

THE IMPACT OF FEDERAL CIRCUIT PRECEDENT ON THE “ON-SALE” AND “PUBLIC-USE” BARS TO PATENTABILITY

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INTRODUCTION

On October 1, 1995, the United States Court of Appeals for the Federal Circuit (Federal Circuit) began its fourteenth year of jurisprudence.¹ Over the years, the Federal Circuit has received wide acclaim for bringing more consistency and predictability to patent law and for engendering a climate conducive to obtainment and enforcement of patents. Indeed, many individuals believe that the Federal Circuit's jurisprudence has had the effect of markedly enhancing the economic value of patents in general, as well as their notoriety among the public.² Yet, despite the Federal Circuit's commendable achievements, it has not brought the measure of predictability or clarity to certain areas of patent law desired by a number of individuals. In some instances, the Federal Circuit has deliberately eschewed bright-line rules on the theory that such rules are unworkable or are simply repugnant to fundamental policies underlying patent law.³ In other instances, predictability appears to be, at best, an incremental goal of the Federal Circuit.⁴

The law relating to the "on-sale" and "public-use" bars⁵ has long been a chaotic area of patent jurisprudence. The case of *Philco Corp. v. Admiral Corp.*,⁶ for example, characterized the state of the law in 1961 as follows:

The cases dealing with § 102(b) of the Patent Act are in a state of confusion resulting in part from an attempt to establish hard and fast rules of law based upon overly refined legal distinctions. The area sought to be governed by these rules, however, encompasses an infinite variety of factual situations which, when viewed in terms of the policies underlying § 102(b), present an infinite variety of legal problems wholly unsuited to mechanically-applied, technical rules.⁷

1. Federal Courts Improvement Act of 1982, Pub. L. No. 97-164, §§ 101, 102, 96 Stat. 25 (codified at 28 U.S.C. §§ 41, 44(a), 44(c) (1988)).

2. See, e.g., Brian C. Cannon, Note, *Toward a Clear Standard of Obviousness for Biotechnology Patents*, 79 CORNELL L. REV. 735, 744 (1994) (noting court's recognition of "immense value" of patent monopoly); A. Samuel Oddi, *An Uneasier Case for Copyright than for Patent Protection of Computer Programs*, 72 NEB. L. REV. 351, 394 (1993) (postulating increased consistency in patent decisions in Federal Circuit as compared to predecessor).

3. See *infra* Parts VI and VII (discussing underlying policies and totality of circumstances).

4. See *infra* notes 109-20 and accompanying text (explaining application of principles of contract law to on-sale inquiry).

5. See *infra* note 15 and accompanying text (explaining "on-sale" and "public-use" bars as codified in 35 U.S.C. § 102(b)).

6. 199 F. Supp. 797 (D. Del. 1961).

7. *Philco Corp. v. Admiral Corp.*, 199 F. Supp. 797, 815 (D. Del. 1961).

Indeed, some five years after its formation, the Federal Circuit itself remarked that the court's comments in *Philco* "are as apt today as when made in 1961."⁸ The question is whether the Federal Circuit has since diminished confusion and, more importantly, whether it has fashioned legal principles which yield at least fairly predictable results.

In a broad sense, the Federal Circuit has reduced confusion as to the application of the on-sale and public-use bars by adopting a single standard for making a *prima facie* case for, and ultimately proving, the bars.⁹ It has thus resolved the conflict among the circuits as to the proper burden of proof standard.¹⁰ Moreover, the Federal Circuit has also clarified the law and established some rather practicable rules to govern some issues, such as what constitutes on-sale activity.¹¹ With respect to other issues, however, such as the stage of development an invention must reach as a predicate to triggering the bars, the Federal Circuit has fostered more confusion and unpredictability.¹²

Overall, the Federal Circuit has shunned a bright-line rule oriented approach to the bars by mandating the application of an inherently indeterminate "totality of the circumstances" test in conjunction with a policy-based analysis.¹³ Of course, as the court in *Philco* implied, some uncertainty is to be expected due to the very nature of the on-sale and public-use bars.¹⁴ Whether this state of the law is desirable, or is a necessary consequence of any on-sale or public-use bar inquiry, is still open to considerable debate.

This Article focuses on the impact of more than ten years of Federal Circuit jurisprudence on the on-sale and public-use bars, including, in particular, the Federal Circuit's effect on pre-Federal Circuit jurisprudence. Part I of this Article introduces the basic statutory framework of the bars. Part II discusses the burden of proof

8. *UMC Elecs. Co. v. United States*, 816 F.2d 647, 654 (Fed. Cir. 1987).

9. *See infra* Part II.B.

10. *See infra* Part II.A.

11. *See infra* notes 100-04 and accompanying text (explaining Federal Circuit's policy on what constitutes on-sale activity).

12. *See infra* notes 153-59 and accompanying text (discussing confusion over when invention is sufficiently developed to trigger on-sale bar).

13. *See Manville Sales Corp. v. Paramount Sys.*, 917 F.2d 544, 549-50 (Fed. Cir. 1990) (explaining that facts of case must be considered in light of how they comport with policies underlying on-sale and public-use bars, and enumerating several of these policies). Relevant policies include (1) discouraging removal of inventions from the public domain that the public reasonably believes are freely available; (2) favoring the prompt and widespread disclosure of inventions; and (3) allowing the inventor to determine the potential economic value of a patent. *Envirotech Corp. v. Westech Eng'g Inc.*, 904 F.2d 1571, 1574 (Fed. Cir. 1990).

14. *See Philco Corp. v. Admiral Corp.*, 199 F. Supp. 797, 815 (D. Del. 1961) (revealing uncertainty in light of variety of factual situations that bars can involve).

relating to the bars, while Parts III and IV delve into the specifics of each of the bars. Part V relates to the policies underlying the bars and Part VI discusses the totality of the circumstances test. Finally, Part VII deals with the experimental-use negation.

I. THE STATUTORY FRAMEWORK

The on-sale and public-use bars to patentability are codified in 35 U.S.C. § 102(b), which provides that a person shall be entitled to a patent unless "the invention was . . . 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."¹⁵ The current language of § 102(b) was originally enacted as part of the U.S. Patent Act of 1952.¹⁶ Earlier Patent Acts, dating back to the 1800s,¹⁷ however, contained language barring patents on inventions that were in public use or on sale earlier than a specified grace period between the filing of a patent application and the activity in question.¹⁸ Thus, the bars have over 150 years of jurisprudence behind them. Nevertheless, certain cases decided before the enactment of the 1952 Act are not easily reconciled with § 102(b). A primary reason for the discrepancies is that the Patent Act of 1839 invalidated patents on inventions which were on-sale or in-public use within the specified grace period and then later abandoned during that period.¹⁹ In pre-1952 cases, therefore, courts tended to intertwine the issue of abandonment or forfeiture with any public-use or on-sale inquiry.

II. THE BURDEN OF PROOF

A. *Pre-Federal Circuit Law*

The Patent Act of 1952²⁰ sets forth standards governing the burden of proof of patent invalidity and the presumption of validi-

15. 35 U.S.C. § 102(b) (1988).

16. U.S. Patent Act of July 19, 1952, ch. 950, 66 Stat. 797 (codified at 35 U.S.C. § 102(b) (1988)).

17. See Act of July 4, 1836, ch. 357, § 6, 4 Stat. 117; Act of Mar. 3, 1839, ch. 88, § 7, 5 Stat. 353.

18. See 2 DONALD S. CHISUM, PATENTS: A TREATISE ON THE LAW OF PATENTABILITY, VALIDITY AND INFRINGEMENT § 6.02[1], at 6-7 (1994) (discussing section 6 of Patent Act of 1836, which allowed patents only on inventions not in public use or on sale at time of application, and § 7 of Patent Act of 1839, which set forth two-year grace period for determining whether invention was on sale or public use).

19. See *id.* (stating that proof of inventor abandonment was grounds for holding patent invalid).

20. Act of July 19, 1952, ch. 950, 66 Stat. 812 (codified at 35 U.S.C. § 282 (1988 & Supp. V 1993)).

ty.²¹ In particular, section 282 provides that a "patent shall be presumed valid The burden of establishing invalidity of a patent or any claim thereof shall rest on the party asserting such invalidity."²² Section 282, therefore, explicitly places the burden of proving invalidity, based on the on-sale or public-use bars, on the party invoking either of those bars.²³ Even so, conflicts persisted among the courts as to the quantum of proof required to establish the existence of the bars and as to the circumstances, if any, under which the burden of proof shifted to the patentee. A number of courts necessitated clear and convincing evidence to demonstrate the bar.²⁴ Other courts indicated that the nature and type of evidence presented dictated the quantum of proof.²⁵ That is, the clear and convincing evidence standard applied where evidence of an invalidating on sale or public use was "inherently suspect," while a preponderance of the evidence standard applied "in the usual patent case."²⁶ A few courts even adopted a "beyond a reasonable doubt" standard under certain circumstances.²⁷

Once the challenger made a *prima facie* showing of on-sale or public-use activity occurring before the critical date,²⁸ a number of courts shifted the burden onto the patentee²⁹ to prove that the

21. 35 U.S.C. § 282 (1988 & Supp. V 1993).

22. *Id.*

23. *See id.* (stating that party asserting invalidity has burden of establishing invalidity on any ground specified in part II of patent title, which includes § 102(b) as condition for patentability).

24. *See Tights, Inc. v. Acme-McCrary Corp.*, 541 F.2d 1047, 1054-55 (4th Cir. 1976) (upholding jury's findings that clear and convincing evidence did not establish patent's invalidity); *Moore v. Shultz*, 491 F.2d 294, 298 (10th Cir. 1974) (reversing lower court's judgment n.o.v. and reinstating jury's finding of clear and convincing evidence of patent infringement).

25. *See Dickstein v. Seventy Corp.*, 522 F.2d 1294, 1296-97 (6th Cir. 1975) (stating that clear and convincing evidence was necessary because facts and circumstances required it); *Rains v. Niaqud*, 406 F.2d 275, 278 (2d Cir. 1969) (holding that clear and convincing evidence was unnecessary for defendant to be granted summary judgment as long as defendant is able to prove evidence of prior use).

26. *See Dickstein*, 522 F.2d at 1296-97 (noting that higher standard would be appropriate where oral testimony based on stale facts and circumstances was used to establish public use).

27. *See Hobbs v. United States Atomic Energy Comm'n*, 451 F.2d 849, 856 (5th Cir. 1971) (noting that Fifth Circuit had previously used varying statements to describe required quantum of proof and holding that presumption of patent validity may be rebutted only if proof is established by greater than mere preponderance of evidence regardless of whether this quantum of proof is labeled as clear and convincing or beyond reasonable doubt); *Grayhill, Inc. v. AMF Inc.*, 203 U.S.P.Q. (BNA) 745, 772 (D.N.J. 1978) (explaining evidence of prior public use can only be established by proof, so clear, convincing and cogent, so as to be beyond reasonable doubt), *aff'd*, 591 F.2d 1335 (3d Cir.), *cert. denied*, 442 U.S. 930 (1979).

28. "Critical date" refers to the date specified in 35 U.S.C. § 102(b), which is exactly one year before the effective filing date of a U.S. patent application.

29. The term "patentee" includes not only the patentee to whom the patent was issued, but also the successors in interest to the patentee. 35 U.S.C. § 100 (1988).

activity was an experimental use or was otherwise negated.³⁰ Indeed, even precedent in the Federal Circuit's predecessor court, the Court of Customs and Patent Appeals (C.C.P.A.), seemed to subscribe to this burden-shifting rule.³¹ A number of courts also indicated that the issue of whether a patent was invalid in light of the on-sale or public-use bars was one of fact.³² These precedents had their roots in the well-acknowledged "morass of conflict"³³ among the circuits as to the quantum of proof required to overcome the presumption of patent validity.³⁴

B. Federal Circuit Law

The Federal Circuit has repeatedly and unequivocally stated that the party challenging the validity of a patent has the statutory burden of proving invalidity by clear and convincing evidence.³⁵ According

30. See *Kock v. Quaker Oats Co.*, 681 F.2d 649, 653 (9th Cir. 1982) (finding that once prior use has been established, patentee has burden of justifying use by "full, unequivocal, and convincing" evidence (quoting *Smith & Griggs Mfg. Co. v. Sprague*, 123 U.S. 249, 264 (1887))); *Omark Indus. v. Carlton Co.*, 652 F.2d 783, 787 (9th Cir. 1980) (noting that once prior public use defense is adequately raised, burden shifts to inventor to prove, by clear and convincing evidence, that established use was primarily experimental); *Dart Indus. v. E.I. Du Pont De Nemours & Co.*, 489 F.2d 1359, 1364-65 (7th Cir. 1973) (revealing that once prior use has been established, inventor carries burden of avoiding statutory bar by proving that such prior use was for purely experimental purposes).

31. See *In re Theis*, 610 F.2d 786, 792 (C.C.P.A. 1979) (remarking that in case where invention was proven to be on sale prior to critical date, patentee must establish his experimental use or sale by "full, unequivocal, and convincing" proof (quoting *Smith & Griggs*, 123 U.S. at 264)).

32. See *Philco Corp. v. Admiral Corp.*, 199 F. Supp. 797, 817 (D. Del. 1961) (noting that words "on sale" imply crucial inquiry into intent of inventor and that determining whether or not there is bar is question of fact); *Lensch v. Metallizing Co.*, 39 F. Supp. 838, 842 (S.D. Cal. 1941) (stating that determining public use or offer for sale is question of fact).

33. See *Stamcarbon, N.V. v. Escambia Chem. Corp.*, 430 F.2d 920, 924-25 (5th Cir. 1970) (noting three differing standards of proof used by different circuits). The three standards are: (1) preponderance of the evidence; (2) clear and convincing evidence; and (3) beyond a reasonable doubt. *Id.* (citations omitted).

34. See *Clark Equip. Co. v. Keller*, 570 F.2d 778, 795 (8th Cir. 1978) (explaining Eighth Circuit's standard of proof in terms of substantial evidence while acknowledging other circuits' use of clear and convincing evidence standard); *Hobbs v. United States Atomic Energy Comm'n*, 451 F.2d 849, 856 (5th Cir. 1971) (stating that courts "have not distinguished themselves for consistency in their determination of the quantum of proof necessary to rebut the presumption" of patent validity); *Woodstream Corp. v. Herter's, Inc.*, 446 F.2d 1143, 1149 n.4 (8th Cir. 1971) (citing specific list of cases to show differing quantum of proof required to overcome presumption of patent validity). In *Hobbs*, the Fifth Circuit identified an "apparent inconsistency" in the various statements of the necessary quantum of proof. *Hobbs*, 451 F.2d at 856. In *Woodstream*, however, the Eighth Circuit cited *Stamcarbon*, a Fifth Circuit case, in support of its characterization of the law as a "morass of conflict." *Woodstream*, 446 F.2d at 1149 n.4.

35. See, e.g., *Envirotech Corp. v. Westech Eng'g Inc.*, 904 F.2d 1571, 1574 (Fed. Cir. 1990) (stating that party asserting on-sale bar must prove bar by clear and convincing evidence); *Moleculon Research Corp. v. CBS*, 793 F.2d 1261, 1266 (Fed. Cir. 1986) (noting that patent challenger has burden at trial to prove public use by clear and convincing evidence); *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1459 (Fed. Cir. 1984) (explaining that challenger of patent validity under 35 U.S.C. § 282 must introduce

to the Federal Circuit, this ultimate burden of persuasion never shifts to the patentee and the presumption of validity is never weakened or destroyed.³⁶ The challenger of a patent must, therefore, prove the existence of an on-sale or public-use bar by clear and convincing evidence.³⁷

Nevertheless, as is typical with any trial or summary judgment motion, the burden of coming forward with evidence may shift back and forth between the patentee and the challenger.³⁸ Once the challenger demonstrates a prima facie case of an on-sale or public-use bar, the burden shifts to the patentee to come forward with sufficient evidence to counter the challenger's prima facie showing.³⁹ If the patentee does so, the burden of coming forward shifts back to the challenger.⁴⁰

The patentee may present sufficient evidence by showing that the alleged on-sale or public-use activity was in fact primarily experimental,⁴¹ or, that the subject activity was an offer for sale of merely a concept.⁴² This evidence, however, must be sufficiently convinc-

clear and convincing evidence to win challenge).

36. *Lindemann*, 730 F.2d at 1459 (citing *Stratoflex Inc. v. Aeroquip Corp.*, 713 F.2d 1530 (Fed. Cir. 1983)).

