The More Things Change, The More They Stay The Same: Implications of *Pfaff v. Wells Electronics, Inc.* and the Quest for Predictability in the On-Sale Bar

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Abstract

Section 102(b) of Title 35 precludes an inventor from receiving a patent if the invention was on sale in the United States more than one year prior to filing a patent application. The statutory structure of the on-sale bar has left the term "invention" ill-defined, leading to considerable uncertainty in the courts. Hoping to add predictability to this unsettled area of law, the Supreme Court in *Pfaff v. Wells Electronics, Inc.* articulated a new standard that requires an invention be "ready for patenting" in order for the bar to apply.

This new test, as applied by the lower courts, has effected no real change in the law as district courts are diverging significantly from the Supreme Court's test and holding that the offer for sale of the mere conception of the invention is sufficient for the bar to apply. The courts also have conflated the two versions of the on-sale bar: the anticipatory version, where what is offered for sale is precisely the same as what is later claimed in the patent, and the obviousness version, where what is offered for sale varies from what is later claimed, but that variation would be obvious to one skilled in the relevant technological art. This approach further undermines predictability and the other policies that underlie the on-sale bar.

This Article posits a two prong approach to the on-sale bar. First, for the anticipatory version, the courts should expressly incorporate the law of enablement under 35 U.S.C. § 112 and of utility under 35 U.S.C. § 101 into the on-sale bar, thus providing a well-known body of law to promote predictability. Procedurally, the courts should establish a hierarchy of evidence, similar to the approach used in claim construction, that

considers certain, more readily available information as the most pertinent while eschewing the use of expert testimony and other litigation-based evidence. Second, for the obviousness version of the on-sale bar, there should not be a "ready for patenting" test. Instead, whatever is offered for sale should be considered within the public knowledge and useable to determine whether the inventor has claimed something more than a simple variation of what she offered for sale. This approach would better serve the policies underlying the on-sale bar and comports more readily with the concepts of "prior art" in patent law without impeding the predictability sought in this area.

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I. Introduction

Inventions and ingenuity pervade American culture, perhaps more so now than ever. Computer technology, the Internet, and biotechnology are all examples of how the recent technological developments—and the patents that underlie these developments—are increasingly present in our society.

Yet, one view of the inventive process remains paradigmatic to most—building the better mousetrap. Suppose that you in fact *have* thought up the better mousetrap, one that ensures that any mouse will be captured painlessly—say, for example, by a pheromone attraction device—to allow the owner to take care of it as she deems fit. In the exuberant joy of conceiving of this idea, you race to the local mousetrap production company, or more appropriately send them an e-mail, offering to sell your magnificent idea to them. The company, realizing that your device is presently half-baked, declines to accept your offer. Indeed, you do not actually know if the invention will work because, while you have the idea, you have not yet actually designed or constructed the trap. Since designing mousetraps is not your primary source of income, the idea sits on the backburner for more than a year after you approached the mousetrap company. Eventually, you generate fairly complete diagrams of your idea and build the superior mousetrap. Overjoyed, you rush to file your patent application, anticipating instant riches from your contraption. The question remains, however—can you get a patent?

To obtain a patent on eligible subject matter,[1] an invention must have utility,[2] be novel,[3] and be nonobvious to a person of ordinary skill in the relevant technology field;[4] and the application for the patent must meet the provisions of § 112 of the Patent Act.[5] Utility requires that the invention simply be useful for a specific purpose.[6] Novelty requires that the invention not be disclosed in a single prior art reference.[7] For example, if the invention has already been described in a single scientific article published either prior to the date of invention[8] or more than one year before the date of the application for the patent,[9] then it is not novel; in other words, it is anticipated.[10]

An invention is obvious if it is described in the relevant art field in a plurality of references. An obviousness analysis involves the combining of references to determine whether in combination they disclose the invention.[11] For example, an invention that claims steps A+B+C may be obvious if one prior reference teaches A+B and another teaches C.[12] The combination of the two references would effectively teach the invention, rendering it obvious. The purpose of the obviousness requirement is to avoid allowing patents for trivial advances in the relevant art.[13]

Finally, in order to obtain a patent, the application must meet the requirements of 35 U.S.C. § 112. Included in 35 U.S.C § 112 is enablement, which requires a description in the patent specification sufficient to allow one of ordinary skill in the art to make and use the invention.[14] The enablement requirement is rooted in the fundamental quid pro quo that underlies the patent system. The patentee is afforded the twenty year statutory term in exchange for disclosing his invention to the public so as to enhance the public's knowledge base.[15] This new information can be used to promote further innovation by others. As such, the patentee, through the enablement requirement, must disclose in his patent specification sufficient information so that the public can use the invention.[16]

In determining whether a patent is anticipated or obvious, both the courts and Patent and Trademark Office ("PTO") rely on 35 U.S.C. § 102 for guidance as to what should be considered prior art. Included in 35 U.S.C. § 102 is a proscription on obtaining a patent on an invention that "was . . . on sale in this country, more than one year prior to the date of the application for patent in the United States."[17] Beyond this statutory language, Congress has not provided any additional guidance as to the application of this so-called "on-sale bar," such as what constitutes an "invention" under the statute, and has left the refinement of the on-sale bar to the courts.[18]

The courts have held that the on-sale bar applies to both sales of the precise invention claimed (that is, a sale that satisfies every limitation of the recited patent claim and thus anticipates the claim),[19] and sales of nonidentical inventions that would render the claimed invention obvious to one skilled in the relevant field.[20] In the case of nonidentical inventions, the on-sale bar would preclude patentability if one of ordinary skill in the technological area, looking at what was offered for sale, would readily come up with the claimed invention. For example, suppose the mousetrap you offer to the mousetrap company contains only the pheromone, but in your patent application you also claim an additional fragrance to cover up any foul odors from the trap. If the addition of this fragrance would be obvious to one of ordinary skill in the art, then you may be precluded from obtaining the patent even though what you offered to sell was not precisely the same as what you claimed in your patent application.

In refining the on-sale bar test, the courts have identified multiple policies underlying the bar.[21] Generally, the purpose of the on-sale bar is to afford the inventor time (one year) to determine if

her invention has economic viability. The one year limitation prevents the effective extension of the patent term that would result if the invention was commercialized prior to filing an application.[22] The courts are similarly concerned with preventing the removal of inventions from the public which the public has come to view as freely available due to prolonged sales activity.[23] The courts have concluded that a single offer for sale is sufficient for the bar to apply.[24] Finally, the on-sale bar promotes the public interest by requiring a prompt and widespread disclosure of new inventions to the public. Encouraging such disclosures and discouraging removal of information from the public domain presumably promotes greater technological development by adding to and maintaining the knowledge base in a given field. This free exchange of information fuels innovation by allowing competitors to design around the claimed inventions (i.e., creating changes to the invention that would circumvent the patent claims).

Over the years, the courts and, particularly, the U.S. Court of Appeals for the Federal Circuit,[25] have had difficulty in defining the limits of this bar. Instead of a bright-line test, the Federal Circuit balanced the aforementioned policy concerns in an ambiguous "totality of the circumstances" analysis.[26] Of particular concern was the extent to which an invention had to be developed to be considered subject to the bar. Was the mere idea enough? Was a physical embodiment required, or something in between?[27] The Federal Circuit, through its policy balancing approach, answered the question as "in between."[28] But answering "in between" then begged the question of how much development was enough.

The totality of the circumstances test, while remaining true to the goals of the on-sale bar, did not provide a clear answer to this question. Instead, the balancing approach undercut yet another important policy in patent law: predictability.[29] The ambiguity of the test made its application effectively an ad hoc, after-the-fact inquiry. Any attempt to make an assessment of the applicability of section 102(b) prospectively, such as at the time the inventor was actually filing his patent application, was nearly impossible. Indeed, answering this question in light of the mousetrap hypothetical—even with its relatively simplistic fact pattern—is nearly impossible. Competitors also need a predictable test in order to evaluate the activities of the inventor and to determine the validity of a given patent, without having to rely on federal litigation. In the hopes of adding certainty and predictability to the on-sale bar, the Supreme Court surprisingly entered the fray and provided a new test to determine whether an invention was on sale.[30]

This Article reviews both the historical development of the on-sale bar and its recent evolution in light of the Supreme Court's new standard articulated in *Pfaff v. Wells Electronics, Inc.*[31] The aim of the Article is to determine whether the Supreme Court test has added any greater certainty and to evaluate whether additional refinements would better effectuate the policies underlying the on-sale bar. Specifically, in Part II, this Article analyzes the historical development of the on-sale bar, culminating in the Supreme Court's decision in *Pfaff v. Wells Electronics, Inc.* Part III reviews the recent applications of the Supreme Court's test by the lower courts, concluding that

the new test, as applied, has added little certainty to this area of the law. In Part IV, the Article posits that the on-sale bar requires a bifurcated approach: one for the anticipatory version (i.e., where what is offered for sale is precisely what is claimed in the patent) and one for the obviousness version (i.e., where what is offered for sale varies insignificantly from what is claimed in the patent). If the anticipatory on-sale bar is to achieve greater certainty, the Federal Circuit should expressly incorporate the law of enablement under 35 U.S.C. § 112 and utility under § 101, as the Supreme Court's test implicitly suggests. Finally, for the hybrid 102(b)/103 obviousness variant of the on-sale bar—that is, if what is offered for sale renders the invention "obvious" pursuant to 35 U.S.C. § 103—this Article posits that the ready for patenting test should *not* apply. Instead, whatever is offered for sale should be considered along with what is known in the field in determining whether there is a patentable difference between what was offered for sale and what was claimed. This approach would provide the best balance between predictability and the four underlying policies[32] of the on-sale bar.

I. The Evolution of the On-Sale Bar Test

II. The Pre-*Pfaff* State of On-Sale Bar Doctrine

The on-sale bar is a statutorily based limitation on the patentability of an invention. The statute specifically proscribes a patent if the "invention was . . . on sale in this country, more than one year prior to the date of the application for patent in the United States."[33] However, the meaning of this statutory provision is ambiguous, and Congress has provided no guidance in this area.

In particular, the language of § 102(b) immediately begs the question of what constitutes an invention for the purposes of the bar. Conspicuously absent from the patent statute is any actual definition of this term. Section 100 of Title 35 (the "Definitions" section) tautologically states that "[t]he term 'invention' means invention or discovery."[34] Among many in the patent field, an invention is considered to be complete when it has been both conceived (a legal term of art in patent law)[35] and reduced to practice (that is, a working embodiment of the invention was produced).[36] Both terms are present in 35 U.S.C. § 102(g),[37] which determines who among

competing claimants is the first to invent and thus entitled to the patent. These terms, however, do not establish what constitutes an "invention" for the purposes of the on-sale bar of § 102(b).[38]

I. *The Early Tests for Determining Whether There is an "Invention" that Can be On-Sale Under § 102(b)*

In the absence of any clear statutory guidance from Congress on the interpretation of § 102(b), the courts were left to fill in the gaps.[39] In early on-sale bar jurisprudence, the courts required that the invention be "on hand" to trigger the on-sale bar. "On hand" meant that the invention not only was reduced to practice but also was commercially available to complete a sale.[40] Eventually, the standard shifted to a less rigorous requirement that the invention merely be reduced to practice at the time it was offered for sale.[41] These tests afforded significant predictability because they required a physical embodiment of the invention for the bar to apply. Such a bright-line rule, however, was subject to easy circumvention. To avoid triggering the bar, the inventor could either leave the invention in pieces knowing that the invention would work once assembled, or alternatively, an inventor could alter the claim language.

With the inception of the Federal Circuit in 1982, the regional circuit decisions became merely persuasive authority. Prior to the Supreme Court's decision in *Pfaff v. Wells Electronics, Inc.*,[42] the Federal Circuit generally relied on a "totality of the circumstances" test, i.e., an ad hoc factual inquiry into whether an invention had been offered for sale.[43] The "totality of circumstances test" balanced the four identified policies that underlie the on-sale bar in determining whether the facts of the case justified application of the bar:

1. the policy against removal of inventions from the public which the public has come to view as freely available due to the prolonged sales activity;
2. the policy in favor of prompt and widespread disclosure of new inventions to the public;
3. the policy against allowing inventors to commercially exploit the exclusivity afforded by the patent beyond the statutorily prescribed period (currently 20 years from the application date); and
4. the policy in favor of affording the inventor a reasonable amount of time following sales activity to determine whether the patent is a worthwhile investment.[44]

Since these policy considerations have shaped the evolution of on-sale bar jurisprudence, their importance merits further explication. The rationale behind the first policy consideration—avoiding detrimental reliance by the public—is that once the public believes that an invention is part of the public domain, such knowledge should not subsequently be

removed. Otherwise "members of the public [may] start making, using or selling the invention," and would therefore infringe the later-issued patent, to their detriment.[45]

The second consideration, encouraging prompt patent disclosures, facilitates the dissemination of information into the public domain. The one-year period encourages the patentee to disclose her invention by filing a patent application soon after commercial activity has begun or risk losing the availability of patent protection. For an invention that cannot be readily kept secret after a sale of an embodiment, the potential loss of the patent right serves as a strong incentive to disclose the invention.[46]

The policy against effectively extending the patent term corresponds with the underlying, fundamental basis of the patent system. The patent system provides a balanced quid pro quo—the inventor gives the invention and surrounding knowledge to the public in exchange for the right to exclude others from using the invention for twenty years. If the inventor is permitted to commercialize the invention well in advance of applying for a patent, then the patent term is effectively extended and the balance of benefits of the patent system is disrupted. Indeed, "[a]n inventor would have the best of two worlds if he could commercially exploit his invention without disclosing it for an indefinite amount of time before he applied for a patent."[47] The inventor's patent term would become twenty years plus however long he could commercialize the invention prior to filing the patent application, in contravention of the congressionally mandated quid pro quo of the patent system.

The on-sale bar's final objective, affording the inventor time to determine the viability of his invention, represents a policy of fairness to the inventor.[48] This policy interest is realized in the one-year grace period, since Congress could easily bar patents for inventions that have been commercialized at any time prior to the filing of a patent application.[49] The one-year period affords the inventor time to assess whether pursuit of a patent for her invention is worthwhile. Such an evaluation would consider whether the invention would be economically beneficial to the inventor and worth the expense of obtaining a patent.[50] This evaluation benefits not only the inventor but also the PTO by minimizing the number of applications for economically useless inventions. Reviewing such applications consumes the time and resources of the PTO, creating the potential for administrative delays in reviewing and issuing more meritorious patents.

The Federal Circuit's approach of balancing these various policy concerns was problematic because the on-sale bar inquiry necessitated a comparison of the facts of each individual case with the underlying policies. This approach effectively precluded any prelitigation assessment as to whether an invention was on sale under § 102(b).[51] Such uncertainty was particularly difficult for practitioners, who routinely provide clients with opinion letters regarding the validity of a patent. Determining the validity of a patent that was possibly subject to the on-

sale bar was an exercise in speculation, divested of clear legal rules to inform the inquiry. For inventors not intimately familiar with the on-sale bar, this murkiness was impenetrable—an inventor likely had no notice that such sales activities risked the loss of a patent. Competitors similarly suffered because they could not, with certainty, form opinions regarding the validity of a patent when deciding whether to sell a competing and perhaps infringing product. Instead, competitors risked significant litigation costs because judicial determination may be necessary to invalidate the patent due to the application of the on-sale bar.[52] Given the test's vagueness, it posed a real threat to competition. Moreover, a vague standard disserves the public if a competitor chooses not to produce a noninfringing and possibly cheaper substitute for the patented good in view of the uncertainty surrounding the patent's validity.

The Federal Circuit generally resisted creating bright-line exceptions to the on-sale bar.[53] The Federal Circuit and Supreme Court have maintained the "experimental use" exception, which precludes the application of the on-sale bar if the purpose of the commercial sale was experimental in nature.[54] If the commercialization was strictly a means of developing the invention, then the on-sale bar does not apply. This exception facilitates progress in the useful arts by promoting development, particularly in circumstances where an inventor may lack the financial and/or technical resources to construct and test his invention on his own.[55] Beyond this single exception however, the on-sale bar has remained free of any bright-line rules of applicability or exceptions that could add certainty to the law.

I. *The Evolution of the On-Sale Bar at the Federal Circuit Culminates in the "Substantially Complete" Test*

Notwithstanding the Federal Circuit's recitation of the "totality of the circumstances" test and its reluctance to create bright-line rules and exceptions to the bar, the Federal Circuit did identify three general legal prerequisites to the application of the on-sale bar. First, there must be an offer for sale; a completed sale is not necessary.[56] Second, more than an idea must be offered for sale;[57] the idea must have been developed to some extent.[58] The courts used these two requirements as the lenses through which they directed the "totality of the circumstances" analysis. In other words, the courts used them to determine whether the factual circumstances demonstrate both that an offer for sale was made and that the subject matter of the sale was more than an idea.

The third requirement is necessary for any validity analysis—the substance of the offer for sale must encompass all of the limitations of the asserted patent claim. This requirement can be satisfied in two ways. First, if the offer is for precisely what is claimed in the patent, then the invention is anticipated pursuant to a pure application of § 102(b).[59] In other words, the invention is not novel because it has been exactly disclosed by the offer for sale.[60] Second, the offer for sale can invalidate the patent even if what was offered for sale is not

exactly the same as what was claimed in the patent. If the modifications to the invention as claimed are insignificant, such that one skilled in the art would have found the invention obvious in view of what was contained in the offer for sale, then the patent claim is invalid.[61] This conjunctive use of the on-sale bar of § 102(b) and the nonobviousness standard of § 103 has been called the "§102(b)/103 bar."[62]

Although evaluated under the "totality of the circumstances," the first prong of the test, the offer for sale, has not engendered much confusion. In contrast, the second requirement, the extent to which the invention must be developed, i.e., whether there actually is an "invention" in existence to be on sale, has contributed significant uncertainty to the law and has puzzled commentators for some time.[63] The case law had made clear that actual reduction to practice—a physical, operable version of the invention[64]—was not required for the on-sale bar to apply;[65] however, more than an idea had to be on sale.[66] The issue was where to draw the line between an idea and an invention that is reduced to practice. Due to its "totality of the circumstances" inquiry, the Federal Circuit was unable to draw this line to enhance predictability in this area of the law.

