

The Supreme Court and the Future of Patent Reform

By R. Polk Wagner



As the patent system grows in importance to the U.S. economy, so too does the controversy surrounding the law, its institutional players, and even its underlying economic assumptions. The Supreme Court's recent return to substantive patent law in last term's *KSR v. Teleflex* opinion offers an opportunity to take stock of the recent past and look forward. In this article, I sketch the outlines of a series of major shifts that have rocked the patent system in recent years, including a growth in patent-related activity, and the emergence of the technology industry (on the West Coast) as a major player in the political economy of the patent system. It is these "plate tectonics," I suggest, that both explain the recent interest in the patent system as well as suggest important features of its future. My argument is that, as the paths for change narrow, meaningful patent reform will increasingly fall to the courts. This case-by-case, litigation-driven change has, I think, important consequences. And, indeed, the Supreme Court's recent *KSR* decision is a case study that reveals critical limitations in this approach. This, in turn, suggests that a re-evaluation of patent reform options is required, and that, in particular, the understudied role of the U.S. Patent and Trademark Office (PTO) should be revisited.

The Plate Tectonics of the U.S. Patent System

There can be little doubt that patent law has hit the mainstream in the United States. Although patent law is old, at no time has the patent system been so prominent—and controversial—than it is today. There are several reasons for this, including, especially, the recent rise in patent filings, a concomitant rise in patent litigation activities, the changing role of patents in the economy, and the rise of a particular industry—the pharmaceutical industry—as a major voice in patent issues. The result is the inevitable result of long-term changes in the economy of the United States (and, inevitably, in the world) will drive the debate about the patent system's viable future.

One major driver of the emergence of patent law in the public eye is the dramatic rise in patenting activity over the last two decades; since 1986, the number of U.S. patents granted per year has increased by 140 percent, whereas the number of applications received by the PTO has risen by 240 percent.¹ Figure 1 shows this trend. (This rise in patenting activity has been largely mirrored among major patent offices worldwide.²)

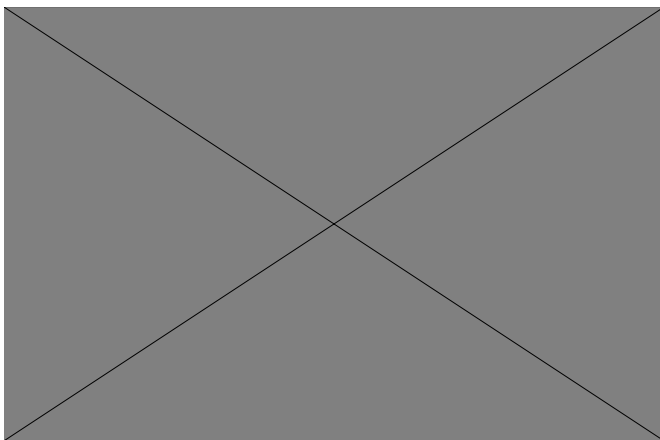


Figure 1: Patenting Activity, 1986–2006³

Perhaps even more striking than the growth of the raw numbers of filings is that this rise in activity surpasses the (also large) rise in research and development spending over the past two decades—that is, one obvious possible cause for the rise in activity is the rise in economic activity, especially related to innovation and high technology. Yet, even when one normalizes patenting activity by the amount of private investment into research and development (thus measuring “patent intensity”), similarly dramatic trends are evident, as shown in figure 2.

Figure 2: Patent Intensity, 1986–2004: Patent Applications per \$B of Nongovernment R&D Investment⁴

Increasing Enforcement Activity

The amount of litigation, in absolute terms, has roughly paralleled the rise in patent application filings. And although enforcement has clearly increased substantially, whether the rate of patent enforcement has risen depends to some degree upon how one measures it. For example, when one considers the number of lawsuits filed per in-force patents (patents granted but not expired), this measure of litigation intensity has increased significantly—albeit not as dramatically as patent applications have (about 45 percent during the period between 1988 and 2005). Figure 3 shows this relationship.