37. *Id.*; see also *Manville Sales Corp. v. Paramount Sys.*, 917 F.2d 544, 549 (Fed. Cir. 1990) (stating that parties asserting bars must prove them by clear and convincing evidence); *Baker Oil Tools, Inc. v. Geo Vann, Inc.*, 828 F.2d 1558, 1563 (Fed. Cir. 1987) (explaining that because substantial property rights are at issue, bar on patentability must be proven by clear and convincing evidence).

38. The burden of proof consists of two elements: the burden of coming forward with evidence and the burden of persuasion. In the context of the on-sale and public-use bars, the burden of coming forward requires a party to come forward with sufficient evidence to forestall a directed verdict or other ruling that would be adverse to it on the bars. The burden of persuasion means that the party must adduce sufficient evidence to prevail by clear and convincing evidence on the bar at issue. See CHISUM, *supra* note 18, § 6.02[86-160] n.12.

39. See *United States Envtl. Prods. v. Westall*, 911 F.2d 713, 716 (Fed. Cir. 1990) (explaining patentee's failure to offer sufficient evidence to counter challenger's showing of on-sale bar where no record of experimental use was offered); see also *TP Lab., Inc. v. Professional Positioners, Inc.*, 724 F.2d 965, 971 (Fed. Cir. 1984) (considering all evidence put forth by both parties to decide whether entire record leads to conclusion of public use). Both *U.S. Environmental*, 911 F.2d at 714, and *TP Laboratories*, 724 F.2d at 966, involved appeals from bench trials. It should be noted, however, that the court in *TP Laboratories* did not mention the decision of its predecessor court, the C.C.P.A., in *In re Theis* which appears to hold to the contrary. See *In re Theis*, 610 F.2d 786, 791-92 (C.C.P.A. 1979) (involving appeal from Patent and Trademark Office Board of Appeals, where no challenge of patent application was brought, yet court still found on-sale bar after plaintiff failed to meet burden of proof). The Federal Circuit adopted as binding precedent the decisions of the Court of Customs and Patent Appeals and the Court of Claims, now known as the U.S. Court of Federal Claims, in *South Corp. v. United States*, 690 F.2d 1368, 1371 (Fed. Cir. 1982).

40. Cf. *U.S. Environmental*, 911 F.2d at 716 (holding patent invalid based on patentee's failure to come forth with sufficient evidence to counter challenger's showing of on-sale bar).

41. See *UMC Elecs. Co. v. United States*, 816 F.2d 647, 656-57 (Fed. Cir. 1987) (stating that "a sale made because the purchaser was participating in experimental testing creates no on sale bar").

42. *Id.*

ing.⁴³ In the case of a summary judgment motion, sufficiently convincing means the evidence must present a "sufficient disagreement to require submission to a jury" or must otherwise be sufficient to raise a genuine issue of material fact.⁴⁴ In this regard, absent corroboration in the form of documentary or physical evidence, oral testimony is strictly scrutinized and regarded with suspicion.⁴⁵

The significance of the Federal Circuit's pronouncements on the burden of proof cannot be understated. While the Federal Circuit's relatively recent decision in *Markman v. West View Instruments, Inc.*⁴⁶ may well portend more bench trials, patent actions have been frequently tried to juries over the past ten years. Juries usually take very seriously the instructions relating to the burden of proof. Thus, the use of a clear and convincing evidence standard is a potent weapon in the arsenal of the patentee. Due to the presumption of patent validity, the burden of proof often works in favor of the patentee on summary judgment motions. This is especially true in light of the famous trilogy of 1986 Supreme Court cases on summary judgments, which dictate that the burden of proof must be incorporated into any summary judgment analysis.⁴⁷ Thus, the clear and

43. *U.S. Environmental*, 911 F.2d at 716; *TP Laboratories*, 724 F.2d at 971.

44. See *Paragon Podiatry Lab. v. KLM Lab.*, 984 F.2d 1182, 1185 (Fed. Cir. 1993). The Court in *Paragon* stated:

The proper inquiry, therefore, is "whether the evidence presents a sufficient disagreement to require submission to a jury or whether it is so one-sided that one party must prevail as a matter of law." . . . In other words, "[s]ummary judgment is authorized when it is quite clear what the truth is," . . . and the law requires judgment in favor of the movant based upon facts not in genuine dispute.

Id. (citations omitted); see also *Keystone Retaining Wall Sys. v. Westrock, Inc.*, 997 F.2d 1444, 1449 (Fed. Cir. 1993) (explaining that, because material fact may affect final outcome of case that fact is necessarily relevant to proceedings); *Sinskey v. Pharmacia Ophthalmics*, 982 F.2d 494, 498 (Fed. Cir. 1992) (holding that patentee cannot sufficiently raise issue of material fact by merely contradicting own prior statements).

45. *Carella v. Starlight Archery & Pro Line Co.*, 804 F.2d 135, 138 (Fed. Cir. 1986); see also *American Permahedge, Inc. v. Barcana, Inc.*, 857 F. Supp. 308, 316-17 (S.D.N.Y. 1994). For a helpful list of factors to be considered in evaluating oral testimony, see *Nordberg, Inc. v. Telsmith, Inc.*, 881 F. Supp. 1252, 1284 (E.D. Wis. 1995); *Medtronic Inc. v. Daig Corp.*, 611 F. Supp. 1498, 1511 (D. Minn. 1985).

46. 52 F.3d 967 (Fed. Cir. 1995) (en banc). In *Markman*, the Federal Circuit held that the issue of claim construction, including any subsidiary factual issues relating to the meaning of the claims, is for a court to decide. *Id.* Because in many cases a trier of fact's determination of the meaning of the claims may be dispositive of infringement, and to a somewhat lesser extent validity, bench trials and summary judgments can be expected to increase.

47. See *Celotex Corp. v. Catrett*, 477 U.S. 317, 323 (1986) (citing nonmoving party's failure to make sufficient showing on essential element of case, to which she had burden of proof, as basis for grant of summary judgment); *Anderson v. Liberty Lobby*, 477 U.S. 242, 255 (1986) (concluding determination of appropriateness of summary judgment is influenced by substantive evidentiary standards that apply to case); *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 587-88 (1986) (finding that granting of summary judgment must be based on facts of case and in light of proof required by applicable law). The Supreme Court further clarified its pronouncements in *Eastman Kodak v. Image Technical Services*, 504 U.S. 451 (1992).

convincing standard will typically thwart a challenger's summary judgment motion, and, in some cases, may even facilitate the patentee's obtaining summary judgment that its patent is not invalid. The patentee is favored because the patent challenger must show, by clear and convincing evidence, that there is no genuine issue of material fact as to patent invalidity.⁴⁸ If there is no issue of material fact, the patentee should be entitled to summary judgment in its favor on patent invalidity. Of course, once the patent challenger has come forward with clear and convincing evidence of invalidity, the patentee must then adduce sufficient evidence to raise a genuine issue of material fact as to the presence of clear and convincing evidence of invalidity.⁴⁹ In this regard, an inventor's affidavit evincing nothing more than his subjective belief that the invention was not on sale or in public use before the critical date does not create a genuine issue.⁵⁰

On the other hand, when the patentee moves for summary judgment, the patentee may discharge its burden by showing that there is an absence of material evidence to support the patent challenger's case (i.e., by showing that the challenger's evidence is insufficient to enable it to sustain its burden of proof at trial).⁵¹ Once the patentee comes forward with this showing, the patent challenger must submit sufficient evidence to raise a genuine issue of material fact as to the presence of clear and convincing evidence of invalidity.⁵² In practice, this requirement probably greatly facilitates the granting of summary judgment in favor of the patentee where the evidence against validity is somewhat tenuous from a preponderance of the evidence standpoint. On the other hand, where the evidence appears to solidly meet the preponderance standard, a court may well

48. See *supra* notes 24-26 and accompanying text (discussing evidentiary standards to prove patent bar).

49. See *Paragon Podiatry Lab. v. KLM Lab.*, 984 F.2d 1182, 1187-88 (Fed. Cir. 1993) (rejecting plaintiff's corroborative evidence as insufficient to establish genuine issue of material fact); *Sinskey v. Pharmacia Ophthalmics*, 982 F.2d 494, 498 (Fed. Cir. 1992) (explaining that inconsistency in plaintiff's testimony did not raise genuine issue of material fact); *Constant v. Advanced Micro Devices, Inc.*, 848 F.2d 1560 (Fed. Cir. 1988) (affirming district court's grant of summary judgment that patent was invalid under, *inter alia*, § 102(b)).

50. See *Sinskey*, 982 F.2d at 497-99 (explaining plaintiff's experimental use claim did not create issue of fact when based on patentee's subjective intent and not objective evidence).

51. See, e.g., *In re Epstein*, 32 F.3d 1559, 1564 (Fed. Cir. 1994) (examining appellant's assertions of insufficiency of challenger's evidence); *Tone Bros. v. Sysco Corp.*, 28 F.3d 1192, 1197 n.4 (Fed. Cir. 1994) (explaining shifting burden of proof in challenges to patents).

52. See *Pensa Inc. v. L.A. Gear Cal. Inc.*, 4 U.S.P.Q.2d (BNA) 1016, 1019 (C.D. Cal. 1987) (revealing that defendant who opposes summary judgment "must submit evidence raising a bona fide issue of material fact as to the presence of clear and convincing evidence of invalidity"); *Fromson v. Citiplate, Inc.*, 671 F.Supp. 195, 200 (E.D.N.Y. 1987) (explaining patent challenger's burden of convincing court that reasonable people could find patent invalid).

be reluctant to find that the evidence is insufficient to forestall summary judgment.

The Federal Circuit has described clear and convincing evidence as evidence "which proves in the mind of the trier of fact 'an abiding conviction that the truth of factual contentions [is] highly probable.'"⁵³ It has not yet, however, delved deeply into the meaning of clear and convincing evidence in the context of patent validity. Nevertheless, the Federal Circuit has stated that this standard is not met where "extensive inferences" would have to be drawn from the evidence to find an on-sale bar.⁵⁴

In contrast to patent litigation, the burden of proof standard in proceedings on a patent application before the U.S. Patent and Trademark Office (PTO) is a preponderance of the evidence based on the totality of the evidence.⁵⁵ Therefore, if the PTO asserts an on-sale or public-use bar as grounds for rejecting an application, it must prove the bar by only a preponderance of the evidence.⁵⁶ Even so, the same principles of shifting the burden of coming forward with evidence still apply.⁵⁷ The Federal Circuit has also rejected the premise that any doubts as to patentability should be resolved in favor of the applicant.⁵⁸

The ultimate issue of whether an invention was on sale or in public use under § 102(b) is a question of law which the Federal Circuit reviews *de novo*.⁵⁹ The factual findings underlying the conclusions of the finder of fact are, however, subject to the clearly erroneous standard of review.⁶⁰ These factual findings are based on the many

53. *Intel Corp. v. United States Int'l Trade Comm'n.*, 946 F.2d 821, 830 (Fed. Cir. 1991) (quoting *Colorado v. New Mexico*, 467 U.S. 310, 316 (1984)).

54. *Id.* But see *Sonoscan, Inc. v. Sonotek, Inc.*, 936 F.2d 1261, 1263-64 (Fed. Cir. 1991) (affirming district court's finding of on-sale bar, even though it was ostensibly based on broad inferences).

55. *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992) (finding that patentability is determined on totality of record by preponderance of evidence with due consideration to persuasiveness of argument). The presumption of validity, of course, applies only to issued patents. 35 U.S.C. § 282 (1988 & Supp. V 1993).

56. See *In re Epstein*, 32 F.3d 1559, 1564 (Fed. Cir. 1994) (holding that "[p]reponderance of the evidence is the standard that must be met by the PTO in making rejections"); *In re Caveney*, 761 F.2d 671, 674 (Fed. Cir. 1985) (noting patent applications are not entitled to same procedural advantages as issued patents).

57. See *In re Oetiker*, 977 F.2d at 1449 (explaining once patent application is rejected by PTO, applicant must be given opportunity to challenge rejection with evidence and argument); *Schrag v. Strosser*, 21 U.S.P.Q.2d (BNA) 1025, 1027 (Bd. Pat. Int. 1991) (requiring that after *prima facie* case of public use is met, burden of proof shifts to patent holder).

58. *In re Andersen*, 743 F.2d 1578, 1580 (Fed. Cir. 1984).

59. See *Atlantic Thermoplastics Co. v. Faytex Corp.*, 970 F.2d 834, 836 (Fed. Cir. 1992) (explaining review of on-sale bar, which includes review of factual findings at trial court level for clear error); *Manville Sales Corp. v. Paramount Sys.*, 917 F.2d 544, 549 (Fed. Cir. 1990) (noting review of on-sale and public-use bars as question of law that court reviews *de novo*).

60. *Manville Sales*, 917 F.2d at 549.

factors that enter into the "totality of the circumstances" test, which underlies any legal conclusion as to the presence of an on-sale or public-use bar.⁶¹ Above all, one must always consider the "totality of the circumstances" and how these circumstances comport with the policies underlying the bars.⁶² This approach is necessary because the policies underlying the bar, in effect, define it.⁶³

III. THE ON-SALE BAR

An examination of jurisprudence on the on-sale bar necessitates consideration of the following questions:

1. What activities constitute placing the invention "on sale"?
2. What is the "invention" for the purpose of triggering and applying the on-sale bar?
3. Where and when must the placing of the invention on sale occur in order to trigger the on-sale bar?
4. Under what circumstances is the on-sale bar negated by the experimental use doctrine or by other evidence?⁶⁴

A. *Pre-Federal Circuit Law*

1. *On-sale activities*

Pre-Federal Circuit cases virtually universally held that a single sale or offer to sell the invention before the critical date gave rise to the on-sale bar, absent sufficiently countervailing proof.⁶⁵ Indeed, a widely held view was that on-sale activity broadly referred to attempts by the inventor or his company to sell the claimed invention.⁶⁶

61. See *Biodex Corp. v. Loredan Biomedical*, 946 F.2d 850, 852 (Fed. Cir. 1991) (explaining that whether invention was adequately tested to give rise to on-sale bar is initially question of fact for jury resolution to be determined by totality of circumstances analysis); see also *infra* Part VI.

62. *Manville Sales Corp.*, 917 F.2d at 549.

63. *Id.*

64. This Article will only cursorily touch on the third question, which is generally well-settled. The experimental use negation is addressed separately (see *infra* notes 217-68 and accompanying text) as are the totality of the circumstances and underlying patent policies that affect the resolution of any on-sale or public-use bar inquiry (see *infra* notes 198-216 and accompanying text).

65. See *Manufacturing Research Corp. v. Graybar Elec. Co.*, 679 F.2d 1355, 1362 (11th Cir. 1982) (noting that there is no requirement that sale be consummated for bar to apply); *In re Theis*, 610 F.2d 786, 791-92 (C.C.P.A. 1979) (explaining that for § 102(b) to apply, it suffices that claimed invention, reduced to practice, is merely offered to potential customers, where evidence of such offer includes existence of sales contract); *Robbins Co. v. Lawrence Mfg. Co.*, 482 F.2d 426, 431 (9th Cir. 1973) (revealing that even activity not resulting in sale can constitute on-sale bar).

66. See *Robbins*, 482 F.2d at 431 (explaining that activity by inventor or his company in attempting to sell patented idea can constitute on-sale bar, even where actual accomplished sale has not occurred); *Amphenol Corp. v. General Time Corp.*, 397 F.2d 431, 433 (7th Cir. 1968) ("On sale" does not mean an actual accomplished sale but activity by the inventor or his company in attempting to sell the patented idea.); *Ex-Cell-O Corp. v. Litton Indus. Prod.*,

There was also a consensus that the bar could be invoked based not only on the sales activity of the inventor, or of someone under the inventor's control, but also on the sales activity of an independent third party.⁶⁷ Moreover, even a secret pre-critical date sale of the claimed invention by the inventor or by a third party could trigger the bar.⁶⁸

These cases also reflect a constant struggle among the courts over whether to adopt hard and fast rules to define on-sale activity or to espouse a case-by-case approach.⁶⁹ This struggle was particularly evident in situations involving executory contracts or sales activity that did not appear to amount to a formal offer to sell.⁷⁰ Some courts developed definitive rules based on the express or implied content of the offer or sales contract.⁷¹ Other courts declined to formulate rigid rules as to what constituted on-sale activity.⁷² Instead, these courts focused on whether, based on the facts presented and certain underlying patent policies, the activity amounted to proscribed

479 F. Supp. 671, 681 (E.D. Mich. 1979) (stating that on-sale bar may be triggered by activity of inventor or his company in attempting to sell patented idea).