Despite the predictability a bright-line reduction to practice test would afford, the Federal Circuit expressly rejected this approach since it would be easy to circumvent. In *UMC Electronics Co. v. United States*,[67] the Federal Circuit was faced with the issue of whether the on-sale bar applies when all of the parts of the invention had been built but had never been assembled as a whole to include all of the limitations of the patent claim at issue. Although the invention was not reduced to practice (because it was never completed prior to the critical date[68]), the Federal Circuit held that the on-sale bar applied. The court noted that "the on-sale bar does not necessarily turn on whether there was or was not a reduction to practice of the claimed invention."[69] The Federal Circuit noted that "by invoking reduction to practice as developed in interference law, an inventor might be able to escape the on-sale bar simply through deft claim draftsmanship."[70] The court gave the example of claiming "an aircraft with an accelerometer" instead of just the accelerometer.[71] Technically, for there to be a reduction to practice, the inventor would have to construct the entire aircraft and not simply the accelerometer.[72] Addressing the other extreme, the court warned that "we do not intend to sanction attacks on patents on the ground that the inventor or another offered for sale, before the critical date, the mere concept of the invention. Nor should inventors be forced to rush into the PTO prematurely."[73] Thus, the Federal Circuit established that, in order to be on sale, the invention need not be reduced to practice but it must have been developed beyond a mere concept. The question remained, however, as to where along the spectrum between conception and reduction to practice lies the point at which the on-sale bar applies.

More recently, the Federal Circuit appeared to be charting a course away from *UMC* and

towards requiring a reduction to practice. In *Seal-Flex, Inc. v. Athletic Track and Court Construction*,[74] the invention was a rubberized running track surface. After a track was laid down at a high school, one of the inventor's representatives showed it to others and made an offer to sell such a track.[75] The court reversed the district court's summary judgment of invalidity because factual issues remained as to whether the track was "complete and . . . known to work for its intended purpose."[76] If testing of the track still needed to be done, then the invention was not known to work and the invention could not be considered sufficiently complete so as to constitute an "invention" that had been offered for sale under § 102(b). In its legal discussion, the court noted:

> The general rule is that the on-sale bar starts to accrue when a *completed* invention is offered for sale. Facts underlying the on-sale bar must be proved by clear and convincing evidence. The trier of fact must determine whether the invention was completed and known to work for its intended purpose, or whether the inventor was continuing to develop and evaluate the invention; whether the inventor was merely exploring the market, or had made an unconditional offer to sell a completed invention. When these material facts are at issue, summary disposition is negated.[77]

The court's mention of a "complete" invention and recitation of the reduction to practice mantra of demonstrating that the invention "will work for its intended purpose"[78] suggested that the court intended to move away from *UMC* and towards requiring a reduction to practice.[79]

In *Micro Chemical, Inc. v. Great Plains Chemical Co., Inc.*,[80] the court was confronted with a device to add extremely small amounts of additives to animal feed.[81] The Federal Circuit held that the on-sale bar did not apply because the invention was not sufficiently complete. The court used the facts that one of the parts of the invention was designed only on paper and the other had not been designed at all to reach its conclusion:

> [a]t the time of the alleged offer, Pratt had developed a prototype for the weighing system; however, he had only made a sketch of the mixing system and had not yet designed the elements for isolating the weighing system. The invention was thus not close to completion and Pratt was not confident at that time that the invention would work for its intended purpose.[82]

Although the court cited *Seal-Flex* approvingly,[83] it did not adopt the strict reduction to practice language used in that decision. Instead, the court stated that "a sale or a definite offer to sell a *substantially completed* invention, with *reason to expect* that it would work for its intended purpose upon completion, suffices to generate a statutory bar."[84] This language differed significantly from the test in *Seal-Flex* and demonstrated some tension in the Federal Circuit's pronouncements regarding the on-sale bar.

I. *The Stage is Set for the Supreme Court to Intercede when the Federal Circuit Applies the On-Sale Bar to an Invention that Existed only on Paper*

Prior to the Critical Date

Any thought that *UMC* would be eviscerated was dispelled by *Pfaff v. Wells Electronics, Inc*.,[85] which applied the on-sale bar in the absence of *any* physical embodiment of the claimed invention. The case arose as a result of ongoing litigation between the inventor, Pfaff, and Wells Electronics. The invention was a socket used to test leadless chip carriers. Pfaff had previously sued Wells for infringement but lost.[86] When Wells altered its socket design, however, Pfaff again sued for patent infringement.[87] In the district court, Wells raised the on-sale bar in order to invalidate Pfaff's patent as a defense to infringement.[88]

It was undisputed that the invention had been designed only on paper prior to the critical date. The court noted that "[a]lthough the invention was commercialized [prior to the critical date], it had not been reduced to practice at the time of sale because there was no physical embodiment of the invention."[89] Regardless, the court held that the relevant claims were invalid under the on-sale bar—a marked departure from *UMC*, where at least some of the invention had been produced in physical form.[90]

The Federal Circuit offered several reasons in support of its conclusion that the invention was sufficiently complete for the bar to apply. First, the court noted that Pfaff had produced engineering drawings that "accurately depict[ed] the patented invention prior to the verbal purchase order of March 17, 1981, and the formal written order of April 8, 1981."[91] The drawings had listed specific materials to be used and dimensions for the device and "'depict [ed] accurately the claimed invention and [were] very similar to the actual patent drawings used in the ['377] patent.'"[92] The court next noted that, although not complete, the tooling of the machinery necessary to produce the sockets had already begun at the time of the sale.[93] Third, the court recognized as important to its conclusion that the inventor Pfaff "was confident, based on his drawings, that this invention would work."[94] Indeed, the court noted that this approach, production of a device from paper without first building a prototype, was Pfaff's typical business practice.[95]

The Federal Circuit distinguished both *Seal-Flex* and *Micro Chemical*. The *Seal-Flex* court dealt with an invention for which durability was an essential aspect,[96] which was unlike Pfaff's invention, where it was clear that the invention would work for its intended purpose without durability testing.[97] In distinguishing *Micro Chemical*, the court noted that, there, certain claimed elements of the invention had not yet been designed as of the critical date; in the case at bar, all major parts of the invention had been designed on paper.[98]

The court also invalidated two claims based upon the conflated § 102(b)/103 obviousness-type on-sale bar. In other words, the court determined that what was offered for sale, combined with the knowledge in the relevant art field, rendered the two claims invalid

because they would have been obvious to one skilled in the art, as detailed in § 103.[99] Specifically, the court held that the district court clearly erred when it determined that the prior art did not teach the use of "prongs" or "barbs" to hold an electrical device in place, as was stated in these other claims.[100] The court did not clarify, however, to what extent an invention needs to be developed in the context of the § 102(b)/103 bar in order to invalidate a patent. The court left unanswered whether what was offered for sale in the obviousness context also had to be "substantially complete" or whether the information surrounding the offer for sale would be used in the obviousness analysis regardless of the state of development.[101] Instead, the court merely entered into a routine obviousness analysis. The state of the development of the invention was never discussed in the context of the obviousness variant of the bar and seemingly was subsumed in the court's analysis of the anticipatory bar.

I. The Supreme Court Steps into the Fray and Articulates the "Ready for Patenting" Test

Recognizing the unsatisfactory state of the on-sale bar, the Supreme Court granted certiorari in *Pfaff* and unanimously affirmed the judgment of the Federal Circuit. The Court rejected the Federal Circuit's test for determining how "complete" an invention needs to be for the on-sale bar to apply and announced a new test.[102]

The Supreme Court recognized in *Pfaff* that "[t]he primary meaning of the word 'invention' in the Patent Act unquestionably refers to the inventor's conception rather than to a physical embodiment of that idea."[103] Furthermore,

> [t]he word "invention" must refer to a concept that is complete, rather than merely one that is "substantially complete." It is true that reduction to practice ordinarily provides the best evidence that an invention is complete. But just because reduction to practice is sufficient evidence of completion, it does not follow that proof of reduction to practice is necessary in every case.[104]

The Court thus rejected a test that would require proof of reduction to practice for the on-sale bar to apply. In the same breath, it rejected the Federal Circuit's "substantially complete" test as well by noting that the inventive concept must be entirely complete. The Court grounded its conclusion in the fact that patents can be granted on inventions that have never been actually reduced to practice through their construction.[105] The Court relied on *The Telephone Cases*,[106] in which Alexander Graham Bell was awarded a patent on the telephone "even though he had filed his application before constructing a working telephone."[107] It would be anomalous to conclude that an invention could not be on sale before it was reduced to practice when an inventor can receive the actual patent before actually reducing the invention to practice.[108]

In lieu of the "substantially complete" approach of the Federal Circuit[109] and the "reduction to practice" test of the petitioner,[110] the Court offered a new standard. Specifically, the Court articulated a two-part test: (1) the invention must be subject to a commercial offer for sale and (2) the invention must be "ready for patenting."[111] Whether an invention is ready for patenting can be demonstrated in at least two ways—"by proof of reduction to practice before the critical date; or by proof that prior to the critical date the inventor had prepared drawings or other descriptions of the invention that were sufficiently specific to enable a person skilled in the art to practice the invention."[112] The Court reasoned that, since it is possible to obtain a "paper patent," i.e., a patent on an invention that has never actually been constructed,[113] there is no reason to believe that an "invention" cannot be on sale prior to its construction. A constructive reduction to practice[114] (as it is known in patent parlance) belies a requirement of an actual reduction to practice as the *sine qua non* of invention.

Applying this new standard, the Court concluded that Pfaff's invention was on sale prior to the critical date—and the patent was therefore invalid—because the detailed diagrams provided to the manufacturers would have enabled one of skill in the art to make the invention.[115] In fact, the manufacturers *did* produce the invention from the diagrams.[116] Consequently, the Court affirmed the Federal Circuit's judgment of invalidity.

The Court modified only the second prong of the test articulated by the Federal Circuit by demonstrating that the invention must be "ready for patenting" instead of "substantially complete."[117] The Court effectively maintained the status quo with respect to the first prong, demonstration of an offer for sale.[118] Although the Court did not expressly mention the third requirement identified by the Federal Circuit for the on-sale bar to apply—that the offer for sale anticipate or render obvious the claimed invention[119]—the Court clearly contemplated that the third requirement remains, at least with respect to anticipation. The Court noted, albeit somewhat incorrectly,[120] that "those sockets contained all the elements of the invention claimed in the '377 patent."[121] In other words, the third prong was met—what was offered for sale contained all the limitations of the claims at issue.[122] The Court was also cognizant of the obviousness version of the on-sale bar,[123] but failed to explain what interplay, if any, there would be between the newly articulated test and an obviousness determination under the § 102(b)/103 bar. In other words, the Supreme Court never explained if the "ready for patenting" prong of the test applies only in the anticipation context or also in the obviousness context.

I. "Ready for Patenting"—Has This Test Effected Any Real Change?

The Supreme Court reviewed *Pfaff* in the hopes of adding certainty to this otherwise confused area of the law.[124] The following section of this Article reviews the subsequent

application of the *Pfaff* test by the lower courts to determine whether this goal has been met and to identify other issues that have evolved among *Pfaff*'s progeny.

I. Is There Any Difference Between the "Ready for Patenting" Test and the "Substantially Complete" Test?

Since the Supreme Court's decision in *Pfaff*, the Federal Circuit and district courts[125] have had numerous opportunities to apply and refine the *Pfaff* test. The results are mixed at best. The courts' applications of the new "ready for patenting" rule appear to have left the state of the law intact. Indeed, the earlier requirement that the invention be "substantially completed such that the inventor knew it would work for its intended purpose,"[126] is not particularly dissimilar to the "ready for patenting" test. Notably, the Federal Circuit and district courts, in applying the *Pfaff* test, have used many of the same factual considerations that once informed the inquiry of whether an invention was "substantially complete."[127]

In *Weatherchem Corp. v. J.L. Clark, Inc.*,[128] the first case in which the Federal Circuit applied *Pfaff*, the Federal Circuit concluded that the "court follows the Supreme Court's two part test without balancing various policies according to the totality of the circumstances as may have been done in the past."[129] This disavowal of the "totality of the circumstances" is somewhat disingenuous. Prior to *Pfaff*, the Federal Circuit identified three conditions necessary for the on-sale bar to apply—(1) an offer for sale (2) of an invention (in some form) that (3) anticipates or renders obvious the claimed invention.[130] The "totality of the circumstances," policy balancing approach was applied to the first two of these requirements. The third prong used the traditional tests for anticipation (i.e., that each and every claim limitation be present in the offer for sale) and obviousness (i.e., that what was offered for sale, when considered in conjunction with the prior art, would render the claimed invention obvious to one of ordinary skill in the art). Thus, the Supreme Court only modified the second prong, changing the requirement that the invention be "substantially complete" to "ready for patenting."

Although *Weatherchem* purported to signal the death knell of the "totality of the circumstances" test,[131] the facts used to demonstrate that the invention was "ready for patenting" in the case were strikingly similar to those relied upon under the former "substantially complete" test: detailed drawings containing each claim limitation;[132] inventor testimony that he believed that the invention would work;[133] a commercial order prior to building a physical embodiment;[134] and the ability of a manufacturer to eventually produce the invention from the drawings.[135] All of these factual considerations had been considered as relevant under the now-defunct "substantially complete" standard.[136] Indeed, there is no new or different facts considered in *Weatherchem*—all of them were used under the former standard. As such, while adhering to the language of the Supreme Court's test, the Federal

Circuit was still relying on the same facts that formerly demonstrated the substantial completion of the invention in order to prove that the invention was ready for patenting.

Similarly, district court cases applying the test have identified a myriad of factual considerations to determine whether the invention was ready for patenting, such as: the criticality and timing of certain polymer chemistry (e.g., the polymers chosen, and when and how those polymers are introduced into the process);[137] whether there was further experimentation or mere fine tuning;[138] and the nature of a contractual guarantee between purchaser and seller, i.e., "a typical money-back guarantee or a guarantee that highlighted the fact that the polymer chemistry had not yet been worked out."[139]

Moreover, the Federal Circuit's application of the "ready for patenting" test has not been consistent. Even though the Federal Circuit has purportedly rejected the use of the policy balancing approach of the "totality of the circumstances" test,[140] some cases still reference these policy considerations in justifying their outcome.[141] Even more bizarrely, the Federal Circuit has applied the bar even though the inventors had no idea they were in *possession of the invention*.[142] In *Abbott Laboratories v. Geneva Pharmaceuticals, Inc.*,[143] the Federal Circuit dealt with a situation in which sales by a third party included the claimed chemical compound.[144] At the time of the sales, however, "the parties to the United States transactions did not know the identity of the particular crystalline form with which they were dealing."[145] As the identity of the compound was not known, the invention necessarily had not been conceived.[146] As such, there is no way that the invention could be "ready for patenting" because there was nothing to describe. Nevertheless, the Federal Circuit applied the on-sale bar because, in its view, the invention had been reduced to practice even though there had been no conception and the reduction to practice was accidental.[147] This result is seemingly contrary to the Supreme Court's interest in affording inventors predictability in determining when the grace period for commercialization ends—how could one know that time had begun elapsing when she did not know she had invented something? Thus, much ambiguity still surrounds the on-sale bar, both at the district courts and the Federal Circuit.

Even the semantics between whether the invention is "ready for patenting" (the information provided at time of sale is sufficient to allow one skilled in the art to practice the invention), and whether it is "substantially complete" (known to work for its intended purpose), do not seem markedly dissimilar. For an inventor to be able to provide sufficient information to allow one skilled in the art to practice the invention, she would have to know that the invention actually works. To enable someone to use the invention, the inventor would have to know how the invention is likely to work, so she will have reason to believe the invention will work for its intended purpose. The evidence to demonstrate that there are "reasons to expect" that the invention would work, as stated in the "substantially complete" test, are likely the exact same considerations that would demonstrate an enabling disclosure.

As the review of the factual considerations in the cases applying the "ready for patenting" test indicates, little, if anything, has changed since the rejection of the "substantially complete" test. The courts continue to comb the factual record to determine whether the invention is "ready for patenting," just as they did previously to determine whether the invention was "substantially complete." The myriad of factual circumstances identified by the courts belies the predictability and the certainty that the Supreme Court had hoped would emerge from its new test. Indeed the facts relevant under the "ready for patenting" test are very similar to those under the "substantially complete" test.