Figure 3: Patent Litigation Activity, 1988–2005⁵

Even though the question of whether the rate of litigation has increased is subject to some debate, it is clear that patent litigation has become much more costly. One survey reported that for litigation with less than \$1 million at risk, litigation fees from initiation of the lawsuit through appeal were \$500,000; with \$1 million to \$25 million at risk, the fees rose to just over \$2 million; and when more than \$25 million is at stake, litigation expenses approached \$4 million.⁶ Although patent litigation is costly and the cost is rising, it is important to note that only on the order of 1.5

percent of patents are litigated, with a mere 0.1 percent making it to trial.⁷ Of course, these statistics reflect the fact that many more patents are being issued today than were issued 10 years ago and that only a small percentage of patents are commercially significant.⁸

The Changing Role of Patents

As activity related to the U.S. patent system—both filings and enforcement—has increased rather dramatically, it seems clear as well that the role of patents in the national economy has changed. In prior work, Professor Gideon Parchomovsky and I have explored what we call the “patent paradox”: why has there been a rapid rise in patenting activities, when all available evidence about the actual monetary value of a patent indicates that in most (and probably the overwhelming majority) of cases the value of a patent is essentially zero? As we state in the article,

It is abundantly clear that firms act as though patents are important. But why? Filing patterns and firms’ attitudes toward patents have presented theorists with a puzzle: if patents are valuable, where does their value lie? And if they are not valuable, as the empirical research suggests, why do they matter so much to both corporations and investors? ... [W]e refer to this puzzle as the patent paradox.⁹

Our suggestion is that firms are increasingly beginning to understand the value of patents in terms of the portfolio of which they are a part instead of any individual benefit they may offer. According to this view, the marginal benefit of seeing patent protection for an idea is positive, even if the expected value of the patent is negative, because of the contribution that the patent makes to the overall portfolio. Others have suggested alternative—and sensible—theories to explain the paradox, such as Professor Clarisa Long’s theory that patents act as signals of innovative activity and business savvy;¹⁰ or that patents provide alternative benefits to firms, such as metrics for employee performance;¹¹ or even that in engaging on patenting activity firms are essentially purchasing lottery tickets, wherein a very small number of patents become exceptionally valuable.¹²

Regardless of which theory one finds most attractive, the essential point is the same: the traditional appropriability theory of patents—that they generate social benefits by allowing a patentee to internalize otherwise nonexcludable benefits to an invention, thus solving a potential “public goods” problem with respect to the creation of new ideas—is no longer the sole, nor perhaps even the most important, way that patents are used in the marketplace. And as patents play different roles, the way they affect economic activity, and the way they are understood, will change as well.

Even beyond the large-scale changes in the way patents are being used, it is worth noting the widespread understanding that the relationship between patents and commercial goods and services is changing as well: patents often do not correlate neatly with commercial products,

and, in very many cases, a single product may embody several or even hundreds of patents.¹³ Obviously, the converse may be true as well: a single patent might be a component of an array of commercial products. Furthermore, not all patents involved in a product play an equal role in commercial success or failure; some patents may be crucial to the overall enterprise, whereas others may play merely a supporting role. And even though this fact—the inexact relationship between patents and products—has surely been true since the dawn of the patent system, the rise of increasingly complex technological products, as well as modern business practices (such as the separation between design and manufacturing firms), has brought this fact to the fore in recent years.

Finally, it should be noted that the perception of patents—even if not the reality—has changed substantially in the past three and one-half decades. For example, the creation of the U.S. Court of Appeals for the Federal Circuit, from its beginning in 1982, altered the legal landscape of patents, resulting in a significant strengthening of the patent grant.¹⁴ Indeed, “the Federal Circuit has taken its role as defender of the patent system seriously.”¹⁵ The altered landscape was not lost on the corporate world. After witnessing significant damage awards, the power of preliminary injunctions, and the generous interpretation of the subject matter eligible for patent protection, corporate players viewed their extant patent portfolios in a new light, as so-called Rembrandts in the Attic.¹⁶ And these same corporations, to the extent that they were dubious about the value of patent protection for any given invention, erred on the side of filing for patent protection. As two commentators noted, the Federal Circuit “has had a significant positive effect on both the number of patent applications and the number of patent grants.”¹⁷

The upshot, then, of the changing—indeed, broadening—role of patents, both in terms of their utility to firms and in terms of their effect and perception in the marketplace, is that the modern patent system is becoming at once increasingly important to the national economy, increasingly unwieldy, and increasingly complex to understand.

The Maturing of the Technology Industry

The fourth major prong of the plate tectonics of the modern patent system is the rise of the technology industry as a major player in the patent system. The traditional list of the industries with large stakes in the patent system includes the chemical and pharmaceutical industries, both of which focus on products with specific economic features of high initial R&D investment and relatively low marginal cost of manufacturing. Large manufacturing firms, such as automobile companies, also have been traditional players.