67. See, e.g., *General Elec. Co. v. United States*, 654 F.2d 55, 62 (Ct. Cl. 1981) (re-establishing that placing of invention on sale by unrelated third party can invalidate patent); *CTS Corp. v. Piher Int'l Corp.*, 527 F.2d 95, 103 (7th Cir. 1975) (explaining on-sale bar may apply if invention was sold by someone other than patentee more than one year prior to filing date); *Hobbs v. United States Atomic Energy Comm'n*, 451 F.2d 849, 860 (5th Cir. 1971) (stating "[it] has . . . long been settled that placing on sale may be by the inventor or another, with or without the consent of the inventor").

68. See *Hobbs*, 451 F.2d at 860 (noting that while secrecy may be relevant to issue of public use, it is not relevant to on-sale determination).

69. Compare *Robbins*, 482 F.2d at 431-33 (setting forth rule to determine whether sale or offering for sale precludes patentability) with *Red Cross Mfg. Corp. v. Toro Sales Co.*, 525 F.2d 1135, 1139-41 (7th Cir. 1975) (explaining statutory proscription under § 102(b) is not concerned with formal requisites, but rather on effects of activity, to be determined on case-by-case basis) and *Philco Corp. v. Admiral Corp.*, 199 F. Supp. 797, 815 (D. Del. 1961) (criticizing use of hard and fast rule of law in cases dealing with § 102(b) because this area of law involves infinite variety of factual situations and legal problems, which are unsuited to mechanically-applied technical rules).

70. See *Timely Prods. Corp. v. Arron*, 523 F.2d 288, 300 (2d Cir. 1975) (concluding that "executory contracts for sale should be treated like those for use"); *Griswold v. Dixie Foundry Co., Inc.*, 79 F. Supp. 79, 80 (E.D. Tenn. 1948) (labeling executory contract with inventor "license" rather than "assignment, grant, or sale" of patents). An interrelated aspect of this struggle involved the question of what constituted the "invention" for the purpose of triggering and applying the on-sale bar. See *infra* notes 78-94 and accompanying text (discussing effect of actual reduction to practice on triggering on-sale and public-use bars).

71. See *Robbins*, 482 F.2d at 432-33 (relating such express or implied content to experimental use); *Micro-Magnetic Indus. v. Advance Automatic Sales Co.*, 488 F.2d 771, 774 (9th Cir. 1973) (quoting rule in *Robbins* for appropriateness of summary judgment when claim of "experimental sale" is made).

72. See *Red Cross Mfg. v. Toro Sales Co.*, 525 F.2d 1135, 1140 (7th Cir. 1975) (stating that effect of challenged activity govern rather than formal requisites of activity); *In re Yarn Process Patent Validity Litig.*, 498 F.2d 271, 287 (5th Cir. 1974) (rejecting rule set forth in *Robbins* as "excessively rigid").

pre-critical date commercial exploitation of the claimed invention.⁷³ A number of courts also attributed substantial significance to the inventor's intent in evaluating alleged on-sale activity,⁷⁴ although, as a practical matter, the probative value at trial would depend on the inventor's credibility. Thus, there evolved the rule that an invention was not on sale unless (1) the patentee had a present intent to sell the claimed invention and (2) the patentee had communicated that intent to a prospective purchaser for the purpose of eliciting a sale, and not for some other reason.⁷⁵

2. *The invention*

Pre-Federal Circuit cases also grappled with the question of what constituted the "invention" for the purposes of triggering and applying the on-sale bar.⁷⁶ This question frequently surfaced in the context of executory sales contracts.⁷⁷ In such cases, a conceptual difficulty normally arose because, while the contract was entered into before the critical date, the claimed invention was actually reduced to practice or delivered after the critical date.⁷⁸ The resolution of this

73. See, e.g., *Red Cross*, 525 F.2d at 1139-41 (noting that such exploitation would unfairly extend duration of patent monopoly); *In re Yarn*, 498 F.2d at 287 (asserting that "an inventor should be free to introduce evidence of a bona fide experimental intent even if that intent is not indicated within the contract or sale or offering"); *Philco Corp. v. Admiral Corp.*, 199 F. Supp. 797, 815 (D. Del. 1961) (revealing that plaintiff's sale-related activities, for purpose of retaining competitive advantage were unallowable extension of patent monopoly).

74. See *Dataq, Inc. v. Tokheim Corp.*, 736 F.2d 601, 604 (10th Cir. 1984) (stating that whether invention is on sale is primarily matter of inventor's intent as inventor must have present intent to sell, and must communicate intent to prospective purchaser to elicit sale); *Bergstrom v. Sears, Roebuck & Co.*, 599 F.2d 62, 65 (8th Cir. 1979) (holding that in order for invention to be on sale patentee needs intent to sell which must be communicated to purchaser to elicit sale); cf. *Robbins*, 482 F.2d at 431 (holding that inventor's testimony regarding his subjective intent has no probative force against overwhelming evidence to contrary and is insufficient to defeat adverse summary judgment).

75. *Dataq*, 736 F.2d at 604 (adopting Court of Customs and Patent Appeals test that inventor have intent to sell and communicate intent).

76. See, e.g., *Red Cross*, 525 F.2d at 1144 (determining nature of invention's demonstrations necessary to determine if on-sale bar is triggered); *Ex-Cell-O Corp. v. Litton Indus. Prods., Inc.*, 479 F. Supp. 671, 681 (E.D. Mich. 1979) (concluding that purpose of demonstration of invention is indicative of applicability of on-sale bar).

77. See, e.g., *In re Dybel*, 524 F.2d 1393, 1400 (C.C.P.A. 1975) (finding executory contract insufficient to prove knowledge of invention's performance); *Timely Prods. Corp. v. Arron*, 523 F.2d 288, 300-01 (2d Cir. 1975) (explaining significance of executory contracts for purposes of evaluating "invention" status).

78. *National Business Sys. v. AM Int'l*, 743 F.2d 1227, 1237 (7th Cir. 1984) (finding executory sales contract fulfilled by new invention without purchaser's knowledge that product was new invention did not violate on-sale bar), *cert. denied*, 471 U.S. 110 (1985); *Robbins*, 482 F.2d at 433 (holding that sale before critical date did not violate on-sale bar when made for experimental purpose); *Hobbs v. United States*, 451 F.2d 849, 859-61 (5th Cir. 1971) (finding mere existence of sales contract is insufficient to establish placing on sale); *McCreery Eng'g Co. v. Massachusetts Fan Co.*, 195 F. 498, 501 (1st Cir. 1912) (holding executory sales contract based on "plans" not sufficient to establish that machine was on sale absent evidence that invention had been reduced to practice at time of contracting).

question depended on whether the term "invention" meant conception⁷⁹ coupled with actual reduction to practice, or an intermediate state between conception and actual reduction to practice,⁸⁰ or even some subsequent state of development.⁸¹

Courts considering this question widely held that actual reduction to practice of the claimed invention was a prerequisite for triggering both the on-sale and public-use bars.⁸² A number of courts relied on

79. Conception, which is the mental aspect of the inventive process, is the formation in the inventor's mind of a "definite and permanent idea of the complete and operative invention, as it is thereafter to be applied in practice." *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1376 (Fed. Cir. 1986) (quoting 1 ROBINSON ON PATENTS 532 (1890)), *cert. denied*, 480 U.S. 947 (1987); *Townsend v. Smith*, 36 F.2d 292, 295 (C.C.P.A. 1929) (stating that conception of invention consists of complete performance of mental component of inventive art).

80. Actual reduction to practice, which is the physical part of the inventive process, is the stage in an invention's development "when the invention has been reduced to a sufficiently tangible form to demonstrate that it will work for its intended purpose." *General Elec. Co. v. United States Atomic Energy Comm'n*, 654 F.2d 55, 62 (Ct. Cl. 1981). It requires at least a physical embodiment, which includes all limitations of the claimed invention, and that the inventor subjectively appreciate and recognize the reduction to practice at the time it occurs. *UMC Elecs. Co. v. United States*, 816 F.2d 647, 652 (Fed. Cir. 1987) (holding that invention cannot be reduced to practice without physical embodiment including all limitations of claim), *cert. denied*, 484 U.S. 1025 (1988); *Heard v. Burton*, 333 F.2d 239, 243-44 (C.C.P.A. 1964) (stating that recognition and appreciation of invention is necessary to claim product as invention). Moreover, where testing is necessary, actual reduction to practice also requires that the claimed invention be "sufficiently tested to demonstrate that it will work for its intended purpose." *Barmag Barmer Maschinenfabrik AG v. Murata Machinery, Ltd.*, 731 F.2d 831, 838 (Fed. Cir. 1984) (finding that invention cannot be offered for sale until it completes testing to verify that it is operable and commercially marketable). There is, however, no requirement that the invention, when tested, be in a commercially satisfactory stage of development. *Id.*; see also *King Instrument Corp. v. Otari Corp.*, 767 F.2d 853, 861 (Fed. Cir. 1985) (reasoning that some devices are "so simple and their purpose and efficacy so obvious that their complete construction is sufficient to demonstrate workability" (quoting *Eastern Rotorcraft Corp. v. United States*, 384 F.2d 429, 431 (Ct. Cl. 1967))), *cert. denied*, 475 U.S. 1016 (1986). Another way to reduce an invention to practice is by filing a patent application describing the invention, in compliance with the requirements of 35 U.S.C. § 112, which will result in a "constructive" reduction to practice. 35 U.S.C. § 112 (1988).

81. See *Barmag*, 731 F.2d at 836 (rejecting "on hand" doctrine which required device incorporating invention to have existed in its ordinary and useable form and to have been on hand and ready for delivery).

82. See, e.g., *Stewart-Warner Corp. v. Pontiac*, 717 F.2d 269, 273-74 (6th Cir. 1983) (stating reduction to practice is most widely used standard for determining when invention is completed); *Austin v. Marco Dental Prods.*, 560 F.2d 966, 970 (9th Cir. 1977) (examining legislative history of on-sale provision which revealed Congress' awareness that invention must be reduced to practice before it was considered complete and before inventor required to file for patent), *cert. denied*, 435 U.S. 917 (1978); *Timely Prods. Corp. v. Arron*, 523 F.2d 288, 302 (2d Cir. 1975) (indicating that one requirement for on-sale bar was that invention must have been sufficiently tested to verify that it was operable and commercially marketable, i.e., that invention could not be offered for sale until it was reduced to practice); *Medtronic, Inc. v. Daig Corp.*, 611 F. Supp. 1498, 1508 (D. Minn. 1985) (requiring party asserting patent bar to prove claimed invention was previously known or embodied in single prior act, device or practice, i.e., conceived and reduced to practice (citing *Coffin v. Ogden*, 85 U.S. (18 Wall.) 120, 124 (1873), *aff'd*, 78 F.2d 903 (Fed. Cir.)), *cert. denied*, 479 U.S. 931 (1986)).

the following language⁸³ from the 19th century case of *Coffin v. Ogden*.⁸⁴

If the thing were embryotic or inchoate; if it rested in speculation or experiment; if the process pursued for its development had failed to reach the point of consummation, it cannot avail to defeat a patent founded upon a discovery or invention which was completed, while in the other case there was only progress, however near that progress may have approximated to the end in view. The law requires not conjecture, but certainty.⁸⁵

Nevertheless, some courts imposed the less exacting requirement that the invention be "essentially completed."⁸⁶ In contrast, many courts established an additional requirement, known as the "on-hand" doctrine,⁸⁷ that the invention be in inventory or available for delivery before the critical date.⁸⁸ The "on-hand" doctrine was especially applied in cases of executory sales contracts.⁸⁹ Even these courts, however, typically carved out an exception to the "on-hand" doctrine where the activity involved a display of operable samples before the critical date, even though no production models were available for delivery until after the critical date.⁹⁰

Eventually, criticism of the "on-hand" doctrine increased,⁹¹ and *Timely Products Corp. v. Arron*⁹² ushered in its demise in most jurisdic-

83. See, e.g., *Stamcarbon, N.V. v. Escambia Chem. Corp.*, 430 F.2d 920, 927 (5th Cir.), cert. denied, 400 U.S. 944 (1970); *Medtronic*, 611 F. Supp. at 1508; *Deering, Milliken & Co. v. Temp-Resisto Corp.*, 160 F. Supp. 463, 469 (S.D.N.Y. 1958).

84. 85 U.S. (18 Wall.) 120 (1873).

85. *Id.* at 124.

86. See *Red Cross Mfg. Corp. v. Toro Sales Co.*, 525 F.2d 1135, 1141 (7th Cir. 1975) (holding on-sale bar triggered as long as invention essentially completed at time of allegedly invalidating sale).

87. The "on hand" test requires that a "device incorporating the invention must have existed in its ordinary or contemplated usable form, and must have been on hand and ready for delivery more than one year prior to the patent application filing date." *Gallard-Henning Mfg. Co. v. Dempster Bros., Inc.*, 315 F. Supp. 68, 80 (E.D. Tenn. 1970).

88. Compare *Red Cross*, 525 F.2d at 1140 n.7 (stating that "complete lack of inventory and tooling prior to critical date" does not preclude, as matter of law, finding of on-sale) with *McCreery Eng'g Co. v. Massachusetts Fan Co.*, 195 F. 498, 501 (1st Cir. 1912) (holding that under on-sale defense, defendant is required to show machine existed as complete article of sale—not on paper—but in fact).

89. See, e.g., *Red Cross*, 525 F.2d at 1140 n.7; *Timely Prods. Corp. v. Arron*, 523 F.2d 288, 299-301 (2d Cir. 1975).

90. See *Amphenol Corp. v. General Time Corp.*, 397 F.2d 431, 436 (7th Cir. 1968) (stating that submission of samples renders device on sale, and that further testing after production and delivery does not affect on sale status).

91. See *Dart Indus. Inc. v. E.I. Du Pont De Nemours & Co.*, 489 F.2d 1359, 1365 (7th Cir. 1973) (stating patented product need not be on hand in commercial quantities for it to be on sale), cert. denied, 417 U.S. 933 (1974).

92. 523 F.2d 288 (2d Cir. 1975).

tions.⁹³ In *Timely Products*, the Second Circuit held that the on-sale bar applied where a solicitation of an order, before the critical date for a specific article to be produced later, met the following prerequisites:

(1) [T]he complete invention claimed must have been embodied in or obvious in view of the thing offered for sale; (2) the invention must have been tested sufficiently to verify that it is operable and commercially marketable. This is simply another way of expressing the principle that an invention cannot be offered for sale until it is completed, which requires not merely its conception, but its reduction to practice; and (3) the sale must be primarily for profit rather than for experimental purposes.⁹⁴

In sum, notwithstanding many nuances, the prevailing view in 1982 of pre-Federal Circuit cases was as follows: A sale or offer for sale of the claimed invention before the critical date could invalidate a patent or prevent its issuance if, before the critical date, the claimed invention was (1) reduced to practice, (2) embodied in, or was obvious in view of, the product offered for sale, and (3) the sale was primarily for profit rather than for experimental purposes.⁹⁵

B. Federal Circuit Law

1. On-sale activities

The Federal Circuit has followed much of the pre-Federal Circuit precedent regarding the activities that constitute placing an invention on sale. Therefore, a single sale or offer to sell the claimed invention is enough to invoke the bar.⁹⁶ Moreover, the bar applies to sales activities by an inventor, someone under his control, or a third party.⁹⁷ It is not relevant that a pre-critical date sale or offer to sell

93. See, e.g., *UMC Elecs. Co. v. United States*, 816 F.2d 647, 653 (Fed. Cir. 1987) (declining to adopt *Timely Products* test); *Western Marine Elecs., Inc. v. Furuno Elec. Co.*, 764 F.2d 840, 844 (Fed. Cir. 1985) (refusing to adopt rigid *Timely Products* test in favor of totality of circumstances).

94. *Timely Prods. Corp. v. Arron*, 523 F.2d 288, 302 (2d Cir. 1975).

95. *CHISUM*, *supra* note 18, § 6.02[6], at 6-69 to -71 (discussing Federal Circuit holdings indicating that inventions need not necessarily be reduced to practice in order for "on-sale" bar to apply).

96. See, e.g., *A.B. Chance Co. v. RTE Corp.*, 854 F.2d 1307, 1311 (Fed. Cir. 1988) (holding that, regardless of acceptance, single offer to sell is sufficient to invoke on-sale bar); *In re Caveney*, 761 F.2d 671, 676 (Fed. Cir. 1985) (finding that single offer to sell is enough to bar patentability is "well established" principle); *General Elec. Co. v. United States*, 654 F.2d 55, 60 (Ct. Cl. 1981) (stating that completion of sale not required to invoke patentability bar, whereas "mere offer" is enough).

