

SUBSTANTIVE VERSUS PROCESS-BASED FORMALISM IN CLAIM CONSTRUCTION

by
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In recent years, the United States Court of Appeals for the Federal Circuit has embraced the use of bright-line, formalistic rules in the interest of increasing certainty in patent law. The Supreme Court has also expressed an interest in certainty in patent law, but its approach has varied from that of the Federal Circuit. Whereas the Federal Circuit has articulated bright-line substantive rules that are outcome determinative, the Supreme Court has articulated process-based formalistic rules, such as the use of rebuttable presumptions, which do not preordain a certain outcome and thus provide greater fairness. This Article first reviews the Supreme Court's patent-related jurisprudence to explore the differences between the Court's and the Federal Circuit's views on certainty. Next, the Article evaluates the Federal Circuit's claim construction jurisprudence and assesses which doctrines and methodologies, if any, are consistent with the Supreme Court's view. Finally, the Article concludes that the Federal Circuit should embrace claim construction methodologies that are more akin to rebuttable presumptions than the estoppel-like approaches it presently uses. While such a change may sacrifice some certainty, it would better comport with Supreme Court precedent and afford greater fairness to patentees.

I.	INTRODUCTION.....	124
II.	PROCESS-BASED RULES VERSUS SUBSTANTIVE RULES, OR THE SUPREME COURT VERSUS THE FEDERAL CIRCUIT.....	126

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	A. Federal Circuit's Bright-Line Substantive Formalism	127
	B. The Supreme Court's Process-Based Formalism	129
III.	FEDERAL CIRCUIT CLAIM CONSTRUCTION FORMALISM	133
	A. "Irrebuttable Presumptions"—Estoppel-like Principles in Claim Construction	133
	1. "Claim Construction Estoppel" for § 112, para. 6 Equivalents and "Prosecution Disclaimer"	134
	2. "Specification Estoppel"—the Dedication Rule for Literal Infringement	139
	B. Process-Oriented Claim Construction Rules—Canons and Presumptions	144
	1. Canons of Claim Construction	144
	2. Various Presumptions Relating to the Ordinary Meaning of a Term	145
IV.	THE SHOWDOWN—VITRONICS V. TEXAS DIGITAL	146
	A. Vitronics Corp. v. Conceptronic, Inc.	146
	B. Texas Digital Systems, Inc. v. Telegenix, Inc.	148
	C. Which Approach Better Comports with the Supreme Court's View, or Do They Both Fail?	149
V.	CONCLUSION	151

I. INTRODUCTION

In 1995 the United States Court of Appeals for the Federal Circuit ushered in a "sea change"¹ in United States patent law in *Markman v. Westview Instruments, Inc.* ("Markman I") by declaring claim construction a matter of pure law reviewed de novo on appeal.² The court in *Markman I* achieved two institutional objectives: it removed juries from claim construction (and essentially from deciding questions of literal infringement), and it aggrandized power over claim construction at the appellate level.

The Supreme Court affirmed the Federal Circuit's *Markman I* decision, agreeing that judges, not juries, should construe a patent's claims.³ The Federal Circuit subsequently confirmed the latter consequence of its *Markman I* decision in the bookend case *Cybor Corp. v. FAS Technologies, Inc.*⁴ The court decided *Cybor Corp.* en banc as a result of the intracircuit split that developed in the wake of the Supreme Court's *Markman II* decision.⁵

¹ *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 989 (Fed. Cir. 1995) (en banc) (Mayer, J., concurring) ("Markman I").

² *Id.* at 979.

³ *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 372 (1996) ("Markman II"); see also *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1454 (Fed. Cir. 1998) (en banc) ("Although the law is clear that the judge, and not the jury, is to construe the claims, this case presents the issue of the proper role of this court in reviewing the district court's claim construction.").

⁴ *Cybor Corp.*, 138 F.3d at 1456.

⁵ See *id.* at 1454.

Both the Federal Circuit in *Markman I* and *Cybor Corp.* and the Supreme Court in *Markman II* relied on the need for uniformity and certainty in patent law as key functional considerations in reaching these conclusions.⁶ These concerns are given considerable weight due to Congress's purpose in creating the Federal Circuit. Congress created the court in light of the lack of uniform treatment the regional circuits had given patent issues in the past.⁷ Many of the regional circuits were hostile towards patents, minimizing their effectiveness as tools of innovation and commercialization.⁸ Regional variation also created opportunities for forum shopping.⁹ Congress created the Federal Circuit to consolidate patent law and increase its certainty and predictability.¹⁰

Numerous scholars have commented on the Federal Circuit's approach to claim construction.¹¹ None of these articles, however, have evaluated the

⁶ See generally Timothy R. Holbrook, *The Supreme Court's Complicity in Federal Circuit Formalism*, 20 SANTA CLARA COMP. & HIGH TECH. L.J. 1, 2–9 (2003). The Federal Circuit in *Markman I* considered the need for certainty to competitors:

[C]ompetitors should be able to rest assured, if infringement litigation occurs, that a judge, trained in the law, will similarly analyze the text of the patent and its associated public record and apply the established rules of construction, and in that way arrive at the true and consistent scope of the patent owner's rights to be given legal effect.

52 F.3d at 979. The Supreme Court similarly reasoned, as follows:

[W]e see the importance of uniformity in the treatment of a given patent as an independent reason to allocate all issues of construction to the court. . . . Uniformity would, however, be ill served by submitting issues of document construction to juries. . . . [W]hereas issue preclusion could not be asserted against new and independent infringement defendants even within a given jurisdiction, treating interpretive issues as purely legal will promote (though it will not guarantee) intrajurisdictional certainty through the application of *stare decisis* on those questions not yet subject to interjurisdictional uniformity under the authority of the single appeals court.

Markman II, 517 U.S. at 390–91. The Federal Circuit drew on this particular language in reaching its conclusion in *Cybor Corp.* that the court will review claim construction de novo on appeal. See 138 F.3d at 1455 (“Indeed, the sentence demonstrates that the Supreme Court endorsed this court’s role in providing national uniformity to the construction of a patent claim, a role that would be impeded if we were bound to give deference to a trial judge’s asserted factual determinations incident to claim construction.”).

⁷ See generally Elizabeth I. Rogers, *The Phoenix Precedents: The Unexpected Rebirth of Regional Circuit Jurisdiction Over Patent Appeals and the Need for a Considered Congressional Response*, 16 HARV. J.L. & TECH. 411, 422 (2003).

⁸ Pauline Newman, *Origins of the Federal Circuit: The Role of Industry*, 11 FED. CIR. B.J. 541, 542 (2001) (“It was clear that patents could never serve as reliable investment incentives when their fate in the courts was so unpredictable, and the judicial attitude in general so hostile.”).

⁹ See Rogers, *supra* note 7, at 428.

¹⁰ See, e.g., H.R. REP. NO. 97-312, at 22 (1981) (“At present, the validity of a patent is too dependent upon geography (i.e., the accident of judicial venue) to make effective business planning possible. . . . A single court of appeals for patent cases will promote certainty where it is lacking to a significant degree and will reduce, if not eliminate, the forum-shopping that now occurs.”).

¹¹ See, e.g., R. Polk Wagner and Lee Petherbridge, *Is the Federal Circuit Succeeding? An Empirical Assessment of Judicial Performance*, 152 U. PA. L. REV. 1105, 1111 (2004) (dividing the court into the “holistic” and “proceduralist” camps for claim construction); Craig Allen Nard, *Process Considerations in the Age of Markman and Mantras*, 2001 U. ILL.

Federal Circuit's approach in light of the Supreme Court's view of striking the appropriate balance between certainty and fairness. Indeed, the methods used by the Federal Circuit and the Supreme Court in promoting these goals have varied. The Federal Circuit has a penchant for adopting formalistic substantive rules, i.e., rules that are outcome determinative. In contrast, the Supreme Court has generally embraced formalistic process-based rules, such as rebuttable presumptions.¹² This Article will explore the Federal Circuit's various methodologies and rules for interpreting patent claims, assessing whether they are substantively or procedurally formalistic. Substantively formalistic rules are more likely to run afoul of the Supreme Court's views on maintaining proper balance in the patent system and thus may be likely targets for future Supreme Court review.

II. PROCESS-BASED RULES VERSUS SUBSTANTIVE RULES, OR THE SUPREME COURT VERSUS THE FEDERAL CIRCUIT

The Federal Circuit has charted a doctrinal course that emphasizes bright-line, formalistic rules over more general standards based on the totality of the circumstances. Commentators have recognized this trend and, in the main, have criticized it.¹³ The Supreme Court has reviewed some of these rules and generally has not acceded to the Federal Circuit's approach. Admittedly, the Court has recognized that the Federal Circuit possesses "expertise" in the area of patent law and generally does not micromanage the court's jurisprudence.¹⁴ The Court also has recognized the need for certainty and predictability in patent law.¹⁵ In contrast to the formal substantive rules used by the Federal Circuit, however, the Supreme Court has articulated process-based rules that provide

L. REV. 355; Craig Allan Nard, *A Theory of Claim Interpretation*, 14 HARV. J.L. & TECH. 1 (2000) (dividing court into "hypertextualists" and "pragmatic textualists"); John F. Duffy, *On Improving the Legal Process of Claim Interpretation: Administrative Alternatives*, 2 WASH. U. J.L. & POL'Y 109, 130–31 (2000) (criticizing de novo review and suggesting allowing greater role for PTO in claim construction). To avoid confusion with the dichotomy articulated by Wagner and Petherbridge, this Article will refer to "process-based" formalism in contrast to substantive formalism.

¹² Holbrook, *supra* note 6, at 9–10.

¹³ See, e.g., Arti K. Rai, *Engaging Facts and Policy: A Multi-Institutional Approach to Patent System Reform*, 103 COLUM. L. REV. 1035, 1103–22 (2003); John R. Thomas, *Formalism at the Federal Circuit*, 52 AM. U. L. REV. 771, 778–802 (2003).

¹⁴ See, e.g., *Dickinson v. Zurko*, 527 U.S. 150, 163 (1999) ("These features of review underline the importance of the fact that, when a Federal Circuit judge reviews PTO factfinding, he or she often will examine that finding through the lens of patent-related experience—and properly so, for the Federal Circuit is a specialized court."); *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 40 (1997) ("We expect that the Federal Circuit will refine the formulation of the test for equivalence in the orderly course of case-by-case determinations, and we leave such refinement to that court's sound judgment in this area of its special expertise.").

¹⁵ See, e.g., *Warner-Jenkinson*, 520 U.S. at 29 ("There can be no denying that the doctrine of equivalents, when applied broadly, conflicts with the definitional and public-notice functions of the statutory claiming requirement."); *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 391 (1996) ("*Markman II*"). See generally Holbrook, *supra* note 6, at 6–9.

some balance between fairness and the harsh consequences of bright-line rules. The Court's recent decision in *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.* ("*Festo II*").¹⁶ (and perhaps its jurisdictional decision in *Holmes Group, Inc. v. Vornado Air Circulation Systems, Inc.*)¹⁷ suggests that the Court is now less likely to defer to the Federal Circuit on patent law, particularly where the Federal Circuit is articulating hard-edged, bright-line rules.¹⁸ This section will review the Federal Circuit's formalistic jurisprudence and the Supreme Court's response to this evolution.

