No. 04-1350

IN THE

Supreme Court of the United States

KSR INTERNATIONAL CO.,
Petitioner,

v.

TELEFLEX INC. and TECHNOLOGY HOLDING CO.,
Respondents.

On Writ of Certiorari to the United States Court of Appeals for the Federal Circuit

BRIEF FOR *AMICI CURIAE* TIME WARNER INC., IAC/INTERACTIVE CORP., AND VIACOM, INC. IN SUPPORT OF PETITIONER

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TABLE OF CONTENTS

TABLE OF CONTENTS—Continued

TABLE OF AUTHORITIES

TABLE OF AUTHORITIES—Continued

TABLE OF AUTHORITIES—Continued

CONSTITUTIONS, RULES AND STATUTES

BOOKS, ARTICLES AND OTHER MATERIALS

TABLE OF AUTHORITIES—Continued

TABLE OF AUTHORITIES—Continued

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INTERESTS OF *AMICI CURIAE*[1]

Amici are leading providers of goods and services in various high technology fields. As owners of thousands of valuable patents, *amici* frequently seek to enforce or to license patents. *Amici* also have licenses to use other patents, and frequently they are the object of infringement claims and litigation. *Amici* therefore have a strong interest in ensuring that patent law and in particular the laws governing the validity of patents are applied in a fair and balanced fashion.

[1] Counsel for both parties have consented to the filing of this brief, and their consents have been filed with the Clerk of this Court. No counsel for either party had any role in authoring this brief, and no person other than the named *Amici* and their counsel has made any monetary contribution to the preparation and submission of this brief. *See* Rule 37 & 37.6.

Amicus Time Warner Inc. is a leading global media and entertainment company with businesses in filmed entertainment, interactive services, television networks, cable systems and publishing media, including America Online, Time Warner Cable, Time Inc., HBO, Turner Broadcasting System and Warner Bros. Entertainment. A frequent innovator in the area of high technology, Time Warner has pioneered such industry-shifting products as the DVD and digital cable, and it holds numerous patents.

Amicus IAC/InterActiveCorp is a diversified e-commerce company whose businesses are leaders in numerous sectors of the Internet economy. IAC's operating businesses include Ask.com, Citysearch, Entertainment Publications, Evite, Gifts.com, HSN, Interval International, LendingTree, Match.com, ServiceMagic, and Ticketmaster. IAC/InterActiveCorp holds many patents in areas such as Internet communications and business solutions.

Amicus Viacom, Inc. is one of the leading global entertainment content companies. Offering programming and content for television, motion pictures and digital platforms, Viacom's world-class brands include MTV Networks (MTV, VH1, Nickelodeon, Nick at Nite, Comedy Central, CMT: Country Music Television, Spike TV, TV Land, Logo, and more than 120 networks around the world), BET Networks, Paramount Pictures, Paramount Home Entertainment, DreamWorks, MTV Films, Nick Movies, and Famous Music. Viacom uses patented technologies in providing its programming services and content.

Amici are concerned by the Federal Circuit's test implementing the "nonobviousness" requirement in Section 103 of the Patent Act, 35 U.S.C. § 103(a), by requiring proof of teaching, suggestion, or motivation in the prior art. Although this test may appear flexible, in practice it is implemented in a rigid fashion that requires obviousness to be proven through evidence of published suggestions. Because there is little publication of innovation in many high tech fields, this test

effectively eliminates the obviousness defense in those fields. *Amici* therefore urge that the Federal Circuit's test be rejected and replaced by the more flexible approach mandated by the plain language of Section 103 and the controlling decisions of this Court.

SUMMARY OF ARGUMENT

The patent system aims to reward genuine innovation. Thus, under this Court's longstanding precedents as codified in the Patent Act of 1952, a patent may not issue if the claimed invention would have been obvious to a person of ordinary skill in the relevant art. By its very terms, this standard is technology-specific. To determine whether an invention is obvious, a patent examiner or a court must step into the shoes of a person skilled in the relevant art. Different arts involve different skills. Proof of obviousness thus may be expected to vary with the different customs and practices of different fields.

Departing sharply from precedent, however, the Federal Circuit has abandoned such a flexible and technology-specific approach in favor of a rigid and uniform evidentiary test. To show obviousness, the Federal Circuit requires "specific findings showing a teaching, suggestion, or motivation to combine prior art teachings in the particular manner claimed by the patent at issue." Pet. App. 16a. Meeting that burden, the Federal Circuit has held, requires detailed objective "evidence of record" rather than reliance on "common sense" or any of the other factors this Court has deemed relevant to obviousness.

This strict evidentiary requirement biases the obviousness inquiry in favor of pre-existing evidence that is documented or otherwise publicly accessible. Some fields customarily generate such evidence, for example through government regulatory submissions, peer-reviewed journals, or published patents. But other fields, with different traditions and market structures, do not record their advances in this manner.

In many high technology fields, technological advances are often not well recorded in academic or industry journals or decades of published patents. In fields such as computer data processing, Internet commerce, software-based business methods and digital media, for example, technology advances through rapid electronic exchanges of information with minimal traditional documentation. Many emerging fields evolve so quickly that patents and printed articles cannot keep up with the latest developments. In such fields, it is difficult to satisfy the Federal Circuit's rigid evidentiary test even when a claimed "invention" would have been perfectly obvious to one skilled in the field.

By making it too difficult to prove obviousness in such fields, the Federal Circuit's approach distorts the patent system. The obviousness requirement provides a crucial check on dubious patents because the other requirements for patentability—utility and novelty—are easily satisfied by patent attorneys acting *ex parte* at the Patent Office. If obviousness is too hard to prove in areas of emerging technology, those areas will quickly become clogged with dubious patents that impede future innovation, devaluing actual advances and defeating the underlying objective of the patent laws. And if it becomes virtually impossible to prevail on obviousness on summary judgment, then expensive trials or excessive settlements will burden both the economy and the judicial system.