I. Is Conception Alone Sufficient to Demonstrate that an Invention is Ready for Patenting?

In contemplating the metes and bounds of the "ready for patenting" test, the district courts have begun to address the question of whether proof of *conception of the invention alone* is sufficient.[148] The district courts—relying on the language in *Pfaff* that "[t]he word 'invention' must refer to a *concept* that is complete, rather than merely one that is 'substantially complete'"[149]—have grabbed onto the idea that proof of conception is the lodestar of the on-sale bar. In *Lacks Industries, Inc. v. McKechnie Vehicle Components USA, Inc.*,[150] the court's treatment of the issue was rather succinct with no analysis:

> As to claims 1, 8, 11, and 25, the evidence shows that their inventions were ready to be patented as of May 1992. At that time, Chase [the inventor] had conceived of a cladded wheel that 1) had a temporary securing means in the form of a mechanical fastener (the key element of claims 1 and 8) and/or 2) used a selective application of the permanently securing adhesive (the key element of claims 11 and 25). Thus the second prong of the *Pfaff* test is satisfied.[151]

The court offered no explanation as to why conception alone is sufficient to satisfy the ready for patenting standard. Ultimately, the court held that the on-sale bar did not apply because there was no offer for sale.[152]

In *Space Systems/Loral, Inc. v. Lockheed Martin Corp.*,[153] the district court engaged in a more rigorous discussion of whether conception is sufficient to satisfy the "ready for patenting" test. The court accepted that genuine issues of material fact remained as to whether the diagrams and drawings surrounding the offer for sale would enable one of skill in the art to practice the invention.[154] The court granted summary judgment of invalidity, however, because the patent holder conceded that the invention was conceived prior to the offer for sale.[155] The court reasoned that

> Where the terms enablement and conception have been used together, enablement has been treated as evidentiary support for conception:

It is settled that in establishing conception a party must show possession of every feature recited in the count, and that every limitation of the count must have been known to the inventor at the time of the alleged conception. Conception must be proved by corroborating evidence which shows that the inventor disclosed to others his "completed thought expressed in such clear terms as to enable those skilled in the art" to make the invention.

. . . .

By alleging conception by [the critical date], SSL has effectively conceded that the claimed invention was ready for patenting by this date as well.[156]

In contrast to the district court's reasoning, the Federal Circuit in dicta has suggested that conception is irrelevant to the on-sale bar. In *Abbott Laboratories v. Geneva Pharmaceuticals, Inc*., the Federal Circuit rejected the argument that conception had to be demonstrated before the bar could apply.[157] In *Abbott*, the court wrestled with a pharmaceutical compound that was sold prior to the critical date, but the identity of which was not known until after the sales were made.[158] In determining that the on-sale bar applied in this case, the court rejected Abbott's position that, because the identity of the compound was not known, there could be no conception and thus no offer for sale:

Abbott insists that there can be no on-sale bar unless conception of the invention has been proved, and that the lack of knowledge of the exact crystalline nature of the material that was sold precludes there having been conception. We disagree that proof of conception was required. The fact that the claimed material was sold under circumstances in which no question existed that it was useful means that it was reduced to practice. In any event, *this is not a priority dispute in which conception is a critical issue*. The sale of the material in question obviates any need for inquiry into conception.[159]

Thus, the district courts and the Federal Circuit seem to be in conflict as to exactly what is required to satisfy the "ready for patenting" test.

I. The Federal Circuit's Treatment of the Obviousness Version of the On-Sale Bar

Federal Circuit law makes clear that an offer to sell an item that anticipates the claim is not the only circumstance in which the on-sale bar applies. Indeed, if what is offered for sale, when combined with the prior art, renders the claimed invention obvious, it is invalid under the § 102(b)/103 bar.[160] This approach was first adopted by one of the Federal Circuit's predecessor courts, the United States Court of Customs and Patent Appeals ("CCPA"), the precedent of which is binding on the Federal Circuit.[161]

In *In re Foster*,[162] the CCPA, speaking generally to the "time bar" provisions of § 102(b),[163] concluded that these references could be used in the obviousness context. To hold otherwise would

> permit[] an inventor to sleep on his rights more than a year after the invention has become entirely obvious to the public, whereby the public has potential possession of it, and still obtain a patent which will take the invention from the public, a result Congress could not possibly have intended in view of its express indication that section 102(b) is merely a continuation of the prior law.[164]

Thus, the material described in § 102(b) serves as prior art to be considered with other prior art references in making the obviousness determination.[165]

Generally, there are few limits on what constitutes "prior art." In addition to the limitations provided by sections 102(a), (b), (e), (f), and (g) of Title 35,[166] prior art must be accessible to the public.[167] Subsection (a) defines prior art as pre-invention activities showing that the invention was "known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant."[168] Similarly, subsection (b) prescribes as prior art, materials showing that the invention was "patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States."[169] Section 102(e) provides that a patent by another that results from an application filed before the applicant's invention will also serve as prior art.[170] Subsection 102(f) "is a derivation provision, which provides that one may not obtain a patent on that which is obtained from someone else whose possession of the subject matter is inherently 'prior.'"[171]

These prescriptions, however, do not relate to the material contained within the prior art reference. They only determine when, temporally, material should be considered to be prior art. The contents of the prior art can be nearly anything,[172] and it is good for whatever it teaches. The only exception to this broad, all-encompassing view of the prior art is that, for purposes of anticipation, a prior art reference must be enabling of its disclosure and the claimed invention.[173] In other words, for anticipation, one of skill in the art should be able to read the single prior art reference and be able to practice the invention. A reference need not be enabling, however, for an obviousness determination under § 103.[174] For example, in the mousetrap hypothetical, suppose the inventor only had the idea of using the pheromone but had no idea of a means of restraining the mouse. The offer for sale itself would not be enabling because it would fail to teach how to immobilize or restrain the mouse. Yet, if what was offered for sale is placed into the prior art of mousetrap technology, the addition of the pheromone idea to the prior art could render any later claimed mousetrap obvious because such restraints likely would have been known in the art.

Such a broad definition of prior art is appropriate because patents should not be awarded for inventions that are already publicly known or, as § 103 states, "obvious" to one skilled in the art based on publicly available information. Any evidence that suggests the state of the art would thus be appropriately relevant.

There are some unique aspects of the use of on-sale bar materials as "prior art" that merit consideration. For example, there is nothing in the statute or the case law suggesting that such an offer be publicly available for the on-sale bar to apply. Indeed, the information may not be publicly available.[175] This situation might occur if there was a confidentiality agreement between the two potentially contracting parties. Therefore, it is apparent that an offer for sale does not fall within the "traditional" definition of prior art for the simple reason that the offer need not be generally publicly available. An offer for sale can invalidate a patent when only the two parties were aware of the offer; there is no need for public availability.[176]

The extent to which this treatment of an offer for sale as prior art survives in light of *Pfaff* remains unclear. In other words, does what is offered for sale have to be "ready for patenting" in order to serve as a prior art reference for the obviousness, § 102(b)/103 bar? In the past, no such standard was required,[177] nor is such a standard required in the context of other prior art references generally used in the obviousness context.[178] This issue was before the Supreme Court, but the Court never addressed it and instead glossed over this distinction.[179] Under *Pfaff*, then, it remains unclear whether an invention must be ready for patenting for the § 102(b)/103 bar to apply.

The Federal Circuit has yet to squarely address the issue, but the language of its post-*Pfaff* decisions suggests that it believes the "ready for patenting" test applies in the obviousness context. So far, post-*Pfaff* Federal Circuit law conflates the anticipatory and obviousness bars and has stated that the "ready for patenting" standard applies to both.[180] No case has specifically addressed the issue, however, rendering such language dicta. Consequently, the issue of whether the "ready for patenting" test applies to the "obviousness" version of the on-sale bar remains unanswered.

I. Implications of Recent Developments in On-Sale Bar Jurisprudence

The Federal Circuit over the years had attempted to develop a test for the on-sale bar to determine when there was in fact an "invention" that could be on sale. Deeming the Federal Circuit's efforts fruitless, the Supreme Court intervened to articulate a new standard. Although the Supreme Court intended to provide clarity and predictability to the on-sale bar, the above review demonstrates that numerous issues still obfuscate this area of the law. Indeed, the factual considerations given by the lower courts to the on-sale bar belie any

significant change or improvement in clarity. Moreover, the district courts appear to be moving towards adopting proof of conception as sufficient to demonstrate that the invention was ready for patenting, a direction that is inconsistent with both pre- and post-*Pfaff* Federal Circuit precedent. Finally, the status of the "ready for patenting" test vis-à-vis the § 102(b)/103 obviousness analysis has yet to be addressed by any court. As such, a host of issues remain that plague predictability in the context of the on-sale bar.

I. The Implications—A Bifurcated Approach to the Anticipatory And Obviousness Versions of the On-Sale Bar

The Federal Circuit's and district courts' applications of the "ready for patenting" test enunciated in *Pfaff* demonstrate that little, if any, clarity has been added to this area of the law. Moreover, none of the cases have noted the distinction between the pure, anticipatory on-sale bar and the conflated § 102(b)/103 obviousness variant, which merits independent consideration and, indeed, a separate approach.

I. In Applying the Anticipatory On-Sale Bar, the Courts Should Expressly Incorporate the § 112 Enablement and § 101 Utility Requirements into the Ready for Patenting Test

In announcing the "ready for patenting" test, the Supreme Court succinctly answered the question before it but left open several areas of concern, leaving the state of the law unclear. The Supreme Court emphasized that the key to an invention is its conception, i.e., a complete idea of the invention.[181] In contrast, the "ready for patenting" test, as articulated, seems to parrot the "enablement" language of 35 U.S.C. § 112. Section 112 requires that a patentee provide in his specification a "description . . . of the manner and process of making and using [the invention], in such full, clear, concise, and exact terms as to enable any person skilled in the art . . . to make and use the same . . . ."[182] The Supreme Court, in its "ready for patenting test," requires that "the inventor had prepared drawings or other descriptions of the invention that were sufficiently specific to enable a person skilled in the art to practice the invention."[183] Notwithstanding the striking similarities between the language of § 112 and the Supreme Court's test, the courts have failed to identify to what extent, if any, § 112 law will now be incorporated into the on-sale bar, or whether this is some sui generis "enablement" requirement.[184]

I. *Express Incorporation of the § 112 Enablement Requirement (and as a Matter of Law § 101's Utility Requirement) Would Best Serve Certainty*

The policies that underlie the on-sale bar and the interests in certainty and predictability can be in tension. To best balance these concerns, the courts should incorporate the enablement

requirement of § 112 (and, by definition, the utility requirement of § 101) into the "ready for patenting" test. Moreover, procedurally, the Federal Circuit should establish a hierarchy of evidence to be used, similar to its approach in claim construction, that emphasizes reliance on the particular materials surrounding the sale and de-emphasizes expert testimony.

I. Express Incorporation of the § 112 Enablement and § 101 Utility Requirements into the On-Sale Bar Inquiry Would Enhance Predictability While Adhering to the Policies Supporting the On-Sale Bar

The Supreme Court's test suggests that the enablement and utility requirements must be met to satisfy the on-sale bar. Such a test would serve to increase certainty in this area of the law. Generally, in order to obtain a patent, the inventor must demonstrate that she is in possession of more than an idea. First, the inventor must demonstrate that the invention has utility.[185] Until the inventor knows that the invention will work for its intended purpose, the invention necessarily is not ready for patenting because it is unknown whether the concept will have the requisite utility under 35 U.S.C. § 101.[186] In the mousetrap example, at the time the inventor came up with the invention, she was not certain that the invention would in fact work. Thus, until she further designed the trap and built it, she did not know whether the invention had utility.

Second, an invention cannot be "ready for patenting" unless the enablement requirement of 35 U.S.C. § 112 can be met.[187] Indeed, "[l]ack of enablement and absence of utility are closely related grounds of unpatentability."[188] Satisfying the enablement requirement inherently satisfies the utility requirement as a matter of law.[189]

Enablement requires a disclosure sufficient to "teach those skilled in the art how to make and use the full scope of the claimed invention without 'undue experimentation.'"[190] In the mousetrap example, the diagrams created by the inventor may have been sufficient to provide an enabling disclosure. That is, a skilled person in the mousetrap art field may have been able to look at those drawings and create the invention. If so, the drawings would be enabling.

The language for the enablement test—to teach one skilled in the art how to make and use the invention—is nearly identical to the Supreme Court's test in *Pfaff*.[191] Indeed, the ready for patenting test is rooted in *The Telephone Cases*, which dealt with a patent *application* and whether the conditions for patentability could be met without actually constructing the invention, i.e., whether there could be a constructive reduction to practice.[192] The Supreme Court, however, never references § 112 in *Pfaff*. As the "ready for patenting" test derives from the patent prosecution-side of patent law, however, the Supreme Court implicitly

intended the test to be identical to that of § 112.

Incorporating 35 U.S.C. § 112 law will provide a pre-existing body of law that hopefully can enhance the predictability sought by the Supreme Court in *Pfaff*. The Federal Circuit seems to be heading in this direction. In *Helifix Limited v. Blok-lok, Ltd.*,[193] the Federal Circuit concluded that genuine issues of material fact regarding whether the invention was ready for patenting precluded summary judgment of invalidity.[194] Specifically, the court concluded that "[a]s discussed above, there are genuine issues of material fact as to whether the '93 brochure discloses and enables each element of the method claimed in the 801 patent."[195] In its discussion the court considered whether or not the pamphlet was enabling for purposes of a pure anticipation analysis under § 102(b).[196] Thus, the court silently *did* apply the § 112 enablement requirement to the "ready for patenting" test,[197] but otherwise has never specifically addressed § 112 in the context of the on-sale bar.

Legally, an enablement requirement would seem appropriate in the context of the anticipatory on-sale bar. Although the Federal Circuit expressly noted pre-*Pfaff* that enablement was not a requirement for the on-sale bar,[198] enablement *is* generally a requirement for anticipation.[199] In order for a single prior art reference to disclose the invention, it must provide enough information to allow one skilled in the art to practice the invention. Simply disclosing all of the limitations of a claim would be insufficient to invalidate the relevant patent. Consequently, the requirement of an enabling disclosure in the anticipatory on-sale bar brings that test into line with anticipation generally.

An enablement-constructive reduction to practice approach would also seem appropriate in light of modern technology. Computer-assisted design software permits extensive and complicated modeling of various apparatuses, processes, and combinations. It would indeed seem bizarre in this modern setting to require that every invention, regardless of the nature of the technology involved in the invention, be physically constructed before it would be considered patentable.

Application of an exacting § 112 review of what was offered for sale may create some inequities. In the context of priority, a patentee is considered to have constructively reduced the invention on the date she filed an application at the PTO.[200] This is true regardless of whether the patentee actually met the requirements of § 112 (or §§ 101, 102 or 103 for that matter) on the date of filing. The patentee is then able to traverse rejections before the PTO in order to obtain allowance of the patent. In the context of the on-sale bar, there would be no opportunity for such traversal. To require absolute compliance with § 112 may be viewed as unfair to the party challenging validity because it would seem unlikely that any offer for sale would contain a description of an invention that, if in the form of an application, the PTO would accept on its face. As such, the court could simply view the

analysis as not as rigorous as a true § 112 evaluation.

The Federal Circuit has used a similar, less demanding analysis in a different context. In patent law, a device may infringe a patent claim even if the claim limitations are not literally met by that device. A patent claim may be infringed under what is known as "the doctrine of equivalents if each limitation of the claim is met in the accused device either literally or equivalently."[201] What may be an equivalent, however, is not boundless. A patentee cannot assert as an equivalent that which was present in the prior art at the time she filed her patent application. The reasoning is straightforward: "a patentee should not be able to obtain, under the doctrine of equivalents, coverage which she could not lawfully have obtained from the PTO by literal claims."[202]

In *Wilson Sporting Goods Co. v. David Geoffrey & Associates*,[203] a hypothetical claim rubric was used to make the determination of whether a patentee was claiming as an equivalent something present in the prior art. In other words, a court should take the claim at issue and alter it to encompass the accused, equivalent structure.[204] If the patentee could not have obtained a patent on this reconstructed, hypothetical claim at the time the real claim issued, then infringement under the doctrine of equivalents is precluded because the range of equivalents asserted by the patentee would impermissibly embrace inventions already disclosed in the prior art.[205] In other words, if the hypothetical claim is anticipated or rendered obvious by the prior art, then the subject matter was part of the public domain and the patentee cannot assert equivalency over this known matter. Otherwise, the patentee would effectively be removing subject matter from the public domain. The Federal Circuit has made it clear that the anticipation and/or obviousness analysis performed on the hypothetical claim does not entail the same rigorous review as a "normal" anticipation or obviousness invalidity analysis.[206] By analogy, the courts could apply a less rigorous § 112 enablement standard in determining whether the information surrounding the offer for sale provides an enabling disclosure.

Lessening the stringency of the enablement analysis, however, could create additional uncertainty. If applied too loosely, the standard could evolve into something completely different than § 112 and result in a new form of enablement, a form subject to the whim of the Federal Circuit. As such, a fairly regimented § 112 analysis is probably most appropriate in order to obtain predictability in the on-sale bar context.

Some might argue against conflating the enablement requirement of § 112 with the on-sale bar of § 102(b). The Federal Circuit noted similar concerns about importing the concept of a reduction to practice into the on-sale bar:

> It can only cause confusion in interference law, with its special technical considerations, and in operation of the on-sale bar, which is guided by entirely different policies, to adopt modifiers in

connection with “reduction to practice,” whatever the context.

Moreover, since reduction to practice is a term of art under this court’s precedent, any specific ruling in one context on whether there is or is not a “reduction to practice” necessarily carries over into the other.[207]

Such concerns do not seem at issue with respect to incorporating § 112’s enablement test into the on-sale bar because the legal considerations are the same—whether an inventor would have been able to obtain a patent at the given time (either prior to the critical date for the on-sale bar or when the applicant files her patent application). Indeed, adopting the enablement requirement would avoid the problem identified in *UMC* of confusing the meaning of a defined legal concept. In *UMC*, the court feared confusing the term “reduction to practice” with modifiers such as “substantially reduced to practice.”[208] Here, adopting the tests under § 112 would avoid creating a new “enablement” requirement which might confuse the issue in both contexts.