A. Federal Circuit's Bright-Line Substantive Formalism

The Federal Circuit, upon its creation, immediately went about its mandate of providing uniformity to the patent laws by at first adopting the precedents of its predecessor courts, the Court of Claims and the Court of Customs and Patent Appeals, rendering the case law of the regional circuits' merely persuasive authority. Within its first few years, the court remedied a variety of conflicts in the laws that had developed in the regional circuits. The *Markman I* decision, however, appears to have ushered in a period of considerable development at the court of bright-line rules intended to afford greater predictability and certainty to the law.¹⁹

This formalistic approach has reached beyond claim construction. The court has articulated bright-line rules in the interest of certainty in a number of areas: the on-sale bar,²⁰ infringement for offering to sell an invention,²¹

¹⁶ 535 U.S. 722 (2002) ("*Festo II*").

¹⁷ 535 U.S. 826, 834 (2002) (holding that the Federal Circuit lacks jurisdiction if the patent claim arises in a counterclaim).

¹⁸ See Rai, *supra* note 13, at 1125 ("[W]e should welcome the Supreme Court's recent interest in reviewing patent cases that raise not only allocation of power issues but also issues of substantive patent law and policy.").

¹⁹ Arguably, the court's adoption of the All Elements Rule for the doctrine of equivalents in *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931 (Fed. Cir. 1987) (en banc), could also be viewed as a step towards formalism. See Holbrook, *supra* note 6, at 3–4. Contrary to the Federal Circuit's approach, recent scholarship has suggested that in complex factual and economic settings, more general standards actually afford greater certainty and predictability than bright-line rules. See John Braithwaite, *Rules and Principles: A Theory of Legal Certainty*, 27 AUSTRALIAN J. LEGAL PHIL. 47, 53 (2002) (arguing that "principles are more likely to enable legal certainty than rules when complex actions in changing environments and considerable economic interests are at stake").

²⁰ See *Group One, Ltd. v. Hallmark Cards, Inc.*, 254 F.3d 1041, 1047–48 (Fed. Cir. 2001) (requiring a formal commercial offer for on-sale bar to apply to avoid uncertainty of "some more amorphous test" and to bring "greater certainty" to the bar); see also Timothy R. Holbrook, *Liability for the "Threat of a Sale": Assessing Patent Infringement for Offering to Sell an Invention and Implications for the On-Sale Patentability Bar and Other Forms of Infringement*, 43 SANTA CLARA L. REV. 751, 773–84 (2003) (discussing and criticizing this standard).

²¹ *Rotec Indus., Inc. v. Mitsubishi Corp.*, 215 F.3d 1246, 1255 (Fed. Cir. 2000) (holding that "'offer to sell' is to be interpreted according to its ordinary meaning in contract law, as revealed by traditional sources of authority" such as the UCC, dictionaries, and the Restatement (Second) of Contracts); *3D Sys., Inc. v. Aarotech Labs., Inc.*, 160 F.3d 1373, 1379 (Fed. Cir. 1998) (rejecting use of state contract law to define "offer to sell"). See generally Holbrook, *supra* note 20, at 765–801 (analyzing the "formal commercial offer"

obviousness,²² written description,²³ the patent-antitrust interface,²⁴ the effective elimination of the reverse doctrine of equivalents²⁵ and experimental use²⁶ as defenses to infringement, the public dedication rule limiting the doctrine of equivalents,²⁷ and—most notoriously—prosecution history estoppel.²⁸

standard and concluding, in light of economic analysis, harmonization concerns, and predictability, that a broader “commercialization” standard would better effect this provision).

²² The Federal Circuit has elevated a “motivation to combine” references to a bright-line requirement to invalidate a patent as obvious. *See, e.g., In re Sang-Su Lee*, 277 F.3d 1338, 1344–45 (Fed. Cir. 2002) (rejecting PTO’s use of “common knowledge and common sense” to find a motivation to combine). For recognition of this formalization of the obviousness standard by commentators, see Arti K. Rai, *Allocating Power Over Fact-Finding In The Patent System*, 19 BERKELEY TECH. L.J. 907, 913 (2004).

[T]he FTC rightly focuses on some recent Federal Circuit opinions in which the court has forbidden the USPTO from combining references based on common knowledge in the art. The examiner instead must point to a specific written reference that suggests the combination is obvious. Because skilled scientists and engineers have little motivation to publish what is already well known, this requirement may make the examiner’s task virtually impossible.

Id.; Holbrook, *supra* note 6, at 3 (“Whereas the Supreme Court’s test for obviousness identified four relevant factors, the Federal Circuit has elevated a fifth factor as a bright-line requirement—the need for some teaching or motivation to combine prior art references to yield the claimed invention.”); Thomas, *supra* note 13, at 773 (“By increasing the evidentiary showing needed to demonstrate a motivation to combine references, the Federal Circuit has continued its trend of lowering the standard of nonobviousness.”).

²³ *Regents of the Univ. of Cal. v. Eli Lilly & Co.*, 119 F.3d 1559, 1567–68 (Fed. Cir. 1997). *See generally* Janice M. Mueller, *The Evolving Application of the Written Description Requirement to Biotechnological Inventions*, 13 BERKELEY TECH. L.J. 615 (1998).

²⁴ *See Creative Copier Servs. v. Xerox Corp. (In re Indep. Serv. Orgs. Antitrust Litig.)*, 203 F.3d 1322 (Fed. Cir. 2000). For criticism of the formalistic nature of this decision, see Rai, *supra* note 13, at 1107–09.

²⁵ *Tate Access Floors, Inc. v. Interface Architectural Res., Inc.*, 279 F.3d 1357, 1368 (Fed. Cir. 2002) (describing the defense as an “anachronistic exception, long mentioned but rarely applied”).

²⁶ *Madey v. Duke Univ.*, 307 F.3d 1351, 1360–63 (Fed. Cir. 2002).

²⁷ *Johnson & Johnston Assocs., Inc. v. R.E. Serv. Co.*, 285 F.3d 1046, 1054 (Fed. Cir. 2002) (en banc).

²⁸ *See Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 234 F.3d 558, 563 (Fed. Cir. 2000) (en banc) (“*Festo I*”), *rev’d* 535 U.S. 722 (2002). Even on remand from the Supreme Court, the Federal Circuit attempted to save some of its formalistic agenda by characterizing the rebuttal of the *Festo* presumption a legal question and barring the use of extrinsic evidence to assess whether an amendment has a tangential relationship to the asserted equivalent. *See Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 344 F.3d 1359, 1368, 1369–70 (Fed. Cir. 2003) (en banc) (“*Festo III*”). *But see id.* at 1379 (Newman, J. concurring in part, dissenting in part).

I also concur in the remand to the district court for determination of the rebuttal issue of unforeseeability, although I object to the prejudgments with which the remand is encumbered. I do not agree with the treatment of the factual criteria of “tangentialness” and “other reasons” as questions of law, or with the adjudication of these new issues without permitting evidence and argument in accordance with the procedures of trial.

Id.

The court recently created another formalistic prosecution history estoppel rule en banc. *See Honeywell Int’l Inc. v. Hamilton Sundstrand Corp.*, 370 F.3d 1131, 1134 (Fed. Cir.

B. *The Supreme Court's Process-Based Formalism*

In contrast to the harsh, more substantively-based rules of the Federal Circuit that often act to exclude consideration of certain types of evidence, the Supreme Court has attempted to effect certainty through process-based approaches, particularly through the use of rebuttable presumptions. To enhance predictability while affording a certain level of fairness, the Court, with the exception of *Pfaff v. Wells Electronics, Inc.*,²⁹ fashioned a variety of rules detailing the manner of approaching an issue, instead of one rule directed at reaching a particular outcome.

In *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*, the Court acknowledged the fear that the doctrine of equivalents had “taken on a life of its own, unbounded by the patent claims,” thereby “conflict[ing] with the definitional and public-notice functions of the statutory claiming requirement.”³⁰ In response to this concern, the Court embraced two new process-oriented rules: the All-Elements Rule and the *Warner-Jenkinson* rebuttable presumption.³¹

The All-Elements Rule guides the courts in how to apply the doctrine of equivalents: courts must apply the doctrine on a limitation-by-limitation basis and not to the claim as a whole.³² It is thus more concerned with the manner in which the doctrine is applied than with the outcome of such analysis.³³ A court

2004) (en banc) (holding that “rewriting of dependent claims into independent form coupled with the cancellation of the original independent claims creates a presumption of prosecution history estoppel”).

²⁹ 525 U.S. 55 (1998). In *Pfaff*, the Supreme Court articulated a substantive rule for applying the on-sale bar: to be invalid, the claimed invention must have been the subject of a commercial offer for sale and be ready for patenting. This is satisfied if someone has reduced the invention to practice or if someone has created diagrams sufficiently detailed to enable one of skill in the art to make the invention. *Id.* at 67; see also Holbrook, *supra* note 6, at 8–9 (recognizing the formalistic nature of substantive on-sale bar rule). The court based its decision on grounds of certainty: “A rule that makes the timeliness of an application depend on the date when an invention is ‘substantially complete’ [the Federal Circuit’s rule] seriously undermines the interest in certainty.” *Pfaff*, 525 U.S. at 65–66. Whether such certainty has been achieved via the “ready for patenting” test is debatable. See Timothy R. Holbrook, *The More Things Change, the More They Stay the Same: Implications of Pfaff v. Wells Electronics, Inc. and the Quest for Predictability in the On-Sale Bar*, 15 BERKELEY TECH. L.J. 933, 955–973 (2000) (noting little change in district court opinions and positing adoption of the enablement test under § 112 as likely to add greater certainty). The Federal Circuit has sought to further formalize this standard by requiring formal commercial offers for sale as defined by contract law. See *supra* note 20.

³⁰ *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 28–29 (1997).

³¹ *Id.* at 40–41. The Court also offered truly procedural suggestions on how to improve “reviewability,” “certainty,” and “uniformity” of judgments and jury verdicts regarding the doctrine of equivalents, such as special verdicts, interrogatories, and summary judgment based on legal limitations such as prosecution history estoppel and the All Elements Rule. *Id.* at 39 n.8.

³² *Id.* at 29 (“[T]he doctrine of equivalents must be applied to individual elements of the claim, not to the invention as a whole.”).

³³ *Cf.* *Augustine Med., Inc. v. Gaymar Indus., Inc.*, 181 F.3d 1291, 1298 (Fed. Cir. 1999) (“[T]he ‘all elements’ rule provides the analytical framework for conducting an

will identify the relevant claim limitation pursuant to the Rule and then assess whether the element in the accused device is an equivalent under the function-way-result or insubstantial differences tests. The Rule does not answer what counts as an equivalent, although the corollary to the Rule is substantively formalistic in that it may answer what is *not* an equivalent. The Court recognized that the doctrine of equivalents cannot be given such play so as to permit the vitiation of a claim limitation.³⁴ Unsurprisingly, the Federal Circuit has applied this side of the rule in a harshly formalistic manner, finding vitiation of limitations not present in the express language of the claims.³⁵

The Court also articulated a rebuttable presumption with respect to prosecution history estoppel: if the reason for an amendment is not known, the court should presume the reason was related to patentability. The patentee can rebut this presumption by showing the applicant did not amend the claim for

infringement analysis under the doctrine of equivalents that avoids undue expansion of a patent's claims.”).