For these reasons, this Court should reject the Federal Circuit's rigid requirement and return to a more flexible approach that allows courts to consider different evidence of obviousness as appropriate for different technologies. Documentary evidence of a prior teaching, motivation or suggestion to combine elements should remain relevant to the obviousness inquiry. In fields like medicine and biotechnology where advances are heavily documented, such evidence might well be dispositive in assessing claims of obviousness. But in other

fields where advances are not heavily documented, the obviousness of a patent to a person of ordinary skill in the field should be provable by other means.

ARGUMENT

I. BY REPLACING THE FLEXIBLE, TECHNOLOGY-SPECIFIC ANALYSIS REQUIRED BY THIS COURT'S PRECEDENTS AND THE PATENT ACT WITH A RIGID EVIDENTIARY RULE, THE FEDERAL CIRCUIT HAS MADE IT TOO DIFFICULT TO PROVE MANY HIGH TECH PATENTS OBVIOUS

Because the patent system seeks to reward only genuine innovation, patent-worthy inventions must be not only new and useful, but also not obvious to a person of ordinary skill in the relevant art. As this Court has held for well over a century, a patent applicant must evidence "more ingenuity and skill than were possessed by an ordinary mechanic acquainted with the business . . . ." *Graham v. John Deere Co.*, 383 U.S. 1, 11 (1966) (citing *Hotchkiss v. Greenwood*, 52 U.S. (11 How.) 248, 267 (1851)). The power to reject a patent as obvious helps to protect future innovation. "A patent for a combination that only unites old elements with no change in their respective functions . . . obviously withdraws what already is known into the field of its monopoly and diminishes the resources available to skillful men. . . ." *Sakraida v. AG Pro, Inc.*, 425 U.S. 273, 281 (1976) (quoting *Great Atl. & Pac. Tea Co. v. Supermarket Corp.*, 340 U.S. 147, 152 (1950)).

The Patent Act of 1952 codified the longstanding *Hotchkiss* test, as elaborated in this Court's later decisions, by specifying that a patent must not be obvious to a person of ordinary skill in the relevant art. It provides:

> A patent may not be obtained . . . 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.

35 U.S.C. § 103(a). *See Graham*, 383 U.S. at 17 (noting that this "section was intended merely as a codification of judicial precedents").

The obviousness inquiry called for by this Court's precedents and the Patent Act is flexible and technology-specific. It requires stepping into the shoes of a person skilled in the relevant art at the time the invention was made. The Federal Circuit, however, has jettisoned such a flexible approach in favor of a rigid, uniform evidentiary test requiring detailed objective evidence of a prior teaching, suggestion or motivation. This newly created requirement not only defies precedent and statutory language, but biases the obviousness inquiry toward documentary evidence of innovation. In high technology fields like digital media, Internet commerce and computer-based data communication, however, rapid advances are not recorded in peer-reviewed journals or government regulatory submissions. The Federal Circuit's rigid evidentiary test thus makes it unnecessarily difficult to prove obviousness in such fields.

A. This Court's Precedents And The Patent Act Call For Flexible And Technology-Specific Proof Of Obviousness

Under this Court's longstanding precedents, determining obviousness calls for a practical, "functional approach" that compares what is known according to the "background skill of the calling" with the patent applicant's claim of a new invention. *Graham*, 383 U.S. at 12. Such an approach is necessarily technology-specific. It requires stepping into the shoes of a person of ordinary skill in the particular field at the time of the invention, and asking whether such a person

would be routinely capable of devising the allegedly inventive method or device.

Since custom, practice, and knowledge base differs in different fields, there is no reason to expect that the sources of such capability will all be similar. As this Court has cautioned, "What is obvious is not a question upon which there is likely to be uniformity of thought in every given factual context." *Graham*, 383 U.S. at 18. To the contrary, "background skill" will vary with the "calling" in question. A person skilled in one field might understand the routine nature of an alleged advance based on quite different sources, practices and techniques than a person skilled in another field.

Accordingly, this Court has applied the obviousness requirement in a flexible fashion. The seminal *Graham* decision identified three primary inquiries in determining obviousness: "the scope and content of the prior art," the "difference between the prior art and the claims at issue," and the "level of ordinary skill in the pertinent art." 383 U.S. at 17-18. Additionally, the Court noted that certain "secondary considerations" that might be "indicia of nonobviousness," such as "commercial success, long felt but unsolved needs, failure of others, etc." might be relevant. *Id*. But in every case, this Court has approached the technology at issue on its own terms.[2]

The text of the Patent Act likewise embodies such a technology-specific approach. Section 103(a), by looking to

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[2] *See Dann v. Johnston*, 425 U.S. 219, 229-30 (1976); *Anderson's-Black Rock, Inc. v. Pavement Salvage Co.*, 396 U.S. 57, 60-61 (1969); *United States v. Adams*, 383 U.S. 39, 51-52 (1966); *Calmar, Inc. v. Cook Chem. Co.*, 383 U.S. 26, 35 (1966); *Great Atl. & Pac. Tea Co.*, 340 U.S. at 151-52; *Toledo Pressed Steel Co. v. Standard Parts, Inc.*, 307 U.S. 350, 356 (1939); *Lincoln Eng'g Co. v. Stewart-Warner Corp.*, 303 U.S. 545, 549 (1938); *Adams v. Bellaire Stamping Co.*, 141 U.S. 539, 542 (1891); *Reckendorfer v. Faber*, 92 U.S. 347, 357 (1876); *Hailes v. Van Wormer*, 87 U.S. 353, 368 (1874); *Hotchkiss*, 52 U.S. (11 How.) at 265-67.

the perspective of a "person having ordinary skill *in the art*," 35 U.S.C. § 103(a) (emphasis added), suggests by its very terms that evidence of obviousness will vary across the different skills appropriate to different arts. "Read for plain meaning, this language seems to call for evaluations of nonobviousness from the perspective of ordinary practitioners who are contemporaries of the inventor in the relevant technological community." Rebecca S. Eisenberg, *Obvious to Whom? Evaluating Inventions from the Perspective of PHOSITA*, 19 BERKELEY TECH. L.J. 885, 886 (2004).