Although the technology industry—producers of electronics and software—has been an important component of the U.S. economy for decades, its substantial involvement with the patent system is more recent and has lagged behind those of the traditional patenting industries. There are several reasons for this state of affairs, including the economic structure of the industry, cultural issues, and

concentration. Economically, the high-tech industry is characterized by products with very short life cycles compared to the traditional cycles seen in the “patenting industries”—meaning that the value of marketplace protection for a particular good is relatively limited. Also, the nature of many of the high-tech products can resist easy copying by competitors; for example, integrated circuits are often difficult to replicate exactly, and even software can be difficult to reverse engineer.

Culturally, the short life cycle of products and the boom-and-bust aspects of the technology industry mean that patents have been traditionally viewed as unnecessary at best and perhaps even harmful to the development of new products. However, as aspects of the industry have matured, these sectors have increasingly turned to patents as important tools. The semiconductor industry and the major business software industry are examples of sectors in which patenting has become an integral aspect of the business plan. One certainly expects that, as other sectors of the technology industry (the Internet, and so forth) mature, additional involvement in patents will be seen there as well.

In other words, there might be said to be a rough correlation between an industry’s maturity and its involvement in the patent system. When an industry is relatively young, periods of rapid innovation and a dynamic industry structure are the dominant characteristics. As the industry matures, the rate of innovation may slow, and the structure may become more stable or concentrated. This is not to say that there are not pockets of rapid innovation or that new firms do not develop, but just to note that the predominant characteristics of a younger industry change over time.

A more mature industry is more likely to use the patent system. For the large dominant firms, as innovation slows (and thus major advances become more costly), they may increasingly turn to the patent system to both protect the firm’s substantial investments in R&D and to protect current market position. And for new entrants in a marketplace dominated by large firms with major market positions, patents may provide one of the only ways to break into the market itself in a durable way.

What I think we’re seeing now with respect to the U.S. patent system is the gradual maturing of the technology industry, which is increasingly recalibrating its relationship with the patent system. Importantly, however, this is not to suggest that the technology industry is becoming more “pro-patent”; to the contrary, many of the fundamental economic aspects of the industry noted above (such as the short life cycle of products or cultural factors) still apply equally, and perhaps even more so today.¹⁸ Instead, my suggestion is that we’re seeing the emergence of the technology industry as a major patent player—and one with significantly different interests and perceptions than the traditional heavyweights in the patent world have. This, I think, will have major implications for the future of substantive patent reform, as I explore in the next section.

Narrowing Avenues for Patent Reform

In the prior section, I suggested that four major trends—

the rise in patenting, the rise in enforcement activity, the changing role of patents, and the maturing of the technology industry—were roiling the patent world. In this section, I briefly sketch out how one result of those shifts is the increasing politicization of the patent system, the related narrowing of the avenues for substantive patent reform, and the emerging importance of judicially driven substantive patent reform.

The Politicization of Patents

It has been conventional wisdom for decades that the politics of the U.S. patent system are unusual for issues of this level of economic importance—unusual in the sense that there are thought to be no clear camps on the pro and con sides of the issue. This is the case for many reasons, including the fact that most of the major players in the patent system occupy roles as both producers and consumers of patents—that is, innovative enterprises with rights both to produce patents (apply for and enforce patents) and to consume patents (license products and defend against infringement charges). Changes, then, to the basic balance of the patent system are likely to have an impact on many companies in *both* roles: strengthening patents will add value to the producer end of the equation but is likely to add risk to the consumer role. Add to this the fact that the real-world economic impact of patents on the business enterprise is exceptionally difficult to quantify, and you have a rather strong incentive for companies to shy away from wholesale changes to the system—or at least to shift their interest from wholesale changes to those of a more circumscribed, tinkering nature.

This theory does not suggest that the era of remarkable legislative stability in the Patent Act since 1952 is not a reflection of widespread satisfaction with the scope of patents, but instead that it represents what has been a relatively stable *détente*—within major patenting firms as well as between them. According to this theory, patent law was not highly politicized; reform was possible, but only if the reforms were widely understood to be either narrow in scope¹⁹ or represented in a way that is something like Pareto improvements to the overall system.

Now, however, the uneasy status quo may be changing. At the same time that the patent system is plainly becoming more economically important, more utilized, more costly, and more complex, the emergence of the technology industry as a major player—and one with divergent interests from the traditional players—seems likely to have a deeply politicizing effect.

