



THE WAR AGAINST OBVIOUSNESS: TIPS FOR INVENTORS TO OBTAIN STRONGER, QUICKER, AND LESS EXPENSIVE PATENT PROTECTION

Introduction

In order to be patentable, an invention must be new and non-obvious. The non-obvious battle can be time-consuming and costly to win because the determination is subjective. Under 35 U.S.C. § 103(a), an invention is obvious “if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” In the landmark case of *KSR, Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727 (2007), the United States Supreme Court broadened the expansive arms of the obviousness standard. This merits a closer look at strategies inventors can use to combat or avoid an obviousness rejection.

This paper will discuss four different techniques that an inventor can utilize during the innovation and disclosure processes of a new invention to provide a patent attorney with the arsenal of weapons needed to fight the war against obviousness rejections. In summary, they include consideration of 1) unexpected problems and unexpected results, 2) the synergy of separate components, 3) quantifying the “unquantified,” and 4) alternative embodiments. Educating inventors to be aware of these techniques may provide several advantages, such as reducing prosecution costs, expediting

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prosecution, providing business alternatives for product protection, and increasing the protection afforded by an issued patent.

The KSR Decision

In *KSR* the Supreme Court ruled that the obviousness analysis is not limited to the problem which the patentee was attempting to solve, but instead focuses on whether the combination was obvious to a person of skill in the art for any reason. 127 S. Ct. at 1742. The Court elaborated: “the [obviousness] analysis need not seek out precise teaching directed to the specific subject matter of the challenged claims, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” 550 127 S. Ct. at 1741. The *KSR* decision permits an Examiner to broaden the scope of evidence that can be used to support an obviousness rejection beyond the limits previously set by Federal Circuit case law.

The difficulty and cost associated with defeating an obviousness rejection will increase due to this broadened scope of possible basis for rejection. Likewise, the number of appeals will also increase. Currently, the Board of Patent Appeals and Interferences hands down about 150 decisions a month that directly relate to obviousness. Mark Nowotarski, *Using KSR to Overcome an Obviousness Rejection*, INTELLECTUAL PROPERTY TODAY, Sept. 2007, available at <http://www.iptoday.com/articles/2007-09-nowotarski.asp>. Uncertainty in patent

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prosecution, whether attributed to obviousness concerns or otherwise, can cause expense and delays for companies wanting to bring a product to market.¹

Educating inventors in the four ways suggested in this article may give the prosecuting attorney more tools to combat a rejection based on obviousness, and may help mitigate costs, decrease prosecution time, and increase the likelihood of issuance of a patent.

Unexpected Problems and Unexpected Results

An unexpected problem is a problem that occurs during the implementation, testing, and/or designing of an invention that the inventor did not foresee at the time an inventive solution was formulated. Therefore, the inventor should note when the inventive moment occurred and what the idea initially encompassed. An unexpected problem is a problem that may be foreseeable at the time it occurs, but may not have been foreseeable at the time of the inventive formulation. Therefore, inventors should evaluate every obstacle or problem he or she encounters with this question: Was this foreseeable when I had my

¹ The cost of prosecuting an application has increased significantly in recent years. The number of appeals filed after final rejection almost doubled between 2006 and 2007 (Jim Singer, *USPTO Statistics: Fewer Allowances, More Appeals*, IP SPOTLIGHT, Jan. 21, 2008, available at <http://ipspotlight.com/2008/01/21/uspto-statistics-fewer-allowances-more-appeals/>), while the number of filed applications has only increased by about 6% on average over the last five years. *U.S. Patent Statistics, Calendar Years 1963-2007*, USPTO, Electronic and Information Products Division/Patent Technology Monitoring Team, March 2008, available at http://www.uspto.gov/web/offices/ac/ido/oeip/taf/us_stat.pdf. Further, the U.S. patent allowance rate has declined from over 70% in 2000 to just above 50% in 2007. Jim Singer, *USPTO Statistics: Fewer Allowances, More Appeals*, IP SPOTLIGHT, Jan. 21, 2008, available at <http://ipspotlight.com/2008/01/21/uspto-statistics-fewer-allowances-more-appeals/>. As allowances decrease, the number of patent appeals and requests for continued examination has increased. Accordingly, the increased number of filings has increased attorney time and costs significantly.

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inventive moment? If the answer is no or maybe, the problem may be unexpected and should be recorded as such.

Inventors should also learn how to recognize unexpected results during the innovation process. A result is unexpected if the inventor could not foresee the result or the magnitude of the result at the beginning of an experiment. After each test or experiment, inventors should evaluate every result with the same question: Did I foresee this result when I began the experiment? If the answer is no or maybe, the result may be unexpected and should be recorded as such.