The statute also calls for flexibility in determining obviousness in different fields. "The practicality of working in different technologies requires a flexible approach to determining . . . obviousness, and the PHOSITA [*i.e.*, "person having ordinary skill in the art"] approach gives a court that flexibility." Dan L. Burk & Mark A. Lemley, *Is Patent Law Technology Specific?*, 17 BERKELEY TECH. L.J. 1155, 1191 (2002).

Between the Patent Act's enactment and the creation of the Federal Circuit in 1982, this flexible, technology-specific approach to proof of obviousness was for the most part followed by the Federal Circuit's predecessor court, the Court of Customs and Patent Appeals (CCPA). Under the CCPA's decisions, "the test for combining references is not what the individual references themselves suggest but rather what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art." *In re McLaughlin*, 443 F.2d 1392, 1395 (C.C.P.A. 1971). Thus it was "not necessary" that the prior art "actually suggest, expressly or in so many words," the improvements made by the patent applicant. *In re Sheckler*, 438 F.2d 999, 1001 (C.C.P.A. 1971).[3]

[3] *See also In re Conrad*, 439 F.2d 201, 205 (C.C.P.A. 1971) (holding that "the test of obviousness is not express suggestion of the claimed invention in any or all of the [prior art] references but rather what the

B. The Federal Circuit Has Required A Rigid Evidentiary Rule In Place Of The Flexible And Technology-Specific Approach

Departing sharply from these precedents, "the Federal Circuit . . . has all but ignored the statutory directive that judgments of nonobviousness be made from the perspective of PHOSITA." Eisenberg, *supra*, at 888. Instead, the Federal Circuit has created a new rule of its own devising, requiring detailed and specific findings of prior teaching, suggestion or motivation to combine elements of prior art to create the invention claimed in the patent in question.[4]

Although on its face the requirement of a teaching, suggestion, or motivation might seem flexible enough, in practice this requirement has been applied in a rigid fashion that has raised the bar for proving obviousness for even the simplest inventions. *See, e.g.*, *In re Sernaker*, 702 F.2d 989, 993-96 (Fed. Cir. 1983) (overturning Patent Office rejection of a patent as obvious, finding no prior suggestion to apply dye transfer techniques known in the textile art to embroidery with different colored threads). And it is being applied in rigid manner in the district courts. *See, e.g.*, Federal Circuit Bar Association Model Patent Jury Instructions, No.10.9.2 ("In deciding whether to combine what is described in the various items of prior art, you should keep in mind that there *must be some motivation or suggestion* for a skilled person

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references taken collectively would suggest to those of ordinary skill in the art presumed to be familiar with them" (quotation omitted)).

[4] Most patents present combinations of pre-existing elements. "Innovations typically are a unique and creative combination of elements present in separate prior references." Joshua McGuire, *Nonobviousness: Limitations on Evidentiary Support*, 18 Berkeley Tech. L.J. 175, 175 (2003). *See, e.g., Reeves Instrument Corp. v. Beckman Instruments, Inc*., 444 F.2d 263, 270 (9th Cir. 1971) (noting that "the vast majority [of mechanical or electrical devices], if not all, involve the construction of some new device (or machine or combination) from old elements").

to make the combination covered by the patent claims" (emphasis added)).

Raising the bar for proving obviousness still higher, the Federal Circuit's teaching-suggestion-motivation test has hardened in practice into a rigid requirement of some prior *published* suggestion of the combination in question. For example, in *In re Lee*, 277 F.3d 1338 (Fed. Cir. 2002), the Federal Circuit reversed the Patent Office's rejection of a patent application for adjusting a television screen's picture using an on-screen menu. The Patent Office had found that, to the "common sense of a person of ordinary skill in the art," it was obvious that one could combine a prior patent for an on-screen television menu with an on-screen picture-quality adjustment for a video game played on a television already illustrated in the game's handbook. The Federal Circuit, however, ruled that obviousness must be based on "objective evidence *of record*," and not upon "common sense." *Id*. at 1343 (emphasis added). Finding no specific published suggestion in the record, the Federal Circuit ruled the alleged "invention" patentable. *Id*. at 1341.

By biasing the obviousness inquiry in favor of pre-existing published evidence, the Federal Circuit's test in effect substitutes the perspective of the skilled librarian for that of the skilled practitioner of the technology in question. This turns the Patent Act on its head, destroying the flexibility specified by its terms.

C. Many Technologies Do Not Produce Documentary Evidence Suited To The Federal Circuit's Rigid Evidentiary Rule

The Federal Circuit's rigid test is especially ill-suited to the frenetic pace of development in many high technology fields. The test assumes that research and innovation proceeds principally in documented form. While this might be true of some fields, it is untrue of others. Where it is untrue, the Federal Circuit's test distorts the obviousness inquiry.

