodic technical publications have searchable text databases of their past publications dating back many years.

Since the Court Of Appeals For The Federal Circuit held in *State Street Bank*<sup>5</sup> that methods of doing business are not *per se* unpatentable, perhaps some clients may want to search through databases containing business publications.

As an example of a specific situation, software related inventions are infamous for difficulties in searching for the most relevant prior art references. Over the past ten years, the Patent Office has improved its ability to search for prior art that is relevant to software related inventions, but this technology area remains controversial. For a patentability opinion, the attorney should come to an agreement with the client as to whether a search of additional databases is warranted by the improved quality of the patentability opinion that may result from the additional search. Some clients do not want to spend the extra money.

## B. MANUAL AND COMPUTER ASSISTED SEARCHES

Most searchers of U.S. prior art employ both (1) a manual search of a specific class and subclass(es) of U.S. patents, and (2) a computer assisted database search for key words in the U.S. Patent Office Automated Patent System (APS) or other database. However, for special situations, the attorney may specify other searches.

Manual and database searches are not equivalent and rarely yield the same results. Mature technologies tend to have a well known set of terms describing the art that can be effectively used in a computer assisted key word search of a database. However, in pioneering technologies, many laboratories toil in secrecy and file patent applications using a laboratory specific lexicon of terms to describe the invention. In such circumstances, a computer assisted key word search may be of little help. Such pioneering inventions are best searched by a manual search of a specific class and subclass. Most inventions are best searched using both techniques.

## C. SEARCH CRITERIA

Another decision point influencing the quality of the opinion is the selection of a specific search criteria for either manual or database search, or both. For example, the search criteria may be a specific combination of two elements used in a particular type of device. The searcher then reviews all references in the selected subclass to identify patents that disclose the specific combination of two elements in the particular type of device. Ideally, 10 to 20 prior art patents are identified by this technique. One of the important searching skills is a knowledge of the existing prior art sufficient to set a search criteria of reasonable scope.

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<sup>5</sup> *State Street Bank & Trust Co. v Signature Financial Group, Inc.*, 149 F.3d 1368 (Fed. Cir. 1998).

In the end, the attorney will analyze the located patents, and give an opinion of the claim scope available for the invention. If too many patents are located, the cost of the patentability opinion will be excessive because of the attorney time involved in analyzing the patents. If too few patents are located, the search criteria may have been too narrow. An opinion of available claim scope that is much broader than the search criteria may be unjustified based on the search, and an opinion of available claim scope that is commensurate with the search criteria may be unnecessarily narrow if based on an overly narrow search criteria. It is the attorney's job to assess the available claim scope to a reasonable certainty.

#### D. OTHER FACTORS

Yet another decision point influencing the quality of the opinion is the identification of the class and subclasses of U.S. patents in which to conduct a manual search (thus, further limiting the scope of the searched library). When a searcher is uncertain of the most relevant search class or subclass, then a senior patent examiner should be consulted to help identify an appropriate class and subclasses to search. Similarly, the identification of key words and databases in which to conduct a computer assisted database search for prior art will influence the quality of the opinion.

#### E. EMPLOYMENT OF SEARCH AGENTS

Another decision point influencing the quality of the opinion is the selection of a search agent or search firm. As a general rule, an attorney organizes and initiates a search, but usually employs a search agent to conduct the search. Although the attorney may request specific searches, the attorney usually relies on the thoroughness and accuracy of the searcher. I recommend this practice when the attorney has worked with the searcher enough to have developed confidence in the searcher's judgment. It is more cost efficient, and searching is a specialty that may involve skills with which the patent attorney has little experience or outdated experience. For example, a searcher but not the attorney may have knowledge of a current patent reclassification project within the Patent Office.

In normal practice, the attorney identifies the invention, with an attached figure and/or description, in a letter to the searcher, and requests that the searcher conduct the search for an agreed price (typically between \$250 and \$1,000, depending on the art). A description of the invention and a description of how the invention differs from the known prior art are normally included in the request letter. If available and relevant, one or more drawings and a written description may be attached. The letter with attachments must convey an understanding of the invention.

Since the attorney relies on many decisions of the searcher, the selection of the search agent is an important decision influencing the quality of the attorney's opinion. This is just another form of the "garbage in, garbage out" maxim. The searcher usually sets the scope of the search based on the money authorized in the attorney's letter. A good searcher will advise the attorney if the money authorized is insufficient. For example, when the number

of subclasses that must be searched is unusually large, the searcher must spend more time reading patents and should advise the attorney that more money will be required to review all subclasses.