Another interesting aspect of the use of enablement law would be the apparent transformation of what previously had been a highly fact-intensive inquiry into a legal question. Compliance with the enablement requirement under § 112 is a question of law based on factual underpinnings.[209] In contrast, the former question of whether an invention was “substantially complete” was purely factual.[210] This shift in the fact/law balance would place more authority with the Federal Circuit, as recent trends seem to indicate it is prone to take.[211]

I. Adoption of a Hierarchy of Relevant Evidence Would Procedurally Enhance Certainty

In addition to the substantive changes noted in subsection (a), the Federal Circuit could also adopt procedural changes regarding what evidence should be considered relevant in analyzing the “ready for patenting” test, and particularly whether the enablement and utility requirements have been satisfied. This approach would be similar to the approach already utilized by the Federal Circuit in claim construction analysis.[212] When performing a § 112 analysis in the context of validity, the courts generally begin with the disclosures in the specification[213] because the specification is what must supply the enabling disclosure.[214] Often, review of the specification alone is sufficient to reach a decision on enablement.[215] Similarly, in the on-sale bar context, the primary focus of the analysis should be on the drawings and descriptions surrounding the offer for sale to determine whether that material is enabling. Only if this review is insufficient to make a determination should the court look further. In such circumstances, expert witness testimony or other extrinsic evidence, such as the ability of a manufacturer to produce the good at the time of the sale (as was the case in

Pfaff II and *Weatherchem*[216]) would be relevant to facilitate this determination.[217]

Such extrinsic evidence could include an evaluation of whether any required experimentation is "undue." The courts have made clear that "[e]nablement is not precluded by the necessity for some experimentation . . . ."[218] The enablement requirement is violated only when such experimentation is "undue."[219] "The key word is 'undue,' not 'experimentation.'"[220] The question of how much experimentation is too much, has provided some uncertainty in enablement law. Rather than providing a simple analytical framework, the Federal Circuit has identified eight factors relevant to this analysis:

1. The quantity of experimentation necessary;
2. The amount of direction or guidance presented;
3. The presence or absence of working examples;
4. The nature of the invention;
5. The state of the prior art;
6. The relative skill of those in the art;
7. The predictability or unpredictability of the art; and
8. The breadth of the claims.[221]

The balancing of these factual considerations "requires the application of a standard of reasonableness, having due regard for the nature of the invention and the state of the art."[222] These factors, while "illustrative" and "not mandatory,"[223] demonstrate that an enablement inquiry can be highly factually intensive if the issue of experimentation is present.[224] The balancing of these eight factual considerations brings to mind the balancing of the four policy considerations under the former, "totality of the circumstances" test used for the on-sale bar. As such, the "undue experimentation" aspect of enablement may undermine the sought-after predictability in this area of the law. The issue of experimentation is not always present,[225] however, so the specter of uncertainty may not be as enormous. Thus, the Federal Circuit could establish, with respect to the on-sale bar, that the question of whether experimentation was undue would only be considered if the materials surrounding the offer for sale alone were not determinative.

Moreover, some of the evidence relied on by the courts in applying the ready for patenting test should be considered as minimally probative. In some post-*Pfaff* cases, the courts considered relevant testimony by the inventor that he believed the invention would work.[226] As the test for enablement is objective, the practice of the inventor and her belief regarding her invention should not be a factor. Indeed, as the "ready for patenting" test becomes more

established, likely inventors will stop making the brash statements found in *Pfaff* and *Weatherchem* regarding how certain they are that the invention worked.[227]

Despite such factual underpinnings, if the Federal Circuit formally adopted the enablement test, then at least the inquiry would be guided by these well-known requirements of §112 instead of the open-ended, policy-based "totality of the circumstances" approach that is employed in determining whether an invention was "substantially complete." Overall, this less disingenuous approach would add certainty to patent law, though maybe not as much as the Supreme Court would have preferred. If the Federal Circuit limits or prioritizes the evidence to be considered in this determination, as it did with claim construction, then greater certainty may be achieved.

I. *Conception Alone is Not Sufficient to Satisfy the On-Sale Bar*

The above analysis makes one thing clear—the district court opinions finding that proof of conception satisfies the "ready for patenting" test are erroneous. The district courts' interpretation of the test to allow a mere conception to satisfy the ready for patenting test misreads *Pfaff* and indeed would undermine the policy interests behind the on-sale bar. The Supreme Court's focus on an enabling disclosure strongly suggests that more than mere conception should be required. Indeed, at the time of conception, an inventor may have no idea whether the idea will even work. The Supreme Court's test and the language in *Pfaff* strongly suggests that the Court wants to encourage the filing of applications that have been sufficiently developed so as to comply with § 112. Otherwise, the Court would be sanctioning inventors rushing to the PTO with every half-baked idea they may have in order to avoid any potential on-sale bars resulting from any attempts to commercialize. The Court's language suggests that, as the idea must be "complete,"[228] the inventor must be confident that the invention will in fact work. The following analysis will begin with the language of the Supreme Court's decision in *Pfaff*, the reasoning of *The Telephone Cases*, and the law of utility and enablement to demonstrate that the "ready for patenting" test necessarily requires more than the mere conception of the invention for the on-sale bar to apply. Finally, review of the four policies that underlie the on-sale bar demonstrates that they are effected more readily through the use of an enablement standard rather than a "conception alone test," confirming the inadequacy of the latter test.

I. The Language and Reasoning of the Supreme Court's Decisions in *Pfaff* and *The Telephone Cases* Belies the "Conception Alone" Test

To begin, on a purely textual level, if the Supreme Court intended conception alone to be sufficient, it could have simply stated the test as requiring proof of an offer for sale of an invention that had been conceived prior to the critical date. There would have been no need

for the Court's exegesis on the "ready for patenting" standard and the requirement for a reduction to practice or for "prepared drawings or other descriptions of the invention."[229] In fact, it would be anomalous for the Supreme Court to state that reduction to practice is sufficient to meet the standard if conception alone were sufficient. A reduction to practice generally flows from the conception, and conception is a necessary prerequisite to reduction to practice.[230] Thus, to explicitly require a reduction to practice if the Court truly meant conception is illogical. Tellingly, an *amicus curiae* before the Supreme Court specifically argued that conception alone should be the standard.[231] The Supreme Court was aware of this alternative test, but chose not to adopt it.

The Supreme Court also rejected the test that "if the sale or offer in question embodies the invention for which a patent is later sought, a sale or offer to sell that is primarily for commercial purposes and that occurs more than one year before the application renders the invention unpatentable."[232] The Court reasoned that "the possibility of additional development after the offer for sale in these circumstances counsels against adoption of the rule proposed by the Solicitor General."[233] Thus, the Supreme Court contemplated that more than an idea was required and recognized that further development could occur.

Finally, the factual context of *The Telephone Cases*, which provided the source for the Supreme Court's "ready for patenting" test, also suggests that more development than conception ought to be required. In *The Telephone Cases*, the Supreme Court was faced with the question of whether Alexander Bell was entitled to his patent for the telephone notwithstanding the fact that he had never made a working model of the telephone prior to filing his application. The Court noted that:

> in [Bell's] specification he did describe accurately and with admirable clearness his process, that is to say, the exact electrical condition that must be created to accomplish his purpose, and he also described, with sufficient precision to enable one of ordinary skill in such matters to make it, a form of apparatus which, if used in the way pointed out, would produce the required effect, receive the words, and carry them to and deliver them at the appointed place.[234]

The Supreme Court, therefore, had before it a detailed written description of the invention and not merely the conception of the invention. Further demonstrating that Bell had moved beyond the conception phase was the fact that "[t]he particular instrument which he had *and which he used in his experiments* did not, under the circumstances in which it was tried, reproduce the words spoken, so that they could be clearly understood . . ."[235] This quotation crystallizes the reality of the inventive process—Bell had the concept of the invention,[236] but had to experiment to make it work.[237] Bell did not conceive of the idea and immediately file a patent application. Instead, he experimented and further designed the invention to get it to a point where he had an enabling description. Thus, the Supreme Court's reliance on *The Telephone Cases* in *Pfaff* confirms that more than a concept is

required for the on-sale bar.

I. Federal Circuit Law on Conception, Utility, and Enablement Confirms that a "Conception Alone" Test Would Not Satisfy the "Ready for Patenting" Test

Moreover, the Federal Circuit has explicitly recognized that "enablement and conception are distinct issues, and one need not necessarily meet the enablement standard of 35 U.S.C. § 112 to prove conception."[238] This view acknowledges that, at the time of conception, the inventor may not be certain his invention will work. Thus, necessarily the invention is not "ready for patenting" because, at conception, the inventor may not be able to satisfy the utility requirement of § 101.

Conception, unlike enablement under § 112, does not require knowledge of the invention's utility. Conception is "the formation in the mind of the inventor, of a definite and permanent idea of the complete and operative invention, as it is hereafter to be applied in practice."[239] "Thus, the test for conception is whether the inventor has an idea that was definite and permanent enough that one skilled in the art could understand the invention."[240] The inventor, however, "*need not know that his invention will work for conception to be complete*. He need only show that he had the idea . . . ."[241] A reduction to practice (actual or constructive) may be proof that the conception was indeed complete, but the inventor may not know his conception was complete until well after conception, i.e., until his later reduction to practice (actual or constructive) confirms the invention's utility.

Another way to look at the on-sale bar is that an inventor has one year from the date of commercialization to file her patent application. From this perspective, with a "conception alone" test, an inventor could lose her right to a patent before she even knows the invention would work. For example, if the inventor conceived of the invention and commercialized the invention through a conditional contract (i.e., if the invention works, the other party will purchase or license it), and the inventor takes more than a year from the date of the offer to develop the invention, then the inventor loses her patent rights *even though she may never have known that her invention would work until the date of the constructive or actual reduction to practice*. As such, the inventor has an incentive to rush to the PTO, perhaps prematurely, in order to avoid the draconian nature of the on-sale bar.[242]

Indeed, this approach has negative policy consequences. Forcing such premature disclosures would "discourag[e] investment in long-term development projects."[243] Once the agreement to develop a product has been reached, the inventor would have effectively one year to obtain success, be it through a product or a patent. The inventor would be "forced to choose between abandoning the right to the patent and disclosing the knowledge gained in the first year."[244] Such an investment would be rather risky to an investor—a patent right

may never be obtained or may be lost under the bar, and there would be limited time to decide the most appropriate means to protect any advances, such as by patent or trade secret protection. Thus, a conception alone approach would undermine the ability of the patent system to promote progress in the useful arts by undermining an almost necessary element in such progress—financial backing.

Thus, by definition, possession of the mere concept is *insufficient* for an invention to be "ready for patenting" because the inventor may not know whether the invention has utility under § 101. Requiring mere conception ill-serves the goal of providing certainty in this area of the law: the inventor may not realize that she conceived of the invention (in the legal sense) until after the one year period has run because she may not be able to demonstrate the utility of the invention until more than a year after its conception. With a "conception only" rule, inventors would have the incentive to apply for a patent for every idea they have.

The mousetrap example drives this point home. In the hypothetical, the inventor had conceived of the invention. At the time of her conception—although the idea was complete—she was not certain it would work. Not until she further designed and built the mousetrap was she certain that it would in fact work. Under the "conception alone" test, however, our inventor would be out of luck due to her attempts to sell the invention to the mousetrap company. She would have had to apply for her patent while her idea was still seemingly only half-baked in order to avoid the application of the on-sale bar. This result is contrary to the purposes of the bar.

I. Enablement Versus Conception: Policy Considerations

Requiring an enabling disclosure—as opposed to simple conception—more carefully balances the policies underlying the on-sale bar. While the Federal Circuit has rejected balancing these policy considerations under the now-defunct "totality of the circumstances" test,[245] consideration of these policies remains appropriate in attempting to ferret out the metes and bounds of the "ready for patenting" test. It would be anomalous to adopt a rule that would in fact undermine the statutory section that it is purported to serve. Review of these considerations demonstrate that a "conception alone" rule would indeed be subversive to the purposes behind the on-sale bar. The on-sale bar is rooted in the following four policies: the policy against removal of inventions from the public which the public has come to view as freely available due to the prolonged sales activity; the policy in favor of prompt and widespread disclosure of new inventions to the public; the policy against allowing inventors to commercially exploit the exclusivity afforded by the patent beyond the statutorily prescribed period; and the policy in favor of affording the inventor a reasonable amount of time following sales activity to determine whether the patent is a

worthwhile investment.[246]

The policy against removing an invention from the public domain is better served by requiring an enabling disclosure because an inchoate conception does not place anything within the grasp of the public. Once the invention has been developed to the point of enablement—either by a working physical embodiment or, at least, a detailed written embodiment that enables the actual practice of the invention—this policy would be implicated as there would be a concrete invention that the public could view as freely available due to any sales activity. Since the inventor may not know if the invention even will work at the time of conception,[247] it is difficult to understand how the invention could be considered in the public domain.

Additionally, requiring mere conception to start the running of the one-year grace period of § 102(b) would serve to encourage *premature*, not prompt, disclosure of the invention. In *UMC*, the Federal Circuit determined that more than a "mere concept" must be offered for sale to avoid "forc[ing inventors] to rush into the Patent and Trademark Office prematurely."[248] No public good is served by flooding the PTO with applications on inventions that are incomplete, straining the resources of that agency even more. Requiring, at a minimum, a detailed written embodiment that would enable the actual practice of the invention guarantees that inventors will not rush to the PTO until they have had time to develop the invention.

Requiring an enabling written description would not allow an inventor to exploit the patent beyond the patent term. In order to satisfy the on-sale requirement of § 102(b), the inventor would have to demonstrate the commercial viability of the invention with either a working prototype or detailed engineering drawings, so the inventor would not be commercially exploiting the invention until after the inventor knew it would work. Indeed, any pre-enablement commercial activity would likely be exempt as "experimental use"[249] to determine whether the invention will work. For example, if our mousetrap inventor had approached the mousetrap manufacturers for help in determining whether her invention would work, such commercialization would likely be considered experimental use, which is exempted from the on-sale bar.

Finally, starting the one-year grace period at conception would undercut this policy consideration because the "invalidity" clock would run while the inventor tries to determine if the invention works. Requiring an enabling physical and/or written embodiment to trigger the on-sale bar is fairer to inventors because it affords the inventor time to develop the invention to a point where she can truly evaluate its technological efficacy before filing with the PTO. In the hypothetical, the inventor needed a significant amount of time to determine the efficacy of her invention. Starting the clock at conception compromised her

ability to make this assessment, at the cost of her ability to obtain a patent.

As such, the "ready for patenting" test of *Pfaff* should only be satisfied if the enablement and utility requirements are met. Requiring an enabling disclosure pursuant to § 112 comports with the language of *Pfaff*, is more consistent with the doctrines surrounding conception and enablement, and better serves the policy interests underlying the on-sale bar.

I. Unlike the Anticipatory On-Sale Bar, the "Ready for Patenting" Test Should Not be a Requirement for Application of the § 102(b)/103 On-Sale Bar

While incorporation of § 112's enablement requirement and § 101's utility requirement would best serve the anticipatory version of the on-sale bar, neither requirement should be required in the context of the § 102(b)/103 obviousness variant. The purpose behind this conjoined bar and the policies underlying the on-sale bar suggest that anything offered for sale should be relevant to the obviousness analysis.

I. *The "Prior Art" Analogy to the Offer for Sale Confirms that the "Ready for Patenting" Test Should Not Apply in the Obviousness Context*

As discussed above,[250] the on-sale bar has been applied where what is offered for sale is not precisely what is later claimed but is an obvious earlier variant of the claimed invention. The rationale for this approach is that what is offered for sale is considered "prior art" in assessing the patentability of the invention.[251] In other words, what is offered for sale should be considered public knowledge. Under this "prior art" analogy, it is clear that there should be no "ready for patenting" requirement for the obviousness-type on-sale bar to apply.

Earlier Federal Circuit decisions recognized that requiring a reduction to practice in the context of the obviousness variant of the on-sale bar was inappropriate for this very reason:

> Implicit in the operation of a sections 102(b)/103 bar is the absence of reduction to practice of the claimed invention as a requirement for the bar to operate. The invention, i.e., as claimed with all elements, is not the subject of the sale. If it were, section 103 would not be involved. With respect to non-claimed subject matter of the sale in a sections 102(b)/103 situation, it is meaningless to speak of "reduction to practice" of what was sold. "Reduction to practice" relates only to the precise invention expressed in a claim.[252]

This reasoning applies in the "ready for patenting" context as well. A § 103 analysis does not require that an individual piece of prior art be enabling. Indeed, one reference cannot be enabling of the claimed invention because, in the realm of obviousness, part of the claimed invention is not disclosed in the single reference. Thus, in the context of the obviousness on-

sale bar, the materials surrounding a commercial offer for sale should not have to be enabling to render the claimed invention obvious.

Under present law that seemingly requires the invention to be "ready for patenting" for the obviousness version of the on-sale bar to apply, the Federal Circuit is disingenuous in stating that what was offered for sale in effect becomes a "prior art" reference. A prior art reference for the purpose of an obviousness determination does not have to be enabling. Yet, the circumstances surrounding an offer for sale must provide an enabling disclosure *even in the context of the obviousness version of the on-sale bar*. If an offer for sale truly were a prior art reference, then it would not have to be enabled. *Anything* offered for sale that could teach something relevant to the art could be appropriately considered. The present law denies this incongruity and should be changed so that the ready for patenting test has no role in the obviousness on-sale bar.