Medical fields, for example, are characterized by a culture of peer-reviewed journals, clinical trials, grant applications, and FDA regulatory submissions in which scientists report written research and results. The National Center for Biotechnology Information, for instance, maintains a database that includes over 4,800 journals and 16 million citations dating back to the 1950s.[5] In such a culture, patent obviousness may often be provable by readily available documentary evidence.[6]

Similarly, in other established fields such as construction and transportation, technological advances are typically documented in incremental sequences of published patents. *See, e.g., In re Sheckler*, 438 F.2d 999 (C.C.P.A. 1971) (upholding rejection of 1966 application for patent on masonry blocks as obvious in light of patents published in 1948 and 1960); *In re McLaughlin*, 443 F.2d 1392 (C.C.P.A. 1971) (upholding rejection of 1966 application for patent on arrangement for loading railroad boxcars as obvious in light of prior patents published in 1960, 1963 and 1965).

In many high technology fields, by contrast, the Federal Circuit's paradigm of an inventor drawing upon years of

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[5] *See* NCBI PubMed, http://www.ncbi.nlm.nih.gov/entrez/ query.fcgi?DB=pubmed (last visited August 16, 2006). A search in the National Center's database for the human immunodeficiency virus (HIV) returns over 200,000 entries.

[6] For example, in *Princeton Biochemicals, Inc. v. Beckman Coulter, Inc.*, 411 F.3d 1332 (Fed. Cir. 2005), the Federal Circuit affirmed a district court's finding that a patent on a biochemical research device was obvious based on an article published in a scientific journal (the INT'L J. ON CHROMATOGRAPHY, ELECTROPHORESIS AND RELATED METHODS) and a published Ph.D. thesis. Similarly, in *Sibia Neurosciences, Inc. v. Cadus Pharmaceutical Corp*., 225 F.3d 1349 (Fed. Cir. 2000), and *Merck & Co., Inc. v. Teva Pharmaceuticals USA, Inc*., 395 F.3d 1364 (Fed. Cir. 2005), the Federal Circuit found patents in the biochemistry and pharmaceutical fields, respectively, to be obvious in light of published articles in scientific journals.

printed journal articles and prior patents simply does not exist. "[P]atent law has lost its primarily mechanical character, branching out into biotechnology, semiconductors, computer hardware and software, electronics, and telecommunications." Burk & Lemley, *supra*, at 1159 (citing John R. Allison & Mark A. Lemley, *The Growing Complexity of the United States Patent System*, 82 B.U. L. REV. 77, 87-90 (2002)).

In many of these fields, innovation is ever more rapid, and business cycles are increasingly short. Electronic devices such as personal computers and cellular phones (and the software that makes them function) that were cutting edge are quickly obsolete.[7] New developments are disseminated at speeds that outstrip conventional documentation. There is no need in these fields for developed bodies of published literature that would spell out teachings, motivations or suggestions in the manner required by the Federal Circuit's test. Consider the following examples:

Internet. Although the Internet might now seem essential, it is a very recent development. *See* ROBERT H. REID, ARCHITECTS OF THE WEB xx-xxi (1997). Begun as a military project in 1970, it opened for commercial use only in 1990. The basic building blocks of the World Wide Web were developed between 1991 and 1993, *id*. at xxv, and the Internet went from being an isolated novelty in 1997 to a ubiquitous tool by the end of 1999, *id*. at xxxiv-xxxv. Indeed, the Internet has developed so rapidly that web pages dating from less than a decade ago are considered ancient history.[8]

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[7] For example, although the Apple iPod was introduced less than five years ago, it has already gone through five generations, four of which are no longer in production. *See* Apple iPod, http://www.apple.com/ipod/ipod.html (last visited Aug. 19, 2006).

[8] The Internet Archive maintains a website that permits users to browse through webpages archived since 1996. *See* Internet Archive, Wayback

These technical developments have not been extensively documented. The Internet is driven by market forces that leave knowledgeable participants little means, time or inclination to publish and share their knowledge. To begin with, the Internet is highly decentralized, connecting computers over networks operated by myriad independent companies.[9] Many of the companies that pioneered the Internet no longer exist or have been purchased by other companies. *See, e.g.*, REID, *supra*, at 1-2 and 357 (describing the influence and success of Netscape, now owned by AOL).

In any event, the Internet's development far outstrips the pace at which patents or academic literature do or could proceed. The Patent Office receives over 400,000 patent applications each year, and on average it takes more than two years for an application to be processed. USPTO, PERFORMANCE AND ACCOUNTABILITY REPORT: FISCAL YEAR 2005, at 18, 22-23. Scholarly publications move at a similar pace. In peer-reviewed journals, it typically takes many

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Machine, http://www.archive.org/web/web.php (last visited Aug.19, 2006). This archive is called the "Wayback Machine" after a fictional machine that allowed one to travel back in time to witness historical events. *See* Mister Peabody, http://en.wikipedia.org/wiki/Mr._Peabody (last visited Aug. 18, 2006).

[9] Although manufacturers of Internet servers and routers have agreed upon certain protocols or interoperability standards to ensure that their respective machines are compatible, these protocols are too limited and too general to provide evidence of a teaching, suggestion or motivation that could limit obvious extensions of existing technology under the Federal Circuit's approach. These protocols define only threshold functionality, the minimum information and processes that the equipment must be able to recognize in order to communicate with other equipment. Firms implement these standards in different fashions, and they often keep their implementations secret because it might provide competitive advantages such as more efficient processing of information, better power consumption, and more robust operations.

months from the submission of an article until publication. Internet engineers operate on a vastly quicker timetable.