97. *J.A. LaPorte, Inc. v. Norfolk Dredging Co.*, 787 F.2d 1577, 1581-82 (Fed. Cir. 1985) (asserting bar is not limited to sales by inventor or someone under inventor's control, but may result from activities of third party), *cert. denied*, 479 U.S. 884 (1986); see also *In re Epstein*, 32 F.3d 1559, 1564 (Fed. Cir. 1994) (instructing that § 102 bars not limited to sales or uses by inventor or one

was secret, except in the instance of a third party's sale of a product made by a secret process.⁹⁸ In other words, while a patentee's pre-critical date sale of a product secretly made by a subsequently patented process does invoke the on-sale bar, a third party's sale of a product made by the subject process does not.⁹⁹

In defining on-sale activity, the Federal Circuit has followed pre-Federal Circuit precedent that opted for a policy-based factual approach rather than hard and fast rules, thereby harmonizing the overall approach to an on-sale inquiry.¹⁰⁰ The Federal Circuit has also fashioned the elements necessary to establish a *prima facie* case for asserting the on-sale bar. The elements are as follows: (1) a *definite* sale or offer to sell prior to the critical date, and (2) the subject matter of the sale or offer to sell must either fully anticipate the claimed invention or render it obvious by its addition to prior art.¹⁰¹ In this regard, the dissenting opinion in the case of *Atlantic Thermoplastics Co. v. Faytex Corp.*,¹⁰² maintained that the Federal Circuit actually has three tests: the basic test outlined above, a second test analogous to the *Timely Products* test,¹⁰³ and a third test that

under inventor's control, but may result from third party activities).

98. *In re Caveney*, 761 F.2d 671, 675 (Fed. Cir. 1985) (stating exception to general rule that offer to sell is bar to patent issuance occurs where patented method is practical and kept secret by third party and remains secret after sale of unpatented product of method).

99. *Id.*; see also *D.L. Auld Co. v. Chroma Graphics Corp.*, 714 F.2d 1144, 1147-48 (Fed. Cir. 1983) (holding that where method is kept secret and remains secret after sale of product of method, that sale will not bar another inventor from receiving patent on that method unless sale was made by applicant for patent or assignee), *cert. denied*, 474 U.S. 825 (1985); *Metallizing Eng'g Co. v. Kenyon Bearing & Auto Parts Co.*, 153 F.2d 516, 518 (2d Cir. 1946) (reasoning that third party's use of secret process and subsequent sale of product made by secret process did not bar inventor from receiving patent because there was no question of abandonment or forfeiture by inventor), *cert. denied*, 328 U.S. 840 (1946).

100. *Buildex Inc. v. Kason Indus.*, 849 F.2d 1461, 1465 (Fed. Cir. 1988) (asserting that court has deliberately resisted rigid formulae and *per se* exceptions in applying on-sale bar and instead considers totality of circumstances in each case); *Shatterproof Glass Corp. v. Libbey-Owens Ford Co.*, 758 F.2d 613, 622 (Fed. Cir. 1985) (stating that "clear weight of authority is that bare offer to sell does not *ipso facto* satisfy 'on sale' bar, and that the surrounding circumstances must be considered").

101. See *UMC Elecs. Co. v. United States*, 816 F.2d 647, 656 (Fed. Cir. 1987) (indicating that challenger has burden of proving that there was definite, pre-critical date sale or offer to sell and that subject matter of sale or offer to sell fully anticipated claimed invention or rendered it obvious by its addition to prior art), *cert. denied*, 484 U.S. 1025 (1988); see also *RCA Corp. v. Data Gen. Corp.*, 887 F.2d 1056, 1059 (Fed. Cir. 1989) (determining that, in establishing *prima facie* case, patent challenger has burden of proving definite sale or offer to sell more than one year before application for subject patent and that subject matter of sale or offer to sell fully anticipated claimed invention or would have rendered it obvious by its addition to prior art); *Buildex*, 849 F.2d at 1462 (finding that defendant had burden of proving that there was sale or offer to sell more than one year before application for patent).

102. 5 F.3d 1477 (Fed. Cir. 1993).

103. See *supra* note 94 and accompanying text (discussing elements of *Timely Prods.* test).

requires balancing the totality of circumstances and policy considerations.¹⁰⁴

The Federal Circuit's reference to obviousness in the basic test¹⁰⁵ does not signify that the obviousness standard of 35 U.S.C. § 103 is incorporated into the on-sale bar.¹⁰⁶ Instead, if a device placed on sale before the critical date anticipates the later patented invention (i.e., the device meets all of the claim limitations), then the bar applies, absent sufficient countervailing evidence.¹⁰⁷ Otherwise, such a device becomes prior art which can be used against the claimed invention to show that the invention was obvious¹⁰⁸ (i.e., a §§ 102(b)/103 bar).¹⁰⁹

The Federal Circuit's requirement of a definite sale or offer to sell establishes a minimum threshold for the kind of commercial activity which, absent sufficient countervailing evidence, will trigger the on-sale bar or which becomes technical prior art for the purpose of the §§ 102(b) and 103 analysis.¹¹⁰ Therefore, merely making preparations for the sale of a claimed invention is not enough to invoke the on-sale bar.¹¹¹ Taken at face value, this requirement appears to be more exacting than that implied in some pre-Federal Circuit prece-

104. *Atlantic Thermoplastics II Co. v. Faytex Corp.*, 5 F.3d 1477, 1482-86 (Fed. Cir. 1993) (Rader, J., dissenting) (setting forth each of three "tests" for determining existence of on-sale bar and analyzing facts of case under all three).

105. See *supra* note 101 and accompanying text (stating need to prove definite sale or offer to sell).

106. Section 103 provides that a patent may not be obtained "if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art." 35 U.S.C. § 103 (1988).

107. See *Labounty Mfg., Inc. v. United States Int'l Trade Comm'n*, 958 F.2d 1066, 1071 (Fed. Cir. 1992) (stating that patent may be barred either if device placed on sale is anticipation of later claimed invention or, if claimed invention would have been obvious from on-sale device in conjunction with prior art); *UMC Elecs. Co. v. United States*, 816 F.2d 647, 656 (Fed. Cir. 1987) (indicating that challenger has burden of proving definite sale or offer for sale and if these facts are established, patent owner must come forward with explanation of circumstances surrounding what would otherwise appear to be commercialization outside grace period).

108. *UMC Electronics*, 816 F.2d at 655-56 (recognizing principle that, where claimed invention is not subject of sale, statutory bar will apply if invention is obvious in view of thing offered for sale).

109. 35 U.S.C. § 102(b) (1988) (delineating "on-sale" bar to patent issuance); *id.* § 103 (stating that patent may not be obtained if subject matter would have been obvious at time invention was made to person having ordinary skill in art to which subject matter pertains).

110. See *Intel Corp. v. United States Int'l Trade Comm'n*, 946 F.2d 821, 830 (Fed. Cir. 1991) (stating that proof that offers or sales were "likely" was insufficient to carry burden of proof that sale or offer was made); *RCA Corp. v. Data Gen. Corp.*, 887 F.2d 1056, 1062 (Fed. Cir. 1989) (finding that, where there is no sale, definite offer to sell is essential requirement of on-sale bar and excludes merely indefinite or nebulous discussion about possible sale). The Federal Circuit, however, has used the word "firm" instead of "definite" in describing the requisite type of offer. *Buildex, Inc. v. Kason Indus.*, 849 F.2d 1461, 1464 (Fed. Cir. 1988).

111. *Intel*, 946 F.2d at 830 (stating lack of circumstantial or direct evidence showing offers or sales before critical date precluded on-sale assertion based on "preparations" for sale).

dent which speaks of on-sale activity in the broadly defined sense of "commercialization."¹¹² The Federal Circuit's present requirement, however, can be reconciled with most of the earlier precedent by examining the Federal Circuit's definition of "definite sale" and "definite offer to sell" and how the Federal Circuit focuses the subsequent evidentiary inquiry.

According to the Federal Circuit, contract law does not provide an absolute litmus test for determining whether a definite sale or offer to sell has been made.¹¹³ Therefore, unrestricted distribution of a prototype for the purpose of soliciting a sale may raise the bar.¹¹⁴ Nevertheless, a pre-critical date definite offer, under contract principles, clearly meets the threshold requirement and, as a practical matter, contract principles are an important analytical tool.¹¹⁵ On the other hand, "merely indefinite or nebulous discussion about a possible sale" is not enough.¹¹⁶

Because a formal contract or offer in contract terms is not a prerequisite to application of the on-sale bar, the content of the document, in which the alleged sale or offer to sell is embodied, is not itself ordinarily dispositive.¹¹⁷ Rather, where the content of the

112. See *supra* notes 71-75 and accompanying text (delineating pre-Federal Circuit requirements for on-sale bar).

113. See *RCA Corp.*, 887 F.2d at 1062-63 (stating that definite offer to sell requirement in patent context may be met by patentee's commercial activity which does not rise to level of formal "offer" under contract principles, however, definite offer in contract sense clearly meets this requirement). This is, of course, consistent with the Federal Circuit's "totality of the circumstances" approach. See *Shatterproof Glass Corp. v. Libbey-Owens Ford Co.*, 758 F.2d 613, 622 (Fed. Cir. 1985) (indicating that current authority demands that bare offer to sell does not, ipso facto, satisfy on-sale bar, and that surrounding circumstances must be considered).

114. See *Intel*, 946 F.2d at 830 (citing *Stearns v. Beckman Instruments, Inc.*, 737 F.2d 1565, 1569 (Fed. Cir. 1984)). In *Stearns*, an order was placed for a syringe before the critical date. After the critical date, the patentee shipped a prototype of a later patented syringe in response to the order. *Id.* at 1566-67; see also *Atlantic Thermoplastics Co. v. Faytex Corp.*, 5 F.3d 1477, 1480 (Fed. Cir. 1993) (finding no definite offer to sell where defendant engaged in negotiations regarding necessity of further development and prototype testing because such negotiations were for experimental purposes and not primarily for profit).

115. See, e.g., *RCA*, 887 F.2d at 1062 (analyzing commercial activities under contract principles of offer and acceptance for purposes of determining definite offer applicable to on-sale bar); *Buldex Inc. v. Kason Indus.*, 849 F.2d 1461, 1463-64 (Fed. Cir. 1988) (reasoning that to determine whether there has been definite sale or offer, terms must be analyzed under contract principles); *General Elec. Co. v. United States Atomic Energy Comm'n*, 654 F.2d 55, 59 (Fed. Cir. 1981) (employing general contract principles to determine whether product was on-sale); see also *Amway Corp. v. Nartron Corp.*, 32 U.S.P.Q.2d (BNA) 1757, 1761-62 (W.D. Mich. 1994) (applying Michigan contract law to assess whether price quotation was budgetary estimate or offer to sell).

116. *RCA*, 887 F.2d at 1062.

117. *Id.* In *RCA*, the offer was embodied in a lengthy written proposal providing background information, a detailed delivery schedule, a rate of completion of the proposed work and a separate section on financial data and costs. *Id.* The court found this offer was a definite offer. *Id.*; see also *Sonoscan, Inc. v. Sonotek, Inc.*, 936 F.2d 1261, 1263 (Fed. Cir. 1991) (looking to various forms of evidence to determine whether invention of patent was on-sale), *aff'g* 17

offer or sale is ambiguous, the Federal Circuit looks to any relevant evidence which would establish the offer's content. Such evidence includes memoranda, drawings, correspondence and testimony of witnesses.¹¹⁸ For example, in *Sonoscan, Inc. v. Sonotek, Inc.*,¹¹⁹ the Federal Circuit affirmed the district court's reliance on extrinsic evidence to determine whether a simple pre-critical date price quotation constituted an offer to sell the claimed invention.¹²⁰

Contrary to some pre-Federal Circuit precedent, the Federal Circuit emphasizes objective evidence and, additionally, has diminished the significance of the prospective purchaser's knowledge of the invention.¹²¹ This stems from the fact that the "policies underlying the on sale bar . . . concentrate on the attempt by the inventor to exploit his invention, not whether the potential purchaser was cognizant of the invention."¹²² Consequently, there is no requirement that a purchaser have actual knowledge of the claimed invention to invoke the bar.¹²³ However, what the purchaser reasonably believes the inventor to be offering is relevant to whether the offer for sale objectively may be said to be of the patented invention.¹²⁴ Also relevant is objective evidence of the purpose for which the alleged offer, such as a price quotation, was made.¹²⁵

Furthermore, the inventor's attempted exploitation "must be objectively manifested as a definite sale or offer to sell the inven-

U.S.P.Q.2d (BNA) 1247 (E.D. Va. 1990).

118. See *RCA*, 887 F.2d at 1060 (stating that relevant evidence may establish whether offered-product is claimed invention).

119. 936 F.2d 1261 (Fed. Cir. 1991).

120. *Sonoscan, Inc. v. Sonotek, Inc.*, 936 F.2d 1261, 1262 (Fed. Cir. 1991), *aff'g*, 17 U.S.P.Q.2d (BNA) 1247 (E.D. Va. 1990).

121. See, e.g., *Ferag AG v. Quipp, Inc.*, 45 F.3d 1562, 1568 (Fed. Cir. 1995) (stating that relevant question is not whether public knew of invention, but rather whether product sold or offered embodies invention claimed); *Atlantic Thermoplastics Co. v. Faytex Corp.*, 970 F.2d 834, 836-37 (Fed. Cir. 1992) (stating that to determine whether profit motivated transaction, court must examine claimed features, offeror's objective intent, and totality of circumstances); *Envirotech Corp. v. Westech Eng'g*, 904 F.2d 1571, 1574-76 (Fed. Cir. 1990) (finding prospective purchaser's knowledge of how invention will perform is manifest, but not dispositive and is not same as offering or intending to offer it for sale); *King Instrument Corp. v. Otari Corp.*, 767 F.2d 853, 860 (Fed. Cir. 1985) (reasoning that policies underlying on-sale bar focus on inventor's attempt to exploit his invention, not whether potential purchaser was knowledgeable of invention), *cert. denied*, 475 U.S. 1016 (1986).

122. *King*, 767 F.2d at 860.

123. *Id.*; see also *Ferag AG*, 45 F.3d at 1568 (holding no actual knowledge requirement placed on purchaser).

124. *Envirotech*, 904 F.2d at 1576.

125. *Amway Corp. v. Nartron Corp.*, 29 U.S.P.Q.2d (BNA) 1314, 1316 (Fed. Cir. 1993) (unpublished opinion) (vacating summary judgment on ground that purpose for which price quotation was offered was material fact having direct bearing on whether invoking bar would further bar's underlying policies); see also *Amway Corp.*, 32 U.S.P.Q.2d (BNA) at 1760-62 (W.D. Mich. 1994).

tion."¹²⁶ Thus, the "subjective, uncommunicated and ultimate intention of the offeror, however clear, is not alone sufficient."¹²⁷ Nevertheless, objective evidence of an inventor's intent is pertinent because the thrust of the on-sale bar inquiry is whether the inventor thought he had a product which could be and was offered to customers.¹²⁸ With respect to executory contracts in particular, the Federal Circuit's emphasis on an *objectively* manifested definite sale or offer to sell tends to facilitate accurate assessment of what activity qualifies as placing the invention on sale. In this regard, the cases of *Envirotech Corp. v. Westech Engineering, Inc.*¹²⁹ and *Ferag AG v. Quipp, Inc.*,¹³⁰ are illustrative. In the former case, the purchaser's knowledge weighed against the bar because the purchaser understood the patentee's proposal to be for a prior art design. In the later case, purchaser knowledge was irrelevant because the purchaser did not have any understanding as to whether a prior art device or a later patented device was being proposed.

Consistent with prior precedent, the Federal Circuit has also stated that the statutory time period in § 102(b)¹³¹ does not begin to run until the invention becomes available to the public.¹³² "Public" can mean a single prospective purchaser,¹³³ depending on the totality of the circumstances. Thus, in *Continental Can Co. USA v. Monsanto Co.*,¹³⁴ the patentee and a prospective purchaser entered into a confidential development agreement under which the patentee would initially make, and the purchaser would test, a certain product

126. *Envirotech*, 904 F.2d at 1575.

127. *Id.*; see also *Ferag AG*, 45 F.3d at 1568 ("[T]he measure of the bar is what was offered, not the patentee's intent.").

128. *Paragon*, 984 F.2d at 1187 n.5 (Fed. Cir. 1993); see also *Matter of Mahurkar Double Lumen Litigation*, 831 F. Supp. 1354, 1369-70 (N.D. Ill. 1993) (Easterbrook, J.) (involving exclusive production licensee's sham sale of prototype of invention for purpose of avoiding provision in license agreement that exclusivity would terminate absent sale by specified date).

129. 904 F.2d 1571, 1576 (Fed. Cir. 1990).

130. 45 F.3d 1562, 1568 (Fed. Cir. 1995).

131. 35 U.S.C. § 102(b) (1988).

