

Texas Intellectual Property Law Journal
Spring 2003

Recent Developments

**RECENT DEVELOPMENTS IN PATENT LAW--DECISIONS BY THE U.S. COURT OF APPEALS FOR THE
FEDERAL CIRCUIT**

Gale R. Peterson^{al} Derrick A. Pizarro^{al}

Copyright (c) 2003 State Bar of Texas, Intellectual Property Law Section; Gale R. Peterson; Derrick A. Pizarro

Table of Contents

I.	Introduction	489
II.	Novelty and Loss of Right to a Patent -- § 102	489
	A. Anticipation	489
	1. Claim Construction	489
	2. Anticipation Shown Through Inherency	492
	3. Oral Evidence re Lack of Novelty	499
	4. In an Infringement Context, References Are Presumed to Be Enabling for All That They Disclose, Including Claimed and Unclaimed Subject Matter: The Burden Falls on the Patentee to Prove That a Reference is Non-Enabling	504
	B. Loss of Rights--§ 102(b)	507
	1. A Confidentiality Notice on One Page of a Document Does Not Necessarily Mean That the Entire Document Was Inaccessible	507
	2. "On Sale"	508
	3. "In Public Use"	516
	C. Statute of Limitations - Interferences - § 102(e)(2) and § 135(b)(1)	521
III.	Obviousness/Nonobviousness -- § 103	524
	A. Deferential Judicial Review Under the APA Does Not Relieve the PTO of Its Obligation to Develop an Evidentiary Basis for Its Findings	524
	B. The Obviousness/Nonobviousness Analysis	527
	1. Claim Construction	527

	C. Negating/Rebutting a Prima Facie Case of Obviousness	533
IV.	Forfeiture Based on Prosecution Delay	534
V.	Enablement-Written Description-Best Mode: 35 U.S.C. § 112(1)	536
	A. Written Description: 35 U.S.C. § 112(1)	536
	1. Provisional Applications Must Provide Specific Written Description for Every Limitation in Later Claims in Non-Provisional Application: Written Description Support is Necessary from the Face of the Application	536
	2. Drawings Alone May Provide a “Written Description” of the Invention	537
	3. Reference in the Specification to a Deposit of a Nucleotide Sequence in a Public Depository, Which Makes Its Contents Accessible to the Public When It is Not Otherwise Available in Written Form, Constitutes an Adequate Description of the Deposited Material Sufficient to Comply with the Written Description Requirement	538
	4. Although It is Permissible to Amend Claims or Add Claims to Purposefully Cover Devices or Processes and Thereafter Allege Infringement, There Must Be Written Description Support	541
	B. Enablement: 35 U.S.C. § 112(1)	542
	1. Ambiguities in Disclosure May Lead to a Finding of Undue Experimentation - At Least on Summary Judgment	542
	C. Best Mode Tutorial - 35 U.S.C. § 112(1): The Claims Measure the Extent of the Best Mode Requirement - The Requirement Does Not Extend to “Production Details” Such as Equipment on Hand, Availability of Materials, and Customer Requirements	544
VI.	Particularly Point Out and Distinctly Claim - What The Applicant Regards as His Invention: 35 U.S.C. § 112(2)	547
	A. Where Claims Are Contrary to the Specification, Such Claims Do Not Distinctly Claim What “The Applicant Regards as His Invention”: Claims Are Invalid Under § 112(2) Even Though Mistake Was Obvious	547
	B. The Meaning of “Substantially” May Be Aided by Extrinsic Evidence of Usage and Meaning in the Context of the Invention	548
VII.	Interferences - Proving a Date of Invention	549
	A. General Practice and Procedure	549
	1. A Patent-Patent Interference Under § 291 Requires Interfering Claims Drawn to the Same Invention	549
	2. Counts in Interferences Must Be Construed in a Fashion Similar to Claims	550
	3. When Patent-Patent Interferences Are Conducted in District Court Under § 291, a Single Description of the Interfering Subject Matter - Like a Count - is Necessary for a Determination of Priority	551
	4. The Ultimate Burden of Proof for Showing an Earlier Date of Invention Remains on	552

	the Junior Party - The Burden of Proof Does Not Shift	
	B. Diligence: Activities Directed to Building a Facility for Large-Scale Practice of the Process of the Count May Constitute Diligence: Communication of an Invention to an Agent in the U.S. Constitutes a Date of Conception	554
	C. Reduction to Practice: Testing is Evidence of Whether the Inventor Would Have Known That an Invention Was Suitable for Its Intended Purpose	555
VIII.	Reissue & Reexamination	556
	A. The Orita Rule Narrowed to Its Facts	556
	B. Reexamination - Means-Plus-Function Limitations	557
IX.	Inventorship	558
	A. Determining Inventorship Also Requires Correct Claim Construction: Inventorship May Be Corrected Even Though Patent is Unenforceable for Inequitable Conduct Associated with the Failure to Name the Correct Inventor	558
	B. For Two Patents with “Overlapping Subject Matter,” Inventorship of Each Patent is Distinct, and Failure of One Party to Prove That It Co-Invented the Other Party’s Invention is Not Sufficient Proof That the Other Party Co-Invented the First Party’s Invention	560
X.	Licenses & Assignments	563
	A. The Bona Fide License Defense Does Not Apply to Non-Exclusive Licenses	563
	B. Assignment Covering Present Application and Any CIP Does Not Necessarily Cover Future Application Not Designated as a CIP	566
XI.	Inequitable Conduct	567
	A. Materiality: Affidavits That Are Literally True, Even If Misconstrued by the Examiner, May Not Meet the Threshold Level of Materiality	567
	B. Intent	571
	1. Inferred: Deliberately Concealing and Not Naming Correct Inventor Can Constitute Inequitable Conduct: One Bad Apple Spoils the Barrel - Patent is Not Enforceable Even by Innocent Non-Named Co-Inventor	571
	2. Not Inferred: No Direct Evidence of Intent to Deceive the PTO	572
XII.	Terminal Disclaimers--URAA	573
XIII.	Claim Construction	575
	A. Overview	575
	B. Ordinary Meaning	575
	1. Claim Term Will Not Be Given Its Ordinary Meaning If (1) the Patentee Acted as His Own Lexicographer, (2) Intrinsic Evidence Shows That Patentee Expressly	575

Disclaimed Subject Matter, or (3) the Term Chosen by the Patentee So Deprives the Claim of Clarity That Resort to Other Intrinsic Evidence is Required	
2. “Characterizable by” Does Not Mean “Determined from”	576
3. It is Generally Improper to Interpret Clear Structural Language as Having Functional Requirements	577
C. Claims Read “In Light Of” The Specification	577
1. Claims Read “In Light Of” The Specification v. Reading Limitations from Specification into the Claims	577
2. Claim Scope Not Limited by Scope of, and Embodiments in, the Written Description: Cases Generally Following Johnson Worldwide	579
D. Dictionary Definitions	581
E. Preambles	584
F. Selected Recently Used or Developed Axioms of Claim Construction	586
1. “Or” Means That Items in a Sequence Are Alternatives to Each Other	586
2. Method Claims That Are Not Tied to Any Particular Machine or Apparatus Are Interpreted to Cover Any Process That Performs the Method Steps	587
3. Claiming a Range Does Not Provide Notice to the Public of an Intent to Disclaim Coverage Outside That Range	588
4. “Composition” Means a Physical Mixture	589
5. The Same Word Used Consistently Throughout the Claims Should Be Interpreted Consistently - Rule Does Not Apply If Word is Used Differently	590
6. “Consisting Essentially Of” Named Components Permits Small Amounts of Other Components, but Does Not Affect Limiting Effect of Parameter Expressed as a Range	590
7. Asserting That a Particular Claim Construction Results in an Inoperable Invention Requires Proof of the Same	591
8. Where the Prosecution History Requires a Claim Construction That Excludes Some but Not All of the Preferred Embodiments, Such a Construction is Permissible	592
9. Asserting That a Particular Claim Construction Results in Excluding the Preferred Embodiment Requires Proof of the Same	593
10. When Words Are Used Interchangeably in the Specification, No Distinction Should Be Drawn Between the Two.	594
G. Reliance on Prosecution History	595
1. Claims Are Interpreted to Exclude Any Interpretation That Was Disclaimed During Prosecution.	595
2. Reliance on Prosecution History of Parent/Related Applications	595

	3. If the Applicant “Defined” a Term During Prosecution, That is the “Definition” That Should Be Used	596
	H. Any Presumption Arising From Claim Differentiation May Be Overcome by a Disclaimer During Prosecution	597
XIV.	Construction of Means- and Step-Plus-Function Limitations	598
	1. Background	598
	2. Cases: Year 2002	599
	3. Definiteness - § 112(2): Failure to Disclose Structure for Performing the Claimed Function Leads to Invalidity Under § 112(2)	603
XV.	Infringement	604
	A. There is No “Practicing the Prior Art” Defense to Literal Infringement--The Federal Circuit is Unlikely to Ever Apply the “Reverse Doctrine of Equivalents”	604
	B. Experimental Use Defense	606
	1. Focus is Not on Non-Profit Status but Whether or Not The Use Was Solely for Amusement, To Satisfy Idle Curiosity, or for Strictly Philosophical Inquiry	606
	2. Not an Affirmative Defense	608
	C. Hatch-Waxman Amendments	608
	1. Federal District Court Does Not Have Authority in an Infringement Action to Shorten 30-Month Period of Hatch-Waxman Amendments but Does Have Such Authority in Action Under APA.	608
	2. One Cannot Seek a Judicial Determination of Whether a Party’s Paragraph IV Certification Complies with the Hatch-Waxman Amendments in an Infringement Action	609
	3. “It is Not an Act of Infringement to Submit an ANDA for Approval to Market a Drug for a Use When Neither the Drug Nor That Use is Covered by an Existing Patent, and the Patent At Issue is for a Use Not Approved Under the NDA.”	610
	D. Repair or Reconstruction	613
XVI.	Infringement Under the Doctrine of Equivalents	614
	A. The “All Elements” or “All Limitations” Rule	614
	1. The “All Limitations” Rule May Result in a Limitation Having No Equivalents	614
	2. Two Device Elements May Together Perform a Single Function: Separate Claim Limitations May Be Combined into Single Device Element: One-to-One Correspondence is Not Required	615
	B. Unclaimed but Disclosed Subject Matter is Dedicated to the Public--Johnson & Johnston Associates Inc. v. R.E. Service Co., Inc.	616

XVII.	Prosecution History Estoppel, The Warner-Jenkinson Presumption and Festo	618
	A. The Warner-Jenkinson Presumption	618
	B. Supreme Court’s Festo Foreseeability Test: “At the Time of the Amendment, One Skilled in the Art Could Not Reasonably Be Expected to Have Drafted a Claim That Would Have Literally Encompassed the Alleged Equivalent”	619
	C. Pre-Supreme Court Festo Case (2002): Prosecution History Estoppel May Not Arise from Statements Made in Connection with Another Commonly-Owned Application That is Not a “Continuing” Application, Even Though There is a Common Inventor	621
XVIII.	Relief	623
	A. Actual Damages Under § 284	623
	1. Limited by the Marking Statute	623
	2. Lost Profit Damages: Acceptable Non-Infringing Substitute	623
	3. Lost Profits and Reasonable Royalty	625
	4. Price Erosion - Patentee is Not Required to Know That Competing System Infringed: Granting License Even with Reservation of Rights May Result in No Available Damages	625
	B. Reasonable Attorney’s Fees--§ 285: an Attorney Pro se Litigant May Not Recover Attorney Fees as a Sanction Under Fed. R. Civ. P. 37(a)(4)(A) but May Recover Fees Under Inherent Power of the Court	627
	C. Costs	628
XIX.	Practice and Procedure	628
	A. Standing	628
	B. Declaratory Judgment Jurisdiction	631
	C. Appellate Jurisdiction	632
	D. Claim Preclusion	634
	E. Issue Preclusion	635
	F. “Prosecution Laches” is an Available Defense Within § 282 (At Least Where the Patentee is Jerry Lemelson) - Despite Two Prior Non-Precedential Opinions to the Contrary	637
	G. Pre-Filing Investigation - Rule 11: (1) an Attorney’s Pre-Filing Claim Construction is Reviewed to Determine Whether It is Objectively Reasonable, (2) When a Number of Products Are Charged with Infringement It is Not Always Necessary for the Plaintiff’s Attorneys to Inspect Each Product Separately to Verify the Facts Underlying a Charge of Infringement, but the Evidence Must Be Sufficient to Permit a Reasonable Inference That All Products Infringe	640

H. Use of Non-Rule 706 Court Appointed Technical Advisor	643
I. District Court Abused Discretion in Not Imposing Sanctions for Violating a Protective Order by Making Copy of Opponent's Patent Application and Filing It with the PTO	645
J. Failure to Object to Claim Construction in Jury Charge May Result in Waiver Even If Futile (at Least in the Eighth Circuit)	647
XX. Conclusion	648

*489 I. Introduction

The year 2002 saw many significant developments in patent law. This article presents a survey of those developments as they emerged through United States Supreme Court and Federal Circuit holdings. Prosecution history estoppel, the best mode requirement, and claim construction are some of the areas addressed by significant 2002 decisions.

II. Novelty and Loss of Right to a Patent--§ 102

A. Anticipation

1. Claim Construction

i) Claims Are Read "in Light of" the Specification

In *In re Cruciferous Sprout Litigation*, the three patents-in-suit were directed generally to growing and eating sprouts to reduce the level of carcinogens in animals, *490 specifically methods of preparing food products that contained high levels of substances that induce Phase 2 enzymes, which are part of the human body's mechanism for detoxifying potential carcinogens.¹

One of the patents-in-suit called for "a method of preparing a food product rich in glucosinolates, comprising germinated cruciferous seeds, with the exception of cabbage, cress, mustard and radish seeds, and harvesting sprouts prior to the 2-leaf stage, to form a food product comprising a plurality of sprouts."² A second patent-in-suit, a continuation of the foregoing patent, claimed a "method of preparing a human food product" from sprouts.³ The third patent-in-suit, a divisional of the first patent-in-suit, claimed a "'method of increasing the chemoprotective amount of Phase 2 enzymes in a mammal,' as well as a 'method of reducing the levels of carcinogens in a mammal,' by creating a 'food product' from sprouts and then 'administering said food product' to a mammal."⁴

The district court granted the defendants summary judgment of invalidity finding the claims anticipated by, inter alia, the fact that broccoli (and other) sprouts have long been cultivated and eaten.⁵ On appeal, the Federal Circuit affirmed.⁶

In order to avoid anticipation, Brassica argued that the phrases "rich in glucosinolates" and "high Phase 2 enzyme-inducing potential" in the claims should be interpreted to require "at least 200,000 units per gram fresh weight of Phase 2 enzyme-inducing potential at 3-days following incubation under conditions in which cruciferous seeds germinate and grow," as taught in the specification.⁷ The Federal Circuit refused to do so, noting that it was generally improper to read limitations from the specification into the claims, and here, the specification did not say that either of those two phrases should be so limited.⁸ Further, dependent claims introduced those specific parameters. Accordingly, the court read "high" and "rich" as being relative terms not limited to any specific parameters.⁹

*491 ii) An Assertion of Infringement, Standing Alone, Does Not Admit Invalidity

In *Beckson Marine, Inc. v. NFM, Inc.*, the patent-in-suit was directed to a "portlight" (i.e., what some would refer to as a port

hole or window in the wall of a boat), having drains to prevent an accumulation of water if the “portlight” was opened.¹⁰ Beckson Marine charged that a portlight produced by NFM infringed.¹¹

The asserted claim required a “sloping drain groove,” which the district court construed narrowly in light of the specification and drawings to mean “a highly specific U-shaped drain channel of constant diameter/width, as shown in the figures accompanying the ‘350 patent.”¹² The district court also based its claim construction on dependent claims calling for specific shapes. As a result of that claim construction, the district court granted NFM’s motion for summary judgment of non-infringement.¹³

On the issue of invalidity, Beckson had initially asserted its ‘350 patent against an NFM oval portlight. Based on its claim construction, the district court concluded that the oval portlight did not infringe.¹⁴ The district court also, however, concluded that because that oval portlight did not infringe the ‘350 patent, it could not “serve as a basis for a judgment of invalidity.”¹⁵ The district court was clearly wrong. The accused portlight, according to the evidence, was undoubtedly prior art. Furthermore, the district court’s claim construction was, as the Federal Circuit held, far too narrow. Nevertheless, the Federal Circuit held that asserting infringement, in this instance, “does not serve as an admission that the ‘350 patent encompasses the prior art, thus rendering that patent invalid.”¹⁶ According to the Federal Circuit, “Beckson’s allegation of infringement before it realized that the oval portlight was prior art was based on its subjective belief at the time regarding the scope of its claims. These litigation theories—to the extent not expressed in claim language, the patent specification, or the prosecution history—do not affect claim scope or bear on patent validity.”¹⁷

Perhaps not, but what about admissions by a party opponent? And what about *Vanmoor v. Wal-Mart Stores, Inc.*, which is mentioned nowhere in the opinion, ***492** holding that patentee’s own assertion of infringement can provide the basis for a finding of anticipation when the accused device turns out to be prior art?¹⁸

In any event, the court concluded that “Beckson’s assertion of infringement, standing alone, does not admit the invalidity of the ‘350 patent.”¹⁹ On the other hand, according to the Federal Circuit, “if the record shows that Beckson asserted infringement against the NFM oval portlight based on a claim construction identical to the correct judicial claim construction, then Beckson’s assertion could serve as additional evidence of invalidity, or even anticipation.”²⁰

Circuit Judge Rader, the author of the present opinion, was on the panel in *Vanmoor*. *Vanmoor* held that when one charges another with infringement by having produced and sold a particular product, one must accept the consequences.²¹ If it is shown that the product alleged to infringe is, in fact, prior art, the asserted claims are invalid.²² For example, if it was sold in this country more than one year before the filing date of the application in suit, the on-sale bar will apply.²³

2. Anticipation Shown Through Inherency

A prior art reference that does not explicitly disclose or teach a particular claim element may nevertheless anticipate a claim containing such an element if the prior art reference “inherently” discloses that claim element.²⁴ To establish inherency, the extrinsic evidence “must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.”²⁵

i) Inherency May Not Be Assumed Based on Similarities Between the Prior Art and the Claimed Invention

In *Crown Operations International Ltd., v. Solutia, Inc.*, the Federal Circuit pointedly refused to accept Crown’s argument, in this declaratory judgment action seeking, inter alia, a judgment of invalidity, that a prior art reference inherently satisfied ***493** a particular claim limitation based solely on the similarity between the prior art and the claimed invention—in the absence of actual testing.²⁶

Solutia’s two patents-in-suit were directed “to layered films used to produce safety and solar control glass,” e.g., for automobile windshields.²⁷ One of the patents-in-suit was directed to a problem with such solar control films, i.e., the film tended to wrinkle during “encapsulation” between layers of polyvinyl butyral (“PVB”). The patent masked the wrinkles from detection by the human eye by limiting the visible light reflection contribution of the solar control film to 2 percent or less as compared to reflection from a complete assembly.²⁸ The asserted sole independent claim required, inter alia, that “said solar control film contributes no more than about 2% visible reflectance.”²⁹

Crown argued that the asserted claims were invalid as being anticipated by a patent to Gillery. Although the Gillery patent

did not expressly disclose the 2% limitation, Crown argued that the limitation was inherently present because the patent taught an assembly with PVB layers, a substrate layer, and a substrate metal-coating which the court said was “arguably of the same composition and thickness as the films disclosed in the [subject patent].”³⁰ Because “the structure, thickness, and materials were the same or within the same range(s)” as those disclosed, Crown urged that the Gillery patent must inherently disclose a 2% limitation.”³¹

Both the district court (in granting summary judgment of “not invalid”) and the Federal Circuit disagreed.³² Crown urged that inherency should be assumed “if a prior art reference discloses the same structure as claimed by a patent.”³³ The Federal Circuit expressly rejected this, emphasizing the rule from *Continental Can* that inherency cannot be established by probabilities or possibilities.³⁴ Criticizing the lack of any empirical evidence of the properties exhibited by the Gillery product, as noted above, the court noted that Crown “offer[ed] only an assumption and its own contentions.”³⁵

***494 ii) Whether Claims Are Inherently Anticipated by Prior Art May Depend on Claim Construction: Obviousness is Not Inherent Anticipation**

In *Trintec Industries, Inc. v. Top-U.S.A. Corp.*, the Federal Circuit illustrates how thinly it will slice some issues.³⁶ Trintec was the assignee of the patent-in-suit drawn to “a cost-effective method of producing, in low volume, multicolor faces for watches, clocks, thermometers and other instruments.”³⁷ The method involved creating a graphic instrument face in a computer, transmitting it to a color printer or photocopier, and printing, cutting, and assembling the face into an instrument.³⁸

Top-U.S.A. produced watches and clocks with customized faces. Top had used pad printing, engraving, silk screening etc. to produce such faces, but it turned to using color laser printing by 1995.³⁹ In response to the suit by Trintec, Top-U.S.A. urged that the asserted claims were invalid as inherently anticipated by a catalogue distributed by Sweda Company LLC in 1991-92. That catalogue advertised the availability of multicolor watches produced using “a new computer laser printer.”⁴⁰ The district court granted Top-U.S.A. summary judgment of invalidity.⁴¹ On appeal, the Federal Circuit reversed.⁴²

One of the asserted claims called for “transmitting electronic signals from the computer to the photocopier so that the photocopier transforms the electronic simulation . . . onto a piece of sheet material.”⁴³ The Sweda catalogue referred to reproducing a customer’s logo on its new “advanced computer laser printer.”⁴⁴

The specification of the patent-in-suit referred to using “a printer, preferably a color photocopier.”⁴⁵ The Federal Circuit concluded that despite that disclosure, printers were different than photocopiers.⁴⁶ Although that difference was minimal (and perhaps obvious), the court noted that “obviousness is not inherent anticipation.”⁴⁷ Because the Sweda catalogue disclosed a color printer and the claims *495 called for a color photocopier, the court concluded that the claims were not inherently anticipated.⁴⁸

Likewise, another asserted claim called for “creating the instrument face . . . in the computer.”⁴⁹ The Sweda catalogue did not specifically disclose “creating” a computer face in the computer, and it expressly required that customers provide color separations of their own artwork.⁵⁰ On that basis, the Sweda catalogue was held not to inherently anticipate that claim as well.⁵¹

iii) Recognition of Inherent Plant Properties is Not Patentable

In *In re Cruciferous Sprout Litigation*, discussed above, the court noted that the inventors had not invented “a new kind of sprout, or a new way of growing or harvesting sprouts.”⁵² Rather, the inventors recognized that some sprouts were rich in glucosinolates and high in Phase 2 enzyme-inducing activity while others were not.⁵³ However, those properties existed in the sprouts themselves and, thus, were inherent.⁵⁴

The court reasoned that “Brassica has done nothing more than recognize properties inherent in certain prior art sprouts.”⁵⁵ The court also rejected Brassica’s argument that the claims were not anticipated because the prior art did not recognize or disclose selecting particular seeds, reasoning that the “prior art teaches sprouting and harvesting the very same seeds that the patents recognize as producing sprouts rich in glucosinolates and having high Phase 2 enzyme-inducing potential.”⁵⁶

***496 iv) One of Ordinary Skill in the Art Must Recognize What Was Asserted to Be Inherent**

In *Elan Pharmaceuticals, Inc. v. Mayo Foundation for Medical Education & Research*, the majority emphasized that one of

ordinary skill in the art would not have recognized the asserted inherency,⁵⁷ while the dissent strongly urged that “[i]t matters not that those of ordinary skill heretofore may not have recognized these inherent characteristics.”⁵⁸ This is an issue that appears to be dividing the Federal Circuit, and, on December 18, 2002, the court granted a petition for rehearing en banc and vacated the opinion.⁵⁹

Elan’s two patents-in-suit were directed to transgenic animals having a genetic makeup that had been altered so that they were susceptible to Alzheimer’s disease.⁶⁰ For example, “the DNA of these animals has been modified to contain a mutated human gene called the ‘Swedish mutation,’ for the gene was isolated from the cells of a Swedish family having an unusually high incidence of early-onset Alzheimer’s disease.”⁶¹ The district court had granted summary judgment of invalidity based on anticipation by the Mullan patent.⁶² Dr. Mullan had obtained samples of the Swedish family’s DNA, “isolated the relevant mutant gene, and identified the nature and location of the mutation in the gene as well as mutated protein (APP_{sw}) expressed by the gene.”⁶³ The Mullan patent further stated that “transgenic animals containing the mutated gene could be used in Alzheimer’s disease research,” that the mutated human gene could be “used to create transgenic animals in various ways,” and that the mutated gene could be transferred to a mouse that would preferably express the variant human APP protein.⁶⁴ Mullan did not, however, actually produce a transgenic animal or “determine which of the known procedures would be effective for this purpose, or suggest conditions or detail of any method for successful production of the desired animal.”⁶⁵ Expert witnesses for both parties testified that this art was unpredictable and had a low success rate.⁶⁶

***497** The brains of Alzheimer patients apparently “contain abnormal tangles and deposits of plaque.”⁶⁷ A principal component of that plaque is a protein fragment known as beta-amyloid peptide (betaAP). It was known that betaAP may be formed when a protein (APP) produced in the brain is cleaved by enzymes in the brain. The Elan patents explained that such enzyme cuts the APP molecule, releasing a protein fragment ATF-betaAP.⁶⁸ During prosecution, the claims in the Elan patent to a “transgenic rodent” were distinguished over the Mullan patent by adding “wherein said polypeptide is processed to ATF-betaAP in a sufficient amount to be detectable in a brain homogenate of said transgenic rodent.”⁶⁹

The district court concluded that “although Mullan does not mention formation of ATFbetaAPP, its formation is inherent in Mullan’s general teaching of transgenic mice with the Swedish mutation.”⁷⁰ The district court found that because the “low success rate for gene transfer and expression was known, it was a matter of statistical probability that a few successful results would be obtained.”⁷¹ Elan argued that “the Mullan disclosure was simply an invitation to experiment, with no assurance of success.”⁷² Elan further argued that Mullan did not mention producing detectable ATF-betaAP and that doing so permitted determining whether the Swedish DNA had been successfully transferred.⁷³ Mayo argued that limitation was inherent because “a successful transgenic procedure and ensuing enzymatic cleavage will produce ATF-betaAP.”⁷⁴

In reversing the district court’s grant of summary judgment of invalidity, the panel majority emphasized that, for anticipation, a “single reference must describe and enable the claimed invention, including all claim limitations, with sufficient clarity and detail to establish that the subject matter already existed in the prior art and that its existence was recognized by persons of ordinary skill in the field of the invention.”⁷⁵ The panel majority noted that “there was no evidence that the formation and detection of ATF-betaAP in the transgenic mouse brain with the Swedish mutation was known to persons of ordinary skill in the invention.”⁷⁶

***498** In dissent, Circuit Judge Dyk strongly urged that, “[t]his decision, if followed, will have serious and unfortunate consequences in the future by permitting the securing of patent rights to existing inventions so long as the patent applicant identifies an inherent characteristic of that product that was not identified in the prior art.”⁷⁷ Judge Dyk further urged that (1) the disclosure of the Elan patents may be used as “extrinsic evidence” to show what was inherent in the prior art, namely, the Mullan patent,⁷⁸ and that (2) a transgenic rodent produced per Mullan’s teachings inherently possessed the claimed characteristics.⁷⁹ Judge Dyk urged that the majority’s conclusion “directly contradicts our law, which has repeatedly recognized that the discovery of an inherent characteristic of an old product cannot be patented.”⁸⁰

v) Where Manufacturing Process is Not Specified in a Patent, The Question is Not Whether a Manufacturing Process Necessarily Results in Claimed Invention but Whether One Skilled in the Art Would Read a Prior Art Patent as Disclosing the Claimed Invention

In *Rosco, Inc. v. Mirror Lite Co.*, Rosco and Mirror were competitors in the school bus mirror market.⁸¹ The suit concerned “cross-view” mirrors, i.e., convex mirrors mounted on the front of school buses that allowed a driver to see the front and passenger side of the bus.⁸² Rosco alleged infringement of a design patent, and Mirror, in turn, alleged infringement of a utility patent in which the mirror had a varying radius of curvature along the major axis of a convex, ellipsoid mirror lens.⁸³

Only the issues involving the utility patent will be addressed here. Rosco's defense was that, inter alia, the utility patent claims were anticipated under § 102(e), and the district court agreed.⁸⁴

The prior art to Mirror's utility patent was Rosco's design patent. During trial, there was testimony that "Rosco would have preferred to have a mirror that had a constant radius of curvature, . . . [but] the vacuum thermoforming process used to manufacture such mirrors of necessity yields a mirror with a varying radius of curvature."⁸⁵ The district court then concluded that anyone practicing the Rosco *499 design patent, by attempting to manufacture it, would have "come up with" a mirror having a varying radius of curvature as claimed.⁸⁶

On appeal, the Federal Circuit reversed, noting that the:

Vacuum thermoforming process . . . is not specified in the [Rosco design] patent. Thus, the question is not whether the manufacture of the mirror using this process inherently results in a varying radius of curvature along the major axis [as claimed], but whether one skilled in the art would read the [Rosco design] patent as inherently disclosing the invention of the [Mirror utility] patent, that is, whether one skilled in the art would read the [Rosco design] patent as showing a mirror of varying radius of curvature along the major axis.⁸⁷ The court found no evidence that the mirror of Rosco's design patent could only be manufactured using the vacuum thermoforming process.⁸⁸

3. Oral Evidence re Lack of Novelty

i) Evaluating Witness Credibility: Eight Factors

In the past few years, an undeniable conflict developed regarding the need for corroboration in assessing the credibility of a witness. In *Woodland Trust v. Flowertree Nursery, Inc.*, the Federal Circuit held that uncorroborated oral testimony of prior knowledge and use by others (at least where such testimony involved long-past events) could not provide clear and convincing evidence of invalidity.⁸⁹ However, the Federal Circuit shortly thereafter held in *Thomson S.A. v. Quixote Corp.* that uncorroborated oral testimony by non-interested individuals may be sufficient to satisfy the clear and convincing standard of proof for invalidity based on anticipation under § 102(g).⁹⁰ Mere weeks later, a different Federal Circuit panel held in *Finnigan Corp. v. International Trade Commission*, that "Thomson did not present the question of the necessity of corroboration vel non, but rather the sufficiency of the corroborating evidence."⁹¹ According to the Federal Circuit in *Finnigan*, the Thomson and Woodland Trust cases "correctly recognized that the level of interest of the testifying witness is an important consideration when such testimony is offered to corroborate another witness's testimony" but that those cases "do not stand for the proposition that only an interested witness's testimony requires corroboration."⁹² The Federal Circuit held that "[i]n any event, corroboration is required of *500 any witness whose testimony alone is asserted to invalidate a patent, regardless of his or her level of interest."⁹³

Juicy Whip, Inc. v. Orange Bang, Inc. potentially resolves this conflict by returning to the eight factors discussed in *Woodland Trust* for evaluating the credibility of oral statements.⁹⁴

The invention of the patent-in-suit was a "post-mix" beverage dispenser (syrup concentrate and water are stored separately and are mixed as the beverage is dispensed) that had a transparent bowl simulating the appearance of a "pre-mix" dispenser (syrup concentrate and water are premixed and stored in a display bowl).⁹⁵ The invention sought to capture the impulse buying benefits of a "pre-mix" dispenser while avoiding its drawback of bacterial contamination. The claims required, inter alia, "positioning a transparent display bowl relative to the dispenser outlet to create the visual impression that said bowl is the reservoir and principal source from which a serving of the beverage is dispensed."⁹⁶

Orange Bang presented the testimony of six witnesses to the effect that dispensers had been constructed and were "in public use" prior to the critical date.⁹⁷ The jury found that the asserted claims were invalid under § 102(b).⁹⁸ On appeal, the Federal Circuit panel majority reversed, concluding that the evidence did not clearly show that such prior art dispensers satisfied the foregoing claim limitation (discussed above) and that the oral testimony introduced vis-à-vis those dispensers was unreliable, uncorroborated oral testimony.⁹⁹

The Federal Circuit observed that the factors the court used in assessing the need for corroboration include:¹⁰⁰

- the delay between event and trial,

- interest of witness,
- contradiction or impeachment,
- corroboration,
- witnesses' familiarity with details of alleged prior structure,
- improbability of prior use considering state of the art,
- impact of the invention on the industry, and

***501** • relationship between witness and alleged prior user.¹⁰¹ Those are also the factors the court discussed in *Woodlawn Trust*, although in slightly modified form.

Applying those factors, the Federal Circuit panel majority noted that (1) "[t]he testimony concerning the 1983 and 1988 dispensers came more than eight and twelve years, respectively, after the witnesses saw the dispensers;" (2) the operator of the Staten Island Zoo and the Boathouse Restaurant, the only individual who used the dispensers "to serve drinks in public, kept the 1983 dispenser for only one month and the 1988 dispenser for only three months;"¹⁰² and (3) none of the witnesses were disinterested.¹⁰³ Fox and Burwick were co-defendants.¹⁰⁴ The operator of the Staten Island Zoo concession and the Boathouse Restaurant was one of Burwick's long-time customers, and Burwick was a shareholder in a group of restaurants that he operated. The remainder of the witnesses included an operations manager for Orange Bang and an individual that had known Fox for a long-time and had a business relationship with Fox's brother-in-law.¹⁰⁵

There was, of course, the purchase order for the transparent bowls that Orange Bang purchased in 1988. According to the panel majority, however, even if that provided corroboration for the 1988 dispenser, there was no evidence that such a dispenser met the claim limitation: "positioning a transparent display bowl relative to the dispenser outlet to create the visual impression that said bowl is the reservoir and principal source from which a serving of the beverage is dispensed."¹⁰⁶

In dissent, Chief Judge Mayer noted that Orange Bang had brought a common Starline pre-mix dispenser into the courtroom.¹⁰⁷ Fox then explained to the jury how he had converted that pre-mix dispenser into a post-mix dispenser. The Starline dispenser, according to Chief Judge Mayer, closely resembled the dispenser of Figure 1, from the countertop up.¹⁰⁸ Chief Judge Mayer noted that the jury, as the finder of fact, could have easily determined for itself that the display bowl was positioned ***502** relative to the dispenser outlet to create the visual impression that the bowl was the reservoir and principal source of the beverage being dispensed.¹⁰⁹

As for the other witnesses, Chief Judge Mayer accepted that those witnesses had varying degrees of interest in the outcome of the case but noted that level of interest was only one of the eight factors.¹¹⁰ According to Chief Judge Mayer, the drink dispenser at issue was easily understood, and the jury was aware of all of the factors that might affect the witnesses' credibility.¹¹¹ As a result, Chief Judge Mayer would have accepted the jury verdict given the appellate standard of review.¹¹²

ii) Testimony Concerning Anticipation Must (1) Be from One Skilled in the Art, (2) Identify Each Claim Element, (3) State the Witnesses' Interpretation of the Claim Element, And (4) Explain in Detail How Each Claim Element is Disclosed in the Prior Art Reference

The Federal Circuit held in *Schumer v. Laboratory Computer Systems, Inc.*¹¹³ that Schumer's claims were drawn to a method that added certain capabilities to digitizing tablets, using software drivers.¹¹⁴ Two of the claims were asserted to be invalid as anticipated by a driver that Laboratory Computer Systems (LCS) had developed and licensed to Seiko Corporation more than one year before the effective filing date of the application maturing into the patent-in-suit.¹¹⁵

The parties had submitted competing affidavits on the issue to the district court in connection with motions for summary judgment. LCS had submitted a declaration by the programmer of the Seiko driver, who currently was LCS's president. Schumer submitted a declaration contradicting LCS's declaration, and LCS then filed a supplemental declaration.¹¹⁶ The district court, relying principally on the supplemental declaration, granted summary judgment of invalidity.¹¹⁷ On appeal, the Federal Circuit reversed.¹¹⁸

***503** Noting that patents are presumed valid and that “[e]vidence of invalidity must be clear as well as convincing,”¹¹⁹ the Federal Circuit observed that:

[i]t is not our task, nor is it the task of the district court, to attempt to interpret confusing or general testimony to determine whether a case of invalidity has been made out, particularly at the summary judgment stage. Indeed, to accept confusing or generalized testimony as evidence of invalidity is improper.¹²⁰ The court reasoned that “[t]he risk is great that the confusion or generality is the result, not of an inarticulate witness or complex subject matter, but of a witness who is unable to provide the essential testimony.”¹²¹ Instead, the court noted that “[t]ypically, testimony concerning anticipation must be testimony from one skilled in the art and must identify each claim element, state the witnesses’ interpretation of the claim element, and explain in detail how each claim element is disclosed in the prior art reference,” and that “testimony is insufficient if it is merely conclusory.”¹²² The Federal Circuit concluded that LCS’s proffered declarations did not meet that standard.¹²³ According to the court, the declarations simply set out the declarant’s understanding of the Seiko driver and what he considered to be known to one of ordinary skill in the art.¹²⁴ The declarant did not, the court said, describe the operative steps of the claimed method or how those steps were performed by the Seiko driver.¹²⁵

The situation was similar in *Texas Digital Systems, Inc. v. Telegenix, Inc.*¹²⁶ Texas Digital Systems (TDS) was the owner of the four patents-in-suit, all directed to methods and devices for controlling pixel color in light emitting diodes (LEDs).¹²⁷ Emphasizing that claim terms should receive their ordinary meaning unless the patentee chose to be her own lexicographer or otherwise disclaimed a particular meaning or scope, the Federal Circuit concluded that the district court had misconstrued a number of disputed terms and phrases.¹²⁸ Accordingly, the court reversed the finding of literal infringement.¹²⁹ Additionally, the district court had found the patents “not invalid,” and Telegenix urged on appeal that the district ***504** court had improperly excluded the testimony of an engineer, Brown, who had allegedly developed a variable color LED display in the early 1980s.¹³⁰ Telegenix argued that Brown’s testimony coupled with a 1982 patent application that he had filed would have shown that the claimed invention was in public use more than one year before the filing date of the original application maturing into the patents-in-suit in 1986.¹³¹

The district court had refused to permit Brown to testify because (1) his testimony was unreliable, i.e., he could not remember many details (the district court commented, “He just couldn’t remember.”), and (2) the sole offered corroboration, the 1982 patent application, was insufficient.¹³²

The Federal Circuit reiterated the need for corroboration, noting the eight factors discussed in *Woodland Trust*, above.¹³³ Although it was unclear why the district court had found that the 1982 patent application was insufficient corroboration, the Federal Circuit found no abuse of discretion.¹³⁴ The Federal Circuit also concluded that the district court did not abuse its discretion when it excluded his testimony under Fed. R. Evid. 403 on the ground that his testimony would be confusing to the jury.¹³⁵ Specifically, the court noted that although Brown gave “clear and definite testimony concerning certain facts related to public use,” he could not establish a particular date of public use.¹³⁶

4. In an Infringement Context, References Are Presumed to Be Enabling for All That They Disclose, Including Claimed and Unclaimed Subject Matter: The Burden Falls on the Patentee to Prove That a Reference is Non-Enabling

During *ex parte* prosecution, the C.C.P.A. held in *In re Sasse*, as well as in other cases, that the burden falls on the applicant to show that an assertedly anticipatory reference (or, more particularly, a teaching in a reference) is not enabled.¹³⁷ Who bears the burden of proving or disproving enablement in an infringement action involving an issued patent? The party challenging validity? Or the patentee? Does it matter whether the teaching being relied upon for challenging validity is or ***505** is not part of the claimed subject matter, i.e., does it matter whether the presumption of validity under § 282 applies?