Finally, extensive documentation of Internet innovations can be a market liability. Companies that serve and support the Internet are loath to publish their current software or processes lest they expose their users to spammers or hackers or reveal and devalue their trade secrets. *See* Eisenberg, *supra*, at 897-98 (noting that the written record of prior art is a particularly poor proxy for the skill of the ordinary practitioner in fields with a "prevailing culture of secrecy and few incentives to publish").

For all these reasons, Internet technology lacks documentation of the "state of the art" that might be considered evidence of teachings, suggestions or motivations under the Federal Circuit's rigid test. The state of Internet art, however, is known to engineers in the field at any given time and can be implied from current products. It is this more practical state of knowledge that should be evaluated in properly flexible obviousness analysis.

Software. Computer software is another fast-developing area that is ill-suited to the Federal Circuit's rigid test for proving obviousness. Like the Internet, software-based inventions are a new development with a relatively limited documentary history. Widely distributed computer software for consumer use did not appear until the introduction of the personal computer in the late 1970s. *See* PAUL E. CERUZZI, A HISTORY OF MODERN COMPUTING 263-266 (2d ed. 2003).

Furthermore, the patentability of software was at best spotty in the United States until the late 1990s. *See, e.g.*, *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 1355-61 (Fed. Cir. 1999); *State Street Bank & Trust Co. v. Signature Fin. Group*, 149 F.3d 1368, 1373 (Fed. Cir. 1998). *See generally* Julie E. Cohen & Mark A. Lemley, *Patent Scope and Innovation in the Software Industry*, 89 CAL. L.

REV. 1, 8-11 (2001). The available set of patents in the software field is therefore relatively recent and underdeveloped, providing little history of issued, published patents from which to draw evidence of teachings, motivations or suggestions.

In any event, software evolves rapidly. *See, e.g.*, Cohen & Lemley, *supra*, at 6 (noting the "short effective life of software innovations"). Microsoft introduced its first disk operating system (MS-DOS) only in 1980. *See* CERUZZI, *supra*, at 270. Windows, the graphical interface that operates on top of DOS, was introduced in 1983, and since then it has gone through four major transformations as well as numerous minor revisions. *See, e.*g., Windows History, http://www.microsoft.com/ windows/ WinHistory ProGraphic.mspx (last visited Aug. 19, 2006). The evolution of the Linux operating system is even more rapid because it is "open source" code that is constantly modified by its users, who share their innovations under a general public license. *See, e.g.*, GLYN MOODY, REBEL CODE: LINUX AND THE OPEN SOURCE REVOLUTION 60, 170 (2001). Here again, the technology moves too quickly for published references to keep up.

Finally, software innovations are typically not well documented. The software industry does not rely upon systems of formal documentation used in other technical fields. Like their colleagues in the Internet field, software engineers have little incentive or ability to publish their knowledge in scholarly journals.[10] What does get published tends to be theoretical rather than practical. Moreover, good computer programmers minimize comments elaborating on the

[10] *See* Cohen & Lemley, *supra*, at 6; Julie E. Cohen, *Reverse Engineering and the Rise of Electronic Vigilantism: Intellectual Property Implications of "Lock-Out" Programs*, 68 S. CAL. L. REV. 1091, 1178 (1995) ("Many new developments in computer programming are not documented in scholarly publications at all. Some are simply incorporated into products and placed on the market.")

innovations in their programs.[11] In fact, they believe that it is counterproductive to explain trivial or obvious improvements in their software.[12] And software is ephemeral: Although older iterations of software may be tracked down through the judicial discovery process, evidence can be lost forever when systems are upgraded. This is especially burdensome when software that drives a particular process is disseminated over networks in many locations in servers manufactured and maintained by numerous different companies.

While software innovation, unlike improvements in masonry blocks, railroad cars and medical devices, thus often does not leave much of a paper trail, a software engineer of ordinary skill will still be able to identify what is obvious in the field from knowledge of the custom and practice of the industry. Such practical wisdom should be relevant and probative evidence of obviousness even if the Federal Circuit's rigid evidentiary test is impossible to satisfy in many instances.

Other new technologies. The same features of rapid, market-driven development across decentralized markets characterize other high technology areas, and the problems of evidentiary documentation described above for software and the Internet are similar.

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[11] *See, e.g.,* BRIAN W. KERNIGHAN & P.J. PLAUGER, THE ELEMENTS OF PROGRAMMING STYLE 151 (2d. ed. 1978) ("Don't over-comment."); Free Software Foundation, Inc., *GNU Pascal Coding Standards* ("You should avoid comments by writing clear code."), *available at* http://www.gnu-pascal.de/h-gpcs-en.html#index-trivial-comments-34 (last visited Aug. 19, 2006).

[12] *See, e.g.*, BRIAN W. KERNIGAN & ROB PIKE, THE PRACTICE OF PROGRAMMING 23 (1999) ("Don't belabor the obvious."); Free Software Foundation, Inc., *GNU Pascal Coding Standards* ("Do not write 'trivial' comments."), *available at* http://www.gnu-pascal.de/h-gpcs-en.html #index-trivial-comments-34 (last visited Aug. 19, 2006).

For example, high-speed data networks are expanding at an exponentially rapid pace. One of *amicus* Time Warner's subsidiaries offers video, Internet and Digital Phone services to consumers, and its Digital Phone Service signed up 1.1 million customers in 2005, five times the total at the end of 2004. Rapid change and short product cycles similarly characterize the semiconductor industry. *See* Bronwyn H. Hall & Rosemarie Ham Ziedonis, *The Patent Paradox Revisited: An Empirical Study of Patenting in the U.S. Semiconductor Industry, 1979-1995*, 32 RAND J. ECON. 101, 102 (2001).