132. *Continental Can Co. USA v. Monsanto Co.*, 948 F.2d 1264, 1270 (Fed. Cir. 1991) (stating that on-sale bar is measured by "the time the public came into possession of the invention"); *UMC Elecs. Co. v. United States*, 816 F.2d 647, 660-61 (Fed. Cir. 1987) (requiring invention to be placed into hands of public in condition for immediate use requiring no further speculation or experiment), *cert. denied*, 484 U.S. 1025 (1988); *In re Foster*, 343 F.2d 980, 987-88 (C.C.P.A. 1965) (holding that statutory period starts running when invention becomes available to public), *cert. denied*, 383 U.S. 966 (1966).

133. *Continental Can Co.*, 948 F.2d at 1270 (ruling prospective purchaser was private corporation); *Envirotech Corp. v. Westech Eng'g*, 904 F.2d 1571, 1574 (Fed. Cir. 1990) (finding individual general contractor was "public" entity); *King Instrument Corp. v. Otari Corp.*, 767 F.2d 853, 860 (Fed. Cir. 1985) (holding single purchaser was "public" for purposes of on-sale bar), *cert. denied*, 475 U.S. 1016 (1986).

134. 948 F.2d at 1264 (Fed. Cir. 1991).

developed by the patentee.¹³⁵ Moreover, if the product were found to be satisfactory, the patentee would then make it and sell it to the purchaser at certain quantities and prices specified in the agreement.¹³⁶ The project was subsequently terminated, however, because the "mechanical performance" requirements were not met.¹³⁷ The Federal Circuit held that, under the totality of the circumstances, the on-sale bar had not been triggered.¹³⁸

2. *The invention*

Early in its history, the Federal Circuit explicitly rejected the "on-hand" doctrine and declined to adopt the *Timely Products* test.¹³⁹ Thereafter, in *UMC Electronics Co. v. United States*,¹⁴⁰ the Federal Circuit was squarely presented with the issue of whether an actual reduction to practice is a prerequisite for application of the on-sale bar.¹⁴¹ The court held that it was not an *absolute* requirement, because the on-sale bar must be analyzed by evaluating the totality of the factual circumstances in light of the policies underlying the statute.¹⁴² The court, however, left intact the first and third elements of the *Timely Products* test,¹⁴³ which still have vitality, although they are subordinate to the policies underlying the bar and have been further refined by the Federal Circuit.¹⁴⁴ *UMC Electronics*, however, did not resolve two very fundamental issues: (1) the significance of reduction to practice in determining whether the claimed invention was on sale before the critical date; and (2) the particular stage, if

135. *Continental Can Co.*, 948 F.2d at 1269.

136. *Id.*

137. *Id.*

138. *Id.* at 1270 (holding that product "was part of terminated development project that never bore commercial fruit and was cloaked in confidentiality" and therefore was not on sale).

139. See *Barmag Barmer Maschinenfabrik AG v. Murata Machinery, Ltd.*, 731 F.2d 831, 836-37 (Fed. Cir. 1984) (rejecting plaintiff's position that inventory of products should be made requirement of on-sale bar). The court stated:

It is not difficult to conceive of a situation where, because commercial benefits outside the allowed time has been great, the technical requisite of *Timely Products* for a physical embodiment, particularly for a simple product, would defeat the statutory policy and we, therefore, do not adopt the *Timely Products* test as the answer in all cases.

Id. at 837.

140. 816 F.2d 647 (Fed. Cir. 1987), *cert. denied*, 484 U.S. 1025 (1988).

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

142. *Id.* at 657 (holding that no single finding or conclusion is *sine qua non* to resolution of on-sale bar).

143. See *supra* note 94 and accompanying text (listing elements of *Timely Prods.* test).

144. See *RCA Corp. v. Data Gen. Corp.*, 887 F.2d 1056, 1059 (Fed. Cir. 1989) (holding that *prima facie* case for on-sale bar requires definite sale or offer to sell, and that subject matter of sale or offer to sell anticipate claimed invention or render claimed invention obvious by its addition to prior art); *UMC Electronics*, 816 F.2d at 657 (stating formulation of requirements of *Timely Prods.* not necessary to determine whether product was on sale).

any, of development the claimed invention must have attained as a predicate to triggering an on-sale bar.¹⁴⁵ Both questions are manifestly pertinent because *UMC Electronics* stresses that the state of development of the invention must be considered, along with all of the other factual circumstances, and weighed against the policies underlying the on-sale bar.¹⁴⁶

In resolving the first question, the Federal Circuit in *UMC Electronics* acknowledged that reduction to practice is still an "important analytical tool in an on-sale analysis"¹⁴⁷ and that its existence can lighten the burden of proving the on-sale bar.¹⁴⁸ Subsequent Federal Circuit and district court opinions also reflect that in practice the traditional "sufficiently tested" element of the legal definition of reduction to practice is significant.¹⁴⁹ Other district courts have stated that reduction to practice is still an important, but not dispositive, consideration.¹⁵⁰

When considering the second question in *UMC Electronics*, the Federal Circuit cautioned that an on-sale bar cannot arise from a sale or offer to sell made at the time "the inventor had merely a conception or was working towards development of that conception."¹⁵¹ According to *UMC Electronics*, the reason is that at such time there is not yet an existing "invention."¹⁵² The court's opinion is, however, ambiguous as to whether the term "merely a conception" means the

145. These same two questions are equally relevant to the public-use bar to the extent that the *UMC Electronics* holding applies to the public-use bar.

146. See *UMC Electronics*, 816 F.2d at 656-57; see also *A.B. Chance Co. v. RTE Corp.*, 854 F.2d 1307, 1311 (Fed. Cir. 1988).

147. *UMC Electronics*, 816 F.2d at 656.

148. *Id.* (citing *General Elec. Co. v. United States*, 654 F.2d 55 (Ct. Cl. 1981) (en banc)).

149. See *Buehler AG v. Ocrim S.P.A.*, 836 F. Supp. 1291, 1301 (N.D. Tex. 1992) (relying on fact that invention described was "sufficiently tested" to ascertain workability); *Biodex Corp. v. Loredan Biomedical*, 946 F.2d 850, 852-53 (Fed. Cir. 1991) (stating that product must be "sufficiently tested" for on-sale bar to apply); *Sonoscan Inc. v. Sonotek Inc.*, 936 F.2d 1261, 1263-64 (Fed. Cir. 1991) (upholding trial court's determination that patented invention was "sufficiently developed" so that patent owner's quotation was genuine offer for sale); *B.F. Goodrich Co. v. Aircraft Braking Sys. Corp.*, 825 F. Supp. 65, 69-71 (D. Del. 1993) (noting that disk brakes were merely concept and testing was required before existence was established); *Southwest Aerospace Corp. v. Teledyne Indus.*, 702 F. Supp. 870, 884, 9 U.S.P.Q.2d (BNA) 1949, 1960 (N.D. Ala. 1988) (finding that product had not been sufficiently tested to conclude product works). Testing, of course, may not always be an element of reduction to practice. *Branham Indus., Inc. v. Hydrafab*, 11 U.S.P.Q.2d (BNA) 1529, 1533 (S.D. Tex. 1989) (declaring that selling product and believing product will work is sufficient proof).

150. See *Sonoscan Inc. v. Sonotek Inc.*, 17 U.S.P.Q.2d (BNA) 1247, 1250 (E.D. Va. 1990), *aff'd*, 936 F.2d 1261 (Fed. Cir. 1991) ("Reduction to practice is an important but not dispositive issue in determining if the invention was offered for sale.").

151. *UMC Electronics*, 816 F.2d at 657; see also *A.B. Chance Co.*, 854 F.2d at 1311 (noting that mere concept of invention is not enough to trigger on-sale bar).

152. See *UMC Electronics*, 816 F.2d at 657 (requiring more than mere concept for invention to exist).

legal definition of conception. Arguably, the primacy accorded to the underlying statutory bar policies in any on-sale bar analysis dictates that under certain circumstances a sale, or offer for sale, of a true "conception" of the claimed invention should trigger the bar. The situation where the on-sale activity relates to a rather simple invention may present an especially compelling case.¹⁵³

District court opinions decided after *UMC Electronics* evince confusion as well as divergent views as to what stage of development an invention must reach before the bar can be triggered. One court has evaded the issue simply by referring to the lack of a "sufficiently developed" invention.¹⁵⁴ Another court has construed *UMC Electronics* to require that, at the time of the offer, the invention either "must have been shown to work for its intended purpose or the inventor knew or was satisfied that the invention would serve its intended purpose."¹⁵⁵ Still other courts appear to predicate the application of the bar on whether the invention was tested sufficiently to demonstrate that it was operable or worked for its intended purpose.¹⁵⁶ One court has stated that *UMC Electronics* established a sliding scale approach, meaning the less a sale or offer to sell looks like ordinary commerce in search of a profit, the more complete the invention must be to trigger the bar.¹⁵⁷ One district court also placed emphasis on whether the invention was "commercially marketable" or existed in a commercial embodiment prior to the critical date.¹⁵⁸ Such an approach is inconsistent with *UMC Electronics* and with the Federal

153. See *Pfaff v. Wells Elecs., Inc.*, 9 U.S.P.Q.2d (BNA) 1366, 1375 (N.D. Ind. 1988). In *Pfaff*, the invention was fairly complex and was described only in drawings before the critical date. *Id.* While the court apparently did not appreciate the legal definition of conception, it did determine that the drawings amounted to only a concept of the invention. *Id.*

154. See *Loral Corp. v. B.F. Goodrich Co.*, No. C-86-216, 1989 U.S. Dist. LEXIS 16865, at *91 (S.D. Ohio Jan. 27, 1989) (stating court should consider stage of development of invention to determine whether offer or sale occurred), *rev'd on other grounds*, 899 F.2d 1288, 15 U.S.P.Q.2d (BNA) 1396 (Fed. Cir. 1990) (unpublished opinion).

155. *Ziggity Sys. v. Val Watering Sys.*, 769 F. Supp. 752, 809 (E.D. Pa. 1990).

156. See *Modine Mfg. Co. v. Allen Group*, 8 U.S.P.Q.2d (BNA) 1622, 1625 (N.D. Cal. 1988) (stating product must be tested sufficiently to show that it will work); *Southwest Aerospace Corp. v. Teledyne Indus.*, 702 F. Supp. 870, 884, 9 U.S.P.Q.2d (BNA) 1949, 1960 (N.D. Ala. 1988) (finding that product had not been tested enough to conclude that product would work).

157. *In re Mahurkar Patent Litig.*, 831 F. Supp. 1354, 1370, 28 U.S.P.Q.2d (BNA) 1801, 1813 (N.D. Ill. 1993).

158. *Construction Technology, Inc. v. Lockformer Co.*, 713 F. Supp. 100, 104-05 (S.D.N.Y. 1989). In *Construction Technology*, the defendant argued that *UMC* served to eliminate the second prong of the *Timely Products* test, thereby making evidence of ongoing difficulties and revisions following the alleged on-sale event relevant only to the issue of experimental use. *Id.* at 104. The court admonished that *UMC* "held simply that reduction to practice is not 'an absolute requirement of the on-sale bar.'" (emphasis added). *Id.* Thus, according to the court, because the absence of a reduction to practice does not prevent application of the bar, there is "nothing to prevent its being considered along with other factors in determining whether the invention is 'operable and commercially marketable'" as stated in *Timely Products*. *Id.*

Circuit precedent, which states that reduction to practice does not require commercial marketability or a commercial embodiment.¹⁵⁹

3. *Joint development and sales to related entities*

A sale or offer to sell does not trigger the on-sale bar unless it is between "two separate entities."¹⁶⁰ Separateness is determined in light of the totality of the circumstances and the policies underlying the bar.¹⁶¹ A key question in making this assessment is whether the seller entity exercises enough control over the purchaser entity's business activities to prevent the invention from being commercially exploited without the seller entity's consent.¹⁶² If the seller entity fails to exercise such control, a pre-critical date sale is inconsistent with the third policy¹⁶³ underlying the on-sale bar. Thus, one entity's ownership of stock in another entity, together with a certain amount of control over the entity's operations, does not itself avoid classification of two entities as separate for the purposes of § 102(b).¹⁶⁴

Similarly, the mere fact that a product is delivered to an intermediary or distributor does not avoid the bar where the entity and the patentee are independently controlled.¹⁶⁵ Nor is there a *per se* joint development negation to the on-sale bar,¹⁶⁶ although some pre-Federal Circuit precedent indicated to the contrary.¹⁶⁷ Instead, the issue turns on the totality of the circumstances, including whether joint development was primarily for the purpose of experimentation and in whose control development resided.¹⁶⁸

159. See *King Instrument Corp. v. Otari Corp.*, 767 F.2d 853, 861 (Fed. Cir. 1985) (stating that reduction to practice does not require invention to be in commercially satisfactory stage of development); *Barmag Barmer Maschinenfabrik AG v. Murata Mach., Ltd.*, 731 F.2d 831, 838 (Fed. Cir. 1984) (rejecting notion that commercial marketability is required in addition to reduction to practice to make invention complete).

160. See *Ferag AG*, 45 F.3d at 1567 (finding that statutory bar raised under § 102(b) where transaction between two separate entities is required); *In re Caveney*, 761 F.2d 671, 676 (Fed. Cir. 1985) (stating that sale or offer to sell between two entities is required under 35 U.S.C. § 102(b)); cf. *Union Carbide Corp. v. Filtronic Corp.*, 170 U.S.P.Q. (BNA) 482, 521 (C.D. Cal. 1971) (finding that separate divisions of corporation are not separate entities).

161. See *In re Caveney*, 761 F.2d at 676 (deciding that two companies are separate entities despite common ownership).

162. *Ferag AG*, 45 F.3d at 1567 ("Because *Ferag* could not control *Ferag, Inc.*'s, marketing of the invention, the two companies were separate entities for section 102(b) purposes and the transaction between them gives rise to a statutory bar.").

163. See *infra* Part VII.

164. *Ferag AG*, 45 F.3d at 1567 (Fed. Cir. 1995).

165. *In re Caveney*, 761 F.2d at 676.

166. See *Buildex, Inc. v. Kason Indus.*, 849 F.2d 1461, 1465 (Fed. Cir. 1988) (rejecting joint development exception to on-sale bar).

167. See *id.* (discussing *Ex-Cell-O Corp. v. Litton Indus. Prods.*, 479 F. Supp. 671 (E.D. Mich. 1979), which assumed on-sale bar did not apply if invention was developed jointly).

168. See *id.* (finding that there was only one inventor of product and consequently rejecting notion that both parties were part of "inventorship entity"); see also *Schreiber Mfg. Co. v. Saft*

IV. THE PUBLIC-USE BAR

The Federal Circuit generally has adhered to the "extremely broad" definition of public use adopted by other courts.¹⁶⁹ In light of the *UMC Electronics* decision, however, turmoil reigns among the district courts as to the extent to which application of the public-use bar must be predicated on some level of development of the invention. As with the on-sale bar, the Federal Circuit has made many a public-use inquiry more indeterminate by articulating a totality of the circumstances test in conjunction with a policy based analysis. Finally, any public-use bar inquiry is based on the same four fundamental questions that must be answered for the on-sale bar.¹⁷⁰

A. *Public-Use Activities*

The Federal Circuit has embraced a number of longstanding principles concerning what kind of activities constitute public use of an invention. Like the on-sale bar, the public-use bar can derive from the activities of either the inventor or a third party.¹⁷¹ Normally, public use includes use of the invention in public by the inventor for a commercial purpose.¹⁷² A single pre-critical date use of the invention can be a public use.¹⁷³ Secrecy alone does not necessarily negate public use.¹⁷⁴ Pre-critical date secret use of the invention by

Am., 704 F. Supp. 759, 763-65 (E.D. Mich. 1989) (deciding sale of product was for profit and not for experimental purposes).

169. See *Watson v. Allen*, 254 F.2d 342, 345 (D.C. Cir. 1958) (stating that term "public use" has been given "extremely broad" construction).

170. See *supra* Part III (listing fundamental questions).

171. See *In re Epstein*, 32 F.3d 1559, 1564 (Fed. Cir. 1994) (noting that both "public-use" and "on-sale" bars may result from activities of third parties); *Grain Processing Corp. v. American Maize-Prods. Co.*, 840 F.2d 902, 906 (Fed. Cir. 1988) (indicating that any use of invention by person other than inventor, who is under no restriction or obligation of secrecy to inventor, is public use); *Harrington Mfg. Co. v. Powell Mfg. Co.*, 815 F.2d 1478, 1481 (Fed. Cir. 1986) (finding journalist's demonstration of inventor's product constituted public use).

172. Compare *Harrington Mfg.*, 815 F.2d at 1481 (determining that one inventor's demonstration of prototype of his invention purely for purpose of commercial exploitation constituted public use, even though his co-inventor was uncertain invention would work) with *In re Yarn Processing Patent Validity Litig.*, 498 F.2d 271, 277 (5th Cir. 1974) (allowing use of invention for experimental purposes only, even where profit is made).