I. *The Policies Underlying the On-Sale Bar and the Patent System Support Elimination of the "Ready for Patenting" Test, Even if Some Uncertainty Attends this Approach*

Using the obviousness inquiry in the context of § 102(b) makes common sense: it would be bizarre if an inventor could obtain a patent for an obvious variant of something that has already been in the public for a year or more, or that has been commercially exploited. To permit otherwise would allow an inventor to tweak her product slightly in order to avoid the on-sale bar by claiming a slightly different (albeit obvious) variant of her invention. For example, the inventor in *Pfaff* could have avoided invalidation of his claims by the addition of the "barb element" limitation found in claims 7 and 11 because that limitation was not in the diagrams of the invention.[253] That is, a small change to the claim that makes it slightly (even obviously) different from what was offered for sale allows the inventor to escape the bar. Eliminating the "ready for patenting" standard for the § 102(b)/103 bar would better serve the policy interests underlying the on-sale bar: the policy against removal of inventions from the public domain; the policy in favor of prompt and widespread disclosure of new inventions to the public; the policy against allowing inventors to effectively extend the patent term; and the policy in favor of providing a reasonable amount of time to assess whether a patent is worthwhile.[254]

The public could easily view the claimed invention as part of the public domain. What is patented would merely be an obvious—and therefore normally unpatentable—variant of the item sold. Due to the sales activity, the public would believe that the invention is part of the public domain. Any changes would be minor. Allowing a patent on the obvious variant therefore would remove the invention from the public domain.

If inventors could receive patents on obvious variants of something that had been offered for sale, then the patent seeker has an incentive to delay going to the patent office. She already has the commercial benefit from the sale of the earlier version, and thus has an incentive to delay filing the patent to prevent the beginning of the patent term from running. Accordingly, the policy of encouraging prompt disclosures of inventions would be violated.

The policy concern regarding the effective extension of the patent term is clearly implicated by the on-sale bar. Allowing a patent for an obvious variant of something that has been on-sale for more than one year would in effect extend the patent term. The inventor would not have received the patent if what was offered for sale had been part of the prior art. The claimed invention and what was offered for sale are essentially the same—they are not patentably distinct. The patentee, however, would be able to commercialize the obvious variant not claimed in the patent without fear of losing the patent due to that sale.

Finally, the patentee would get a generous period of time if obvious versions were patentable because the one-year clock would never start running on the version in the patent application. Aside from intervening prior art, the patentee would have an infinite amount of time to assess whether to pursue a patent on the obvious variant.

Requiring that the invention be ready for patenting in the obviousness context undermines these considerations. What is offered could be in a fairly underdeveloped state, yet its addition to the art could render the invention obvious. The inventor would thus be allowed to receive commercial benefits from his invention and still receive his patent, in contravention of all four policies underlying the on-sale bar. The Federal Circuit's decision in *Helifix Limited v. Blok-Lok, Ltd.*[255] provides an excellent example. There, the court vacated a grant of summary judgment of invalidity *inter alia* on the basis of the on-sale bar because the offer for sale—a brochure—was not enabling.[256] The court therefore concluded that Blok-Lok was required to show a reduction to practice, which on the record it had failed to do.[257] The court never considered whether the addition of the brochure to the prior art could render the invention obvious. If the brochure rendered the invention obvious, regardless of whether it was enabling, public policy suggests that the patent should be invalid—the patentee should not receive his rights to exclude for a trivial advance in the art. Under the Federal Circuit's reasoning, however, it would seem that the patent may stand due to the lack of an enabling disclosure.

In contrast to these policy concerns, however, the key concern of the Supreme Court in *Pfaff* remains predictability. To allow *anything* surrounding an offer for sale to be considered would cut against such predictability. Without some limit on the level of development of the invention required for the bar to apply, any attempt at pre-critical date

commercialization would raise the specter of the obviousness variant of the on-sale bar. Thus, eliminating the "ready for patenting" or enablement requirement for the § 102(b)/103 bar risks end-running the entire purpose of *Pfaff*.

Removing the "ready for patenting" test from the obviousness version of the on-sale bar, does not place an onerous burden on the inventor. It is no more onerous than the enabling requirements under the ready for patenting test. An inventor should be able to determine whether what she intends to claim is obvious in light of what was offered for sale. Generally, the inventor is one of skill in the art and could make such a determination.[258] Indeed, she should be in as good of a position to assess the obviousness of a invention as to assess whether the invention is ready for patenting. Thus, the risks of loss in predictability would be substantially mitigated.

Moreover, a different perspective on the "prior art" rationalization for the § 102(b)/103 bar could lead to an even more radical conclusion—the obviousness variant of the on-sale bar should be eliminated. The language of § 103 is somewhat ambiguous in this regard:

> [a] patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, 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.[259]

Section 103 does not state that *every* item listed in § 102 is considered prior art. It merely states that if the invention is not anticipated (i.e., identically disclosed or described) but is obvious in light of the *prior art*, which the statute never defines, then a patent cannot be obtained or would be invalid. What is considered prior art under § 103 has led to debate in the past.[260] In fact, the statute notes that the obviousness determination is made "at the time of the invention," which may be more than one year prior to the filing date of the application, as required by § 102(b).[261] Judge Smith, now of the Federal Circuit but then of the Court of Customs and Patent Appeals, forcefully argued the importance of this express statutory language in his dissent in *In re Foster*, which held that § 102(b) references were prior art for the purposes of § 103:

> Thus, within the rationale of the majority opinion and its construction of section 102, it is no longer necessary for a patent [application] or a publication to "describe" the invention to lay the basis for the loss of right to a patent under section 102(b). It is sufficient that a patent or a publication be found, or that some combination of the same can be put together after the applicant's date of invention and with the accuracy characteristic of perfect hindsight which make the invention 'obvious' more than one year prior to the date of filing the patent application. Thus, in addition to changing the wording of section 102(b) as above suggested, the majority must also intend to rewrite section 103 so that the phrase 'at the time the invention was made' now is to be limited by a proviso

which reduces this time to a period of one year prior to the filing of the application.[262]

Thus, consistent with the statute, "prior art" could be construed as to exclude section 102(b) material. Thus, the on-sale bar would apply only in the anticipation context. Indeed, in light of the possible confidential nature of some of these sales, such an interpretation is plausible because the offer for sale may never be publicly available. Accordingly, the bar would be limited solely to the pure, anticipatory bar of § 102(b).

Such a rule would clearly enhance predictability because the on-sale bar would only apply if what was offered for sale is identical to what is claimed—a determination that is easily made. Yet, allowing an inventor to maintain a patent for an invention that is obvious (i.e., not patentably distinct) from what she or another has commercialized prior to the critical date would allow the inventor to effectively extend the term of the patent. The Federal Circuit has recognized that "[t]he overriding concern of the on-sale bar is an inventor's attempt to commercialize his invention beyond the statutory term."[263] An inventor who is subject to the bar could tweak the claims slightly, but engage in wholesale commercialization of the invention without the slight modifications. For example in *Pfaff*, assume that the first claims without the "barb element" were not present. Then, Pfaff could have patented the "barbed" version while selling the "unbarbed" version of the invention.[264] Pfaff could have sold the unbarbed version for a period of time greater than one year prior to filing an application,[265] thereby extending the patent term. The mousetrap hypothetical affords another example. If the inventor adds a fragrance to the claimed invention, she could sell the unscented version before the critical date without fear of losing her patent on the scented version. Thus, if § 102(b) references were not available as prior art, inventors could easily extend the patent term and also be awarded a patent that would be obvious in light of what they had sold. These negative consequences counsel strongly in favor of applying § 102(b) in the § 103 obviousness language. Indeed, all four of the policy concerns underlying the on-sale bar support applying § 102(b) in the § 103 context and support not requiring the "ready for patenting" standard.

The express language of the statute requires determination of what was obvious at the time of the invention, whereas the on-sale bar of § 102(b) is evaluated one year prior to the date of application. This disparity in timing suggests that the Court of Customs and Patent Appeals was wrong in allowing § 102(b) references to be used in determining obviousness—the obviousness determination is made at any time prior to the critical date, regardless of the actual date of invention. Despite the fact that *Foster* seems to contradict the express language of the statute,[266] Congress implicitly agrees with the Court of Customs and Patent Appeals' reasoning. *Foster* was decided in 1965. Presumptively, Congress was aware of this decision, and could have amended the patent statute to reflect Judge Smith's interpretation. For example, Congress could amend § 103 to state expressly that materials

under § 102(b) shall not be considered prior art for a § 103 analysis. Congress has never taken such a step. Accordingly, the interpretation offered in *Foster* and its progeny appears to be correct.[267]

Consequently, including what is offered for sale as prior art for an obviousness determination is the best approach, and is in line with Congress' intent. Enablement should not be required because, whether or not the disclosure is enabling, an applicant should not receive a patent for an invention that is minimally different, i.e., obvious, in light of what was offered for sale and the prior art. Such a result would permit the patentee to, in effect, extend the patent term well beyond its twenty year limit. Moreover, it would allow a patentee to obtain a patent that, due to the sales activity, would seemingly have entered the public domain excepting the minor differences between what was offered and what was claimed. Prior art used in a general obviousness context does not have to be enabling. There is no reason to distinguish general obviousness under § 103 from obviousness under the conflated § 102(b)/103 analysis. To be consistent, therefore, prior art under the § 102 (b)/103 obviousness analysis, i.e., what was offered for sale and "typical" prior art, also should not have to be enabling. Although this approach may lead to less predictability in the law, it best effectuates the policies underlying the bar.

I. Conclusion

The on-sale bar to patentability has long posed a difficult problem for the courts in determining at what point there is an "invention" that could be considered on sale pursuant to § 102(b). Early requirements that the invention be commercially on-hand or reduced to practice provided bright-line tests, but these tests could easily be circumvented by clever patent attorneys. In response, the Federal Circuit developed the "substantially complete" test, which held that more than conception of the invention but less than complete reduction to practice was required. Somewhere between these two points the "invention" would be considered complete enough to justify application of the on-sale bar. Due to this fact-based, "totality of the circumstances" approach used by the Federal Circuit, nearly unmanageable uncertainty attended this standard. The Supreme Court attempted to add certainty to the on-sale bar. While well-intended, the Supreme Court's "ready for patenting" test has failed to produce the predictability and certainty desired.

To realize this goal of certainty while best balancing the policies that underlie the on-sale bar, the Federal Circuit should expressly adopt the § 112 enablement and § 101 utility requirements for the anticipatory on-sale bar. This step would provide an established body of law by which the courts could evaluate this issue. Moreover, the Federal Circuit should attempt to narrow the range of evidence relevant to this inquiry to avoid the ad hoc nature of the "substantially complete" test, which seems to be creeping into the "ready for

patenting" test. The Federal Circuit should also reject the standard developing at the district court level that mere conception alone is sufficient for the bar to apply.

With respect to the § 102(b)/103 obviousness version of the on-sale bar, however, there should be no enablement requirement: the information surrounding any offer for sale should serve as prior art, regardless of whether it is enabling. While decreasing certainty, this approach better serves the policy of preventing inventors from extending the patent term. With these modifications to the doctrine, the Federal Circuit can best balance the sometimes competing policy interest in certainty vis-à-vis the various policy considerations that underlie the on-sale bar, thus best effectuating congressional intent and the promotion of the useful arts.

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1 . The Supreme Court has made clear that certain discoveries are *per se* unpatentable. These discoveries fall into three categories: laws of nature, physical phenomena, and abstract ideas. Diamond v. Chakrabarty, 447 U.S. 303, 309 (1980). Examples of such ineligible subject matter include "a new mineral discovered in the earth or a new plant found in the wild," Einstein's relativity formula, $E=mc^2$, and Newton's law of gravity. *Id.*

2 . 35 U.S.C. § 101 (1994) (requiring invention be "useful"); *see also In re* Brana, 51 F.3d 1560, 1564 (Fed. Cir. 1995).

3 . 35 U.S.C. §§ 101, 102 (1994) (respectively requiring that the invention be "new" and establishing conditions for novelty).

4 . 35 U.S.C. § 103 (1994).

5 . 35 U.S.C. § 112 (1994). Section 112 requires a written description of the invention, a description of how to make and use the invention sufficient to enable one of ordinary skill in the art to practice the invention, disclosure of the inventor's best mode for practicing the invention, and claims that "particularly point[] out and distinctly claim[] the subject matter which the applicant regards as his invention." *Id.*

6 . *See* Estee Lauder Inc. v. L'oreal, S.A., 129 F.3d 588, 593 (Fed. Cir. 1997) ("[T]he 'utility requirement is satisfied when an inventor has learned enough about the product to justify the conclusion that it is useful for a specific purpose.'" (citation omitted)).

7 . *See, e.g.*, Lewmar Marine, Inc. v. Barient, Inc., 827 F.2d 744, 747 (Fed. Cir. 1987) ("Anticipation under 35 U.S.C. § 102 requires the presence in a single prior art disclosure of each and every element of a claimed invention.").

8 . *See* 35 U.S.C. § 102(a) (1994).

9 . *See* 35 U.S.C. § 102(b) (1994).

10 . *See Lewmar*, 827 F.2d at 748 ("'Anticipation' thereafter became a restricted term of art in patent law meaning that the claimed invention lacked novelty, or was unpatentable under 35 U.S.C. § 102.").

11 . Continental Can Co. USA v. Monsanto Co., 948 F.2d 1264, 1267 (Fed. Cir. 1991) ("When more than one reference is required to establish unpatentability of the claimed invention anticipation under § 102 cannot be found, and validity is determined in terms of § 103.").

12 . A potential risk of the obviousness analysis is the use of hindsight, that is using the invention as a map in order to piece together the prior art appropriately. To combat the "insidious effect of a hindsight syndrome," W.L. Gore & Assoc., v. Garlock, Inc., 721 F.2d 1540, 1553 (Fed. Cir. 1983), the courts and the Patent and Trademark Office consider a number of secondary indicia of obviousness. *Id.* ("That [objective] evidence [of nonobviousness] can often serve as insurance against the insidious attraction of the siren hindsight when confronted with a difficult task of evaluating prior art."). Such objective evidence includes the commercial success of the invention, long felt but unsolved needs in the art, and the failure of others. *See* Graham v. John Deere Co., 383 U.S. 1, 17-18 (1966).

The case law also requires that the prior art contain a motivation to combine the references to yield the claimed invention. *See* Carella v. Starlight Archery and Pro Line Co., 804 F.2d 135, 140 (Fed. Cir. 1986) ("Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination."). For example, in the "A+B+C" case, even if the first reference taught A+B and the other taught C, but there was no motivation in those references or elsewhere in the prior art to suggest combining the two, then the invention is not obvious. *See id.* (holding a claim to be nonobvious, even though all of the features of the claim were known in the prior art, because there was no motivation to combine the references).

13 . Martin J. Adelman et al., Patent Law 408 (1998) ("[T]he nonobviousness requirement for patentability thus expresses the congressional determination that trivial advances should not be awarded with patent protection.").

14 . *See* 35 U.S.C. § 112, ¶ 1 (1994).

15 . Kewanee Oil Co. v. Bicron Corp., 416 U.S. 470, 480-81 (1974).

16 . *Id.*; *see also* Adelman, *supra* note 13, at 567 ("As the essential bargain for the exclusive right of the patent, the patentee must teach the public how the invention works . . . .").

17 . 35 U.S.C. § 102(b) (1994).

18 . *See* Stewart-Warner Corp. v. City of Pontiac, 717 F.2d 269, 273 (6th Cir. 1983) ("In attempting to define the point at which an invention is complete, courts have struggled to develop a legal standard which balances the interests articulated by Congress.").

19 . *See, e.g.*, Tec Air, Inc. v. Denso Mfg. Mich., Inc., 192 F.3d 1353, 1358 (Fed. Cir. 1999).

20 . *See* Ferag AG v. Quipp Inc., 45 F.3d 1562, 1566 (Fed. Cir. 1995)

21 . *See infra* note and accompanying text.

22 . *See Ferag*, 45 F.3d at 1567-68; *see also* STX, L.L.C. v. Brine, Inc., 211 F.3d 588, 590 (Fed. Cir. 2000).

23 . UMC Elecs. v. United States, 816 F.2d 647, 652 (Fed. Cir. 1987).

24 . Intel Corp. v. U.S. Int'l Trade Comm'n, 946 F.2d 821, 830 (Fed. Cir. 1991).

25 . The Federal Circuit possesses exclusive jurisdiction to hear appeals from the United States District Courts in cases arising under the United States' patent laws. 28 U.S.C. § 1295(a)(1) (1994).

26 . *See, e.g.*, Evans Cooling Sys., Inc. v. General Motors Corp., 125 F.3d 1448, 1451-52 (Fed. Cir. 1997).

27 . The issue of what actually constitutes an "offer for sale" has not generated confusion. The court has made clear that commercialization is key; thus, offers for sale have been found as the result of something as simple as a purchase order. *See, e.g.*, Pfaff v. Wells Elecs., Inc., 124 F.3d 1429, 1433 (Fed. Cir. 1997) [hereinafter *Pfaff I*]; Buildex Inc. v. Kason Indus., 849 F.2d 1461, 1464 (Fed. Cir. 1988).

28 . *See infra* notes 73- and accompanying text.

29 . *See* Janice M. Mueller, *Conception, Testing, Reduction to Practice: When is it Really On Sale?*, 80 J. Pat. & Trademark Off. Soc'y 305, 319-20 (1998) ("The need for greater certainty in on sale determinations is particularly acute because the § 102(b) bars effectively work as statutes of limitation. Their operation is draconian. . . . Because the risk of losing a valuable property right is so great, the triggering of the "limitations period" should be reasonably clear.").

30 . *See* Pfaff v. Wells Elecs., Inc., 525 U.S. 55, 65-66 (1998) [hereinafter *Pfaff II*].

31 . *Pfaff II* , 525 U.S. 55 (1998).

32 . *See infra* note 44 and accompanying text (discussing the four policy considerations).

33 . 35 U.S.C. § 102(b) (1994).

34 . 35 U.S.C. § 100(a) (1994).