An attorney should not forget that the quality of the patentability opinion depends, at least in part, on the libraries and databases searched, whether manual and/or automated computer searches were conducted, key words selected, the selection of the class and subclasses to manually search, and whether a sufficient number subclasses have been searched. When the independent search is conducted by a search firm, these choices should be provided in the searcher's written report, and the attorney should confirm that these choices are reasonable for the invention. Clearly, care must be exercised in selecting a search firm or agent.

Most patent attorneys and agents prefer working with patent search firms of their own choosing and with whom they are familiar and within whom they have confidence. Search firms are like any other contractor. Some are highly skilled and others are not. Different firms have skills in different technologies. A searcher of electronic or computer arts is not interchangeable with a searcher of genetic arts. Many searchers are former patent examiners, some are registered patent agents, and others are merely students trying to work their way through college with no other credentials. It takes experience to develop a short list of search firms in your preferred art. When hiring a searcher, ask a lot of questions. Experienced attorneys typically have a list of preferred searchers categorized by technology, and this list changes from time to time.

#### IV. PREPARING THE PATENTABILITY OPINION

The bottom line for a patentability opinion is a statement of the attorney's opinion of what claim scope is believed available. Clients should review the opinion and determine whether the available claim scope justifies the expense of preparing and prosecuting a patent application.

To prepare a patentability opinion, the attorney must analyze the invention in light of the located prior art references and the prior art disclosed in the written invention disclosure in view of the patent statutes and case law. The attorney's knowledge of statutes and case law influence the quality of the opinion as does the attorney's knowledge of technical matters.

##### A. AN EXAMPLE OF A ROUTINE OPINION

A common method of reporting an opinion is in the form of a long letter. After identifying the client's request for the opinion (reference number, date, title, etc.), the search criteria, the located references and the libraries and databases searched are described. The opinion may conclude, or even lead, with an opinion of the likely available claim scope. The order of these items may vary.

## 1. THE SEARCH CRITERIA

The first part of a typical opinion is a paragraph discussing the search criteria: what was looked for and occasionally what was not. I will include such language as “The scope of the search was set to include patents disclosing a method for ... . Included were patents disclosing a method to use an ion beam to create a self-aligned structure with ... . Also cited are patents disclosing ... . Generally excluded were patents disclosing ... .”

## 2. DISCUSSION OF THE PRIOR ART

When discussing the prior art, always be careful not to amplify on or characterize the disclosure beyond what is actually written in any prior art patent or other reference. Do not categorize something as prior art if it is not. It may be just a located reference.

It may be beneficial to organize the prior art into categories based on what the art fairly discloses. One might order the art in the categories from the most narrow to the broadest. For example, for the most narrow category, one might report that “No references were found showing . . . ,” a narrow scope.

In the next broader category one might report the located patents individually such as “U.S.P.N. XXX,XXX to Jones shows a detector array using ... coupled to ... for ... .” If several patents disclose similar subject matter, one might report the patents as a group such as “The following patents describing other sensors that include a detector array ... coupled to ... regardless of application includes:”, followed by a list of the located patents. The report continues until all prior art has been discussed.

## 3. DISCUSSION OF WHAT WAS SEARCHED

Any patentability opinion should inform the reader of what was searched, and it should identify the library or libraries that were searched, what classes and subclasses of U.S. patents were manually searched and through what date. For example, the opinion might state “The search included a manual subclass search of class/subclasses ... as of ... .” For computer assisted database searches, the opinion letter should identify the database searched, the dates of references represented in the database. Since databases are frequently updated in a dynamic fashion, the letter should also identify date of the search. When a searcher seeks the advice of a patent examiner to help identify the most relevant subclass to search, the examiner who assisted in such identification should be identified in the patentability opinion.

## 4. STATEMENT OF CLAIM SCOPE

The letter generally concludes with a statement of claim scope in one or two sentences. For example, a statement of claim scope may say “Based on this search, I believe that

patent protection is available for at least a ... sensor that includes a ... structure directly coupled to a ... .”

## B. UNUSUAL SITUATIONS

### 1. CLOSE PRIOR ART

Rarely will you find a prior art patent that exactly anticipates the invention in every detail. However, you may find related prior art that discloses all aspects of the invention, as you understand it, except for one or two specific features.

Although the invention may be novel, should you opine as to whether it is unobvious? Your client surely does not want a written opinion that the invention is unpatentable as obvious.<sup>6</sup> After all, you may be wrong.

A first course of action in this situation may be to telephone your client to discuss your opinion. You may then ask how the client would like you to report this situation in your written opinion. If your client wants something in writing, there are ways to approach the writing that will minimize any adverse consequence to your client if the invention is ultimately proven to be patentable. First, it may be your opinion that a patent examiner will reject a claim drawn to the present subject matter. In that case, you may write “An examiner may assert that U.S. Patent No. XXX,XXX discloses critical features of the present invention that may be combined with U.S. Patent No. YYY,YYY to achieve the present invention, and such assertions may be difficult to refute.”

