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A REALISTIC APPROACH TO THE OBVIOUSNESS OF INVENTIONS†

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INTRODUCTION

Obviousness is the ultimate condition of patentability.[1] The nonobviousness requirement—that inventions must, to qualify for a patent, be not simply new but sufficiently different that they would not have been obvious to the ordinarily skilled scientist—is in dispute in almost every case, and it is responsible for invalidating more patents than any other patent rule.[2] It is also perhaps the most vexing doctrine to apply, in significant part because the ultimate question of obviousness has an "I know it when I see it" quality that is hard to break down into objective elements. That hasn't stopped the Federal Circuit from trying to find those objective elements. In the last quarter-century, the court has created a variety of rules designed to cabin the obviousness inquiry: an invention can't be obvious unless there is a teaching, suggestion, or motivation to combine prior art elements or modify existing technology;[3] an invention can't be obvious merely because it is obvious to try;[4] and so forth.

In its decision last year in *KSR International Co. v. Teleflex Inc.*,[5] the Supreme Court rejected the use of "rigid" rules to decide obviousness cases.[6] In its place, the Court offered not a new test, but a constellation of factors designed to discern whether the person having ordinary skill in the art (the PHOSITA)[7] would likely think

1. *See generally* NON-OBVIOUSNESS: THE ULTIMATE CONDITION OF PATENTABILITY (John F. Witherspoon ed., 1980).

2. *See* John R. Allison & Mark A. Lemley, *Empirical Evidence on the Validity of Litigated Patents*, 26 AIPLA Q.J. 185, 209 tbl.2 (1998).

3. *See, e.g.*, *In re* Sang-Su Lee, 277 F.3d 1338, 1343 (Fed. Cir. 2002); *In re* Dembiczak, 175 F.3d 994, 999 (Fed. Cir. 1999); Lindemann Maschinenfabrik GmbH v. Am. Hoist & Derrick Co., 730 F.2d 1452, 1462 (Fed. Cir. 1984).

4. *See, e.g.*, *In re* Fine, 837 F.2d 1071, 1075 (Fed. Cir. 1988).

5. 127 S. Ct. 1727 (2007).

6. *Id.* at 1739.

7. The statute refers to "a person having ordinary skill in the art ...." 35 U.S.C. § 103(a) (2000). On the PHOSITA abbreviation, see, for example, John O. Tresansky, *PHOSITA — The Ubiquitous and Enigmatic Person in Patent Law*, 73 J. PAT. & TRADEMARK OFF. SOC'Y 37 (1991); *see also* ROBERT L. HARMON, PATENTS AND THE FEDERAL CIRCUIT § 4.3 (5th ed. 2001); Joseph P. Meara, Note, *Just Who is the Person Having Ordinary Skill in the Art? Patent Law's Mysterious Personage*, 77 WASH. L. REV. 267 (2002). The first known use of the term PHOSITA appears to be in Cyril A. Soans, *Some Absurd Presumptions in Patent Cases*, 10

to make the patented invention.[8] In short, the Court sought to take a realistic approach to obviousness—to make the obviousness determination less of a legal construct and to put more weight on the factual determination of what scientists would actually think and do about a particular invention.

As a general principle, this realistic focus is a laudable one. The too-rigid application of rules designed to prevent hindsight bias had led to a number of results that defied common sense, including the outcome of *KSR* itself in the Federal Circuit. But the realistic approach has some (dare we say it) nonobvious implications for evidence and procedure, both in the Patent and Trademark Office (PTO) and in the courts. The greater focus on the characteristics of individual cases suggests a need for evidence and factual determinations, but the legal and structural framework under which obviousness is tested means that it is difficult to make and review those determinations. The realistic approach is also incomplete, because the obviousness inquiry depends critically on the counterfactual assumption that the PHOSITA, while ordinarily skilled, is perfectly informed about the prior art. If we are to take a realistic approach to obviousness, we should make it a consistent approach, so the ultimate obviousness determination reflects what scientists in the field would actually think. So far, despite *KSR*, it does not. The result of taking the realistic approach seriously may be—to the surprise of many—a law of obviousness that is in some respects *more*, not less, favorable to patentability than the standard it displaced.

In Part I, we review the law of obviousness and the likely substantive effects of the *KSR* decision. In Part II, we explore the less-noticed procedural effects of *KSR*, as both the PTO and the courts try to inject realism and evidence into a legal framework that is not designed to evaluate them. Finally, in Part III, we discuss the ways in which the obviousness inquiry still uses a legal construct rather than a realistic inquiry into what the PHOSITA would think of an invention. We argue there that obviousness should be reconceived as a truly realistic inquiry, one that focuses on what the

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IDEA 433, 438 (1966).

8. *KSR*, 127 S. Ct. at 1734, 1739.

PHOSITA and the marketplace actually know and believe, not what they might believe in a hypothetical, counterfactual world.

I. OBVIOUSNESS, BEFORE AND AFTER *KSR*

In *Graham v. John Deere Co.*,[9] the Supreme Court set out the framework pursuant to which courts should evaluate whether an invention is obvious. The Court determined that the ultimate question of patent validity is an issue of law that depends on certain underlying facts. It identified the factual inquiries pertinent to a determination of obviousness as: (1) the scope and content of the prior art; (2) the differences between the prior art and the claims at issue; and (3) the level of ordinary skill in the art.[10] In addition, the Court noted the importance of secondary considerations of non-obviousness derived from the circumstances surrounding the putative invention.[11]

A. The Prior Art and the Role of the PHOSITA in Evaluating It

Obviousness is determined with reference to whether a purported invention would have been obvious to a PHOSITA; a person who "thinks along the line of conventional wisdom in the art and is not one who undertakes to innovate, whether by patient, and often expensive, systematic research or by extraordinary insights ...."[12] In *Environmental Designs, Ltd. v. Union Oil Co. of California*,[13] the Federal Circuit set forth the following factors for defining a PHOSITA: (1) the inventor's educational background; (2) the kinds of problems confronted in the art; (3) solutions found previously; (4) the speed of innovation in the art; (5) the level of sophistication of the technology; and (6) the educational level of workers in the field.[14] The court cautioned that not all factors will be relevant in every case.[15] And, although one of the listed factors is the inventor's

9. 383 U.S. 1, 17 (1966).
10. *Id.*
11. *Id.* at 17-18.
12. Standard Oil Co. v. Am. Cyanamid Co., 774 F.2d 448, 454 (Fed. Cir. 1985).
13. 713 F.2d 693 (Fed. Cir. 1983).
14. *Id.* at 696.
15. *Id.*

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