35 . Conception requires that "the inventor has an idea that was definite and permanent enough that one skilled in the art could understand the invention." Burroughs Wellcome Co. v. Barr Labs., Inc., 40 F.3d 1223, 1228 (Fed. Cir. 1994); *see also* Hybritech, Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 1376 (Fed. Cir. 1986) ("Conception is the 'formation in the mind of the inventor, of a definite and permanent idea of the complete and operative invention, as it is hereafter to be applied in practice.'" (quoting 1 Robinson on Patents 532 (1890)). For a complete conception, "only ordinary skill would be necessary to reduce the invention to practice, without extensive research or experimentation." *Burroughs*, 40 F.3d at 1228.

36 . *See* UMC Elecs. v. United States, 816 F.2d 647, 652 (Fed. Cir. 1987) ("Under our precedent there cannot be a

reduction to practice of the invention here without a physical embodiment which includes all limitations of the claim."); Hybritech Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 1376 (Fed. Cir. 1986) ("Actual reduction to practice requires that the claimed invention work for its intended purpose." (citation omitted)). In the introductory hypothetical, the mousetrap was not reduced to practice until the inventor actually constructed it.

37 . *See* 35 U.S.C. § 102(g) (1994) ("In determining priority of invention there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other."). Under § 102 (g), generally the first person to conceive and reduce the invention to practice is awarded priority of invention. Section 102(g) also clarifies that an inventor who is first to conceive, second to reduce to practice, and exercises due diligence from a point prior to the conception by the other potential inventor to the reduction to practice by the first to conceive, is to receive priority over the other potential inventor.

38 . *See Pfaff II*, 525 U.S. 55, 61 (1998) ("The statute's only specific reference to that term [invention] is found in § 102(g), which sets forth the standard for resolving priority contests between two competing claimants to a patent.").

39 . *See* Stewart-Warner Corp. v. City of Pontiac, 717 F.2d 269, 273 (6th Cir. 1983).

40 . *See* B. F. Sturtevant Co. v. Massachusetts Hair & Felt Co., 124 F.2d 95, 97 (1st Cir. 1941) (requiring proof that "the machine existed as a complete article of sale, not on paper, but in fact. . . . [W]here a specimen of an invention is built or made to order, it is not 'on sale' till it is completed, delivered, and accepted."); Burke Electric Co. v. Indep. Pneumatic Tool Co., 234 F. 93, 93 (2d Cir. 1916) ("If articles are on hand ready to be delivered to any purchaser, they are on sale. . . . But if they are not, they cannot be said to be on sale. . . ."); McCreery Eng'g Co. v. Mass. Fan Co., 195 F. 498, 501 (1st Cir. 1912) ("[P]roof of a mere contract to construct from plans and to deliver in future a machine or manufacture not proven to have been previously completed, falls short of proof that the machine or invention was 'on sale.'").

41 . *See, e.g.*, Timely Prods Corp. v. Arron, 523 F.2d 288, 302 (2d Cir. 1975) (requiring "not merely its conception but its reduction to practice").

42 . *Pfaff II*, 525 U.S. 55 (1998).

43 . *See, e.g.*, Evans Cooling Sys., Inc. v. General Motors Corp., 125 F.3d 1448, 1451-52 (Fed. Cir. 1997); Pfaff v. Wells Elecs., Inc., 124 F.3d 1429, 1433 (Fed. Cir. 1997), *aff'd*, 525 U.S. 55 (1998); Barmag Marmer Maschinenfabrik AG v. Murata Machinery, Ltd., 731 F.2d 831, 836 (Fed. Cir. 1984). Although based on underlying facts, the ultimate determination of whether an invention is on-sale within the context of § 102(b) is a legal question. *See Evans Cooling*, 125 F.3d at 1450-51.

44 . UMC Elecs. Co. v. United States, 816 F.2d 647, 652 (Fed. Cir. 1987); *see also* Seal-Flex, Inc. v. Athletic Track and Court Constr., 98 F.3d 1318, 1322 (Fed. Cir. 1996) (noting that the on-sale bar provides "a balance of the policies of allowing the inventor a reasonable amount of time to ascertain the commercial value of an invention, while requiring prompt entry into the patent system after sales activity has begun") (citing Envirotech Corp. v. Westech Eng'g, Inc., 904 F.2d 1571, 1574 (Fed. Cir. 1990)).

45 . Patrick J. Barrett, Note, *New Guidelines for Applying the On Sale Bar to Patentability*, 24 Stan. L. Rev. 730, 731

(1972).

46 . *See id.* at 734.

47 . *Id.*

48 . *Id.* at 733.

49 . Indeed, the first version of the on-sale bar in the 1836 Patent Act did not provide a one-year grace period. *See id.* at 731.

50 . *See id.* at 735.

51 . *See Pfaff II*, 525 U.S. 55, 66 n.11 (1998) (criticizing the "totality of the circumstances test."); *see also* Seal-Flex, Inc. v. Athletic Track and Court Constr., 98 F.3d 1318, 1323 n.2 (Fed. Cir. 1996) ("The standard of the totality of the circumstances has been criticized as unnecessarily vague.").

52 . A corollary to this concern is that, with greater predictability, seemingly there would be less litigation because the litigants would be more willing to settle. The parties themselves could more readily predict the outcome of such litigation. With the vague "totality of the circumstances" test, parties would be more likely (assuming they have similar litigating resources) to "roll the dice" and let the court make the decision.

53 . For example, in *Evans Cooling Systems, Inc. v. General Motors Corp.*, 125 F.3d 1448 (Fed. Cir. 1997), the court refused to create a "clean-hands" exception to the on-sale bar. The court rejected the argument that the on-sale bar should not apply because the offer for sale occurred as a result of the accused infringer's misappropriation of the invention. *Id.* at 1452. The court reasoned that a patentee could easily protect himself from such misappropriation by timely filing an application at the patent office. In *Evans*, the patentee had waited for six years after a reduction to practice and two years after he believed the invention had been misappropriated before filing his application. *Id.* at 1454.

The court similarly rejected a "joint development" exception to the bar in *Brasseler, U.S.A. I, L.P. v. Stryker Sales Corp.*, 182 F.3d 888, 890 (Fed. Cir. 1999). The theory behind this proposed exception was that, by jointly developing the invention, the two entities (buyer and seller) are not commercializing the invention; thus, the bar should not apply. The court rejected this theory, noting that the joint development still constitutes commercial exploitation of the invention. *Id.* at 890-91.

54 . Paragon Podiatry Lab., Inc. v. KLM Labs., Inc., 984 F.2d 1182, 1185 (Fed. Cir. 1993).

55 . In the mousetrap hypothetical, if the inventor had approached the mousetrap companies for research money to further evaluate the idea, then the experimental use exception would apply. In the hypothetical, however, the inventor merely tried to sell the mousetrap to the companies.

56 . *See* Buildex Inc., v. Kason Industries, Inc., 849 F.2d 1461, 1464 (holding that a sales contract or a signed purchase order is sufficient for the invention to be on-sale). The offer for sale need not be by the inventor: an offer to

sell the invention by a third party (even an accused infringer) also invalidates the patent. *See Evans Cooling*, 125 F.3d at 1451; J.A. LaPorte, Inc. v. Norfolk Dredging Co., 787 F.2d 1577, 1581 (Fed. Cir. 1986).

57 . *See* UMC Elecs. Co. v. United States, 816 F.2d 647, 657 (Fed. Cir. 1987).

58 . *See* Micro Chem., Inc. v. Great Plains Chem. Co., 103 F.3d 1538, 1545 (Fed. Cir. 1997) (holding that an invention must be sufficiently complete to provide a "reason to expect that it would work for its intended purpose upon completion"); Robotic Vision Sys., Inc. v. View Eng'g, Inc., 112 F.3d 1163, 1167 (Fed. Cir. 1997).

59 . *UMC*, 816 F.2d at 656.

60 . *See* Ferag AG v. Quipp Inc., 45 F.3d 1562, 1566 (Fed. Cir. 1995); *UMC*, 816 F.2d at 656.

61 . *UMC*, 816 F.2d at 656.

62 . *Pfaff I*, 124 F.3d 1429, 1436 (Fed. Cir. 1997); LaBounty Mfg., Inc. v. United States Int'l Trade Comm'n, 958 F.2d 1066, 1071 n.3 (Fed. Cir. 1992).

63 . *See, e.g.*, Vincent J. Allen, Comment, *The On Sale Bar: When Will Inventors Receive Some Guidance?*, 51 Baylor L. Rev. 125 (1999); Mueller, *supra* note 29; David W. Carstens and Craig Allen Nard, *Conception and the "On-Sale" Bar*, 34 Wm. & Mary L. Rev. 393 (1993); Michael R. Schact, Note, *UMC Electronics v. United States: Should Reduction to Practice be a Requirement of the On-Sale Bar?*, 12 U. Puget Sound L. Rev. 131 (1988).

64 . *See UMC*, 816 F.2d at 652 ("Under our precedent there cannot be a reduction to practice of the invention here without a physical embodiment which includes all limitations of the claim."); Hybritech Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 1376 (Fed. Cir. 1986) ("Actual reduction to practice requires that the claimed invention work for its intended purpose." (citation omitted)).

65 . *See UMC*, 816 F.2d at 656.

66 . *See id.* at 657 ("If the inventor had merely a conception or was working towards development of that conception, it can be said there is not yet any 'invention' which could be placed on sale."); *see also* John F. Sweeney and Charles H. Sanders, *The On-Sale Bar to Patentability: Understanding the Doctrine's Past, Present, and Future*, 532 PLI/Pat 157, 164 (1998) ("The only limitation placed on this amorphous approach was that the stage of development needed to be beyond a 'mere concept of the invention.'").

67 . 816 F.2d 647 (Fed. Cir. 1987).

68 . The critical date is the date one year prior to the date the patent application is filed. *See, e.g.*, *Pfaff II*, 525 U.S. 55, 57-58 (1998) ("On April 19, 1982, petitioner, Wayne Pfaff, filed an application for a patent on a computer chip socket. Therefore, April 19, 1981, constitutes the critical date for purposes of the on-sale bar of 35 U.S.C. § 102 (b)."); *In re* Epstein, 32 F.3d 1559, 1564 n.5 (Fed. Cir. 1994) ("One year before the filing of the application is referred to as the 'critical date' for purposes of measuring the 'in public use or on sale' status."). This date marks the

point prior to which any offer for sale of an invention would invalidate the patent.

69 . *UMC*, 816 F.2d at 656.

70 . *Id.* at 655. Some commentators have suggested that this concern is "overstated." *See* Mueller, *supra* note 29, at 319. Mueller notes that "the addition of limitations, whether to avoid the potential imposition of an on-sale bar or for any other reason, can have a severe corresponding cost in terms of enforceable scope. Such trade-offs will not be made lightly." *Id.* The fact remains, however, that any reasonable patent attorney would gladly surrender claim scope in order to obtain a valid claim—a narrower but enforceable claim is of more value than an invalid one. Moreover, a reduction to practice standard is not only avoided by draftsmanship: an actual reduction to practice requires a physical embodiment of the invention as claimed. Thus, an inventor could simply not build the invention in its entirety or, if composed of numerous parts, complete each individual part without constructing the invention as a whole.

71 . *UMC*, 816 F.2d at 655 n.9.

72 . *Id.*

73 . *Id.* at 656.

74 . 98 F.3d 1318 (Fed. Cir. 1996).

75 . *Id.* at 1321.

76 . *Id.*

77 . *Id.* at 1324 (citations omitted and emphasis added). In a concurrence, Circuit Judge Bryson disagreed with this statement of the law. Instead, in his view, the proper test is "if the sale or offer in question embodies the invention for which a patent is later sought, a sale or offer to sell that is primarily for commercial purposes and that occurs more than one year before the application renders the invention unpatentable." *Seal-Flex*, 98 F.3d at 1325 (Bryson, J., concurring).

78 . General Elec. Co. v. United States, 654 F.2d 55, 62 (Ct. Cl. 1981); *see also* UMC Elecs. v. United States, 816 F.2d 647, 659 (Fed. Cir. 1987) (Smith, J., dissenting) (noting "[a] device must be in existence and shown to work for its intended purpose (the classical definition of reduction to practice)").

79 . *See* Mueller, *supra* note 29, at 311 ("This definition comports with an actual reduction to practice. Thus, the majority's opinion in *Seal-Flex* harkened back to pre-*UMC* doctrine requiring an actual reduction to practice.").

80 . 103 F.3d 1538 (Fed. Cir. 1997).

81 . 103 F.3d at 1540.

82 . *Id.* at 1544-45.

83 . *See id.* at 1545.

84 . *Id.* at 1545 (emphasis added).

85 . *Pfaff I*, 124 F.3d 1429, 1433 (Fed. Cir. 1997).

86 . *See* Pfaff v. Wells Elecs., Inc., 884 F.2d 1399 (Fed. Cir. 1989) (Table).

87 . *See Pfaff I*, 124 F.3d at 1432.

88 . *Id.*

89 . *Pfaff I*, 124 F.3d at 1433.

90 . *See UMC*, 816 F.2d at 651-52 ("It is not sufficient for a reduction to practice that Weaver built and tested only a part of the later-claimed model UMC-B accelerometer.").

91 . *Pfaff I*, 124 F.3d at 1434.

92 . *Id.* at 1434 (quoting from the district court's decision).

93 . *Id.*

94 . *Id.*

95 . *Id.*

96 . *Id.* at 1435.

97 . *Id.*

98 . *Id.* at 1437.

99 . *Id.* at 1439.

100 . *Id.*

101 . Of course, because the court found that what was offered for sale was substantially complete, such language would have been dicta.

102 . *Pfaff II*, 525 U.S. 55, 65-66 (1998).

103 . *Pfaff II*, 525 U.S. at 60.

104 . *Id.* at 66.

105 . *Id.* at 61.

106 . 126 U.S. 1 (1888).

107 . *Pfaff II*, 525 U.S. at 61.

108 . *See id.* at 62-63.

109 . *Pfaff II*, 525 U.S. at 65-66 ("A rule that makes the timeliness of an application depend on the date when an invention is 'substantially complete' seriously undermines the interest in certainty. Moreover, such a rule finds no support in the text of the statute.").

110 . *Id.* at 66 ("Thus, petitioner's argument calls into question the standard applied by the Court of Appeals, but it does not persuade us that it is necessary to engraft a reduction to practice element into the meaning of the term 'invention' as used in § 102(b).").

111 . *See Pfaff II*, 525 U.S. at 67.

112 . *Id.* at 67-68.

113 . *See Pfaff II*, 525 U.S. at 61-63 (discussing The Telephone Cases, 126 U.S. 1, 535-536 (1888)).

114 . *See, e.g.*, Hybritech, Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 1376 ("[C]onstructive reduction to practice occurs when a patent application on the claimed invention is filed.").

115 . *See Pfaff II*, 525 U.S. at 68.

116 . *Id.*

117 . *See supra* notes 5662- and accompanying text.

118 . *See Pfaff II*, 525 U.S. at 67 ("An inventor can both understand and control the timing of the first commercial marketing of his invention. . . . [W]e perceive no reason why unmanageable uncertainty should attend a rule that measures the application of the on-sale bar of § 102(b) against the date when an invention that is ready for patenting

is first marketed commercially.").

119 . *See supra* notes 6265- and accompanying text.

120 . The diagrams lacked the "barb element" that was claimed in claims 11 and 19; thus, all of the elements in the claim were not present in the diagrams. *See Pfaff I*, 124 F.3d 1429, 1435 (Fed. Cir. 1997).

121 . *Pfaff II*, 525 U.S. at 68.

122 . The Federal Circuit has confirmed the continued viability of the third prong, notwithstanding the Supreme Court's failure to expressly address the issue. *See* Tec Air, Inc. v. Denso Mfg. Michigan, Inc., 192 F.3d 1353, 1358 (Fed. Cir. 1999) ("If this subject matter anticipates the claimed invention or would have rendered it obvious, the invention itself must also have been 'ready for patenting' at the time of the offer for sale."); Scaltech Inc. v. Retec/ Tetra, L.L.C., 178 F.3d 1378, 1383 (Fed. Cir. 1999) ("Hence, the first determination in the § 102(b) analysis must be whether the subject of the barring activity met each of the limitations of the claim, and thus was an embodiment of the claimed invention.").

123 . *Id.* at 60 ("The other two claims (11 and 19) described a feature that had not been included in Pfaff's initial design, but the Court of Appeals concluded as a matter of law that the additional feature was not itself patentable because it was an obvious addition to the prior art. Given the court's § 102(b) holding, the prior art included Pfaff's first four claims." (footnote omitted, citing § 103)).

124 . *See Pfaff II*, 525 U.S. at 65-66 ("A rule that makes the timeliness of an application depend on the date when an invention is 'substantially complete' seriously undermines the interest in certainty. Moreover, such a rule finds no support in the text of the statute." (footnote omitted)).

125 . I include, for ease of reference, the U.S. Court of Federal Claims in the term "district courts."

126 . Micro Chem., Inc. v. Great Plains Chem. Co., 103 F.3d 1538, 1544 (Fed. Cir. 1997).

127 . *See infra* notes 128147- and accompanying text.

128 . Weatherchem Corp. v. J.L. Clark, Inc., 163 F.3d 1326 (Fed. Cir. 1998).

129 . *Id.* at 1332-33.

130 . *See supra* notes 5662- and accompanying text.

131 . Weatherchem Corp. v. J.L. Clark, Inc., 163 F.3d 1326, 1333 (Fed. Cir. 1998).