As the patent law becomes more politicized and the stakes rise, the opportunities for substantial reform of the system narrow. This is in large part because the structure of the U.S. political system is well designed to slow the pace of change of controversial legislation, especially such legislation that has a ratio of economic importance to public visibility. This fact does not, of course, mean that there will be less legislative activity surrounding the patent system; indeed, with higher public visibility, more controversy, and more lobbying dollars likely to be spent, legislative activities, hearings, proposed legislation, and

the like should only increase. But these activities, I suggest, will fall short of real, substantive patent reform.

Judicially Driven Reforms

If legislative reform opportunities decrease because of politicization, then the relative importance of judicially driven reforms will increase. By judicially driven reforms, I mean substantive patent reforms brought about by jurisprudential developments. In a politicized environment, judicially driven reforms offer something of a way out, most importantly because they are not subject to the stalemate that can result from politicization.

Furthermore, patent law offers a unique environment for judicially driven reforms. Many of the law's most important doctrines—most relevant for our purposes here, the nonobvious requirement—are solely or primarily creatures of judicial doctrine:²⁰ that is, even though patent law is a creature of statute, much of the actual legal landscape has been constructed by decades of court decisions, in common-law-like fashion. Indeed, many of the most important issues in current patent law—such as claim construction—seem somewhat beyond the reach of legislative activity.²¹

KSR and the New Era of Patent Reform

I've argued in the sections above that key trends of the U.S. patent system (including greater activity, complexity, and the emergence of the high-tech industry) have led to greater polarization surrounding the achievement of substantive reforms, thus dimming the prospects for legislative actions in this regard. A predictable consequence, then, is the increasing importance of judicially driven reforms.

In this regard, then, the *KSR* case provides an important window into the possibilities—and limitations—of modern substantive patent reform via the courts. And on this record at least, it appears that there is little reason to be hopeful about the possibilities for real reform of the patent system via Supreme Court litigation.

The *KSR* case itself, of course, marks the Supreme Court's return—after a 30-year hiatus—to the jurisprudence of the patent law's requirement (in 35 U.S.C. § 103) that patentable inventions be “non-obvious” to a person having ordinary skill in the relevant art at the time the invention was made. The dispute concerned relatively simple mechanical technology (an adjustable automobile pedal system using electronic sensors) and offered a clear example of technological innovation being driven by the adaptation of new technologies to solve old problems. Both of these facts, of course, seem likely to have influenced the Supreme Court's interest in the case as well as the result.

The invention at issue in *KSR* was a paradigmatic case of a combination invention. Each of the various components of the claims was widely known: an adjustable pedal, the ability to adjust without changing the pivot point, the use of an electronic sensor, and the mounting of the sensor on the pedal assembly itself. The parties to the case agreed, therefore, that whether or not the claim was obvious under 35 U.S.C. § 103—and thus the outcome of the case—turned on whether the prior art (which included pedals with and without electronic sensors, and with and without

fixed pivot points) provided enough detail to render the claim obvious to one skilled in the art.

The district court, on summary judgment, held the Teleflex patent to be obvious, reasoning that each element of the claim was fully disclosed by the relevant prior art and that the technological advance of the industry would suggest the combination of electronic sensors and adjustable pedals and also that certain aspects of the prior art suggested the solutions to the problems solved by the Teleflex patent.²² The Federal Circuit reversed the district court's ruling, holding that, although each element of the claim may well have been disclosed in the prior art, the district court's application of the “teaching, suggestion, motivation” (TSM) analysis was deficient:

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[T]he district court invalidated claim 4 of the '565 patent on obviousness grounds without making “finding[s] as to the specific understanding or principle within the knowledge of a skilled artisan that would have motivated one with no knowledge of [the] invention to make the combination in the manner claimed.” Under our case law, whether based on the nature of the problem to be solved, the express teachings of the prior art, or the knowledge of one of ordinary skill in the art, the district court was required to make specific findings as to whether there was a suggestion or motivation to combine the teachings of Asano with an electronic control in the particular manner claimed by claim 4 of the '565 patent. That is, the district court was required to make specific findings as to a suggestion or motivation to attach an electronic control to the support bracket of the Asano assembly.²³

Thus, the Federal Circuit reasoned, the lack of specific findings linking the teachings of the prior art to one another in the particular manner claimed by the '565 patent was fatal to the analysis. The court therefore held

that summary judgment was inappropriate and that further analysis of specific teachings (or lack thereof) was required.