Thus, there are many areas of high technology in which there is no basis for the assumption that obvious combinations of elements in the prior art will be documented in prior patents, scholarly journals, or any other reliably obtainable documentation. Where traditional documentary practices are absent, the Federal Circuit's rigid evidentiary requirement will systematically overprotect obvious inventions.

II. THE FEDERAL CIRCUIT'S INFLEXIBLE TEST FOR EVIDENCE OF OBVIOUSNESS UNDERMINES THE PATENT SYSTEM

Ensuring that patents "promote the Progress of Science and useful Arts," U.S. CONST. art. I, § 8, cl. 8., requires a "careful balance" between rewarding the fruits of successful past research and protecting future innovation. "From their inception, the federal patent laws have embodied a careful balance between the need to promote innovation and the recognition that imitation and refinement through imitation are both necessary to invention itself and the very lifeblood of a competitive economy." *Bonito Boats, Inc. v. Thunder Craft Boats, Inc*., 489 U.S. 141, 146 (1989). Thus, "concepts within the public grasp, or those so obvious that they readily could be, are the tools of creation available to all." *Id*. at 156. Only when an inventor comes up with a genuine innovation

that "add[s] to the sum of useful knowledge" does patent law grant the inventor the exclusive right to his invention for a limited period of time. *Graham*, 383 U.S. at 6.

This careful balance is upset if too many dubious patents clog the market in a field. While new technologies have created hugely valuable innovation in recent decades, "it is [also] an undeniable fact that . . . worthless patents abound." Clarissa Long, *Patent Signals*, 69 U. CHI. L. REV. 625, 626 (2002); *see* Kimberly A. Moore, *Worthless Patents*, 20 BERKELEY TECH. L. J. 1521, 1524 (2005). The proliferation of questionable patents, accompanied by the rise of professional patent litigants, *see, e.g.*, Jeremiah Chan & Matthew Fawcett, *Footsteps of the Patent Troll*, 10 INTELL. PROP. L. BULL. 1 (2005), raises serious concerns. The balance of the patent system depends upon practical mechanisms for distinguishing valuable innovation from dubious exploitation. Without a flexible way to prove obviousness, it is unnecessarily hard for the system—the Patent Office, litigants and courts—to separate the wheat from the chaff.

The Federal Circuit's rigid evidentiary test contributes to these problems, helping to distort innovation and to burden courts and litigants with unduly expensive patent litigation. Returning to the more flexible approach to obviousness mandated by the plain language of the Patent Act and the decisions of this Court would restore the balance between innovation and competition while allowing district courts to use the ample tools at their disposal to ensure that application of the obviousness requirement does not become distorted by inappropriate hindsight.

A. A Flexible Approach To Obviousness Is An Important Check On Over-Reaching Patents

The requirement of nonobviousness plays a crucial role in the practical operation of the patent system. Under the Patent Act, a patented invention must also be "useful" and "new." 35

U.S.C. §§ 101, 102. But these two hurdles are in practice easy to clear. The bar for usefulness is low—almost any claimed invention has a useful purpose. And creative patent attorneys, operating *ex parte* before the Patent Office, can readily circumvent the novelty requirement. Because the claims of a patent define the invention, each "patent" actually contains many inventions of varying scope. Patent attorneys can freely choose how to claim the invention for which they seek patent protection. By adding small limitations to the claims, any competent patent attorney can ensure that at least some claims are novel when strictly compared to the prior art.

Nonobviousness, therefore, is often the only requirement that stands between issuing a dubious patent and appropriately granting valuable exclusive rights. In the Patent Office, obviousness should be "the most frequently dispositive patentability issue, since most inventions can meet the liberal requirements of utility and novelty." Robert W. Harris, *Prospects for Supreme Court Review of the Federal Circuit Standards for Obviousness of Inventions Combining Old Elements*, 68 J. PAT. & TRADEMARK OFF. SOC'Y 66, 66 (1986). "With the statutory subject matter, novelty, and utility requirements presenting quite lenient patentability standards, nonobviousness remains the patent law's most robust guardian of the public domain." John R. Thomas, *Formalism at the Federal Circuit*, 52 AM. U. L. REV. 771, 801 (2003).

B. An Inflexible Approach To Obviousness Distorts Innovation

The Federal Circuit's rigid test for proof of obviousness makes dubious patents in emerging technologies easier to obtain and harder to invalidate. In so doing, it undermines both the legitimacy of all patents and the patent system's overall goal of stimulating genuine innovation.

To begin with, by making obviousness too difficult to show, especially in high technology industries where docu-

mented teachings, suggestions and motivations are scarce, the Federal Circuit's rigid test devalues genuine inventions. The problem of incremental, non-inventive follow-on developments illustrates this point: After investing considerable time and money in research, an inventor might make genuine innovation in an emerging technology, patent that innovation, and start marketing that innovation under the patent. If others are able to obtain patents for mundane or trivial improvements to this innovation that would be obvious under a flexible test, however, the inventor will not be able to fully realize the value of an invention. The follow-on patents will block the inventor from making workmanlike improvements to the invention. And the inventor will be unable to realize the patent's full value because licenses for the follow-on patents must be obtained in order to practice the original invention fully.

The Federal Circuit's test, moreover, encourages innovators to take wasteful steps to avoid these problems, further undermining innovation. To protect their inventions where it is too difficult to show that follow-on inventions are obvious (and the Patent Office therefore cannot be trusted to reject patents for trivial improvements adjacent to true innovations), inventors have an incentive to seek patents on any incremental improvements that they desire to make and to ensure that every obvious improvement (whether of commercial interest or not) is published. Thus, prudent inventors are forced to divert time and resources away from productive activities into duplicative patent applications or wasteful submissions to the *Journal of Obvious Suggestions* in their area. Patent law should not encourage such deadweight loss, but instead should free inventors to discover new inventions by protecting them against attempts to patent obvious extensions of their inventions.