132 . *Compare Weatherchem*, 163 F.3d at 1333-34 *with Pfaff I*, 124 F.3d 1429, 1434 (Fed. Cir. 1997) ("Pfaff had completed engineering drawings accurately depicting the patented invention . . . ."); King Instrument Corp. v. Otari Corp., 767 F.2d 853, 861 (Fed. Cir. 1985) ("[T]he assembly drawing of the '358 horizontal shift block device was

prepared [prior to the critical date].”); Western Marine Elecs., Inc. v. Furuno Elec. Co., 764 F.2d 840, 842, 846 (Fed. Cir. 1985) (noting as relevant to the analysis “production drawings . . . showing parts critical to the stabilization function; . . .” and “Documents show[ing] that certain parts drawings had been made . . . .”).

133 . *Compare Weatherchem*, 163 F.3d at 1334 *with Pfaff I*, 124 F.3d at 1434 *and* Seal-Flex, Inc. v. Athletic Track and Court Const., 98 F.3d 1318, 1323 (noting as relevant “the inventor’s uncertainty as to the status of the Beloit track”); Shatterproof Glass Corp. v. Libbey-Owens Ford Co., 758 F.2d 613, 622 (Fed. Cir. 1985) (“The product of these first tests was described by Shatterproof’s vice-president as ‘frightening,’ and by inventor Wan as ‘useless.’”).

134 . *Compare Weatherchem*, 163 F.3d at 1334 and STX, Inc. v. Brine, Inc., 37 F. Supp. 2d 740, 762 n.6 (D. Md. 1997), *aff’d* 211 F.3d 588 (Fed. Cir. 2000) (noting as relevant that the buyer “ordered a ‘commercial quantity of the invention’”) *with Pfaff I*, 124 F.3d at 1434 *and* Barmag Barmer Maschinenfabrik AG v. Murata Machinery, Ltd., 731 F.2d 831, 839 (“[B]ased on these tests, Burlington placed an order amounting to three-quarters of a million dollars.”).

135 . *Compare Weatherchem*, 163 F.3d at 1334 and *STX*, 37 F. Supp. at 762 n.6 (noting as relevant that “STX was able to produce the Excaliburs contemporaneously with the commercial sale of the invention.”) *with Pfaff I*, 124 F.3d at 1434 *and Western Marine*, 764 F.2d at 842-43, 846 (noting that “invoices and delivery receipts . . . showing the manufacture and delivery . . . of parts necessary for Wesmar to construct the stabilized sonar devices; . . .” “Documents show that . . . machined parts had been received by Wesmar from a machinist. . . .”). The true holding in *STX*, however, is that the invention was reduced to practice, rendering the “ready for patenting” discussion dicta. *See STX*, 37 F. Supp. 2d at 761-62 (“[T]he evidence of record establishes as a matter of law that STX’s manufacturer delivered Excalibur lacrosse heads to STX on the very day of the sale to Brine’s and that *nothing new whatsoever was developed and incorporated into the invention after the first manufacture*.” (emphasis added)).

136 . *See supra* notes 132135-.

137 . Chemical Separation Tech., Inc. v. United States, 45 Fed. Cl. 513, 518 (1999).

138 . *See id.* at 518-519; *cf. Seal-Flex*, 98 F.3d at 1324 (“The trier of fact must determine . . . whether the inventor was continuing to develop and evaluate the invention; . . .” “[w]e do not, of course, hold that an inventor may avoid the on-sale bar while engaging in commercial activity, simply by continuing to make improvements in the commercialized invention”); Barmag Barmer Maschinenfabrik AG v. Murata Machinery, Ltd., 731 F.2d 831, 838 (Fed. Cir. 1988) (“It is also immaterial that modifications were made . . . . No change was made that concerns limitations in the claims.”); Baker Oil Tools, Inc. v. Geo Vann, Inc., 828 F.2d 1558, 1562, 1563 (Fed. Cir. 1987) (“Claim 1, the parties agree, includes a limitation based on the change in the gravel packer apparatus after the critical date. . . . Whether the change in the devices is ‘material’ is a factual matter; . . .” “The law recognizes the inventor’s need to test the invention, to ascertain whether the work is complete or further changes should be made . . . .”). Under *Weatherchem*, fine tuning does not preclude the bar, *Weatherchem*, 163 F.3d at 1334, but undisputedly if the invention is in the experimental stages, the bar does not apply. *See Pfaff II*, 525 U.S. 55, 64-65 (1998).

139 . *Chemical Separation*, 45 Fed. Cl. at 519 (citing LaBounty Mfg., Inc. v. United States Int’l Trade Comm’n, 958 F.2d 1066, 1074 (Fed. Cir. 1992) for the proposition that “a money-back guarantee is a typical commercial sales provision and does not establish an experimental relationship between the parties”).

140 . *See Weatherchem*, 163 F.2d at 1333; *see also* Brasseler, U.S.A., I, L.P. v. Stryker Sales Corp., 182 F.3d 888,

889-90 (Fed. Cir. 1999).

141 . *See* STX, LLC. v. Brine, Inc., 211 F.3d 588, 590 (Fed. Cir. 2000) ("The overriding concern of the on-sale bar is an inventor's attempt to commercialize his invention beyond the statutory term."); Abbott Labs. v. Geneva Pharms., Inc., 182 F.3d 1315, 1319 (Fed. Cir. 1999) ("One of the primary purposes of the on-sale bar is to prohibit the withdrawals of inventions that have been placed into the public domain through commercialization.").

142 . *See Abbott Labs.*, 182 F.3d at 1318. The Federal Circuit held, somewhat quixotically, that the invention had been reduced to practice even though it had yet to be conceived. *See id.* ("We disagree that proof of conception was required. The fact that the claimed material was sold under circumstances in which no question existed that it was useful, means that it was reduced to practice. In any event, this is not a priority dispute in which conception is a critical issue."); *see also id.* at 1319 ("If a product that is offered for sale inherently possesses each of the limitations of the claims, then the invention is on sale, whether or not the parties to the transaction recognize that the product possesses the claimed characteristics."); *see generally* Nicole Marie Fortune, Note, Scaltech Inc. v. Retec/Tetra L.L. C. *and* Abbott Laboratories v. Geneva Pharmaceuticals, Inc., 15 Berkeley Tech. L.J. 185 (2000).

143 . 182 F.3d 1315 (Fed. Cir. 1999).

144 . *Id.* at 1317.

145 . *Id.*

146 . *See* Amgen, Inc. v. Chugai Pharm. Co., 927 F.2d 1200, 1206 (Fed. Cir. 1991) ("Conception requires both the idea of the invention's structure and possession of an operative method of making it.").

147 . *Abbott*, 182 F.3d at 1318-19.

148 . *See, e.g.*, Space Systems/Loral, Inc. v. Lockheed Martin, 1999 WL 1278382 (N.D. Cal. 1999); Lacks Indus., Inc. v. McKechnie Vehicle Components USA, Inc., 55 F. Supp. 2d 702 (E.D. Mich. 1999).

149 . *Pfaff II*, 525 U.S. 55, 66 (1998) (emphasis added).

150 . 55 F. Supp.2d 702 (E.D. Mich. 1999).

151 . *Lacks*, 55 F. Supp. 2d at 734 (citations omitted); *see also* A.K. Stamping Co. v. Instrument Specialties Co., Inc., 106 F. Supp. 2d 627, 639 (D. N.J. 2000) ("'Invention,' for purposes of the patent statutes, refers to an inventor's complete concept, rather than a finished product reduced to practice."); Altech Controls Corp. v. E.I.L. Instruments, Inc., 71 F. Supp. 2d 661, 664-65 ("Nevertheless, the 'invention' requires that the concept be complete, not merely 'substantially' complete."). In *A.K. Stamping*, the district court held that there were general issues of material fact regarding whether there was an offer for sale, and thus the court never addressed the "ready for patenting" prong of the on-sale bar test. *See A.K. Stamping*, 106 F. Supp. 2d at 641, n.19.

152 . *Lacks*, 55 F. Supp. 2d at 735.

153 . 1999 WL 1278382 (N.D. Cal. 1999). The author notes that he was counsel to Space Systems/Loral in this case.

154 . *Space Systems*, 1999 WL 1278382, at *6.

155 . *Id.* at *8.

156 . *Id.* at *8 (quoting Coleman v. Dines, 754 F.2d 353, 359 (Fed. Cir. 1985) (other citations omitted)).

157 . 182 F.3d 1315 (Fed. Cir. 1999).

158 . *Id.* at 1317 ("[A]t the time of the sales, the parties to the United States transactions did not know the identity of the particular crystalline form with which they were dealing. It was not until after the United States sales transactions were completed that Abbott and Geneva each tested samples from these lots and determined that the Form IV anhydrate crystal was what had been sold.").

159 . *Id.* at 1318-19 (emphasis added). Commentators have noted that "there is a structural inconsistency in the *Pfaff* test in having a 'proof of reduction to practice' as one of the ways 'ready for patenting' can be shown. Indeed, an invention inadvertently created is reduced to practice although no one has as yet determined its patent-worthy features." Fortune, *supra* note 142, at 197. This inconsistency is generally only relevant in the chemical context, where a compound could inadvertently be created but nevertheless be reduced to practice. As the invention was unrecognized in this case, however, the better approach in the chemical context may be that as "entirely unrecognized inventions," *id.* at 202, then the bar should not apply. Generally, this issue is precisely the problem with a "conception only" test—the "ready for patenting" test would be satisfied before anyone had determined whether it was patent worthy.

160 . *See, e.g.*, Tec Air, Inc. v. Denso Mfg. Mich., Inc., 192 F.3d 1353, 1358 (Fed. Cir. 1999); Evans Cooling Sys. v. General Motors Corp., 125 F.3d 1448, 1450 (Fed. Cir. 1997); *Pfaff I*, 124 F.3d 1429, 1436 (Fed. Cir. 1997).

161 . South Corp. v. United States, 650 F.2d 1368, 1370 (Fed. Cir. 1982) (en banc) (adopting precedent of the United States Court of Claims and United States Court of Customs and Patent Appeals as binding).

162 . 343 F.2d 980 (C.C.P.A. 1965).

163 . *Foster*, 343 F.2d at 990.

164 . *Id.*

165 . *See Pfaff II*, 525 U.S. 55, 60 (1998) ("Given the court's § 102(b) holding, the prior art included Pfaff's first four claims."); UMC Elecs. Co. v. United States, 816 F.2d 647, 656 (Fed. Cir. 1987) (noting that the on-sale bar applies if "the subject matter of the sale or offer to sell . . . would have rendered the claimed invention obvious by its addition to the prior art"); Baker Oil Tools, Inc. v. Geo Vann, Inc., 828 F.2d 1558, 1563 (Fed. Cir. 1987).

166 . *See* OddzOn Prods., Inc. v. Just Toys, Inc., 122 F.3d 1396, 1401-02 (Fed. Cir. 1997) (noting that "[s]ubsections

(a), (b), (e), and (g) . . . are clearly prior art provisions" and holding that subsection (f) "is a prior art provision"). In contrast, "[s]ubsections (c) and (d) are loss-of-right provisions," the former causing forfeiture of a patent if the inventor abandons the invention and the latter if the inventor delays too long in filing in the United States after filing elsewhere. *Id.* at 1402.

167 . *See OddzOn Prods.*, 122 F.3d at 1402; Kimberly-Clark Corp. v. Johnson & Johnson, 745 F.2d 1437, 1453 (Fed. Cir. 1984).

168 . 35 U.S.C. § 102(a) (1994).

169 . 35 U.S.C. § 102(b) (1994).

170 . This section has been dubbed "secret prior art" because, prior to the issuance of the prior art patent, the present inventor does not know of the existence of the other co-pending application because pending applications are confidential. *See* 35 U.S.C. § 122; *see also* Baxter Int'l, Inc. v. Cobe Labs., Inc., 88 F.3d 1054, 1062 (Fed. Cir. 1996) (Newman, J., dissenting); Hazeltine Research, Inc. v. Brenner, 382 U.S. 252, 254-55 (1966) (holding that a § 102(e) co-pending application is "prior art" for the purposes of obviousness under § 103). The rationale for this rule is that "the patent text remains secret while the patent application is pending, but after the patent is issued its subject matter is deemed to be prior art *as of its filing date*." *Baxter Int'l*, 88 F.3d at 1062 (Newman, J., dissenting) (emphasis added). This problem will be ameliorated in part by the November 1999 amendments to 35 U.S.C. § 122, that provide for the publication of applications after 18 months. *See* Pub. L. 106-113, Div. B, § 1000(a)(9).

171 . *OddzOn Prods.*, 122 F.3d at 1401.

172 . *See, e.g.*, Manual of Patent Examining Procedure § 901.06 (Version 7.0 July 1998) ("All printed publications may be used as references."); *In re* Epstein, 32 F.3d 1559, 1562-63, 1568 (Fed. Cir. 1994) (using a database product brochure and seminar book as prior art).

173 . *See e.g.*, *In re* Donohoe, 766 F.2d 531, 533 (Fed. Cir. 1985); Helifix Ltd. v. Blok-Lok, Ltd., 208 F.3d 1339, 1348 (Fed. Cir. 2000).

174 . Paperless Accounting, Inc. v. Bay Area Rapid Transit System, 804 F.2d 659, 665 (Fed. Cir. 1986) ("The correct role of the [unenabled] foreign publication in such case is as a reference under § 103."). Indeed, because the question of obviousness arises only when the invention is not disclosed in a single prior art reference, it would be impossible for a single prior art reference to be enabling of the invention: part of the invention is missing from the reference's disclosure.

175 . *See, e.g.*, Ferag AG v. Quipp, Inc., 45 F.3d 1562, 1568 (Fed. Cir. 1995) ("Indeed, an offer or sale may invoke the statutory bar 'even though no details are disclosed.'" (quoting RCA Corp. v. Data General Corp., 887 F.2d 1056, 1060 (Fed. Cir. 1989))); La Porte, Inc. v. Norfolk Dredging Co., 787 F.2d 1577, 1582 (Fed. Cir. 1982).

176 . There are other exceptions to the general rule that prior art be generally available to the public. As discussed *supra* note 170, the "secret prior art" of § 102(e) is not available to the public until the patent issues or, in the future, until 18 months after the application is filed. Also, material falling under 35 U.S.C. § 102(f) may not be publicly

known because it "applies to private communications between the inventor and another which never may become public." *OddzOn*, 122 F.3d at 1401-02.

177 . *See In re* Epstein, 32 F.3d 1559, 1568 (Fed. Cir. 1994).

178 . *See Paperless Accounting*, 804 F.2d at 665.

179 . *See Pfaff II*, 525 U.S. 55, 60 (1998) ("The other two claims (11 and 19) described a feature that had not been included in Pfaff's initial design, but the Court of Appeals concluded as a matter of law that the additional feature was not itself patentable because it was an obvious addition to the prior art. Given the court's § 102(b) holding, the prior art included Pfaff's first four claims."). The court's holding, however, never addresses the obviousness variant of the on-sale bar present and instead merely held that "those sockets contained all the elements of the invention claimed in the '377 patent." *Id.* at 68.

180 . *See, e.g.*, Tec Air, Inc. v. Denso Mfg. Mich., Inc., 192 F.3d 1353, 1358 (Fed. Cir. 1999) ("If this subject matter anticipates the claimed invention or would have rendered it obvious, the invention itself must also have been 'ready for patenting' at the time of the offer for sale."). In *Tec Air*, the Federal Circuit concluded that the subject of the offer for sale did not anticipate or render obvious the claimed invention, so it never reached the ready for patenting test. *See id.* at 1359 ("However, because the offer for sale did not involve subject matter that either anticipates the invention or would have rendered it obvious, *Pfaff*'s second prong is irrelevant.").

181 . *Pfaff II*, 525 U.S. at 60.

182 . 35 U.S.C. § 112 (1994).

183 . *Pfaff II*, 525 U.S. at 67-68.

184 . Indeed, the patent law seems to already have two distinct "enablement requirements"—one for proof of conception. *See* Coleman v. Dines, 754 F.2d 353, 359 (Fed. Cir. 1985) ("Conception must be proved by corroborating evidence which shows that the inventor disclosed to others his 'completed though expressed in such clear terms as to *enable those skilled in the art' to make the invention*." (quoting Field v. Knowles, 183 F.2d 593, 601 (C.C.P.A. 1950) (emphasis added))), and one for § 112. Although the Federal Circuit has stated that these concepts are "distinct," Burroughs Wellcome Co. v. Barr Labs., Inc., 40 F.3d 1223, 1231 (Fed. Cir. 1994), commentators and the Federal Circuit's predecessor court, the C.C.P.A., both have suggested that they may actually be the same standard. *See* 3 Donald S. Chisum, Chisum on Patents § 10.04[3] (1997) ("Indeed, the requirement of a manifested conception is often treated as identical to that of the requirement of enablement for a patent specification."); Spero v. Ringold, 377 F.2d 652, 660 (C.C.P.A. 1967) ("In this light, the standard for proving conception is not essentially different from that required for proving reduction to practice or *adequacy of support in a disclosure for a claim*." (emphasis added)).

185 . *See* 35 U.S.C. § 101 (1994) (requiring a "new and *useful* process, machine, manufacture, or composition of matter, or any new and *useful* improvement thereof" (emphasis added)).

186 . *See* Estee Lauder Inc. v. L'Oreal, S.A., 129 F.3d 588, 593 (Fed. Cir. 1997) ("[T]he 'utility requirement is

satisfied when an inventor has learned enough about the product to justify the conclusion that it is useful for a specific purpose.'" (citation omitted)).

187 . *See* Chiron v. Abbott Labs, 902 F. Supp. at 1121 (N.D. Cal 1995).

188 . Process Control Corp. v. Hydreclaim Corp., 190 F.3d 1350, 1358 (Fed. Cir. 1999) ("If a patent claim fails to meet the utility requirement because it is not useful or operative, then it also fails to meet the how-to-use aspect of the enablement requirement.").