In what is almost assuredly dicta in *Amgen, Inc. v. Hoechst Marion Roussel, Inc.*, the court held, relying solely on *Sasse*, that “an accused infringer should be similarly entitled [as is the PTO during *ex parte* prosecution] to have the district court presume the enablement of unclaimed (and claimed) material in a prior art patent defendant asserts against a plaintiff.”¹³⁸ The Federal Circuit concluded that the district court had erred in placing the burden of showing enablement on the defendant, but it also concluded that the error was harmless.¹³⁹

The district court had found that “none of the cited references,” including the reference asserted to lack an enabling disclosure, disclosed each of the limitations of Amgen’s asserted claims.¹⁴⁰ The Federal Circuit accordingly affirmed the finding of no anticipation, thus strongly suggesting that the court’s foregoing comment should be dismissed as dictum.¹⁴¹

However, the court also reversed an earlier finding that the same reference did not anticipate claim 1 of one of the patents-in-suit because of a disagreement over the meaning a term that apparently had not been disputed at an earlier Markman hearing.¹⁴² The court also reversed the district court's finding that the claims had not been proved invalid under § 103 based on the district court's view that the reference was not enabling. But, of course, as the Federal Circuit noted, a reference need not be enabling under § 103. The court's holding regarding the burden of proof vis-à-vis enablement was, thus, not necessary for the court's decision.¹⁴³

Amgen was (and presumably still is) the owner of a number of patents drawn to the "production of erythropoietin (EPO), a naturally occurring hormone that controls the formation of red blood cells in bone marrow."¹⁴⁴ Amgen filed a declaratory judgment action asserting that the defendants (jointly referenced as TKT in the opinion) had infringed five of its patents.¹⁴⁵ The district court conducted a three-day Markman hearing and had then tried the case for 23 days over the course of four months. At the end, the district court issued an exhaustive 244 page opinion. One of the district court's conclusions was that the asserted claims were not anticipated *506 by a patent to Sugimoto that disclosed a process for producing human EPO.¹⁴⁶

The district court concluded that Sugimoto was not proper prior art under § 102(a) (at least for the disclosure that TKT was relying on) because there was no proof that disclosure was enabled.¹⁴⁷ TKT argued on appeal that the district court had erred in placing the burden of proving enablement on it.¹⁴⁸ Amgen responded that there should be no presumption of enablement under § 282 because the disclosure that TKT was relying on was not encompassed by the claims.¹⁴⁹

The Federal Circuit concluded that Amgen's argument was irrelevant "because, as reasoned below, we do not only rely on § 282 as the source for a presumption. Instead, relying on our precedent, we hold a presumption arises that both the claimed and unclaimed disclosures in a prior art patent are enabled."¹⁵⁰ The court reasoned that, under *Sasse*, the burden falls on the applicant during ex parte prosecution to rebut a presumption of enablement. Although the CCPA in *Sasse* did not specifically draw a distinction between claimed and unclaimed subject matter, the Federal Circuit viewed that presumption as applying to both.¹⁵¹

The court then held, as noted above: "We hold that an accused infringer should be similarly entitled to have the district court presume the enablement of unclaimed (and claimed) material in a prior art patent defendant asserts against a plaintiff."¹⁵² The court reached that holding on the policy consideration that "we think it unwise as a matter of policy to force district courts to conduct a mini-trial on the proper claim construction of a prior art patent every time an allegedly anticipating patent is challenged for lack of enablement."¹⁵³

The Federal Circuit further noted that "[i]f a patentee presents evidence of nonenablement that a trial court finds persuasive, the trial court must then exclude that particular prior art patent in any anticipation inquiry, for then the presumption has been overcome."¹⁵⁴ Accordingly, the issue, according to the court, was whether Amgen had presented sufficient proof of nonenablement.¹⁵⁵ The court *507 concluded, as also noted above, that the district court had improperly (in its view) placed the burden on TKT, but it held that such error was harmless.¹⁵⁶

B. Loss of Rights--§ 102(b)

1. A Confidentiality Notice on One Page of a Document Does Not Necessarily Mean That the Entire Document Was Inaccessible

That was one of the conclusions reached in *Cooper Cameron Corp. v. Kvaerner Oilfield Products, Inc.*, although the court did so in the context of finding that the district court had improperly resolved what the Federal Circuit regarded as genuine issues of material fact against the non-movant for summary judgment.¹⁵⁷ Accordingly, it remains to be seen whether certain disputed documents actually qualify as "printed publications."

Cooper Cameron was the owner of two patents directed to subsea wellheads having a horizontal "spool tree," instead of a conventional "Christmas tree," configuration. The second patent was a continuation of the application maturing into the first patent-in-suit.¹⁵⁸

The "spool tree" differed from conventional "Christmas trees" in that it had a comparatively large vertical through bore without internal valves and was large enough to accommodate the tubing used for completion. Thus, in workover situations, the tubing string could be pulled through a BOP stack, without disturbing the spool tree and, thus, the pressure integrity of the

well.¹⁵⁹

Cooper charged that Kvaerner's "Side Valve Tree" infringed. In addition to non-infringement, Kvaerner asserted that the claims of the two patents-in-suit were invalid under § 102(b) as being anticipated by certain written reports by Subsea Intervention Systems, Ltd. (SISL).¹⁶⁰ The district court had granted summary judgment that those reports were not "printed publications" for purposes of § 102(b) because they were not generally available.¹⁶¹ On appeal, the Federal Circuit reversed, holding that Kvaerner had raised a genuine issue of material fact whether *508 the reports were sufficiently available to the interested public before the critical date to constitute "printed publications."¹⁶²

SISL was an industry joint venture. The subject reports were released to its three members and six participants between late 1990 and the end of June 1992. The critical date was, according to the Federal Circuit, June 1, 1991. During the summary judgment phase, Kvaerner had submitted affidavits stating that those reports were not considered confidential and had been distributed to interested parties, including outside contractors.¹⁶³

The Federal Circuit concluded that the district court had improperly resolved disputed questions of fact in Cooper's favor and further disagreed "with the [district] court's conclusion that the 'confidential' label on that report [an interim report] removed it as an available prior art reference."¹⁶⁴ According to the Federal Circuit, "the report contained only a single confidentiality notice relating to financial information on the fourth page of its 130 pages. That notice did not render the entire document inaccessible in light of evidence that the reports were available to participants who were allowed to share confidential data with others."¹⁶⁵

2. "On Sale"

i) Licensing a Process for Further Development and Later Commercialization is Not a "Sale" for Purposes of § 102(b)

The court held so in *In re Kollar*.¹⁶⁶ Kollar's application was drawn to a process for preparing a chemical compound, dialkyl peroxide, by reacting certain components in the presence of a specific catalyst. The resulting compound could be used to produce ethylene glycol, which, in turn, was used in producing a variety of products ranging from polyester fibers to mining explosives.¹⁶⁷

Prior to the critical date, Kollar's company, Redox Technologies, Inc., and Celanese Corp. entered into an agreement under which the parties agreed to share certain technology and to coordinate research aimed at designing and building a commercial plant capable of implementing Kollar's claimed process for manufacturing ethylene glycol. The agreement had two phases: (1) an R&D Phase under which Celanese made annual royalty payments to Redox, but could terminate the agreement on sixty days notice while retaining a non-exclusive license; and (2) a Commercial Phase during which Celanese would receive an exclusive license to *509 practice the process in pilot and commercial plants and sell resulting products. At the time of that agreement, Kollar admitted that the invention had been reduced to practice.¹⁶⁸

The board concluded that the agreement with Celanese had placed the invention "on sale" prior to the critical date reasoning that Celanese had received a right to commercialize the invention in exchange for royalty payments and that a technical description of the process (apparently in documents made available to Celanese) enabled practice of the invention.¹⁶⁹ On appeal, the Federal Circuit reversed.¹⁷⁰

The board, in reaching its decision, looked to *Mas-Hamilton Group v. LaGard, Inc.*, which held that an offer of "part of" the legal rights in an invention may avoid triggering the "on-sale" bar if no agreement has been reached about the particulars of the invention prior to the critical date.¹⁷¹ That, the Federal Circuit said, was error. According to the court, "[t]he proper reading of *Mas-Hamilton* . . . is that the offer of a license under a patent and a description of the invention, without more, does not fall within the on-sale bar of § 102(b)."¹⁷²

The court also distinguished between a "sale" of a product or apparatus and a process. According to the court:

[k]now-how describing what the process consists of and how the process should be carried out may be sold in the sense that the buyer acquires knowledge of the process and obtains the freedom to carry it out pursuant to the terms of the transaction. However, such a transaction is not a 'sale' of the invention within the meaning of § 102(b) because the process has not been carried out or performed as a result of the transaction. The same applies to a license to a patent covering a process.¹⁷³

The court concluded that “licensing the invention, under which development of the claimed process would have to occur before the process is successfully commercialized, is not such a sale [for purposes of § 102(b)].”¹⁷⁴

ii) Evidence of Experimental Purpose May Negate That Sale Was Commercial - At Least on Summary Judgment

Although that was the result reached in *EZ Dock, Inc. v. Schafer Systems, Inc.*,¹⁷⁵ the “additional views” of Circuit Judge Linn noted that this was a close *510 case and was resolved as it was, at least in Judge Linn’s mind, because it was an appeal from the district court’s grant of summary judgment of invalidity due to an on-sale bar.¹⁷⁶

The filing date of the patent-in-suit was July 17, 1992, and, thus, the critical date was July 17, 1991. The subject matter of the patent-in-suit was a polyethylene floating dock. In October 1989, two Minnesota neighbors on the Mississippi River, Neitzke and Vierus, one of whom ran a nightclub and the other of whom ran an office supply store and marina, collaborated on a plastic dock design that used uniform molded dock sections coupled with rubber male-type anchors in the shape of a dog bone that fitted into female-type receiving sockets. In early 1991, the inventors entered into an agreement with Winnebago Industries to build some dock sections, and, in May 1991, Winnebago supplied the inventors with sixty-four dock sections that they experimented with. Neitzke then installed several of those dock sections in his marina in late May or early June 1991.¹⁷⁷

At about the same time, a customer, Greden, brought a copier to Neitzke’s store for repair and saw Neitzke storing several dock sections near the store’s front windows. Neitzke agreed to sell Greden two dock sections on June 13, 1991, which Greden then installed at his father’s residence as a Father’s Day present. Neitzke and Vierus visited the dock four to six times during the summer of 1991 and made various repairs at no charge. The dock sections sold to Greden had rectangular shaped pylons which were later changed to frusto-conical shapes. The frusto-conical shape was claimed in some, but not all, of the claims in the resulting patent-in-suit.¹⁷⁸

Greden ultimately sold the dock at his father’s residence to Schafer Systems for \$1000. Schafer unsuccessfully attempted to negotiate a license from EZ Dock, the company Vierus and Neitzke formed to exploit their patent. Schafer then produced its own floating dock system, known as “Connect-a-Dock,” and EZ Dock brought suit. Schafer defended, inter alia, asserting that the claims of the patent-in-suit were invalid due to the on-sale bar, i.e., the sale to Greden.

In reversing the district court’s grant of summary judgment of invalidity, the Federal Circuit noted that “[t]his court has repeatedly stressed that evidence of experimental use does not give rise to a free-standing doctrinal exception to statutory bars, but instead operates to negate application of section 102(b),”¹⁷⁹ citing *TP *511 Laboratories, Inc. v. Professional Positioners*¹⁸⁰ and *Monon Corp. v. Stoughton Trailers, Inc.*¹⁸¹ According to the panel opinion, the Supreme Court in *Pfaff* indicated that it would consider “experimental use negation” when considering whether an invention was “ready for patenting.”¹⁸² According to the panel opinion, the fact that (1) EZ Dock was not selling docks when Greden purchased his dock, (2) Greden did not pay full retail price for his dock, (3) Neitzke and Vierus visited the dock and performed free repairs, and (4) the pylons were later changed to a frusto-conical shape, all created genuine issues of material fact, that the “sale to Mr. Greden was experimental.”¹⁸³

The panel opinion, thus, blurs the distinction between the “in public use” and “on-sale” bars. The basis of the district court’s grant of summary judgment was the “on-sale” bar, not the “in public use” bar.

Judge Linn’s “additional views” draw a clearer distinction between the bars and also indicate that Judge Linn would view the issue of experimentation as impacting on the first prong of the *Pfaff* test, namely whether the sale was commercial or not, rather than the second “ready for patenting” prong.¹⁸⁴ Judge Linn also emphasized that, in his view, the case was close.

Judge Linn agreed that experimental use was a “negation” of the “in public use” bar.¹⁸⁵ Judge Linn also reasoned, however, that “[b]efore *Pfaff*, reduction to practice was a central focus of both the on-sale bar and experimental use negation thereof,”¹⁸⁶ which is not entirely accurate. The rule has been since 1987 and *UMC Electronics Co. v. United States* that an actual reduction to practice was not a prerequisite for the § 102(b) “on sale” bar to apply.¹⁸⁷ The Court in *Pfaff* did not disturb that holding, but it rejected the “totality of the circumstances” test that the Federal Circuit had used in cases such as *Micro Chemical, Inc. v. Great Plains Chemical Co.*¹⁸⁸ to determine whether, at the time of the alleged sale, the invention *512 was “ready for patenting.”¹⁸⁹ It is true, though, that “reduction to practice” continued as a focus in “in public use” cases.

In any event, Judge Linn reasoned that “[t]he coincidence of reduction to practice as a focal point for both aspects [i.e., his view of the “on-sale” bar and “experimental use” negation thereof] brought a symmetry, and often a simplicity, to the analysis.”¹⁹⁰ Although that is simply not an accurate assessment of the analysis, Judge Linn continued to reason that (1) “[w]hat Pfaff made clear is that the triggering event for an on-sale bar is not reduction to practice, but the advancement of the invention to the stage where it is ‘ready for patent,’” and (2) “Because nothing in Pfaff altered the transitional significance of reduction to practice for experimental use negation, the heretofore complementary nature of the two tests and the symmetry that such congruence brought to the analytical framework disappeared.”¹⁹¹ According to Judge Linn, “[t]raversing this new landscape now demands in each case a careful examination of the purpose of the use contemplated in a potentially barring sale, not merely that the invention then may be in an experimental stage, and signals a shift in focus from the second prong to the first in evaluating experimental use negation.”¹⁹²

Apparently, Judge Linn is positing that an invention may be “ready for patenting” before an actual reduction to practice, but instances of alleged “on-sale” activity prior to an actual reduction to practice may not (query - likely not?) be sufficiently commercial in nature to satisfy the first prong of Pfaff. That interpretation would be consistent with Judge Linn’s earlier comment that “an invention seldom would trigger an on-sale bar prior to the time it was reduced to practice.”¹⁹³ Indeed, Judge Linn emphasized that:

[w]hat is important to an assessment of the commercial versus experimental significance of a sale is not necessarily the posture of the invention’s overall development, but the nature or purpose of the particular use to which the invention that is the subject of that sale is to be put, [and concluded that]the question posed by the experimental use doctrine, assessed under the first prong of the two-part on-sale bar test of Pfaff, is not whether the invention was under development, subject to testing, or otherwise still in its experimental stage at the time of the asserted sale. Instead, the question is whether the transaction constituting the sale was ‘not incidental to the primary purpose of experimentation,’ i.e., whether the primary purpose of the inventor at the time of the sale, as ***513** determined from an objective evaluation of the facts surrounding the transaction, was to conduct experimentation.¹⁹⁴

Further, according to Judge Linn, the court should have examined the factors that they had previously identified in *Baker Oil Tools, Inc. v. Geo Vann, Inc.*¹⁹⁵ These factors include: (1) the necessity for public testing, (2) the amount of control over the experiment retained by the inventor, (3) the nature of the invention, (4) the length of the test period, (5) whether payment was made, (6) whether there was a secrecy obligation, (7) whether records of the experiment were kept, (8) who conducted the experiment, and (9) the degree of commercial exploitation during testing.¹⁹⁶ Judge Linn also thought the court should have looked at the additional factors identified in *Seal-Flex, Inc. v. Athletic Track & Court Construction*¹⁹⁷ when determining whether a use was “commercial or experimental.”¹⁹⁸ These factors included whether the invention reasonably required evaluation under actual conditions of use, whether testing was systematically performed, whether the inventor continually monitored the invention during testing, and the nature of contacts made with potential customers.¹⁹⁹

Judge Linn concluded that in this case there was no genuine issue of material fact that the dock prototypes covered by at least the broad claim of the patent-in-suit satisfied the second Pfaff prong, i.e., the prototypes were far more than the drawings involved in Pfaff.²⁰⁰ However, Judge Linn found doubt as to the first Pfaff prong, i.e., whether the sale to Greden was sufficiently commercial in nature, and that summary judgment was not warranted.²⁰¹ Judge Linn did, however, note that (1) the sale to Greden was a commercial sale of an existing structure without any assurances that the dock would be maintained for further experiments, (2) there were no limitations placed on the use of the dock, (3) there were no restrictions on keeping the dock at Greden’s father’s residence, (4) there were no restrictions on re-sale, (5) there were no particular tests contemplated, and (6) the inventors did not maintain any control over the dock.²⁰²

***514** iii) Judge Linn’s Concurring Views in *EZ Dock* Becomes Precedential

In *Allen Engineering Corp. v. Bartell Industries, Inc.*, Judge Linn turned his concurring views in *EZ Dock* into law.²⁰³ The subject matter was concrete riding trowels used to smooth the surface of freshly poured concrete. Apparently one of the problems with such trowels was relatively poor steering. Allen Engineering produced a first model called the “Red Rider” in the late 1980s featuring dual control sticks and an operator seat facing forward, as distinct from “straddle-type” seats similar to motorcycle seats. Sales of the Red Rider began in 1988, and over one hundred units were sold. Allen Engineering continued its research resulting in the development of another model, known as the “Flying Frame,” which was introduced in 1990. Allen Engineering’s patent-in-suit was filed on July 13, 1990 and issued in 1992.²⁰⁴

Bartell introduced a straddle-type trowel in 1988 and a front-facing model in 1992. The front-facing model was allegedly

copied from a prototype of Allen Engineering's Flying Frame trowel.²⁰⁵

The opinion reads like a tutorial on patent law, especially a lecture-like section at the end advising counsel of their duties as officers of the court,²⁰⁶ which indicates that the district court may have been misled on what its responsibilities were in a patent infringement proceeding.

In remanding the "on-sale" issue, the Federal Circuit instructed the district court that Bartell must prove facts underlying both prongs of Pfaff by clear and convincing evidence.²⁰⁷ In doing so, Judge Linn characterized the first prong as being whether the Red Rider was "the subject of a commercial offer for sale not primarily for purposes of experimentation."²⁰⁸ Judge Linn, thus, has added the foregoing emphasized language to the Supreme Court's characterization of the first prong, as he suggested in *EZ Dock*. That characterization continued in Judge Linn's instruction that the district court must determine "whether a commercial offer for sale has occurred, applying traditional contract law principles," and also "whether the circumstances surrounding the transaction show that the transaction *515 was not primarily for purposes of experimentation."²⁰⁹ Judge Linn then noted the thirteen factors he had listed in his concurring opinion in *EZ Dock*.²¹⁰

iv) Sending Samples Does Not Place an Invention "On Sale"

That was the holding in *Minnesota Mining & Manufacturing Co. v. Chemque, Inc.*²¹¹ 3M's patent-in-suit was drawn to compositions of encapsulants for "signal transmission devices," i.e., electrical or optical cables.²¹² The jury returned inconsistent verdicts, i.e., that dependent claim 9 was infringed but invalid as anticipated while parent claim 1 was neither infringed nor anticipated.²¹³ Nevertheless, Chemque argued before the district court that the verdicts were not inconsistent.²¹⁴ The panel majority, making passing reference to Schrödinger's cat,²¹⁵ concluded that Chemque's argument that the verdicts were not inconsistent judicially estopped it from arguing non-infringement.²¹⁶

One of the asserted grounds for invalidity appears to have been that a cable resealant, Ricoseal, was "on sale" in the U.S. before the critical date by Ricon Resins, a third party.²¹⁷ According to the Federal Circuit, however, [t]he evidence in the record . . . only indicates that Ricon had sent samples of Ricoseal to various companies. Providing potential customers with samples of a product, without providing any other terms, is not a commercial offer for sale, because the recipient could not act in such a way that would create a contract.²¹⁸

v) A Court May Not Invalidate the Claims of a Patent Without Construing the Disputed Limitations of the Claims and Applying Them to the Allegedly Invalidating Acts Even If the Court Adopts the Patentee's Proposed Interpretation

The court so held in *Dana Corp. v. American Axle & Mfg., Inc.*²¹⁹ Dana's patents-in-suit were certain vehicle driveshafts with a diameter reducing portion *516 "having a substantially uniform wall thickness . . . Dana, as well as American Axle & Mfg., Inc.'s (AAM's) predecessor, developed driveshafts prior to the critical date," of the patents-in-suit, but the parties disputed "whether those driveshafts were 'butted,' i.e., whether they had a thickened end tube."²²⁰ AAM alleged that the asserted claims were invalid under § 102(b) based on certain drive shafts having been sold or offered for sale before the critical date.²²¹

The district court granted wholesale summary judgment of invalidity, including vis-à-vis various dependent claims that it had not separately analyzed.²²² On appeal, the Federal Circuit vacated and remanded, noting that even though the district court may have implicitly adopted a patentee's proposed claim construction, a court may not invalidate the claims of a patent without construing the disputed limitations of the claims and applying them to the allegedly invalidating acts . . . Otherwise, as in this case, the decision invalidating the patent becomes effectively unreviewable. Such evaluation must recognize the statutory presumption of validity and the need for facts supporting a conclusion of invalidity by clear and convincing evidence.²²³

The court also noted that the district court had "erred in invalidating all of the dependent claims without considering whether the subject matter of the alleged bars met the additional limitations of those claims,"²²⁴ reminding the district court that under § 282, "[e]ach claim of a patent * * * shall be presumed valid independently of the validity of other claims"²²⁵

3. "In Public Use"

The Supreme Court has held that "a single use for profit, not purposely hidden" constitutes a public use.²²⁶ If such a use

occurs more than one-year prior to the applicant's filing date, then a valid patent is barred.

i) Evidence of Prior "In Public Use" Must Anticipate Each Claim Limitation

A subtopic might be: one may not rely on even common sense to supply missing teachings. In *Juicy Whip, Inc. v. Orange Bang, Inc.*, the claims required, inter alia, "positioning a transparent display bowl relative to the dispenser outlet to create the visual impression that said bowl is the reservoir and principal source *517 from which a serving of the beverage is dispensed. . . ." ²²⁷ Orange Bang presented the testimony of six witnesses, all to the effect that dispensers had been constructed and were "in public use" prior to the critical date each of which consisted of transparent bowls atop a "post-mix" dispenser. ²²⁸ In a special verdict, a jury found that the asserted claims were invalid under § 102(b). ²²⁹ On appeal, the Federal Circuit panel majority reversed concluding that the evidence did not clearly show that such prior art dispensers satisfied the foregoing claim limitation. ²³⁰ In short, the Federal Circuit panel majority concluded that there was no substantial evidence that a dispenser with a transparent bowl on top containing a beverage would "create the visual impression that said bowl" was the "reservoir and principal source from which a serving of the beverage is dispensed," as claimed. ²³¹ One might ask: if that was not the visual impression, what was?

The court wrote in *Juicy Whip* that "[s]ubstantial evidence is such relevant evidence from the record taken as a whole as might be accepted by a reasonable mind as adequate to support the finding under review." ²³² Under that standard of review, according to the court, no "reasonable mind" ²³³ could accept that a "post-mix" dispenser having a transparent bowl containing liquid appearing to be a beverage could satisfy the claim limitation "positioning a transparent display bowl relative to the dispenser outlet to create the visual impression that said bowl is the reservoir and principal source from which a serving of the beverage is dispensed" ²³⁴

ii) The Onus is on the Inventor to Protect the Confidentiality of an Invention: Failure to Do So Can Result in an "In Public Use" Bar

In *Netscape Communications Corp. v. Konrad*, Konrad was the owner of three patents-in-suit, all directed to systems that allowed a computer user to access *518 and search a database on a remote computer. ²³⁵ The critical date was January 8, 1992. ²³⁶

Konrad was a staff scientist for the Lawrence Berkeley Laboratory. On September 26, 1990, he successfully tested a remote database object system. In 1991, Konrad, working with another employee, adapted an initial prototype for a high energy physics database maintained at Stanford's Linear Accelerator Center. ²³⁷ Thereafter, Konrad filed the first of several applications on January 8, 1993. In 2000, Konrad filed suit against thirty-nine customers of Netscape in the Eastern District of Texas. ²³⁸ Netscape, in turn filed a declaratory judgment action in the Northern District of California. ²³⁹ On summary judgment, the Northern District of California concluded, inter alia, that two demonstrations prior to the critical date placed the claimed invention "in public use." ²⁴⁰ On appeal, the Federal Circuit affirmed the district court's subsequent holding of invalidity. ²⁴¹

The opinion does not, unfortunately, fully describe the demonstrations found to constitute "in public use" activities. The first was, apparently, a demonstration of the invention to two University of California computing personnel, Shuli Roth and Dick Peters, in 1991. Konrad argued that he had submitted an invention disclosure to the Lawrence Berkeley Laboratory patent department in October 1990 and that this created an expectation of confidentiality vis-à-vis a demonstration to Roth and Peters. The Federal Circuit disagreed. Noting that Konrad had not shown that Roth or Peters were ever made aware of any requirement of confidentiality or apprised of the invention disclosure. ²⁴²

Konrad also argued that the 1991 demonstration did not disclose every limitation of the invention. The court noted that the issue is not whether a demonstration discloses every limitation but rather whether the device actually demonstrated includes every limitation of the ultimately claimed invention. ²⁴³ According to the Federal Circuit, the only difference between the device (or system) demonstrated *519 and the claimed invention was that the demonstrated system did not have a "starter client," and was initiated using a computer keyboard. ²⁴⁴ That difference, the Federal Circuit concluded, would have been obvious to one of ordinary skill in the art. ²⁴⁵

The Federal Circuit also rejected Konrad's argument that the 1991 demonstration was an experimental use. Konrad, apparently, said that the purpose of the demonstration was to "convince people in the Berkeley computer center that [his system] was a viable project." ²⁴⁶ The Federal Circuit viewed that as more of a commercial objective than one for experimental

purposes.²⁴⁷ The court also noted that Konrad had failed to present any testing records or similar evidence that would support his experimental use argument.²⁴⁸

The second demonstration apparently involved use by employees of the University Research Association-Superconducting Super Collider Laboratory. Konrad argued that the Department of Energy (DoE) owned all of the intellectual property rights to his invention, and all DoE employees were under an obligation of confidentiality.²⁴⁹ The court rejected that argument as “without merit.”²⁵⁰ The court noted that,

Konrad is the inventor of the patents; the limitation, restriction, or obligation of secrecy of others using the invention is owned to him, not the persons or entities providing the funding The onus is on him, as the inventor, to protect the confidentiality of his invention and its use by others before the critical date.²⁵¹ Additionally, according to the court, Konrad did not show that such obligations of confidentiality applied to employees of the University Research Association-Superconducting Super Collider Laboratory or the Stanford Linear Accelerator Center.²⁵²

Konrad lastly argued that the demonstration, “was not enabling because there was no evidence that source code was delivered to the Superconducting Super Collider Laboratory before the critical date.”²⁵³ The Federal Circuit responded that the source code was not part of the claimed invention and that “Konrad’s failure to monitor the use of his remote database object system, and failure to impose confidentiality *520 agreements on those that used it was enough to place the claimed features of the patents in the public’s possession.”²⁵⁴

The opinion does not contain a clear set of facts regarding the two demonstrations and the alleged offer for sale; therefore, it is virtually impossible to properly analyze. However, the court’s comments regarding an inventor’s individual responsibilities regarding confidentiality should give one pause. In either a university/academic or corporate setting, an inventor’s actual capacity to fulfill such responsibilities is questionable.

iii) “In Public Use” of an Invention After an Actual Reduction to Practice Cannot Constitute Experimental Use as a Matter of Law

The panel majority so held in *New Railhead Mfg., L.L.C. v. Vermeer Mfg. Co.*²⁵⁵ The inventions of the two patents-in-suit related to (1) a drill bit and (2) method for horizontal directional drilling used, for example, when installing utilities under roads, rivers, and so forth. The drill bit used a body that contained fixed and semi-floating cutting points and fluid channels for lubricating the bit and dispersing formations that had been cut or fractured without using jetting fluids that had been typically used to steer such drill bits. New Railhead conceded that the method of the second patent-in-suit was performed whenever the drill bit of the first patent-in-suit was used.²⁵⁶

Commercial embodiments of the drill bit had been sold during the spring and summer of 1996, more than one year before the November 1997 filing date of the non-provisional application that matured into the patent-in-suit. However, an earlier provisional application had been filed in February 1997. Nevertheless, the district court found that the earlier provisional application did not provide § 112(1) support for the claims in the later non-provisional application directed to the drill bit itself, and it concluded that the claims in the patent-in-suit directed to the drill bit were invalid under § 102(b).²⁵⁷

The district court further held that the method claims of the second patent-in-suit were invalid under the “in public use” bar of § 102(b), even if those claims were entitled to the priority date of the prior provisional application.²⁵⁸ New Railhead *521 contended that such use was experimental. A panel majority of the Federal Circuit disagreed and affirmed.²⁵⁹

The inventor of the patents-in-suit, Cox, testified in his deposition that beginning in January 1996, he had allowed an acquaintance, Earl Freeman, to use the drill bits at a public job site. Freeman was the foreman of a drilling team working for a third party. Cox further conceded that he did not control Freeman’s drilling activities, although he “felt” that he had retained control of the drill bit itself.²⁶⁰ Cox further testified that the claimed method was successfully performed several times in January 1996 with a first prototype of the bit, which the panel majority viewed as an actual reduction to practice: “New Railhead understood after the first 200-foot bore that the patented method had been reduced to practice, as it worked for its intended purpose. Accordingly, as a matter of law, none of the subsequent uses of the method can be experimental.”²⁶¹

C. Statute of Limitations - Interferences - § 102(e)(2) and § 135(b)(1)

Section 135(b)(1) is in the nature of “a statute of limitations, so to speak, on interferences so that the patentee might be more secure in his property right.”²⁶² The Federal Circuit has held that § 135(b) serves as a basis for rejecting a claim copied during ex parte prosecution from a patent more than one year after the patent issued.²⁶³

In *In re Berger*, the Federal Circuit additionally held that § 102(e)(2) and the patent from which the claim was copied may serve as a basis for rejection.²⁶⁴ Yet further, although a U.S. patent is prior art under § 102(e)(2) only if the filing date of such patent is before the applicant’s earliest provable date of invention, in this instance, an applicant cannot “swear behind” that patent.²⁶⁵ None of that is particularly surprising, but the court’s analysis creates a potential problem.

Berger’s application was drawn to a beverage can having an indentation on the side wall to accommodate a consumer’s lower lip with the stated purpose of minimizing spillage. During prosecution, Berger added a claim (claim 7) that was copied from a patent (the Muller patent) that had issued more than one year before *522 the date of the amendment adding claim 7. Claim 7 was rejected under § 135(b) and § 102(e)(2) based on the Muller patent. Other claims were rejected under § 112(2).²⁶⁶

With respect to the rejection under § 135(b), Berger argued that claim 7 was directed to the same or substantially the same invention as his original claims 1-6. Berger, apparently, also argued that claim 7 should, therefore, have been accorded the “filing date” of the original claims, well within the one year limitation of § 135(b).²⁶⁷ Whether Berger actually argued that copied claim 7 should be accorded some earlier “filing date” for purposes of § 135(b) or whether that was the court’s interpretation of Berger’s argument is unclear. In either event, that argument, real or perceived, seems to have misdirected the court from the actual issue in the case.

It is clear that Berger argued that in deciding whether claim 7 was directed to the same or substantially the same invention as original claims 1-6, the definitions of 37 C.F.R. § 1.601(n), applicable to interferences, should apply.²⁶⁸

Berger argued that the PTO, in order to sustain a rejection under § 135(b), was required to show that claim 7 was non-obvious over claims 1-6. In terms of § 1.601(n), if copied claim 7 (invention “A”) would have been obvious in view of claims 1-6 (invention “B”), then claims 1-6 and copied claim 7 were drawn to the “same patentable invention.”²⁶⁹

The Federal Circuit, however, disagreed that § 1.601(n) had anything to do with the issue.²⁷⁰ The court concluded that the “comparison standard of 37 C.F.R. § 1.601(n) was formulated not to determine the effective date of a claim in one party’s application for compliance with § 135(b), but instead to define the extent of interfering subject matter as between applications of potentially conflicting parties.”²⁷¹ The court concluded that “[w]hether claim 7 is obvious in view of original *523 claims 1-6 is not germane to the question of whether claim 7 is entitled to the earlier effective date of claims 1-6 for purposes of the one-year bar of 35 U.S.C. § 135(b).”²⁷² According to the court, “[t]o establish entitlement to the earlier effective date of existing claims for purposes of the one-year bar of 35 U.S.C. § 135(b), a party must show that the later filed claim does not differ from an earlier claim in any ‘material limitation,’”²⁷³ citing the C.C.P.A.’s 1977 decision in *Corbett v. Chisholm*.²⁷⁴

The court thus appears to have fixated on establishing an “effective date” for copied claim 7. While it is true that § 1.601(n) has nothing to do with “effective dates” of claims, neither does *Corbett*. Moreover, adopting what the court perceived to be a “material limitation” standard in *Corbett* (which was not posed as any “standard,” but rather was simply a way of expressing that certain claims were not drawn to the same invention) creates, in essence, a test in addition to that of § 1.601(n) for whether claims are drawn to the same or substantially the same invention.

In any event, Berger’s original claim 1 called for, *inter alia*, an “indentation means” while copied claim 7 called for “a circumferential groove having a first radial depth and a second radial depth extending further radially inwardly than said first radial depth.”²⁷⁵ The court concluded that limitation in copied claim 7 was “material” because it had been added in the Muller patent to avoid prior art and that the “indentation means” limitation of original claims 1-6 was thus “materially” different.²⁷⁶ Accordingly, the court concluded that, “[b]ecause Berger’s original claims 1-6 do not include a material limitation of Berger claim 7, copied claim 7 is not entitled to the earlier effective date of those original claims for purposes of satisfying § 135(b).”²⁷⁷

With respect to the rejection under § 102(e)(2), Berger had filed an affidavit under 37 C.F.R. § 1.131 swearing behind the Muller patent. The court, however, noted that a § 1.131 declaration cannot be used to swear behind a U.S. patent claiming the same patentable invention. Accordingly, the court concluded that the board had correctly affirmed the examiner’s rejection of claim 7 under § 102(e)(2).²⁷⁸ The court overlooked, or at least did not acknowledge, that § 1.131 expressly incorporates the

definitions of § 1.601(n).

***524** The result, accordingly, may have been correct (although that is debatable), but continuing to apply the Corbett standard rather than § 1.601(n) potentially creates problems. Corbett, of course, was decided in 1977, well prior to adoption of the then “new” interference rules (of which § 1.601(n) was a part) in 1984.

III. Obviousness/Nonobviousness--§ 103

A. Deferential Judicial Review Under the APA Does Not Relieve the PTO of Its Obligation to Develop an Evidentiary Basis for Its Findings

That was the holding in *In re Sang Su Lee*, resulting in a remand to the board with no decision on the merits.²⁷⁹ Lee’s application was drawn to a method of automatically displaying the functions of a video display device and demonstrating how to select and adjust the functions in order to facilitate response by a user.²⁸⁰ The claims were rejected under § 103 based on (1) a patent disclosing a television set having a menu display through which a user could adjust various picture and audio functions but without a demonstration of how to adjust those functions and (2) a handbook for a video game saying that the video display had a “demonstration mode” showing how to play the game.²⁸¹ Lee argued that there was no motivation for combining those references.²⁸² The board concluded that it was not necessary to present a source of a teaching, suggestion, or motivation to combine the references but that the decision of obviousness could “be made from common knowledge and common sense of a person of ordinary skill in the art without any specific hint or suggestion in a particular reference.”²⁸³ When Lee filed a request for reconsideration, the board responded - five years later - adhering to its original opinion.²⁸⁴

In the past, the Federal Circuit has occasionally been frustrated by the lack of fact finding by the board, and that frustration hit its zenith in *Gechter v. Davidson*.²⁸⁵ There, too, the Federal Circuit refused to rule on the merits and held that the board must prepare findings of fact and conclusions of law equivalent to those required by Rule 52, Fed. R. Civ. P., even though the board is not bound by the Federal Rules of Civil Procedure.²⁸⁶ In *Lee*, the Federal Circuit reached essentially the same result but on the reasoning that meaningful judicial review under the APA ***525** required that “the agency tribunal must present a full and reasoned explanation of its decision.”²⁸⁷ The board had not done so here.²⁸⁸

On appeal, the Federal Circuit reversed finding that neither the examiner nor the board provided adequate support for the combination of the two references.²⁸⁹ The court, in vacating and remanding, noted that “[d]eferential judicial review under the Administrative Procedure Act does not relieve the agency of its obligation to develop an evidentiary basis for its findings.”²⁹⁰ Specifically, the Federal Circuit noted that the “foundation of the principle of judicial deference to the rulings of agency tribunals is that the tribunal has specialized knowledge and expertise, such that when reasoned findings are made, a reviewing court may confidently defer to the agency’s application of its knowledge in its area of expertise.”²⁹¹ However, the court also noted that “[t]he ‘common knowledge and common sense’ on which the Board relied in rejecting Lee’s application are not the specialized knowledge and expertise contemplated by the Administrative Procedure Act. Conclusory statements such as those here provided do not fulfill the agency’s obligation.”²⁹²

The Federal Circuit in *In re Huston* further defined its expectations regarding the evidentiary basis for decisions by the board.²⁹³ In *Huston*, the court affirmed the board’s obviousness rejection on grounds not specifically expressed by the board, as “supported by the record.”²⁹⁴ To the Federal Circuit, the board’s reasoning could “reasonably be discerned,” and that was sufficient.²⁹⁵

Huston’s application was directed to a method and apparatus for displaying an advertising message to a golfer on a screen based on the golfer’s current position as determined by a global positioning satellite (“GPS”) system.²⁹⁶ *Huston*’s claims were rejected under § 103(a) based on various combinations of eight references, including (1) Wang, which used hand-held receiver units and fixed-position reference transmitters to determine distance and direction between a golfer and key locations on a golf course; (2) Fukushima, which taught the use of a GPS system to locate the current position of a vehicle and which provided a simple, inexpensive, and easy to use navigation apparatus; (3) Dudley, which taught positional advertising on a golf ***526** course using a radio frequency system rather than GPS; and (4) Paul, which disclosed an information and management system that used GPS to determine the position of a GPS receiver on a golf course, where a map of the course was stored at the base station, and displays advertising messages to a golfer.²⁹⁷ *Huston* appealed the rejection to the board, and the board sustained the examiner’s rejection.²⁹⁸ *Huston* then appealed the Federal Circuit.²⁹⁹

After agreeing with the board that Paul was prior art under § 102(e), the Federal Circuit affirmed the board's finding with respect to claim 1 that the use of a GPS system on a golf course was obvious in light of Wang and Fukushima.³⁰⁰ Huston argued that there was no motivation to combine those references.³⁰¹ In response, the Federal Circuit stated that because the board had, later in its opinion and apparently for a different purpose, separately found use of a GPS system on a golf course to be fully disclosed by Paul, there was no need to find motivation in light of Paul.³⁰² According to the Federal Circuit, the board's decision could have been clearer had it simply cited Paul rather than combining Wang and Fukushima.³⁰³ Nevertheless, the board's reasoning could be "readily discerned."³⁰⁴

The court then turned to the question of whether it would have been obvious to combine a system that uses GPS on a golf course with the transmission of positional advertising.³⁰⁵ The board found that missing element in Dudley.³⁰⁶ Again, Huston, urging Lee, complained that the board did not specifically find a motivation to combine the references, except through its reliance on common knowledge and common sense.³⁰⁷ The court distinguished Lee as a situation in which the board relied on its "general knowledge to negate patentability" and stated that here, the board, despite its passing reference to "common knowledge and common sense," had not relied on its own general knowledge but had found motivation in the prior art references themselves.³⁰⁸ Commenting that the board's conclusions were "cryptic," the court again used Paul to find the needed motivation, even *527 though the board had not cited Paul for that purpose.³⁰⁹ To the court, this was a situation where the board's "path may reasonably be discerned," and "under such circumstances, the Board's decision must be affirmed despite its failure to specifically cite the Paul reference for [that] purpose."³¹⁰ In response to pointed criticism from dissenting Judge Prost that the board's conclusions were "nonexistent," rather than "cryptic," and that the "majority ha[d] charted an analytical course of its own,"³¹¹ the majority noted that "[t]he board's cryptic motivation to combine may be affirmed because it was supported in the record, even though the record reference [Paul] was not quoted, just as a district court's factual finding may be sustained if supported by record evidence not specifically cited by the district court."³¹²

To Judge Prost, though, the majority was backing away from its stance in Lee because the board's stated grounds were "clearly insufficient."³¹³ The board did not cite Paul for the purposes for which the court used it, and the sole support for the majority's conclusion was a passage from the Paul reference that did not appear in the board's opinion.³¹⁴ That, said Judge Prost, compelled remand, because, "[a]s this court held in [Lee], 'review of administrative decisions must be made on the grounds relied on by the agency. If those grounds are inadequate or improper, the court is powerless to affirm the administrative action by substituting what it considers to be a more adequate or proper basis.'"³¹⁵

B. The Obviousness/Nonobviousness Analysis

1. Claim Construction

In *In re Glaug*, the court reminded the PTO that simply using the same phrase in the application under examination as was used in the prior art does not necessarily mean that the phrase means the same thing in context.³¹⁶ Glaug et al.'s claims, drawn to a method of making disposable training pants by which the elasticity of the waist was preserved over a longer period of useful life, called for "applying an adhesive . . . at selected spaced apart zones."³¹⁷ Glaug et al. used the word "intermittent" *528 in the specification to designate distinct zones of adhesive spaced from zones free of adhesives.³¹⁸ The claims were rejected over Nomura, which disclosed all of the steps of the claimed process except for applying the adhesive in spaced apart zones, and a secondary reference, which was asserted as teaching folding a hem over the elastic.³¹⁹ The board found that Nomura taught "intermittent" spacing of the adhesive.³²⁰ In context, however, the court found that Nomura did not suggest "applying an adhesive . . . at selected spaced apart zones" as claimed, even though Nomura used the word "intermittent."³²¹ Accordingly, the Federal Circuit concluded that the PTO had not established a prima facie case for obviousness.³²²

A Prima Facie Case at the PTO

i) Claims Are Given Their Broadest Reasonable Interpretation During Ex Parte Prosecution

It has long been the rule that during examination, claims are given their broadest reasonable interpretation,³²³ on the rationale that it "serves the public interest by reducing the possibility that claims, finally allowed, will be given broader scope than is justified."³²⁴

The Federal Circuit reiterated this standard in *In re Thrift*, where Mr. Scott's voice command in *Star Trek*: "Computer . . .," was given the broadest reasonable interpretation. *Thrift et al.*'s application was entitled "Voice Activated HyperMedia Systems Using Grammatical Metadata" and was assigned to Texas Instruments, the real party in interest.³²⁵ The broad invention was a speech interface that allowed users to access information on a computer network.³²⁶ Using the interface, users could use voice commands to activate a browser and access links on an HTML page by speaking the link name.³²⁷ Some claims, specifically independent claims 11 and 14, added the ability to create a "grammar" (i.e., an established set of *529 query words).³²⁸ "For example, saying the phrase 'how does the weather look today' could link the user to the URL <http://www.washingtonpost.com/weather>."³²⁹

The examiner rejected the claims-on-appeal as having been obvious over Patent A in view of Article B.³³⁰ Patent A was "directed to a hypermedia-structured expert system, i.e., a browser software system that searches and accesses electronic documents." Patent A further disclosed using an expert system for processing a user's action based on embedded intelligence and returning the results to the user.³³¹

Article B disclosed controlling a computer system by speech input, namely "speaking a window's name [would] move the window to the front of the screen and move the cursor into that window."³³² Article B taught two speech interfaces, including associating windows with voice templates, i.e., words stored in the computer that would be recognized as commanding some action.³³³

With respect to the broad claims, the *Thrift* court conceded that Patent A disclosed all limitations of the claimed invention except the "speech user agent."³³⁴ *Thrift* urged that Article B did not disclose a "speech user agent," which *Thrift* said was an "agent that dynamically creates the vocabulary, grammar and actions that are possible for the user to use in a given situation."³³⁵ However, the Federal Circuit noted that the broad claims used "speech user agent" without any modifiers or qualifications and that the specification did not specifically define the term.³³⁶ Accordingly, reiterating that claims are interpreted as broadly as is reasonable during *ex parte* prosecution, the Federal Circuit interpreted "speech user agent" according to its ordinary meaning, namely "an interface that allows the user to interact with the system by speaking."³³⁷ Article B disclosed a "speech user agent" as thus defined.³³⁸

*530 The court also applied the same rule in *In re Bass*.³³⁹ Bass owned a utility patent on a fishing boat.³⁴⁰ A third party requested reexamination based on a design patent, several brochures, and an engineering drawing in a magazine.³⁴¹ The examiner initially found that Bass' claims were allowable and issued a Notice of Intent to Issue Reexamination Certificate.³⁴² Before the Reexamination Certificate issued, however, the same third party requested a second reexamination based on the same earlier submitted references plus six "closet publications" and a declaration by a boat designer that contained an illustration of a boat based on the drawing in the previously submitted magazine.³⁴³ The examiner granted the second reexamination, merged the proceedings, and rejected several claims over the design patent and the magazine.³⁴⁴ The board affirmed.³⁴⁵

On appeal, the Federal Circuit affirmed as well.³⁴⁶ For reasons discussed more fully in the chapter on reexamination, the court concluded that the PTO continued to have jurisdiction to reconsider its earlier conclusion until the Reexamination Certificate actually issued.³⁴⁷ On the merits, Bass argued that the magazine drawing did not disclose a "low profile," "motorized sports boat," that "had the control console been placed against the bulkhead, the pilot would then be in the cockpit and have limited visibility."³⁴⁸ The Federal Circuit disagreed, noting that the PTO must apply the broadest reasonable meaning to the claim language.³⁴⁹

The specification defined "motorized sports boat" as a boat that included a cabin and had a length of about 20 to 50 feet.³⁵⁰ The magazine drawing illustrated such a boat.³⁵¹ Although Bass argued that the boat had a fish hold, the definition in the specification did not exclude such boats. The specification also defined "low profile" to mean a cabin having a height roughly level to the sheer line of the boat *531 hull, which the boat illustrated in the magazine article also showed.³⁵² That boat also included a pilothouse, but the court concluded that the ordinary definition of pilothouse precluded it from being considered a "cabin."³⁵³ The court concluded that the boat depicted in the magazine also met the "limited visibility" limitation, giving that term its broadest reasonable meaning (but without saying what that meaning was or how the court could make that judgment based on a magazine drawing).³⁵⁴ Accordingly, the Federal Circuit affirmed.³⁵⁵

ii) Reason or Motivation for Combination

a) Comparison of the Claims is Appropriate?

