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The Patentability Standard in the United States: Part 2



As set forth in Part 1 (March/April 2009 HTP), there are three basic criteria for patentability of a claimed invention. First, the invention must be *useful*.

Second, the invention must be *new or novel*. Third, the invention must be *nonobvious*. In Part 1, the first and second criteria of utility and novelty were discussed. We now turn to the third criterion: *nonobviousness*. This criterion is typically the biggest hurdle currently faced by an Applicant during prosecution of a patent application before the United States Patent and Trademark Office (USPTO).

As set forth in Section 103(a) of Title 35 of the United States Code (35 U.S.C.), "A patent may not be obtained though the invention is not identically disclosed or described" as set forth in 35 U.S.C. § 102; i.e., it is new, "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 other words, if the differences between the claimed invention and the prior art would be obvious to a hypothetical person of ordinary skill in the same technical field who is presumed to have known the relevant art at the time of the invention, then a rejection of the claims will be made under § 103(a).

In the U.S., an invention is *made* when it is conceived and reduced to practice. Conception is the mental part of the inventive act, specifically the formation in the mind of the inventor of a definite and permanent idea of the complete and operative invention as it is thereafter to be applied in practice. Reduction to practice can be actual or constructive, and can occur after or contemporaneously with conception. Actual reduction to practice is embodying the inventive idea in a physical or tangible form that

will work for its intended purpose, such as making a working model or performing a test run of a method.

The filing of a patent application that meets the requirements of written description and enablement operates as conception and constructive reduction to practice of the subject matter described. Thus, "*at the time the invention was made*" will be presumed to be the filing date of the application, although there are procedures for submitting evidence to establish an earlier date.

It is important to note that the determination of obviousness is a question of law based on underlying factual inquiries. It may thus be difficult for a technical person to fully understand the obviousness analysis if they do not understand the legal framework, and, likewise, it may be difficult for the lawyer to properly analyze obviousness if they do not understand the technical subject matter. Thus, patent

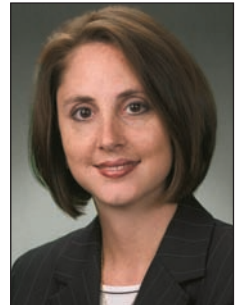
Three basic criteria for patentability of a claimed invention are that it must be useful, new or novel, and nonobvious.

lawyers are required to have a technical background so they may at least have an appreciation of basic scientific principles, and ideally a more advanced knowledge in the field of the invention. This enables them to come to a sufficient understanding of the often complex technical aspects of the invention to properly apply the legal framework.

Imagine you are working with a lawyer to patent your newly developed alloy composition, and the lawyer asks "Can you explain to me

what an alloy is?" You would be better served with a patent lawyer who has education and/or work experience in the field of materials science. In addition, it is important to understand that despite some technical savvy, the patent lawyer's technical knowledge is very likely to be less than the inventor's knowledge, so communication between the patent lawyer and the inventor is key to understanding all the issues, both factual and legal, to obtain the best possible patent protection for the invention.

The United States Supreme Court set forth the legal framework for objective analysis of obviousness in 1966 in the case of *Graham v. John Deere Co.* (383 U.S. 1 (1966)). The factual inquiries to be followed by the USPTO when examining an application are:



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- Determine the scope and contents of the prior art
- Ascertain the differences between the claimed invention and the prior art
- Resolve the level of ordinary skill in the pertinent art

This inquiry is known as “the *Graham* factors” or “the *Graham* three pronged test” for establishing a *prima facie* case of obviousness. The USPTO has the burden of establishing a *prima facie* case. If a *prima facie* case is established, it may be rebutted by the inventor via evidence, such that the fourth and final inquiry is:

- Evaluate evidence of secondary considerations

Determining the scope and content of the prior art requires a thorough understanding of the invention disclosed and claimed in the application and a search to identify relevant prior art. Prior art can be in the field of applicant’s endeavor, or be reasonably pertinent to the particular problem with which the applicant was concerned, or in some circumstances may be outside the field of endeavor. Sub-


ject matter that is prior art under § 102 can be used to support a rejection under § 103. For example, a printed publication that published more than one year prior to the filing of the application may be used in a rejection under § 103, where the publication does not anticipate the claimed invention under § 102(b)

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because it does not disclose each and every element of the claimed invention, but would nonetheless have been relevant to one skilled in the art at the time the invention was made for what it does disclose as a whole. *At the time the invention was made* is again a key aspect of the inquiry, as hindsight-based reasoning is impermissible. In other words, using only that which the inventor later-

taught as a blueprint for piecing together the prior art to defeat patentability is impermissible hindsight reasoning. Admitted prior art may also be used to support a rejection under § 103; for example, statements made by Applicant in the Background section of the Application, which may describe aspects in the field of endeavor that were known at the time the invention was made and what problem Applicant was attempting to solve with respect thereto. It is therefore wise to take care in how the Background section is worded to avoid admitting that something is prior art when in fact it was not.

Ascertaining the differences between the claimed invention and the prior art requires interpreting the claim language in a manner that provides the broadest reasonable interpretation consistent with the specification and considering the invention as a whole. The question is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. It is for that reason that the



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analysis should not distill the invention down to its "gist" or "thrust." Likewise, a prior art reference must be considered in its entirety; i.e., as a whole, including any portions thereof that would lead one skilled in the art away from the claimed invention.

As stated above, the person of ordinary skill in the art is a hypothetical person who is presumed to have known the relevant art at the time of the invention, and is also a person of ordinary creativity, not an automaton. Factors that may be considered in determining the level of ordinary skill may include the type of problems typically encountered in the art, prior solutions to those problems, the rate of innovation in the field, the sophistication of the technology, and the educational level of active workers in the field. If the typical problems encountered in a field occur in a manufacturing plant manned by workers with 3-10 years manufacturing experience and/or a B.S. in mechanical engineering, then the analysis should not include an evaluation of what would have been obvious to a research engineer having a Ph.D. and a combined 35 years of manufacturing and research experience, since such person may be considered an expert, or at the very least, a person of greater skill than the hypothetical person of ordinary skill.

The *Graham* factors analysis requires the USPTO Examiner to step backward in time and into the shoes worn by the hypothetical person of ordinary skill in the art when the invention was unknown and just before it was made. In view of all factual information, the Examiner must then make a determination whether the claimed invention, as a whole, in view of the prior art, as a whole, would have been obvious at that time to that person. The Examiner, in making a rejection under § 103(a), must provide a clear articulation of the reason(s) why the claimed invention would have been obvious.

Under the fourth factual inquiry, evidence may be provided to rebut a *prima facie* case of obviousness. Rebuttal evidence may include evidence of secondary considerations, such as commercial success of a product embodying the invention, long felt but unsolved needs in the field of endeavor, failure of others to solve the problem, unexpected results (i.e., the claimed invention yields unexpectedly improved properties or properties not present in the prior art), or copying of the invention by others. Secondary considerations may be incorporated in the application upon filing, such as test data that illustrates an unexpected result, or it may be submitted during prosecution in response to a rejection by the Examiner. When evidence of secondary considerations is present, the Examiner must consider it in the obviousness analysis to determine if the weight of the evidence as a whole favors nonobviousness.

Having set forth the three criteria for patentability, and in view of the nonobviousness criterion being the biggest hurdle currently faced by Applicants during prosecution of patent applications before the USPTO, the next IP Corner will expand upon the obviousness analysis, including discussion of a recent and impactful Supreme Court case and the trends resulting therefrom. **HTP**

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