173. See *Moleculon Research Corp. v. CBS*, 793 F.2d 1261, 1266 (Fed. Cir. 1986) (acknowledging that public use can be confined to one person); cf. *Egbert v. Lippman*, 104 U.S. 333, 336 (1881) (requiring only one public use, but noting that more uses strengthen proof); *Koehring Co. v. National Automatic Tool Co.*, 362 F.2d 100, 104 (7th Cir. 1966) (stating that only single use of invention for commercial purposes is required to show public use).

174. See *Kinzenbaw v. Deere & Co.*, 741 F.2d 383, 390-91 (Fed. Cir. 1984) (finding commercial use to be public use even if it is kept secret). More recently, the Federal Circuit stated that the public-use bar requires that (1) the invention was used *in public*, and (2) the use was not primarily experimental in purpose. *Allied Colloids, Inc. v. American Cynamid Co.*, 35 U.S.P.Q.2d 1840, 1842 (Fed. Cir. 1995). While the Federal Circuit's reference to "in public"

the inventor primarily for commercial purposes thus constitutes public use.¹⁷⁵ On the other hand, truly private use by the inventor of her own invention for enjoyment, rather than for commercial purposes, is not public use.¹⁷⁶

Furthermore, public use has long been defined as any use of the invention by a person other than the inventor who is not under any limitation, restriction, or obligation of secrecy to the inventor.¹⁷⁷ Consistent with its totality of circumstances and policy-based approach, however, the Federal Circuit has refined this general principle as it relates to use authorized by the inventor. It has indicated that, where commercialization is absent, the public-use bar may not apply to an inventor who maintains control over the invention while allowing a third party, such as a friend, to use the invention without any express obligation of secrecy.¹⁷⁸ Nevertheless, even the public-use bar may be activated where the third party, to whom the inventor has disclosed the invention, then unwittingly permits another to have free and unrestricted access to the invention.¹⁷⁹ According to a

suggests that a use of the invention must necessarily have occurred in public view, earlier precedent refutes such an interpretation. See *supra* note 175; see also *Electric Storage Battery Co. v. Shimadzu*, 307 U.S. 5, 19-20 (1939) ("[T]he ordinary use of a machine or the practice of a process in a factory in the usual course of producing articles for commercial purposes in public use.").

175. Compare *Kinzenbaw*, 741 F.2d at 390 ("A commercial use is a public use even if it is kept secret.") with *Metallizing Eng'g Co. v. Kenyon Bearing & Auto Parts Co.*, 153 F.2d 516, 520 (2d Cir. 1946) (finding personal use to be public use, even if kept secret, where used longer than statutory period). In *Kinzenbaw*, there was a commercial use by the patentee because the farmers who used the device were agents of the patentee. *Kinzenbaw*, 741 F.2d at 391. Interestingly, the patentee conceded that it was not raising the experimental use negation. *Id.*

176. See *Moleculon*, 793 F.2d at 1265-66 (stating that private use includes inventor showing product to others as long as inventor retains control of product and its distribution); *Bergstrom v. Sears, Roebuck & Co.*, 457 F. Supp. 213, 224 (D. Minn. 1978) (allowing private use for private purposes and enjoyment before patenting product), *aff'd*, 599 F.2d 62 (8th Cir. 1979); see also *Beachcombers Int'l, Inc. v. Wildewood Creative Prods., Inc.*, 31 F.3d 1154, 1160 (Fed. Cir. 1994) (stating that *Moleculon* involved "an implied restriction of confidentiality").

177. See *Egbert*, 104 U.S. at 336 (declaring that allowing non-inventor to use product without restriction or limitation constitutes public use); *Grain Processing Corp. v. American Maize-Prods. Co.*, 840 F.2d 902, 906 (Fed. Cir. 1988) (noting standard does not apply to experimental purposes); *In re Smith*, 714 F.2d 1127, 1134 (Fed. Cir. 1983) (applying standard except in cases where use was for experimental purposes); *Randolph v. Allis-Chalmers Mfg. Co.*, 264 F.2d 533, 535 (7th Cir. 1959) (citations omitted) (stating that standard is applied except in cases of experimental purposes performed in good faith); see also *Allied Colloids*, 35 U.S.P.Q.2d at 1843 (stating that mere fact that experiments were "commercially motivated" does not trigger bar, because commercial purpose underlies virtually every contract).

178. See *Moleculon*, 793 F.2d at 1265-67 (noting Federal Circuit's approval of district court's finding that inventor had not "given over" invention for "free and unrestricted use" by another person); see also *Beachcombers*, 31 F.3d at 1160 (noting that personal demonstration to friends at party constituted public use); *Kinzenbaw*, 741 F.2d at 390-91 (finding that testing of machine by agents of patent owner served its commercial purposes and, therefore, absent any claim of experimental use, constituted public use of invention).

179. See *National Research Dev. Corp. v. Varian Assocs.*, 30 U.S.P.Q.2d (BNA) 1537, 1538-39 (Fed. Cir. 1994) (unpublished opinion) (finding that inventor must make sure that no one has

non-precedential Federal Circuit decision, the reason is that the public-use bar applies equally to the inventor's confidants and the inventor.¹⁸⁰ There is also an interplay between control and secrecy such that the more sweeping and stringent the degree of confidentiality, the more likely it is that the inventor maintained sufficient control so as to avoid the bar.¹⁸¹

Moreover, it is well established that secret use of an invention by a third party without the knowledge or consent of the inventor constitutes a public use where the invention is discoverable or ascertainable by examination of the product sold.¹⁸² Except for this limited situation, however, the vast majority of pre-Federal Circuit precedent held that secret commercial use by such a third party did not constitute public use.¹⁸³ The Federal Circuit appeared to adopt this majority rule in *W.L. Gore & Associates v. Garlock*.¹⁸⁴ In a later case, *Kinzenbaw v. Deere & Co.*,¹⁸⁵ however, another panel of the Federal Circuit seemed to limit the holding in *Gore* as follows: "[In *Gore*], this Court held that, *in the particular circumstances there involved*, the secret use by third persons of a patented process to produce tape that those persons sold commercially, did not constitute a public use" ¹⁸⁶ Given the absence of a detailed policy analysis in *Gore* and the Federal Circuit's penchant for avoiding bright-line rules, this issue may still have some life.¹⁸⁷

free access to invention).

180. *Id.*

181. *Beachcombers*, 31 F.3d at 1160.

182. *See* J.A. LaPorte, Inc. v. Norfolk Dredging Co., 787 F.2d 1577, 1582 (Fed. Cir. 1986) (finding public use where invention was discoverable from device sold); *see also In re Caveney*, 761 F.2d 671, 675-76 (Fed. Cir. 1985) (noting that claimed invention was disclosed to purchaser).

183. *Compare* Puget Sound Salmon Egg Co. v. Shoshoni, Inc., 321 F. Supp. 104, 112 (D. Idaho 1970) (holding that use of product by others who are unable to determine how product was made is not public use) *and* Chemithon Corp. v. Proctor & Gamble Co., 287 F. Supp. 291, 306, 313-14 (D. Md. 1968) (finding that product was publicly used when many employees of another company used it and no effort was made to keep process secret) *with* *Lorenz v. Colgate-Palmolive-Peet Co.*, 167 F.2d 423, 429 (3d Cir. 1948) (stating that inventor must protect product from public use before product is patented, because court will treat any disclosure as public use, even if unintended).

184. 721 F.2d 1540 (Fed. Cir. 1983). The court found that secret commercial use by a third party, where others could not determine the process, was not a public use. *W.L. Gore & Assocs. v. Garlock, Inc.*, 721 F.3d 1540, 1549-50 (Fed. Cir. 1983).

185. 741 F.2d 383 (Fed. Cir. 1984).

186. *Kinzenbaw v. Deere & Co.*, 741 F.2d 383, 390 (Fed. Cir. 1984) (emphasis added).

187. *See* D.L. Auld Co. v. Chroma Graphics Corp., 714 F.2d 1144, 1147 (Fed. Cir. 1983) (supporting majority rule and stating that "[w]here a method is kept secret, and remains secret after a sale of the product of the method, that sale will not, of course, bar another inventor from the grant of a patent on that method"); *In re Caveney*, 761 F.2d 671, 675 (Fed. Cir. 1985) (supporting majority view and stating that pre-critical date sale of unpatented product will bar patent of another unless patented method is secret and remains secret after sale of unpatented products of method).

B. *The Invention*

As with the on-sale bar, the prevailing view of pre-Federal Circuit precedent was that actual reduction to practice was an essential predicate to the application of the public-use bar.¹⁸⁸ In practice, some courts also followed the somewhat less vigorous "essentially completed" criterion.¹⁸⁹ The Federal Circuit has not yet confronted this issue explicitly. In fact, in *UMC Electronics*, the Federal Circuit expressly limited its holding to the on-sale bar and acknowledged that the public-use bar "implicates different considerations."¹⁹⁰ In this regard, the Federal Circuit's pre-*UMC Electronics* decision in the case of *Harrington Manufacturing Co. v. Powell Manufacturing Co.*¹⁹¹ can arguably be construed as supporting the prevailing view.¹⁹²

The requirement of an actual reduction to practice has some facile appeal because of the fundamental precept that an invention cannot be in public use until it is at least embodied in a physical thing. Arguably, such a requirement would also provide more predictability to an assessment of the public-use bar. On the other hand, actual reduction of practice in its legal sense involves more than just

188. See, e.g., *Dataq, Inc. v. Tokheim Corp.*, 736 F.2d 601, 605 (10th Cir. 1984) (noting that product does not exist before reduced to practice); *Stewart-Warner Corp. v. Pontiac*, 717 F.2d 269, 273-74 (6th Cir. 1983) (stating that unless product's operativeness is obvious by its simplicity, product must be tested in work conditions before product is considered completed); *Digital Equip. Corp. v. Diamond*, 653 F.2d 701, 718 (1st Cir. 1981) (declaring that product is not "on sale" unless it is operable and reduced to practice); *Austin v. Marco Dental Prods.*, 560 F.2d 966, 970 (9th Cir. 1977) (allowing inventor, who showed product at convention, to avoid being barred from getting patent because product had not yet been reduced to practice); *Medtronic, Inc. v. Daig Corp.*, 611 F. Supp. 1498, 1508-09 (D. Minn. 1985) (stating that if product has not been reduced to practice then there is nothing to disclose to public).

189. See *Red Cross Mfg. Corp. v. Toro Sales Co.*, 525 F.2d 1135, 1141 (7th Cir. 1975) ("Exact identity is not required as long as the invention is essentially completed at the time of the invalidating sale." (quoting *Dart Indus. v. E.I. Du Pont De Nemours and Co.*, 489 F.2d 1359, 1365 (7th Cir. 1973))); see also *UMC Elecs. Co. v. United States*, 816 F.2d 647, 655 (Fed. Cir. 1987) (noting that in cases like *Dart*, some courts would "attempt to shoehorn the reduction to practice concept into the on-sale bar analysis . . . [by assessing] whether the invention was 'sufficiently' reduced to practice for purposes of the bar"). In *UMC Electronics*, however, the Federal Circuit stated that "adoption of a 'sufficiently' reduced-to-practice requirement is in fact an abandonment of reduction to practice as that term is used in other contexts [such as interferences]." *Id.* Hence, the court declined to "adopt modifiers in connection with 'reduction to practice,' whatever the context." *Id.*

190. *UMC*, 816 F.2d at 652 n.5.

191. 815 F.2d 1478 (Fed. Cir. 1986).

192. See *Harrington Mfg. Co. v. Powell Mfg. Co.*, 815 F.2d 1478, 1481 (Fed. Cir. 1986) (noting that product does not have to work perfectly to be considered reduced to practice or on sale or in public use); cf. *Allied Colloids, Inc. v. American Cynamid Co.*, 35 U.S.P.Q.2d (BNA) 1840, 1842 (Fed. Cir. 1995) ("A 'public use' for the purpose of barring access to the patent system is a use more than a year before the patent filing date, whereby a *completed* invention is used in public, without restriction and in circumstances other than 'substantially for the purpose of experiment.'" (quoting *Smith & Griggs Mfg. Co. v. Sprague*, 123 U.S. 249, 256 (1887) (emphasis added))).

construction of a physical embodiment of the claimed invention.¹⁹³ Therefore, there conceivably can be use of an apparatus which amounts to commercialization and which only later meets the legal definition of an actual reduction to practice. Whether such use should be deemed public use is open to legitimate disagreement. Given the Federal Circuit's emphasis on a policy approach,¹⁹⁴ however, the Federal Circuit may well extend its holding in *UMC Electronics* to the public-use bar. Statements in early Supreme Court cases, however, can be interpreted selectively as support for either side of this issue.¹⁹⁵

Post-*UMC Electronics* district court decisions that have considered this issue evince divergent views. Some courts continue to require an actual reduction to practice.¹⁹⁶ Other courts have adopted a "sufficiently tested to demonstrate that it will work for its intended purpose" requirement.¹⁹⁷

V. THE UNDERLYING POLICIES

Early in its history, the Federal Circuit eschewed any hard and fast rules for analyzing the on-sale and public-use bars in favor of evaluating the totality of the factual circumstances in light of the

193. See *supra* notes 79-80 and accompanying text (discussing inventor's subjective appreciation and recognition as factors used to determine if invention was actually reduced to practice).

194. See *infra* notes 198-99 and accompanying text (discussing policy issues that Federal Circuit applies to analysis).

195. See, e.g., *Root v. Third Ave. R.R.*, 146 U.S. 210, 223-26 (1892) (explaining that product may be used by some members of public for testing and still not be considered for public use); *Smith & Griggs Mfg. Co. v. Sprague*, 123 U.S. 249, 256 (1887) (stating that if product is used mainly for trade and experimental use is incidental, product will be considered for public use); *City of Elizabeth v. American Nicholson Pavement Co.*, 97 U.S. 126, 134-35 (1877) (stating that, where inventor tests product to his and others' benefits, product will not be considered for public use if inventor is using it for experimental purposes); see also *Lyman v. Maypole*, 19 F. 735, 736-37 (N.D. Ill. 1884) (noting that if inventor sells product that is used for business and not for experimental purposes, product is deemed to be of public use even if inventor continues testing product).

196. See *Medtronic, Inc. v. Daig Corp.*, 611 F. Supp. 1498, 1507 (D. Minn. 1985) (holding that public-use bar requires actual reduction to practice), *aff'd*, 789 F.2d 903 (Fed. Cir.), *cert. denied*, 479 U.S. 931 (1986). The court stated that "[w]hen a party asserts that a prior use anticipates a patent claim under Section 102(a) or (b), that party must also establish that such a use was of a complete invention, i.e., conceived and reduced to practice, and public." *Id.*; see also *Klein v. Cannondale Corp.*, 8 U.S.P.Q.2d (BNA) 1500, 1506 (D. Conn. 1988) (requiring actual reduction to practice for public-use bar).

197. *Southwest Aerospace Corp. v. Teledyne Indus.*, 702 F. Supp. 870, 884, 9 U.S.P.Q.2d (BNA) 1949, 1960 (N.D. Ala. 1988) (holding no public-use bar when product was not sufficiently tested for intended use). The court found that, in light of the evidence that the claimed invention was not in commercial form at the time and that the invention was not known to be useful to perform its intended function, the invention was not "sufficiently tested to demonstrate that it would work for its intended purpose" until after critical date and there was no public use or sale of invention under section 102(b). *Id.*

policies underlying these bars.¹⁹⁸ According to the Federal Circuit, these policies include:

(1) discouraging removal of inventions from the public domain that the public recently has become to believe are freely available [(i.e., avoidance of detrimental public reliance)]; (2) favoring the prompt and widespread disclosure of inventions to the public; (3) allowing the inventor a reasonable amount of time following sales activity to determine the potential economic value of a patent [(i.e., one year)]; and (4) prohibiting the inventor from commercially exploiting his invention beyond the statutorily prescribed period (i.e., preventing pre-application commercial exploitation of the invention beyond the bar period).¹⁹⁹

The fourth policy is the most important one and must be weighed with the "sometimes inconsistent" other three policies.²⁰⁰ A paradigmatic example of the application of these policy considerations in conjunction with the totality of the circumstances test is the case of *Manville Sales Corp. v. Paramount Systems*.²⁰¹

These policy considerations antedate the Federal Circuit by several decades. Early Supreme Court cases explicated one or more of them.²⁰² The famous case of *Metallizing Engineering Co. v. Kenyon Bearing and Auto Parts Co.*²⁰³ delved into the second and fourth of these policy considerations in detail.²⁰⁴ In 1981, these policy

198. See *Barnag Barmer Maschinenfabrik AG v. Murata Machinery*, 731 F.2d 831, 836 (Fed. Cir. 1984) (applying test consistent with underlying policies of on-sale bar); *TP Lab., Inc. v. Professional Positioners, Inc.*, 724 F.2d 965, 968 (Fed. Cir. 1984) (balancing factors including disclosure to public and need to perfect invention).