In *re Sastry* involved claims to a composition for stimulating an effective immune response to HIV, the Federal Circuit found that the prior art provided sufficient motivation for the combination proposed by the examiner.³⁵⁶ The representative claim on appeal called for a “first peptide” and a “second peptide.”³⁵⁷ The “first peptide” was defined as a “CTL [i.e., cytotoxic T lymphocyte]-inducing peptide with the ability to stimulate the formation or enhance the activity of cytotoxic T cells that are capable of killing MHC [i.e., broken down proteins of an infectious particle]-matched target cells that have the peptide on their surface,” such as peptides designed to promote the development of CTLs that will destroy HIV-infected cells.³⁵⁸ The “second peptide” was defined as one of a group of peptides that functioned to assist the immune response elicited by the first peptide by ensuring that the body maintained a large population of uninfected T helper cells.³⁵⁹

The claims were rejected based on a first reference that taught the “first peptide” and a number of other references that taught the “second peptide.”³⁶⁰ Sastry conceded that the prior art taught the first and second peptides but urged that the prior art did not provide any motivation for the claimed combination and, in fact, taught away from such a combination.³⁶¹ The Federal Circuit disagreed.³⁶²

***532** Circuit Judge Bryson, focusing on the claims of the primary reference, a patent to Arlinghaus, concluded that claim 1 of Arlinghaus encompassed the claimed “first peptide” and dependent claim 5 of Arlinghaus encompassed the claimed “second peptide.”³⁶³ Because claim 5 was dependent from claim 1, Circuit Judge Bryson concluded that claim 5 of the primary Arlinghaus reference covered both the first and second peptides, as claimed.³⁶⁴ Circuit Judge Bryson also found that a second dependent claim in the primary reference covered both the first and second peptides as claimed.³⁶⁵ Judge Bryson dismissed Sastry’s contrary interpretation of the reference as “clearly wrong.”³⁶⁶ Accordingly, Circuit Judge Bryson concluded that “[i]n light of the overlap between claims 5 and 22 of Arlinghaus and claim 1 of the ‘865 application, the Board could have based its rejection on anticipation rather than obviousness.”³⁶⁷ Judge Bryson also found that other references provided the necessary motivation to combine the two peptides, but that finding was clearly offered as support for the primary conclusion, rather than as an independent finding.³⁶⁸

Thus, Sastry may be viewed as evidencing Judge Bryson’s penchant for focusing on the claims in the prior art, as he did in *Inland Steel*.³⁶⁹ This is dangerous. Although the ultimate result in Sastry is not necessarily wrong, the rationale is clearly suspect. The fact that claims in the prior art encompass various claim limitations that does not necessarily mean that such prior art anticipates or renders obvious claims in a subsequent application. Although the claims in prior art references cannot be ignored, generic claims do not necessarily anticipate or render obvious later claims to specific species. As usual, it depends on the subject matter, the disclosures in the prior art, and so forth.

b) Motivation May Come from General Knowledge in the Art

In *Novo Nordisk A/S v. Becton Dickinson & Co.*, the motivation came from the knowledge that small injection needles lead to less pain.³⁷⁰ The invention of the three patents-in-suit was a pen-shaped insulin injection syringe.³⁷¹ The validity ***533** issue turned on the size of the needles.³⁷² The claims in two of the patents-in-suit called for needle sizes smaller than 30-gauge.³⁷³ The asserted prior art consisted of (1) a patent disclosing a pen-shaped injection system similar to the Novodisk system but without any specific needle size and (2) patents showing the use of 30-gauge needles for insulin injection but not in pen-shaped systems.³⁷⁴ The evidence at trial established that it was well-known that thinner needles reduced pain.³⁷⁵ The Federal Circuit concluded, in affirming a finding of invalidity, that there was substantial evidence for a jury to find that “the known pain reduction provided the requisite motivation to narrow the needle.”³⁷⁶

C. Negating/Rebutting a Prima Facie Case of Obviousness

In *re Peterson*, Peterson’s application was drawn to a nickel-based single-crystal superalloy used in manufacturing industrial gas turbine engines.³⁷⁷ Peterson’s claimed composition included a relatively small amount of rhenium that improved the alloy’s mechanical strength without reducing its hot corrosion resistance.³⁷⁸ The representative claim called for, *inter alia*, about one to three percent rhenium and about fourteen percent chromium.³⁷⁹

The examiner rejected the claims over three references based on overlapping ranges.³⁸⁰ Peterson responded that the prior art disclosed only the optional use of rhenium and did not suggest that controlled amounts of rhenium would result in advantageous mechanical properties and that his composition achieved unexpected results.³⁸¹ The examiner responded that Peterson had failed to show any criticality in the selected amount of rhenium.³⁸² The Federal Circuit affirmed.³⁸³

The Federal Circuit focused on a single reference, Shah. Shah disclosed ranges for rhenium (0-7%) and chromium (3-18%) that encompassed Peterson's *534 claimed ranges.³⁸⁴ The Federal Circuit noted that a case of prima facie obviousness typically was made out when the prior art disclosed ranges overlapping the claimed ranges, such as here.³⁸⁵ Accordingly, the Federal Circuit concluded that the claimed invention was prima facie obvious in view of Shah.³⁸⁶

Turning to Peterson's rebuttal proof, the court noted that "an applicant's showing of unexpected results must be commensurate in scope with the claimed range."³⁸⁷ Here, Peterson's data failed to show unexpected improvements over the claimed range of "about 1 to 3 percent."³⁸⁸ Examples in the specification showed the most significant improvement with the addition of 2% rhenium.³⁸⁹ Data for alloy having 3% rhenium, according to the court, seemed to show a decrease in strength, as did the data at the 1% end of the range.³⁹⁰ Accordingly, the Federal Circuit concluded that Peterson had not rebutted the prima facie case of obviousness.³⁹¹

IV. Forfeiture Based on Prosecution Delay

In *Symbol Technologies, Inc. v. Lemelson Medical, Education & Research Foundation, Ltd. Partnership*, over a strong dissent by Circuit Judge Newman, the panel majority held that the equitable doctrine of laches could be used to bar enforcement of a patent that issued after an unreasonable delay in prosecution, even though the patent applicant had complied with the pertinent statutes and rules.³⁹²

In *re Bogese*, again over a strong dissent by Circuit Judge Newman, the panel extended *Symbol Technologies* to ex parte prosecution holding that an applicant had forfeited his/her right to a patent after an unreasonably long delay in prosecution.³⁹³

The saga began with Bogese's first application filed in 1978.³⁹⁴ That application was abandoned in favor of a continuation.³⁹⁵ That continuation was appealed *535 to the Federal Circuit twice, once in 1984 and once in 1987.³⁹⁶ In the second appeal, the Federal Circuit affirmed a rejection of all pending claims under § 103.³⁹⁷ Bogese then filed a file wrapper continuation application, abandoning the parent, but with no claim amendment and no argument.³⁹⁸ The PTO issued a final rejection based on the previous 1987 decision and several prior art references.³⁹⁹ Bogese then filed a series of some nine or ten further file wrapper continuation applications without any claim amendments or arguments.⁴⁰⁰ Each was finally rejected.⁴⁰¹ In one of those applications filed in 1994, the examiner warned Bogese that the next continuation would be rejected "by invoking the equitable doctrine of laches, absent any substantive amendment to advance prosecution."⁴⁰² Nevertheless, Bogese filed yet another file wrapper continuation application in 1995, which the examiner rejected (1) on the doctrine of res judicata based on the 1987 Federal Circuit decision, (2) under § 103 based on several prior art references, and (3) on the ground that "applicant has forfeited the right to a patent" by deliberately postponing prosecution.⁴⁰³ Bogese, in response, for the first time, amended the claims and submitted affidavits in support of patentability.⁴⁰⁴ The examiner was not persuaded, and the issue went to the board.⁴⁰⁵

The board issued its decision in 2000.⁴⁰⁶ The board refused to sustain the rejection based on res judicata because Bogese had amended his claims.⁴⁰⁷ However, the board sustained the rejection based on § 103 on forfeiture, relying on the general power granted the PTO to examine patents under § 131 and on one of its prior opinions.⁴⁰⁸ On appeal, the Federal Circuit affirmed the rejection based on forfeiture and never reached the § 103 issue.⁴⁰⁹

*536 The Federal Circuit panel majority said that it was bound by the decision in *Symbol Technologies*.⁴¹⁰ The panel majority reasoned that they saw no reason for denying power to the PTO when the court had already recognized the PTO in earlier district court infringement actions. It necessarily follows that the PTO has the authority to reject patent applications for patents that would be unenforceable under our holding in *Symbol Technologies*.⁴¹¹ Indeed, the panel majority went one step farther, saying, "we think the PTO's authority to sanction undue delay is even broader than the authority of a district court to hold a patent unenforceable," reasoning that the PTO has the authority to impose reasonable deadlines and requirements on parties.⁴¹²

In dissent, Circuit Judge Newman urged that (1) *Symbol Technologies* should be limited to its facts; that (2) "prosecution laches" is based on a showing of prejudice, and there is no analogy in ex parte practice; that (3) there is binding precedent to the contrary;⁴¹³ that (4) equitable determinations may be proper for the courts but not administrative agencies; and that (5) the PTO has the authority to promulgate rules but only to do so using agency rule-making procedure which it did not do here.⁴¹⁴

V. Enablement-Written Description-Best Mode: 35 U.S.C. § 112(1)

A. Written Description: 35 U.S.C. § 112(1)

1. Provisional Applications Must Provide Specific Written Description for Every Limitation in Later Claims in Non-Provisional Application: Written Description Support is Necessary from the Face of the Application

In *New Railhead Manufacturing, L.L.C. v. Vermeer Manufacturing Co.* (discussed supra), commercial embodiments of the claimed drill bit had been sold during the spring and summer of 1996, more than one year before the November 1997 filing date of the non-provisional application that matured into the patent-in-suit.⁴¹⁵ *537 However, an earlier provisional application had been filed in February 1997.⁴¹⁶ The provisional application did not either illustrate in the drawings or describe in the specification that the “bit body” was “angled with respect to the sonde housing,” as required by one of the claim limitations.⁴¹⁷

The district court found that the earlier provisional application, thus, did not provide § 112(1) written description support for the claims in the later non-provisional application directed to the drill bit itself and concluded that the claims in the patent-in-suit directed to the drill bit were invalid under § 102(b).⁴¹⁸ On appeal, the Federal Circuit affirmed.⁴¹⁹

The court noted that “for the non-provisional utility application to be afforded the priority date of the provisional application, . . . the written description of the provisional must adequately support the claims of the non-provisional application”⁴²⁰ “That is, the disclosure must show he had invented each feature that is included as a claim limitation. The adequacy of the written description (i.e., the disclosure) is measured from the face of the application; the requirement is not satisfied if one of ordinary skill in the art must first make the patented invention before he can ascertain the claimed features of that invention.”⁴²¹ Furthermore, according to the court, that the inventor may have been “in possession of” the invention is not decisive; “the written description requirement ‘is not subsumed by the “possession” inquiry.’ Identity of description is not necessary. . . . Identity of that which is described, however, is necessary.”⁴²²

2. Drawings Alone May Provide a “Written Description” of the Invention

In *Cooper Cameron Corp. v. Kvaerner Oilfield Products, Inc.* (discussed supra), the court reiterated its holding in *Vas-Cath, Inc. v. Mahurkar*,⁴²³ that “[d]rawings constitute an adequate description if they describe what is claimed and convey to those of skill in the art that the patentee actually invented what is claimed.”⁴²⁴ A claim in one of the patents-in-suit called for “a workover port extending *538 laterally through the wall of the spool tree between the two plugs.”⁴²⁵ A continuation application that matured into the second patent-in-suit called for “a workover port extending through said wall of said spool tree . . . below the BOP bore and above said tubing hanger”⁴²⁶ Kvaerner argued that there was no written description support for the latter claim. The district court agreed and granted Kvaerner summary judgment of invalidity under § 112(1), finding that the original disclosure only referred to the workover port as being located between the two plugs.⁴²⁷ On appeal, the Federal Circuit reversed.⁴²⁸

After noting that drawings alone may provide written description support, the Federal Circuit observed that Fig. 7 showed workover port 73 entering the assembly above tubing hanger 54 and below the BOP as claimed.⁴²⁹ Accordingly, the court concluded that Fig. 7 provided clear written description support for the claim, even though the specification also provided support for claiming the workover port as being between the two plugs.⁴³⁰

3. Reference in the Specification to a Deposit of a Nucleotide Sequence in a Public Depository, Which Makes Its Contents Accessible to the Public When It is Not Otherwise Available in Written Form, Constitutes an Adequate Description of the Deposited Material Sufficient to Comply with the Written Description Requirement

After initially reaching precisely the opposite conclusion in a first panel opinion and after several opinions regarding the court’s order declining to take the issue en banc,⁴³¹ in a second panel opinion, *Enzo Biochem, Inc. v. Gen-Probe Inc.*, the Federal Circuit adopted the PTO’s “Guidelines for Examination of Patent Applications Under 35 U.S.C. § 112, P 1 ‘Written Description’ Requirement”⁴³² and held:

In light of the history of biological deposits for patent purposes, the goals of the patent law, and the practical difficulties of describing unique biological materials in a written description, we hold that reference in the specification to a deposit in a public depository, which makes its contents accessible to

the public when it is not otherwise available *539 in written form, constitutes an adequate description of the deposited material sufficient to comply with the written description requirement of § 112, P 1.⁴³³

The patent-in-suit was “directed to nucleic acid probes that selectively hybridized to genetic material of the bacteria that causes gonorrhea,” which is similar in homology to the bacteria that causes meningitides.⁴³⁴ Enzo derived three sequences for chromosomal DNA probes that preferentially hybridized to six common strains of gonorrhea bacteria over six common strains of meningitidis bacteria.⁴³⁵ Enzo deposited those sequences as recombinant DNA molecules within an *E. coli* bacterial host with the American Type Culture Collection.⁴³⁶

Claim 1 called for:

A composition of matter that is specific for *Neisseria gonorrhoeae* comprising at least one nucleotide sequence for which the ratio of the amount of said sequence which hybridizes to chromosomal DNA of *Neisseria gonorrhoeae* to the amount of said sequence which hybridizes to chromosomal DNA of *Neisseria meningitidis* is greater than about five.⁴³⁷ The body of the claim recited how that ratio was obtained.⁴³⁸ [Emphasis added.]

The district court granted summary judgment of invalidity for failure to meet the written description requirement.⁴³⁹ Relying on *Regents of the University of California v. Eli Lilly and Co.*,⁴⁴⁰ the district court concluded that the claimed composition was defined only by its biological activity or function, i.e., the ability to hybridize to *Neisseria gonorrhoeae* in a ratio greater than about five vis-à-vis *Neisseria meningitidis*.⁴⁴¹ The district court rejected Enzo’s argument that the deposit satisfied the written description requirement, finding that such deposits only satisfied the enablement requirement.⁴⁴²

Acknowledging *Eli Lilly*, where the Federal Circuit held that a gene material defined only by a statement of function or result did not adequately describe the claimed invention, the court, nevertheless, concluded that “[i]t is not correct, however, *540 that all functional descriptions of genetic material fail to meet the written description requirement.”⁴⁴³

Dependent claims specifically referred to the ATCC deposit, i.e., “wherein said nucleotide sequences are selected from the group consisting of: the *Neisseria gonorrhoeae* [sic] DNA insert of ATCC 53409, ATCC 53410 and ATCC 53411.”⁴⁴⁴ The court applied a two step analysis, namely (1) “whether Enzo’s deposits of the claimed nucleotide sequences of claims 4 and 6 may constitute an adequate description of those sequences” and (2) “whether the description requirement is met for all of the claims on the basis of the functional ability of the claimed nucleotide sequences to hybridize to strains of *N. gonorrhoeae* that are accessible by deposit.”⁴⁴⁵

The court, as noted above, answered yes to the first question. The court reasoned that “[a] person of skill in the art, reading the accession numbers in the patent specification, can obtain the claimed sequences from the ATCC depository by following the appropriate techniques to excise the nucleotide sequences from the deposited organisms containing those sequences.”⁴⁴⁶

The court noted, however, that claims 4 and 6 were not simply limited to the deposited sequences but also included “subsequences.” Such subsequences, according to the specification, were at least 12 nucleotides long.⁴⁴⁷ The deposited sequences were 850 to 1300 nucleotides long, meaning that there were hundreds of subsequences, an unknown number of which might meet the claimed hybridization ratio.⁴⁴⁸ The claims also covered mutated variations and mixtures thereof that amounted to an “astronomical” number.⁴⁴⁹ The court remanded the case to the district court to determine “whether a person of skill in the art would glean from the written description, including information obtainable from the deposits of the claimed sequences, subsequences, mutated variants, and mixtures sufficient to demonstrate possession of the generic scope of the claims.”⁴⁵⁰ The court also remanded the case to the district court to consider whether the deposited sequences were representative of the scope of the genus claims.⁴⁵¹

*541 The several opinions that were generated in conjunction with the court’s order declining to take the case en banc⁴⁵² suggest that the issue of whether the written description requirement should even continue to read as a separate requirement under § 112(1), at least where priority is not an issue, is a live and controversial one. The dissenters, Circuit Judges Rader, Gajarsa and Linn, generally urged that although § 112(1) requires a “written description” of the invention, the measure of the sufficiency of that description was whether one of ordinary skill in the art was taught how to make and use the claimed invention.⁴⁵³ Those concurring in the decision not to take the case en banc generally urged that (A) it was unnecessary to do

so since the panel had changed the result, and (B) the statute, § 112(1), and precedent required a [1] “written description of the invention and of [2] the manner and process of making and using it.”⁴⁵⁴ Clearly this is an issue that will eventually be taken en banc.

4. Although It is Permissible to Amend Claims or Add Claims to Purposefully Cover Devices or Processes and Thereafter Allege Infringement, There Must Be Written Description Support

In *PIN/NIP, Inc. v. Platte Chemical Co.*, the patent-in-suit was “directed to a composition and methods for inhibiting sprout growth on tubers, such as potatoes,” using synthetic chemical chloroprotham (CPIC) and substituted naphthalene.⁴⁵⁵ The original claims filed in the application called for a “composition comprising CPIC and a substituted naphthalene.”⁴⁵⁶ After the filing date, the applicants learned that PIN/NIP had publicly disclosed a method for treating potatoes in which CPIC and a substituted naphthalene were applied separately in spaced, sequential applications, days to months apart.⁴⁵⁷ The applicants then amended their application by adding a claim that called for, in successive steps, “applying CPIC,” and “applying a substituted naphthalene.”⁴⁵⁸ The application was allowed on the first office action, and PIN/NIP thereafter sued.⁴⁵⁹

The district court construed “composition” to include spaced, sequential applications, analogizing “composition” to an artist arranging or “composing” a still ***542** life.⁴⁶⁰ On appeal, the Federal Circuit reversed, concluding that the term “composition” meant “a physical mixture . . . existing together at approximately the same time.”⁴⁶¹

PIN/NIP also asserted that the added claim was invalid under § 112(1) for lack of a written description.⁴⁶² The Federal Circuit agreed noting that the specification only described the use of CPIC and a substituted naphthalene as a “composition,” as the court defined that term.⁴⁶³ There was no support for the claim calling for separate applications of CPIC and a substituted naphthalene.⁴⁶⁴

B. Enablement: 35 U.S.C. § 112(1)

The enablement requirement of § 112(1) requires a patent applicant to adequately disclose the claimed invention so as to enable a person of ordinary skill in the art to practice the invention as of the time the application was filed without undue experimentation.⁴⁶⁵

1. Ambiguities in Disclosure May Lead to a Finding of Undue Experimentation - At Least on Summary Judgment

In *Crown Operations International Ltd., v. Solutia Inc.*, discussed supra, Solutia’s two patents-in-suit were directed to layered films used to produce safety and solar control glass, e.g., for automobile windshields.⁴⁶⁶ Such windshields were typically formed of two layers of glass with a multi-layer film therebetween.⁴⁶⁷ The multi-layer film would typically have an inner layer - the solar control film - made from a substrate coated with one or more layers of metal or metallic substances and which selectively absorbed, reflected, or transmitted defined percentages of certain wavelengths of light.⁴⁶⁸ One of the patents-in-suit was directed to a problem with such solar control films, i.e., the film tended to wrinkle during “encapsulation” between layers of polyvinyl butyral (PVB).⁴⁶⁹

***543** The second patent was directed to eliminating optical distortion, termed “applesauce,” in safety and solar control glass assemblies.⁴⁷⁰ The disclosed method involved physically measuring the “waviness” of the PVB surface and generating an electronic “trace line” thereof.⁴⁷¹ A computer then calculated a “wave index” from the trace.⁴⁷² There were “rules” for calculating the wave index that involved a “smoothing” function that eliminated minor inflection points to simplify calculation.⁴⁷³ Crown urged that the asserted claims were invalid under § 112(1) because of (1) a lack of written description support, and (2) a lack of enablement.⁴⁷⁴ The district court granted Solutia summary judgment finding that the claimed invention was enabled, but it did not address the written description requirement.⁴⁷⁵ On appeal, the Federal Circuit reversed, finding that there was a genuine issue of material fact vis-à-vis whether the claimed invention was enabled.⁴⁷⁶

Crown had introduced expert testimony that the second patent-in-suit did not define amplitude and that one of ordinary skill in the art would not know whether to measure amplitude (1) “from a centerline running horizontally through the middle of the trace,” (2) “peak-to-peak,” or (3) by “some other baseline or reference.”⁴⁷⁷ The results would be markedly different. Solutia argued that even if there were ambiguities regarding the wave index calculations, a person of ordinary skill in the art could make the invention without undue experimentation.⁴⁷⁸ Crown, on the other hand, contended that the amplitude ambiguity coupled with other ambiguities creates a wide range of possibilities.⁴⁷⁹ Accordingly, the court concluded that there

were genuine issues of material fact regarding enablement that precluded summary judgment.⁴⁸⁰

***544 C. Best Mode Tutorial - 35 U.S.C. § 112(1): The Claims Measure the Extent of the Best Mode Requirement - The Requirement Does Not Extend to “Production Details” Such as Equipment on Hand, Availability of Materials, and Customer Requirements**

Two noteworthy recent tutorials of the best mode requirement are Judge Linn’s opinion in *Teleflex, Inc. v. Ficosa North America Corp.*⁴⁸¹ and Judge Clevenger’s opinion in *Bayer AG v. Schein Pharmaceuticals, Inc.*⁴⁸²

The Federal Circuit especially emphasized that the claims measure the extent of the best mode disclosure requirement (which has not always been clear from prior precedent), although the requirement may extend to information that bears a “strong relationship” to the claimed invention and to information that is intentionally concealed.⁴⁸³ The court further emphasized that the best mode disclosure requirement does not extend to “production details,” including commercial considerations, such as customer requirements.⁴⁸⁴

One of the two patents-in-suit was directed to a component of a two-piece shift cable used by General Motors in certain sport utility vehicles that was used to connect a shift control with an automatic transmission.⁴⁸⁵ The two-piece design allowed GM to wait until an advanced stage of manufacturing before connecting the two pieces together. Specifically, the invention used a clip for holding the two pieces together.⁴⁸⁶

During the inventor’s deposition, the inventor testified that a certain clip material and matching the male member metal to the clip metal was the “best way” to make the cable as of the filing date. Later in his deposition, though, the inventor testified that both were done to satisfy GM’s requests to reduce the insertion force and connector size.⁴⁸⁷ The district court granted *Teleflex* summary judgment that there had been no violation of the best mode requirement, and the Federal Circuit affirmed.⁴⁸⁸

The Federal Circuit emphasized that “[t]he best mode inquiry is directed to what the applicant regards as the invention, which in turn is measured by the ***545** claims.”⁴⁸⁹ The court acknowledged, though, that “we have found violations of the best mode requirement for failure to disclose subject matter not strictly within the bounds of the claims,” but concluded that “even in these cases the alleged best mode information bore a strong relationship to the claimed invention or implicated questions of concealment.”⁴⁹⁰ The court secondly emphasized that “[t]he best mode requirement does not extend to ‘production details,’ including commercial considerations such as equipment on hand, availability of materials, relationships with suppliers, or customer requirements.”⁴⁹¹ The court further held that “the best mode requirement does not extend to ‘routine details’ apparent to one of ordinary skill in the art . . . because one skilled in the art is aware of alternative means for accomplishing the routine detail that would still produce the best mode of the claimed invention.” [Internal citations omitted.]⁴⁹²

Here, the claims did not require any particular material or hardness or thickness for the clip, and the relationship between the “missing information” and the claimed invention, according to the court, did not implicate the best mode requirement because the inventor had testified that those features were dictated by GM specifications.⁴⁹³

In *Bayer AG v. Schein Pharmaceuticals, Inc.*, the Federal Circuit similarly stressed that “[o]ur cases examining the scope of the best mode requirement demonstrate that the best mode disclosure requirement only refers to the invention defined by the claims.”⁴⁹⁴ However, as in *Teleflex*, the panel acknowledged that the court had found violations of the best mode requirement for failure to disclose subject matter that was not strictly within the bounds of the claims.⁴⁹⁵ According to the panel, “these cases involved either failure to disclose a preferred embodiment or else failure to disclose a preference that materially affect making or using the invention.”⁴⁹⁶

The panel concluded that, [t]hus, we have held a patent invalid for failure to satisfy the best mode requirement in two situations. First we have invalidated patents when they do not adequately disclose a preferred embodiment of the invention. . . . Second, we have invalidated patents when ***546** the patentee failed to disclose aspects of making or using the claimed invention and the undisclosed matter materially affected the properties of the claimed invention.⁴⁹⁷

According to the panel,

DeGeorge [v. Bernier⁴⁹⁸] is one of the key cases for understanding the best mode requirement. . . . The instances in which we have held that an inventor failed to disclose the best mode of carrying out his invention are consistent with DeGeorge. Each instance in which best mode violations have been founding our precedent deal with the invention itself, and in each of those cases the failure to disclose a preference for carrying out the claimed invention directly impacted the invention itself.⁴⁹⁹ The Federal Circuit concluded that “[i]n short, we have held that the best mode of making or using the invention need be disclosed if it materially affects the properties of the claimed invention itself.”⁵⁰⁰

In Bayer, the principle issue was whether the patent-in-suit, drawn to a class of chemical compounds, including the commercially successful antibiotic CIPRO®, was entitled to the filing date of a parent application under § 120.⁵⁰¹ The defendant claimed that the patent-in-suit was not entitled to the benefit of the earlier filing date and was therefore invalid under § 102(d).⁵⁰² The issue under 35 U.S.C. § 120 was whether a grandparent application, on which Bayer relied for an earlier filing date, satisfied the best mode requirement for the presently claimed invention.⁵⁰³ Specifically, in making the class of claimed compounds, the inventor had trouble making the starting material and turned to a colleague.⁵⁰⁴ That colleague successfully synthesized a compound, the “Klauke compound,” for making the starting material.⁵⁰⁵ It was, apparently, undisputed that one of ordinary skill in the art could readily obtain the Klauke compound by using commercially-available starting materials and known methods.⁵⁰⁶ That compound was also the subject of another patent.⁵⁰⁷

***547** The claims in the patent-in-suit were directed to the target antibiotic compound, i.e., ciprofloxacin, the end product in a reaction sequence.⁵⁰⁸ The starting materials were not part of the claims.⁵⁰⁹ It was also undisputed that the inventor had a preference for using the Klauke compound in producing an intermediate compound and that the Klauke compound was not disclosed.⁵¹⁰ However, it was also undisputed that the inventor’s preferred way of making the intermediate compound had no material effect on the properties of the claimed end product.⁵¹¹ Accordingly, the Federal Circuit concluded that it was not necessary to disclose the Klauke compound to satisfy the best mode requirement, that the patent-in-suit was entitled to the benefit of an earlier filing date and that the asserted claims in the patent-in-suit were, therefore, not invalid under § 102(d).⁵¹²

VI. Particularly Point Out and Distinctly Claim - What The Applicant Regards as His Invention: 35 U.S.C. § 112(2)

A. Where Claims Are Contrary to the Specification, Such Claims Do Not Distinctly Claim What “The Applicant Regards as His Invention”: Claims Are Invalid Under § 112(2) Even Though Mistake Was Obvious

In Allen Engineering Corp. v. Bartell Industries, Inc., Allen Engineering’s patent-in-suit was directed to concrete riding trowels.⁵¹³ Much of the invention, apparently, had to do with the steering mechanism. Some of the claims-at-issue limited one of two pivot steering boxes to pivoting “its gear box only in a plane perpendicular to said biaxial plane,” yet the specification said that “rotation about the axis established by bolt 272 is not permitted; gearbox 85A cannot pivot in a plane perpendicular to the biaxial plane.”⁵¹⁴ Allen Engineering argued that one of ordinary skill in the art would understand the term “perpendicular” should be read to mean “parallel.”⁵¹⁵ The Federal Circuit, however, concluded that “it is of no moment that the contradiction is obvious: semantic indefiniteness of claims ‘is not rendered unobjectionable merely because it could have been corrected.’”⁵¹⁶ The court concluded that because it was apparent from the specification that the inventor ***548** did not regard what was claimed to be his invention, the claims were invalid under § 112(2).⁵¹⁷

B. The Meaning of “Substantially” May Be Aided by Extrinsic Evidence of Usage and Meaning in the Context of the Invention

In Verve, LLC v. Crane Cams, Inc., the invention related to improved push rods for internal combustion engines.⁵¹⁸ Hollow push rods had been developed to meet a need for stronger, lighter push rods in modern engines having increased engine speeds.⁵¹⁹ Verve’s patent-in-suit disclosed and claimed a hollow push rod having a larger overall diameter at the middle than at the ends, a substantially constant wall thickness, and rounded seats at the tips.⁵²⁰ The claims, *inter alia*, called for “said tube having substantially constant wall thickness throughout the length of the tube and the tips thereon.”⁵²¹

The district court granted summary judgment of invalidity, finding that “substantially constant wall thickness” was indefinite.⁵²² On appeal, the Federal Circuit reversed, noting that

[p]atent documents are written for persons familiar with the relevant field; the patentee is not required to include in the

specification information readily understood by practitioners, lest every patent be required to be written as a comprehensive tutorial and treatise for the generalist, instead of a concise statement for persons in the field.⁵²³

In resolving any ambiguity in the claims or specification, therefore, the Federal Circuit noted that the intrinsic evidence “may be aided by extrinsic evidence of usage and meaning of a term in the context of the invention,” i.e., the question should have been how the phrase “substantially constant wall thickness” would be understood by persons experienced in this field of mechanics.⁵²⁴ If persons in the field have differing opinions as to the meaning of a term, then the “judge will then be obliged to decide between contending positions; a role familiar to judges.”⁵²⁵ According to the court, “[i]t is well established that when the term ‘substantially’ *549 serves reasonably to describe the subject matter so that its scope would be understood by persons in the field of the invention . . . it is not indefinite.”⁵²⁶

VII. Interferences - Proving a Date of Invention

A. General Practice and Procedure

1. A Patent-Patent Interference Under § 291 Requires Interfering Claims Drawn to the Same Invention

In *Talbert Fuel Systems Patents Co. v. Unocal Corp.*, Talbert’s patent-in-suit was directed to certain reformulated gasolines that reduced emissions but retained certain performance parameters.⁵²⁷ Talbert’s reformulated gasoline was substantially free from low-end hydrocarbons in the C₄-C₅ range (which vaporized easily and could enter the atmosphere easily for example at a gas pump) and high-end hydrocarbons in the C₁₁-C₁₂ range (which may be incompletely combusted and could enter the atmosphere through engine exhaust).⁵²⁸ However, low-end hydrocarbons aided effective ignition and high-end hydrocarbons provided fuel energy.⁵²⁹ Talbert’s gasoline contained a “minimum effective amount” of low-end hydrocarbons as a “priming agent.”⁵³⁰

Talbert asserted that it had disclosed its invention to Unocal in 1989, but Unocal, after evaluation, stated that it was not interested.⁵³¹ Nevertheless, Unocal later filed its own application on a reformulated gasoline that issued as the ‘393 patent.⁵³² Talbert sought an interference in the district court under § 291 vis-à-vis claim 81 of the ‘393 patent.⁵³³ The district court, however, found that the inventions covered by the respective claims were not the same.⁵³⁴ On appeal, the Federal Circuit agreed.⁵³⁵

Claim 81 of Unocal’s ‘393 patent called for, inter alia, an “octane value of at least 92.”⁵³⁶ Affidavits that Talbert had submitted stated that Talbert’s gasoline *550 had an octane value of 84.3 and that additives were used to raise the octane to 92.⁵³⁷ The Federal Circuit, although agreeing that “interfering claims need not recite all of the same limitations, if in fact the claims cover the same subject matter,” concluded that “the octane value required by Unocal’s claim 81 is not possessed by Talbert’s gasoline of claim 1, but is available only by manipulation of the composition using octane-increasing additives.”⁵³⁸ According to the court, that made Talbert’s claimed subject matter different from Unocal’s.⁵³⁹

Query, however, whether that is the correct result in view of the fact that Talbert’s representative claim called for a “gasoline comprising a priming agent and a hydrocarbon mixture having an intermediate carbon range.”⁵⁴⁰ In other words, the claim did not preclude other additives, and it was known in the art that such additives could be added to increase octane value. If the claim was otherwise to the same invention, and the Federal Circuit does not urge otherwise, it would seem that there is interfering subject matter.

2. Counts in Interferences Must Be Construed in a Fashion Similar to Claims

In *Griffin v. Bertina*, the count was: “A method according to claim 62 of the Bertina application OR A kit according to claim 81 of the Bertina application.”⁵⁴¹ Claim 62 called for a “method for diagnosing an increased risk for thrombosis or a genetic defect causing thrombosis comprising the steps of”⁵⁴² Griffin attempted to show an actual reduction to practice prior to Bertina’s earliest priority date by showing that he had performed the claimed steps.⁵⁴³ Griffin argued that the preamble should not be limiting.⁵⁴⁴ Both the board and the Federal Circuit concluded otherwise, however.⁵⁴⁵ As such, Griffin conceded at oral argument that he could not show an earlier reduction to practice.⁵⁴⁶

In *Adang v. Fischhoff*, the subject matter was tomato plants that had been genetically modified to incorporate a bacterial gene, *Bacillus thuringiensis* (Bt), that *551 provided insect resistance.⁵⁴⁷ The board construed the count so narrowly that no example of either application in interference satisfied the count.⁵⁴⁸ The Federal Circuit said applying normal claim construction principles was error.⁵⁴⁹ The case is otherwise fact-specific.

In *Manning v. Paradis*, similar to *Griffin*, the Federal Circuit construed “[a] method of treating a subject in cardiac arrest comprising . . . “in the preamble as limiting and as defining the intended purpose of the invention.”⁵⁵⁰ Manning, the junior party, relied on certain experiments with a dog as proving an earlier actual reduction to practice.⁵⁵¹ However, those experiments and a subsequent journal article describing the same did not demonstrate that he appreciated that oxygen was actually delivered to the heart during the experiments.⁵⁵² That is, construing the preamble as limiting, the experiment did not result in treating a subject for cardiac arrest.⁵⁵³ Accordingly, the board and the Federal Circuit concluded that Manning had not appreciated that the invention had worked for its intended purpose, i.e., treating cardiac arrest.⁵⁵⁴

3. When Patent-Patent Interferences Are Conducted in District Court Under § 291, a Single Description of the Interfering Subject Matter - Like a Count - is Necessary for a Determination of Priority

The court so held in *Slip Track Systems, Inc. v. Metal-Lite, Inc.*, a patent-patent interference.⁵⁵⁵ The general subject matter was a slotted header that prevented dry wall from cracking during earthquakes by permitting the wallboard to move up and down.⁵⁵⁶ One of the issues concerned conception.

Slip Track produced drawings said to corroborate conception prior to Metal-Lite’s filing date.⁵⁵⁷ Metal-Lite contended that the drawings were insufficient because they did not show wallboard.⁵⁵⁸ Slip Track asserted that wallboard was not a *552 claim limitation.⁵⁵⁹ The problem was that the district court had not defined a “count” per se.⁵⁶⁰ The Federal Circuit, acknowledging that it had not previously squarely addressed the issue, held that “given interfering patents, a single description of the interfering subject matter is necessary for a determination of priority.”⁵⁶¹

The court explained that

[a]s with a count in the administrative interference process before the PTO, the description of interfering subject matter must be broad enough to encompass the common subject matter of the claims in both patents, in this case, the claims of the ‘760 patent and the claims of the ‘203 patent.⁵⁶² Interfering patents are those that claim the same subject matter. Thus, the claims, not the disclosure, must be compared to determine the “common” or interfering subject matter.⁵⁶³ The Federal Circuit reasoned that

[s]ince the claims of the ‘760 patent do not include a wallboard, and . . . the specification is not relevant to the determination of an interference, the wallboard cannot be an element of the interfering subject matter in this case, even though it is a limitation in the claims of the ‘203 patent.⁵⁶⁴ Accordingly, the court concluded that Slip Track was entitled to its date of conception as corroborated by the drawings.⁵⁶⁵

4. The Ultimate Burden of Proof for Showing an Earlier Date of Invention Remains on the Junior Party - The Burden of Proof Does Not Shift

That was the holding of the Federal Circuit in *Brown v. Barbacid* over a strenuous dissent by Circuit Judge Newman.⁵⁶⁶ The subject matter of the application-patent interference was an assay to identify anti-cancer compounds.⁵⁶⁷ The Barbacid patent issued from an application filed on May 8, 1990.⁵⁶⁸ The Brown *553 application was filed on December 22, 1992, but was accorded the benefit of an earlier application filed on April 18, 1990.⁵⁶⁹ Thus, Brown was senior party.