The documentation of unexpected problems and unexpected results can provide a weapon in the attorney's arsenal for combating an obviousness rejection. For example, a showing that each component of an invention exists in the prior art is often typical during the examination process in that inventions are often minor improvements of known elements or a combination of known elements. The Examiner may argue that because each component exists in the prior art, it would have been obvious to put each of the components together to arrive at the invention. Documenting unexpected problems and unexpected results allows a prosecution attorney to argue that, although the components are all taught in the prior art, the combination of the features overcomes unexpected problems and produces unexpected results that would not have been foreseeable to a person of ordinary skill in the art. Such an argument may help

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to get claims allowed without narrowing their scope, and quickly defeat the obviousness argument.

Synergy of Separate Components

During the disclosure process, inventors should consider and disclose the synergy of the invention. To do this, the inventor needs to determine all of the major components of the invention, and then describe the cause and effect relationship of each component and its interactions with any other identified component. Additionally, the inventor needs to describe how all of the major components working together affect the resulting invention, and how any one component may affect the resulting invention. For example, if a system has three sequential major components, the inventor should explain the causational relationship between components one and two, the causational relationship between components one and three, the causational relationship between components two and three, and how the combination all three of the relationships between the components affects the end result of the system.

Documentation of the synergy of separate components provides another weapon against an obviousness rejection. The point of patentability in an invention may not necessarily be the existence of the components, but rather how all of the components affect one another. By documenting the synergy of components, the inventor gives the prosecuting attorney the tools to highlight the effect of the components as they interact.

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The attorney can argue that the combination of components provides for an advantage, an efficiency, and/or a cost reduction that is not identified in the prior art.

Quantifying the “Unquantifiable”

Inventors should also learn to recognize qualitative features of an invention.

Inventions are often improvements of known items or processes and/or involve unquantified products or aspects. These inventions are often described with descriptive terms, such as better, stronger, faster, crispier, fluffier, lighter and so on. These descriptions sometimes provide little value to an application because an Examiner can equate almost any reference that discloses the same features. Often times, the prior art makes a less effective improvement that is not equivalent. Without a measurable quantification or comparison test, there is limited means of overcoming prior art without submitting further information, such as an experiment comparing the two different products.

An inventor should identify qualitative features and determine a way to quantify these aspects if the qualitative feature is novel. This can be accomplished by identifying a standard of measurement, by creating a tangible comparison, or by creating a repeatable test/panel. For example, if a food product is fluffy or fluffier than previously utilized products, the inventor should find a way to quantify this, such as providing a weight, volume, and/or density range for the food product; a minimum air/aeration percentage by weight; a repeatable comparison with another standard or commonly

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known product in the art; or a repeatable test that can be applied and compared to another product. The quantification should be measurable, tangible, and repeatable.

For example, perhaps an inventive aspect of a whipping cream is that it floats on a hot liquid. Such a general description may not help during the prosecution process because an Examiner may be able to show prior art that includes whipping cream capable of at least partially floating on a beverage of some temperature for some period of time. Yet the whipping cream in the prior art may not be so stable that it floats for more than 10 minutes on a liquid with a temperature above 80° C. Of importance in this situation is the scope of the term “float” and the scope of the term “hot.” By documenting a quantification of the “float” and “hot” features, an attorney may be able to argue the allowability of the features. Quantified features provide the attorney with a weapon to argue that the prior art does not teach a whipping cream having a particular density for floating on a liquid at a specific temperature for a minimum time period.

Alternative Embodiments

Alternative embodiments are components of an invention that can be reorganized, replaced, substituted, or changed without materially altering the invention. After describing the main embodiment of an invention, the inventor should determine whether it can be rearranged or reconfigured to produce the same inventive result. The inventor should consider: Can I move a component? Can I eliminate a component? Can I use a different component? Can I reorganize a component? If I make any of

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these changes, do I still achieve the result that I desire? If a change is within the purpose for the invention, the inventor should convey this embodiment to the patent attorney.

The documentation of alternative embodiments can provide a last line of defense in the attorney's arsenal for combating an obviousness rejection, as the attorney may be able to argue that one or more alternative embodiments are not shown or suggested in the prior art. Although this argument is a last resort, protection on the alternative embodiment may still provide some benefit to the inventor or the inventor's company.

Conclusion

Since the ruling in *KSR*, the difficulty and cost associated with overcoming an obviousness rejection is increasing. Inventors can help mitigate these costs and difficulties by considering and documenting the strategies discussed above during the inventive process. Prosecution attorneys can assist by educating inventors to be aware of these strategies. These techniques provide several advantages, such as reducing prosecution costs, expediting prosecution, providing business alternatives for product protection, and increasing the protection afforded by an issued patent.

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