In this regard, the *KSR* case presented something of a perfect storm for testing the boundaries of the Federal Circuit's doctrine in the area of obviousness—and most especially that court's increasing use of the teaching, suggestion, motivation framework. First, the case presented the TSM analysis squarely—given the facts of the case, the parties stipulated that the obviousness case turned on the application of the TSM test itself. Second, the Federal Circuit's *KSR* opinion was quite short and designated as “unpublished,” meaning that the analysis surrounding the TSM question was cursory at best and no general defense of the TSM test or its applicability was provided. Third, the technology was very simple, involving straightforward mechanical principles, thus allowing for easy understanding by nontechnical judges (and justices). And fourth, the invention itself was a classic example of an innovation driven by the adaptation of old techniques to new technologies—here, the traditional adjustable pedal layout, with the addition of an electronic sensing system to enable modern “drive-by-wire” technology.

Therefore, for those seeking to implement fundamental reform of the patent system, the *KSR* case provided a nearly ideal vehicle. There are few concepts to the patent law more fundamental than those embedded in 35 U.S.C. § 103. The Federal Circuit had, in the eyes of many observers, altered the standards for patentability markedly, especially via the TSM analysis. And, as the petitioners successfully argued, the Federal Circuit had arguably vitiated (or at least ignored) the Supreme Court's most recent jurisprudence of obviousness, which had been done in the 1970s.²⁴

In its opinion, the Supreme Court sided clearly with the district court, describing the Federal Circuit's analysis as “rigid.” The Supreme Court stated that the obviousness requirement demanded a flexible, “functional approach”—a “broad inquiry.” By contrast, noted the Court, the Federal Circuit's demand for specific findings linking the teachings of the prior art together in precisely the way the *Teleflex* patent claimed them was in conflict with the statute and prior case law and therefore could not stand.

This aspect of the opinion was widely anticipated; it was clear from the outset that the Supreme Court was unhappy with the formality and rigidity of the Federal Circuit's opinion in *KSR*. Indeed, when the case was argued in November 2006, the Supreme Court expressed contempt for the Federal Circuit's development of the TSM standard. Several justices repeatedly commented that they could not understand it, and one justice went so far as to call the standard “gobbledygook.”²⁵ Indeed, the tone of the “colloquy” was so rough and so lopsided that it appeared to foretell a unanimous repudiation of the TSM standard and, along with it, the last 25 years of Federal Circuit jurisprudence.

And yet, it is important to note that this rhetoric is largely belied by the opinion that ultimately emerged in the case. After dispatching the Federal Circuit's analysis in the *KSR* case itself, the Supreme Court turned its attention to the TSM test:

When it first established the requirement of demonstrating a teaching, suggestion, or motivation to combine known elements in order to show that the combination is obvious, the Court of Customs and Patent Appeals captured a helpful insight. As is clear from cases such as *Adams*, a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. Although common sense directs one to look with care at a patent application that claims as innovation the combination of two known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. This is so because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known.

Helpful insights, however, need not become rigid and mandatory formulas; and when it is so applied, the TSM test is incompatible with our precedents. The obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents. The diversity of inventive pursuits and of modern technology counsels against limiting the analysis in this way. In many fields it may be that there is little discussion of obvious techniques or combinations, and it often may be the case that market demand, rather than scientific literature, will drive design trends. Granting patent protection to advances that would occur in the ordinary course without real innovation retards progress and may, in the case of patents combining previously known elements, deprive prior inventions of their value or utility. In the years since the Court of Customs and Patent Appeals set forth the essence of the TSM test, the Court of Appeals no doubt has applied the test in accord with these principles in many cases. There is no necessary inconsistency between the idea underlying the TSM test and the *Graham* analysis. But when a court transforms the general principle into a rigid rule that limits the obviousness inquiry, as the Court of Appeals did here, it errs.²⁶

Importantly, the legal standard the Court embraced is little different from the TSM standard that the Federal Circuit had traditionally applied.²⁷ An example is the following language from *In re Dembizcak*: “We have noted that evidence of a suggestion, teaching, or motivation to combine may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, from the nature of the problem to be solved. ...”²⁸

In *KSR*, after tracing this “[h]elpful insight” back 46 years to a predecessor court to the Federal Circuit, the Supreme Court affirmed the basic principle of the TSM analysis, holding that predictable (and therefore obvious) extensions of prior art or arrangements of prior art elements are identifiable by considering “whether there was an apparent reason to combine known elements in the fashion claimed by the patent at issue.”²⁹ Similarly, the Federal Circuit had routinely encouraged the broad use of prior art information to test whether claims are obvious—for example, from prior art references, the knowledge and skill of the ordinary artisan, or from the nature of the problem to be solved.³⁰ In its opinion, the Supreme Court embraced this practice, stating that an obviousness inquiry should consider the interrelated teachings of multiple patents, the knowledge and skill of the ordinary artisan, and the demands of the marketplace or design community.³¹ Indeed, the Supreme Court emphasized that this flexibility in reviewing the context of an invention was a key element of the obviousness analysis.