Under 37 C.F.R. § 1.657(a), “[a] rebuttable presumption shall exist that, as to each count, the inventors made their invention in the chronological order of their effective filing dates. The burden of proof shall be upon a party who contends otherwise.”⁵⁷⁰ The junior party has the burden of establishing priority by a preponderance of evidence.⁵⁷¹

“The board found that Barbacid showed an actual reduction to practice no later than March 6, 1990.”⁵⁷² It found that Brown had not shown a reduction to practice prior to March 6, 1990 and declined to consider Brown’s assertions of earlier conception finding that those assertions were made in Brown’s Statement of Facts rather than in the “Argument” section of its brief.⁵⁷³

On appeal, Brown argued, *inter alia*, that the board had improperly shifted the burden of proof by requiring Brown to show, by a preponderance of the evidence, that he had a conception or reduction to practice prior to March 6, 1990.⁵⁷⁴ Brown argued that the board should have shifted only the burden of production, i.e., the burden of going forward, rather than the burden of proof.⁵⁷⁵

The panel majority agreed.⁵⁷⁶ Treating the issue as one of first impression, the panel majority viewed 37 C.F.R. § 1.657(a) as imposing the burden of proof, *vis-à-vis* priority of invention, on the junior party and that such burden did not shift.⁵⁷⁷ The panel majority also concluded that the board had erred in failing to consider Brown's evidence of a prior conception.⁵⁷⁸ The panel majority, accordingly, vacated and remanded.⁵⁷⁹

Circuit Judge Newman, in dissent, urged that the respective burdens of proof in an interference had been "set long ago."⁵⁸⁰ In Judge Newman's view, the law *554 was well-settled that if a junior party established, by a preponderance of the evidence, an invention date earlier than the senior party's effective filing date, the presumption of § 1.657(a) was rebutted, and the junior party would prevail unless the senior party met its burden of proving an earlier date of invention.⁵⁸¹ According to Judge Newman, the burden of proof at that stage shifts to the senior party.⁵⁸² Judge Newman agreed, however, that the board had erred in failing to consider the evidence of Brown's earlier conception but deemed the record complete and would have awarded priority to Brown.⁵⁸³

B. Diligence: Activities Directed to Building a Facility for Large-Scale Practice of the Process of the Count May Constitute Diligence: Communication of an Invention to an Agent in the U.S. Constitutes a Date of Conception

The Federal Circuit said so in *Scott v. Koyama*.⁵⁸⁴ The invention was a process for producing a certain chemical compound used as a replacement for chlorofluorocarbons in refrigeration systems.⁵⁸⁵ Koyama, the senior party, relied on his Japanese filing date as a constructive reduction to practice.⁵⁸⁶ Scott's application was assigned to Imperial Chemical Industries PLC (ICI).⁵⁸⁷ Scott's evidence of conception was a description of his process that was disclosed to individuals at ICI's U.S. subsidiary.⁵⁸⁸ The Federal Circuit confirmed that the 100+ year old rule that communication of an invention to an agent in the U.S. for the purpose of filing a patent application or for introducing it to public use establishes conception in the U.S. still has vitality, and it accorded Scott the date of that communication as conception.⁵⁸⁹ Scott had not shown actual reduction to practice in the U.S.⁵⁹⁰ Scott, therefore, had to show diligence from just prior to Koyama's priority date to his filing date - a seventeen day period.⁵⁹¹ Scott presented evidence of daily activity directed toward building a manufacturing plant to practice the process. *555⁵⁹² The board found that such activity was directed to commercializing the invention and, therefore, could not count toward diligence.⁵⁹³ The Federal Circuit disagreed, finding that Scott's activity was directed toward an actual reduction to practice.⁵⁹⁴ Accordingly, the court reversed.⁵⁹⁵

C. Reduction to Practice: Testing is Evidence of Whether the Inventor Would Have Known That an Invention Was Suitable for Its Intended Purpose

As noted above, *Slip Track Systems, Inc. v. Metal-Lite, Inc.* involved a patent-patent interference, and the subject matter was "a slotted header that prevents dry wall from cracking during earthquakes by permitting the wallboard to move up and down."⁵⁹⁶ Another of the issues in the case concerned reduction to practice.⁵⁹⁷ Prototypes had been made, but they were not tested because they were made of cardboard rather than wallboard; however, there was expert testimony to the effect that viewing those prototypes would indicate that they would work.⁵⁹⁸

According to the panel, "testing is relevant in that it is evidence of whether the inventor would have known that an invention is suitable for its intended purpose."⁵⁹⁹ However, the panel also noted that "[t]esting is not itself a requisite for reduction to practice, although it may be a requisite for showing that a prototype demonstrates that an invention is suitable for its intended purpose."⁶⁰⁰

The panel noted that "[i]n some cases, where the invention is particularly complicated, the absence of testing may be sufficient in and of itself to justify a grant of summary judgment denying priority for lack of reduction to practice."⁶⁰¹ However, according to the panel, in a case where the necessity of such testing is more uncertain, as in this case, and where there is other uncontroverted evidence that the inventor would have known that the invention would work for its intended purpose, it is inappropriate to grant summary judgment *556 on the basis of lack of testing alone, given the preponderance of the evidence standard.⁶⁰²

The Court's conclusion is questionable, to say the least. It is true that there are some cases in which the "devices [are] so simple that a mere construction of them is all that is necessary to constitute reduction to practice."⁶⁰³ But the description of the invention and the claims reproduced in the opinion suggest that the present invention was not that simple. Thus, under existing case law, some testing would be required to determine whether the invention worked for its intended purpose (traditional standard) or was "suitable" for its intended purpose (one more recent standard used by some panels). Actual "environmental" testing may have been excused per *Scott v. Finney*,⁶⁰⁴ and testing in an actual earthquake may not have been necessary. Nevertheless, under existing principles, some type of testing that would have simulated earthquake conditions would be required. Here, cardboard "prototypes" had been constructed and apparently nothing else. This panel seems to be suggesting that an actual reduction to practice could then result if the inventor testified that, upon viewing those cardboard "prototypes," he knew they would actually work. If that is truly what the panel is saying, this is a significant departure from traditional principles of reduction to practice.

VIII. Reissue & Reexamination

A. The Orita Rule Narrowed to Its Facts

The applicant, in *In re Orita*, agreed to a restriction requirement and cancelled the non-elected claims.⁶⁰⁵ Following issuance of the patent, Orita filed a reissue application seeking to add four claims substantially identical to the originally non-elected claims.⁶⁰⁶ The board and the court sustained the examiner's rejection holding that an "error" in failing to file a divisional application on non-elected claims was not an "error" correctable by reissue under § 251.⁶⁰⁷ The Federal Circuit has applied that rule in one other case, which involved a similar fact pattern.⁶⁰⁸

In *In re Doyle*, the Federal Circuit essentially limited *Orita* to its facts.⁶⁰⁹ Doyle filed an application generally directed to a chiral catalysts and methods of *557 using the same.⁶¹⁰ The examiner issued a nine-way restriction requirement.⁶¹¹ Doyle elected Group VI, namely certain method claims, and cancelled the other pending claims.⁶¹² Doyle did not file a divisional application, and his patent issued in due course.⁶¹³ Shortly before the running of the two-year bar for broadening reissues, Doyle filed a reissue application asserting that the claims were narrower than permitted by the prior art.⁶¹⁴ Doyle filed proposed reissue genus claims that read on, but were broader than, the non-elected claims.⁶¹⁵ The examiner rejected the newly submitted claims, *inter alia*, on the *Orita* rule.⁶¹⁶ The board agreed, but on appeal, the Federal Circuit reversed.⁶¹⁷

The court viewed the claims as squarely within the "mandate" of § 251, namely, claims that were broader than the originally presented claims.⁶¹⁸ The court distinguished the situation from *Orita* in that (1) Doyle's claims were neither identical to nor substantially similar to the non-elected claims - they were substantially broader and (2) Doyle could have (and should have) prosecuted the broader genus claims as "linking" claims in the earlier application.⁶¹⁹

B. Reexamination - Means-Plus-Function Limitations

If claims are broadened during reexamination, the claim is invalid.⁶²⁰ The Federal Circuit applies their previous analysis of broadening claims in a reissue application.⁶²¹ The rule is that a reexamined claim that is broader in any respect is considered to be broader than the original claim even though it may be narrower in other respects.⁶²²

*558 What happens when means-plus-function limitations are amended during reexamination? That was the issue in *Creo Products, Inc. v. Presstek, Inc.*⁶²³ The subject of the patent-in-suit dealt with correcting registration errors in color off-set printing.⁶²⁴ The original claim limitations were amended during reexamination as follows:

iii. means for offsetting, with respect to said x and y coordinates, the action of the discharge-source actuation means in accordance with the angular offset parameters to correct [imaging errors] the angular inconsistencies; and

iv. means for altering the length of the scan in accordance with the size difference parameters to correct the image-size inconsistencies.⁶²⁵ The specification disclosed four algorithms for correcting different types of errors.⁶²⁶ Creo urged that the original claim required programming for all four algorithms (i.e., that was the structural support for the original means-plus-function limitation) and that the amended claim only required programming for two.⁶²⁷ The Federal Circuit disagreed, noting that a written description may disclose alternative "structures" for performing the claimed function.⁶²⁸ The

court read the original claim as covering one or more of the disclosed algorithms but not necessarily all four.⁶²⁹ Accordingly, the court concluded that the reexamined claims were not invalid under § 305.⁶³⁰

IX. Inventorship

A. Determining Inventorship Also Requires Correct Claim Construction: Inventorship May Be Corrected Even Though Patent is Unenforceable for Inequitable Conduct Associated with the Failure to Name the Correct Inventor

In *Frank's Casing Crew & Rental Tools, Inc. v. PMR Technologies, Ltd.*, the subject matter of the patent-in-suit, licensed by PMR, was a method and apparatus for monitoring torque while making up pipe connections.⁶³¹ Specifically, torque was monitored as the connection was made-up.⁶³² The inventors were Darrell Vincent, *559 Larry Vincent, and John Shaunfield.⁶³³ After receiving a cease and desist letter, Frank's brought a declaratory judgment action asserting, inter alia, that another individual, Weiner, was the true inventor.⁶³⁴ Frank's was the assignee of Weiner's interest.⁶³⁵

"Weiner had extensive experience in the field of torque monitoring" and had worked with the Vincent brothers as a consultant in the late '70s until 1981, when their relationship began to deteriorate.⁶³⁶ Prior to leaving, Weiner had worked on a torque monitoring device that used a computer and CRT, which Shaunfield was later hired to program.⁶³⁷ The Vincents filed an application in 1982 that (after an intermediate broadening reissue) matured into the patent-in-suit, which they contended was different than the system that Vincent had worked on.⁶³⁸ Although they listed Shaunfield as an inventor, they did not tell him about the application and filed a declaration averring that Shaunfield had refused to execute the oath/declaration.⁶³⁹ After a later investigation, the PTO found that the Vincents' conduct did not amount to inequitable conduct. The Vincents also did not tell Weiner about the application.⁶⁴⁰

The district court found that Weiner should have been named as either the sole or a co-inventor.⁶⁴¹ The Federal Circuit agreed.⁶⁴² The district court, however, had not construed the claims and, instead, had focused on credibility determinations.⁶⁴³ On appeal, the Federal Circuit independently construed the disputed term "monitoring" and concluded that the term did not require a machine-or computer-implemented method.⁶⁴⁴ Under the court's construction, Weiner was clearly an inventor or co-inventor, as the district court had found.⁶⁴⁵ The district court had refused, however, to correct inventorship because the court had also found that the Vincents had engaged in inequitable conduct before the PTO in failing to name *560 Weiner.⁶⁴⁶ The Federal Circuit, though, noted that "[n]othing in the statute governing a court's power to correct inventorship . . . prevents a court from correcting the inventorship of an unenforceable patent."⁶⁴⁷

B. For Two Patents with "Overlapping Subject Matter," Inventorship of Each Patent is Distinct, and Failure of One Party to Prove That It Co-Invented the Other Party's Invention is Not Sufficient Proof That the Other Party Co-Invented the First Party's Invention

In *Trovan, Ltd. v. Sokymat SA*, the patent at issue was drawn to a miniature passive transponder, used, for example, for animal tracking and identification, anti-theft devices, and access control systems.⁶⁴⁸ That patent illustrated an antennae coil of very thin wire wound around a cylindrical magnetic core.⁶⁴⁹ The wire ends of the coil were shown as attached to a small integrated circuit.⁶⁵⁰

In developing the passive transponder, Trovan sought the expertise of Sokymat, a Swiss watch manufacturer, on ways to automate the winding of wire to make the antennae coils.⁶⁵¹ Trovan and Sokymat agreed to work together to optimize production of Trovan's transponders and entered into a non-disclosure agreement, which covered Trovan's existing intellectual property but did not cover Sokymat's existing intellectual property.⁶⁵² The agreement had no provision for assignment of any invention developed during the collaboration.⁶⁵³ The Trovan-Sokymat design team included Trovan's engineers, Hadden and Zirbes, and Sokymat's chief, Gustafson.⁶⁵⁴ Research and progress meetings were conducted both in the U.S. and in Switzerland.⁶⁵⁵ In January of 1991, Gustafson, in Switzerland, assembled a transponder by thermal compression in which the wire ends of the coil provided the sole support for the integrated circuit.⁶⁵⁶ On February 26, 1991, Gustafson demonstrated the device to Trovan in Switzerland.⁶⁵⁷

*561 The day before that demonstration, however, Gustafson had filed a patent application with the Swiss patent office claiming the method for thermal compression bonding and for supporting an integrated circuit solely by the antennae wire

ends as well as for the any product thereby obtained.⁶⁵⁸ The application listed only Gustafson as an inventor.⁶⁵⁹ Gustafson later used the Swiss application as priority for the United States patent application that matured into the '410 patent.⁶⁶⁰ Gustafson did not disclose the patent application or its contents to Trovan.⁶⁶¹

On June 5, 1991, Hadden and Zirbes filed, as co-inventors, the application that matured into the '855 patent, the patent at issue.⁶⁶² The patent was assigned to Trovan, and Gustafson was not included in the application as a co-inventor.⁶⁶³

In June of 1997, Trovan sued Sokymat, asserting, inter alia, ownership and infringement of the '410 and '855 patents.⁶⁶⁴ Sokymat responded by alleging that Gustafson was the sole inventor and sole owner of the '410 patent and should be declared to be a co-inventor and co-owner of the '855 patent.⁶⁶⁵ Sokymat further alleged that the '855 patent was invalid and unenforceable because Gustafson was omitted as a co-inventor with deceptive intent.⁶⁶⁶ Ultimately, the parties disputed the inventorship of an embodiment of the '855 patent in which the wire ends of the antennae coil provided the sole support for the integrated circuit, i.e., the integrated circuit was not otherwise supported within the transponder.⁶⁶⁷ The parties also disputed the inventorship of thermal compression bonding of the wire ends to their corresponding pads on the integrated circuit.⁶⁶⁸

The district court ruled that Hadden and Zirbes were not co-inventors of the '410 patent.⁶⁶⁹ The Federal Circuit affirmed with respect to the '410 patent but remanded for determination of the ownership of the '855 patent.⁶⁷⁰ The district court, on remand, ruled that Gustafson was not a co-inventor of the '855 patent. ***562** Sokymat appealed arguing that (1) because Gustafson was named the sole inventor of the '410 patent and because the '410 and '855 patents had “overlapping subject matter,” it followed that Gustafson was at least a co-inventor of the '855 patent and that (2) Gustafson conceived and reduced to practice the wire support feature of claims 5 and 9 of the '855 patent.⁶⁷¹

The Federal Circuit vacated and remanded, concluding that the lower court had failed to distinguish between the direct bonding and wire support features.⁶⁷² The court began its analysis by explaining that:

...because co-inventors need not ‘make a contribution to the subject matter of every claim of the patent,’ 35 USC §116, inventorship is determined on a claim by claim basis. Moreover, an inventorship analysis, like an infringement or invalidity analysis, begins as a first step with a construction of each asserted claim to determine the subject matter encompassed thereby. The second step is then to compare the alleged contributions of each asserted co-inventor with the subject matter of the properly construed claim to then determine whether the correct inventors were named.⁶⁷³

Regarding Sokymat’s “overlap” theory, the Federal Circuit recognized that it had affirmed the district court’s determination that Gustafson was the sole owner of the '410 patent. However, the Federal Circuit explained that:

although Gustafson is presumed to have invented the description described in the '410 patent, that presumption does not carry over to the '855 patent issued to Hadden and Zirbes. Even if Sokymat showed that the '410 and '855 patents contain ‘overlapping subject matter,’ that alone is insufficient to prove by clear and convincing evidence that Gustafson invented part of the invention in the '855 patent. While an examination of Gustafson’s inventive effort toward the '410 patent may have been probative regarding whether he invented certain features of the '855 patent, Sokymat cannot rely on Hadden and Zirbes’ failure to meet their burden of proof on the issue of inventorship of the '410 patent to satisfy its burden to prove that Gustafson is a co-inventor of the '855 patent. The two issues are distinct. It is not inconsistent in circumstance like this for a court to find that both parties have failed to meet their perspective burdens.⁶⁷⁴

With respect to the wire support feature, the Federal Circuit faulted the district court for failing to conduct an independent claim construction analysis for defending claims 5 and 9 and stated that, “[w]ithout a direct construction of claims 5 and 9, the meaning and the scope of the claims and the extent to which Gustafson may have contributed to the invention recited in those claims cannot be determined.”⁶⁷⁵ The Federal Circuit then construed claims 5 and 9 to “require that the wire leads provide at least some support for the silicon substrate but not necessarily ***563** the sole support.”⁶⁷⁶ As far as inventorship was concerned, “Gustafson’s reduction to practice was clear from the record.”⁶⁷⁷ However, testimony regarding conception of claims 5 and 9, where the wire leads were directly connected to the chip and provided support for the chip, had blurred the two concepts of direct bonding and wire support.⁶⁷⁸ Moreover, the district court had also failed to distinguish between the direct bonding and wire support features.⁶⁷⁹ Consequently, the Federal Circuit was unable to discern whether Gustafson was entitled to co-inventor status of the wire support feature of the '855 patent.⁶⁸⁰ Accordingly, the Federal Circuit vacated the district court’s decision and remanded “for determination of whether Hadden or Zirbes first conceived the wire support feature of claims 5 and 9 or whether Gustafson sufficiently contributed to the conception of claims 5 and 9 to be deemed a

co-inventor.”⁶⁸¹

Judge Michel, in dissent, argued that he was not “convinced that the district court improperly construed the claims.”⁶⁸² Further, Judge Michel viewed the record as sufficient to affirm and stated that “the practical effect of our decision is to give Gustafson a second bite at the apple when (even assuming an erroneous claim construction) the district court plainly believed that the defendants had not carried their burden the first time.”⁶⁸³

X. Licenses & Assignments

A. The Bona Fide License Defense Does Not Apply to Non-Exclusive Licenses

In general, the bona fide purchaser for value rule applies only to those cases in which there has been a transfer of title, i.e., the rule generally does not apply to executory contracts, leases, licenses, and the like that do not involve a transfer of title. The Federal Circuit has held that a “bona fide purchaser for value” of an interest in a patent is one who acquires an interest in a patent for valuable consideration from the legal title holder “without notice of an outstanding equitable claim or title” and is entitled to retain the purchased interest “free of any equitable encumbrance.” *564⁶⁸⁴ The Federal Circuit has also added that “[a]s a general proposition, in order to defeat a bona fide purchaser defense on the basis of notice, the purchaser must receive the notice before he has paid the consideration or before he has performed his purchase obligations.”⁶⁸⁵

In *Rhone-Poulenc Agro, S.A. v. DeKalb Genetics Corp.*, the Federal Circuit characterized the issue as “whether a sublicensee (Monsanto) that acquired the sublicense from a licensee (DeKalb Genetics Corp. (DeKalb)), that acquired the original license by fraud, may retain the sublicense by establishing that the sublicensee was a bona fide purchaser for value.”⁶⁸⁶ In a first panel opinion, the court held it was bound by the foregoing “rule” from *Heidelberg Harris*.⁶⁸⁷ The panel, though, clearly signaled possible en banc review noting: “[a]ny argument to the contrary must be addressed to the court sitting in banc.”⁶⁸⁸ *Rhone-Poulenc (RPA)* (now *Aventis CropScience, SA*) filed a combined petition for rehearing or rehearing en banc.⁶⁸⁹ The en banc court concluded that “because of the unique circumstance in [*Heidelberg Harris*], and the parties’ not having contested the issue, *Heidelberg Harris* is not binding authority on the bona fide purchaser issue; and the panel is not constrained by the court’s decision in *Heidelberg Harris*.”⁶⁹⁰ The first panel opinion was, therefore, vacated, and the panel issued a revised opinion holding that “the bona fide purchaser defense is governed by federal law and is not available to non-exclusive licensees in the circumstances of this case.”⁶⁹¹

RPA and DeKalb collaborated on the development of certain technology for producing herbicide resistant corn.⁶⁹² In an earlier trial, *Rhone-Poulenc Agro, S.A. v. DeKalb Genetics Corp. (Rhone-Poulenc I)*, the jury found that DeKalb had concealed certain successful field tests from RPA which fraudulently induced RPA to enter into a 1994 Agreement with DeKalb granting DeKalb a “world-wide, paid-up” license to use that technology in the field of use of corn.⁶⁹³ In 1996, however, *565 and before RPA filed the present actions against DeKalb and Monsanto, DeKalb sublicensed its rights to that technology to Monsanto in exchange for a license to certain Monsanto intellectual property.⁶⁹⁴ Monsanto also acquired a 40 percent equity ownership interest in DeKalb and 10 percent of DeKalb Class A (voting) stock.⁶⁹⁵ In *Rhone-Poulenc I*, though, the district court, following the jury’s findings, ordered rescission of the 1994 Agreement.⁶⁹⁶ The issue here, then, was what became of the 1996 Monsanto-DeKalb agreement.⁶⁹⁷

In response to the suit by RPA against DeKalb and Monsanto for patent infringement and trade secret misappropriation, Monsanto moved the district court for summary judgment that it had a valid license under RPA’s patent and its trade secrets because it was a BFP of the sublicense.⁶⁹⁸ The district court orally granted that motion and dismissed both the patent infringement and trade secret misappropriation claims against Monsanto.⁶⁹⁹ On appeal, in the second panel opinion, the Federal Circuit vacated and remanded.⁷⁰⁰

First, the Federal Circuit decided whether the bona fide license defense to a patent infringement claim was a matter of state or federal common law.⁷⁰¹ The issue could be outcome determinative because the law of North Carolina, the law otherwise applicable in the case, did not recognize a BFP defense unless there had been a transfer of title.⁷⁰² The Federal Circuit concluded in both panel opinions in *Rhone-Poulenc II* that, “[b]ecause of the importance of having a uniform national rule, we hold that the question of whether a bona fide purchaser defense to patent infringement may be asserted is a matter of federal law.”⁷⁰³

On the merits, the Federal Circuit noted that, in some instances, the bona fide purchaser defense was governed by federal statute, i.e., § 261, but that only applied where the patent owner made inconsistent assignments.⁷⁰⁴ Nevertheless, § 261 provided that patents were to be treated as personal property, and the court reasoned that, under the common law, a bona fide purchaser was one who acquired title *566 to personal property.⁷⁰⁵ The court recognized that in some instances an exclusive license may be tantamount to an assignment of title but only where the licensee holds “all substantial rights.”⁷⁰⁶ Here, the court noted, the license was non-exclusive and there was no assignment or something equivalent to an assignment.⁷⁰⁷ Accordingly, the court held that the bona fide purchaser defense does not apply to non-exclusive licenses.⁷⁰⁸

B. Assignment Covering Present Application and Any CIP Does Not Necessarily Cover Future Application Not Designated as a CIP

In *University of West Virginia, Board of Trustees v. VanVoorhies*, VanVoorhies, a senior design engineer for GM, enrolled in graduate school at WVU to pursue a Ph.D. in engineering.⁷⁰⁹ The WVU patent policy applied to full-time and part-time members of the faculty and staff, as well as to graduate and undergraduate students.⁷¹⁰ That patent policy, as is typical of most university patent policies, required that inventions made using University personnel or resources be assigned to the WVU.⁷¹¹ VanVoorhies developed a first invention (Invention # 1), a contrawound toroidal helical antenna, and executed an assignment of that invention to WVU when a patent application was filed.⁷¹² That assignment contained the usual language that VanVoorhies assigned “all right, title and interest” in the invention, in the application, in any resulting U.S. and foreign patents, and in any “divisional, continuation, continuation-in-part or substitute applications” to the University.⁷¹³ VanVoorhies later developed a second invention (Invention # 2), which was also a contrawound toroidal helical antenna, and filed an invention disclosure with the University urging that WVU seek patent protection.⁷¹⁴ When WVU later sent him an application for signature, however, he did not respond.⁷¹⁵ WVU filed the application without his signature as a CIP of the earlier application.⁷¹⁶ VanVoorhies, who had become a registered patent agent by this time, later filed his own application *567 on Invention # 2 but did not designate it as a CIP of WVU application # 1.⁷¹⁷ WVU sued VanVoorhies, alleging a breach of his obligation to assign Invention # 2 to WVU.⁷¹⁸ VanVoorhies responded with a host of counterclaims, including fraud, breach of fiduciary duty, etc. The district court granted WVU summary judgment.⁷¹⁹ On appeal, the Federal Circuit affirmed.⁷²⁰

As for WVU application # 2, the Federal Circuit determined that (1) the application was, in fact, filed as a CIP of WVU application # 1 and (2) that it, therefore, fell within literal language of the assignment executed in conjunction with WVU application # 1.⁷²¹ The Federal Circuit specifically did not determine whether WVU application # 2 would be entitled to the benefit of the filing date of the earlier WVU application # 1, saying that question was not before the court.⁷²²

Query: Is this putting form over substance? That is, the result seems to be that the assignment language is triggered by the act of filing an application claiming it is a CIP of an earlier application without regard to whether the second application is, in fact, substantively a CIP. If it is later determined that no part of the second application, although filed during the pendency of the earlier application and sharing at least one common inventor, finds support in the earlier application, may the assignment then be rescinded? Presumably not. The Federal Circuit appears to read the assignment as covering the “act” of filing a CIP, etc. without regard to the substance of the second application.

XI. Inequitable Conduct

A. Materiality: Affidavits That Are Literally True, Even If Misconstrued by the Examiner, May Not Meet the Threshold Level of Materiality

Juicy Whip, Inc. v. Orange Bang, Inc.,⁷²³ as discussed previously, involved a patent to a beverage dispenser having a countertop display bowl and additional equipment concealed from public view.⁷²⁴ During prosecution, in response to rejections under § 103, the inventors submitted, inter alia, declarations directed to commercial success and long-felt need.⁷²⁵ Orange Bang’s assertion of inequitable *568 conduct centered on two of those declarations: the Boulahanis declaration and the Bowers declaration.⁷²⁶

The Boulahanis declaration was directed to the advantages of the invention and cleaning problems experienced by the prior art.⁷²⁷ Boulahanis declared that he “worked for a distributor of Orange Bang and was responsible for servicing, maintaining, and repairing pre-mix dispensers.”⁷²⁸ In general, his declaration discussed “the difficulties of cleaning and maintaining pre-mix dispensers.”⁷²⁹

After submission of that declaration, the examiner characterized the declaration as being from “an employee of a competitor of the company owning the rights to the instant invention.”⁷³⁰ That, of course, was incorrect. The examiner, nevertheless, continued the rejection, and the inventors submitted the Boulahanis declaration two more times without correcting the examiner’s misunderstanding.⁷³¹

The Bowers declaration was directed toward the asserted commercial merits of the invention.⁷³² At the time of the declaration, Bowers was an employee of Coca-Cola USA.⁷³³ At that time, Coca-Cola and Juicy Whip had an agreement covering the purchase of 10,000 Juicy Whip dispensers over a five-year period.⁷³⁴ Bowers declared that he was Manager of the Innovation Center with Coca-Cola, had read about Juicy Whip’s dispenser, had investigated the product, and had arranged for the installation of fifty dispensers to be serviced by Coca-Cola.⁷³⁵ Bowers praised the Juicy Whip dispenser saying that it would be “absurd” not to use it.⁷³⁶

After that declaration was filed, however, Coca-Cola filed a protest against issuance of the patent-in-suit.⁷³⁷ Coca-Cola, in its protest, said that some of the statements in the Bowers declaration were untrue.⁷³⁸ For example, Bowers had declared ***569** that the Juicy Whip dispenser had “solved the display bowl cleaning problem that had confronted Coca-Cola for more than 10 years.”⁷³⁹ The protest contained a declaration from Coca-Cola’s manager of post-mix sales equipment that Coca-Cola technical personnel had never been asked to solve that problem.⁷⁴⁰ The examiner rejected that protest, noting that the Bowers declaration had been given little weight.⁷⁴¹

Orange Bang also relied on a letter (the Stratton letter) drafted by one of the inventors and addressed to the California Department of Health Services.⁷⁴² The letter was, apparently, drafted to address a concern about potential consumer confusion.⁷⁴³ The letter said that a disclaimer would be placed on the bowl indicating that the liquid was “for advertising purposes only.”⁷⁴⁴ At trial, Juicy Whip produced the original letter and testimony that it was never mailed, despite earlier contradictory deposition testimony.⁷⁴⁵ Orange Bang was evidently asserting that the letter should have been disclosed to the PTO because it bore on Orange Bang’s argument in an earlier appeal that the invention lacked utility under § 101 as being deceptive.⁷⁴⁶

The jury found that Orange Bang had proved inequitable conduct.⁷⁴⁷ On appeal, the Federal Circuit reversed.⁷⁴⁸ Specifically, the Federal Circuit concluded that neither the Boulahanis declaration nor the Stratton letter met a threshold level of materiality and that there was no threshold showing of intent vis-à-vis the Bowers declaration.⁷⁴⁹

Regarding the Boulahanis declaration, the Federal Circuit emphasized that “[i]t is undisputed that every statement in the declaration is a true statement.”⁷⁵⁰ The Federal Circuit acknowledged that it was “misleading” to re-submit the declaration two more times knowing that the examiner misunderstood Boulahanis’ employment ***570** and said that it was “bothered” by the inventors’ failure to correct that misunderstanding.⁷⁵¹ Nevertheless, the court reasoned that the declaration accurately explained the cleaning problems solved by the invention.⁷⁵² According to the court’s rationale, “[t]he relevant inquiry before the examiner was whether the claimed invention solved a long-felt need, not who said the invention solved the long-felt need.”⁷⁵³

That conclusion, appears to be directly contrary to *Refac International, Ltd. v. Lotus Dev. Corp.*,⁷⁵⁴ holding that assertedly immaterial (i.e., cumulative) affidavits do not have the same status as assertedly immaterial references. The Federal Circuit held that affidavits are “inherently material, even if only cumulative.”⁷⁵⁵ The Federal Circuit also pointedly noted that omissions in affidavits can result in a finding of equitable conduct to the same degree as direct misrepresentations.⁷⁵⁶ One of the omissions in Refac concerned the impression given in the subject declarations that the declarants were independent from the inventors.⁷⁵⁷ Contrary to the court’s comments in Juicy Whip, Refac insists that the court will consider the identity of the declarant. Whether or not the declarant is an independent party clearly impacts the credibility and weight given to their statements.⁷⁵⁸

With respect to the Stratton letter, the Federal Circuit noted that it had previously rejected Orange Bang’s contention that the claimed invention lacked utility because its purpose was to deceive the public.⁷⁵⁹ Accordingly, the court concluded that the letter did not meet a threshold level of materiality.⁷⁶⁰

With respect to the Bowers declaration, Orange Bang argued that the declaration misrepresented the commercial success of the Juicy Whip dispenser.⁷⁶¹ The Federal Circuit, though, viewed the declaration as expressing Bowers’ personal views regarding the state of the beverage industry and what was happening at Coca- ***571** Cola.⁷⁶² The court viewed the subsequent

protest by Coca-Cola as a “disagreement” between Bowers and Coca-Cola.⁷⁶³ According to the court, the record did not reflect that the inventors knew that anything in the Bowers declaration was false or misleading at the time that they submitted it to the PTO, and the statements in the declaration vis-à-vis Coca-Cola having ordered 10,000 dispensers were true.⁷⁶⁴ Accordingly, the court concluded that there was no threshold showing of intent to deceive.⁷⁶⁵ Indeed, according to the court, the only evidence bearing on intent was that Juicy Whip hired Bowers two years after his declaration was filed.⁷⁶⁶

The court’s conclusions vis-à-vis the Stratton letter and the Bowers declaration were supportable, but it appears that the court’s conclusion vis-à-vis the Boulahanis declaration is not supportable, at least not in light of Refac. Even if the declaration was “inherently material,” the level of materiality appears to have been low.

B. Intent

1. Inferred: Deliberately Concealing and Not Naming Correct Inventor Can Constitute Inequitable Conduct: One Bad Apple Spoils the Barrel - Patent is Not Enforceable Even by Innocent Non-Named Co-Inventor

The subject matter of the patent-in-suit in *Frank’s Casing Crew & Rental Tools, Inc. v. PMR Techs., Ltd.*,⁷⁶⁷ licensed by PMR, was a method and apparatus for monitoring torque while making up pipe connections, as discussed above.⁷⁶⁸ The named inventors were Darrell Vincent, Larry Vincent, and John Shaunfield.⁷⁶⁹ After receiving a cease and desist letter, Frank’s brought a declaratory judgment action asserting, inter alia, that another individual, Weiner, was the true inventor.⁷⁷⁰ Frank’s was the assignee of Weiner’s interest.⁷⁷¹

The district court found that Weiner should have been named as either the sole or a co-inventor.⁷⁷² The Federal Circuit agreed.⁷⁷³ The district court also *572 found that the Vincent brothers had engaged in a “pattern of intentional conduct designed to deceive the attorneys and patent office as to who the true inventors were.”⁷⁷⁴ The district court found that Weiner’s involvement was material because he was one of the inventors and found intent stemming from their dispute with Weiner over some stock ownership.⁷⁷⁵ On appeal, without much discussion, the Federal Circuit affirmed.⁷⁷⁶

Frank’s, as assignee of Weiner’s interest, contended that the named inventors’ conduct should not lead to unenforceability of the patent vis-à-vis Weiner.⁷⁷⁷ The Federal Circuit disagreed, noting that, “if unenforceable due to inequitable conduct, a patent may not be enforced even by ‘innocent’ co-inventors. One bad apple spoils the entire barrel. Misdeeds of co-inventors, or even a patent attorney, can affect the property rights of an otherwise innocent individual.”⁷⁷⁸ Frank’s urged that the “bad apple” rule should only apply “where all the apples in the barrel are true inventors.”⁷⁷⁹ The Federal Circuit disagreed, noting that this was not a situation in which the patent would have issued without the participation of the wrongdoers.⁷⁸⁰ Accordingly, the “bad apple” rule applies, even though Weiner had no participation whatsoever in the inequitable conduct.⁷⁸¹

2. Not Inferred: No Direct Evidence of Intent to Deceive the PTO

As noted earlier in other sections, *Allen Engineering Corp. v. Bartell Industries, Inc.*⁷⁸² involved concrete riding trowels used to smooth the surface of freshly poured concrete. One of the problems with such trowels was relatively poor steering.⁷⁸³ Allen Engineering produced a first model called the “Red Rider” in the late 1980’s featuring dual control sticks and an operator seat facing forward, as distinct from “straddle-type” seats similar to motorcycle seats.⁷⁸⁴ Sales of the Red Rider *573 began in 1988, and over one hundred units were sold.⁷⁸⁵ Allen Engineering continued its research, resulting in the development of another model, known as the “Flying Frame,” which was introduced in 1990.⁷⁸⁶ Allen Engineering’s patent-in-suit was filed on July 13, 1990 and issued in 1992.⁷⁸⁷

Bartell urged that the Red Rider placed the claimed invention “on sale” before the critical date and that failure to so advise the PTO constituted inequitable conduct.⁷⁸⁸ The Federal Circuit disagreed. The Federal Circuit found no abuse of discretion in the district court’s conclusion that there was no inequitable conduct.⁷⁸⁹ Bartell essentially urged that Allen Engineering was “grossly negligent” in failing to disclose the Red Rider to the PTO.⁷⁹⁰ However, the Federal Circuit noted that even if that were true, gross negligence alone was insufficient to establish inequitable conduct per *Kingsdown*.⁷⁹¹ The Federal Circuit further observed that Bartell had failed to advance evidence of a specific intent to deceive, and the Federal Circuit found no evidence of such intent of record.⁷⁹²

XII. Terminal Disclaimers--URAA

The Uruguay Round Agreements Act (URAA), which took effect January 1, 1995, changed the patent term from seventeen years from the date of issuance to twenty years from the date of filing.⁷⁹³ Under 35 U.S.C. § 154(c)(1), terms of existing patents and patents issuing on applications filed before June 8, 1995 were given the greater of the twenty-year or seventeen-year terms, subject to any terminal disclaimers.⁷⁹⁴ Many practitioners draft terminal disclaimers to refer to the statutory term of a patent. Some, however, refer to specific dates. As a result of the URAA, terminal disclaimers that referred to specific dates may have stated terms that are shorter than the actual statutory term. Terminal disclaimers cannot be amended.

***574** That was the situation in *Bayer AG v. Carlsbad Technology, Inc.*,⁷⁹⁵ and the Federal Circuit, thankfully, concluded that the PTO had acted correctly in amending its records to reflect the new URAA date despite an earlier date in a terminal disclaimer.

The patent-in-suit was directed to the commercially successful antibiotic Bayer marketed as CIPRO®.⁷⁹⁶ In earlier litigation, Bayer had filed a terminal disclaimer to avoid an allegation of double patenting.⁷⁹⁷ The terminal disclaimer referred to two earlier patents; the first to expire on October 1, 2002. The terminal disclaimer stated that “[t]he term of this patent subsequent to October 1, 2002, has been disclaimed.”⁷⁹⁸ As a result of the URAA, however, that patent was automatically extended to December 9, 2003—over a year later.⁷⁹⁹ Shortly after the URAA became effective in 1995, Bayer filed an amended terminal disclaimer, which the PTO treated as a petition under its discretionary authority.⁸⁰⁰ The PTO viewed the initial terminal disclaimer as ambiguous as a result of the URAA, i.e., it set out two dates, a specific date October 1, 2002 and the date automatically set by the URAA, December 9, 2003.⁸⁰¹ The PTO advised that, in view of that ambiguity, it was changing its records to reflect that later date. Carlsbad challenged the PTO’s authority to do so.⁸⁰²

The Federal Circuit concluded that the district court had properly accorded deference to the PTO’s action and also correctly interpreted the URAA.⁸⁰³ The Federal Circuit noted that the URAA automatically extended the patent term.⁸⁰⁴ According to the Federal Circuit, “[b]ecause Bayer linked its terminal disclaimer to the expiration date of the . . . [first to expire] patent, the terminal disclaimer date also automatically shifted to December 2003.”⁸⁰⁵

***575 XIII. Claim Construction**

A. Overview

Deciding patent infringement, of course, requires a two-step analysis.⁸⁰⁶ First, a court must determine as a matter of law the correct scope and meaning of a disputed claim term.⁸⁰⁷ The Federal Circuit reviews that part of the infringement analysis *de novo*.⁸⁰⁸ Second, the infringement analysis requires a comparison of the properly construed claims to the accused device, process etc. to determine whether the accused device, process etc. contains all of the limitations, either literally or by equivalents, of the asserted claims.⁸⁰⁹ Determining infringement, whether literal or under the doctrine of equivalents, is a question of fact.⁸¹⁰

B. Ordinary Meaning

Claim terms are generally given their ordinary meaning as understood by one of ordinary skill in the art,⁸¹¹ unless it appears from the specification or the prosecution history that the inventor intended a different meaning.