199. *Envirotech Corp. v. Westech Eng'g*, 904 F.2d 1571, 1574 (Fed. Cir. 1990) (citing *King Instrument Corp. v. Otari Corp.*, 767 F.2d 853, 860 (Fed. Cir. 1985)).

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

201. 917 F.2d 544, 549-51 (Fed. Cir. 1990) (applying factors and showing that inventor actions were consistent with policies by applying for patent after necessary tests were conducted).

202. See *Egbert v. Lippmann*, 104 U.S. 333, 337-38 (1881) (illustrating that if inventor allows product to be used without restrictions for longer than statutorily prescribed period, then product will be deemed abandoned and patent will be void); *Consolidated Fruit-Jar Co. v. Wright*, 94 U.S. 92, 95-97 (1877) (applying abandonment policy and stating that if inventor fails to apply for patent when appropriate, then inventor loses right); *City of Elizabeth v. American Nicholson Pavement Co.*, 97 U.S. 126, 135 (1877) (allowing good faith experimental use of product to avoid public use); *Shaw v. Cooper*, 32 U.S. (7 Pet.) 292, 323 (1833) (stating that if invention goes into public use by any means, inventor must immediately assert patent right or else lose right); *Pennock v. Dialogue*, 27 U.S. (2 Pet.) 1, 23 (1829) (holding that if inventor puts product into public use or sells it before applying for patent then inventor is barred from claim on patent).

203. 153 F.2d 516, 519-20 (2d Cir. 1946). For an interesting discussion of the interrelationship between market analysis and the policies, see *In re Mahurkar Double Lumen Hemodialysis Catheter Patent Litig.*, 831 F. Supp. 1354, 1367-72 (N.D. Ill. 1993) (Easterbrook, J.).

204. See *Metallizing Eng'g Co. v. Kenyon Bearing & Auto Parts Co.*, 153 F.2d 516, 519-20 (2d Cir. 1946) (prohibiting inventor from deriving benefit from sale or use of product based on policies that inventor should not be able to extend monopoly beyond patent period and that public has right to prompt and widespread disclosure).

considerations were distilled in the Court of Claims case of *General Electric Co. v. United States*.²⁰⁵ What has changed under the Federal Circuit, however, is that the court has mandated that these policy considerations be intertwined with a totality of the circumstances test.²⁰⁶ Therefore, it is often more difficult to predict the outcome of any on-sale or public-use bar issue with any reasonable certainty.

VI. TOTALITY OF THE CIRCUMSTANCES

The requirement of looking to the totality of the circumstances to resolve an on-sale or public-use bar inquiry did not originate with the Federal Circuit. As discussed previously, some courts adopted such an approach in lieu of formulating rigid or bright-line rules.²⁰⁷ With regard to experimental-use negation, the Ninth Circuit similarly avoided bright-line rules in *Cataphote Corp. v. De Soto Chemical Coatings*,²⁰⁸ which held that the applicability of the negation depended "entirely on a determination, from the totality of evidence presented by both parties, of the nature of the acts committed prior to the critical date and the purpose that motivated the commission of those acts."²⁰⁹

Shortly after its inception, the Federal Circuit adopted a totality of the circumstances test for determining the existence of a public-use or on-sale bar and for assessing the availability of the experimental-use negation.²¹⁰ In addition, the court stressed that the test was to be applied in light of the policies underlying the bars.²¹¹ In this

205. 654 F.2d 55, 61-63 (Ct. Cl. 1981) (illustrating application of four policies).

206. See *infra* Part VI (discussing application of totality of circumstances test).

207. See, e.g., *Red Cross Mfg. Corp. v. Toro Sales Co.*, 525 F.2d 1135, 1139-41 (7th Cir. 1975) (analyzing facts based on their effects, and not on formal requisites of challenged activity); *Philco Corp. v. Admiral Corp.*, 199 F. Supp. 797, 815 (D. Del. 1961) (rejecting "hard and fast rules of law based upon overly refined legal distinctions" in light of infinite factual situations and policies governing them); see also *Powell Mfg. Co. v. Long Mfg. Co.*, 319 F. Supp. 24, 41 (E.D.N.C. 1970) (stating that issue of public use is "a question of fact in light of all the evidence").

208. 356 F.2d 24 (9th Cir. 1966).

209. *Cataphote Corp. v. De Soto Chem. Coatings, Inc.*, 356 F.2d 24, 26 (9th Cir. 1966).

210. See *Shatterproof Glass Corp. v. Libbey-Owens Ford Co.*, 758 F.2d 613, 622 (Fed. Cir. 1985) (holding that on-sale bar is determined by considering "the surrounding circumstances"); *TP Lab., Inc. v. Professional Positioners, Inc.*, 724 F.2d 965, 972 (Fed. Cir. 1984) (positing that public use is determined upon consideration of "the entire surrounding circumstances"); *In re Smith*, 714 F.2d 1127, 1137 (Fed. Cir. 1983) (stating that "totality of the evidence" determines experimental use). Still later the court explicitly denominated the test as the "totality of circumstances." *Western Marine Elecs. v. Furuno Elec. Co.*, 764 F.2d 840, 845 (Fed. Cir. 1985).

211. *Western Marine*, 764 F.2d at 845 (stating that in order to agree with underlying policies, court "will want to consider the totality of circumstances . . . along with the character and extent of bona fide experimentation"); see also *UMC Elecs. Co. v. United States*, 816 F.2d 647, 656 (Fed. Cir. 1987) (stating that "[a]ll of the circumstances surrounding the sale or offer to sell, including the stage of development of the invention and the nature of the invention, must be considered and weighed against the policies underlying section 102(b)").

regard, the Federal Circuit has set forth a list of non-exclusive factors which are to be considered, where appropriate, in assessing whether under the totality of the circumstances the on-sale or public-use bars exist. A number of these factors overlap with the factors that are pertinent to a determination of whether the experimental-use negation is applicable.²¹²

Factors relevant to the on-sale bar when there is an issue concerning the relationship between the patentee and a customer include: (1) the need for testing by someone other than the patentee; (2) the stage of development of the invention, including the existence of prototypes; (3) the amount of control exercised by the inventor or patentee; (4) whether payments were made and the basis for the payments; (5) whether confidentiality was required; (6) whether technological changes were made; (7) the character and extent of promotional activities; and (8) lack of record keeping by the inventor.²¹³

Factors bearing on an evaluation of public-use bar include many of the same factors used for assessing both the on-sale bar and experimental-use negation.²¹⁴ As with the Federal Circuit's on-sale bar precedent, the focus is on objective evidence, and the subjective belief of inventors or customers must be weighed against the opposing objective evidence.²¹⁵ Nevertheless, in either case the inventor or patentee's control over the invention is an important factor.²¹⁶

212. See *supra* notes 198-205 and accompanying text (identifying policies underlying on-sale and public-use bars); *infra* note 259 and accompanying text (identifying factors to be considered in assessing experimental use regulation).

213. *Continental Can Co. USA v. Monsanto Co.*, 948 F.2d 1264, 1269 (Fed. Cir. 1991); *United States Envtl. Prods. Inc. v. Westall*, 911 F.2d 713, 716-17 (Fed. Cir. 1990); *Baker Oil Tools v. Geo Vann, Inc.*, 828 F.2d 1558, 1563-65 (Fed. Cir. 1987); *Western Marine*, 764 F.2d at 845.

214. See *U.S. Environmental*, 911 F.2d at 716-17 (using same list of factors to determine existence of either on-sale or public-use bar); *Hycor Corp. v. Schlueter Co.*, 740 F.2d 1529, 1535 (Fed. Cir. 1984) (citing various determinative factors). Additional factors include: (1) the nature of the activity that occurred in public; (2) the public's access to and knowledge of the public use; (3) the length of the test period in comparison with similar tests; and (4) the number of tests and their scale compared with commercial conditions. *Allied Colloids, Inc. v. American Cyanamid Co.*, 35 U.S.P.Q.2d (BNA) 1840, 1842 (Fed. Cir. 1995).

215. See *U.S. Environmental*, 911 F.2d at 717 ("The subjective belief of inventors or customers . . . must be weighed against objective evidence which indicates otherwise."); *TP Lab., Inc. v. Professional Positioners, Inc.*, 724 F.2d 965, 972 (Fed. Cir. 1984) (stating that "inventor's expression of his subjective intent . . . is generally of minimal value").

216. See *U.S. Environmental*, 911 F.2d at 717-18 (indicating that lack of inventor's control over invention, although not determinative, was important factor to be considered in assessing on-sale bar); *Moleculon Research Corp. v. CBS*, 793 F.2d 1261, 1265-66 (Fed. Cir. 1986) (refusing to find public-use bar where inventor allowed some close friends to use the invention while maintaining control over limited third-party use primarily for private enjoyment).

VII. EXPERIMENTAL USE

A. *Pre-Federal Circuit Law*

Experimental use is a judicially created doctrine rooted in the seminal Supreme Court case of *City of Elizabeth v. American Nicholson Pavement Co.*,²¹⁷ where the Court made two critical observations. First, the Court stated that "[t]he use of an invention by the inventor himself, or by any other person under his direction, by way of experiment, and in order to bring the invention to perfection, has never been regarded as [public] use."²¹⁸ Second, the Court noted:

It is sometimes said that an inventor acquires an undue advantage over the public by delaying to take out a patent, inasmuch as he thereby preserves the monopoly to himself for a longer period than is allowed by the policy of the law; but this cannot be said with justice when the delay [in filing] is occasioned by a *bona fide* effort to bring his invention to perfection, or to ascertain whether it will answer the purpose intended²¹⁹

Ever since the *City of Elizabeth* decision, courts have wrestled with two fundamental questions: (1) to what extent must the purpose of the asserted public-use or on-sale activity be bona fide experimentation; and (2) what constitutes the period of experimentation with the invention for the purpose of the experimental-use doctrine. Some circuits have held that the doctrine applies only where the activity was solely or purely experimental.²²⁰ The Second Circuit, however, held that only the primary purpose of the activity need be experimental.²²¹ In *Robbins Co. v. Lawrence Manufacturing Co.*,²²² the Ninth Circuit adopted a variation of this primary purpose test ruling that a sale or offer for sale barred any inquiry into the experimental nature of the sale, unless the sales contract or offer to sell contained an

217. 97 U.S. 126 (1878).

218. *City of Elizabeth v. American Nicholson Pavement Co.*, 97 U.S. 126, 134 (1877) (citing *Shaw v. Cooper*, 32 U.S. (7 Pet.) 292 (1833)).

219. *Id.* at 137.

220. See, e.g., *Dart Indus. v. E.I. Du Pont De Nemours & Co.*, 489 F.2d 1359, 1366 (7th Cir. 1973) (stating that public-use bar may be avoided by proof that use was purely experimental); *Dunlop Co. v. Kelsey-Hayes Co.*, 484 F.2d 407, 414 (6th Cir. 1973) (denying claim because uses of brake devices were not "secret or purely experimental"); *National Biscuit Co. v. Crown Baking Co.*, 105 F.2d 422, 426 (1st Cir. 1939) (holding that uses of products or devices must be "merely to test out . . . invention").

221. *Timely Prods. Corp. v. Arron*, 523 F.2d 288, 302 (2d Cir. 1975).

222. 482 F.2d 426 (9th Cir. 1973).

express or implied condition that the sale was made primarily for experimentation.²²³

The Fifth Circuit heavily criticized the Ninth-Circuit's so-called "*Robbins* rule"²²⁴ and expounded its own variation, holding that the doctrine could be invoked where experimental purpose "predominates."²²⁵ This variation recognized that the experimental use doctrine was "basically a question of the inventor's intent."²²⁶ It, therefore, required a weighing of two motives, experimentation and commercialization, to determine which motive predominated.²²⁷ In contrast, the Ninth Circuit stated that the inventor's intent ordinarily should be entitled to very little weight.²²⁸ Finally, many decisions, including C.C.P.A. precedent, characterized the experimental-use doctrine as an "exception" to an on-sale or public-use bar.²²⁹

Perhaps initially owing to the uncertainty engendered by the Supreme Court's language in *City of Elizabeth*,²³⁰ courts developed differing views as to whether it was necessary that the experimentation be for the primary purpose of actually reducing the invention to practice, or whether the period of experimentation could encompass post-reduction-to-practice experimentation. The prevailing view was that the experimental-use period may well extend beyond the point of actual reduction to practice.²³¹ Nevertheless, by focusing on whether the activity was for the purpose of perfecting an incomplete invention, some decisions held that actual reduction to practice ended the period of experimentation which would otherwise negate the

223. *Robbins Co. v. Lawrence Mfg. Co.*, 482 F.2d 426, 434 (9th Cir. 1973).

224. See *In re Yarn Processing Patent Validity Litig.*, 498 F.2d 271, 284-85 (5th Cir. 1974) (emphasis added) (stating that there cannot be "any use or sale of invention at all").

225. *Id.* at 288.

226. *Id.*

227. *Id.*

228. See *Robbins Co. v. Lawrence Mfg. Co.*, 482 F.2d 426, 431 (9th Cir. 1973) (holding that inventor's intent is "insufficient to raise a genuine issue of material fact to defeat an adverse summary judgment").

229. See, e.g., *In re Theis*, 610 F.2d 786, 792-93 (C.C.P.A. 1979) (finding customer's six-month evaluation of product outside scope of "experimental use exception"); *In re Yarn Processing*, 498 F.2d at 288 n.7 (noting that if inventor's main purpose is experimentation, "experimental use exception applies"); *Robbins*, 482 F.2d at 432 (indicating types of sales nonpreclusive of "experimental exception").

230. See *supra* notes 218-19 and accompanying text (discussing experimental use doctrine).

231. For opinions adhering to this view, see *Del Mar Eng'g Lab. v. Physio-Tronics*, 642 F.2d 1167, 1169 (9th Cir. 1981); *Atlas v. Eastern Airlines*, 311 F.2d 156, 162 (1st Cir. 1962); *Cleveland Trust Co. v. Schriber-Schroth Co.*, 92 F.2d 330, 335 (6th Cir. 1937), *rev'd on other grounds*, 305 U.S. 47 (1938); *General Motors Corp. v. Bendix Aviation Corp.*, 123 F. Supp. 506, 519-21 (N.D. Ind. 1954); see also CHISUM, *supra* note 18, § 6.02[7], at 6-85 to -86 (describing view that experimental-use period may well extend beyond point of actual reduction to practice).

public-use or on-sale bars.²³² Indeed, at least one decision of the C.C.P.A. intimated that experimental use could extend beyond the reduction to practice of the claimed invention,²³³ while a Court of Claims case intimated the opposite.²³⁴ Notwithstanding this uncertainty, there was virtual unanimity that the experimental-use "exception" was not applicable to experiments performed with respect to unclaimed features of an invention.²³⁵

B. Federal Circuit Law

In one of its earliest cases addressing this issue,²³⁶ the Federal Circuit characterized experimental use as a "negation," rather than an "exception," to the on-sale and public-use bars, thereby adding to the lexicon of patent terminology.²³⁷ It did so despite having lapsed into calling experimental use an "exception" in an earlier case.²³⁸ In addition, the Federal Circuit adopted the primary purpose test, which states that a pre-critical date public-use or on-sale activity is negated if the primary purpose of the activity was experimentation.²³⁹ The Federal Circuit also adopted the requirement of a nexus between the experimentation and the claimed features of the invention.²⁴⁰

232. See *In re Yarn Processing*, 498 F.2d at 279-85 (holding that experiments must be "reasonably necessary" in order to avoid public-use bar); *Nicholson v. Carl W. Mullis Eng'g & Mfg. Co.*, 315 F.2d 532, 535 (4th Cir. 1963) (stating that invention that meets legal definition of reduction to practice is no longer in experimental stage).

233. *In re Josseland*, 188 F.2d 486, 490-94 (C.C.P.A. 1951) (noting that reduction to practice does not necessarily imply public use).

234. *Gould, Inc. v. United States*, 579 F.2d 571, 583 (Ct. Cl. 1978) (adopting idea that reduction to practice by definition post-dates testing sufficient to ensure functionality).