Just as important, the Supreme Court affirmed the Federal Circuit’s traditional view that a decision-maker must provide an explanation of how a combination of the prior art renders the patent claim at issue obvious.³² Thus, according to the Supreme Court, “[t]o facilitate review, the analysis should be made explicit.”³³ Finally, confirming the basic legal standard implemented by the Federal Circuit for more than two decades, the Supreme Court expressly rejected the primary argument that opponents of the standard have long voiced—that the basis of the TSM analysis is somehow inconsistent with the guidance the Court long ago provided in *Graham v. John Deere*.³⁴

Though apparently agreeing in principle with the TSM analysis, the Supreme Court did see significant error in the Federal Circuit’s opinion: that it was a too rigorous version of the TSM analysis. In particular, the Court explained that the search for solutions in the prior art should range more broadly than the subject matter invented, and that the hindsight bias, though important, does not justify “rigid preventative rules that deny factfinders recourse to common sense.”³⁵

Note that, from a jurisprudential perspective, the Supreme Court’s approach in *KSR*—generally upholding the basis of the TSM approach while condemning its application in the case at hand—allowed the Court to emphasize its most critical advice regarding the law of obviousness, namely, that, when a decision-maker examines the content and teachings of the prior art for information or knowledge that shows how and why a claimed combination would have been apparent to a person having ordinary skill in the relevant art, it should remain flexible in its approach. A decision on the question of obviousness, noted the Court, should reflect an effort to maintain a liberal view of sources of information relevant to an obviousness analysis and reflect a searching consideration of how prior art information may be understood and applied by a person of ordinary skill in the art at times contemporaneous with the invention. As stated by the Court, “The obviousness analysis cannot be confined by a

formalistic conception of the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents. The diversity of inventive pursuits and of modern technology counsels against limiting the analysis in this way.”³⁶

Obviously, the full effect of *KSR* on patent law remains to be seen; this discussion takes place simply too quickly after the ruling case to discern any real patterns that have emerged as a result. So far, the handful of opinions by the Federal Circuit shows no significant changes from pre-*KSR* patterns. At least one Federal Circuit judge is on record as stating that he understands the *KSR* rules not to have changed the Federal Circuit’s analysis much. Similarly, the Patent and Trademark Office’s interim guidelines do not appear to change the analysis significantly, though they do make clear that the grounds for rejection based on 35 U.S.C. § 103 have broadened somewhat (but whether these will substantially change the bar for patentability remains to be seen).

It does seem clear thus far that *KSR* does not represent the sea change that many were hoping to see with respect to the application of the nonobvious requirement in patent law. The flexible, broad-ranging version of the TSM analysis that the Federal Circuit had developed remains largely in place, though it is also plainly not the only means by which an invention can be declared obvious. (It is important to note, of course, that—contrary to the assertions of many commentators and litigators—the TSM test was never the “exclusive” test for patentability under § 103 in any event.³⁷) Over the next several years we will have to see whether other frameworks take hold, such as the PTO’s apparent desire to reincarnate a version of the “obvious to try” analysis that was rejected in *In re Deuel*, and if so, whether that analysis changes the ball game at all.

In the meantime, the *KSR* case stands as an important cautionary tale about the limits of judicially driven patent reform. Indeed, perhaps the most striking aspect of the Supreme Court’s opinion in the case is how *little* change the Court made to the Federal Circuit’s doctrine, especially given the predictions that followed the rather lopsided oral argument.

One important insight is that, although the Supreme Court may often sound like a legislative body on patent issues,³⁸ the scope of any corrective action the Court can take is relatively modest. Although the Supreme Court has more latitude than other judicial bodies do, it is nonetheless confined to the set of issues that present themselves in the case at hand.

Note as well that the recent history of the Federal Circuit suggests a significant degree of path dependence with respect to judicially driven reform efforts—even those established by the Federal Circuit itself. For example, in other work, I have documented the (surprising) lack of change to the Federal Circuit’s jurisprudence of claim construction, notwithstanding the 2005 *Phillips v. AWH* en banc decision, which purported to resolve a long-standing split in the jurisprudence.³⁹ (See figure 4.)