1. Claim Term Will Not Be Given Its Ordinary Meaning If (1) the Patentee Acted as His Own Lexicographer, (2) Intrinsic Evidence Shows That Patentee Expressly Disclaimed Subject Matter, or (3) the Term Chosen by the Patentee So Deprives the Claim of Clarity That Resort to Other Intrinsic Evidence is Required

In *CCS Fitness, Inc. v. Brunswick Corp.*,⁸¹² the court explained that “Generally speaking, we indulge a ‘heavy presumption’ that a claim term carries its ordinary and customary meaning . . . Sensibly enough, our precedents show that dictionary ***576** definitions may establish a claim term’s ordinary meaning.”⁸¹³ The court also explained when a claim term would not receive its ordinary meaning:

[A] court may constrict the ordinary meaning of a claim term in at least one of four ways. First, the claim term will not receive its ordinary meaning if the patentee acted as his own lexicographer and clearly set forth a definition of the disputed claim term in either the specification or prosecution history. Second, a claim term will not carry its ordinary meaning 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. Third, a claim term also will not have its ordinary meaning if the term “chosen by the patentee so deprive[s] the claim of clarity” as to require resort to the other intrinsic evidence for a definite meaning. Last, as a matter of statutory authority, a claim term will cover nothing more than the corresponding structure or step disclosed in the specification, as well as equivalents thereto, if the patentee phrased the claim in step-or-means-plus-function format.⁸¹⁴

2. “Characterizable by” Does Not Mean “Determined from”

In *Union Carbide Chemicals & Plastics Technology Corp. v. Shell Oil Co.*, the subject matter of the three Union Carbide patents-in-suit was improved silver catalysts for the production of ethylene oxide.⁸¹⁵ One of the claim terms in dispute was “wherein the combination of silver, cesium and alkali metal in said catalyst is characterizable by an efficiency equation: [equation set out].”⁸¹⁶ The district court had construed that limitation to mean the combination of silver, cesium and alkali metal in the catalyst was “determined from the efficiency equation.”⁸¹⁷ That, the Federal Circuit said, was error. Relying on Webster’s Third New International Dictionary (1993), the court concluded that “characterizable” meant “capable of being characterized.”⁸¹⁸ The ordinary meaning, according to the court, was therefore “capable of being described by an efficiency equation.”⁸¹⁹ The court found nothing *577 in the specification or prosecution history indicating otherwise.⁸²⁰ Accordingly, the court reversed the jury’s finding of non-infringement.⁸²¹

3. It is Generally Improper to Interpret Clear Structural Language as Having Functional Requirements

So said the Federal Circuit in *Schwing GmbH v. Putzmeister Aktiengesellschaft*.⁸²² The patent-in-suit was drawn to a concrete pump and, in particular, a seal that functioned both as a barrier and as a spring to push certain parts of the pump together in order to maintain a tight seal.⁸²³ One of the claim terms in dispute was “an annular extension” that was defined structurally, in part, as “overlap[ing]” certain other areas.⁸²⁴ The district court, relying on prosecution history, held that the annular extension must inhibit radial expansion of the sealing ring.⁸²⁵ On appeal, the Federal Circuit held that was error, noting that “[w]here a claim uses clear structural language, it is generally improper to interpret it as having functional requirements.”⁸²⁶ The court concluded that the district court had misconstrued the prosecution history and that the same did not overcome that general rule.⁸²⁷

C. Claims Read “In Light Of” The Specification

1. Claims Read “In Light Of” The Specification v. Reading Limitations from Specification into the Claims

Two cases in 1998 and 1999, respectively, have generally and frequently been cited as setting out the difference between properly reading claims “in light of” the specification and improperly reading limitations from the specification into the claims. In *Johnson Worldwide Associates, Inc. v. Zebco Corp.*,⁸²⁸ the Federal Circuit explained that “[o]ur case law demonstrates two situations where a sufficient reason exists to require the entry of a definition of a claim term other than its ordinary and accustomed meaning.”⁸²⁹

*578 The first arises if the patentee has chosen to be his or her own lexicographer by clearly setting forth an explicit definition for a claim term.⁸³⁰

The second is where the term or terms chosen by the patentee so deprive the claim of clarity that there is no means by which the scope of the claim may be ascertained from the language used.⁸³¹

Earlier, in *Renishaw PLC v. Marposs Societa’ Per Azioni*,⁸³² the Federal Circuit also explained the difference between reading claims “in light of” the specification as opposed to reading limitations from the specification into the claims. The Federal Circuit explained that, inter alia:

[claim construction includes] a familiar pair of claim construction canons: (a) one may not read a limitation into a claim from the written description, but (b) one may look to the written description to define a term already in a claim limitation, for a claim must be read in view of the specification of which it is a part. These two rules lay out the general relationship between the claims and the written description. As rules at the core of claim construction methodology, they provide guideposts for a spectrum of claim construction problems.⁸³³

Ultimately, the interpretation to be given a term can only be determined and confirmed with a full understanding of what the inventors actually invented and intended to envelop with the claim. The construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction.⁸³⁴ Despite what the Federal Circuit said in *Johnson Worldwide and Renishaw*, there was a noticeable trend, especially during 1997 (or so) through most of 2001 by at least some panels of the Federal Circuit to read claims narrowly in light of the specification. The justification for doing so, according to the court, was the written description requirement of § 112(1). That trend is exemplified by decisions such as *Wang Laboratories, Inc. v. America Online, Inc.*,⁸³⁵ *SciMed Life Systems, Inc. v. Advanced Cardiovascular Systems, Inc.*,⁸³⁶ *Network, LLC v. Centraal Corp.*,⁸³⁷ *579 *Toro Co. v. White Consolidated Industries Inc. (Toro I)*,⁸³⁸ *Bell Atlantic Network Services, Inc. v. Covad Communications Group, Inc.*,⁸³⁹ and *Leggett & Platt, Inc. v. Hickory Springs Mfg. Co.*⁸⁴⁰

Recently, though, in cases such as *Teleflex, Inc. v. Ficosa North America Corp.*,⁸⁴¹ *CCS Fitness, Inc. v. Brunswick Corp.*,⁸⁴² and *Amgen, Inc. v. Hoechst Marion Roussel, Inc.*,⁸⁴³ Federal Circuit panels have begun distinguishing those cases and have been strongly emphasizing that claim language should be given its “ordinary meaning,” which may encompass more than what is specifically disclosed in the specification.

2. Claim Scope Not Limited by Scope of, and Embodiments in, the Written Description: Cases Generally Following *Johnson Worldwide*

i) Claims Are Not Limited to Embodiment Disclosed in Specification Even If There is Only One Embodiment

Although there are a number of cases clearly suggesting that if an applicant discloses a single embodiment the claims will be limited to that embodiment, the Federal Circuit in *Teleflex, Inc. v. Ficosa North America Corp.*,⁸⁴⁴ forcefully denied that this was the law stating “the number of embodiments disclosed in the specification is not determinative of the meaning of disputed claim terms.”⁸⁴⁵ The court also gave an authoritative, citable digest of claim construction principles.⁸⁴⁶

One of the two patents-in-suit was directed to a component of a two-piece shift cable used by General Motors in certain sport utility vehicles that was used to connect a shift control with an automatic transmission.⁸⁴⁷ The two-piece design allowed GM to wait until an advanced stage of manufacturing before connecting the two pieces together.⁸⁴⁸ Specifically, the invention used a clip for holding the *580 two pieces together.⁸⁴⁹ The claims called for “a clip (28) manually insertable into and manually removable from said locked position mechanically interlocking said core element sections together while moving axially within said guide lengths.”⁸⁵⁰

Teleflex urged a broad claim construction before the district court, but the court adopted the narrower construction urged by *Ficosa*, i.e., the district court had adopted a construction limiting the clip to a “single pair of legs.”⁸⁵¹ Nevertheless, the jury found infringement.⁸⁵² One of *Ficosa*'s arguments on appeal was that “where only one embodiment is disclosed in the specification, claim terms are limited to the embodiment disclosed,” citing *Bell Atlantic* and other cases seeming to support precisely that proposition.⁸⁵³ Judge Linn, after reviewing each of the cited cases, though, concluded that “our precedent establishes no such rule.”⁸⁵⁴ He forcefully wrote:

We hold that claims terms take on their ordinary and accustomed meanings unless the patentee demonstrated an intent to deviate from the ordinary and accustomed meaning of a claim term by redefining the term or by characterizing the invention in the intrinsic record using words or expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope.⁸⁵⁵ The Federal Circuit concluded that nothing in the ordinary meaning of “clip,” the specification, or prosecution history limited the term to a “single pair of legs,” and, thus, the district court had erred.⁸⁵⁶ Nevertheless, the court affirmed in view of the jury verdict of infringement despite the district court's erroneous narrow construction.⁸⁵⁷

ii) One Cannot Use Intrinsic Evidence's Silence to Narrow Ordinary Meaning: Claims Are Not Limited to Single Embodiment Disclosed in Specification

The Federal Circuit in *CCS Fitness, Inc. v. Brunswick Corp.*,⁸⁵⁸ similarly emphasized that claims are not necessarily limited to the embodiment shown in the drawing or described in the specification. CCS owned the three patents-in-suit *581 drawn to

an elliptical trainer.⁸⁵⁹ One of the terms used in the claims was “reciprocating member.”⁸⁶⁰ The drawings and specification illustrated and described elongated, single component, straight-bar structures that ran “substantially parallel” to the floor.⁸⁶¹ The accused infringing device used “pedal levers,” namely multi-component structures that curved upward as they approached the frame end of the machine.⁸⁶² The district court had granted Brunswick summary judgment of non-infringement, finding that “member” did not encompass curved, multiple-component structures.⁸⁶³ On appeal, the Federal Circuit reversed.⁸⁶⁴

Reiterating that there is a “heavy presumption” that a claim term carries its ordinary meaning and relying on the definition for “member” in the McGraw-Hill Dictionary of Scientific and Technical Terms at 1237 (5th ed. 1994), the Federal Circuit agreed with CCS Fitness that “member” was not limited to a straight-bar, single component structure.⁸⁶⁵ Although acknowledging that the only “member” disclosed in the specification and drawings was a straight, single component structure and distinguishing *SciMed Life Systems, Inc. v. Advanced Cardiovascular Systems, Inc.*⁸⁶⁶ and *Toro Co. v. White Consolidated Industries Inc. (Toro I)*⁸⁶⁷ on their facts, the court found nothing in the specification or prosecution history that required the court to limit the term “member” to that structure,⁸⁶⁸ noting “Life Fitness cannot use the intrinsic evidence’s silence to narrow the ordinary meaning of an unambiguous claim term.”⁸⁶⁹

D. Dictionary Definitions

In *Texas Digital Systems, Inc. v. Telegenix, Inc.*,⁸⁷⁰ the Federal Circuit, continuing the trend of *CCS Fitness* and *Teleflex*, emphasized that claim terms should be given their “ordinary” meaning and particularly stressed the importance of using dictionaries, encyclopedias, and treatises to determine that “ordinary” meaning.

***582** *Texas Digital Systems (TDS)* was the owner of the four patents-in-suit, all directed to methods and devices for controlling pixel color in light emitting diodes (LEDs).⁸⁷¹ The Federal Circuit concluded that the district court had misconstrued a number of disputed terms and phrases.⁸⁷² Accordingly, the court reversed the finding of literal infringement.⁸⁷³ The court’s comments on claim construction will likely be repeatedly cited for the near future and, therefore, are set out at length. Under the heading “The Contours of Claim Construction,” the Federal Circuit wrote: ‘In construing claims, the analytical focus must begin and remain centered on the language of the claims themselves, for it is that language that the patentee chose to use to “particularly point[] out and distinctly claim[] the subject matter which the patentee regards as his invention.” 35 U.S.C. § 112, P 2.’⁸⁷⁴

The terms used in the claims bear a ‘heavy presumption’ that they mean what they say and have the ordinary meaning that would be attributed to those words by persons skilled in the relevant art.⁸⁷⁵

Moreover, unless compelled otherwise, a court will give a claim term the full range of its ordinary meaning as understood by persons skilled in the relevant art.⁸⁷⁶

The court, as noted above, emphasized not only the importance of dictionaries and other objective sources for determining the meaning of claim terms but also noted that such sources were available to the court to use regardless of whether the parties had provided the same:

It has been long recognized in our precedent and in the precedent of our predecessor court, the Court of Customs and Patent Appeals, that dictionaries, encyclopedias and treatises are particularly useful resources to assist the court in determining the ordinary and customary meanings of claim terms.⁸⁷⁷

Dictionaries are always available to the court to aid in the task of determining meanings that would have been attributed by those of skill in the relevant art to any disputed terms used by the inventor in the claims.⁸⁷⁸

When a patent is granted, prosecution is concluded, the intrinsic record is fixed, and the public is placed on notice of its allowed claims. Dictionaries, encyclopedias and treatises, publicly available at the time the patent is issued, are objective resources that serve ***583** as reliable sources of information on the established meanings that would have been attributed to the terms of the claims by those of skill in the art. Such references are unbiased reflections of common understanding not influenced by expert testimony or events subsequent to the fixing of the intrinsic record by the grant of the patent, not colored by the motives of the parties, and not inspired by litigation. Indeed, these materials may be the most meaningful sources of information to aid judges in better understanding both the technology and the terminology used by those skilled in the art to

describe the technology.⁸⁷⁹

These materials serve as important resources to assist courts in many ways. For example, they are often used to aid in the interpretation of statutes and regulations and in the interpretation of terms used in contracts. These materials deserve no less fealty in the context of claim construction.⁸⁸⁰ Although previously the court had referred to dictionaries, etc. as holding a “special place” in claim construction, the Federal Circuit, in stressing that such resources were always available to courts for claim construction, characterized that label as being “misplaced”:

As resources and references to inform and aid courts and judges in the understanding of technology and terminology, it is entirely proper for both trial and appellate judges to consult these materials at any stage of a litigation, regardless of whether they have been offered by a party in evidence or not. Thus, categorizing them as “extrinsic evidence” or even a “special form of extrinsic evidence” is misplaced and does not inform the analysis.⁸⁸¹ The Federal Circuit also addressed the issue of multiple definitions:

Because words often have multiple dictionary definitions, some having no relation to the claimed invention, the intrinsic record must always be consulted to identify which of the different possible dictionary meanings of the claim terms in issue is most consistent with the use of the words by the inventor. If more than one dictionary definition is consistent with the use of the words in the intrinsic record, the claim terms may be construed to encompass all such consistent meanings. The objective and contemporaneous record provided by the intrinsic evidence is the most reliable guide to help the court determine which of the possible meanings of the terms in question was intended by the inventor to particularly point out and distinctly claim the invention.⁸⁸² and the necessity of consulting the intrinsic record:

Moreover, the intrinsic record also must be examined in every case to determine whether the presumption of ordinary and customary meaning is rebutted. Indeed, the intrinsic record may show that the specification uses the words in a manner clearly inconsistent with the ordinary meaning reflected, for example, in a dictionary definition. In such a case, the inconsistent dictionary definition must be rejected. In short, the presumption in favor of a dictionary definition will be overcome where the patentee, acting *584 as his or her own lexicographer, has clearly set forth an explicit definition of the term different from its ordinary meaning. Further, the presumption also will be rebutted if the inventor has disavowed or disclaimed scope of coverage, by using words or expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope.⁸⁸³

Nevertheless, the court’s clear direction to the district courts and the bar to begin with the language of the claims was further underscored by noting that the claims should be reviewed before turning to the specification or prosecution history:

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. For example, if an invention is disclosed in the written description in only one exemplary form or in only one embodiment, the risk of starting with the intrinsic record is that the single form or embodiment so disclosed will be read to require that the claim terms be limited to that single form or embodiment. . . . But if the meaning of the words themselves would not have been understood to persons of skill in the art to be limited only to the examples or embodiments described in the specification, reading the words in such a confined way would mandate the wrong result and would violate our proscription of not reading limitations from the specification into the claims.⁸⁸⁴

Lastly, the court summed up:

By examining relevant dictionaries, encyclopedias and treatises to ascertain possible meanings that would have been attributed to the words of the claims by those skilled in the art, and by further utilizing the intrinsic record to select from those possible meanings the one or ones most consistent with the use of the words by the inventor, the full breadth of the limitations intended by the inventor will be more accurately determined and the improper importation of unintended limitations from the written description into the claims will be more easily avoided.⁸⁸⁵

Time will only tell whether the court will, indeed, follow those rules strictly. If the court does so, however, Texas Digital will

be a watershed development.

E. Preambles

Whether in the context of determining validity or determining infringement, the issue of whether claim preambles are limiting or not has never been particularly clear. *Catalina Marketing International, Inc. v. Coolsavings.com, Inc.*,⁸⁸⁶ is the Federal Circuit's most recent tutorial on when preambles are limiting or not:

***585** Whether to treat a preamble as a limitation is a determination “resolved only on review of the entire[] . . . patent to gain an understanding of what the inventors actually invented and intended to encompass by the claim.”⁸⁸⁷

In general, a preamble limits the invention if it recites essential structure or steps, or if it is “necessary to give life, meaning, and vitality” to the claim.⁸⁸⁸

Conversely, a preamble is not limiting “where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention.”⁸⁸⁹

No litmus test defines when a preamble limits claim scope. Some guideposts, however, have emerged from various cases discussing the preamble's effect on claim scope. For example, this court has held that Jepson claiming generally indicates intent to use the preamble to define the claimed invention, thereby limiting claim scope. Additionally, dependence on a particular disputed preamble phrase for antecedent basis may limit claim scope because it indicates a reliance on both the preamble and claim body to define the claimed invention. Likewise, when the preamble is essential to understand limitations or terms in the claim body, the preamble limits claim scope.⁸⁹⁰

Further, when reciting additional structure or steps underscored as important by the specification, the preamble may operate as a claim limitation.⁸⁹¹

Moreover, clear reliance on the preamble during prosecution to distinguish the claimed invention from the prior art transforms the preamble into a claim limitation because such reliance indicates use of the preamble to define, in part, the claimed invention. Without such reliance, however, a preamble generally is not limiting when the claim body describes a structurally complete invention such that deletion of the preamble phrase does not affect the structure or steps of the claimed invention. Thus, preamble language merely extolling benefits or features of the claimed invention does not limit the claim scope without clear reliance on those benefits or features as patentably significant.⁸⁹²

Moreover, preambles describing the use of an invention generally do not limit the claims because the patentability of apparatus or composition claims depends on the claimed structure, not on the use or purpose of that structure. Indeed, “[t]he inventor of a machine is entitled to the benefit of all the uses to which it can be put, no matter whether he had conceived the idea of the use or not.” More specifically, this means that a patent grants the right to exclude others from making, using, selling, offering to sale, or importing the claimed apparatus or composition for any use of that apparatus or composition, whether or not the patentee envisioned such use. Again, statements of intended ***586** use or asserted benefits in the preamble may, in rare instances, limit apparatus claims but only if the applicant clearly and unmistakably relied on those uses or benefits to distinguish prior art. Likewise, this principle does not mean that apparatus claims necessarily prevent a subsequent inventor from obtaining a patent on a new method of using the apparatus where that new method is useful and nonobvious.⁸⁹³ In *Catalina Marketing*, the invention of the patent-in-suit was a system that dispensed manufacturers' coupons to customers at remote kiosk-like terminals.⁸⁹⁴ The preambles of the two independent claims-at-issue called for such terminals to be “located at predesignated sites.”⁸⁹⁵ *Coolsavings.com* operated a web-based system in which users could log on and browse the website for available coupons.⁸⁹⁶ The district court, giving the preamble limiting effect, held that *Coolsavings.com* did not infringe either literally or under the doctrine of equivalents.⁸⁹⁷ The Federal Circuit disagreed, finding that the patentee had not relied on that phrase to distinguish the claims over the prior art and that deleting that phrase from the preamble did not “affect the structural definition or operation of the terminal itself.”⁸⁹⁸ Accordingly, the Federal Circuit found that phrase to be non-limiting.⁸⁹⁹ Nevertheless, one of the claims also used the phrase in the body.⁹⁰⁰ With respect to that claim, the court concluded that the phrase meant designating the physical site of the terminal before locating the terminal, something that *Coolsavings.com* did not do.⁹⁰¹

F. Selected Recently Used or Developed Axioms of Claim Construction

1. “Or” Means That Items in a Sequence Are Alternatives to Each Other

In *Schumer v. Laboratory Computer Systems, Inc.*,⁹⁰² *Schumer*’s claims were drawn to a method that added certain capabilities to digitizing tablets.⁹⁰³ The claim preambles said “which coordinate system has a point of origin and has an angle of *587 rotation with respect to the digitizer and has a scale.”⁹⁰⁴ The claim bodies, however, referred to “one of the following elements is different from the digitizer’s coordinate system: location of the point of origin, or angle of rotation, or scale.”⁹⁰⁵ The district court had interpreted the preambles as limiting and had read “or” in the claim body as meaning “and.”⁹⁰⁶ Both constructions, the Federal Circuit held, were error.⁹⁰⁷ The Federal Circuit concluded that the preambles simply described features that were necessary in coordinate systems for digitizers but did not specify how the device would operate vis-à-vis those features.⁹⁰⁸ The claim bodies, according to the court, further set out all of the features of the invention, thus rendering the preambles non-limiting.⁹⁰⁹

With respect to the word “or,” the court noted that the common dictionary definition of the term meant an “alternative.”⁹¹⁰ “We have consistently interpreted the word “or” to mean that the items in the sequence are alternatives to each other.”⁹¹¹ Accordingly, the court reversed the district court’s grant of summary judgment of non-infringement.⁹¹²

2. Method Claims That Are Not Tied to Any Particular Machine or Apparatus Are Interpreted to Cover Any Process That Performs the Method Steps

The Federal Circuit in *Schumer v. Laboratory Computer Systems, Inc.*,⁹¹³ discussed above, also decided the question of whether the method claims at issue, drawn to a method that added certain capabilities to digitizing tablets, “should be interpreted to mean that the method must be capable of translating each of the three alternative variables, i.e. point of origin, angle of rotation, and scale.”⁹¹⁴ The district *588 court, apparently, held that it must be so capable.⁹¹⁵ The Federal Circuit disagreed, stating that “[i]f this were a product patent, the concept of capability would have relevance.”⁹¹⁶ Here, however, the method was not tied to a particular device but rather “‘operate[d] to change articles or materials to a “different state or thing.”” Such a claim must be interpreted to cover any process that performs the method steps.⁹¹⁷

3. Claiming a Range Does Not Provide Notice to the Public of an Intent to Disclaim Coverage Outside That Range

Although this may no longer be “good law,”⁹¹⁸ that was the result in *Abbott Labs. v. Dey, L.P.*⁹¹⁹ There were two patents-in-suit, both relating to a lung surfactant composition for treating respiratory distress syndrome in premature babies.⁹²⁰ The patents represented the work of Dr. Tanaka and others. The asserted claim of Patent A called for, inter alia, a phospholipids content of 75.0-95.5%.⁹²¹ The asserted claim of Patent B called for, inter alia, an overall phospholipids content of 68.6-90.7%.⁹²² Abbott sued Dey for infringement of both patents but sought preliminary injunctive relief only vis-à-vis Patent B because Patent A was about to expire.⁹²³ The Dey composition was outside the claimed range of 68.6-90.7%, as some samples contained 91.8% phospholipids and other samples contained 94.5% phospholipids.⁹²⁴ Abbott asserted infringement under the doctrine of equivalents, and it produced expert testimony that the exact amount of phospholipid was not critical so long as there was enough to make a monolayer.⁹²⁵ The district court denied the requested injunction, reasoning that because it was an “improvement patent,” it was not entitled to a broad range of equivalents.⁹²⁶ While that denial was on appeal, the district court granted Dey summary judgment of non-infringement, reasoning, inter alia, that claiming a specific range notified the public that the patentee *589 was surrendering coverage outside that range.⁹²⁷ On appeal, the Federal Circuit reversed.⁹²⁸ It held that the “fact that a claim recites numeric ranges does not, by itself, preclude Abbott from relying on the doctrine of equivalents.”⁹²⁹

4. “Composition” Means a Physical Mixture

That was the conclusion in *PIN/NIP, Inc. v. Platte Chemical Co.*⁹³⁰ The patent-in-suit was directed to a composition and method for inhibiting sprout growth on tubers, such as potatoes, using synthetic chemical chloroprotham (CPIC) and substituted naphthalene.⁹³¹ The original claims filed in the application called for a “composition comprising CPIC and a substituted naphthalene.”⁹³² After the filing date, the applicants learned that PIN/NIP had publicly disclosed a method for treating potatoes in which CPIC and a substituted naphthalene “were applied separately in spaced, sequential applications days to months apart.”⁹³³ The applicants then amended their application by adding a claim that called for, in successive steps, “applying CPIC . . .” and “applying a substituted naphthalene . . .”⁹³⁴ The application was allowed on the first Office action, and Platte sued.⁹³⁵

The district court construed “composition” to include spaced, sequential applications, analogizing “composition” to an artist arranging or “composing” a still life.⁹³⁶ On appeal, the Federal Circuit reversed, finding error in that construction.⁹³⁷ It is not surprising that Judge Lourie, having some considerable experience in chemistry, concluded that the term “composition” had a well-established meaning in chemistry and generally referred to mixtures of substances.⁹³⁸ Here, the specification also supported that construction.⁹³⁹ The court concluded that the term “composition,” therefore, meant “a physical mixture . . . existing together at approximately the same time. The mixture may be a pre-mixture . . . or a mixture that is formed at any time during use, such as through simultaneous application of the *590 constituent chemicals, as long as a mixture is indeed formed.”⁹⁴⁰ The court vacated the finding of infringement and remanded.⁹⁴¹

5. The Same Word Used Consistently Throughout the Claims Should Be Interpreted Consistently - Rule Does Not Apply If Word is Used Differently

The Federal Circuit has held that there is a “presumption that the same terms appearing in different portions of the claims should be given the same meaning unless it is clear from the specification and prosecution history that the terms have different meanings at different portions of the claims.”⁹⁴²

In *Epcon Gas Systems, Inc. v. Bauer Compressors, Inc.*,⁹⁴³ the Federal Circuit emphasized more precisely that the axiom that “[a] word or phrase used consistently through a claim should be interpreted consistently.”⁹⁴⁴ *Epcon*’s patent-in-suit was drawn to “a method and apparatus for providing gas assistance to an injection molding process.”⁹⁴⁵ Two claims were asserted: one method claim and one apparatus claim.⁹⁴⁶ Claim 2 called for a pressure to be “substantially below” another pressure.⁹⁴⁷ Claim 16 had a similar limitation. Claim 2 also called for a pressure to be held “substantially constant.”⁹⁴⁸ The Federal Circuit construed “substantially constant” as a term of approximation, while “substantially below” meant magnitude, i.e., not insubstantial.⁹⁴⁹

6. “Consisting Essentially Of” Named Components Permits Small Amounts of Other Components, but Does Not Affect Limiting Effect of Parameter Expressed as a Range

That was the holding in *Talbert Fuel Systems Patents Co. v. Unocal Corp.*⁹⁵⁰ *Talbert*’s patent-in-suit was directed to certain reformulated gasolines that reduced *591 emissions but retained certain performance parameters.⁹⁵¹ The representative claim called for a “gasoline comprising a priming agent and a hydrocarbon mixture having an intermediate carbon range.”⁹⁵² The “intermediate carbon range” was further defined as “consisting essentially of C₆-C₁₀ hydrocarbons . . . ‘said gasoline having a boiling point range of 121°-345°F.’”⁹⁵³ The specification explained that 121°F was the boiling point of the C₆ component and that 345°F was the boiling point of the C₁₀ component.⁹⁵⁴ The district court construed the claim as being limited to gasolines within the claimed range and excluded gasolines having a boiling point higher than 345°F.⁹⁵⁵ On appeal, the Federal Circuit affirmed.⁹⁵⁶

Talbert argued that even traces of hydrocarbons above C₁₀ would raise the final boiling point above 345°F and that reading the claim as a whole required a conclusion that the claim was not limited to the specific range claimed.⁹⁵⁷ The Federal Circuit disagreed, noting that

the plain meaning of a boiling point range that is used to define a composition and distinguish it from other compositions is that the range limits the composition to that stated in the claim, and that compositions of a different boiling range are not covered by the claim. While the signal ‘consisting essentially of’ allows for the presence of small amounts of components outside of the designated paraffinic C₆-C₁₀ hydrocarbons, the boiling range of 121°- 345°F is designated as describing the entire claimed gasoline. The phrase ‘consisting essentially of’ thus cannot negate the limiting effect of the claimed temperature range of 121°- 345°F.⁹⁵⁸ The Federal Circuit found further support for that construction from the prosecution history in which *Talbert* relied on the 345° upper limit to distinguish prior art.⁹⁵⁹

7. Asserting That a Particular Claim Construction Results in an Inoperable Invention Requires Proof of the Same

The facts in *Talbert Fuel Systems Patents Co. v. Unocal Corp.*⁹⁶⁰ are discussed above. The Federal Circuit concluded that the district court was correct in limiting *Talbert*’s claims to the claimed range of 121°- 345°F.⁹⁶¹ One of *Talbert*’s *592 arguments was that such a construction was incorrect because it was inoperable.⁹⁶² In rejecting that argument, the Federal Circuit agreed that “a construction that renders the claimed invention inoperable should be viewed with extreme skepticism,”⁹⁶³ but it noted that “*Talbert* did not [however] demonstrate inoperability or provide any basis for judicially interpreting the claim to adjust

the temperature range that Talbert states is the inoperable limitation.”⁹⁶⁴

8. Where the Prosecution History Requires a Claim Construction That Excludes Some but Not All of the Preferred Embodiments, Such a Construction is Permissible

In *Rheox, Inc. v. Entact, Inc.*,⁹⁶⁵ Rheox’s patent-in-suit was drawn to a method of remediating lead from lead-contaminated soil using “calcium orthophosphate.”⁹⁶⁶ “Calcium orthophosphate” generally referred to a family of compounds that included monocalcium orthophosphate and tricalcium orthophosphate.⁹⁶⁷ Rheox’s original dependent claims specifically called for calcium orthophosphate as well as mon-, di-, and tricalcium orthophosphate.⁹⁶⁸ Rheox’s original dependent claims also specifically called for triple superphosphate (TSP), which the parties agreed was composed primarily of monocalcium phosphate.⁹⁶⁹ During prosecution, however, in response to an initial and final rejection, Rheox replaced the reference to calcium phosphate and other types of phosphates with the phrase “consisting essentially of calcium orthophosphate.”⁹⁷⁰ Rheox also deleted reference to TSP.⁹⁷¹

Rheox filed suit against Entact asserting that Entact was infringing by using TSP fertilizer to remediate lead-contaminated soil.⁹⁷² The district court granted Entact summary judgment of non-infringement finding that Rheox had relinquished coverage for TSP or monocalcium orthophosphate during prosecution.⁹⁷³ On appeal, the Federal Circuit agreed.⁹⁷⁴

***593** Rheox argued that during prosecution it had amended the claims to distinguish over the prior art based on the difference in water solubility and had not disclaimed coverage for TSP or monocalcium orthophosphate.⁹⁷⁵ The Federal Circuit disagreed.⁹⁷⁶ The Federal Circuit viewed the prosecution history as limiting the claims to compounds not including monocalcium orthophosphate and TSP.⁹⁷⁷ The Federal Circuit acknowledged that “[a]lthough we recognize that an interpretation excluding a preferred embodiment ‘is rarely, if ever, correct and would require high persuasive evidentiary support,’” nevertheless, “where the prosecution history requires a claim construction that excludes some but not all of the preferred embodiments, such a construction is permissible and meets the standard of ‘highly persuasive evidentiary support.’”⁹⁷⁸ According to the court, doing so followed from the rule that “[t]he prosecution history limits the interpretation of claim terms so as to exclude any interpretation that was disclaimed during prosecution.”⁹⁷⁹

9. Asserting That a Particular Claim Construction Results in Excluding the Preferred Embodiment Requires Proof of the Same

As previously stated, the facts in *Talbert Fuel Systems Patents Co. v. Unocal Corp.*,⁹⁸⁰ are discussed above. The Federal Circuit concluded that the district court was correct in limiting Talbert’s claims, to the claimed range of 121°-345°F.⁹⁸¹ Another of Talbert’s arguments was that such a construction was incorrect because it was inoperable.⁹⁸² In rejecting that argument, the Federal Circuit agreed that “it is unlikely that an inventor would define the invention in a way that excluded the preferred embodiment, or that persons of skill in this field would read the specification in such a way,”⁹⁸³ but noted that “[a]gain, Talbert has not supported this argument. It does not contradict the specification’s teaching that refinery distillations ***594** are imprecise, to apply the specification’s teaching and the prosecution history’s argument that the upper temperature limit of the gasoline is 345°F.”⁹⁸⁴

10. When Words Are Used Interchangeably in the Specification, No Distinction Should Be Drawn Between the Two.

In *Pickholtz v. Rainbow Technologies, Inc.*,⁹⁸⁵ Pickholtz, an attorney, was the owner of the patent-in-suit drawn to an apparatus for preventing software piracy.⁹⁸⁶ Rainbow produced certain computer “dongles,” i.e., small devices that connected externally to a computer port that prevented unauthorized use of computer software.⁹⁸⁷ Pickholtz brought a pro se action against Rainbow for infringement.⁹⁸⁸ One of the claim limitations called for a pseudorandom number generator to be “located in the computer.”⁹⁸⁹ Rainbow’s device was external.⁹⁹⁰ Pickholtz urged that “computer” should be construed as “computer system,” i.e., the processing unit plus peripherals.⁹⁹¹ The district court adopted Rainbow’s narrower construction and granted summary judgment of non-infringement.⁹⁹² On appeal, the Federal Circuit reversed.⁹⁹³

The Federal Circuit concluded that the specification used “computer” and “computer system” interchangeably and did not assign a different meaning to “computer” than to “computer system.”⁹⁹⁴ The court further concluded that the prosecution history did not compel a different conclusion.⁹⁹⁵ Accordingly, the court found that “located in the computer” includes physically in the computer or in peripherals.⁹⁹⁶

***595 G. Reliance on Prosecution History**

1. Claims Are Interpreted to Exclude Any Interpretation That Was Disclaimed During Prosecution.

In *Fantasy Sports Properties, Inc. v. SportsLine.com, Inc.*,⁹⁹⁷ the Federal Circuit turned to both the specification and prosecution history for a definition of “bonus points.”⁹⁹⁸ Fantasy was the owner of the patent-in-suit drawn “to a method of and apparatus for playing ‘fantasy’ football game on a computer.”⁹⁹⁹ The only independent claim-at-issue called for “wherein said players . . . receive bonus points.”¹⁰⁰⁰ The defendants, which included Sportsline.com, Inc., Yahoo! Inc., and ESPN/Starwave Partners, contended that their accused games did not grant “bonus points” as that term was used in the specification, especially in view of the prosecution history.¹⁰⁰¹ The district court agreed and granted summary judgment of non-infringement.¹⁰⁰² On appeal, the Federal Circuit affirmed for the most part, but it remanded as to one accused product finding genuine issues of material fact.¹⁰⁰³ During prosecution, the examiner had rejected all but three of the claims in Fantasy’s application over, inter alia, a 1987 article that disclosed the concept of “fantasy football.”¹⁰⁰⁴ The only claims that the examiner had not rejected were dependent claims that included the “bonus points” limitation.¹⁰⁰⁵ Fantasy, without comment, rewrote those dependent claims as independent claims.¹⁰⁰⁶ According to the Federal Circuit, “Fantasy therefore disclaimed any interpretation of the term ‘bonus points’ that encompasses scoring methods described in the 1987 article, including distance scoring and total yardage.”¹⁰⁰⁷

2. Reliance on Prosecution History of Parent/Related Applications

The Federal Circuit has relied on the prosecution history of parent and related applications both for purposes of claim construction and for prosecution history estoppel. ***596**¹⁰⁰⁸ The Federal Circuit has also held, however, that the prosecution history of related applications is not relevant if there are no common claim terms in dispute.¹⁰⁰⁹ Also, in *Abbott Labs. v. Dey, L.P.*,¹⁰¹⁰ the Federal Circuit refused to find prosecution history estoppel based on statements made in another commonly-owned application, even though the applications shared a common inventor, when (1) the second application was not a “continuing” application of the first application (although there was co-pendency), (2) the second application resulted from further research, and (3) the statements made in the first application were made before the second application had been filed.¹⁰¹¹

3. If the Applicant “Defined” a Term During Prosecution, That is the “Definition” That Should Be Used

*Jack Guttman, Inc. v. Kopykake Enterprises, Inc.*¹⁰¹² involved an appeal from the denial of a preliminary injunction; the district court found no reasonable likelihood of success in proving infringement.¹⁰¹³ In so holding, the district court made preliminary findings vis-à-vis claim construction that, on appeal, the Federal Circuit concluded were erroneous.¹⁰¹⁴ Accordingly, the Federal Circuit vacated and remanded.¹⁰¹⁵

The patent-in-suit was directed toward a method of copying an image, e.g., a photograph, onto an edible substrate that could be placed directly on baked goods, e.g., a birthday cake.¹⁰¹⁶ Conventional photocopy and inkjet printers (1) moved paper through a number of turns that would destroy fragile edible substrates and (2) used heat to fuse ink to the paper, which likewise would destroy or melt edible ***597** substrates.¹⁰¹⁷ The invention involved (1) using a copier with a manual feed path that did not include damaging bends and (2) disabling or removing any heaters.¹⁰¹⁸ The claims called for, inter alia, “passing an edible web along an elongated, non-tortuous copy path in the photocopy machine.”¹⁰¹⁹ The principle claim terms in dispute were “non-tortuous” and “photocopy machine.”¹⁰²⁰ The district court construed “tortuous” as a bend that “deforms the line preceding it,” and gave “photocopy machine” its ordinary meaning, which, according to the district court, excluded an inkjet printer connected to a scanner.¹⁰²¹

The specification illustrated examples of “tortuous” paths but did not define “non-tortuous” per se.¹⁰²² During prosecution, however, the applicant had said that “[i]t will be understood that the term ‘non-tortuous,’ as used by Applicant, is intended to cover a copy path that may be curved, but is free from any bends that would tend to sacrifice the survivability of the substrate.”¹⁰²³ According to the Federal Circuit, that was the definition that should control.¹⁰²⁴ As for photocopy machine, the specification specifically contemplated a separate scanner and image reproduction device.¹⁰²⁵ According to the Federal Circuit, “[i]n this case, the definition of photocopy machine provided in the specification does indeed dispose of the claim construction dispute, and it was error for the district court to overlook it.”¹⁰²⁶

H. Any Presumption Arising From Claim Differentiation May Be Overcome by a Disclaimer During Prosecution

In *Fantasy Sports Properties, Inc. v. SportsLine.com, Inc.*,¹⁰²⁷ during prosecution, the examiner had rejected all but three of the claims in Fantasy's application over, inter alia, a 1987 article that disclosed the concept of "fantasy football."¹⁰²⁸ The only claims that the examiner had not rejected were dependent claims that included *598 a "bonus points" limitation.¹⁰²⁹ Fantasy, without comment, rewrote those dependent claims as independent claims.¹⁰³⁰ As previously stated, "Fantasy therefore disclaimed any interpretation of the term 'bonus points' that encompasses scoring methods described in the 1987 article, including distance scoring and total yardage."¹⁰³¹

Fantasy also urged that two dependent claims further defined "bonus points," and, therefore, the parent independent claims should be construed more broadly.¹⁰³² Rejecting that argument, the Federal Circuit noted that the doctrine of claim differentiation created only a presumption of different scope, and "that presumption is overcome by Fantasy's disclaimer of subject matter in the prosecution history."¹⁰³³

XIV. Construction of Means- and Step-Plus-Function Limitations

1. Background

The Federal Circuit has stated that using the word "means" creates a rebuttable presumption that § 112(6) applies.¹⁰³⁴ That presumption may be overcome in at least two ways. First, "a claim element that uses the word 'means' but recites no function corresponding to the means does not invoke § 112, P 6."¹⁰³⁵ Second, "even if the claim element specifies a function, if it also recites sufficient structure or material for performing that function, § 112, P 6 does not apply."¹⁰³⁶ A claim *599 term recites sufficient structure if, for example, "the 'term, as the name for structure, has a reasonably well understood meaning in the art,'" that may be determined from referring to appropriate dictionaries,¹⁰³⁷ even though such term does not connote a precise physical structure.¹⁰³⁸ That is, simply using the word "means" after a limitation, without more, does not suffice to make that limitation a means-plus-function limitation.¹⁰³⁹ The Federal Circuit has also held that a claim term that does not use the word "means" triggers a rebuttable presumption that § 112(6) does not apply.¹⁰⁴⁰

2. Cases: Year 2002

i) Limitations That State No Function or Contain Sufficient Structure Should Not Be Construed Under § 112(6)

In *Allen Engineering Corp. v. Bartell Industries, Inc.*,¹⁰⁴¹ the subject matter of Allen Engineering's patent-in-suit was concrete riding trowels, as discussed above. The claims contained a number of means-plus-function limitations, e.g., "seat means for supporting an operator," "primary control lever means . . . for steering said riding trowel," and so forth.¹⁰⁴² The district court had neither conducted a *600 Markman hearing nor otherwise construed the claims but nevertheless found literal infringement.¹⁰⁴³ Accordingly, the Federal Circuit remanded, but, in doing so, it essentially construed the claims for the district court.¹⁰⁴⁴ The Federal Circuit found that the terms "pivot steering box means," "friction disk means," "torque rod means," "knuckle spring means," "connecting shaft means," "crank means," "clutch plate means," "fork means," "cable means," and "lever arm means," among other terms, "recite precise structures well understood by those of skill in the art. Accordingly, the word 'means' in these limitations may be ignored."¹⁰⁴⁵

ii) Dictionary Definition for Noun May Be Used to Show That Term Has Generally Understood Meaning Taking a Phrase Outside § 112(6)

In *CCS Fitness, Inc. v. Brunswick Corp.*,¹⁰⁴⁶ CCS owned the three patents-in-suit drawn to an elliptical trainer. One of the terms used in the claims was "reciprocating member."¹⁰⁴⁷ One of the defendant's arguments was that the term should be construed under § 112(6).¹⁰⁴⁸ The Federal Circuit disagreed.¹⁰⁴⁹ Relying on the McGraw-Hill Dictionary of Scientific and Technical Terms (5th ed. 1994) for a definition of the term "member," the court noted that such definition showed "that an artisan of ordinary skill would understand this term to have an ordinary meaning and to connote beam-like structures."¹⁰⁵⁰ The court further noted that such a definition may suffice to avoid § 112(6), even though the term does not "connote a precise physical structure," if the claim includes some other structural definitions, e.g., having a "rear support and a front end."¹⁰⁵¹

iii) Method Claim Drafted with Language Parallel to Apparatus Claim Does Not Mean That Method Claim Should Be Construed as a Step-Plus-Function Limitation Under § 112(6)

The court reached that conclusion in *Epcon Gas Systems, Inc. v. Bauer Compressors, Inc.*¹⁰⁵² Epcon's patent-in-suit was

drawn to a method and apparatus for ***601** providing gas assistance to an injection molding process.¹⁰⁵³ Two claims were asserted: one method claim and one apparatus claim.¹⁰⁵⁴ The method claim called for “following the initial injection of the gas into the mold and prior to the venting of the gas from the mold, the gas pressure within the mold is selectively increased, decreased, or held substantially constant depending upon the particular requirements of the molding process.”¹⁰⁵⁵ The apparatus claim used the term “control means,” which the parties and the court conceded was a means-plus-function limitation governed by § 112(6).¹⁰⁵⁶ The district court had construed the method claim as a step-plus-function limitation due to the foregoing limitation.¹⁰⁵⁷ That, the Federal Circuit said, was error, noting that the claim did not use “step for” and simply recited a series of steps without a recital of function.¹⁰⁵⁸ Additionally, the court held that the claim preamble could not provide the missing function.¹⁰⁵⁹

iv) Where a Method Claim Does Not Contain the Term “Step[s] for,” a Limitation of That Claim Cannot Be Construed as a Step-Plus-Function Limitation Without a Showing That the Limitation Contains No Act: The Phrase “Steps of” at the End of a Preamble Do Not Suffice.