³⁴ *Warner-Jenkinson Co.*, 520 U.S. at 29–30.

³⁵ The Federal Circuit has found that the All Elements Rule has been violated even when an express limitation of the claim is present but a limitation generated as a matter of *claim construction* is missing. For example, in *Lockheed Martin Corp. v. Space Systems/Loral, Inc.*, 324 F.3d 1308, 1315 (Fed. Cir. 2003), the court construed a means-plus-function limitation claiming “means for rotating said wheel in accordance with a predetermined rate schedule which varies sinusoidally over the orbit at the orbital frequency of the satellite.” A wheel’s speed could vary sinusoidally without passing through zero—the plain meaning of the term. Given the disclosures in the specification, however, the court construed the term “sinusoidally” to require a sinusoidal variation in wheel speed that must pass through zero. *Id.* at 1317. In other words, from a peak speed, the wheel must slow down, reach zero speed, and then switch its spinning direction until it reaches the same peak speed in the opposite direction. The wheel in SSL’s device did not pass through zero and switch directions, so of course there was no literal infringement.

The court found no infringement by equivalents under the All Elements Rule also because of the failure of the accused device to pass through zero—the “pass through zero” limitation would be vitiated according to the court. *Id.* at 1321. Yet, the claim limitation at issue is “sinusoidally,” which arguably does correspond, albeit not identically, to the manner in which the accused device operated. The limitation that would be “vitated” is not “sinusoidally” but instead the limitation of “pass through zero” added by the court. The court thus required literal infringement when arguably the procedural application of the All Elements Rule had been satisfied—there was an element in the accused device that corresponded to the claim limitation. *Cf. Ethicon Endo-Surgery, Inc. v. U.S. Surgical Corp.*, 149 F.3d 1309, 1317 (Fed. Cir. 1998) (recognizing that the All Elements Rule could “swallow the doctrine of equivalents, reducing the application of the doctrine to nothing more than a repeated analysis of literal infringement. Once a negative determination of literal infringement is made, that failure to meet a limitation would preclude a finding of infringement under the doctrine.”). The court should have assessed equivalency under the insubstantial differences test at that point.

The court has used this faulty application of the All Elements Rule elsewhere. See *Bell Atl. Network Servs., Inc. v. Covad Communications Group, Inc.*, 262 F.3d 1258, 1280 (Fed. Cir. 2001) (finding vitiation of limitation that no changes be made to the transmission hardware even though the claim only expressly contained limitations requiring “selectively change” or “selectively operate” and the court grafted the “no changes” limitation as part of the court’s construction). This approach to the All Elements is exemplary of the “meta claim construction” problem identified by Professors Mark Lemley and Dan Burk. See Dan L. Burk and Mark A. Lemley, *Quantum Patent Mechanics*, 9 LEWIS & CLARK L. REV. 29, 51–52 (2005).

reasons related to patentability.³⁶ This rule is also procedural: it does not demand that prosecution history estoppel apply, but simply creates the presumption that it will. The Federal Circuit has twisted this presumption to fit within its substantively-based formal agenda by limiting the evidence to rebut the presumption to that found in the prosecution history.³⁷ As the only time the presumption will arise is if the prosecution history is silent, limiting the evidence in this way necessarily means the presumption is irrebuttable, making it part of a disfavored practice.³⁸

The most conspicuous example of the difference between the Supreme Court's and the Federal Circuit's approaches to certainty is, of course, *Festo II*, in which the Court rejected the Federal Circuit's bright-line rule of complete surrender of all equivalents if an applicant made a narrowing amendment to a claim for a reason related to patentability. In lieu of this blindingly bright-line rule, the Court articulated a second presumption: courts should presume a complete surrender of all equivalents unless the patentee can rebut the presumption by showing the asserted equivalent was unforeseeable; that the amendment had only a tangential relation to the claimed equivalent; or that there was "some other reason suggesting that the patentee could not reasonably be expected to have described the insubstantial substitute in question."³⁹ The Court views this procedural approach as the best way, at least in the context of the doctrine of equivalents, to balance interests in certainty with fairness and preservation of the expectations of the inventive community,⁴⁰ implying that the Federal Circuit had erred too far on the side of "certainty."⁴¹ Yet again, however, the Federal Circuit has significantly limited the evidence available to patentees to rebut the presumption of surrender.⁴²

Another non-patent, albeit patent-related, case further evinces the Court's preference for process-based over substantive rules. In *TrafFix Devices, Inc., v. Marketing Displays, Inc.*, the Supreme Court addressed what effect, if any, an expired utility patent had on the ability of a party to assert trade dress

³⁶ *Warner-Jenkinson Co.*, 520 U.S. at 33.

³⁷ See *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 234 F.3d 558, 586 (Fed. Cir. 2000) (en banc) ("*Festo I*"), *rev'd* 535 U.S. 722 (2002).

[A] patent holder seeking to establish the reason for an amendment must base his arguments solely upon the public record of the patent's prosecution, i.e., the patent's prosecution history. To hold otherwise—that is, to allow a patent holder to rely on evidence not in the public record to establish a reason for an amendment—would undermine the public notice function of the patent record.

Id.

³⁸ *Cf. Vlandis v. Kline*, 412 U.S. 441, 446 (1973) ("Statutes creating permanent irrebuttable presumptions have long been disfavored under the Due Process Clauses of the Fifth and Fourteenth Amendments.").

³⁹ *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 740–41 (2002) ("*Festo II*").

⁴⁰ *Cf. id.* at 739 ("In *Warner-Jenkinson* we struck the appropriate balance by placing the burden on the patentee to show that an amendment was not for purposes of patentability.").

⁴¹ *Holbrook*, *supra* note 6, at 9.

⁴² See *supra* note 28.

protection over the design of a product.⁴³ The lower courts had split on this aspect of functionality doctrine,⁴⁴ with the Tenth Circuit articulating a bright-line proscription on asserting trade dress for design elements covered by patent claims, and the Fifth, Seventh, and (surprisingly) the Federal Circuits potentially allowing trade dress protection.⁴⁵ Instead of embracing the Tenth Circuit's bright-line substantive rule (and also not adopting the reasoning of the other circuits), the Supreme Court identified an evidentiary approach to the issue. The Court noted that an expired patent is of "vital significance" in resolving the trade dress issue. An expired patent, therefore is "strong evidence that the features therein claimed are functional."⁴⁶ This "strong evidence," however, is not irrefutable:

Where the expired patent claimed the features in question, one who seeks to establish trade dress protection must carry the heavy burden of showing that the feature is not functional, for instance by showing that it is merely an ornamental, incidental, or arbitrary aspect of the device.⁴⁷

Again, instead of adopting a hard-edged substantive rule, the Court opted for a procedural approach, creating a "heavy burden"—but not an absolute preclusion—of showing non-functionality in light of the expired patent. While not expressly articulating a presumption, the effect seems to be the same: the patent will show that the asserted trade dress is functional unless the patentee can demonstrate otherwise.

Thus, in recent Supreme Court cases, the Court generally has eschewed harsh and substantive bright-line rules in favor of the use of process-based rules such as presumptions and evidentiary allocations. This approach, according to the Court, is the best way to balance the need for certainty and uniformity against the potentially competing need of fairness. The Court is more willing to inquire broadly into an issue and not limit the evidence to be considered. The presumptions assist in weighing the evidence presented, but the Court at least allows consideration of a multitude of evidence, unlike the approach of the Federal Circuit.⁴⁸

⁴³ 532 U.S. 23, 28 (2001).

⁴⁴ Functionality in trademark law serves to prevent the anticompetitive impact that potentially indefinite trade dress protection could create, particularly in areas that are typically governed by patent law, where the term of protection is finite. *See Qualitex Co. v. Jacobson Products Co.*, 514 U.S. 159, 164–65 (1995); *see also* GRAEME DINWOODIE & MARK JANIS, *TRADEMARK & UNFAIR COMPETITION: LAW & POLICY* 167 (2004). Earlier Supreme Court cases had suggested that, when a patent expires, there is a right to copy what was contained therein. In *TrafFix Devices, Inc. v. Mktg. Displays, Inc.*, the court shied away such "rights" rhetoric, instead noting that "in many instances there is no prohibition against copying goods and products. In general, unless an intellectual property right such as a patent or copyright protects an item, it will be subject to copying." 532 U.S. 23, 29 (2001). Saying that copying is not prohibited is a far cry from stating there is an affirmative right to copy. *Cf. Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 165 (1989) ("For almost 100 years it has been well established that in the case of an expired patent, the federal patent laws *do* create a federal right to 'copy and to use.'" (emphasis in original)).

⁴⁵ *TrafFix Devices, Inc.*, 532 U.S. at 28.

⁴⁶ *Id.* at 29.

⁴⁷ *Id.* at 30.

⁴⁸ Of course, the Federal Circuit scorns most expert testimony.

The Federal Circuit's harsh approach arguably does provide greater ex ante certainty.⁴⁹ For example, if a narrowing amendment was made for a reason related to patentability, the doctrine of equivalents would undoubtedly be unavailable under the Federal Circuit's approach. The rebuttable presumption of *Festo II* adds some predictability: surrender is more likely than not to be found and there is some uncertainty as to the ability of the patentee to rebut that presumption. Such information may not be in the public record and may only be in the hands of the patentee, thus undermining the public notice role served by the patent and its prosecution history.⁵⁰

III. FEDERAL CIRCUIT CLAIM CONSTRUCTION FORMALISM

The Federal Circuit repeatedly emphasizes the need for uniformity and certainty in patent law. The court trumpets in mantra fashion the public notice function served by a patent and its prosecution history, offering formalistic rules to protect against the evisceration of this policy objective. The Supreme Court, while clearly aware of this public notice function, has not found that policy to be the ultimate trump over other concerns. A review of the Federal Circuit's approaches to claim construction reveals a mixed bag: aspects of the court's claim construction jurisprudence have embraced harsh estoppels and evidentiary exclusions that should be viewed as suspect (and more likely for review by the Supreme Court), whereas in other contexts the court has articulated rebuttable presumptions designed to elucidate the scope of the claim. This section categorizes the various doctrines that pervade the Federal Circuit's claim construction jurisprudence, explaining why they are rebuttable presumptions or effectively irrebuttable, and thus more suspect, at least to the Supreme Court.

A. "Irrebuttable Presumptions"—Estoppel-like Principles in Claim Construction

It is undeniably appropriate for courts to look at both the specification and the prosecution history in order to properly assess the scope of the claims. The use of these resources, however, has always been tempered by the claim construction canon prohibiting the importation of limitations into the claim from the specification or prosecution history.⁵¹ In recent years, however, the

⁴⁹ But see Braithwaite, *supra* note 19.