Figure 4: Trends of Claim Construction Jurisprudence at the Federal

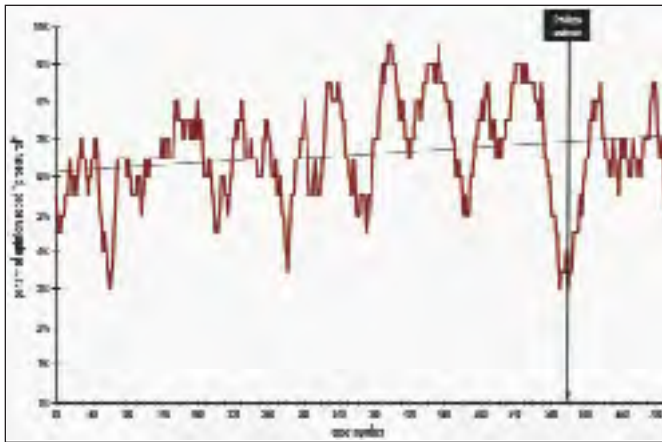
Circuit, 1995–2007 (court opinions, 20-case lagged average, N = 712)⁴⁰

Again, I note that thus far, we have seen little actual change in the course of Federal Circuit opinions related to nonobviousness (although it is far too early to be sure).

Conclusion

Given the fundamental changes that are rocking the patent system, it seems clear that the role of the courts in reform efforts is going to become more important; as the patent law becomes more complex, costly, visible, and politicized, reform opportunities narrow substantially. And yet at least so far, I believe that the courts (perhaps especially the Supreme Court) have not acquitted themselves well in the role of the patent system's white knight.

The history of the Supreme Court's decision in *KSR* is far from written, and many disputes remain about the importance of the case, its long-term impact, and even what it actually says. It seems likely to me, however, that *KSR* could represent something of a turning point—perhaps the beginning of the end of the view that the Supreme Court can provide real patent reform. **TFL**



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Endnotes

¹See U.S. Patent and Trademark Office, *Annual Reports*, 1986–2006.

²The European Patent Office received 193,623 applications in 2005 (up 60 percent from 1995) and issued 53,259 patents (up 22 percent from 1995). The Japanese Patent Office received 427,078 applications in 2005 (up 13.5 percent from 1995) and issued 122,944 (up 11.3 percent from 1995).

³PTO, *Annual Reports*, *supra* note 1.

⁴National Science Foundation, Division of Science Resources Statistics, *National Patterns of R&D Resources* (annual series); PTO, *Annual Reports*, *supra* note 1.

⁵Administrative Office of the United States Courts, *Annual Statistical Reports*; PTO, *Annual Reports*, *supra* note

1. The number of in-force patents was estimated by using lagged data on patent grants to calculate a maximum of potential in-force patents, then correcting (reducing) that number using the patent renewal rate data shown in table 1 of Gideon Parchomovsky and R. Polk Wagner, *Patent Portfolios*, 152 U. PA. L. REV. 1, 15 (2006).

⁶AIPLA REPORT OF THE ECONOMIC SURVEY 21–22 (2003).

⁷See Mark A. Lemley and Carl Shapiro, 19 J. ECON. PERSP. 75, 79 (Spring 2005).

⁸See Allison et al., *Valuable Patents*, 95 GEOR. L. J. 435 (2004). There is significant skewing with respect to distribution of value. *See id.* (stating that the top 1 percent of patents are “more than a thousand times as valuable as the median patent”).

⁹See, Parchomovsky and Wagner, *Patent Portfolios*, *supra* note 5.

¹⁰Clarisa Long, *Patent Signals*, 69 U. CHI. L. REV. 625 (2002) (focusing on patents as a means for credibly publicizing information).

¹¹See Richard C. Levin, *A New Look at the Patent System*, 76 AM. ECON. REV. no. 2, 199, 200–201 (1986) (proposing that patents may be used to measure the performance of research and development employees).

¹²See F.M. Scherer, *The Innovation Lottery*, EXPANDING THE BOUNDARIES OF INTELLECTUAL PROPERTY: INNOVATION POLICY FOR THE KNOWLEDGE SOCIETY 3, 11 (Rochelle Cooper Dreyfuss et al. eds., 2001), at 3.

¹³Note, for example, that Steve Jobs states that the 200 patents applied for related to iPhone technology.