The Federal Circuit held so in *Masco Corp. v. United States*.¹⁰⁶⁰ In *O.I. Corp. v. Tekmar Co.*,¹⁰⁶¹ the court held that even where a drafter uses the “step for” language, “section 112, P 6 is implicated . . . only when steps plus function without acts are present.”¹⁰⁶² In a concurring opinion in *Seal-Flex, Inc. v. Athletic Track & Court Construction (Seal-Flex II)*,¹⁰⁶³ Judge Rader wrote that “the ‘underlying function’ of a method claim element corresponds to what that element ultimately accomplishes in relationship to what the other elements of the claim and the claim as a whole accomplish. ‘Acts,’ on the other hand, correspond to how the ***602** function is accomplished.”¹⁰⁶⁴ In an earlier decision in *Masco*, the Court of Federal Claims adopted Judge Rader’s distinction.¹⁰⁶⁵

The claims of the two patents-in-suit in *Masco* were drawn to methods for controlling certain locks, particularly high security electronic locks.¹⁰⁶⁶ The preambles ended with “the method comprising the steps of.”¹⁰⁶⁷ One of the following steps called for “transmitting a force . . . to the lever.”¹⁰⁶⁸ The Court of Federal Claims construed the phrase “transmitting a force” as a function, not an act, and accordingly construed the limitation as a step-plus-function limitation under § 112, paragraph 6.¹⁰⁶⁹ On appeal, the Federal Circuit held that was error.¹⁰⁷⁰

The court stated that “[w]hen the claim drafter has not signaled his intent to invoke § 112, paragraph 6 by using the ‘step[s] for’ language, we are unwilling to resort to that provision to constrain the scope of coverage of a claim limitation, without a showing that the limitation contains nothing that can be construed as an act.”¹⁰⁷¹ The court further noted that “[m]ethod claims are commonly drafted, as in this case, by reciting the phrase ‘steps of’ followed by a list of actions comprising the method claimed”¹⁰⁷² and that “[a]n application of § 112, paragraph 6 in the present circumstances would render the scope of coverage of these method claims uncertain and disrupt patentees’ settled expectations regarding the scope of their claims.”¹⁰⁷³ The court concluded: “We thus hold that where a method claim does not claim the term ‘step[s] for,’ a limitation of that claim cannot be construed as a step-plus-function limitation without a showing that the limitation contained no act.”¹⁰⁷⁴

***603** 3. Definiteness - § 112(2): Failure to Disclose Structure for Performing the Claimed Function Leads to Invalidity Under § 112(2)

In *Cardiac Pacemakers, Inc. v. St. Jude Medical, Inc.*,¹⁰⁷⁵ the patent-in-suit related to implantable defibrillators.¹⁰⁷⁶ One of the claim limitations called for “third monitoring means for monitoring the ECG signal produced by said detecting means for activating said charging means in the presence of abnormal cardiac rhythm in need of correction.”¹⁰⁷⁷ Looking to the prosecution history, both the district court and the Federal Circuit concluded that two functions were recited, namely “for monitoring” and “for charging.”¹⁰⁷⁸ The Federal Circuit also interpreted the limitation as requiring the same “means” to perform both functions.¹⁰⁷⁹ Turning to the specification, the court found that “there is only one entity referenced in the specification that could possibly both monitor the ECG signal and activate the charging means in the presence of abnormal cardiac rhythm: the physician.”¹⁰⁸⁰ *Cardiac Pacemakers* conceded that a physician was plainly not a “structure.”¹⁰⁸¹ Accordingly, the court affirmed the district court’s finding of invalidity under § 112(2).¹⁰⁸²

In *Creo Products, Inc. v. Presstek, Inc.*,¹⁰⁸³ however, the panel expanded somewhat the holdings in *Budde v. Harley-Davidson, Inc.*,¹⁰⁸⁴ *S3 Inc. v. nVIDIA Corp.*,¹⁰⁸⁵ and *Atmel Corp. v. Info. Storage Devices, Inc.*¹⁰⁸⁶ so that the knowledge of one of ordinary skill in the art may be relied upon to provide an understanding of what “structure” was disclosed.¹⁰⁸⁷ Although the specification is viewed through the eyes of one of ordinary skill in the art, some structure must be disclosed.¹⁰⁸⁸

***604** The subject matter of the patents-in-suit was printing technology.¹⁰⁸⁹ One of the issues was whether the specification

disclosed any “structure” for “rotating each cylinder.”¹⁰⁹⁰

Finding that the specification provided such a disclosure, the court observed:

Under our case law interpreting § 112, P 6, knowledge of one skilled in the art can be called upon to flesh out a particular structural reference in the specification for the purpose of satisfying the statutory requirement of definiteness. Thus, in addressing the question whether a means-plus-function limitation satisfies the definiteness requirement, we focus our inquiry on whether one skilled in the art would have understood that the specification of each patent disclosed structure capable of performing the function recited in the claim limitation.¹⁰⁹¹ Although it was a stretch, the panel majority found “some” structure disclosed in the specification, albeit in terms of “a standard electric motor or other conventional means,” to support the means-plus-function limitation. In other words, the panel majority seemed to say that the knowledge of one of ordinary skill in the art may be used to decide (1) whether any “structure” is disclosed and (2) if so, what that “structure” is.

The panel majority also found structural support for “mounting means for mounting said plate on said cylinder” by the disclosure of a “conventional clamping mechanism,” using the same analysis.¹⁰⁹² The panel majority reasoned that “[t]he characterization of such structure as ‘conventional’ suggests that the use of a V-notch for mounting a printing plate on a cylinder is well within the knowledge of those of ordinary skill in the art.”¹⁰⁹³ Circuit Judge Clevenger, however, in dissent, found no disclosed structure supporting that limitation.¹⁰⁹⁴

XV. Infringement

A. There is No “Practicing the Prior Art” Defense to Literal Infringement--The Federal Circuit is Unlikely to Ever Apply the “Reverse Doctrine of Equivalents”

The Federal Circuit said so in *Tate Access Floors, Inc. v. Interface Architectural Resources, Inc.*¹⁰⁹⁵ Tate’s patent-in-suit was drawn to raised access flooring *605 panels.¹⁰⁹⁶ Tate sought a preliminary injunction, and the district court granted the same.¹⁰⁹⁷ On appeal, Interface’s principal argument was that the district court had erred in finding a reasonable likelihood of success on the merits because Interface was simply “practicing the prior art.”¹⁰⁹⁸ The Federal Circuit rejected that argument and affirmed.¹⁰⁹⁹

According to the court, the Federal Circuit “made unequivocally clear [in *Baxter Healthcare Corp. v. Spectramed, Inc.*]¹¹⁰⁰ that there is no ‘practicing the prior art’ defense to literal infringement.”¹¹⁰¹ The court explained that (1) it is true that the scope of equivalents under the doctrine of equivalents should not extend to the prior art; the doctrine of equivalents is equitable in nature¹¹⁰² and serves to expand the literal language of the claims: “But this limit on the equitable extension of literal language provides no warrant for constricting literal language when it is clearly claimed.”¹¹⁰³ The court also explained that (2) claims should be construed to preserve validity, if possible. Prior art is relevant to literal infringement to the extent it affects the construction of ambiguous claim terms, but “[f]airness and the public notice function of the patent law require courts to afford patentees the full breadth of clear claim language, and bind them to it as well. Consequently, where such claim language clearly reads on prior art, the patent is invalid.”¹¹⁰⁴ The court further stated that (3) patent challengers must prove invalidity by clear and convincing evidence, and “[w]here an accused infringer is clearly practicing only that which was in the prior art, and nothing more, and the patentee’s proffered construction reads on the accused device, meeting this burden of proof should not prove difficult.”¹¹⁰⁵ Accused infringers, however, cannot avoid the clear and convincing standard by asserting a “practicing the prior art” defense: “the fact that the patentee happens to be practicing the prior art is irrelevant; it is the presence of the prior art and its relationship to the claim language that matters for invalidity.”¹¹⁰⁶ Additionally, the court explained that (4) the reverse doctrine of equivalents stems from a *606 remark in *Graver Tank & Manufacturing Co. v. Linde Air Products Co.*,¹¹⁰⁷ which has likely been superceded by the later enactment of § 112, which is “co-extensive with the broadest possible reach of the reverse doctrine of equivalents,”¹¹⁰⁸ and the Federal Circuit has never affirmed a decision finding non-infringement under the reverse doctrine of equivalents.¹¹⁰⁹ And, finally, the court stated that (5) “[e]ven were this court likely ever to affirm a defense to literal infringement based on the reverse doctrine of equivalents, the presence of one anachronistic exception, long mentioned but rarely applied, is hardly reason to create another.”¹¹¹⁰

B. Experimental Use Defense

1. Focus is Not on Non-Profit Status but Whether or Not The Use Was Solely for Amusement, To Satisfy Idle Curiosity, or

for Strictly Philosophical Inquiry

The Federal Circuit held so in *Madey v. Duke University*,¹¹¹¹ after concluding that the experimental use defense “persists albeit in the very narrow form articulated by this court in *Embrex* and in *Roche*.”¹¹¹²

In the mid-1980’s, Madey was a tenured research professor at Stanford University, where he ran a highly regarded and innovative laser research program.¹¹¹³ During that time, Madey obtained sole ownership of two patents that covered some of the equipment in his free electron laser (FEL) lab.¹¹¹⁴ Duke recruited Madey, and, in 1988, Madey took a tenured position in Duke’s physics department.¹¹¹⁵ Shortly thereafter, Madey moved his FEL lab to Duke, requiring Duke to build facilities for it.¹¹¹⁶ After a decade of running the lab and achieving success in both *607 research funding and science, a dispute between Duke and Madey arose.¹¹¹⁷ Duke contended that Madey had ineffectively managed the lab while Madey countered that Duke sought to use his lab for research in areas outside the allocated scope of certain governmental funding.¹¹¹⁸ Madey was ultimately removed from lab directorship but continued to operate some of the equipment in the lab.¹¹¹⁹ Madey then sued Duke for infringement of his two patents.¹¹²⁰

What is interesting is that Madey’s patents covered not only the equipment in Duke’s FEL lab, namely, an infrared FEL, a “storage ring FEL,” and a “microwave gun test stand,” but it also covered the use of that equipment.¹¹²¹ It is not entirely clear from the record, but, apparently, Duke relied on both experimental use and government license defenses while conceding coverage of Madey’s patents.¹¹²² In any case, the district court concluded, *inter alia*, that Duke’s use of Madey’s patented equipment was covered by the experimental use defense, namely, uses that “were solely for research, academic, or experimental purposes” and “made for experimental, non-profit purposes only,” deemed the government license defense to be moot, and dismissed Madey’s infringement claims.¹¹²³ Madey appealed.

The Federal Circuit held that both of the district court’s formulations were too broad.¹¹²⁴ Cases evaluating the experimental use defenses are few, said the court, and those involving non-profit, educational alleged infringers are even fewer.¹¹²⁵ Here, the district court attached too much weight to the non-profit, educational status of Duke:

[R]egardless of whether a particular institution or entity is engaged in an endeavor for commercial gain, so long as the act is in furtherance of the alleged infringer’s legitimate business and is not solely for amusement, to satisfy idle curiosity, or for strictly limited philosophical inquiry, the act does not qualify for the very narrow and strictly limited experimental use defense. Moreover, the profit or non-profit status of the user is not determinative.¹¹²⁶ The Federal Circuit noted that major research universities, such as Duke, often sanction and fund research with arguably no commercial application whatsoever. *608¹¹²⁷ However, those projects “unmistakably” further the institution’s legitimate business objectives, including increasing the status of the institution and luring students, faculty, and lucrative research grants.¹¹²⁸ Here, Duke’s acts “appeared to be in accordance with any reasonable interpretation of Duke’s legitimate business objectives.”¹¹²⁹ Accordingly, the Federal Circuit remanded the case.¹¹³⁰

2. Not an Affirmative Defense

In *Madey v. Duke University*,¹¹³¹ above, the Federal Circuit disagreed with Madey that the experimental use defense was an affirmative defense.¹¹³² There had been no precise treatment of the defense in precedent, and the Federal Circuit saw “no mandate from our precedent, nor any compelling reason from other considerations, why the opportunity to raise the defense if not raised in the responsive pleading should not also be available at the later stages of a case, within the procedural discretion typically afforded the trial court judge.”¹¹³³ The Federal Circuit also concluded that the district court had “erroneously required Madey to show as a part of his initial claim that Duke’s use was not experimental. The defense, if available at all, must be established by Duke.”¹¹³⁴

C. Hatch-Waxman Amendments

1. Federal District Court Does Not Have Authority in an Infringement Action to Shorten 30-Month Period of Hatch-Waxman Amendments but Does Have Such Authority in Action Under APA.

Andrx Pharmaceuticals, Inc. v. Biovail Corp.,¹¹³⁵ is essentially the next step following *Mylan Pharmaceuticals, Inc. v. Thompson*.¹¹³⁶ In *Mylan*, the Federal Circuit held that the Federal Food, Drug, and Cosmetic Act (FFDCA) did not provide for a private cause of action to “delist” a patent from the “Orange Book.”¹¹³⁷ In *Andrx*, the Federal Circuit held that a district

court does not have authority, in an ***609** infringement action, to order the FDA to shorten the 30-month time period of 21 U.S.C. § 355(j)(5)(B)(iii) but does have such authority in an action under the Administrative Procedure Act (APA).¹¹³⁸

2. One Cannot Seek a Judicial Determination of Whether a Party's Paragraph IV Certification Complies with the Hatch-Waxman Amendments in an Infringement Action

So held the court in *Minnesota Mining and Manufacturing Co. v. Barr Laboratories, Inc.*¹¹³⁹ Minnesota Mining and Manufacturing Co. (3M) owned a patent on intermediate compounds that result from a process for producing a particular drug product.¹¹⁴⁰ 3M notified the FDA that its patent claimed a drug for which 3M had filed a new drug application (NDA).¹¹⁴¹ The FDA then listed that patent in the Orange Book.¹¹⁴² Alphapharm filed an abbreviated new drug application (ANDA) and provided a paragraph IV statement to 3M.¹¹⁴³ 3M filed suit.¹¹⁴⁴ As a result, “the FDA could not approve Alphapharm’s ANDA until thirty months after the date 3M received notification from Alphapharm or the termination of the infringement suit in favor of Alphapharm, whichever was earlier.”¹¹⁴⁵ The thirty-month time period expired. The FDA approved Alphapharm’s ANDA, but that suit was still pending, and Alphapharm had deferred marketing the drug until that suit was resolved.¹¹⁴⁶

A co-defendant, Barr Laboratories, also filed an ANDA, after Alphapharm had done so, and provided a paragraph IV certification to 3M.¹¹⁴⁷ As the second filer, Barr was subject to the thirty-month stay and to an additional 180-day stay that extended after the first ANDA filer had begun commercial marketing of the drug.¹¹⁴⁸ That second provision was designed as an incentive for the first ANDA filer to challenge a patent listed in the Orange Book.¹¹⁴⁹ 3M sought additional information ***610** from Barr but, dissatisfied with Barr’s response, filed suit.¹¹⁵⁰ During discovery, 3M became convinced that Barr did not infringe the patent-in-suit and moved to dismiss the suit against Barr without prejudice.¹¹⁵¹ Doing so, according to 3M, would not trigger the 180-day period of exclusivity for Alphapharma.¹¹⁵² The district court refused to do so, and dismissed the suit with prejudice.¹¹⁵³

On appeal, the Federal Circuit viewed the issue as a private party attempting to enforce provisions of the FFDCA.¹¹⁵⁴ The court concluded, following its reasoning in *Mylan* and *Andrx*, that no such private cause of action existed.¹¹⁵⁵

3. “It is Not an Act of Infringement to Submit an ANDA for Approval to Market a Drug for a Use When Neither the Drug Nor That Use is Covered by an Existing Patent, and the Patent At Issue is for a Use Not Approved Under the NDA.”¹¹⁵⁶

That was what the Federal Circuit in *Warner-Lambert Company v. Apotex Corp.*¹¹⁵⁷ concluded when faced with the issue of whether it is an act of infringement under 35 U.S.C. § 271 (e)(2)(A) to submit an ANDA seeking approval to make, use, or sell a drug for an approved use if any other use of the drug is claimed in a patent, or if it is only an act of infringement to submit an ANDA seeking approval to make, use, or sell a drug if the drug or the use for which FDA approval is sought is claimed in a patent.¹¹⁵⁸

Warner-Lambert’s ‘479 patent claimed the method of using gabapentin to treat “neurodegenerative diseases such as stroke, Alzheimer’s disease, Huntington’s disease, amyotrophic lateral sclerosis (ALS), and Parkinson’s disease.”¹¹⁵⁹ Warner-Lambert also owned two patents (now expired): the ‘175 patent covering the gabapentin compound itself and the ‘544 patent to the method of using gabapentin to treat “epilepsy, faintness attacks, hypokinesia, and cranial traumas.”¹¹⁶⁰ Warner-Lambert ***611** further held a patent, the ‘476 patent, to gabapentin monohydrate, a complex made up of gabapentin and water.¹¹⁶¹

Warner-Lambert sells gabapentin under the trade name Neurontin®, having obtained, in 1993, FDA approval, i.e., the FDA granted an NDA to market gabapentin for treatment of epilepsy, one of the several indications claimed in the expired ‘544 patent.¹¹⁶² The FDA did not approve use of gabapentin for any other uses, including those in Warner-Lambert’s ‘479 patent.¹¹⁶³

Apotex filed an ANDA on April 17, 1998, seeking approval to market a generic formulation of gabapentin upon expiration of the ‘544 patent on January 16, 2000.¹¹⁶⁴ As required by the Hatch-Waxman Act, Apotex, “piggybacking” on Warner-Lambert’s NDA, sought approval only for the same indication for which Neurontin® was approved, namely, epilepsy treatment.¹¹⁶⁵ Apotex also filed a certification that its proposed manufacture, use, and sale of anhydrous gabapentin would not infringe either the ‘476 or ‘479 patents and that its labeling would not indicate use for treating neurodegenerative or neurodegenerative diseases.¹¹⁶⁶ Finally, Apotex notified Warner-Lambert of the ANDA and certification, as required by the Act.¹¹⁶⁷

Warner-Lambert sued, asserting that Apotex's ANDA submission infringed its '479 neurodegenerative method patent.¹¹⁶⁸ Even though the FDA had not approved use of gabapentin for treatment of neurodegenerative diseases, the FDA does not regulate drug usage after approval, and apparently more than 75 percent of the prescriptions for Neurontin® were for treatment other than epilepsy, including treatment for neurodegenerative disease.¹¹⁶⁹ Thus, Warner-Lambert argued in opposition to Apotex's motion for summary judgment that Apotex knew that doctors would prescribe Apotex's generic gabapentin for treatment of neurodegenerative diseases.¹¹⁷⁰ Apotex's first motion for summary judgment was denied, but, at the *612 close of discovery, the district court granted Apotex's second motion for summary judgment, and Warner-Lambert appealed.¹¹⁷¹

The Federal Circuit affirmed.¹¹⁷² The court found that it was "abundantly clear" that the statute did not make the filing of an ANDA prior to expiration of a patent an act of infringement unless the ANDA seeks approval to manufacture, use, or sell a drug that would otherwise infringe that patent apart from the provisions of § 271(e)(2).¹¹⁷³ Interpreting "use" in § 271(e)(2)(A) to mean the use for which the FDA has already granted an NDA, the court held that infringement under § 271(e)(2)(A) is limited to patents that claim an FDA-approved drug or drug use, i.e., limited to patents claiming a drug or drug use for which an NDA had already been granted.¹¹⁷⁴ The role of § 271(e)(2)(A), the court explained, was simply to provide an "artificial" act of infringement to create case-or-controversy jurisdiction that enables resolution of an infringement dispute before an ANDA applicant actually makes or markets the proposed product.¹¹⁷⁵ Once that jurisdiction is established, infringement is determined under non-§ 271(e)(2)(A) provisions.¹¹⁷⁶

The patents covering epilepsy treatment, for which the NDA had been granted and for which Apotex was seeking ANDA approval, had expired.¹¹⁷⁷ Apotex had not submitted an ANDA for a protected drug use, namely, gabapentin for treatment of neurodegenerative diseases.¹¹⁷⁸ It sought approval for a non-protected use, namely, gabapentin for epilepsy treatment.¹¹⁷⁹ The court concluded that lacking patent protection for use of gabapentin for epilepsy treatment and lacking an NDA for treatment of neurodegenerative diseases, Warner-Lambert had no basis for asserting infringement under § 271(e)(2)(A).¹¹⁸⁰ Thus, to succeed, Warner-Lambert would have to demonstrate the existence of a genuine issue of material fact to support a traditional infringement claim apart from § 271(e)(2)(A), i.e., that Apotex induced or will induce infringement of the neurodegenerative method patent under § 271(b).¹¹⁸¹ That it had not done, and Apotex was entitled to summary judgment of noninfringement.¹¹⁸²

***613 D. Repair or Reconstruction**

In *Husky Injection Molding Systems Ltd. v. R&D Tool & Engineering Co.*, the Federal Circuit acknowledged that the line between "repair" and "reconstruction" was not altogether clear.¹¹⁸³ The court identified three principal fact scenarios that have arisen in repair/reconstruction cases.¹¹⁸⁴

First are the cases in which the entire patented item is spent, and the alleged infringer makes it useable again.¹¹⁸⁵ In that situation, the activity is clearly reconstruction.¹¹⁸⁶ Second are the cases in which the user replaces a spent part.¹¹⁸⁷ That situation is exemplified by *Wilson v. Simpson*¹¹⁸⁸ and *Aro Manufacturing Co. v. Convertible Top Replacement Co.*,¹¹⁸⁹ concluding that replacement of a spent part, which is not separately patented, is permissible repair, even if the owner sequentially replaces all of the parts.¹¹⁹⁰ Such a situation also includes the case where components are "effectively spent."¹¹⁹¹ Third, there are the cases in which a part is not spent but is replaced to allow the machine to perform a different function.¹¹⁹² In that situation, the activity has been treated as "akin to repair."¹¹⁹³ In *Husky*, the Federal Circuit concluded that if a part is readily "replaceable," replacing the part falls within the "safe harbor" of "akin to repair."¹¹⁹⁴

The Federal Circuit also reiterated its holding in *Surfco Hawaii v. Fin Control Systems Pty. Ltd.*:

***614** [p]recedent amply supports the right of a purchaser of a patented device to do more than simply replace spent or broken parts. . . . [T]he right to replace or modify a part of a patented device does not require that the part be spent or broken. Infringement liability depends on the extent of the change, not its purpose.¹¹⁹⁵ The court made the additional comment that if a part is readily "replaceable," then replacing such a part, even if not spent, will be deemed "repair" rather than reconstruction.¹¹⁹⁶ *Husky* manufactured injection molding systems that produced preforms, i.e., hollow plastic articles used in blow molding.¹¹⁹⁷ The systems used a carrier plate and at least two sets of cavities that were replaceable when there was a change in preform design.¹¹⁹⁸ The carrier plate and cavities were not separately patented.¹¹⁹⁹ R&D made molds and carrier plates that were substitutes for *Husky*'s components.¹²⁰⁰ The Federal Circuit, in finding permissible "akin to repair," concluded that "the same safe harbor exists where activity 'akin to repair' is involved as when repair is involved. In both cases, there is no infringement if the particular part is readily 'replaceable.'"¹²⁰¹

XVI. Infringement Under the Doctrine of Equivalents

A. The “All Elements” or “All Limitations” Rule

1. The “All Limitations” Rule May Result in a Limitation Having No Equivalents The facts of *Cooper Cameron Corp. v. Kvaerner Oilfield Products, Inc.*,¹²⁰² are discussed supra. Cooper Cameron charged that Kvaerner’s “Side Valve Tree” infringed on its two patents that were directed to subsea wellheads having a horizontal “spool tree” configuration.¹²⁰³ One of the limitations in one of Cooper’s asserted claims called for “a workover port extending laterally through the wall of the spool tree from between the two plugs.”¹²⁰⁴ In Kvaerner’s tree, the workover port was located above both “plugs.”¹²⁰⁵ Cooper asserted that Kvaerner’s tree infringed *615 under the doctrine of equivalents.¹²⁰⁶ The district court granted Kvaerner summary judgment of non-infringement concluding that (1) amendments made to that claim foreclosed reliance on the doctrine of equivalents per the Federal Circuit’s *Festo*¹²⁰⁷ holding and that, (2) alternatively, the “all-elements” rule foreclosed infringement under the doctrine of equivalents, i.e., finding infringement would, in essence, require the court to ignore the “between the two plugs” limitation.¹²⁰⁸ On appeal, the Federal Circuit affirmed: “Were we to ignore Cooper’s decision to claim in the ‘707 patent a workover port that connects to the assembly only ‘between’ the plugs, we would vitiate that limitation and thereby run afoul of the all-limitations rule.”¹²⁰⁹

Query: What then can be an equivalent to “between the two plugs” ? The limitation is obviously not met literally, and, thus, the workover port is admittedly somewhere other than “between the two plugs.” Applying the all-elements rule in situations such as this essentially restricts a patentee to literal infringement.

2. Two Device Elements May Together Perform a Single Function: Separate Claim Limitations May Be Combined into Single Device Element: One-to-One Correspondence is Not Required

In *Eagle Comtronics, Inc. v. Arrow Communication Labs, Inc.*,¹²¹⁰ Eagle’s patent-in-suit related to “electrical signal filters that are used to decode or unscramble protected television signals.”¹²¹¹ The claims required a collet assembly having a front cap, a rear insert body, and a seal located between the front cap and the rear insert body.¹²¹² The accused devices did not have separate device elements corresponding to the front cap and rear insert body limitations, but Eagle asserted that Arcom’s one-piece collet assembly was an equivalent.¹²¹³ Although the district court found no infringement under the doctrine of equivalents based on prosecution history estoppel, the Federal Circuit nevertheless considered the all-elements rule and concluded that did not preclude infringement under the doctrine of equivalents.¹²¹⁴

The court noted that

*616 [w]hile a claim limitation cannot be totally missing from an accused device, whether or not a limitation is deemed to be vitiated must take into account that when two elements of the accused device perform a single function of the patented invention, or when separate claim limitations are combined into a single element of the accused device, a claim limitation is not necessarily vitiated, and the doctrine of equivalents may still apply if the differences are insubstantial . . . ‘[O]ne-to-one correspondence of components is not required,’ and the all-limitations rule does not preclude a finding of equivalents here.¹²¹⁵

B. Unclaimed but Disclosed Subject Matter is Dedicated to the Public--Johnson & Johnston Associates Inc. v. R.E. Service Co., Inc.¹²¹⁶

This case resolves the conflict between *Maxwell v. J. Baker, Inc.*,¹²¹⁷ which noted the “well-established rule that ‘subject matter disclosed but not claimed in a patent application is dedicated to the public,’”¹²¹⁸ and *YBM Magnex, Inc. v. International Trade Commission*,¹²¹⁹ limiting Maxwell to situations where there are distinct, alternative embodiments.¹²²⁰ The invention of the patent-in-suit was directed to protecting thin copper foil used in producing printed circuit boards by adhesively securing that foil to a substrate.¹²²¹ The specification disclosed that although aluminum was preferred for the substrate, other materials such as stainless steel could be used.¹²²² The claims, however, were limited to aluminum substrates.¹²²³ After lengthy earlier litigation resulting in a settlement, RES began making new laminates that used steel as a substrate.¹²²⁴ The district court granted RES summary judgment of no literal infringement but sent the issue of infringement under the doctrine of equivalents to the jury, finding, on summary judgment, that there was no dedication of steel substrates to the public.¹²²⁵ The jury found willful infringement under the doctrine of equivalents and awarded over \$1 million in

damages. ***617** ¹²²⁶ The district court granted enhanced damages, attorney fees, and expenses.¹²²⁷ On appeal, the Federal Circuit reversed.¹²²⁸

The Federal Circuit emphasized the public notice function of claims: “The claims give notice both to the examiner at the U.S. Patent and Trademark Office during prosecution, and to the public at large, including potential competitors, after the patent has issued.”¹²²⁹ According to the court, when a patent drafter discloses but declines to claim subject matter, as in this case, this action dedicates that unclaimed subject matter to the public. Application of the doctrine of equivalents to recapture subject matter deliberately left unclaimed would ‘conflict with the primacy of the claims in defining the scope of the patentee’s exclusive right.’¹²³⁰ Moreover, the court said,

a patentee cannot narrowly claim an invention to avoid prosecution scrutiny by the PTO, and then, after patent issuance, use the doctrine of equivalents to establish infringement because the specification discloses equivalents. ‘Such a result would merely encourage a patent application to present a broad disclosure in the specification of the application and file narrow claims, avoid examination of broader claims that the applicant could have filed consistent with the specification.’¹²³¹ YBM Magnex was overruled to the extent of any conflict.¹²³²

The court noted that patentees can remedy the problem by filing a broadening reissue within two years under 35 U.S.C. § 251 or a separate application claiming domestic priority under 35 U.S.C. § 120.¹²³³ An applicant could also, of course, file a separate application even without domestic priority if, of course, it was filed within one year of the issuance of the first patent due to the statutory bar of § 102(b).¹²³⁴

***618 XVII. Prosecution History Estoppel, The Warner-Jenkinson Presumption and Festo**

A. The Warner-Jenkinson Presumption

Prosecution history estoppel bars a patentee from asserting as an equivalent in a doctrine of equivalents analysis subject matter surrendered during prosecution of the patent application.¹²³⁵ The clearest instance of prosecution history estoppel is, of course, when amendments have been made to specifically avoid prior art. But there can be a variety of reasons for an amendment. The Supreme Court in Warner-Jenkinson Co. v. Hilton Davis Chemical Co.¹²³⁶ rejected Warner-Jenkinson’s argument that any surrender of subject matter during patent prosecution, regardless of the reason for such surrender, precluded recapturing any part of that subject matter. Nevertheless, it imposed a presumption that if no explanation is given for a claim amendment, the court should presume that the PTO had a substantial reason related to patentability for requiring the change and, therefore, estoppel would apply.¹²³⁷ The presumption, of course, only applies when the reason for the amendment is not clear in the record.¹²³⁸

Prosecution history estoppel may also arise from arguments made during prosecution - “argument-based” estoppel.¹²³⁹ Argument-based estoppel affecting a limitation in one claim extends to all claims in which that limitation appears.¹²⁴⁰ In some cases, the Federal Circuit has emphasized that “[t]o invoke argument-based estoppel, the prosecution history must evidence a ‘clear and unmistakable surrender of subject matter.’”¹²⁴¹

***619 B. Supreme Court’s Festo Foreseeability Test: “At the Time of the Amendment, One Skilled in the Art Could Not Reasonably Be Expected to Have Drafted a Claim That Would Have Literally Encompassed the Alleged Equivalent”¹²⁴²**

In light of the holding in Warner-Jenkinson, it is, therefore, not surprising that the Supreme Court in Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co. rejected the Federal Circuit’s en banc holding that any narrowing amendment resulted in a complete bar to reliance on the doctrine of equivalents.¹²⁴³ However, the Court’s “foreseeability” standard may prove just as harsh.

The facts of the case have been frequently recounted and are not necessary for an understanding of the Court’s ultimate conclusions. First, the Court clarified that an estoppel may arise as a result of amendments that narrow the scope of a claim to satisfy any requirement of the patent statute.¹²⁴⁴ The Federal Circuit has held that an estoppel also may be found on the basis

of arguments made during prosecution of the application to secure the allowance of claims,¹²⁴⁵ and, if such arguments create an estoppel, the estoppel applies to the same term in other claims.¹²⁴⁶ The Supreme Court did not address that issue directly. However, the Court, in rejecting an argument that estoppel should only be found from amendments that narrowed a claim to avoid the prior art, noted that although estoppel was most frequently encountered in such narrowing amendments, “[i]t does not follow . . . that amendments for other purposes will not give rise to estoppel,” and that “we stated [in Warner-Jenkinson] that even if the amendment’s purpose were unrelated to patentability, the court might consider whether it was the kind of reason that nonetheless might require resort to the estoppel doctrine.”¹²⁴⁷ The Court specifically held ***620** that narrowing amendments to satisfy any requirement of the statute, especially noting §§ 101-103 and 112, may give rise to an estoppel.¹²⁴⁸

According to the Court, narrowing amendments (and presumably arguments) create a rebuttable presumption of estoppel.¹²⁴⁹ Specifically, the Court held that a “patentee’s decision to narrow his claims through amendment may be presumed to be a general disclaimer of the territory between the original claims and the amended claims.”¹²⁵⁰ However, according to the Court, there are instances where an amendment should not be reasonably viewed as surrendering a particular equivalent - specifically,

[t]he equivalent may have been unforeseeable at the time of the application; the rationale underlying the amendment may bear no more than a tangential relation to the equivalent in question; or there may be some other reason suggesting that the patentee could not reasonably be expected to have described the insubstantial substitute in question.¹²⁵¹ In those cases the patentee can overcome the presumption that prosecution history estoppel bars a finding of equivalence.¹²⁵² However, the Court also held that the “patentee must show that at the time of the amendment one skilled in the art could not reasonably be expected to have drafted a claim that would have literally encompassed the alleged equivalent.”¹²⁵³

Thus, the scope of the estoppel depends on “the inferences that may reasonably be drawn from the amendment.”¹²⁵⁴ According to the Court, patentee is not barred from asserting “equivalents unforeseeable at the time of the amendment and beyond a fair interpretation of what was surrendered,” or those that “have only a peripheral relation to the reason the amendment was submitted.”¹²⁵⁵ Also, one may continue to rely on the doctrine of equivalents if there is “some other reason suggesting that the patentee could not reasonably be expected to have described the insubstantial substitute in question.”¹²⁵⁶ In all events, however, the patentee bears the burden of overcoming the presumption by “showing that the amendment does not surrender the particular equivalent in question.”¹²⁵⁷

***621 C. Pre-Supreme Court Festo Case (2002): Prosecution History Estoppel May Not Arise from Statements Made in Connection with Another Commonly-Owned Application That is Not a “Continuing” Application, Even Though There is a Common Inventor**

The Federal Circuit reached that conclusion in *Abbott Labs. v. Dey, L.P.*,¹²⁵⁸ although some parts of that decision may not be good law after the Supreme Court’s *Festo* decision. There were two patents-in-suit, both relating to a lung surfactant composition for treating respiratory distress syndrome in premature babies.¹²⁵⁹ The patents represented the work of Dr. Tanaka and others.¹²⁶⁰ The asserted claim of Patent A called for, inter alia, a phospholipids content of 75.0-95.5%.¹²⁶¹ The asserted claim of Patent B called for, inter alia, an overall phospholipids content of 68.8-90.7%.¹²⁶² During prosecution of Patent A, the claims were rejected under § 103 based on three articles.¹²⁶³ In response, Abbott argued that “only a surface-active material having the chemical composition claimed and disclosed [in the application] have [certain properties.]”¹²⁶⁴ After overcoming a final rejection based on § 112(1) and (2), the patent issued.¹²⁶⁵ Patent B was filed after Patent A had been allowed but before Patent A had issued.¹²⁶⁶ Nevertheless, Patent B was not filed as a continuation, continuation-in-part, or division of Patent A.¹²⁶⁷ The claims of Patent B were allowed on the first Office action because, according to the examiner, those claims were an improvement over claims allowed in Patent A.¹²⁶⁸

Abbott sued Dey for infringement of both patents but sought preliminary injunctive relief only vis-à-vis Patent B because Patent A was about to expire.¹²⁶⁹ The Dey composition was outside the claimed range of 68.8-90.7%.¹²⁷⁰ Tests showed that some samples contained 91.8% phospholipids and other samples contained ***622** 94.5% phospholipids.¹²⁷¹ Abbott thus asserted infringement under the doctrine of equivalents and produced expert testimony that the exact amount of phospholipid was not critical so long as there was enough to make a monolayer.¹²⁷² The district court denied the requested injunction, reasoning that because it was an “improvement patent,” it was not entitled to a broad range of equivalents.¹²⁷³ While that denial was on appeal, the district court granted Dey summary judgment of non-infringement, reasoning that (1) claiming a specific range notified the public that the patentee was surrendering coverage outside that range and (2) the claim in Patent B was limited by the prosecution history of Patent A.¹²⁷⁴ On appeal, the Federal Circuit reversed.¹²⁷⁵

As for the limiting effect of the prosecution history of Patent A, the Federal Circuit noted that there could not be any amendment-based estoppel because the claims of Patent B had not been amended.¹²⁷⁶ There was no basis for asserting argument-based estoppel.¹²⁷⁷ The Federal Circuit further noted that “[w]e also believe that the relationship, if any, between [Patent B and Patent A] is insufficient to render particular arguments made during prosecution of [Patent A] equally applicable to the claims of [Patent B].”¹²⁷⁸ The court noted that the applications were commonly-owned and had one common co-inventor but Patent B was not a continuation, continuation-in-part, or division of Patent B.¹²⁷⁹ Patent B resulted from Dr. Tanaka’s continuing studies.¹²⁸⁰ Also, the statement made during the prosecution of Patent A was made at a time when Patent B had not yet been filed.¹²⁸¹

As for the claimed range, the Federal Circuit held that the “fact that a claim recites numeric ranges does not, by itself, preclude Abbott from relying on the doctrine of equivalents.”¹²⁸²

***623 XVIII. Relief**

A. Actual Damages Under § 284

1. Limited by the Marking Statute

Section 287 provides that without adequate marking, “no damages shall be recovered by the patentee in any action for infringement, except on proof that the infringer was notified of the infringement and continued to infringe thereafter.”¹²⁸³ Compliance with the marking statute has been construed as a question of fact,¹²⁸⁴ and the Federal Circuit held in *Allen Engineering Corp. v. Bartell Industries, Inc.*,¹²⁸⁵ that “[a] manifestly obvious typographical error that does not prevent interested members of the public from discerning the number of a patent alleged to protect an article does not result in a failure to mark.”

2. Lost Profit Damages: Acceptable Non-Infringing Substitute

The Sixth Circuit’s opinion, written by then-Chief Judge Markey, sitting by designation, in *Panduit Corp. v. Stahl Brothers Fibre Works, Inc.*,¹²⁸⁶ has been adopted by the Federal Circuit¹²⁸⁷ as the accepted analysis for lost profit claims. That analysis requires (1) proof of demand for the patented item, (2) the absence of acceptable non-infringing substitutes, (3) proof that the patentee had production capacity to meet the demand, and (4) non-speculative computations showing the amount of lost damages.¹²⁸⁸

The second Panduit requirement is, of course, of an acceptable non-infringing substitute. Despite prior cases “holding” that such an acceptable non-infringing substitute must be available or on the market during the infringing period, the Federal Circuit held in *Grain Processing Corp. v. American Maize-Products Co.*¹²⁸⁹ that the issue requires “comparing the patented invention to its next-best available alternative(s) - regardless of whether the alternative(s) were actually produced and sold during the infringement.” In *Grain Processing*, market *624 data was available that supported the conclusion that the alternative was acceptable.¹²⁹⁰ Such market data may not be available at the time of trial.

The opinion in *Fiskars, Inc. v. Hunt Mfg. Co. (Fiskars II)*¹²⁹¹ suggests that such market data is not necessary. Fiskars’ patent-in-suit was directed to a rotary paper trimmer.¹²⁹² After a first trial and appeal in *Fiskars I*,¹²⁹³ Fiskars was awarded \$3 million in lost profits damages.¹²⁹⁴ Twenty-one months after entry of final judgment, Hunt moved for relief under Fed. R. Civ. P. 60(b)(5) or (6), generally providing for such relief when it is no longer equitable that the judgment should apply.¹²⁹⁵ Hunt asserted that it had developed a new non-infringing trimmer shortly before trial and that it was available for shipping by the time of trial.¹²⁹⁶ Hunt did not introduce any evidence vis-à-vis that new trimmer during trial because, according to Hunt, it needed market data.¹²⁹⁷ The post-trial market data, Hunt said, showed that the new non-infringing trimmer was acceptable to consumers.¹²⁹⁸ The district court denied that motion,¹²⁹⁹ and the Federal Circuit affirmed.¹³⁰⁰ According to the court, “[w]hile sales data showing market acceptance of a non-infringing alternative may provide significant evidence that the alternative was acceptable to consumers, such evidence is not the sole means for demonstrating acceptability.”¹³⁰¹ “Accused infringers routinely rely on witness testimony to show that a non-infringing alternative is acceptable because customers do not seek the patented features absent from the substitute product.”¹³⁰² The court furthermore noted that “[a]lthough the parties must support their positions with sound economic proof, absolute certainty is not required, for reconstruction of the ‘but for’

market is ‘by definition a hypothetical enterprise’ based on the evidence introduced at trial,¹³⁰³ quoting Grain Processing.