⁵⁰ The Federal Circuit, of course, has attempted to mitigate this concern by narrowing the scope of evidence that can be used to rebut both the *Warner-Jenkinson* and *Festo* presumptions. See *supra* note 36; *Festo*, 344 F.3d 1359, 1369–70 (Fed. Cir. 2003) ("*Festo III*") (allowing extrinsic evidence to show unforeseeability by limiting evidence of tangentialness to the prosecution history).

⁵¹ See, e.g., *Alloc, Inc. v. Int'l Trade Comm'n*, 342 F.3d 1361, 1370 (Fed. Cir. 2003).

[T]his court recognizes that it must interpret the claims in light of the specification, yet avoid impermissibly importing limitations from the specification. That balance turns on how the specification characterizes the claimed invention. In this respect, this court looks to whether the specification refers to a limitation only as a part of less than all possible embodiments or whether the specification read as a whole suggests that the very character of the invention requires the limitation to be a part of every embodiment.

Federal Circuit has elevated the use of these resources beyond a claim construction tool; the court has used representations made in either as a surrender of subject matter, thus precluding claim coverage. This estoppel takes place regardless of how one of ordinary skill in the art may have viewed the scope of the invention and often results in the direct importation of limitations from the specification or prosecution history into the claim. The court has never relied on expert testimony to inform the inquiry of these rules. The use of such estoppels—without any presumptions akin to those articulated by the Supreme Court in *Warner-Jenkinson* and *Festo II*—are highly formalistic and, thus, may eventually draw the ire of the Supreme Court.

1. “Claim Construction Estoppel” for § 112, para. 6 Equivalents and “Prosecution Disclaimer”

It is beyond cavil that the prosecution history is relevant in assessing the literal scope of a patent’s claims.⁵² Drawing on this rule, the Federal Circuit adopted, under the guise of claim construction, a formalistic rule that uses prosecution history estoppel in assessing equivalents under § 112, para. 6. Under § 112, para. 6, claims can be written in functional language, but the scope of the claim is limited to the structure disclosed in the specification and equivalents thereof.⁵³ Technically, this form of estoppel, however, is not prosecution history estoppel because infringement by equivalence under § 112, para. 6 is a form of literal infringement, and prosecution history estoppel only limits the scope of the doctrine of equivalents.⁵⁴ This estoppel, therefore, is actually a form of claim construction—claim construction estoppel for short.

Id. (citations omitted); *Tex. Digital Sys., Inc. v. Telegenix, Inc.*, 308 F.3d 1193, 1204–05 (Fed. Cir. 2002).

⁵² See, e.g., *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 980 (Fed. Cir. 1995) (“*Markman I*”).

⁵³ 35 U.S.C. § 112, para. 6 (2000). Congress adopted this provision to overturn the Supreme Court’s decision in *Halliburton Oil Well Cementing Co. v. Walker*, 329 U.S. 1 (1946) (prescribing claims in functional terms). See *Warner-Jenkinson, Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 27–28 (1997). This provision thus acts to limit the scope of the claim because the claim only covers the disclosed structure and its equivalents and not every possible manner of performing the claimed function. *Id.*

⁵⁴ See *Biodex Corp. v. Loredan Biomedical, Inc.*, 946 F.2d 850, 862–63 (Fed. Cir. 1991). *Biodex* also involved the interpretation of a means-plus-function claim. The court reasoned, as follows:

There is a clear line of distinction between using the contents of the prosecution history to reach an understanding about disputed claim language and the doctrine of prosecution history estoppel which “estops” or limits later expansion of the protection accorded by the claim to the patent owner under the doctrine of equivalents when the claims have been purposefully amended or distinguished over relevant prior art to give up scope. . . . Therefore, *Biodex* is technically correct in asserting that the doctrine of prosecution history estoppel is “irrelevant” to determination of literal claim scope. However, a particular interpretation of a claim term may have been disclaimed by the inventor during prosecution, as was asserted by Loredan in this case. A disclaimer could be directed to interpretation. Furthermore, understanding claims with functional limitations may require reference to the prosecution history.

Id. (citations omitted).

The court first recognized the role of the prosecution history to preclude § 112 equivalents in *Alpex Computer Corp. v. Nintendo Co.*⁵⁵ That case involved video game technology, particularly home-video game systems. The claim was written in mean-plus-function format and required two “means for generating a video signal.”⁵⁶ The structure disclosed in the patent specification corresponding to the means was a RAM-based, bit-map video display system with “storage positions corresponding to each discrete position of the raster for a standard television receiver.”⁵⁷ In contrast, the accused device’s signal-generating means did not contain a complete map of the display in memory; instead, the system generated “pre-formed, horizontal slices of data and place[d] each slice in one of eight shift registers” which were processed directly to the screen.⁵⁸ To complete the image on the screen, the process was repeated for the various slices thus resulting in a faster image-generating system relative to the means disclosed in the patent.⁵⁹ During prosecution of the patent at issue, the applicant had distinguished its RAM-based system from a shift-register one.⁶⁰

Infringement under § 112, para. 6 requires the patentee to “establish that the accused device employs structure identical or equivalent to the structure disclosed in the patent and that the accused device performs the identical function specified in the claim.”⁶¹ The differences between the disclosed structure and that of the accused device must be “insubstantial.”⁶² This analysis generally tracks that of the doctrine of equivalents in that the question is the

⁵⁵ 102 F.3d 1214 (Fed. Cir. 1996).

⁵⁶ *Id.* at 1218.

⁵⁷ *Id.* at 1216. The court characterized the patented invention, as follows:

The television raster comprises numerous discrete dots or bars, approximately 32,000, which the cathode ray beam illuminates on a standard cycle, which in turn creates the image on the television screen. The patented invention requires sufficient RAM to accommodate each of the approximately 32,000 memory positions needed to represent the raster image. Thus, the RAM holds at least one “bit” of data for each position in the memory “map” of the raster. Accordingly, this video display system is called “bit-mapping.” The advantage of this system, as disclosed in the patent, is that it provides for the representation of every image within the raster RAM, or display RAM, and thereby provides greater control of the display for the manipulation of complex images and symbols. To achieve this flexibility, however, bit-mapping requires the construction of each image within the display RAM before display, a process that requires the microprocessor to erase and rewrite each image. Because the microprocessor must refresh the display RAM for each frame to show the movement of images, the operation of the system is slowed down.

Id. at 1217.

⁵⁸ *Id.* at 1218.

⁵⁹ *Id.*

⁶⁰ *Id.* at 1219 (noting that the applicant specifically distinguished the shift register-based system because the prior art could not “modify selectively a single pixel on the screen”).

⁶¹ *WMS Gaming, Inc. v. Int’l Game Tech.*, 184 F.3d 1339, 1350 (Fed. Cir. 1999).

⁶² *Id.* at 1351; *Lockheed Martin Corp. v. Space Systems/Loral, Inc.*, 324 F.3d 1308, 1320 (Fed. Cir. 2003).

insubstantiality of the differences.⁶³ Indeed, the Federal Circuit has used the “function-way-result” test for the doctrine of equivalents in the means-plus-function context, noting that under § 112, para. 6, the identical, not substantially the same, function must be performed.⁶⁴

In *Alpex*, however, instead of simply using the prosecution history as a method of informing what structures might be viewed as equivalent as a factual matter, the Federal Circuit applied an estoppel analysis. The court reasoned “[j]ust as prosecution history estoppel may act to estop an equivalence argument under the doctrine of equivalents, positions taken before the PTO may bar an inconsistent position on claim construction under § 112, ¶ 6.”⁶⁵ Because the applicant distinguished the prior art system, the court concluded it had surrendered that subject matter from the range of equivalents available under § 112, para. 6.⁶⁶ The court rejected the expert testimony offered to the contrary because it was directed solely to the functional identity, not the structural equivalency, of the accused device.⁶⁷

The court’s use of estoppel language suggested that this limitation on § 112, para. 6 equivalency is a legal one, although its reasoning was also based on the fact that the expert testimony was insufficient. This suggests that perhaps the court was simply performing the traditional analysis of insubstantial differences in assessing equivalency. Analogizing to prosecution history estoppel, however, suggests that even if the expert testimony suggested structural equivalency, that evidence would be irrelevant to the court’s conclusion of estoppel.

The court’s decision in *Cybor Corp.*, however, dispelled any potential doubt about whether the court had articulated a legal principle. Characterizing the analysis again as “the construction of a claim,”⁶⁸ the court reiterated its statement that the prosecution history can estop a party from asserting equivalency under § 112, para. 6.⁶⁹ Indeed, the court adopted the same standard

⁶³ *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 39–40 (1997). One judge at the Federal Circuit thinks any distinction between the two is false; instead, equivalency in both contexts should be treated identically. See *Dawn Equipment Co. v. Kentucky Farms Inc.*, 140 F.3d 1009, 1021–22 (Fed. Cir. 1998) (Plager, J., additional views).

I believe that the practice of claiming under § 112, ¶ 6 would be much improved if we adhered to the proposition that the ‘equivalents’ of ‘structure, material, or acts described in the specification’ are those found to be within the scope of that term as it is used in § 112, ¶ 6, and not elsewhere. Accordingly, the separate judicially-created doctrine of equivalents would have no application to those aspects of limitations drawn in means-plus-function form.

Id.

⁶⁴ *WMS Gaming, Inc.*, 184 F.3d at 1353 (“[W]e have reversed the district court’s holding of literal infringement based on a lack of identity of function. Consequently, unlike *Chiuminatta*, the accused device in this case may still infringe under the doctrine of equivalents.”).

⁶⁵ *Alpex Computer Corp.*, 102 F.3d at 1221–22.

⁶⁶ *Id.* at 1222.

⁶⁷ *Id.*

⁶⁸ *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1457 (Fed. Cir. 1998).

⁶⁹ *Id.*

as is used for prosecution history estoppel: “whether a competitor would reasonably believe that the applicant had surrendered the relevant subject matter.”⁷⁰ In *Cybor Corp.*, the claimed invention involved a pump with an internal reservoir, whereas the accused device used an external one. During prosecution the applicant distinguished a prior art patent that also had an external reservoir. The court concluded, however, that there was no claim construction estoppel in this context:

In view of the significant differences between the cited [prior art] patent and the claimed invention, including the structurally separate container and independent function of discharging excess fluid in [the prior art reference], the prosecution statements cannot properly be interpreted as precluding coverage of every type of external reservoir.⁷¹

The court’s analysis again dealt strictly with the representations made in the patent office; there is no suggestion that the court is analyzing, on the infringement side, whether these representations inform the “insubstantial differences.” Instead, the court used an estoppel-type analysis to narrow the scope of the claims as a legal matter.