235. See, e.g., *Minnesota Mining & Mfg. Co. v. Kent Indus.*, 409 F.2d 99, 101 (6th Cir. 1969) (concluding that experimentation unclaimed cement ingredient is irrelevant to question of experimental use of cement); *Robine v. Apco, Inc.*, 386 F.2d 267, 270 (2d Cir. 1967) (disqualifying from experimental use exception experimentation related to device used in combination with other items, but not device itself); *Midland Flour Milling Co. v. Bobbitt*, 70 F.2d 416, 421 (8th Cir. 1934) (noting that imperfect interactions between perfected invention and other devices does not negate existence of invention in finished form).

236. *TP Lab., Inc. v. Professional Positioners, Inc.*, 724 F.2d 965 (Fed. Cir. 1984).

237. *Id.* at 971. The Federal Circuit characterized this difference as "not merely semantic." *Id.* Under a fair reading of *City of Elizabeth*, this characterization appears to be correct. See *supra* notes 217-19 and accompanying text (discussing experimental use language from *City of Elizabeth*); see also *Atlantic Thermoplastics Co. v. Faytex Corp.*, 970 F.2d 834, 836 (Fed. Cir. 1992) (holding on-sale bar invalidates patent for invention offered for sale); cf. *Sinskey v. Pharmacia Ophthalmics*, 982 F.2d 494, 498 (Fed. Cir. 1992) (discussing shifting burdens of proof where experimental use asserted to overcome claim of anticipation).

238. See *In re Smith*, 714 F.2d 1127, 1135 (Fed. Cir. 1983); see also *In re Mann*, 861 F.2d 1581, 1582 (Fed. Cir. 1988) (continuing lapse of calling experimental use exception rather than negation).

239. *Baker Oil Tools v. Geo Vann, Inc.*, 828 F.2d 1558, 1558-63 (Fed. Cir. 1987).

240. *Atlantic Thermoplastics Co.*, 970 F.2d at 836 (requiring proof that complete claimed invention "is embodied in or obvious in view of the thing sold or offered for sale" for invocation of on-sale bar); cf. *Sinskey*, 982 F.2d at 498 (stating that to avoid on-sale bar, activity must be

The Federal Circuit, however, did not address explicitly the question of whether experimentation could extend beyond reduction to practice until *RCA Corp. v. Data General Corp.*²⁴¹ In *RCA*, the Federal Circuit held that "experimental use, which means perfecting or completing an invention to the point of determining that it will work for its intended purpose, ends with an actual reduction to practice."²⁴² Interestingly, some of the Federal Circuit's earlier decisions at least implied that the court would adopt the prevailing view.²⁴³

On its face, the *RCA* holding is limited to the on-sale bar.²⁴⁴ Accordingly, one post-*RCA* district court decision has declined to extend the *RCA* holding to the public-use bar.²⁴⁵ Another has, however, at least impliedly made such an extension.²⁴⁶ The Federal Circuit's decision in *Manville Sales Corp. v. Paramount Systems*,²⁴⁷ however, with its emphasis on application of the underlying policies in conjunction with an experimental use analysis, suggests that the Federal Circuit may so extend its *RCA* ruling.²⁴⁸ Whether the *RCA* holding comports with the above-quoted language from *City of Elizabeth* is debatable.

shown to be "substantially for purposes of experiment" (quoting *Baker Oil Tools*, 828 F.2d at 1564); *In re Brigrance*, 792 F.2d 1103, 1109 (Fed. Cir. 1986)) (discussing but not concluding on issue of whether activities that are "solely for experimental purposes" will negate on-sale bar); *In re Smith*, 714 F.2d at 1136 (asserting experimental use exception inapplicable to "experiments performed with respect to unclaimed features of an invention").

241. 887 F.2d 1056, 1061 (Fed. Cir. 1989). The Court's statement in *UMC Elecs. Co. v. United States*, 816 F.2d 647, 656 (Fed. Cir. 1987), that reduction to practice might well be dispositive of whether a sale met the experimental-use negation, perhaps foreshadowed its holding.

242. *RCA Corp. v. Data Gen. Corp.*, 887 F.2d 1056, 1061 (Fed. Cir. 1989).

243. See *Pennwalt Corp. v. Akzona Inc.*, 740 F.2d 1573, 1580-81 (Fed. Cir. 1984). The Court stated that "[i]f any commercial exploitation does occur, it must be merely incidental to the primary purpose of experimentation to perfect the invention." *Id.*; see also *TP Lab., Inc. v. Professional Positioners, Inc.*, 724 F.2d 965, 965 (Fed. Cir. 1984) (stating that court must decide whether "entirety of the evidence led to the conclusion that there had been a 'public use'"); *In re Smith*, 714 F.2d at 1134 ("The experiment to improve and perfect the invention must be the real purpose in such public use and not merely incidental and subsidiary.").

244. See *Atlantic Thermoplastics Co. v. Fayley Corp.*, 5 F.3d 1437, 1480 (Fed. Cir. 1993) (citing to *RCA* only to extent that it addresses on-sale bar).

245. See *Kearns v. Wood Motors*, 773 F. Supp. 979, 982 (E.D. Mich. 1990) (noting that on-sale and public-use bars, while "undeniably related" grounds for invalidating patent, "are not interchangeable").

246. *Tone Bros., Inc. v. Sysco Corp.*, 28 F.3d 1192, 1200 n.8 (Fed. Cir. 1994) (extending, by implication, *RCA* logic on effect of actual reduction to practice to public-use bar); see also *Nordberg, Inc. v. Telsmith, Inc.*, 881 F. Supp. 1252, 1285 (E.D. Wisc. 1995) (discussing effect of reduction to practice in experimental use exception); *Ethicon, Inc. v. United States Surgical Corp.*, 762 F. Supp. 480, 506 (D. Conn. 1991) (indicating that experimental use concludes after tests show product functions as intended or anticipated environment).

247. 917 F.2d 544 (Fed. Cir. 1990).

248. See *Manville Sales Corp. v. Paramount Sys.*, 917 F.2d 544, 549-51 (Fed. Cir. 1990) (concluding that public test of device not fully tested in its intended environment does not imply device is in public domain).

The Federal Circuit has also augmented the importance of the "inventor's control over the experimentation" where the patentee's argument is based on an assertion of the experimental-use negation.²⁴⁹ At least one Federal Circuit case suggests that the inventor's control over the testing of the invention is a *sine qua non* for invoking the experimental-use negation.²⁵⁰ Consequently, at least one district court has elevated the importance of this factor.²⁵¹

In assessing whether the experimental-use negation applies, the Federal Circuit looks to the totality of the circumstances and concentrates on objective evidence.²⁵² Therefore, a bare finding that the patentee was engaged in prototype testing and development is not enough to negate the bar.²⁵³ Moreover, the subjective intent of the inventor is viewed with the same degree of skepticism for the experimental-use negation as for the on-sale and public-use bars.²⁵⁴ An inventor's subjective intent to experiment, therefore, is of minimal value unless it is supported by sufficient objective evidence.²⁵⁵ This approach comports with pre-Federal Circuit precedent, which assigns little weight to bare allegations of subjective intent.²⁵⁶ By the same

249. See *In re Hamilton*, 882 F.2d 1576, 1581-83 (Fed. Cir. 1989) (noting that because both inventor and assignee failed to maintain control over testing tended to show that their motivation was not experimental); *Paragon Podiatry Lab. v. KLM Lab.*, 984 F.2d 1182, 1185-87 (Fed. Cir. 1993) (citing inventor's control of devices as "wholly lacking").

250. *In re Hamilton*, 882 F.2d at 1580; see *Paragon*, 984 F.2d at 1185-87 (using inventor's lack of control as major factor in finding against inventor). After citing *Hamilton* for this proposition, however, *Paragon* ultimately seemed to apply the totality of circumstances approach. *Id.* at 1192-93; see also *United States Envtl. Prods. v. Westall*, 911 F.2d 713, 717-18 (Fed. Cir. 1990) (indicating that "control," while not determinative, is "important factor" in public-use inquiry.)

251. *Gennodie v. Metro North Commuter R.R. Co.*, 1995 WL 366442 (S.D.N.Y. 1995) ("The threshold issue in determining whether the use of a product is experimental is a finding that the inventor had control over the invention during the course of the testing.").

252. See *Atlantic Thermoplastics Co. v. Faytex Corp.*, 970 F.2d 834, 836-37 (Fed. Cir. 1992) (stating that in context of experimental-use negation to on-sale bar, "a court must examine the claimed features, the offeror's objective intent, and the totality of the circumstances"); *LaBounty Mfg. v. United States Int'l Trade Comm'n*, 958 F.2d 1066, 1071-72 (Fed. Cir. 1992) (holding that "[a]n inventor's protestation of an intent to experiment . . . is of little evidentiary value"); *Baker Oil Tools v. Geo Vann, Inc.*, 828 F.2d 1558, 1564 (Fed. Cir. 1987) (stating that in determining whether experimental-use negation applies, "[t]he underlying facts of each case must be considered in light of all of the circumstances."); *In re Smith*, 714 F.2d 1127, 1135 (Fed. Cir. 1983) (holding that objective evidence is to be used to determine applicability of experimental-use negation).

253. *Atlantic Thermoplastics*, 5 F.3d at 1480.

254. *LaBounty*, 958 F.2d at 1072 (holding that "[a]n inventor's protestation of an intent to experiment . . . is of little evidentiary value").

255. *Id.*; see also *Paragon*, 984 F.2d at 1186-87 (holding that inventor's subjective belief that sales were experimental does not raise genuine issue of material fact); *In re Brigrance*, 792 F.2d 1103, 1109 (Fed. Cir. 1986) (stating that inventor's belief of lack of commercial viability is not dispositive); *TRW Fin. Servs., Inc. v. Unisys Corp.*, 835 F. Supp. 994, 1003, 31 U.S.P.Q.2d 1065, 1084-86 (E.D. Mich. 1993) (asserting that inventor's subjective intent is of "minimal value").

256. See *Robbins Co. v. Lawrence Mfg. Co.*, 482 F.2d 426, 431 (9th Cir. 1973) ("An inventor's testimony of his subjective intent has no probative value against overwhelming evidence to the contrary.").

token, objective evidence that a sale was made because the purchaser was participating in experimental testing creates no on-sale bar.²⁵⁷ Any assertion of experimental sales, however, requires at a minimum that the customer be made aware of the experimentation.²⁵⁸

The Federal Circuit has articulated a helpful list of non-exhaustive factors which, where appropriate, should be considered in an experimental-use analysis. The factors include: (1) the length of the test period; (2) the necessity for public testing; (3) whether any payment was made for the inventions; (4) whether there was any secrecy obligations on the part of the user; (5) whether progress records were kept and required; (6) whether persons, other than the inventor, conducted the experiments; (7) the amount of control retained by the inventor over the experiments; (8) how long the test period was in relation to the test periods of similar devices; (9) the existence of promotional activities; (10) the degree of commercial exploitation during the test in relation to the purpose of the experimentation; and (11) the extent to which it is customary practice in the relevant industry to submit samples of proposed devices to potential customers for testing or determination of utility.²⁵⁹

A number of these factors also come into play in any on-sale or public-use bar inquiry. In *Manville Sales Corp. v. Paramount Systems*,²⁶⁰ the Federal Circuit counseled that these factors were subordinate to the policy considerations underlying the statute.²⁶¹

Finally, in *In re Mann*,²⁶² the Federal Circuit seemingly held that the experimental-use negation does not apply to design patents, because "[o]btaining the reactions of people to a design . . . is not experimentation" in the sense envisioned by the negation.²⁶³

257. *UMC Elecs. Co. v. United States*, 816 F.2d 647, 657 (Fed. Cir. 1987) (stating that sale made to further purchaser's experimental use does not create on-sale bar); *Great Northern Corp. v. Davis Core & Pad Co.*, 782 F.2d 159, 165 (Fed. Cir. 1986) (rejecting notion that sale to customer for experimental use created on-sale bar); cf. *Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1269 (Fed. Cir. 1991) ("[T]he on sale bar . . . does not arise simply because the intended customer was participating in development and testing.").

258. *Paragon*, 984 F.2d at 1186; *LaBounty*, 958 F.2d at 1072; see *In re Dybel*, 524 F.2d 1393, 1401 (E.C.P.A. 1975) (stating that inventor's "failure to communicate to any of the purchasers or prospective purchasers of the device that the sale or offering was for experimental use is fatal to his case").

259. *United States Envtl. Prods. v. Westall*, 911 F.2d 713, 717 (Fed. Cir. 1990); *Grain Processing Corp. v. American Maize-Prods. Co.*, 840 F.2d 902, 906 (Fed. Cir. 1988); *Baker Oil Tools v. Geo Vann, Inc.*, 828 F.2d 1558, 1564 (Fed. Cir. 1987); *In re Brigrance*, 792 F.2d at 1108; see also *Joy Technologies, Inc., v. Flakt*, 820 F. Supp. 802, 811 (D. Del. 1993) (listing similar factors that warrant consideration). The fifth and seventh factors are "highly relevant." *Allied Colloids, Inc. v. American Cynamid Co.*, 35 U.S.P.Q.2d (BNA) 1840, 1844 (Fed. Cir. 1995).

260. 917 F.2d 544 (Fed. Cir. 1990).

261. *Manville Sales Corp. v. Paramount Sys.*, 917 F.2d 544, 549-51 (Fed. Cir. 1990).

262. 861 F.2d 1581 (Fed. Cir. 1988).

263. *In re Mann*, 861 F.2d 1581, 1582 (Fed. Cir. 1988).

Nevertheless, a subsequent district court opinion held that *In re Mann* was limited to its facts and thus did not completely foreclose application of the negation to design patents, at least not where the use in public was for the purpose of enabling the inventor to evaluate the design, rather than to see if customers liked it.²⁶⁴ More recently, in *Tone Brothers v. Sysco Corp.*,²⁶⁵ the Federal Circuit characterized its "broad statement" in *In re Mann* as "arguably dictum" and went on to hold that experimentation directed to functional features of a product also containing an ornamental design could negate what otherwise would be considered a public use within the meaning of § 102(b).²⁶⁶ The Court further distinguished *In re Mann* on the ground that it involved activity directed toward generating consumer interest in the aesthetics of the design as opposed to evaluating the effect of functional features of the design on the overall function of the product.²⁶⁷ It thus was at odds with the third policy underlying the bars. In this regard, the Federal Circuit noted that the following factors should be considered in connection with the experimental-use inquiry for design patents: (1) the length of the test period and number of tests as compared with a similar type of test on a similar type of design; (2) whether a user made any payment for the device; (3) whether a user agreed to use secretly; (4) whether records were kept of the progress of the test; and (5) whether persons other than the designer conducted the asserted experiments.²⁶⁸

CONCLUSION

After more than a decade of Federal Circuit jurisprudence, the on-sale and public-use bars still remain a rather volatile and unpredictable area of patent law. In particular, although the Federal Circuit has diminished confusion apparent in pre-Federal Circuit precedent concerning the standards to be applied in assessing the existence of an on-sale or public-use bar, these standards are inherently uncertain. With respect to many aspects of the bars, reference must be made to the totality of the circumstances in light of the policies underlying the bar. As a result, patent practitioners must take a fresh approach to each factual situation, without the benefit of bright-line rules to guide

264. *IKO Chicago v. Certainteed Corp.*, No. 92-C-1929, 1993 U.S. Dist. LEXIS 17603, at *7 (N.D. Ill. Dec. 16, 1993).

265. 28 F.3d 1192 (Fed. Cir. 1994), *cert. denied*, 63 U.S.L.W. 3685-86 (U.S. Mar. 21, 1995).

266. *Tone Bros. v. Sysco Corp.*, 28 F.3d 1192, 1198 (Fed. Cir. 1994), *cert. denied*, 63 U.S.L.W. 3685-86 (U.S. Mar. 21, 1995).

267. *Id.* at 1200.

268. *Id.* (citing *TP Lab., Inc. v. Professional Positioners, Inc.*, 724 F.2d 965, 971-72 (Fed. Cir. 1984)).

them. Given the substantial investment and value inherent in technologies protected by the patent grant, it is eminently arguable that a desirable goal of the Federal Circuit would be to make this important area of the law more predictable. Given the controlling standards, however, predictability appears to be an elusive goal. Moreover, quite apart from the inherent uncertainty engendered by the standards, there are still a number of important, undecided questions involving these standards. For example, the Court has yet to decide definitively whether the apparent holding in *RCA*, that for the purpose of the on-sale bar experimental use ends with reduction to practice, applies to the public-use bar as well. Further, although eight years have passed since the Federal Circuit's decision in *UMC*, the Federal Circuit has yet to provide further guidance on the particular stage, if any, of development the claimed invention must have attained as a predicate to triggering the on-sale bar. Patent practitioners, therefore, need to be fully conversant with the ever-evolving body of Federal Circuit jurisprudence concerning the on-sale and public-use bars and be able to adopt a flexible and imaginative approach to issues in this area.