***625 3. Lost Profits and Reasonable Royalty**

In order to recover lost profits, “a patent owner must prove a causal relation between the infringement and its loss of profits,”¹³⁰⁴ i.e., the patentee bears the burden of showing a reasonable probability that “but for” the infringement, the patentee would have made the infringer’s sales.¹³⁰⁵ A patentee may receive a reasonable royalty on an infringer’s sales that are not included in calculating lost profits,¹³⁰⁶ meaning that a patentee may recover a reasonable royalty on those sales that the patentee cannot meet the “but for” standard.¹³⁰⁷ In *Riles v. Shell Exploration & Production Co.*,¹³⁰⁸ the Federal Circuit required that proposed damage models be based on sound economic and factual predicates.

4. Price Erosion - Patentee is Not Required to Know That Competing System Infringed: Granting License Even with Reservation of Rights May Result in No Available Damages

In *Vulcan Engineering Co., Inc. v. FATA Aluminum, Inc.*,¹³⁰⁹ Vulcan’s patent-in-suit was directed to an on-line continuous system for producing cast metal shapes using the “lost foam” method.¹³¹⁰ Vulcan and FATA had submitted competing bids to General Motors for nine casting lines.¹³¹¹ FATA’s was the lowest, and GM awarded the contract to FATA.¹³¹² Vulcan then wrote GM stating its belief that a system meeting GM’s specification would infringe the patent-in-suit.¹³¹³ GM sent the letter to FATA, which continued to work on the production lines.¹³¹⁴ Vulcan then filed suit.¹³¹⁵ Line 1 had been completed shortly after suit was *626 filed.¹³¹⁶ Lines 2-5 were still being constructed when the district court handed down its opinion that Vulcan’s patent was valid and infringed.¹³¹⁷

Shortly after the district court handed down its opinion, Vulcan and GM entered into an agreement under which Vulcan gave GM a covenant not to sue vis-à-vis line 1.¹³¹⁸ That agreement also gave GM a “limited license” to have FATA “use, sell and offer to sell or otherwise dispose of” lines 2-5.¹³¹⁹ That agreement also contained a reservation of rights: namely, the agreement said that Vulcan did not release any claims against FATA “with respect to the first casting line,” i.e., line 1, or “any claim Vulcan may have against FATA for Vulcan failing to obtain the business of supplying the five casting lines” to GM.¹³²⁰

The district court awarded Vulcan lost profits (but not price erosion) damages for line 1.¹³²¹ The district court reasoned that Vulcan did not know that FATA’s system infringed at the time of the bid; therefore, Vulcan could not recover price erosion damages.¹³²² Regarding lines 2-5, the district court viewed Vulcan’s reservation of rights as only preserving damages for “failing to obtain the business,” and not the actual sale.¹³²³ The district court found that Vulcan had not introduced any evidence of its damages for “failing to obtain the business.”¹³²⁴

On appeal, the panel majority reversed and remanded vis-à-vis line 1 for a determination of price erosion damages, noting that “[i]t is not required that the patentee knew that the competing system infringed the patent, if the patentee reduced its price to meet the infringer’s competition.”¹³²⁵

As for lines 2-5, the panel majority affirmed, commenting somewhat cryptically that “Vulcan’s grant of an express license . . . is not consistent with the assertion of damages against Fata.”¹³²⁶ That, of course, was not the issue. That Vulcan gave GM a license does not absolve FATA from damages for its own infringement. *627 The issue was one of contract construction, namely whether a reasonable construction of the reservation of rights clause was that Vulcan only reserved its rights to pursue damages for “failing to obtain the business.” Although that is what the agreement said, it seems to be a stretch to conclude that that is what the parties reasonably intended.

B. Reasonable Attorney’s Fees—§ 285: an Attorney Pro se Litigant May Not Recover Attorney Fees as a Sanction Under Fed. R. Civ. P. 37(a)(4)(A) but May Recover Fees Under Inherent Power of the Court

In *Pickholtz v. Rainbow Technologies, Inc.*,¹³²⁷ Pickholtz, an attorney, was the owner of the patent-in-suit drawn to an apparatus for preventing software piracy.¹³²⁸ Rainbow produced certain computer “dongles,” i.e., small devices that connected externally to a computer port that prevented unauthorized use of computer software.¹³²⁹ Pickholtz brought a pro se action against Rainbow for infringement.¹³³⁰ Under local discovery rules, Pickholtz was entitled to an electronic form of the source code used with Rainbow’s dongles along with supporting documentation.¹³³¹ Rainbow apparently did not produce the same for approximately one year.¹³³² A U.S. magistrate judge held that there was no substantial justification for that delay but that

there was no authority for awarding Pickholtz his attorney fees.¹³³³ Pickholtz was asserting entitlement to \$264,039.64.¹³³⁴

On appeal, the Federal Circuit agreed that the language of Fed. R. Civ. P. 37 (a)(4)(A) (“expense incurred . . . including attorney fees”) did not permit an award of attorney fees to an attorney pro se litigant since there was no “expense” per se and “attorney” connoted an agency relationship.¹³³⁵ Thus, the Federal Circuit followed the Eleventh Circuit’s lead in a case involving Rule 11.¹³³⁶

The Federal Circuit did, however, find that the district court had inherent power, independent of Rule 37, for assessing attorney fees as a sanction: “attorney fees are such a valuable and frequently used tool in the armamentarium of trial judges that we see no reason for categorically ruling them out of consideration.”¹³³⁷

C. Costs

Under Rule 54(d), Fed. R. Civ. P., costs are allowed to the prevailing party as a matter of course, although the trial court may disallow costs in its discretion. “Costs” are defined by 28 U.S.C. § 1920 and include (1) clerk and marshal fees, (2) court reporter fees, (3) fees for printing and witnesses, (4) “fees for exemplification and copies of papers necessarily obtained for use in the case,” (5) docket fees, and (6) fees for court appointed experts, interpreters etc.¹³³⁸

Computer videos and animations are frequently used in patent cases. The Eleventh Circuit has denied a recovery of costs for such videos, construing “exemplification” in § 1920 as meaning an “official transcript of a public record, authenticated as a true copy for use as evidence.”¹³³⁹ In *Kohus v. Cosco, Inc.*,¹³⁴⁰ the Federal Circuit, applying Sixth Circuit law, joined the Eleventh Circuit and held that such videos/animations were more in the nature of models, and, as such, the costs of producing the same were not recoverable costs.¹³⁴¹ Judge Dyk agreed with the result but viewed the decision as being contrary to Sixth Circuit law.¹³⁴²

XIX. Practice and Procedure

A. Standing

The sole issue presented to the Federal Circuit in *Paradise Creations, Inc. v. U.V. Sales, Inc.*¹³⁴³ was whether a state corporate revival statute can retroactively confer Article III standing where it did not exist at the time the complaint was filed.¹³⁴⁴ Paradise was incorporated under Florida law and was administratively dissolved for failing to file its annual report.¹³⁴⁵ During dissolution, Paradise obtained exclusive rights to the patent in suit and later sued Sales for infringement.¹³⁴⁶ Sales moved for summary judgment on the grounds that Paradise did not have capacity to sue under Florida law or standing to invoke the district court’s Article *629 III jurisdiction.¹³⁴⁷ Shortly after Sales’ motion for summary judgment, Paradise was reinstated as a Florida corporation and, thereafter, opposed Sales’ motion on the ground that under Florida law, “when an administratively dissolved corporation is reinstated, the reinstatement ‘relates back to and takes effect as of the effective date of the administrative dissolution and the corporation resumes carrying on its business as if the administrative dissolution had never occurred.’”¹³⁴⁸ According to Paradise, “its reinstatement gave it the capacity to sue and standing to assert federal jurisdiction at the time it filed its complaint.”¹³⁴⁹ The district court disagreed, stating that “standing in federal court is a matter of federal law, and ‘depends upon the state of things at the time of the action brought.’”¹³⁵⁰ Paradise appealed on the theory that under Florida law, reinstatement related back to dissolution, i.e., that its licensing agreement was retroactively validated and that it constructively held enforceable patent rights on the day it filed its complaint.¹³⁵¹

The Federal Circuit affirmed.¹³⁵² The court agreed that Paradise had capacity to sue under Florida law, “at least insofar as the suit for patent infringement was ‘necessary to wind up and liquidate its business and affairs,’”¹³⁵³ but reiterated that “the plaintiff must demonstrate that it held enforceable title to the patent at the inception of the lawsuit,”¹³⁵⁴ holding that *Enzo APA & Son, Inc. v. Geapag A.G.*¹³⁵⁵ applied.

In *Enzo*, the plaintiff claimed title to a patent under an exclusive license that was executed after inception of the lawsuit but which, by its terms, was retroactive to purportedly take effect prior to the filing of the complaint.¹³⁵⁶ The *Enzo* court determined that parties “should possess rights before seeking to have them vindicated in court”¹³⁵⁷ and held that the retroactive licensing agreement was not sufficient to confer retroactive standing.¹³⁵⁸

***630** As for Paradise, the Federal Circuit saw “no meaningful distinction between a contract provision that purports to vest title retroactively in the plaintiff and a state law that is alleged to vest enforceable title retroactively.”¹³⁵⁹ Further, the court distinguished *Mentor H/S, Inc. v. Med. Device Alliance, Inc.*¹³⁶⁰ in which an exclusive licensee with less than all substantial rights in the patent did not have the right to sue at the inception of the lawsuit but cured the defect by filing a motion to join the patentee as plaintiff.¹³⁶¹ In *Mentor*, the court held, the plaintiff had a cognizable injury at the inception of suit for the purpose of Article III standing, based on its exclusive license.¹³⁶² Here, Paradise held no enforceable rights “whatsoever” in the patent at the time it filed suit “and therefore lacked cognizable injury necessary to assert standing under Article III.”¹³⁶³

The Federal Circuit’s holding, however, was premised on an “admission” by Paradise that it did not hold enforceable rights when the patentee sued. That “admission,” in turn, appears to have been premised solely on the fact that Paradise did not challenge Sales’ construction of Florida law that a contract entered into during dissolution cannot grant enforceable rights.¹³⁶⁴ But what if Sales’ construction was wrong? Assuming that Paradise’s license did entitle it to sue and that Paradise suffered an injury in fact from infringement, there was a causal connection between that injury and Sales’ alleged acts, and it was likely that such injury was redressable by the infringement suit - thus establishing Article III standing.¹³⁶⁵ In his dissent, Judge Lourie concluded that the real issue was whether the Florida dissolution deprived Paradise of its entitlement to bring suit for infringement, i.e. whether Paradise had enforceable patent rights under Florida law.¹³⁶⁶ Judge Lourie further saw Paradise’s “admission” as a simply a concession that Paradise lacked capacity to do business in dissolution, which was no more than what Florida law provided.¹³⁶⁷ Judge Lourie saw a difference between a party that had not entered into the contract before suit (*Enzo*) and a party who had (*Paradise*), but whose corporate capacity to transact business was temporarily defective.¹³⁶⁸

***631 B. Declaratory Judgment Jurisdiction**

In *Vanguard Research, Inc. v. PEAT, Inc.*,¹³⁶⁹ Vanguard and PEAT (and its predecessors) were parties to a series of agreements under which Vanguard marketed PEAT’s technology.¹³⁷⁰ The relationship soured, and PEAT wrote Vanguard asserting that Vanguard no longer had any license or right to market that technology.¹³⁷¹ PEAT, thereafter, filed several lawsuits in several courts alleging breach of contract, unfair competition, trade secret misappropriation, and so forth but not patent infringement.¹³⁷² Nevertheless, PEAT apparently advised customers that Vanguard was using its technology without a license.¹³⁷³ Vanguard meanwhile also filed several suits in several courts seeking a declaratory judgment on various grounds.¹³⁷⁴ Most of those suits were subject to motions to transfer, some of which were granted and some of which were not.¹³⁷⁵ This suit was an action that Vanguard had filed in the Northern District of Alabama seeking a declaratory judgment of invalidity and non-infringement.¹³⁷⁶ The district court dismissed the action for lack of a case or controversy based on PEAT’s statement that it did not intend to sue Vanguard for patent infringement.¹³⁷⁷

In reversing, the Federal Circuit noted that “a patentee’s present intentions do not control over whether a case or controversy exists.”¹³⁷⁸ The inquiry is whether Vanguard had a reasonable apprehension that PEAT would sue it for infringement.¹³⁷⁹ By filing the earlier lawsuits and advising customers that Vanguard was using technology without a license, according to the court, PEAT had shown “a willingness to protect that technology.”¹³⁸⁰ Accordingly, the Federal Circuit concluded that Vanguard had a reasonable apprehension of suit and that there was declaratory judgment jurisdiction.¹³⁸¹

***632 C. Appellate Jurisdiction**

The jurisdiction of the Federal Circuit is set out in 28 U.S.C. § 1295, and it includes jurisdiction “of an appeal from a final decision of a district court . . . if jurisdiction of that court was based, in whole or in part, on [28 U.S.C.] section 1338.”¹³⁸² Section 1338(a), in turn, provides in relevant part that “[t]he district courts shall have original jurisdiction of any civil action arising under any Act of Congress relating to patents.”¹³⁸³ In general, the well-pleaded complaint rule has governed whether a case “arises under” federal law for purposes of § 1331, and the similarity in language used in §§ 1331 and 1338 suggest that a similar interpretation should apply to § 1338. Nevertheless, the Federal Circuit concluded unanimously in *Aerojet-General Corp. v. Machine Tool Works, Oerlikon-Buehrle Ltd.* that a counterclaim for patent infringement that was “compulsory” and not “frivolous” or “insubstantial” sufficed to establish jurisdiction.¹³⁸⁴

In *Holmes Group, Inc. v. Vornado Air Circulation Systems, Inc.*,¹³⁸⁵ the Supreme Court held that the “well-pleaded complaint” rule applied to jurisdiction under § 1338 and, consequently, the Federal Circuit’s appellate jurisdiction. Vornado Air Circulation Systems, Inc. was a manufacturer of fans and heaters.¹³⁸⁶ In 1992, Vornado sued Duracraft Corp., a competitor, asserting that Duracraft had infringed its trade dress by using a “spiral grill design.”¹³⁸⁷ The Tenth Circuit held

that Vornado had no protectible trade dress.¹³⁸⁸ Vornado filed a complaint with the United States International Trade Commission asserting that Holmes' sale of fans and heaters with a spiral grill design infringed Vornado's patent and the same trade dress held unprotectible in Vornado I.¹³⁸⁹ Holmes then filed a declaratory judgment action seeking, inter alia, a judgment that its products did not infringe Vornado's trade dress and an injunction restraining respondent from accusing it of trade-dress infringement in promotional materials.¹³⁹⁰ Vornado asserted a compulsory counterclaim alleging patent infringement.¹³⁹¹

*633 The district court granted the requested declaratory judgment and injunction, finding that Vornado I provided collateral estoppel effect.¹³⁹² The district court rejected Vornado's assertion that an intervening Federal Circuit decision,¹³⁹³ disagreeing with the Tenth Circuit, constituted a change in the law that would permit relitigation of the trade dress issue.¹³⁹⁴ The district court stayed proceedings on the patent infringement counterclaim.¹³⁹⁵

Vornado appealed to the Federal Circuit.¹³⁹⁶ The Federal Circuit remanded the case to the district court for consideration of *TraFFix Devices, Inc. v. Marketing Displays, Inc.*,¹³⁹⁷ which had, in the interim, resolved the circuit split.¹³⁹⁸ The Supreme Court granted certiorari.¹³⁹⁹

The Supreme Court reasoned that

[t]he well-pleaded-complaint rule has long governed whether a case 'arises under' federal law for purposes of §1331. As 'appropriately adapted to §1338(a),' the well-pleaded-complaint rule provides that whether a case 'arises under' patent law 'must be determined from what necessarily appears in the plaintiff's statement of his own claim in the bill or declaration.' The plaintiff's well-pleaded complaint must 'establis[h] either that federal patent law creates the cause of action or that the plaintiff's right to relief necessarily depends on resolution of a substantial question of federal patent law.'¹⁴⁰⁰ Here, of course, Holmes's declaratory judgment complaint did not assert any action arising under federal patent law. The Court concluded that the Federal Circuit had therefore erred in asserting appellate jurisdiction.¹⁴⁰¹

In a concurring opinion, Justice Stevens remarked:

Necessarily, therefore, other circuits will have some role to play in the development of this area of the law. An occasional conflict in decisions may be useful in identifying questions that merit this Court's attention. Moreover, occasional decisions by courts *634 with broader jurisdiction will provide an antidote to the risk that the specialized court may develop an institutional bias.¹⁴⁰²

D. Claim Preclusion

In general, when a final judgment is rendered on the merits, another action may not be maintained between the parties on the same "claim," and any defenses that were or could have been raised in that action are extinguished. This is known as "claim preclusion."¹⁴⁰³ The Federal Circuit treats claim preclusion in patent infringement litigation as being unique to patent law and, consequently, applies its own Federal Circuit law.¹⁴⁰⁴ Consent judgments are deemed to have the same force and effect as judgments on the merits for purposes of claim preclusion.¹⁴⁰⁵

When the device in the first suit is different from that of the second, the Federal Circuit has held that an earlier settlement and consent judgment would operate as a bar to a subsequent validity challenge only if the accused devices in the first and second actions were "essentially the same," or if any changes were merely "colorable" or "unrelated to the limitations in the claims of the patent."¹⁴⁰⁶ If, in the first action, the settlement and consent judgment do not contain any express representations regarding infringement and validity, whether a party would be permitted in the second action to contest validity depends on whether the device at issue is essentially the same as that at issue earlier.¹⁴⁰⁷

Ecolab Inc. v. Paraclipse, Inc.,¹⁴⁰⁸ followed that analysis. Ecolab's patent-in-suit was related to lighted insect traps particularly for use in restaurants.¹⁴⁰⁹ Ecolab previously sued Paraclipse for infringement of the same patent based on Paraclipse's Insect Inn II trap.¹⁴¹⁰ That suit resulted in a settlement and a consent judgment providing that: "[t]his Court finds and concludes, and Paraclipse agrees, that the '690 patent is a valid patent.'¹⁴¹¹ The present litigation involved Paraclipse's *635 Insect Inn IV trap that differed in several respects from the Insect Inn II trap.¹⁴¹² Prior to trial, the district court granted Ecolab's motion for an order in limine precluding Paraclipse from introducing evidence of invalidity.¹⁴¹³ On appeal, the Federal Circuit reversed.¹⁴¹⁴ The court concluded that in the earlier litigation, based on the language of the consent judgment, Paraclipse had

merely agreed that the patent-in-suit was valid.¹⁴¹⁵ “Greater clarity than this is required to foreclose a validity defense in a new infringement suit involving a new product.”¹⁴¹⁶ The court then turned to the question of whether the Insect Inn II and IV traps were “essentially the same” and concluded that they were not.¹⁴¹⁷ Accordingly, the Federal Circuit found that Paraclipse was not precluded from challenging validity.¹⁴¹⁸

E. Issue Preclusion

Under the doctrine of issue preclusion (collateral estoppel), a judgment on the merits in a first suit precludes relitigation in a second suit of issues actually litigated and determined in the first suit.¹⁴¹⁹ Issue preclusion applies if (1) the issue is identical to one decided in the first action, (2) the issue was actually litigated in the first action, (3) resolution of the issue was essential to a final judgment in the first action, and (4) the party against whom estoppel is invoked had a full and fair opportunity to litigate the issue in the first action.¹⁴²⁰ Issue preclusion/collateral estoppel requires a final decision, namely one immune from reversal or amendment. That a decision is subject to appeal is a factor that must be considered.¹⁴²¹ Issue preclusion does not require identical parties and may be invoked in a case involving the same plaintiff and either a party or non-party to the first action.¹⁴²² The Supreme Court, however, has suggested that issues should be relitigated if the prior litigation raises questions regarding the quality, extensiveness, or fairness of the procedures. *636¹⁴²³ In *Innovad, Inc. v. Microsoft Corp.*,¹⁴²⁴ the Federal Circuit further held that issue preclusion is not available until there is a “complete adjudicative process,” including the ability to appeal, in a first action.¹⁴²⁵

In *Masco Corp. v. United States*,¹⁴²⁶ the Federal Circuit clarified when/if issue preclusion should apply if the earlier judgment involves more than one ground. The invention of the two patents-in-suit related to electronic dial combination locks.¹⁴²⁷ The parent patent to the two patents-in-suit was previously litigated and resulted in a prior appeal to the Federal Circuit.¹⁴²⁸ The same accused lock was at issue.¹⁴²⁹ In the prior litigation, one issue was whether a lever in that lock was pushed or pulled.¹⁴³⁰ Another issue involved a “lever operating means” limitation and the structure of the accused lock.¹⁴³¹ In all, the district court had made three findings, any one of which would have been sufficient to support the conclusion of non-infringement.¹⁴³² On appeal in the prior litigation, the Federal Circuit had not specifically reached the push/pull issue.¹⁴³³

The court concluded that an alternative finding not addressed on appeal does not have preclusive effect:

“[i]f the judgment of the court of first instance was based on a determination of two issues, either of which standing independently would be sufficient to support the result, and . . . the appellate court upholds one of these determinations as sufficient and refuses to consider whether or not the other is sufficient and accordingly affirms the judgment, the judgment is conclusive as to the first determination.”¹⁴³⁴ With cumulative findings, the court stated that “[i]f a judgment of a court of first instance is based on determinations of two issues, either of which standing independently would be sufficient to support the result, the judgment is not conclusive with respect to either issue standing alone,” but conceded that “[t]here may be *637 cases where . . . the balance tips in favor of preclusion because of the fullness with which the issue was litigated and decided in the first action.”¹⁴³⁵

In *Masco*, the Court of Federal Claims had given preclusive effect to the resolution of the push/pull issue in the earlier litigation.¹⁴³⁶ The Federal Circuit said that was error.¹⁴³⁷ The government urged that whether an earlier finding should be given preclusive effect should be based on the materiality of the finding to the prior judgment as well as the interests of justice and expediency.¹⁴³⁸ The government argued that the findings in the earlier litigation were cumulative, rather than alternative, and should be given preclusive effect.¹⁴³⁹ The Federal Circuit concluded, however, that an earlier U.S. Court of Claims decision¹⁴⁴⁰ had expressly held that where the appellate court had not passed on a finding by the lower court, that finding was not conclusive.¹⁴⁴¹ Accordingly, the Federal Circuit concluded that because it had not passed on the push/pull issue in the prior litigation, issue preclusion did not apply.¹⁴⁴²

F. “Prosecution Laches” is an Available Defense Within § 282 (At Least Where the Patentee is Jerry Lemelson) - Despite Two Prior Non-Precedential Opinions to the Contrary

So held the panel in *Symbol Technologies, Inc. v. Lemelson Medical, Education & Research Foundation, Ltd. Partnership*,¹⁴⁴³ over a strong dissent by Circuit Judge Newman. This case presents a question that virtually dictates en banc view.

Lemelson Medical, Education & Research Foundation, Limited Partnership (Lemelson), was (and is) the assignee of some

185 unexpired patents and a number of pending patent applications of the late Jerome H. (Jerry) Lemelson.¹⁴⁴⁴ The patents at issue here generally involved machine vision and automatic identification technology and claimed domestic priority dates back to applications filed in 1954 *638 and 1956.¹⁴⁴⁵ Symbol and another party, Cognex Corporation, designed and manufactured bar code scanners and related products.¹⁴⁴⁶ In 1998, in response to complaints from customers that they were receiving letters from Lemelson charging that their use of certain products infringed Lemelson's patents, Symbol and Cognex brought declaratory judgment actions asserting that certain of Lemelson's patents were invalid, unenforceable, and not infringed.¹⁴⁴⁷ The sole issue on this appeal, however, was Symbol's and Cognex's charge of "prosecution laches."¹⁴⁴⁸ The district court had dismissed counts in Symbol's and Cognex's complaints charging "prosecution laches" for failure to state a claim, concluding that "prosecution laches" was unavailable as a matter of law.¹⁴⁴⁹ On appeal, the Federal Circuit reversed.¹⁴⁵⁰

The panel majority found support for a defense of prosecution laches in two Supreme Court cases,¹⁴⁵¹ one decided in 1923, *Woodbridge v. United States*,¹⁴⁵² and one decided in 1924, *Webster Electric Co. v. Splittorf Electrical Co.*¹⁴⁵³ In *Woodbridge*, the applicant requested that the Patent Office delay issuance of his patent for one year (pursuant to the statute then in effect), but when the Patent Office failed to then issue the patent, waited nine years before informing the Office of its error.¹⁴⁵⁴ He then sought to amend his specification and claims to add innovations discovered during the intervening nine years.¹⁴⁵⁵ The Court concluded that because of the delay, the applicant had forfeited his right to a patent.¹⁴⁵⁶ In *Webster*, the applicant presented claims in a divisional application covering subject matter in another patent five years after that patent had issued and after losing an interference with that patent.¹⁴⁵⁷ The Court characterized the delay in presenting those claims as "laches," although modern practice would likely characterize the issue as interference estoppel.¹⁴⁵⁸ The panel majority further characterized two subsequent *639 cases in which the Supreme Court refused to apply "prosecution laches" as "ratifying" that defense. In those cases, *Crown Cork & Seal Co. v. Ferdinand Gutmann Co.*¹⁴⁵⁹ and *General Talking Pictures Corp. v. Western Electric Co.*,¹⁴⁶⁰ the Court refused to find "prosecution laches" because there was an absence of adverse intervening rights.¹⁴⁶¹

The panel majority rejected Lemelson's arguments that (1) *Webster* and its progeny were limited to claims arising out of interference actions,¹⁴⁶² that (2) the Patent Act of 1952, especially the statutory recognition of domestic priority in §§ 120, 121, precluded application of prosecution laches,¹⁴⁶³ and that (3) the panel was bound by two prior non-precedential opinions holding that prosecution laches was not an available defense.¹⁴⁶⁴ The panel majority concluded that (1) contrary to Professor Chisum's view,¹⁴⁶⁵ *Crown Cork* did not limit *Webster* to interference related proceedings, noting that *Webster* did not involve an interference and viewing the Court in *Crown Cork* as more concerned about the delay in presenting the claims than in the interference.¹⁴⁶⁶ The majority also concluded that (2) Pat Federico's Commentary on the New Patent Act stating that: "[t]he defenses which may be raised in an action involving the validity or infringement of a patent are specified in general terms, by the second paragraph of section 282, in five numbered items. Item 1 specifies '[n]oninfringement, absence of liability for infringement, or unenforceability,' (the last word was added by amendment in the Senate for greater clarity); this would include the defenses such as that the patented invention has not been made, used, or sold by the defendant; license; and equitable defenses such as laches, estoppel, and unclean hands," indicated that there was no legislative intent to abolish "prosecution laches" by codifying prior common law domestic priority practice in §§ 120, 121.¹⁴⁶⁷ And, finally, the panel majority also concluded that (3) the Federal Circuit's practice of issuing non-binding, non-precedential opinions¹⁴⁶⁸ was permitted by Article III of the U.S. Constitution, adopting the reasoning *640 of the Ninth Circuit in *Hart v. Massanari*¹⁴⁶⁹ and rejecting the reasoning of the Eighth Circuit in *Anastasoff v. United States*.¹⁴⁷⁰

In dissent, Circuit Judge Newman noted that Lemelson was not charged with violating any provision of §§ 120, 121 or other wrong doing; the only charge was that he had waited too long to present the present claims.¹⁴⁷¹ In Judge Newman's view (1) *Woodbridge* and *Webster* did not provide support for a broad application of "prosecution laches,"¹⁴⁷² (2) the 1952 Patent Act, in codifying the requirements for continuing applications, expressly rejected any time limitation,¹⁴⁷³ and (3) although the panel should not be bound by prior non-precedential opinions, those and other opinions nonetheless supported the view that the court should be bound by the statute, i.e., §§ 120, 121.¹⁴⁷⁴

G. Pre-Filing Investigation - Rule 11: (1) an Attorney's Pre-Filing Claim Construction is Reviewed to Determine Whether It is Objectively Reasonable, (2) When a Number of Products Are Charged with Infringement It is Not Always Necessary for the Plaintiff's Attorneys to Inspect Each Product Separately to Verify the Facts Underlying a Charge of Infringement, but the Evidence Must Be Sufficient to Permit a Reasonable Inference That All Products Infringe

The Federal Circuit in *Antonious v. Spalding & Evenflo Companies*¹⁴⁷⁵ reasoned that because claim construction was a matter

of law, an attorney's proposed claim construction is subject to the Fed. R. Civ. P. 11(b)(2) requirement that all legal arguments be nonfrivolous. Applying Fourth Circuit law, the Federal Circuit further concluded that the standard was "objective reasonableness," and to satisfy that standard, there must be "some basis in law" to support each legal argument.¹⁴⁷⁶

Mr. Antonious was the owner of a patent, the '279 patent, drawn to a particular construction of metal wood golf clubs.¹⁴⁷⁷ In 1997, he saw several Spalding Intimidator *641 clubs in a retail store, purchased one, and cut open the club head.¹⁴⁷⁸ After doing so, he determined that the club infringed his '279 patent.¹⁴⁷⁹ He then contacted his patent counsel at Finnegan, Henderson, Farabow, Garrett & Dunner (Finnegan Henderson).¹⁴⁸⁰ The Finnegan Henderson attorneys reviewed the '279 patent and its prosecution history and concluded that the phrase "extends into and connects with" in the claims could be interpreted as abutting against using an alternative dictionary definition for "into" as meaning "against," as in "crashed into a tree."¹⁴⁸¹ The attorneys examined the cut-open driver and concluded that it infringed.¹⁴⁸² No other club heads in the Spalding Intimidator line were cut open.¹⁴⁸³

Mr. Antonious then filed suit alleging infringement of the '279 patent and further alleging that another line of irons infringed a second of his utility patents, the '184 patent, and two design patents.¹⁴⁸⁴ Initially, the complaint did not specify which of the clubs in the Intimidator line were alleged to infringe or which claims were alleged to infringe.¹⁴⁸⁵ In response to a scheduling order, however, Antonious alleged that 21 named Intimidator woods infringed three independent and several dependent claims of the '279 patent.¹⁴⁸⁶ The district court subsequently granted Spalding summary judgment that the Spalding clubs did not infringe either of the utility patents and that the two design patents were invalid.¹⁴⁸⁷ With respect to the '279 patent, the district court disagreed with Finnegan Henderson's claim construction.¹⁴⁸⁸ Spalding had also filed a motion for sanctions.¹⁴⁸⁹ The district court withheld ruling on that motion until the liability issues were finally resolved.¹⁴⁹⁰ Antonious did not appeal the judgment vis-à-vis the '279 patent but did appeal the judgment vis-à-vis the '184 patent and the two design patents.¹⁴⁹¹ On *642 appeal, the Federal Circuit affirmed the judgment vis-à-vis the '184 patent but reversed the finding of invalidity of the two design patents.¹⁴⁹²

Back in district court, the court awarded \$30,000 in sanctions against Finnegan Henderson.¹⁴⁹³ It was, apparently, unclear whether the court awarded those sanctions based upon Finnegan Henderson's claim construction, i.e., an issue of law, or whether the court viewed Finnegan Henderson's pre-filing investigation as being inadequate.¹⁴⁹⁴ Accordingly, the Federal Circuit addressed both grounds.¹⁴⁹⁵

With respect to claim construction, the Federal Circuit noted that the Finnegan Henderson attorneys had independently reviewed and construed the claims.¹⁴⁹⁶ Accordingly, the court concluded that Finnegan Henderson could be sanctioned for violating Fed. R. Civ. P. 11(b)(2) only if their claim construction was frivolous.¹⁴⁹⁷ The Federal Circuit concluded that it was not.¹⁴⁹⁸

With respect to the pre-filing investigation, the Federal Circuit reasoned that, because infringement was a question of fact, an attorney's allegation of infringement is subject to the requirement of Fed. R. Civ. P. 11(b)(3) that all factual allegations have evidentiary support, and, under Fourth Circuit law, an attorney's pre-filing actions were evaluated using a standard of objective reasonableness.¹⁴⁹⁹ The focus here was on whether it was reasonable to infer that the other clubs in the Intimidator line infringed claim 1 of the '279 patent.¹⁵⁰⁰

Finnegan Henderson argued that the initial complaint did not specifically allege infringement of claim 1 and that other claims did not contain the "extends into and connects" limitation. The Federal Circuit rejected that argument noting that (1) the response to the scheduling order specifically alleged infringement of claim 1, and (2) "even if Finnegan Henderson's allegations with respect to other claims in the October 30 letter [the response to the scheduling order] were well grounded, Finnegan Henderson would not be immunized from sanctions based on the strength of the other allegations of infringement."¹⁵⁰¹ The court noted that "[t]he 'paper-as- *643 a-whole' approach was rejected by the 1993 amendments to Rule 11" and that "[t]he current version of the rule makes clear that sanctions may be based on a single invalid legal or factual theory, even if other asserted theories are valid."¹⁵⁰²

With respect to the unexamined clubs, the Federal Circuit concluded that "[t]o be sure, when a number of different products are charged with infringement it is not always necessary for the plaintiff's attorney to inspect each product separately to verify the facts on which the plaintiff bases its infringement allegations. At a minimum, however, the evidence uncovered by the patent holder's investigation must be sufficient to permit a reasonable inference that all the accused products infringe."¹⁵⁰³

In this case, the Federal Circuit remanded the issue to the district court to determine whether it was reasonable for the

Finnegan Henderson attorneys to infer that each of the clubs alleged to infringe met the limitations of claim 1 as construed by the Finnegan Henderson attorneys.¹⁵⁰⁴

H. Use of Non-Rule 706 Court Appointed Technical Advisor

Techsearch L.L.C. v. Intel Corp.,¹⁵⁰⁵ appears to be the first case in which the Federal Circuit addressed the use of non-Rule 706 court appointed experts.¹⁵⁰⁶ In doing so, the court adopted otherwise applicable regional circuit law (in this case, Ninth Circuit law) and seems to have given the practice qualified approval.¹⁵⁰⁷

Under Fed. R. Evid. 706(a), court appointed experts

[1] shall advise the parties of the witness' findings, if any; [2] the witness' deposition may be taken by any party; and [3] the witness may be called to testify by the court, or any party. The witness shall be subject to cross-examination by each party, including a party calling the witness.

Techsearch involved complex computer microprocessor technology.¹⁵⁰⁸ The case involved extensive submissions by the parties and numerous preliminary findings by the district court, in this case the Northern District of California.¹⁵⁰⁹ After the district court held a Markman hearing and issued a decision regarding claim construction, the parties filed cross-motions for summary judgment.¹⁵¹⁰ Prior to ***644** acting on those motions, the district court informed the parties that the court was appointing a technical advisor who would not be an expert witness under Rule 706.¹⁵¹¹ Consequently, the technical advisor would not issue findings, would not give a deposition, and would not testify.¹⁵¹² In naming the technical advisor, the court told the parties that the advisor would not engage in any independent investigation of the underlying litigation, provide evidence to the court, or contact any party or witness.¹⁵¹³ The court further told the parties that it would identify any material that the technical advisor relied upon other than the materials submitted by the parties or "those upon which a person versed in the relevant field of knowledge would be reasonably expected to rely."¹⁵¹⁴ The court informed the parties that the advisor would execute an affidavit indicating an understanding of the order before beginning his engagement and would file an affidavit attesting to his compliance at the conclusion of his employment.¹⁵¹⁵

Apparently, the advisor (1) purchased computer equipment and software, (2) billed time to "research" and charged the court for telephone calls, and (3) failed to certify compliance with the terms of the court's order.¹⁵¹⁶ Techsearch, losing in the summary judgment battle, complained that the district court had abrogated its authority to the technical advisor (basically arguing that the district court could not have resolved the issues without relying on the technical advisor) and that the foregoing actions indicated that the technical advisor had undertaken independent research and possibly experiments.¹⁵¹⁷

The Federal Circuit concluded that, because the use of technical advisors was not limited to patent cases, otherwise applicable regional circuit law should apply.¹⁵¹⁸ In this case, that was the Ninth Circuit, which had decided in *Association of Mexican American Educators v. California* ("AMAE"),¹⁵¹⁹ that the abuse of discretion standard applied to a district court's appointment of a technical advisor.¹⁵²⁰ The Federal Circuit further concluded that the district court's appointment of a non-Rule 706 technical advisor was within the inherent authority of the court, as held in ***645** AMAE, but it noted that district courts should use that inherent authority sparingly and only in exceptionally technically complicated cases.¹⁵²¹

The Federal Circuit further noted that the majority in AMAE had recognized the need for district courts to avoid impropriety but had not adopted specific guidelines suggested in a dissent because to do so would "undo [the] entire trial."¹⁵²² Accordingly, the Federal Circuit concluded that it could "distill" from the AMAE opinion "appropriate guidelines" that the Ninth Circuit would have otherwise adopted.¹⁵²³ "In essence," the Federal Circuit said, the district court must: use a 'fair and open procedure for appointing a neutral technical advisor . . . addressing any allegations of bias, partiality or lack of qualifications' in the candidates; clearly define and limit the technical advisor's duties, presumably in a writing disclosed to all parties; guard against extra-record information; and make explicit, perhaps through a report or record, the nature and content of the technical advisor's tutelage concerning the technology.¹⁵²⁴

The Federal Circuit concluded that the district court had not abused its discretion in appointing the technical advisor and that the record did not convince the court that the technical advisor had conducted independent experiments or research.¹⁵²⁵ The court, furthermore, concluded that the district court had exercised due care in avoiding improper influence.¹⁵²⁶

Circuit Judge Dyk, in his concurring opinion, voiced the concern that district court judges may have a tendency to rely on technical advisors in summary judgment situations to resolve disputed questions of fact.¹⁵²⁷ The district court's infringement analysis led Judge Dyk to believe that the district court had been "too heavily influenced" by the technical advisor.¹⁵²⁸

I. District Court Abused Discretion in Not Imposing Sanctions for Violating a Protective Order by Making Copy of Opponent's Patent Application and Filing It with the PTO

In *Eagle Comtronics, Inc. v. Arrow Communication Laboratories, Inc.*,¹⁵²⁹ Eagle's patent-in-suit related to electrical signal filters used to decode or unscramble *646 protected television signals.¹⁵³⁰ During discovery, the district court had entered a protective order limiting the access and use of documents marked "Confidential" and "Confidential--Attorneys Only."¹⁵³¹ Arrow d/b/a Arcom produced a pending patent application so marked that listed two of its employees as inventors, one of whom was Gould.¹⁵³² Eagle claimed that one of its employees was the true inventor - Gould had been his supervisor before leaving to join Arcom.¹⁵³³ Eagle claimed that when its counsel read the application it was necessary to take "immediate action" to protect itself from a potential on-sale bar.¹⁵³⁴ Without notifying Arcom, Eagle made two copies of the application and filed them with the PTO as applications, one naming its employee as the sole inventor and the other naming its employee as a joint inventor with the Arcom employees.¹⁵³⁵ Nine days later, Eagle notified Arcom of what it had done and included a declaration and assignment form suggesting that Arcom could "remedy [its] misconduct" by assigning the application to Eagle.¹⁵³⁶

Arcom moved for an order to show cause why Eagle and its counsel should not be held in contempt.¹⁵³⁷ The court declined to do so finding that the action was not egregious.¹⁵³⁸ On appeal, the Federal Circuit strongly disagreed, holding that the district court had abused its discretion in not issuing sanctions.¹⁵³⁹ The Federal Circuit noted that [t]he integrity of the patent system is maintained in part by inventors' understanding that their patent applications will remain secret until either the patents issue or the applications are otherwise published by the PTO. Breaches of this secrecy undermine the integrity of the patent system. When these breaches occur under a court's watch, sanctions are wholly appropriate.¹⁵⁴⁰

***647 J. Failure to Object to Claim Construction in Jury Charge May Result in Waiver Even If Futile (at Least in the Eighth Circuit)**

In *Ecolab Inc. v. Paraclipse, Inc.*,¹⁵⁴¹ Ecolab's patent-in-suit was related to lighted insect traps particularly for use in restaurants.¹⁵⁴² The district court issued a Markman order construing several terms in the claims.¹⁵⁴³ The jury found non-infringement based on the district court's claim construction.¹⁵⁴⁴ Ecolab filed post-trial motions seeking JMOL or a new trial urging that the district court's claim construction was erroneous.¹⁵⁴⁵ Ecolab had not, apparently, objected to the jury charge that contained the district court's claim construction.¹⁵⁴⁶ Fed. R. Civ. P. 51 provides that "[n]o party may assign as error the giving or the failure to give an instruction unless that party objects thereto before the jury retires to consider its verdict, stating distinctly the matter objected to and the grounds of the objection." The requirements of Rule 51 are governed by regional circuit law.¹⁵⁴⁷ Many circuits have adopted a "futility exception" to Rule 51, i.e., a litigant is excused from strictly complying with Rule 51 if the district court is aware of the party's position and further objection would be futile.¹⁵⁴⁸ The Federal Circuit noted, however, that decisions in the Eighth Circuit indicated that there was at least a question whether the Eighth Circuit followed the "futility exception."¹⁵⁴⁹

There were several claim terms in dispute.¹⁵⁵⁰ Most had been previously briefed by the parties and were addressed in the district court's Markman order, but one was not.¹⁵⁵¹ As to the terms previously briefed and covered in the Markman order, the Federal Circuit indicated that the "futility exception" might apply, but, in view of the question whether the Eighth Circuit applied that exception, the Federal Circuit considered the claim construction adopted by the district court and found that construction was correct.¹⁵⁵² As to the term that had not been previously briefed and addressed in the Markman order, the Federal Circuit noted that had Ecolab not objected, Ecolab would have been bound by the requirements of Rule *648 51.¹⁵⁵³ Ecolab had, however, objected, and the Federal Circuit found that the district court's construction was erroneous as to one claim.¹⁵⁵⁴ Accordingly, the court vacated the judgment vis-à-vis that claim.¹⁵⁵⁵

XX. Conclusion

The year 2002 was a big year for patents. The much-anticipated Supreme Court Festo decision introduced a “foreseeability” standard for prosecution history estoppel. Texas Digital, in its reliance on dictionaries, encyclopedias, and treatises, seemed to be a significant marker in the trend toward interpreting patent claims according to their “ordinary” meaning. Allen Engineering, CCS Fitness, and Epcon Gas helped provide an analytical structure for interpreting means-plus-function limitations. Judge Linn’s opinion in Teleflex, addressing the best mode requirement under § 112(1), emphasized that the claims measure the extent of the best mode disclosure. Time will reveal how those and other decisions will further define the law of patents.