Cases subsequent to *Alpex* and *Cybor Corp.* have continued with this formalistic “claim construction estoppel.” In *Wenger Manufacturing, Inc. v. Coating Machinery Systems, Inc.*, the Federal Circuit again applied an estoppel-type analysis to a means-plus-function claim but found no surrender of relevant subject matter.⁷² The patented device—“an apparatus for coating and drying a food product”⁷³—recirculated air, while the accused did not.⁷⁴ However, during prosecution the applicant did not distinguish the prior art on this basis; instead he relied on the lack of a housing in the prior art. The court concluded, therefore, that the patentee was “not barred from arguing that ‘air circulating means’ limitation is met by machines that do not recirculate air.”⁷⁵

In contrast, the court did find surrender of § 112, para. 6 equivalents in *Ballard Medical Products v. Allegiance Healthcare Corp.*⁷⁶ The relevant claim required a “valve means.”⁷⁷ During the prosecution of the patent application the applicant distinguished “vacuum valves” from prior art valves on three bases: the prior art valves were “pressure valves”; the differences between the seals in the invention and the prior art; and the lack of a locking mechanism in the prior art.⁷⁸ Although the applicant distinguished the prior art on multiple grounds, the court nevertheless found that the applicant surrendered coverage of pressure

⁷⁰ *Id.*; cf. *Insituform Techs., Inc., v. Cat Contracting, Inc.*, 99 F.3d 1098, 1107–08 (Fed. Cir. 1996) (noting standard for prosecution history estoppel “depends on what a competitor, reading the prosecution history, would reasonably conclude was given up by the applicant”).

⁷¹ *Cybor Corp.*, 138 F.3d at 1458.

⁷² 239 F.3d 1225, 1238–39 (Fed. Cir. 2001).

⁷³ *Id.* at 1236.

⁷⁴ *Id.* at 1238.

⁷⁵ *Id.* at 1239.

⁷⁶ 268 F.3d 1352 (Fed. Cir. 2001).

⁷⁷ *Id.* at 1354.

⁷⁸ *Id.* at 1359–60.

valves and dynamic seals.⁷⁹ The court distinguished *Cybor Corp.* as simply a different application of the surrender rule.⁸⁰ In other words, it did not distinguish *Cybor Corp.*:⁸¹

The court [in *Cybor Corp.*] emphasized that the scope of the disclaimer must be determined by what “a competitor would reasonably believe that the applicant had surrendered.” Applying that standard in this case, the district court concluded, as do we, that Palmer’s statements identifying his invention as a vacuum valve with a static seal had the effect of disclaiming pressure valves . . . and dynamic seals.⁸²

While the court did not effectively distinguish *Cybor Corp.*, it suggested an even more rigorous view of claim construction estoppel. Whereas the court in *Cybor Corp.* performed a more exacting analysis of the prior art, the claimed invention, and the way in which the applicant distinguished the prior art—the court here simply says, “you distinguished on the basis of pressure valves and dynamic seals, so you have lost all coverage.” The court thus is taking a much more bright-line, formalistic view of this estoppel.

This estoppel-based perspective has now come full circle. *Alpex* and *Cybor Corp.* based this rule on the bedrock patent maxim that claims are interpreted in light of the specification. Given that § 112, para. 6 involves a variant of equivalency, crafting an analog to prosecution history estoppel arguably is appropriate. The court, however, now has taken the estoppel language out of the § 112, para. 6 context and has used the language simply for basic claim construction. For example, in *Desper Products, Inc. v. QSound Labs, Inc.*, the court cited *Alpex* stating that “[p]rosecution history is an important source of intrinsic evidence in interpreting claims because it is a contemporaneous exchange between the applicant and the examiner. . . . whether the claim element in question is written pursuant to § 112, ¶ 6 or not.”⁸³ The court, in the interest of public notice, then precluded the patentee from asserting an interpretation of a non-functional limitation that it believed the applicant surrendered during the prosecution of the patent.⁸⁴ Ostensibly, the court merely applied the rule that claims may be interpreted in light of the prosecution history; the use of estoppel-like language suggests, however, that the court is creating a stronger, more formalistic role for the prosecution history.

The court having now expanded this estoppel-like premise has even given it an official moniker: “prosecution disclaimer.”⁸⁵ The policy support for this doctrine is, of course, public notice: “As a basic principle of claim interpretation, prosecution disclaimer promotes the public notice function of the intrinsic evidence and protects the public’s reliance on definitive statements

⁷⁹ *Id.* at 1361.

⁸⁰ *Id.*

⁸¹ This failure to distinguish *Cybor Corp.* demonstrates that uncertainty can attend even relatively bright-line rules. See Rai, *supra* note 13, at 1115–16.

⁸² *Ballard Med. Prods.*, 268 F.3d at 1361 (citation omitted).

⁸³ 157 F.3d 1325, 1336–37 (Fed. Cir. 1998).

⁸⁴ *Id.* at 1337.

⁸⁵ See *Omega Eng’g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323 (Fed. Cir. 2003).

made during prosecution.”⁸⁶ The court finally conceded that the standard for prosecution disclaimer is indeed the same as that of argument-based prosecution history estoppel, identifying *Alpex* as the link between disclaimer and estoppel.⁸⁷ Thus, any belief that the prosecution history merely is another tool to be used in construing a claim is now long gone – the prosecution history will act as an estoppel in the literal infringement context just as it will in the context of infringement under the doctrine of equivalents. The historical gap between claim construction and prosecution history estoppel has now been bridged.

Nowhere, however, has the court attempted to blend this estoppel into the framework of *Festo II*. Nor has the court applied *Festo II* in the argument-based estoppel setting, which is more closely related to claim construction estoppel and prosecution disclaimer. The court could easily bring these doctrines in line with *Festo II* by using a similar rebuttable presumption of surrender that affords a patentee the opportunity to rebut the presumption.⁸⁸ Instead, the result of the Federal Circuit’s approach is in essence an irrebuttable presumption: the court necessarily presumes that the patentee surrendered claim scope with no opportunity to demonstrate otherwise. As a result, this doctrine serves to exclude various forms of evidence. Primacy is afforded to the public record and no consideration is given to what one of ordinary skill in the art might think, as expert testimony particularly is not useable to rebut such surrender.

2. “Specification Estoppel”—the Dedication Rule for Literal Infringement

The court has long recognized that patent claims must be interpreted in light of the specification. In recent years, however, the court has elevated the consideration of representations made in the specification.⁸⁹ Historically, the specification has been used to limit the scope of a patent’s claims: subject matter that was disclosed by the applicant in the specification but not claimed was deemed dedicated to the public, at least for the purposes of literal infringement.⁹⁰ Use of the specification, however, has always been cabined by the canon of claim construction that limitations from the specification should not be imported into the claim.⁹¹

The idea of using the specification in a preclusive, estoppel-like manner first arose, unsurprisingly, in the context of the doctrine of equivalents. The Federal Circuit expanded the dedication rule to also preclude assertions of

⁸⁶ *Id.* at 1324.

⁸⁷ *Id.* at 1326.

⁸⁸ The court is set to address the appropriate role of prosecution history in claim construction. *See infra* note 158 and accompanying text.

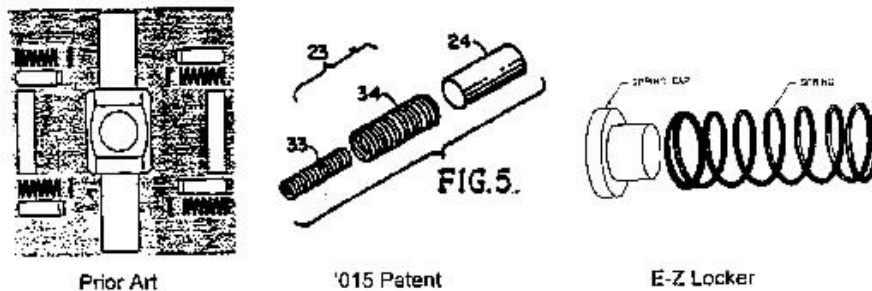
⁸⁹ Steven C. Cherny et al., *Role of Specification Increasing in Claim Construction*, N.Y.L.J., Oct. 15, 2001, at § 8, col. 2 (noting Federal Circuit’s “recent trend towards reading implicit limitations into claims”).

⁹⁰ *Miller v. Brass Co.*, 104 U.S. 350, 352 (1881); *see also Maxwell v. J. Baker, Inc.*, 86 F.3d 1098, 1106–07 (Fed. Cir. 1996). Note that this, too, is a formalistic substantive rule of claim construction.

⁹¹ *See, e.g., Tex. Digital Sys., Inc. v. Telegenix, Inc.*, 308 F.3d 1193, 1204–05 (Fed. Cir. 2002).

equivalency over described but unclaimed subject matter.⁹² The court, however, did not stop there.

In *Vehicular Technologies Corp. v. Titan Wheel International, Inc.* (“*Vehicular I*”), the court reviewed a grant of preliminary injunction based on the likelihood of success of the patentee demonstrating infringement under the doctrine of equivalents.⁹³ The invention related to locking differentials for automobiles, which help prevent a car from getting stuck on ice by “shift[ing] all of the available drive force to the wheel that has traction” and away from the wheel that is slipping.⁹⁴ As part of this apparatus, the patent claimed two concentric springs that attach to a pin, as shown below in the Figure labeled “’015 patent.” In contrast, the accused device (the E-Z Locker, below) used a single spring attached to a plug.



95

The Federal Circuit reversed the grant of the preliminary injunction based on representations made in the specification (although not in the claim) that the dual-spring arrangement performed a back-up function: if one spring broke, the other still allowed the device to function. The accused device could not satisfy this function, and the court concluded that this failure showed that the device was not insubstantially different from the claimed invention. The court did not describe its analysis as an “estoppel,” but the analysis portends such a change in the law.⁹⁶ In dissent, Judge Newman decried this new “all-advantages rule” legal limitation on the doctrine of equivalents and instead implored the court to

⁹² *Maxwell*, 86 F.3d at 1107. The court, resolving an intracircuit split, recently confirmed the viability of this rule. *Johnson & Johnston Assocs., Inc. v. R.E. Serv. Co.*, 285 F.3d 1046, 1054 (Fed. Cir. 2002) (en banc).

⁹³ 141 F.3d 1084, 1087 (Fed. Cir. 1998) (“*Vehicular I*”).

⁹⁴ *Id.* at 1085.

⁹⁵ *Id.* at 1087.

⁹⁶ *Id.* at 1090.

The available scope of protection of a patent under the doctrine of equivalents is not, however, limited solely by prosecution history estoppel In addition, a separate body of case law confirms that a patentee may otherwise lose the right to assert coverage of allegedly equivalent structure or matter. . . .

In this case, the written description makes clear a function of the spring assembly that was not addressed by the district court when it considered PowerTrax’s preliminary injunction motion.

Id.

perform the traditional, factual function-way-result analysis.⁹⁷ Judge Newman also accused the majority of pre-judging the issue on the merits, when in fact the appeal dealt solely with the propriety of granting the preliminary injunction.⁹⁸

Judge Newman proved prophetic, as, on remand, the district court simply granted summary judgment of non-infringement on the basis that the accused device cannot be equivalent due to its failure to perform the backup function.⁹⁹ The Federal Circuit affirmed on the same basis as *Vehicular I*: the failure of the accused device to perform the function identified in the specification precluded a finding of infringement under the doctrine of equivalents.¹⁰⁰ Although couched in terms of the insubstantial differences test—“[i]f this function is ‘key,’ an accused device which does not perform this central function could rarely, if ever, be considered to be insubstantially changed from the claimed invention”¹⁰¹—the court was instead applying estoppel and not evaluating the factual issue of equivalency.