The Federal Circuit's rigid evidentiary test also undermines the ultimate goal of the patent system, which is to stimulate

innovation. *See, e.g.*, *Aronson v. Quick Point Pencil Co.*, 440 U.S. 257, 262 (1979) (noting that patent law "seeks to foster and reward invention [and] to stimulate further innovation"); *see also Mazer v. Stein*, 347 U.S. 201, 219 (1954). By permitting patents on obvious innovations that are unworthy of protection, the rule blocks the path to new inventions without adding to the sum of useful knowledge.

Indeed, to limit their exposure to suits over obvious inventions, innovative companies actually providing products and services are forced to patent those inventions themselves and attempt to assemble patent portfolios that will either deter suits or permit cross-licenses to avoid suit. *See, e.g.*, Carl Shapiro, *Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard-Setting*, *in* 1 INNOVATION POLICY AND THE ECONOMY 119, 127-128 (Adam Jaffe *et al.*, eds., 2000). Thus, the Federal Circuit's test not only deprives would-be future inventors of free access to ideas and technologies; it also diverts funds that might otherwise be used for such innovation to defend against potential claims based upon unjustly issued patents.

C. An Inflexible Approach To Obviousness Distorts Patent Litigation

In addition to undermining both the legitimacy and the goals of the patent system, the Federal Circuit's rigid obviousness test also increases the burden of patent litigation on courts and litigants. Because obviousness is a question of law, it should be susceptible to resolution on summary judgment in appropriate cases. An obviousness test that is properly tailored to the Patent Act's technology-specific language could decide much litigation at the threshold, avoiding lengthy and expensive trials.[13]

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[13] Patent trials are expensive. The "industry rule of thumb" is that "any patent infringement lawsuit will easily cost $1.5 million in legal fees

The Federal Circuit's inflexible test, however, makes it nearly impossible for an obviousness defense to prevail at the summary judgment stage.[14] Because of the Federal Circuit's

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alone to defend." WENDY H. SCHACHT & JOHN R. THOMAS, CONGRESSIONAL RESEARCH REPORT: PATENT REFORM: INNOVATION ISSUES 7 (2005). Moreover, high stakes litigation is even more costly. In patent suits with damage claims of more than $25 million, direct expenses can increase to $4 million per side. *Id*.; *see also* ADAM B. JAFFE & JOSH LERNER, INNOVATION AND ITS DISCONTENTS 14 (2004).

[14] For example, in *McGinley v. Franklin Sports, Inc.*, 75 F. Supp. 2d 1218 (D. Kan. 1999), the plaintiff's patent claimed an "invention" in finger markings on a baseball to teach various pitches. The defendant, who sold baseballs with finger markings, sought summary judgment that the patent was invalid as obvious. Lacking any body of peer-reviewed journals in the baseball pitching field, the defendant offered evidence of obviousness including deposition testimony that a witness's son had "decided to sketch designs on his baseball to show a neighborhood boy where to place his fingers in order to throw certain pitches," *id*. at 1226, and evidence of a prior patent on marked baseballs of less than regulation size, *id.* at 1228. After denying summary judgment based on inability to satisfy the Federal Circuit's rigid obviousness test, the district court submitted the case to the jury, which found the patent valid and infringed. The district court granted judgment as a matter of law that the patent was obvious. 92 F. Supp. 2d 1216 (2000). But the plaintiff appealed, and the Federal Circuit reversed, reinstating the jury's verdict. 262 F.3d 1339 (2001).

For similar examples, see *Neato, LLC v. Rocky Mountain Traders*, 138 F. Supp. 2d 245, 251-56 (D. Conn. 2001) (denying summary judgment of obviousness where the asserted patent claimed an automatic device for applying labels onto compact disks and the prior references included a patent for an automatic device for applying labels onto audiotapes and a patent for a manual device for applying labels onto compact disks); *Remington Arms Co., Inc. v. Modern Muzzleloading, Inc*., No. 2:97CV00660, 1999 WL 281341, at *8-*10 (M.D.N.C. Feb. 9, 1999) (denying summary judgment on the obviousness of a patent on a firing mechanism for front loading a firearm where prior art existed on rear loading firearms); *Simmons, Inc. v. Bombardier Inc.*, 328 F. Supp. 2d 1188, 1204-06 (D. Utah 2004) (denying summary judgment on obviousness where the patent claimed a snowmobile ski with guide rods and a concave bottom for moving over snow, and prior skis contained all the elements of the

rigid approach requiring evidence of an explicit publication of the suggestion or motivation even when the elements of a patent are admittedly old, their combination does not require any unusual skill, and it achieves no new results, district court judges understandably struggle to apply the obviousness test to weed out even the most dubious patents.[15]

The wasteful consequences to the patent system are twofold. First, litigants do not defend obviousness cases as obviousness cases any more. To defend against a claim of infringement of a classically obvious patent, they are required to shift into far more time-consuming and fact-intensive defenses such as noninfringement or more subjective defenses such as inequitable conduct or best mode.[16] Indeed, it is well understood by in-house patent counsel and patent litigators that obviousness alone is too slender a reed on which to rely in defending their clients against patent assertions.

Second, defendants unwilling or unable to endure expensive trials often capitulate to settlements that would not succeed were the obviousness inquiry not so insurmountable at the summary judgment stage. Unwarranted settlements

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claimed ski, but there was no evidence of a specific suggestion to combine the elements).