Second, keep in mind that the inventor has a better understanding of the invention than the attorney. You might further write that “Since the inventor is in the best position to understand the invention, I may fail to fully appreciate all aspects of the present invention. Perhaps the inventor can help me appreciate features of the invention that are not taught or suggested in the located references. Perhaps the inventor can help me understand why skilled persons would not be motivated combine the located references. Should you wish to further discuss the scope of the invention, please do not hesitate to contact me.”

Finally, if your client wants a “yes” or “no” and you are of the “not patentable” belief, you might conclude in your own defense with “Opinions of patent attorneys may vary. You may find a second opinion helpful in deciding whether to seek patent protection for the invention.” Then, you might give the client a referral to other patent attorneys. For example, you might refer the client to the Patent Office to obtain a list of registered patent attorneys and agents.

### 2. UNSEARCHABLE OR DIFFICULT TO SEARCH ART

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<sup>6</sup> 35 U.S.C. §103.

To provide a more complete description of the scope of the search, you may want to disclose other factors that may have made the search incomplete. Clearly, libraries and databases not searched may contain relevant prior art.

Even though a searcher diligently looks through at least one or two subclasses in the public search room of the U.S. Patent and Trademark Office, or other patent depository, the library may be missing some patents from its shelves. Unfortunately not all patent subclasses in the public search room have a complete set of patents present on the shelf. Although there are computer databases that identify all patents that belong in each subclass, a searcher seldom has the time (based on the agreed budget) to go to a computer listing to identify all patents belonging to a subclass, confirm whether all patents are present on the shelves of the patent library, and locate any missing patents in other libraries. Such integrity checks of the patent subclasses are normally not performed during searches for a patentability opinion due to the high cost. The missing patents are not easily searched on the budget generally provided for a patentability opinion. Perhaps the search through other libraries for missing patents is not economically justified.

In addition, pending patent applications are not searchable, but are still potentially prior art.<sup>7</sup> The average elapsed time between the filing date of an application and the issue date is 27 months for the 70% of applications granted on a first prosecution. The average elapsed time between the original filing date of an application and the issue date is 47 months for applications granted on a second prosecution.<sup>8</sup> No statistics are available for subsequent prosecutions under Rule 1.129(a) or requests for a CPA under Rule 1.53(d).<sup>9</sup> In any event, this represents a large number of potential prior art references that cannot be searched.

If normal prosecution delays do not hide from the search enough potential prior art to be worrisome, consider patent applications filed but held under a secrecy order.<sup>10</sup> Such applications are prosecuted to a notice of allowability, but are not allowed until the secrecy order is rescinded. About 330 such applications had secrecy orders rescinded and were issued in 1995, after an average pendency of more than 75 months.<sup>11</sup> These too are unsearchable potential prior art.

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<sup>7</sup> 35 U.S.C. §102(e).

<sup>8</sup> Intellectual Property: Comparison of Patent Examination Statistics for Fiscal Years 1994 and 1995 (Letter Report, 03/13/97, GAO/RCED-97-58). Pursuant to a congressional request, GAO compared the Department of Commerce's Patent and Trademark Office's patent pendency statistics for fiscal years 1994 and 1995, focusing on: (1) overall pendency; (2) patent pendency by examination groups, secrecy orders, foreign applications, and current and original application dates; and (3) patent pendency attributable to applicants.

<sup>9</sup> 37 C.F.R. §1.129(a) and 37 C.F.R. §1.53(d), respectively.

<sup>10</sup> 35 U.S.C. §181.

<sup>11</sup> Intellectual Property: Comparison of Patent Examination Statistics for Fiscal Years 1994 and 1995 (Letter Report, 03/13/97, GAO/RCED-97-58).

Other potential prior art that is difficult to search includes commercial offers for sale of an invention that is ready for patenting,<sup>12</sup> inventions known or used by others in this country,<sup>13</sup> inventions in public use or on sale in this country,<sup>14</sup> and inventions made in this country by another who had not abandoned, suppressed or concealed it before the invention to be searched.<sup>15</sup>

## V. REASONS FOR SEEKING A PATENTABILITY OPINION

Exhaustively researched opinions are expensive. Does a client receive adequate value for a lower priced opinion? So how much should a client want to pay for a patentability opinion? How good can the opinion be for that price? What benefits come from a patentability opinion?

A patentability opinion provides claim scope information for an informed decision to proceed with a patent application, it helps produce a better quality patent when proceeding with the patent application, and it provides several other benefits that are useful but not necessarily sought. For example, a patentability opinion may be sought to attract the financial backing of an investor.