The court utterly discounted the evidence submitted about the equivalency of the accused device, noting that “the extrinsic evidence invoked by PowerTrax to show a potential issue of fact relating to the importance of the reliability issue does not trump the clear disclosures and assertions in the patent itself.”¹⁰² This language reveals the court was doing either of two things. First, it could be stating that the extrinsic evidence was insufficient as a factual matter to show equivalency. The case came to the court on summary judgment, however, which makes the weighing of the facts inappropriate; indeed, all inferences should have been drawn in favor of the nonmovant, here the patentee. The court clearly did draw such inferences. The second and more persuasive explanation of the court’s action is that the panel was articulating a new *legal* principle—a specification estoppel of sorts. If this estoppel is legal in nature, then the court would be correct to note that the extrinsic evidence cannot trump the *legal* conclusion that the patentee surrendered as equivalents devices that cannot perform the backup function. A new legal limitation on the doctrine of equivalents was thus born.

This new legal limitation would not be restricted to the doctrine of equivalents, however. In *SciMed Life Systems, Inc. v. Advanced Cardiovascular Systems, Inc.*, the court faced a technology involving balloon dilation catheters “used in coronary angioplasty procedures to remove restrictions in coronary arteries.”¹⁰³ The specification disclosed catheters with two lumens¹⁰⁴ arranged

⁹⁷ *Id.* at 1093–96 (Newman, J., dissenting).

⁹⁸ *Id.* at 1097–98.

⁹⁹ *Vehicular Techs. Corp. v. Titan Wheel Int’l, Inc.*, 212 F.3d 1377, 1380–81 (Fed. Cir. 2000) (“*Vehicular II*”).

¹⁰⁰ *Id.* at 1382.

¹⁰¹ *Id.*

¹⁰² *Id.*

¹⁰³ 242 F.3d 1337, 1339 (Fed. Cir. 2001).

¹⁰⁴ Lumens are passageways; one is the guidewire lumen, through which a wire is placed to help guide the catheter through the artery, and the other is the inflation lumen, through which the fluid that inflates the balloon flows. *See id.* at 1339.

coaxially and distinguished the prior art lumens that had a side-by-side arrangement.¹⁰⁵ The accused device utilized a side-by-side arrangement, but the claim itself was silent as to the relative location of the two lumens.¹⁰⁶ Nor did the prosecution history help explain the intended claim scope; instead, the court relied solely upon the specification.¹⁰⁷

Given the representations made in the specification—not the prosecution history—the court concluded that for both literal infringement and infringement under the doctrine of equivalents, “we interpret the specification to disclaim the dual lumen configuration and to limit the scope of the asserted claims to catheters with coaxial lumen structures having annular inflation lumens.”¹⁰⁸ The court therefore expanded the role of the specification as expressed in the *Vehicular* cases to estop not only assertions of equivalency, but also to estop claim construction positions relevant to literal infringement.

While later opinions have shied away from a strict application of the *SciMed* approach,¹⁰⁹ the court nevertheless has heightened the role played by the specification. The Federal Circuit, therefore, has announced another formalistic substantive rule with respect to claim construction—that representations made in the specification can preclude attempts to extend the literal scope of the claims, regardless of the ordinary meaning of the claim and regardless of how one of ordinary skill in the art might read the claim.¹¹⁰ Specification estoppel, therefore, can also be viewed as an irrebuttable presumption of surrender of claim scope.

This surrender arguably is even more problematic than prosecution history-based surrender. In the context of the prosecution history there is an exchange between the applicant and the examiner, so the surrender is fairly volitional. However, the patentee cannot amend a specification without losing priority, so the surrender is present effectively from the moment the application is filed.¹¹¹ The court has rooted its substantive formalism in lowest-cost-avoider

¹⁰⁵ *Id.*

¹⁰⁶ *See id.* at 1340.

¹⁰⁷ *Id.* at 1340 (“There is nothing pertinent to this issue in the prosecution history of the three patents; the case turns entirely on an interpretation of the asserted claims in light of the specification.”).

¹⁰⁸ *Id.*

¹⁰⁹ *See, e.g.,* *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1120 (Fed. Cir. 2004) (specification did not evince a “clear and unmistakable disavowal of claim scope”); *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906–07 (Fed. Cir. 2004) (distinguishing *SciMed* and rejecting bright-line rule that “if a patent specification describes only a particular embodiment, the claims must be limited to that subject matter”).

¹¹⁰ *See generally* Russell B. Hill & Frank P. Cote, *Ending The Federal Circuit Crapshoot: Emphasizing Plain Meaning in Patent Claim Interpretation*, 42 IDEA 1 (2002).

¹¹¹ A patentee cannot add matter to the written description of an application. *See* 35 U.S.C. § 132(a) (2000) (“No amendment shall introduce new matter into the disclosure of the invention.”); 37 C.F.R. § 1.53(b) (2004) (“No new matter may be introduced into an application after its filing date.”). New matter can be added through the use of a continuation-in-part application, *see* 37 C.F.R. § 1.53(b)(2); U.S. PATENT & TRADEMARK OFFICE, U.S. DEP’T OF COMMERCE, MANUAL OF PATENT EXAMINATION PROCEDURE § 201.08

analysis: the patentee is in the best position to draft the specification and claims and to clarify itself before the patent office. The patentee, therefore, and not the public, should bear the burden of any ambiguities in the language.¹¹² Unlike the prosecution history context, however, the surrender could be entirely inadvertent and the applicant would have little ability to correct or argue against such surrender.

Moreover, articulating such bright-line rules does not necessarily further the court's interest in public notice. These rules may provide certainty to competitors and enhance public notice for existing patents, but prospectively it discourages disclosure of information in the specification.¹¹³ If something can be used against you, why disclose it? This disincentive to disclose information is problematic for two reasons.

First, it runs counter to one of the fundamental premises of the patent system: encouraging disclosure of information in the patent document to enhance the storehouse of knowledge in a given art field.¹¹⁴ The courts should be *encouraging*, not discouraging, greater disclosure in order to effect this policy objective. Admittedly, an applicant must include sufficient information in her application to satisfy the disclosure requirements (written description, enablement, and best mode),¹¹⁵ so there is a baseline disclosure that will always be maintained. As a matter of policy, however, the court should be encouraging more robust disclosures instead of creating incentives for the most minimal disclosures allowed.

Second, as identified by the Supreme Court, there are inherent ambiguities of language. The court should encourage applicants to discuss more freely what they intend their language to mean to aid the public's ability to comprehend the claim's scope. The Supreme Court recognized that the ambiguities of language drive many of the problems in patent law.¹¹⁶ The public can better understand

(8th ed., rev. 2 May 2004), or, of course, if the applicant files an entirely new application. The applicant, however, will forfeit priority based on the earlier-filed application.

¹¹² Cf. *Sage Prods., Inc. v. Devon Indus., Inc.*, 126 F.3d 1420, 1425 (Fed. Cir. 1997) ("However, as between the patentee who had a clear opportunity to negotiate broader claims but did not do so, and the public at large, it is the patentee who must bear the cost of its failure to seek protection for this foreseeable alteration of its claimed structure.").

¹¹³ Cf. R. Polk Wagner, *Reconsidering Estoppel: Patent Administration and the Failure Of Festo*, 151 U. PA. L. REV. 159 (2002).

¹¹⁴ See generally Katherine J. Strandburg, *What Does the Public Get? Experimental Use and the Patent Bargain*, 2004 WIS. L. REV. 81, 104–07.

¹¹⁵ 35 U.S.C. § 112, para. 1 (2000).

¹¹⁶ *Festo v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 731 (2002) ("*Festo II*") ("Unfortunately, the nature of language makes it impossible to capture the essence of a thing in a patent application."); see also *Festo v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 234 F.3d 558, 621–22 (Fed. Cir. 2000) ("*Festo I*") (Linn, J., concurring in part, dissenting in part).

However, a claim is a linguistic description of a mental concept. Due to the inherent limitations of language, the fit between the description and the concept is almost always inexact. In addition to the inexact fit caused by the inherent limitations of language, the language itself may not be adequately developed at the early stages when patent applications typically are filed, particularly in rapidly evolving research fields.

Id. (citation omitted).

the invention and the patent's scope with *more* disclosure, not with less. In the context of the use of the specification, which the applicants cannot substantively amend without losing the priority date on their application, this problem is particularly acute.¹¹⁷ The public should be able to rely on the disclosures, but such public notice does not mandate application of harsh estoppel principles that remove the consideration of the claim scope from the context of the prior art and what one of skill in the art would interpret as the scope.¹¹⁸

B. Process-Oriented Claim Construction Rules—Canons and Presumptions

Although the court has articulated a fair number of formalistic substantive rules, many of which appear to be variants of estoppel principles, the court has also articulated rules that are more process-based and thus more in line with the Supreme Court's view of the proper way to balance certainty and fairness.

1. Canons of Claim Construction

Well-known procedural "bright-line" rules that the court has relied upon are the various "canons of claim construction": rules of thumb that courts should use in the construction of a patent claim. These canons include a preference for interpreting a claim to maintain its validity if possible;¹¹⁹ the principle that an interpretation that excludes the preferred embodiment as "rarely, if ever, correct";¹²⁰ a preference for narrower claim interpretations;¹²¹

¹¹⁷ See *supra* note 111. The inability to add new matter serves as a countervailing consideration, creating a strong incentive to be inclusive of information disclosed. The estoppel principles, however, do put applicants in a bind. Some manuals instructing prosecutors on methods and techniques of drafting patents show that applicants do try to minimize their disclosures. Cf. JEFFREY G. SHELDON, HOW TO WRITE A PATENT APPLICATION § 7.5.7.2, at 7–58 (Supp. 2001):

If the field of invention is described very broadly, this can be interpreted to be an admission that anything within the broad description is analogous art and can be used to reject the claims under 35 U.S.C. § 103. If the field of the invention is described unduly narrowly, then the scope of the claims may be interpreted during litigation to be of commensurate narrow scope.

Id.; See also Joseph Scott Miller, *Enhancing Patent Disclosure for Faithful Claim Construction*, 9 LEWIS & CLARK L. REV. 177, 202 (2005) ("[B]ecause a statement of the field of invention can help the public construe the claim language, the patentee should not provide one.").

¹¹⁸ The court is also set to assess this aspect of claim construction. See *infra* note 158 and accompanying text.

¹¹⁹ See, e.g., *Modine Mfg. Co. v. United States Int'l Trade Comm'n*, 75 F.3d 1545, 1557 (Fed. Cir. 1996). The en banc order in *Phillips v. AWH Corp.* directly addresses this canon, so the court may alter or eliminate a methodological rule. See *Phillips v. AWH Corp.*, 376 F.3d 1382, 1383 (Fed. Cir. 2004) (en banc). ("When, if ever, should claim language be narrowly construed for the sole purpose of avoiding invalidity under, e.g., 35 U.S.C. §§ 102, 103 and 112?").