189 . *See In re* Ziegler, 992 F.2d 1197, 1200-01 (Fed. Cir. 1993) ("The how to use prong of section 112 incorporates as a matter of law the requirement of 35 U.S.C. § 101 that the specification disclose as matter of fact a practical utility for the invention. If the application fails as a matter of fact to satisfy 35 U.S.C. § 101, then the application also fails as a matter of law to enable one of ordinary skill in the art to use the invention under 35 U.S.C. § 112."); *see also In re* Cortright, 165 F.3d 1353, 1356 (Fed. Cir. 1999) (quoting *Ziegler*).

190 . Genentech, Inc. v. Novo Nordisk A/S, 108 F.3d 1361, 1365 (Fed. Cir. 1997) (quoting *In re* Wright, 999 F.2d 1557, 1561 (Fed. Cir. 1993)).

191 . *Pfaff II*, 525 U.S. 55, 67-68 (1998) (noting that the "ready for patenting" test can be satisfied with "drawings or other descriptions of the invention that were sufficiently specific to enable a person skilled in the art to practice the invention"); *see also* Imron T. Aly, *Seller Beware: The Scope of the On Sale Bar After* Pfaff v. Wells, 7 Tex. Intell. Prop. L.J. 403, 417 (1999) ("Yet, both suggested the 'ready for patenting' standard that, in essence, relies upon language from Section 112 to determine the triggering of 102(b)."). Aly contends that the "ready for patenting" test suffers from a lack of certainty, even with the use of § 112, because it is retrospective in nature. *Id.* at 417-18. This assertion ignores the fact that patentees routinely have to make the enablement determination prospectively, i.e., in order to determine when or if to file a patent application. Enablement is viewed from one of skill in the art. As one so skilled, an inventor should have the perspective and insight to know whether another skilled in the art would understand the how to practice the invention.

In contrast, the "substantially complete" standard was never interpreted from the perspective of one skilled in the art. Instead, the objective inquiry was whether there is reason to expect the invention to work, but the test seems to be in absolute terms and not with respect to one skilled in the art. As such, an enablement requirement, both by providing a wealth of precedent to inform the inquiry and by shifting the perspective of the on-sale bar to being that of one skilled in the art, will add certainty to the law. Thus, the enablement standard does afford greater prospective predictability than that of the "substantially complete" standard.

Aly proposes an "able to be reduced to practice standard," i.e., whether "the inventor believed that work on the invention was finished at the time of sale." *Id.* at 420. Such a test, however, would remove all objectivity from the on-sale bar test. Instead, the test would be based on the subjective view (right or wrong) of the inventor as to whether she believed the invention was finished. This test would seem unfair to other inventors and potential competitors/ infringers*:* such persons would have to interview the inventor to assess whether the invention was on-sale. Inventors likely would be less than willing to accommodate a prospective competitor in such a way. In addition to questions of fairness, the "able to be reduced to practice" standard ignores that the bar can be triggered by third-party commercial activity, i.e., activity by someone other than the inventor. In this context, who would be the "inventor"? From whose perspective would the bar be judged? Such a person may be difficult, and in some cases impossible, to identify. Thus, for third-party activity, the lack of an objective standard could be fatal.

Aside from the loss of objectivity, this proposed new test would also prove difficult to implement because it requires determining the subjective belief of the inventor—a rather difficult evidentiary burden. Likely, testimony such as that present in *Pfaff* and *Weatherchem* by confident inventors will disappear. The inventor will simply state that she did not believe the invention was completed. Disproving this belief could be rather difficult, and attempting to read the mind of the inventor could make such a standard unworkable. Moreover, demonstrating that the inventor was finished could also be challenging in the context of joint inventors—one inventor may have considered the invention finished, while another may not. The test fails to provide any means to discern which inventor's belief would be controlling. Thus, due to greater objectivity and significant improvements in prospective predictability, use of § 112 to determine the on-sale bar would seem a better approach.

192 . *See* Hybritech, Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 1376 (Fed. Cir. 1986).

193 . 208 F.3d 1339 (Fed. Cir. 2000).

194 . *Id.* at 1349-50.

195 . *Id.* at 1350.

196 . *See id.* at 1348.

197 . *See id.* at 1350. The court also concluded that nothing else in the record provided an enabling description and that the accused infringer had failed to demonstrate that the invention had been reduced to practice.

198 . *See In re* Epstein, 32 F.3d 1559, 1568 (Fed. Cir. 1994) ("Beyond this 'in public use or on sale' finding, there is no requirement for an enablement-type inquiry.").

199 . *See In re* Donohoe, 766 F.2d 531, 533 (Fed. Cir. 1985) ("[E]ven if the claimed invention is disclosed in a printed publication, that disclosure will not suffice as prior art if it was not enabling."); *see also Helifix*, 208 F.3d at 1348.

200 . *See* Hybritech, Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 1376 (Fed. Cir. 1986).

201 . Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1459 (Fed. Cir. 1998) (en banc).

202 . Wilson Sporting Goods Co. v. David Geoffrey & Assocs., 904 F.2d 677, 684 (Fed. Cir. 1990).

203 . *Id.*

204 . *Id.* at 684.

205 . *Id.* at 684-85.

206 . *See* Key Mfg. Group, Inc. v. Microdot, Inc., 925 F.2d 1444, 1449 (Fed. Cir. 1991) ("The *Wilson* hypothetical claim analysis does not envision application of a fullblown patentability analysis to a hypothetical claim.").

207 . UMC Elecs. Co. v. United States, 816 F.2d 647, 655 (Fed. Cir. 1987).

208 . *See id.*

209 . *See In re* Epstein, 32 F.3d 1559, 1568 (Fed. Cir. 1994) (noting that enablement, for both § 112 and prior art purposes, is a "question of law reviewed *de novo*, which may involve subsidiary questions of fact reviewed for clear error"). Utility under § 101, however, is a question of fact. *See* Moleculon Research Corp. v. CBS, Inc., 793 F.2d 1261, 1268 (Fed. Cir. 1986).

210 . *See* Seal-Flex, Inc. v. Athletic Track and Court Constr., 98 F.3d 1318, 1324 (Fed. Cir. 1996) ("The trier of fact must determine whether the invention was completed and known to work for its intended purpose . . . .").

211 . *E.g.*, Personalized Media Communications, L.L.C. v. Int'l Trade Comm'n, 161 F.3d 696, 705 (Fed. Cir. 1998) ("A determination of claim indefiniteness is a legal conclusion that is drawn from the court's performance of its duty as the construer of patent claims." (citation omitted)); Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1456 (Fed. Cir. 1998) (en banc) ("[W]e therefore reaffirm that, as a purely legal question, we review claim construction de novo on appeal including any allegedly fact-based questions relating to claim construction."); *cf.* Suntiger, Inc. v. Scientific Research Funding Group, 189 F.3d 1327, 1338 (Fed. Cir. 1999) (Lourie, J., dissenting) (dissenting from decision not to reverse the *denial* of summary judgment, noting "[t]his is not an issue concerning which testimony is necessary to explain complex language, or one where the demeanor of witnesses might matter. We can read the patent.").

212 . *See* Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1583 (Fed. Cir. 1996) (holding that it is improper to consider extrinsic evidence, such as expert testimony, if the intrinsic evidence (i.e., the claim language, specification, and prosecution history) is unambiguous).

213 . *See, e.g.*, Process Control Corp. v. Hydreclaim Corp., 190 F.3d 1350, 1358 n.2 (Fed. Cir. 1999); Harris Corp. v. IXYS Corp., 114 F.3d 1149, 1155-56 (Fed. Cir. 1997).

214 . *See* 35 U.S.C. § 112 (1994) ("The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same . . . ."); Genentech, Inc. v. Novo Nordisk A/S, 108 F.3d 1361, 1365 (Fed. Cir. 1997) ("To be enabling, the specification of a patent must teach those skilled in the art how to make and use the full scope of the claimed invention without 'undue experimentation.'"(citation omitted)).

215 . *See Process Control*, 190 F.3d at 1359; *Harris*, 114 F.3d at 1155-56.

216 . *See Pfaff II*, 525 U.S. 55, 68 (1998); Weatherchem Corp. v. J.L. Clark, Inc., 163 F.3d 1326, 1334 (Fed. Cir. 1998); *see also* STX, Inc. v. Brine, Inc., 37 F. Supp. 2d 740, 762 n.6, *aff'd* 211 F.3d 588 (Fed. Cir. 2000).

217 . *See, e.g.*, Bruning v. Hirose, 161 F.3d 681, 686 (Fed. Cir. 1998); Brooktree Corp. v. Advanced Micro Devices, Inc., 977 F.2d 1555, 1571-73 (Fed. Cir. 1992).

218 . *In re* Wands, 858 F.2d 731, 736-37 (Fed. Cir. 1988).

219 . *Id.* at 737.

220 . *In re* Angstadt, 537 F.2d 498, 504 (C.C.P.A. 1976).

221 . *Wands*, 858 F.2d at 737.

222 . *Id.* at 731, 737.

223 . Amgen, Inc. v. Chugai Pharm. Co., 927 F.2d 1200, 1213 (Fed. Cir. 1991).

224 . *Wands*, 858 F.2d at 737 ("Whether undue experimentation is needed is not a single, simple factual determination, but rather is a conclusion reached by weighing many factual considerations.").

225 . *See, e.g.*, Process Control Corp. v. Hydreclaim Corp., 190 F.3d 1350, 1359 (Fed. Cir. 1999); Harris Corp. v. IXYS Corp., 114 F.3d 1149, 1155-56 (Fed. Cir. 1997).

226 . *See* Weatherchem Corp. v. J.L. Clark, Inc., 163 F.3d 1326, 1334 (Fed. Cir. 1998).

227 . An inventor may still have incentive to make such assertions if, for example, the inventor is attempting to establish an earlier date of invention to pre-date possible prior art references.

228 . *Pfaff II*, 525 U.S. 55, 66 (1998) ("The word 'invention' must refer to a concept that is complete, rather than merely one that is 'substantially complete.'").

229 . *Id.* at 67.

230 . The exception to this general rule occurs in the chemical context, where compounds may accidentally and unknowingly be produced. Until the chemical is described, there can be no conception. *See* Oka v. Youssefyeh, 849 F.2d 581, 583 (Fed. Cir. 1988). In such circumstances, there may be a simultaneous conception and reduction to practice. *See* Amgen, Inc. v. Chugai Pharm. Co., 927 F.2d 1200, 1207 (Fed. Cir. 1991).

231 . *See* Brief of Amicus Curiae for the Patent, Trademark & Copyright Section of the Bar Association of the District of Columbia in Support of Affirmance, Pfaff v. Wells Electronics, Inc., 1998 WL 246712 at *8 (1998).

232 . *Pfaff II*, 525 U.S. at 68 n.14 (quoting brief of Solicitor General).

233 . *Id.*

234 . *The Telephone Cases*, 126 U.S. 1, 535 (1888).

235 . *Id.* at 535 (emphasis added).

236 . *See id.* at 534 ("Bell was the first to discover this fact, and how to put such a current in such a condition.").

237 . *See id.* at 535 ("While it is conceded that he was acting on the right principle and had adopted the true theory, it is claimed that the discovery lacked the practical development which was necessary to make it patentable.").

238 . Burroughs Wellcome Co. v. Barr Labs., Inc., 40 F.3d 1223, 1231 (Fed. Cir. 1994) .

239 . Hybritech Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 1376 (Fed. Cir. 1986).

240 . *Burroughs Wellcome*, 40 F.3d at 1228.

241 . *Id.* at 1228 (emphasis added); *see also* Chiron Corp. v. Abbott Labs., 902 F. Supp. 1103, 1119 (N.D. Cal. 1995) (noting that "an inventor need not know or demonstrate that the invention actually works for conception to be complete.").

242 . This difficulty has already been identified as a risk under the "ready for patenting" standard generally, prior to the articulation of a "conception alone" test. *See* Isabelle R. McAndrews, *The On-Sale Bar After* Pfaff v. Wells, Electronics*: Towards A Bright-Line Rule*, 81 J. Pat. & Trademark Off. Soc'y 155, 174 (1999); Vincent J. Allen, Comment, *The On-Sale Bar: When Will Inventors Receive Some Guidance*, 51 Baylor L. Rev. 125, 145 (1999). As the analysis *supra* at notes 128148- and accompanying text suggests, the ready for patenting test in its present incarnation seems to have changed little. If the posited enablement standard is used, then there should be no problem because the inventor necessarily has a description of the invention of sufficient detail to file a patent at the Patent and Trademark Office. The conception alone test, however, would drive inventors to the Office with only the idea and no additional development.

243 . John F. Sweeney & Charles H. Sanders, *The On-Sale Bar to Patentability: Understanding the Doctrine's Past, Present, and Future*, 532 PLI/Pat. 157, 174 (1998).

244 . *Id.* at 174.

245 . S*ee* Weatherchem Corp. v. J.L. Clark, Inc., 163 F.3d 1326, 1333 (Fed. Cir. 1998).

246 . UMC Elecs. Co. v. United States, 816 F.2d 647, 652 (Fed. Cir. 1987); *see also* Seal-Flex, Inc. v. Athletic Track and Court Constr., 98 F.3d 1318, 1322 (Fed. Cir. 1996) (citing Envirotech Corp. v. Westech Eng'g, Inc., 904 F.2d 1571, 1574 (Fed. Cir. 1990)) (noting that the on-sale bar provides "a balance of the policies of allowing the inventor a reasonable amount of time to ascertain the commercial value of an invention, while requiring prompt entry into the patent system after sales activity has begun.").

247 . *See supra* note 241 and accompanying text.

248 . *UMC*, 816 F.2d at 656, 660 (Smith, J., dissenting) ("The public interest is not served by a system that wastes the resources of inventors . . . or by 'the waste of Patent Office resources in processing halfbaked inventions.'" (citation omitted)) (quoting Gould Inc. v. United States, 579 F.2d 571, 584 (Ct. Cl. 1978) (Nichols, J., dissenting)).

249 . *See, e.g.*, Kolmes v. World Fibers Corp., 107 F.3d 1534, 1540 (Fed. Cir. 1997).

250 . *See supra* notes 160165- and accompanying text.

251 . Baker Oil Tools, Inc. v. Geo Vann, Inc., 828 F.2d 1558, 1563 (Fed. Cir. 1987).

252 . *See UMC*, 816 F.2d at 656.

253 . *See Pfaff I*, 124 F.3d 1429, 1435-37 (Fed. Cir. 1997).

254 . *UMC*, 816 F.2d at 652; *see also* Seal-Flex, Inc. v. Athletic Track & Court Constr., 98 F.3d 1318, 1322 (Fed. Cir. 1996) (citing Envirotech Corp. v. Westech Eng'g, Inc., 904 F.2d 1571, 1574 (Fed. Cir. 1990)) (noting that the on-sale bar provides "a balance of the policies of allowing the inventor a reasonable amount of time to ascertain the commercial value of an invention, while requiring prompt entry into the patent system after sales activity has begun.").

255 . 208 F.3d 1339 (Fed. Cir. 2000).

256 . *Id.* at 1350.

257 . *Id.*

258 . Under § 103, obviousness is determined from the perspective of "a person having ordinary skill in the art to which said subject matter pertains." 35 U.S.C. § 103 (1994).

259 . 35 U.S.C. § 103 (1994) (emphasis added).

260 . *See, e.g.*, OddzOn Prods., Inc. v. Just Toys, Inc., 122 F.3d 1396, 1401-02 (Fed. Cir. 1997) (holding that § 102(f) is a prior art provision); *In re* Foster, 343 F.2d 980, 993-99 (Smith, J., dissenting) (arguing that § 102(b) materials should not be considered prior art for the purposes of obviousness under § 103).

261 . *See* 35 U.S.C. §§ 102(b), 103 (1994).

262 . *Foster*, 343 F.2d at 996-97 (Smith, J., dissenting). "Most disturbing of all is the fact that from this day forward obviousness under section 103 will be tested, not as of the time the invention was made, but as of one year prior to the filing date of the application." *Id.* at 999. The court in *Foster* invalidated a patent under § 103 using a reference

that did not exist at the time the invention was made but which did exist more than one year prior to the date the inventor filed for his application. *See id.* at 998.

263 . *See* STX, LLC. v. Brine, Inc., 211 F.3d 588, 590 (Fed. Cir. 2000); *see also* Ferag AG v. Quipp Inc., 45 F.3d 1562, 1567-68 (Fed. Cir. 1995).

264 . Admittedly, issues of whether the invention was in public use under § 102(b) would arise. Presumably, there would be no obviousness variant of the public use bar if it did not apply to the on-sale bar.

265 . Of course, by not patenting even the unbarbed version and selling it, Pfaff would risk others copying the invention. Thus, there is an incentive to file for the unbarbed version. There is no denying, however, that Pfaff effectively would obtain a patent term greater than the prescribed 20 years.

266 . *See In re* Foster, 343 F.2d 980, 990. "[T]he words 'at the time the invention was made' were included for the sole purpose of precluding the use of hindsight in deciding whether an invention is obvious. We are sure Congress had no intent thereby to modify the law respecting loss of right based on the existence of a time-bar." *Id.* at 999 (Smith, J., dissenting).

267 . *See* Johnson v. Transp. Agency, 480 U.S. 616, 629 n.7 (1987) ("Congress has not amended the statute to reject our construction, nor have any such amendments even been proposed, and we therefore may assume that our interpretation was correct."); *cf*. Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 28 (1997) ("Congress in 1952 could easily have responded to *Graver Tank* as it did to the *Halliburton* decision. But it did not. . . . Congress can legislate the doctrine of equivalents out of existence any time it chooses.").