### A. COSTS ANALYSIS OF PATENTABILITY OPINIONS

The reason most often given for seeking a patentability opinion is to help determine whether the claim scope available is sufficient to justify the cost of proceeding with a patent prosecution. So then how much of the anticipated prosecution cost should a client be prepared to pay for the patentability opinion. Generally, a client is looking for a patentability opinion at a cost ranging from \$1,000 to \$2,000. A U.S. patent prosecution, including \$8,420 of government fees,<sup>16</sup> may cost about \$20,000 from application through the last maintenance fee. Thus, a patentability opinion typically costs from 5 to 10 percent of the U.S. prosecution costs.

If the invention is to be protected internationally, a European application prosecution may cost about \$50,000 (depending on the designated countries) and a Japanese application prosecution may cost another \$50,000 depending on the number of claims. In this case,

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<sup>12</sup> *Pfaff v. Wells Elec.*, 119 S.Ct. 304 (1998), where ready for sale means actual reduction to practice or the existence of drawings or other descriptions sufficient to enable skilled person to practice the invention.

<sup>13</sup> 35 U.S.C. §102(a).

<sup>14</sup> 35 U.S.C. §102(b).

<sup>15</sup> 35 U.S.C. §102(g).

<sup>16</sup> This includes a \$790 filing fee, a \$1,320 issue fee and maintenance fees totaling \$6,310 if the patent is maintained through the last maintenance fee.

the original patentability opinion will cost just 0.8 to 1.7 percent of the \$120,000 total application cost for U.S., European and Japanese protection.

Viewed another way, a client can cover the cost of patentability opinions on 80 inventions (based on an average cost of \$1,500 each) if just one opinion reveals insufficient available claim scope to justify a full international patent prosecution costing \$120,000. The break-even analysis varies depending on whether international protection is desired on all or just some of the inventions.

#### B. "IN THE OPINION OF THE COMMISSIONER"

By way of comparison, the Patent Office processes applications, searches the prior art, examines the claims against the prior art under the patentability standards defined by statutes and case law, and in doing so gives its opinion of patentability, but for a cost of \$8,420. If the client wants only a patentability opinion from the Patent Office, then only the \$790 filing fee need be paid, and the application can be abandoned thereafter.

So then why not get the opinion of the Patent Office for \$790? If the Patent Office will examine the application anyway, why pay an attorney for an additional patentability opinion in the first place?

#### C. THE INDEPENDENT PATENTABILITY OPINION

A patent attorney gives value for his opinion. In 1995, the time from filing a patent application in the U.S. Patent and Trademark Office to first action was about 14 months.<sup>17</sup> However, the time to first action appears to be growing shorter for applications filed in 1997 and 1998. A patentability opinion from an attorney should be provided in from two to four months if provided in due course, and accelerated requests may often be obtained. At a minimum, the attorney can provide an opinion significantly faster than the a first action from the Patent Office.

Another important reason for a client to seek a patentability opinion before filing a patent application is to better know the scope and content of the prior art so that the invention can be defined by claims prepared with the broadest possible scope without including the prior art. Without a good knowledge of the related prior art, it is difficult to prepare claims with the broadest permissible scope. By filing better prepared patent applications, the applicant has lower costs during prosecution and usually has a stronger patent for later enforcement or licensing.

If one prepares claims that are too broad, the Patent Office will reject the claim and make a permanent record of the rejection. In this way, the prosecution history of the application in the Patent Office is more likely to create an estoppel that may later limit the claim scope.

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<sup>17</sup> Intellectual Property: Comparison of Patent Examination Statistics for Fiscal Years 1994 and 1995 (Letter Report, 03/13/97, GAO/RCED-97-58).

On the other hand, without a good knowledge of the related prior art one could prepare claims that are overly narrow. After allowance, the patentee is frustrated when a competitor develops products based on the teachings of the patent yet escapes infringement liability since the claims are overly narrow. One common reason for filing a reissue application is to correct the error of failing to claim all that the inventor(s) had a right to claim.<sup>18</sup>

Other benefits of the patentability opinion include an assessment of the state of the art in a focused technology area, identification of aspects of the client's commercial products that may need to be redesigned to avoid certain patent claims, identification of competitor's patenting activity, and identification of potential licensees.

## VI. CONCLUSIONS

During the preparation of a patentability opinion, an attorney makes many decisions that greatly influence the quality of his or her work product. The attorney's knowledge of statutes and case law and his or her knowledge of technical matters are only some of the influences on the quality of the patentability opinion.

In the end, it may be the cost budgeted for the opinion that has the greatest influence on accuracy of the claim scope determination. However, the opinion is not intended to be a guarantee of available scope; it is an estimate. The accuracy of the estimate can certainly be improved with larger budgets for these opinions. However, the budget must be weighed against the benefits expected from the patentability opinion.

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<sup>18</sup> 35 U.S.C. §251.