¹²⁰ *Vitronics Corp. v. Conceptor, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996).

¹²¹ See, e.g., *Athletic Alternatives, Inc. v. Prince Mfg., Inc.*, 73 F.3d 1573, 1581 (Fed. Cir. 1996).

Where there is an equal choice between a broader and a narrower meaning of a claim, and there is an enabling disclosure that indicates that the applicant is at least entitled to

and the prohibition on importing limitations into the claim from the specification or prosecution history.¹²² These canons are not particularly formalistic, however, because they are only rules of thumb.

2. *Various Presumptions Relating to the Ordinary Meaning of a Term*

Similar to the canons of claim construction, the Federal Circuit has articulated a variety of presumptions that arise in construing a claim. First, there is a “heavy presumption” that a claim term has “the ordinary meaning that would be attributed to those words by persons skilled in the relevant art.”¹²³ Additionally, the use of the word “means” in a claim creates a presumption that the patentee intends to invoke 35 U.S.C. § 112, para. 6.¹²⁴ Conversely, failure to use the term “means” creates a presumption that the patentee intends *not* to invoke § 112, para. 6.¹²⁵ The doctrine of claim differentiation also creates a presumption that claims using different terms have different scope.¹²⁶

The use of these presumptions in claim construction—or perhaps the use of the term “presumption”—is curious given that presumptions are generally used to allocate evidentiary burdens in factual matters, whereas claim construction is purely a legal question. Nevertheless, the use of these presumptions seems much more in line with the type of process-driven formalism that the Supreme Court views as appropriate. These presumptions are not outcome determinative and the parties have a chance to rebut them. For example, the presumption in favor of § 112, para. 6 through the use of the word “means” can be rebutted “if the properly construed claim limitation itself recites sufficiently definite structure to perform the claimed function.”¹²⁷ Likewise, the presumption against the application of § 112, para. 6 can be rebutted “if the claim limitation is determined not to recite sufficiently definite structure to perform the claimed function.”¹²⁸ Rebutting the presumption of

a claim having the narrower meaning, we consider the notice function of the claim to be best served by adopting the narrower meaning.

Id.

¹²² See, e.g., *Burke, Inc. v. Bruno Indep. Living Aids, Inc.*, 183 F.3d 1334, 1340 (Fed. Cir. 1999) (“Consistent with the principle that the patented invention is defined by the claims, we have often held that limitations cannot be read into the claims from the specification or the prosecution history.”).

¹²³ *Tex. Digital Sys., Inc. v. Telegenix, Inc.*, 308 F.3d 1193, 1202 (Fed. Cir. 2002); *Johnson Worldwide Assocs., Inc. v. Zebco Corp.*, 175 F.3d 985, 989 (Fed. Cir. 1999).

¹²⁴ See, e.g., *Kemco Sales, Inc. v. Control Papers Co.*, 208 F.3d 1352, 1361 (Fed. Cir. 2000).

¹²⁵ See, e.g., *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1369 (Fed. Cir. 2002).

¹²⁶ See, e.g., *Comark Communications, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998).

There is presumed to be a difference in meaning and scope when different words or phrases are used in separate claims. To the extent that the absence of such difference in meaning and scope would make a claim superfluous, the doctrine of claim differentiation states the presumption that the difference between claims is significant.

Id.

¹²⁷ *Kemco Sales, Inc.*, 208 F.3d at 1361.

¹²⁸ *Id.*

ordinary meaning, however, opens an entirely different can of worms and is discussed separately below.

The Federal Circuit has embraced formalistic principles that do not drive substantive outcomes necessarily but, instead—and consistent with the Supreme Court’s approach—provide a method by which the issue should be analyzed. The presumptions articulated here are not irrebuttable and the court will consider whether the presumption should rightfully stand.

IV. THE SHOWDOWN—*VITRONICS V. TEXAS DIGITAL*

The aforementioned “heavy presumption” in favor of the ordinary meaning of a claim term has created a significant split at the Federal Circuit. The court has taken *Phillips v. AWH Corp.* en banc to address its proper approach to claim construction, and particularly the proper roles of the specification and dictionaries in assessing the meaning of claim terms.¹²⁹ This section will review the conflicting approaches of the court. Neither approach fits perfectly within the paradigm identified above. Some aspects of the approaches are more akin to irrebuttable presumptions, while others have more procedural aspects that are similar to the Supreme Court’s approach in addressing similar issues.

A. *Vitronics Corp. v. Conceptiontronic, Inc.*

Since *Markman I* made claim construction a matter of law, courts have struggled with the appropriate methodology for claim construction. Shortly after the Supreme Court decided *Markman II*, the Federal Circuit further elaborated the proper hierarchy of evidence considered when construing a claim. The approach detailed in *Vitronics Corp. v. Conceptiontronic, Inc.*¹³⁰ is rather substantive in nature.

In *Vitronics*, the court again emphasized the primary significance of the intrinsic evidence—the claims, specification, and prosecution history—in construing a patent claim.¹³¹ The Federal Circuit noted that the claims—both asserted and unasserted—must be considered in construing a claim. The terms in the claim must be given their ordinary and customary meaning, unless the patentee has acted as his own lexicographer and uniquely defined the terms in the claim. The patentee must disclose non-customary definitions explicitly or implicitly in the specification, necessitating consultation of the specification in every case. According to the court, resort to the specification is typically dispositive because the patent is an integrated document. The prosecution history, however, can also be considered if it is in evidence. The court also articulated a procedural view of the various forms of extrinsic evidence. Inventor testimony, other than that in the public record, lacks any probative

¹²⁹ See *Phillips v. AWH Corp.*, 376 F.3d 1382, 1382–84 (Fed. Cir. 2004) (en banc). The court has issued seven broadly worded questions for the parties and amici to address.

¹³⁰ 90 F.3d 1576, 1582–83 (Fed. Cir. 1996).

¹³¹ *Id.* at 1582.

value.¹³² Expert testimony, while not as problematic as inventor testimony, can be used to educate the judge but cannot be used to contradict the clear meaning of the intrinsic evidence.¹³³ The court viewed prior art as helpful extrinsic evidence because it often is contemporaneous with the invention and, unlike expert testimony, there is less risk that the prior art was created with an eye toward litigation.¹³⁴ Finally, the court expressly categorized dictionaries and treatises as extrinsic evidence, but added that

they are worthy of special note. Judges are free to consult such resources at any time in order to better understand the underlying technology and may also rely on dictionary definitions when construing claim terms, so long as the dictionary definition does not contradict any definition found in or ascertained by a reading of the patent documents.¹³⁵

The court was thus primarily concerned with expert testimony and its potential to eviscerate the public notice function of patents.¹³⁶

This hierarchy of evidence, particularly the emphasis on intrinsic evidence, was not new or startling; it essentially reiterated statements the court made in *Markman I*.¹³⁷ However, the court made a shocking statement: “In those cases where the public record unambiguously describes the scope of the patented invention, reliance on any extrinsic evidence is *improper*.”¹³⁸ Otherwise, “[a]llowing the public record to be altered or changed by extrinsic evidence introduced at trial, such as expert testimony, would make [the right to rely on the public record] meaningless.”¹³⁹ This formalistic rule is fairly process-based; the court is articulating a method of construing the claim. The rule, however, does have irrebuttable and substantive implications. The court cannot rely on extrinsic evidence to further evince the meaning of the claim as one of ordinary skill in the art would understand it.¹⁴⁰

Subsequently, the court retreated from this bright-line proscription on consideration of extrinsic evidence, particularly the implication that such extrinsic evidence should not be *admissible*.¹⁴¹ Importantly, the *Vitronics*

¹³² *Id.* at 1584.

¹³³ *Id.*

¹³⁴ *Id.*

¹³⁵ *Id.* at 1584 n.6.

¹³⁶ The court did note, however, that even consideration of *prior art* is inappropriate if the intrinsic evidence is unambiguous. *Id.* at 1584–85. The court failed to explain why prior art—which by its definition is generally accessible to the relevant public—would undermine the public notice function of the patent. A competitor readily could read the patent *along with* the prior art (like a dictionary) to understand the meaning of the claim.

¹³⁷ See *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979–80 (Fed. Cir. 1995) (“*Markman I*”).

¹³⁸ *Vitronics Corp.*, 90 F.3d at 1583 (emphasis added).

¹³⁹ *Id.*

¹⁴⁰ See Rai, *supra* note 13, at 1049 (“For example, in *Vitronics Corp. v. Conceptronic, Inc.*, the Federal Circuit stated that the use of extrinsic evidence in claim construction is ‘rarely, if ever,’ proper—a statement that flies in the face of the principle that claims should be interpreted from the standpoint of one who is skilled in the art.”) (citation omitted).

¹⁴¹ In *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, the court clarified *Vitronics* by stating, as follows:

hierarchy shows a deep distrust by the Federal Circuit in using extrinsic evidence, particularly expert testimony.

B. *Texas Digital Systems, Inc. v. Telegenix, Inc.*

The approach of *Vitronics* itself has come under assault by some members of the court who prefer a more proceduralist view.¹⁴² The court's opinion in *Texas Digital Systems, Inc. v. Telegenix, Inc.*¹⁴³ represents another step, although perhaps a side-step, in the evolution of claim construction at the Federal Circuit, if not an outright rejection of the *Vitronics* paradigm. The court reaffirmed the presumption that claim terms are afforded their ordinary meaning in the relevant art.¹⁴⁴ To implement this presumption, however, the court took a dramatically different approach than that used in *Vitronics*. While *Vitronics* reserved a special role for dictionaries in claim construction to aid in assessing the ordinary meaning,¹⁴⁵ *Texas Digital* elevated dictionaries to a *primary* source of identifying the ordinary meaning of a term. In a *sub silentio* rejection of *Vitronics*, the court noted:

Consulting the written description and prosecution history as a threshold step in the claim construction process, before any effort is made to discern the ordinary and customary meanings attributed to the words themselves, invites a violation of our precedent counseling against importing limitations into the claims. . . . Indeed, one can easily be misled to believe that this is precisely what our precedent requires when it informs that disputed claim terms should be construed in light of the intrinsic record.¹⁴⁶

After consulting the dictionary definitions, the court then looks to the intrinsic evidence to help discern which of the definitions best comport with the patent document.¹⁴⁷ The court must also consult the intrinsic evidence to ascertain whether the presumption of ordinary meaning¹⁴⁸ has been rebutted,

Despite the district court's statements to the contrary, *Vitronics* does not prohibit courts from examining extrinsic evidence, even when the patent document is itself clear. Moreover, *Vitronics* does not set forth any rules regarding the admissibility of expert testimony into evidence. Certainly, there are no prohibitions in *Vitronics* on courts hearing evidence from experts. Rather, *Vitronics* merely warned courts not to *rely* on extrinsic evidence in claim construction to contradict the meaning of claims discernible from thoughtful examination of the claims, the written description, and the prosecution history—the intrinsic evidence.

182 F.3d 1298, 1308 (Fed. Cir. 1999) (citations and footnote omitted) (emphasis in original).

¹⁴² See *infra* notes 143–47 and accompanying text. R. Polk Wagner and Lee Petherbridge have dubbed these differing approaches the holistic (*Vitronics*) and the proceduralist (*Texas Digital*) approaches. See Wagner and Petherbridge, *supra* note 11, at 1111.