[15] *See, e.g., Aventis Pharma Deutschland GMBH v. Lupin Ltd.*, No. 2:05CV421, 2006 WL 2008962 (E.D.Va. July 17, 2006) (upholding against obviousness challenge one of a series of pharmaceutical patents plaintiff had obtained through what the district court called "clever maneuverings or fortuitous happenstance before the [PTO] or FDA," *id.* at *1, because the court could not identify a clear, published motivation in the references under the Federal Circuit's test, *id.* at *43).

[16] While important under current practice, such defenses have been criticized as inefficient. *See* COMMITTEE ON INTELLECTUAL PROPERTY RIGHTS IN THE KNOWLEDGE-BASED ECONOMY, NATIONAL RESEARCH COUNCIL, A PATENT SYSTEM FOR THE 21ST CENTURY 120-23 (Stephen Merrill *et al*. eds, 2004).

upset the balance of the patent system by providing excessive returns to unjustified monopolies. *See eBay v. Merc-Exchange*, 126 S. Ct. 1837, 1842 (2006) (Kennedy, J., concurring).

These concerns are by no means hypothetical. Consider, for example, the nearly ten years of patent litigation between Gemstar and its subsidiary Starsight and the digital TV equipment industry. Gemstar asserted infringement claims relating to electronic program guides, grids of show selections arranged by channel and time much as newspapers provided for decades. Although this might have been thought an obvious innovation, in over a decade of litigation over multiple patents in multiple forums, no determination on obviousness was ever made, and the case was instead contested on grounds of noninfringement, inequitable conduct, and anticipation, which were ultimately successful. *See, e.g., Gemstar-TV Guide Int'l, Inc. v. Int'l Trade Comm.*, 383 F.3d 1352, 1363 (Fed. Cir. 2004). But several parties paid enormous sums along the way to avoid uncertainty. *See Corporate Brief*, NAT'L L.J., NOV. 13, 2000, at B8 (noting $200 million settlement with Motorola); Jonathan Fahey, *Screen Grab*, FORBES, Mar. 5, 2001, at 52 (noting additional settlements with Microsoft and AOL).

D. A Flexible Approach To Obviousness Will Not Subject Patentees To Improper Hindsight Bias

The Federal Circuit suggests that its rigid evidentiary test for obviousness will "guard[] against entry into the tempting but forbidden zone of hindsight." *In re Dembiczak*, 175 F.3d 994, 998 (Fed.Cir.1999). *Amici* recognize the danger that, many years after an invention has become widely used, its innovation might seem mundane in retrospect—an inevitable progression of the art. *See White v. Samsung Elecs. Am. Inc.*, 989 F.2d 1512, 1513 (9th Cir. 1993) (Kozinski, J., dissenting from denial of rehearing en banc) ("Nothing today . . . is

genuinely new: Culture, like science and technology, grows by accretion, each new creator building on the works of those who came before.").

But reasoned retrospective analysis is not the same as abusive hindsight. Any improper *ex post* reasoning can be avoided so long as one steps back in time into the inventor's shoes at the time of the invention, and considers the evidence available in the technology at that time to a person having ordinary skill in the art, as the Patent Act and this Court's precedents instruct. The requirement of stepping back in time to stand in the shoes of a PHOSITA actually *protects* patents by avoiding analysis of the invention from an unduly contemporary perspective. By requiring that a decision maker step into the shoes of a person of ordinary skill at the time of the invention, the test protects against invalidating worthy patents that were innovative at the time they were made. Thus, the Federal Circuit's rigid test is wholly unnecessary to protect against any improper hindsight bias.

Accordingly, this Court should reject the Federal Circuit's rigid evidentiary test in favor of a return to the more flexible approach reflected in the Patent Act and the Court's own longstanding precedents. This approach need not preclude summary judgment in appropriate cases. Trial courts apply retrospective, fact-specific requirements in many areas, including distinctiveness in trademark law, market power in antitrust law, and negligence in tort law. In these areas, trial courts use summary judgment to weed out insubstantial claims. There is no reason they should not be able to do the same in the patent context. A rigid rule that robs district courts of this ordinary and expected power lacks grounding in law or policy.

Under a flexible, technology-specific approach, prior published teaching, motivation or suggestion of a combination of existing art will still be relevant to and sometimes dispositive of obviousness. But district courts are fully capable of

distinguishing innovative combinations from rote applications of what was already known and expected even if not confined to evidence of prior published suggestions. They may look, for example, to evidence of the nature of the elements being combined, the predictability of the result of the combination, the maturity of the industry, and the speed of innovation in that particular industry.

In some instances, such evidence will be dispositive. For example, where known elements are combined to create an unexpected synergy, the nonobviousness of an invention might be indisputable and summary judgment warranted for the plaintiff. *Cf. United States v. Adams*, 383 U.S. 39, 51-52 (1966) (finding water battery nonobvious in light of its unexpected operating capabilities). In determining whether there is any genuine issue concerning obviousness, the lower courts can develop guideposts for such categories of cases over time. Meanwhile, courts can guard against the submission of unfounded or conclusory evidence about what was obvious at the time of invention. *See* FED. R. EVID. 702; *see also Mid-State Fertilizer v. Exchange Nat'l Bank*, 877 F.2d 1333, 1339 (7th Cir. 1989) ("An expert who supplies nothing but a bottom line supplied nothing of value to the judicial process.").

Thus, the flexible standard mandated by this Court and by the Patent Act provides a practical and useful means of resolving obviousness, and need not prevent the entry of summary judgment in appropriate cases. Such a flexible test served the system well for the century between *Hotchkiss* and the Patent Act, and *amici* respectfully submit that rapid changes in many high technology industries only emphasize how vital such a flexible approach remains today.

CONCLUSION

For the reasons stated above, the decision below should be vacated.

Respectfully submitted,

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