¹⁴See John R. Allison and Mark A. Lemley, *Empirical Evidence on the Validity of Litigated Patents*, 26 AIPLA Q.J. 185, 241 (1998) (noting the increase in patent validity rate after creation of the Federal Circuit); Glynn Lunney, *Patent Law, the Federal Circuit, and the Supreme Court: A Quiet Revolution*, 11 SUP. CT. ECON. REV. 1 (2004) (finding that the percentage of cases where the Federal Circuit held patents invalid dropped considerably).

¹⁵See Lunney, *Patent Law, the Federal Circuit, and the Supreme Court*, *supra* note 14, at 2.

¹⁶See, generally, Kevin G. Rivette and David Kline, *REMBRANDTS IN THE ATTIC: UNLOCKING THE HIDDEN VALUE OF PATENTS* (2000) (discussing the value of patents).

¹⁷William Landes and Richard Posner, *THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW*, at 340 (2003).

¹⁸The emergence of open-source software and other peer-production enterprises means that many in the industry explicitly define themselves as opposed to traditional intellectual property rights (although this need not be the case, of course).

¹⁹See, for example., the Hatch-Waxman Act of 1984, which had enormous impact, but its effects were confined to the pharmaceutical industry.

²⁰The nonobviousness requirement, of course, has its basis in 35 U.S.C. § 103, but virtually all the analytical content is provided by court decisions.

²¹See, for example, R. Polk Wagner and Lee Petherbridge, *Is the Federal Circuit Succeeding? An Empirical Assessment of Judicial Performance*, 152 U. PA. LAW. REV. 1105 (2004).

²²See *Teleflex v. KSR*, 288 F. Supp. 2d at 595 (2004).

²³*Teleflex v. KSR Int'l*, 119 Fed. Appx. at 288 (2005).

²⁴As I have argued elsewhere, the Federal Circuit's approach was understandable, and reasonable, given the infirmities of the Supreme Court's reasoning in *Sakraida* and *Andersons Black-Rock*. See *Brief of Business and Law Professors, KSR Int'l v. Teleflex*, No. 04-1350 (2004).

²⁵See *KSR Int'l v. Teleflex*, No. 04-1350, transcript of oral argument at 41 ("[The TSM analysis] is gobbledygook. It really is, it's irrational.").

²⁶See *KSR Int'l v. Teleflex*, 127 S. Ct. 1727, 1741 (2007).

²⁷See, for example, Lee Petherbridge and R. Polk Wagner, *The Federal Circuit and Patentability: An Empirical Assessment of the Law of Obviousness*, 85 TEX. L. REV. 2051, 2059–2064 (2007) (canvassing Federal Circuit jurisprudence).

²⁸*In re Dembiczak*, 175 F.3d at 994, 999 (Fed. Cir. 1999).

²⁹*KSR Int'l v. Teleflex*, 127 S. Ct. at 1740.

³⁰See Petherbridge and Wagner, *The Federal Circuit and Patentability*, *supra* note 27, at figure 8 (empirically demonstrating the Federal Circuit's use of a range of sources).

³¹*KSR Int'l v. Teleflex*, 127 S. Ct. at 1741.

³²See *Dembiczak*, 175 F.3d at 999. See also Petherbridge and Wagner, *The Federal Circuit and Patentability*, *supra* note 27, at 2063–2064.

³³*KSR Int'l v. Teleflex*, 127 S. Ct. at 1741 (citing Federal Circuit case law for the proposition).

³⁴*Id.* ("There is no necessary inconsistency between the idea underlying the TSM test and the *Graham* analysis.").

³⁵*KSR Int'l v. Teleflex*, 127 S. Ct. at 1742.

³⁶*Id.* at 1741.

³⁷See Petherbridge and Wagner, *The Federal Circuit and Patentability*, *supra* note 27, at 2063–2064.

³⁸See Justice Kennedy's concurrence in *eBay v. MercExchange*, 126 S. Ct. 1837, 1842–43 (2006).

³⁹To this list might be added cases such as the Supreme Court's decision in *Festo*, which rolled back the Federal Circuit's attempt to curtail the use of the doctrine of equivalents in a significant number of cases, but which seems—five years later—to have barely altered the long-term diminishment of the doctrine of equivalents. See Lee Petherbridge, *The Federal Circuit and the Doctrine of Equivalents* (draft manuscript, 2007).

⁴⁰See R. Polk Wagner and Lee Petherbridge, "Did Phillips Change Anything? Empirical Analysis of the Federal Circuit's *Cliam Construction Jurisprudence*," draft, at 18 (August 2007).

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