¹⁴³ 308 F.3d 1193 (Fed. Cir. 2002).

¹⁴⁴ *Id.* at 1202.

¹⁴⁵ See *supra* note 135 and accompanying text.

¹⁴⁶ *Tex. Digital Sys., Inc.*, 308 F.3d at 1204–05.

¹⁴⁷ *Id.* at 1203.

¹⁴⁸ Professor Joseph Scott Miller and James A. Hilsenteger caught the subtle shift within the *Texas Digital* opinion from noting a “presumption of ordinary meaning” to “the

which can occur as follows: (1) if the patentee acted as his own lexicographer by clearly setting forth a unique definition in the specification or prosecution history; or (2) if the intrinsic evidence shows that the patentee distinguished that term from prior art on the basis of a particular embodiment, expressly disclaimed subject matter, or described a particular embodiment as important to the invention.¹⁴⁹

This approach is seemingly more procedural in nature. The court is not prescribing what dictionaries are relevant, but simply that dictionaries should be considered to ascertain the ordinary and customary meaning of the term. The intrinsic evidence is then consulted to discern if the patentee provided any unique definitions or potentially surrendered any subject matter. The outcome is not directly affected by these process steps. As a procedurally formalistic rule, this approach seemingly falls more in line with the Supreme Court's approach of maintaining certainty and uniformity in patent law.¹⁵⁰

The *Texas Digital* approach, however, is still extremely formalistic in that it rejects the use of certain forms of evidence, notably expert testimony. In this regard, it does not stray terribly far from the harsh approach of *Vitronics*. In fact, some consider *Texas Digital* more formalistic than *Vitronics*.¹⁵¹

C. Which Approach Better Comports with the Supreme Court's View, or Do They Both Fail?

The *Texas Digital* case undeniably impacted the approach of at least some of the judges at the Federal Circuit. The use of dictionaries in claim construction has surged in recent years.¹⁵² The procedure of considering

presumption in favor of a dictionary definition." See Joseph Scott Miller & James A. Hilsenteger, *The Proven Key: Roles & Rules For Dictionaries at the Patent Office & the Courts*, 54 AM. U. L. REV. (forthcoming May 2005) (manuscript at 11, on file with author, available at <http://ssrn.com/abstract=577262>); compare *Tex. Digital Sys., Inc.*, 308 F.3d at 1202, with *Tex. Digital Sys., Inc.*, 308 F.3d at 1204.

¹⁴⁹ *Tex. Digital Sys., Inc.*, 308 F.3d at 1204. The court also recognized that the ordinary meaning rule will not apply to means-plus-function claims, see *id.* at 1208 (turning immediately to specification to ascertain structure to perform function), which must be construed as covering the structure disclosed in the specification to perform the claimed function, see 35 U.S.C. § 112, para. 6 (2000).

¹⁵⁰ Simply because the *Texas Digital* approach better comports with the Supreme Court's views does not mean it is unproblematic. Surprisingly, and perhaps disturbingly, the court permits reference to dictionaries by either trial or *appellate* judges at *any stage* of litigation. This sweeping ability is a bit perplexing, as the content of a dictionary definition could be the source of an evidentiary dispute, such as which dictionaries are more appropriate and whether one dictionary in essence has more credibility in the art than another. These concerns would be best addressed at the trial level and not at the appellate level. Moreover, the authority given to courts (and particularly the Federal Circuit) seems unfettered: the court can consult *any* dictionary *it* chooses, regardless of whether it was presented by the parties. Such an unchecked use of dictionaries denies the parties the ability to contest a questionable source or definition.

¹⁵¹ See Ruoyu Roy Wang, Note, *Texas Digital Systems v. Telegenix, Inc.: Toward A More Formalistic Patent Claim Construction Model*, 19 BERKELEY TECH. L.J. 153, 163 (2004).

¹⁵² Miller and Hilsenteger, *supra* note 148 (manuscript at 17).

dictionaries as a threshold matter has aspects of both process-based formalism and substantive formalism. Both approaches exclude the consideration of non-dictionary extrinsic evidence if the intrinsic evidence (plus dictionaries in the case of *Texas Digital*) is unambiguous. This exclusion seems inconsistent with the Supreme Court's process-based approaches.

The Supreme Court in *Markman II* contemplated the use of expert testimony. The Court explained that juries were not necessary in the claim construction context to weigh the credibility of experts because "[i]n the main, . . . any credibility determinations will be subsumed within the necessarily sophisticated analysis of the whole document, required by the standard construction rule that a term can be defined only in a way that comports with the instrument as a whole."¹⁵³ The Court necessarily thought that expert testimony generally would be considered by the lower courts and not summarily excluded from consideration altogether absent an ambiguity in the patent and prosecution history. Consequently, both approaches are inconsistent with the Supreme Court's view of certainty and uniformity.

One approach that appears consistent with the Supreme Court's views is that espoused post-*Markman* by Judge Newman. Judge Newman in one case offered the following process (if one can call it that):

In our *de novo* review we have considered the analysis and conclusions of the district court, as well as the testimony and opinions of the expert witnesses, in resolving these questions. Although both sides have attempted to provide basic education in this field of technology, our determination of the issues on appeal has drawn on the record of the *Markman* hearing and the testimony of the expert witnesses, including their conflicting views of the significance of various distinctions drawn during patent prosecution with respect to the prior art, as well as with respect to the accused Intel methods and their relation to the EMI method and prior art methods.¹⁵⁴

Judge Newman would thus take an even more holistic approach than the *Vitronics* paradigm—the courts would consider all the relevant evidence as a whole to come to an appropriate claim construction. She would not preclude consideration of extrinsic evidence—even expert testimony—simply because the court views the intrinsic evidence as unambiguous. Some might criticize this approach as far too vague and thus insufficiently promoting certainty. To modify this approach slightly, the court could use a presumption system, such as presuming that the meaning of a claim term is derived from the intrinsic evidence, although it can be rebutted by consultation of all the available extrinsic evidence, subject to rebuttal in light of *all* available extrinsic evidence. This would turn the *Texas Digital* approach on its head, by not requiring rebuttal by the intrinsic evidence. It would also greatly expand the information considered in construing the claim, hopefully yielding a more thoroughly reasoned and informed claim construction.

¹⁵³ *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 389 (1996) ("*Markman II*").

¹⁵⁴ *EMI Group N. Am., Inc. v. Intel Corp.*, 157 F.3d 887, 892 (Fed. Cir. 1998).

V. CONCLUSION

Both the Supreme Court and the Federal Circuit recognize the unique role the Federal Circuit plays in U.S. patent law and the need for certainty in the law. The approaches those two courts have taken to promote such certainty, particularly the methods to protect the public notice function served by patents, have varied significantly. To the extent that the Supreme Court looks to intervene in future claim construction approaches, the distinction between process-based and substantive formalism may help inform which issues are appropriate for the Court to review.

This review may also suggest that the Federal Circuit should modify its approach to estoppel-like principles to contain presumptions, as the Supreme Court did in *Festo II*. For example, the disclaimer/claim construction estoppel could be established as a presumption of surrender that the patentee has an opportunity to rebut in the same ways available under *Festo II*—unforeseeability, tangential relationship, or some other basis related to the ambiguities of language. The same could be done for the *SciMed* dedication rule, and indeed for argument-based prosecution history estoppel as well. Of course, rebuttal of such presumptions might necessitate evidence outside the public record, but the Supreme Court has already expressed a view that going outside the intrinsic evidence will not per se eviscerate the public notice function served by the patent.

This distinction may also provide insight in the pending *Phillips* case, which has presented a laundry list of claim construction issues that the court hopes to address. The court itself has admitted that the questions presented will “address broadly the law of claim construction.”¹⁵⁵ One can debate whether, in essence, such judicial legislation is appropriate or whether the court should address these concerns on a more case-by-case basis.¹⁵⁶ Regardless, the court will answer these questions in the near term.

Specifically the questions presented in the *Phillips* en banc order directly implicate the considerations addressed above.¹⁵⁷ The *Vitronics* versus *Texas Digital* conflict actually may be the lesser concern given the substantive formalistic approach articulated in both. The court expressly questioned its use of estoppel-like, irrebuttable presumptions with respect to both the prosecution history and the specification in *Phillips*.¹⁵⁸ The court should give careful

¹⁵⁵ *Astrazeneca AB v. Mut. Pharm. Co.*, 384 F.3d 1333, 1338 n.3 (Fed. Cir. 2004) (emphasis added).

¹⁵⁶ *Cf. In re Zurko*, 111 F.3d 887, 889 n.2 (Fed. Cir. 1997) (“The argument [for altering precedent] is appropriately made in a petition suggesting rehearing in banc, in a case such as this, wherein the court has decided that clear error by the Board requires reversal.”); Duffy, *supra* note 11, at 119 (noting that, in *Cybor Corp.*, “not one judge on the court of appeals disagreed with the trial court’s claim construction. The dispute over the standard of review thus had a hypothetical quality that stands quite in contrast to *Markman*, where the relevant issue was well framed by the conflict between the jury verdict and the judicial construction of the patent.”).

¹⁵⁷ *See Phillips v. AWH Corp.*, 376 F.3d 1382 (Fed. Cir. 2004) (en banc).

¹⁵⁸ *See id.* at 1383. Question 3 poses, in part, “Should the range of the ordinary meaning of claim language be limited to the scope of the invention disclosed in the

consideration as to whether its approach is truly consistent with the vision of the Supreme Court and its process-based formalism, which I contend the current law is not. Furthermore, the court will address the appropriate role of expert testimony,¹⁵⁹ which may open the door for a far greater holistic approach, as contemplated by Judge Newman. The court will also address whether deference is due to the district court's claim construction, notwithstanding that claim construction is purely legal. These latter questions seem far more pressing and important in the long term than resolving the intracircuit split created by *Vitronics* and *Texas Digital*. *Phillips* thus provides the court with the opportunity to rein in its substantive formalistic agenda in favor of the more process-based approach of the Supreme Court. The use of such presumptions as discussed above with respect to the use of the specification and prosecution history are more in line with Supreme Court precedent.

In the interest of full disclosure, I am actually more sympathetic and prone to agree with the formalistic tendencies of the Federal Circuit. Notwithstanding my predisposition for that approach, I do believe that the court has strayed too far from the approach of the Supreme Court, no matter how misguided that approach may be. As such, the time may have come for the court—and formalists such as myself—to retreat from the crystal bright-line rules and accept some level of mud in the interest of fairness.¹⁶⁰

specification, for example, when only a single embodiment is disclosed and no other indications of breadth are disclosed?" *Id.* Question 6 similarly asks "What role should prosecution history and expert testimony by one of ordinary skill in the art play in determining the meaning of the disputed claim terms?" *Id.*

¹⁵⁹ *Id.*

¹⁶⁰ See Carol M. Rose, *Crystals and Mud in Property Law*, 40 STAN. L. REV. 577, 577–78 (1988).