Footnotes

^{a1} Cox & Smith Incorporated, San Antonio, Texas

^{aa1} Cox & Smith Incorporated, San Antonio, Texas

¹ 301 F.3d 1343, 64 U.S.P.Q.2d (BNA) 1202 (Fed. Cir. 2002).

² Id. at 1345, 64 U.S.P.Q.2d at 1203.

³ Id.

⁴ Id.

⁵ Id. at 1346, 64 U.S.P.Q.2d at 1204.

⁶ Id., 64 U.S.P.Q.2d at 1203.

⁷ Cruciferous Sprout, 301 F.3d at 1348, 64 U.S.P.Q.2d at 1205.

⁸ Id.

⁹ Id. at 1348, 64 U.S.P.Q.2d at 1205-06.

¹⁰ 292 F.3d 718, 63 U.S.P.Q.2d (BNA) 1031 (Fed. Cir. 2002).

¹¹ Id.

¹² Id. at 723, 63 U.S.P.Q.2d at 1034.

¹³ Id.

¹⁴ Id. at 726, 63 U.S.P.Q.2d at 1035.

15 Id., 63 U.S.P.Q.2d at 1035-36.

16 Beckson Marine, 292 F.3d at 726, 63 U.S.P.Q. 2d at 1036.

17 Id. at 726, 63 U.S.P.Q. 2d at 1036.

18 201 F.3d 1366, 53 U.S.P.Q.2d (BNA) 1377 (Fed.Cir. 2000).

19 Beckson Marine, 292 F.3d at 726, 63 U.S.P.Q.2d at 1036.

20 Id.

21 Vanmoor, 201 F.3d at 1366, 53 U.S.P.Q.2d at 1379.

22 Id. at 1367, 53 U.S.P.Q.2d at 1379.

23 Id. at 1366, 53 U.S.P.Q.2d at 1378-79 (construing 35 USC § 102(b) (1994)).

24 See Kalman v. Kimberly-Clark Corp., 713 F.2d 760, 771, 218 U.S.P.Q. (BNA) 781, 789 (Fed. Cir. 1983).

25 Cont'l Can Co. USA v. Monsanto Co., 948 F.2d 1264, 1268, 20 U.S.P.Q.2d (BNA) 1746, 1749 (Fed. Cir. 1991).

26 289 F.3d 1367, 1377-78, 62 U.S.P.Q.2d (BNA) 1917, 1923 (Fed. Cir. 2002).

27 Id. at 1370, 62 U.S.P.Q.2d at 1918.

28 Id. at 1372, 62 U.S.P.Q.2d at 1919.

29 Id.

30 Id.

31 Id.

32 Crown Operations, 289 F.3d at 1372, 1377, 62 U.S.P.Q.2d at 1919, 1923.

33 Id., 62 U.S.P.Q.2d at 1923.

34 Id. at 1378, 62 U.S.P.Q.2d at 1923.

35 Id.

36 295 F.3d 1292, 63 U.S.P.Q.2d (BNA) 1597 (Fed. Cir. 2002).

37 Id. at 1294, 63 U.S.P.Q.2d at 1598.

38 Id.

39 Id.

40 Id. at 1295, 63 U.S.P.Q.2d at 1599.

41 Id. at 1294, 63 U.S.P.Q.2d at 1598.

42 Trintec, 295 F.3d at 1297, 63 U.S.P.Q.2d at 1601.

43 Id. at 1295, 63 U.S.P.Q.2d at 1598.

44 Id., 63 U.S.P.Q.2d at 1599.

45 Id. at 1296, 63 U.S.P.Q.2d at 1599.

46 Id., 63 U.S.P.Q.2d at 1600.

47 Id.

48 Trintec, 295 F.3d at 1296, 63 U.S.P.Q.2d at 1699.

49 Id.

50 Id. at 1297, 63 U.S.P.Q.2d at 1600.

51 Id. at 1296, 63 U.S.P.Q.2d at 1600.

52 301 F.3d 1350, 64 U.S.P.Q.2d (BNA) 1206 (Fed. Cir. 2002).

53 Id.

54 Id., 64 U.S.P.Q.2d at 1207.

55 Id. The court also noted that “[i]nherency is not necessarily coterminous with the knowledge of those of ordinary skill in the art. Artisans of ordinary skill may not recognize the inherent characteristics or functioning of the prior art.” Id. at 1349, 64 U.S.P.Q.2d at 1206, (quoting MEHL/Biophile Int’l Corp. v. Milgraum, 192 F.3d 1362, 1365, 52 U.S.P.Q.2d (BNA)1303, 1305-06 (Fed. Cir. 1999)), and (citing Atlas Powder Co. v. IRECO Inc., 190 F.3d 1342, 1347, 51 U.S.P.Q.2d (BNA)1943, 1946-47 (Fed. Cir. 1999)).

56 Id. at 1351, 64 U.S.P.Q.2d at 1207.

57 304 F.3d 1221, 64 U.S.P.Q.2d (BNA) 1292 (Fed. Cir. 2002) (en banc).

58 Id. at 1231, 64 U.S.P.Q.2d at 1299, (quoting In re Cruciferous Sprout Litigation, 301 F.3d 1343, 1350, 64 U.S.P.Q.2d (BNA) 1202, 1207 (Fed. Cir. 2002)).

59 Id. at 1231, 64 U.S.P.Q.2d at 1299.

60 Id. at 1223-24, 64 U.S.P.Q.2d at 1293.

61 Id.

62 Id. at 1227, 64 U.S.P.Q.2d at 1295.

63 Elan Pharm., 304 F.3d at 1224, 64 U.S.P.Q.2d at 1293.

64 Id. at 1225, 64 U.S.P.Q.2d at 1295.

65 Id. at 1226, 64 U.S.P.Q.2d at 1295.

66 Id.

67 Id. at 1224, 64 U.S.P.Q.2d at 1293.

68 Id. at 1224, 64 U.S.P.Q.2d at 1293.

69 Elan Pharm., 304 F.3d at 1226, 64 U.S.P.Q.2d at 1295.

70 Id. at 1227, 64 U.S.P.Q.2d at 1295.

71 Id. at 1228, 64 U.S.P.Q.2d at 1296.

72 Id.

73 Id. at 1229, 64 U.S.P.Q.2d at 1297.

74 Id.

75 Elan Pharm., 304 F.3d at 1227-28, 64 U.S.P.Q.2d at 1296.

76 Id.

77 Id. at 1229, 64 U.S.P.Q.2d at 1297.

78 Id. at 1233, 64 U.S.P.Q.2d at 1300.

79 Id. at 1234, 64 U.S.P.Q.2d at 1301.

80 Id. at 1233, 64 U.S.P.Q.2d at 1300-01, (citing *In re Cruciferous Sprout Litigation*, 301 F.3d 1343, 1350, 64 U.S.P.Q.2d (BNA) 1202, 1207 (Fed. Cir. 2002)).

81 304 F.3d 1373, 64 U.S.P.Q.2d (BNA) 1676 (Fed. Cir. 2002).

82 Id.

83 Id.

84 Id.

85 Id. at 1380, 64 U.S.P.Q.2d at 1680.

86 Id.

87 Rosco, 304 F.3d at 1380-81, 64 U.S.P.Q.2d at 1680-81.

88 Id. at 1381, 64 U.S.P.Q.2d at 1681.

89 148 F.3d 1368, 47 U.S.P.Q.2d (BNA) 1363 (Fed. Cir. 1998).

90 166 F.3d 1172, 49 U.S.P.Q.2d (BNA) 1530 (Fed. Cir. 1999), cert. denied, 119 S. Ct. 2395 (1999).

91 180 F.3d 1354, 51 U.S.P.Q.2d (BNA) 1001 (Fed. Cir. 1999).

92 Id. at 1369, 51 U.S.P.Q.2d at 1012.

93 Id.

94 292 F.3d 728, 63 U.S.P.Q.2d (BNA) 1251 (Fed. Cir. 2002).

95 Id. at 732, 63 U.S.P.Q.2d at 1253.

96 Id.

97 Id. at 735, 63 U.S.P.Q.2d at 1255.

98 Id. at 736, 63 U.S.P.Q.2d at 1256.

99 Id. at 739, 743, 63 U.S.P.Q.2d at 1259, 1261.

100 Because the court used the word “include,” this list is apparently non-exhaustive.

101 Juicy Whip, 292 F.3d at 741, 63 U.S.P.Q.2d at 1260 (citing *In re Reuter*, 670 F.2d 1015, 1021 & n.9, 210 U.S.P.Q. 249, 255 & n.9 (UPA 1981)).

102 It is not readily apparent why the court made this observation, other than perhaps an indirect comment on the witnesses’ familiarity with the details of the dispenser. That the dispensers leaked or were only used for a short period of time would not preclude the dispensers from qualifying as “in public use” prior art under §102(b).

103 Juicy Whip, 292 F.3d at 743, 63 U.S.P.Q.2d at 1261.

104 Id.

105 Id.

106 Id., 63 U.S.P.Q.2d at 1262.

107 Id. at 746, 63 U.S.P.Q.2d at 1264 (Mayer, J. dissenting).

108 Id. at 743, 63 U.S.P.Q.2d at 1261.

109 Juicy Whip, 292 F.3d at 747, 63 U.S.P.Q.2d at 1264.

110 Id. at 747, 63 U.S.P.Q.2d at 1265.

111 Id. at 747-48, 63 U.S.P.Q.2d at 1265.

112 Id. at 746, 63 U.S.P.Q.2d at 1264.

113 308 F.3d 1304, 64 U.S.P.Q.2d (BNA) 1832 (Fed. Cir. 2002).

114 Id. at 1306, 64 U.S.P.Q.2d at 1834.

115 Id. at 1309, 64 U.S.P.Q.2d at 1836.

116 Id.

117 Id.

118 Id. at 1317, 64 U.S.P.Q.2d at 1842.

119 Schumer, 308 F.3d at 1315, 64 U.S.P.Q.2d at 1841.

120 Id. at 1316, 64 U.S.P.Q.2d at 1841.

121 Id.

122 Id. at 1315, 64 U.S.P.Q.2d at 1841.

123 Id. at 1316, 64 U.S.P.Q.2d at 1842.

124 Id., 64 U.S.P.Q.2d at 1841.

125 Schumer, 308 F.3d at 1316, 64 U.S.P.Q.2d at 1841-42.

126 308 F.3d 1193, 64 U.S.P.Q.2d (BNA) 1812 (Fed. Cir. 2002).

127 Id. at 1197, 64 U.S.P.Q.2d at 1815.

128 Id. at 1204-06, 64 U.S.P.Q.2d at 1819-21.

129 Id. at 1216, 64 U.S.P.Q.2d at 1829.

130 Id. at 1217, 64 U.S.P.Q.2d at 1829.

131 Id.

¹³² Tex. Digital Sys., 308 F.3d at 1217-18, 64 U.S.P.Q.2d at 1829.

¹³³ Id. (applying *Woodland Trust v. Flowertree Nursery, Inc.*, 148 F.3d 1368, 47 U.S.P.Q.2d (BNA) 1363 (Fed. Cir. 1998).

¹³⁴ Id. at 1218, 64 U.S.P.Q.2d at 1830.

¹³⁵ Id.

¹³⁶ Id.

¹³⁷ 629 F.2d 675, 681, 207 U.S.P.Q. (BNA) 107, 111 (C.C.P.A. 1980).

¹³⁸ 314 F.3d 1313, 65 U.S.P.Q.2d (BNA) 1385 (Fed. Cir. 2003).

¹³⁹ Id. at 1356, 65 U.S.P.Q.2d at 1417.

¹⁴⁰ Id.

¹⁴¹ Id.

¹⁴² Id. at 1313, 65 U.S.P.Q.2d at 1385.

¹⁴³ Id. at 1357, 65 U.S.P.Q.2d at 1418.

¹⁴⁴ *Amgen*, 314 F.3d at 1319, 65 U.S.P.Q.2d at 1388.

¹⁴⁵ Id.

¹⁴⁶ Id. at 1320, 65 U.S.P.Q.2d at 1388.

¹⁴⁷ Id. at 1354, 65 U.S.P.Q.2d at 1416.

¹⁴⁸ Id.

¹⁴⁹ Id. at 1355, 65 U.S.P.Q.2d at 1416.

¹⁵⁰ *Amgen*, 314 F.3d at 1355, 65 U.S.P.Q.2d at 1416.

¹⁵¹ Id.

152 Id. at 1355, 65 U.S.P.Q.2d at 1416.

153 Id. at 1355 n.21.

154 Id. at 1355.

155 Id. at 1357, 65 U.S.P.Q.2d at 1418. Query: Is the burden a preponderance of the evidence? Or is the burden clear and convincing? Does that make a difference whether the disclosure that one is relying on to show anticipation is embraced by the claims? The opinion does not address any of these issues.

156 Amgen, 314 F.3d at 1356, 65 U.S.P.Q.2d at 1417.

157 291 F.3d 1317, 62 U.S.P.Q.2d (BNA) 1846 (Fed. Cir. 2002).

158 Id. at 1318-19, 62 U.S.P.Q.2d at 1847-48.

159 Id. at 1319, 62 U.S.P.Q.2d at 1848.

160 Id. at 1320, 62 U.S.P.Q.2d at 1848.

161 Id. The district court had also granted summary judgment to Kvaerner that its Side Valve Tree did not infringe the asserted claim of the first patent-in-suit and that the asserted claims of the second patent-in-suit were invalid under §112(1) for lack of an adequate written disclosure. Cooper Cameron appealed those decisions, and Kvaerner cross-appealed the district court's grant of Cooper Cameron's motion for summary judgment vis-à-vis the SISL reports.

162 Id. at 1323, 62 U.S.P.Q.2d at 1851.

163 Cooper Cameron, 291 F.3d at 1324, 62 U.S.P.Q.2d at 1851.

164 Id.

165 Id.

166 286 F.3d 1326, 62 U.S.P.Q.2d (BNA) 1425 (Fed. Cir. 2002).

167 Id. at 1328, 62 U.S.P.Q.2d at 1426.

168 Id. at 1329-30, 62 U.S.P.Q.2d at 1427.

169 Id. at 1328-29, 62 U.S.P.Q.2d at 1426-27.

170 Id. at 1328, 62 U.S.P.Q.2d at 1427.

171 Id. at 1332, 62 U.S.P.Q.2d at 1428 (applying *Mas-Hamilton v. LaGard, Inc.*, 156 F.3d 1206, 1217, 48 U.S.P.Q.2d (BNA) 1010, 1019 (Fed. Cir. 1998).

172 *Kollar*, 286 F.3d at 1332, 62 U.S.P.Q.2d at 1428.

173 Id., 62 U.S.P.Q.2d at 1429.

174 Id. at 1333, 62 U.S.P.Q.2d at 1430.

175 276 F.3d 1347, 61 U.S.P.Q.2d (BNA) 1289 (Fed. Cir. 2002).

176 Id. at 1358, 61 U.S.P.Q.2d at 1293-94 (Judge Linn, concurring).

177 Id. at 1348-49, 61 U.S.P.Q.2d at 1290.

178 Id. at 1350, 61 U.S.P.Q.2d at 1290.

179 Id. at 1351, 61 U.S.P.Q.2d at 1292.

180 724 F.2d 965, 971-72, 220 U.S.P.Q. (BNA) 577, 582 (Fed. Cir. 1984). (“It is incorrect to ask: ‘Was it a public use?’ and then ‘Was it experimental?’ Rather, the court is faced with a single issue: Was it a public use under 102(b)?”). Id.

181 239 F.3d 1253, 57 U.S.P.Q.2d (BNA) 1699 (Fed. Cir. 2001).

182 *EZ Dock*, 276 F.3d at 1352, 61 U.S.P.Q.2d at 1292.

183 Id. at 1352-53, 61 U.S.P.Q.2d at 1293.

184 Id. at 1358, 61 U.S.P.Q.2d at 1296.

185 Id. at 1356, 61 U.S.P.Q.2d at 1295.

186 Id. at 1355, 61 U.S.P.Q.2d at 1295.

187 816 F.2d 647, 2 U.S.P.Q.2d (BNA) 1465 (Fed. Cir. 1987), cert. denied, 484 U.S. 1025 (1988).

188 103 F.3d 1538, 41 U.S.P.Q.2d (BNA) 1238 (Fed. Cir. 1997), cert. denied, 521 U.S. 1122 (1997).

189 *EZ Dock*, 276 F.3d at 1356, 61 U.S.P.Q.2d at 1295.

190 Id. at 1355, 61 U.S.P.Q.2d at 1295. Contrary to Judge Linn’s comments, few would view the analysis of “on-sale” bars following UMC Electronics as “simple.” Indeed, the indeterminate nature of the “totality of the circumstances” analysis that prevailed following UMC Electronics was one of the reasons urged for Supreme Court review in Pfaff.

191 Id.

192 Id.

193 Id.

194 Id. at 1357, 61 U.S.P.Q.2d at 1299 (quoting Scaltech Inc. v. Retec/Tetra, L.L.C., 178 F.3d 1378, 1384 n.1, 51 U.S.P.Q.2d 1055, 1059 n.1 (Fed. Cir. 1999)).

195 828 F.2d 1558, 1564, 4 U.S.P.Q.2d (BNA)1210, 1214 (Fed. Cir. 1987).

196 EZ Dock, 276 F.3d at 1357, 61 U.S.P.Q.2d at 1296.

197 98 F.3d 1318, 1323, 40 U.S.P.Q.2d (BNA) 1450, 1453-54 (Fed. Cir. 1996).

198 Id.

199 Id.

200 EZ Dock, 276 F.3d at 1357-58, 61 U.S.P.Q.2d at 1296.

201 Id. at 1358, 61 U.S.P.Q.2d at 1297.

202 Id., 61 U.S.P.Q.2d at 1296. Although not mentioned by Judge Linn, such lack of control has been decisive. See *In re Hamilton*, 882 F.2d 1576, 1581, 11 U.S.P.Q.2d (BNA) 1890, 1894 (Fed. Cir. 1989).

203 299 F.3d 1336, 63 U.S.P.Q.2d (BNA) 1769 (Fed. Cir. 2002).

204 Id. at 1342-43, 63 U.S.P.Q.2d at 1770-71.

205 Id., 63 U.S.P.Q. at 1771.

206 Id. at 1356, 63 U.S.P.Q.2d at 1781. The court, for example, reminded the parties that “[c]ounsel must remember that they are not only advocates for their clients; they are also officers of the court and are expected to assist the court in the administration of justice, particularly in difficult cases involving complex issues of law and technology.”

207 Id. at 1354-55, 63 U.S.P.Q.2d at 1780.

208 Id. at 1352, 63 U.S.P.Q.2d at 1778 (emphasis added).

209 Allen Eng'g, 299 F.3d at 1352, 63 U.S.P.Q.2d at 1779-80.

210 Id. at 1353, 63 U.S.P.Q.2d at 1779.

211 303 F.3d 1294, 1298, 64 U.S.P.Q.2d (BNA) 1270, 1272 (Fed. Cir. 2002).

212 Id.

213 Id.

214 Id. at 1299, 64 U.S.P.Q.2d at 1273.

215 Id. For those who might be curious, the source, not cited in the opinion, is 1 E. Schrödinger, "Die gegenwertige Situation in der Quantenmechanik," 23 Naturwissenschaften at 807-12, 823, 844-49 (1935).

216 Id. at 1302, 64 U.S.P.Q.2d at 1275.

217 Minnesota Mining, 303 F.3d at 1308, 64 U.S.P.Q.2d at 1277.

218 Id. at 1308, 64 U.S.P.Q.2d at 1277.

219 279 F.3d 1372, 1374, 61 U.S.P.Q.2d (BNA) 1609, 1610 (Fed. Cir. 2002).

220 Id.

221 Id. at 1374-75, 61 U.S.P.Q.2d at 1610.

222 Id. at 1375, 61 U.S.P.Q.2d at 1610.

223 Id. at 1376, 61 U.S.P.Q.2 at 1611.

224 Id.

225 35 U.S.C. § 282 (2000).

226 Elec. Storage Battery Co. v. Shimadzu, 307 U.S. 5, 41 U.S.P.Q. (BNA) 155 (1939).

227 292 F.3d 728, 63 U.S.P.Q.2d (BNA) 1251 (Fed. Cir. 2002).

228 Id. at 735, 63 U.S.P.Q.2d at 1255.

229 Id. at 736, 63 U.S.P.Q.2d at 1256.

230 Id. at 731, 63 U.S.P.Q.2d at 1252. It should, of course, be noted, that the “in public use” issue actually involved two questions: (1)whether the evidence established that a dispenser satisfying all of the limitations of the asserted claims had been placed “in public use” prior to the critical date, and (2)whether that evidence, largely oral, was sufficient by itself, i.e., without reasonable corroboration, to constitute clear and convincing evidence of invalidity. Only the first question is addressed here. The second question is addressed *infra*.

231 Id. at 738, 63 U.S.P.Q.2d at 1257.

232 Id. at 736, 63 U.S.P.Q.2d at 1256, (quoting *Perkin-Elmer Corp. v. Computervision Corp.*, 732 F.2d 888, 893, 221 U.S.P.Q. (BNA) 669, 673 (Fed. Cir. 1984)).

233 *Juicy Whip*, 292 F.3d at 736, 63 U.S.P.Q.2d at 1256.

234 Id. at 732, 63 U.S.P.Q.2d at 1253.

235 295 F.3d 1315, 1318, 63 U.S.P.Q.2d (BNA) 1580 (Fed. Cir. 2002).

236 Id. at 1319, 63 U.S.P.Q.2d at 1582.

237 Id. at 1318-19, 63 U.S.P.Q.2d at 1582.

238 Id. at 1319, 63 U.S.P.Q.2d at 1582.

239 Id.

240 Id., 63 U.S.P.Q.2d at 1583. The district court also concluded that Konrad’s offer to create a remote database system for the University Research Association-Superconducting Super Collider Laboratory in exchange for four months full-time employment (or no more than \$48,000) coupled with his stipulation that the invention had been reduced to practice before that time placed the invention “on sale” prior to the critical date.

241 *Netscape Communication*, 295 F.3d at 1325, 63 U.S.P.Q.2d at 1589.

242 Id. at 1322, 63 U.S.P.Q.2d at 1583.

243 Id.

244 Id. at 1321, 63 U.S.P.Q.2d at 1584.

245 Id.

246 Id. at 1322, 63 U.S.P.Q.2d at 1583-84.

247 Netscape Communication, 295 F.3d at 1322, 63 U.S.P.Q.2d at 1584.

248 Id.

249 Id. at 1322, 63 U.S.P.Q.2d at 1585.

250 Id.

251 Id. at 1323, 63 U.S.P.Q.2d at 1587.

252 Id.

253 Netscape Communication, 295 F.3d at 1323, 63 U.S.P.Q.2d at 1587.

254 Id.

255 298 F.3d 1290, 63 U.S.P.Q.2d (BNA) 1843 (Fed. Cir. 2002).

256 Id. at 1292, 63 U.S.P.Q.2d at 1844.

257 Id. at 1293, 63 U.S.P.Q.2d at 1845.

258 Id.

259 Id. at 1299, 63 U.S.P.Q.2d at 1850.

260 Id. at 1298-99, 63 U.S.P.Q.2d at 1849.

261 New Railhead, 298 F.3d at 1299, 63 U.S.P.Q.2d at 1850. See also, RCA Corp. v. Data Gen. Corp., 887 F.2d 1056, 1061, 12 U.S.P.Q.2d 1449, 1153 (Fed. Cir. 1989) (“[E]xperimental use, which means perfecting or completing an invention to the point of determining that it will work for its intended purpose, ends with an actual reduction to practice.”).

262 Corbett v. Chisholm, 568 F.2d 759, 764-65, 196 U.S.P.Q. (BNA) 337, 342 (C.C.P.A. 1977).

263 In re McGrew, 120 F.3d 1236, 1239, 43 U.S.P.Q.2d (BNA) 1632, 1635 (Fed. Cir. 1997).

264 279 F.3d 975, 977, 61 U.S.P.Q.2d (BNA) 1523, 1524 (Fed. Cir. 2002).

265 Id. at 983, 61 U.S.P.Q.2d at 1528.

266 Id. at 977-79, 61 U.S.P.Q.2d at 1524-25.

267 Id. at 979, 61 U.S.P.Q.2d at 1525.

268 Id. at 981, 61 U.S.P.Q.2d at 1526. Specifically, §§1.601(i) and (n) provide: (i) An interference is a proceeding instituted in the Patent and Trademark Office before the Board to determine any question of patentability and priority of invention between two or more parties claiming the same patentable invention. (n) Invention A is the “same patentable invention” as an invention “B” when invention “A” is the same as (35 U.S.C. 102) or is obvious (35 U.S.C. 103) in view of invention “B” assuming invention “B” is prior art with respect to invention “A”. Invention “A” is a “separate patentable invention” with respect to invention “B” when invention “A” is new (35 U.S.C. 102) and non-obvious (35 U.S.C. 103) in view of invention “B” assuming invention “B” is prior art with respect to invention “A”.

269 Id., 61 U.S.P.Q.2d at 1526-27.

270 In re Berger, 279 F.3d at 981-82, 61 U.S.P.Q.2d at 1527.

271 Id. at 982, 61 U.S.P.Q.2d at 1527.

272 Id. at 981, 61 U.S.P.Q.2d at 1527.

273 Id. at 981-82, 61 U.S.P.Q.2d at 1527.

274 568 F.2d 759, 764-65, 196 U.S.P.Q. (BNA) 337, 342 (Fed. Cir. 1977).

275 In re Berger, 279 F.3d at 977-78, 61 U.S.P.Q.2d at 1524.

276 Id. at 982, 61 U.S.P.Q.2d at 1527.

277 Id. at 983, 61 U.S.P.Q.2d at 1528.

278 Id.

279 277 F.3d 1338, 61 U.S.P.Q.2d (BNA) 1430 (Fed. Cir. 2002).

280 Id. at 1340, 61 U.S.P.Q.2d at 1431.

281 Id. at 1340-41, 61 U.S.P.Q.2d at 1431.

282 Id. at 1341, 61 U.S.P.Q.2d at 1432.

283 Id.

284 Id.

285 116 F.3d 1454, 1460, 43 U.S.P.Q.2d (BNA) 1030 (Fed. Cir. 1997).

286 Lee, 277 F.3d at 1341, 61 U.S.P.Q.2d at 1432.

287 Id. at 1342, 61 U.S.P.Q.2d at 1432-33.

288 Id. at 1345, 61 U.S.P.Q.2d at 1435.

289 Id. at 1343, 61 U.S.P.Q.2d at 1434.

290 Id. at 1344, 61 U.S.P.Q.2d at 1434.

291 Id.

292 Lee, 277 F.3d at 1344, 61 U.S.P.Q.2d at 1434.

293 308 F.3d 1267 n.9, 64 U.S.P.Q.2d (BNA) 1801 n.9 (Fed. Cir. 2002).

294 Id. at 1280, 64 U.S.P.Q.2d at 1811.

295 Id.

296 Id. at 1269, 64 U.S.P.Q.2d at 1802.

297 Id. at 1271, 64 U.S.P.Q.2d at 1803.

298 Id. at 1275, 64 U.S.P.Q.2d at 1806.

299 Huston, 308 F.3d at 1275, 64 U.S.P.Q.2d at 1806.

300 Id. at 1279, 64 U.S.P.Q.2d at 1809.

301 Id. at 1278, 64 U.S.P.Q.2d at 1808.

302 Id.

303 Id.

304 Id.

305 Huston, 308 F.3d at 1279, 64 U.S.P.Q.2d at 1809.

306 Id. at 1280, 64 U.S.P.Q.2d at 1810.

307 Id.

308 Id. at 1280, 64 U.S.P.Q.2d at 1810.

309 Id. at 1280-81, 64 U.S.P.Q.2d at 1810.

310 Id. at 1281, 64 U.S.P.Q.2d at 1810.

311 Huston, 308 F.3d at 1282-83, 64 U.S.P.Q.2d at 1811-12.

312 Id. at 1281 n.9, 64 U.S.P.Q.2d at 1810, 1811 n.9 (citing *Applewood Landscape & Nursery v. Hollingsworth*, 884 F.2d 1502 (1st Cir. 1989)).

313 Id. at 1283, 64 U.S.P.Q.2d at 1812.

314 Id.

315 Id.

316 283 F.3d 1335, 62 U.S.P.Q.2d (BNA) 1151 (Fed. Cir. 2002).

317 Id. at 1337, 62 U.S.P.Q.2d at 1151-52.

318 Id. at 1339, 62 U.S.P.Q.2d at 1152.

319 Id., 62 U.S.P.Q.2d at 1153.

320 Id. at 1338, 62 U.S.P.Q.2d at 1153.

321 Id. at 1339, 62 U.S.P.Q.2d at 1154.

322 Glang, 283 F.3d at 1340, 62 U.S.P.Q.2d at 1155.

323 See *In re Hyatt*, 211 F.3d 1367, 1372, 54 U.S.P.Q.2d (BNA) 1664, 1667 (Fed. Cir. 2000); *In re Graves*, 69 F.3d 1147, 1152, 36 U.S.P.Q.2d (BNA) 1697, 1701 (Fed. Cir. 1995); *In re Etter*, 756 F.2d 852, 858, 225 U.S.P.Q. (BNA) 1, 5 (Fed. Cir. 1985).

324 *In re Yamamoto*, 740 F.2d 1569, 1571, 222 U.S.P.Q. (BNA) 934, 396 (Fed. Cir. 1984).

325 298 F.3d 1357, 63 U.S.P.Q.2d (BNA) 2002 (Fed. Cir. 2002).

326 *Id.* at 1360, 63 U.S.P.Q.2d at 2003.

327 *Id.*, 63 U.S.P.Q.2d at 2004.

328 *Id.*

329 *Id.* at 1361, 63 U.S.P.Q.2d at 2004.

330 *Id.*

331 Thrift, 298 F.3d at 1361, 63 U.S.P.Q.2d at 2004.

332 *Id.*

333 *Id.*

334 *Id.* at 1363, 63 U.S.P.Q.2d at 2006.

335 *Id.* at 1363-64, 63 U.S.P.Q.2d at 2006.

336 *Id.* at 1364, 63 U.S.P.Q.2d at 2006.

337 Thrift, 298 F.3d at 1364, 63 U.S.P.Q.2d at 2006.

338 *Id.*, 63 U.S.P.Q.2d at 2007.

339 314 F.3d 575, 65 U.S.P.Q.2d (BNA) 1156 (Fed. Cir. 2002).

340 *Id.* at 576, 65 U.S.P.Q.2d at 1157.

341 Id.

342 Id.

343 Id.

344 Id.

345 Bass, 314 F.3d at 575, 65 U.S.P.Q.2d at 1156.

346 Id.

347 Id. at 577, 65 U.S.P.Q.2d at 1157.

348 Id.

349 Id., 65 U.S.P.Q.2d at 1158.

350 Id. at 577, 65 U.S.P.Q.2d at 1158.

351 Bass, 314 F.3d at 577, 65 U.S.P.Q.2d at 1158.

352 Id. at 578, 65 U.S.P.Q.2d at 1158.

353 Id.

354 Id. at 578, 65 U.S.P.Q.2d at 1158.

355 Id.

356 285 F.3d 1378, 62 U.S.P.Q.2d (BNA) 1436 (Fed. Cir. 2002).

357 Id.

358 Id.

359 Id.

360 Id.

361 Id., 62 U.S.P.Q.2d at 1437.

362 Sastry, 285 F.3d at 1378, 62 U.S.P.Q.2d at 1437.

363 Id. at 1381-82, 62 U.S.P.Q.2d at 1437-38.

364 Id. at 1382, 62 U.S.P.Q.2d at 1437.

365 Id.

366 Id.

367 Id. at 1383, 62 U.S.P.Q.2d at 1439.

368 Sastry, 285 F.3d at 1383, 62 U.S.P.Q.2d at 1440.

369 265 F.3d 1354, 60 U.S.P.Q.2d (BNA) 1396 (Fed. Cir. 2001).

370 304 F.3d 1216, 64 U.S.P.Q.2d (BNA) 1524 (Fed. Cir. 2002).

371 Id. at 1218, 64 U.S.P.Q.2d at 1525.

372 Id.

373 Id.

374 Id., 64 U.S.P.Q.2d at 1525-26

375 Id. at 1219, 64 U.S.P.Q.2d at 1526.

376 Novo Nordisk, 304 F.3d at 1219, 64 U.S.P.Q.2d at 1526.

377 315 F.3d 1325, 65 U.S.P.Q.2d (BNA) 1379 (Fed. Cir. 2003).

378 Id. at 1327, 65 U.S.P.Q.2d at 1380.

379 Id.

380 Id.

381 Id.

382 Id. at 1327, 65 U.S.P.Q.2d at 1380.

383 Peterson, 315 F.3d at 1327, 65 U.S.P.Q.2d at 1380.

384 Id. at 1329, 65 U.S.P.Q.2d at 1382.

385 Id.

386 Id., 65 U.S.P.Q. at 1382-83.

387 Id. at 1331, 65 U.S.P.Q. at 1383.

388 Id.

389 Peterson, 315 F.3d at 1331, 65 U.S.P.Q.2d at 1383.

390 Id.

391 Id., 65 U.S.P.Q.2d at 1384.

392 277 F.3d 1361, 61 U.S.P.Q.2d (BNA) 1515 (Fed. Cir. 2002).

393 303 F.3d 1362, 64 U.S.P.Q.2d (BNA) 1448 (Fed. Cir. 2002).

394 Id. at 1363, 64 U.S.P.Q.2d at 1449.

395 Id.

396 Id.

397 Id.

398 Id. at 1364, 64 U.S.P.Q.2d at 1449-50.

399 In re Bogese, 303 F.3d at 1364, 64 U.S.P.Q.2d at 1450.

400 Id.

401 Id.

402 Id.

403 Id. at 1365, 64 U.S.P.Q.2d at 1450.

404 Id., 64 U.S.P.Q.2d at 1451.

405 In re Bogese, 303 F.3d at 1365, 64 U.S.P.Q.2d at 1451.

406 Id.

407 Id.

408 Id. at 1365-66, 64 U.S.P.Q.2d at 1451.

409 Id. at 1369, 64 U.S.P.Q.2d at 1454.

410 Id. at 1367, 64 U.S.P.Q.2d at 1451.

411 In re Bogese, 303 F.3d at 1367, 64 U.S.P.Q.2d at 1452.

412 Id. at 1367-68, 64 U.S.P.Q.2d at 1452.

413 Id. Circuit Judge Newman cites In re Henriksen, 399 F.2d 253, 158 U.S.P.Q. (BNA) 224 (CCPA 1968). In Henriksen, the PTO had adopted a literal reading of §120 saying that only two or three continuing applications were permitted. The CCPA reversed finding that the statute “provides no limit to the number of applications that may be copending.” The panel majority said that Henriksen did not “suggest or imply that the PTO must allow dilatory tactics in the prosecution of applications or that the PTO lacks inherent power to prohibit unreasonable delay in prosecution.”

414 Id. at 1370-72, 64 U.S.P.Q.2d at 1454-56.

415 298 F.3d 1290, 63 U.S.P.Q.2d (BNA) 1843 (Fed. Cir. 2002).

416 Id.

417 Id.

418 Id.

419 Id.

420 Id. at 1294, 63 U.S.P.Q.2d at 1846.

421 New Railhead, 298 F.3d at 1295, 63 U.S.P.Q.2d at 1847.

422 Id. at 1295-96, 63 U.S.P.Q.2d at 1847 (quoting *Enzo Biochem, Inc. v. Gen-Probe, Inc.*, 296 F.3d 1316, 63 U.S.P.Q.2d (BNA) 1609 (Fed. Cir. 2002), opinion on petition for rehearing, vacating prior opinion, 285 F.3d 1013, 62 U.S.P.Q.2d (BNA) 1289 (Fed. Cir. 2002)).

423 935 F.2d 1555, 1566, 19 U.S.P.Q.2d 1111, 1119 (Fed. Cir. 1991).

424 291 F.3d 1317, 62 U.S.P.Q.2d (BNA) 1846 (Fed. Cir. 2002).

425 Id. at 1319, 62 U.S.P.Q.2d at 1847.

426 Id.

427 Id.

428 Id. at 1324, 62 U.S.P.Q.2d at 1852.

429 Id. at 1323, 62 U.S.P.Q.2d at 1850-51.

430 *Cooper Cameron*, 291 F.3d at 1323, 62 U.S.P.Q.2d at 1850.

431 *Enzo Biochem, Inc. v. Gen-Probe Inc.*, 285 F.3d 1013, 62 U.S.P.Q.2d (BNA) 1289 (Fed. Cir. 2002).

432 66 Fed. Reg. 1099 (Jan. 5, 2001), available at [http:// www.uspto.gov/web/patents/guides.htm](http://www.uspto.gov/web/patents/guides.htm).

433 296 F.3d 1325, 63 U.S.P.Q.2d (BNA) 1613 (Fed. Cir. 2002), opinion on petition for rehearing, vacating prior opinion, 285 F.3d 1013, 62 U.S.P.Q.2d (BNA) 1289 (Fed. Cir. 2002).

434 Id. at 1320, 63 U.S.P.Q.2d at 1610.

435 Id. at 1321, 63 U.S.P.Q.2d at 1610.

436 Id.

437 Id.

438 Id.

439 Enzo Biochem, 296 F.3d at 1322, 63 U.S.P.Q.2d at 1611.

440 119 F.3d 1559, 1566, 43 U.S.P.Q.2d (BNA) 1398, 1404 (Fed. Cir. 1997), cert. denied, 523 U.S. 1089 (1998).

441 Enzo Biochem, 296 F.3d at 1322, 63 U.S.P.Q.2d at 1611.

442 Id. at 1322, 63 U.S.P.Q.2d at 1612.

443 Id. at 1324, 63 U.S.P.Q.2d at 1613.

444 Id. at 1322, 63 U.S.P.Q.2d at 1611.

445 Id. at 1325, 63 U.S.P.Q.2d at 1613.

446 Id. at 1326, 63 U.S.P.Q.2d at 1614.

447 Enzo Biochem, 296 F.3d at 1326, 63 U.S.P.Q.2d at 1614.

448 Id.

449 Id.

450 Id. at 1327, 63 U.S.P.Q.2d at 1615.

451 Id.

452 Enzo Biochem Inc. v. Gen Probe Inc., 285 F.3d 1013, 62 U.S.P.Q.2d (BNA) 1289 (Fed. Cir. 2002).

453 Id.

454 Id.

455 304 F.3d 1235, 64 U.S.P.Q.2d (BNA) 1344 (Fed. Cir. 2002).

456 Id.

457 Id. at 1239, 64 U.S.P.Q.2d at 1236.

458 Id.

459 Id.

460 PIN/NIP, 304 F.3d at 1239, 64 U.S.P.Q.2d at 1346.

461 Id. at 1245, 64 U.S.P.Q.2d at 1350.

462 Id. at 1247, 64 U.S.P.Q.2d at 1352.

463 Id.

464 Id. at 1245-46, 64 U.S.P.Q.2d at 1350.

465 Enzo Biochem, Inc. v. Calgene, Inc., 188 F.3d 1362, 1371-72, 52 U.S.P.Q.2d (BNA) 1129, 1136 (Fed. Cir. 1999).

466 289 F.3d 1367, 62 U.S.P.Q.2d (BNA) 1917 (Fed. Cir. 2002).

467 Id.

468 Id.

469 Id.

470 Id. at 1375, 62 U.S.P.Q.2d at 1920.

471 Crown Operations, 289 F.3d at 1375, 62 U.S.P.Q.2d at 1920.

472 Id.

473 Id.

474 Id.

475 Id. at 1374-75, 62 U.S.P.Q.2d at 1920.

476 Id. at 1381, 62 U.S.P.Q.2d at 1925.

477 Crown Operations, 289 F.3d at 1379, 62 U.S.P.Q.2d at 1924.

478 Id. at 1381, 62 U.S.P.Q.2d at 1925.

479 Id.

480 Id. at 1382, 62 U.S.P.Q.2d at 1926.

481 299 F.3d 1313, 63 U.S.P.Q.2d (BNA) 1374 (Fed. Cir. 2002).

482 301 F.3d 1306, 64 U.S.P.Q.2d (BNA) 1001 (Fed. Cir. 2002).

483 See Bayer, 299 F.3d at 1331, 63 U.S.P.Q.2d at 1385.

484 Teleflex, 299 F.3d at 1313, 63 U.S.P.Q.2d at 1374.

485 Id. at 1318, 63 U.S.P.Q.2d at 1376.

486 Id.

487 Id. at 1321-22, 63 U.S.P.Q.2d at 1378.

488 Id. at 1322, 1335, 63 U.S.P.Q.2d at 1378, 1388.

489 Id. at 1330, 63 U.S.P.Q.2d at 1385, (quoting *Engel Indus., Inc. v. Lockformer Co.*, 946 F.2d 1528, 1531, 20 U.S.P.Q.2d (BNA) 1300, 1302 (Fed. Cir. 1991)).

490 Teleflex, 299 F.3d at 1331, 63 U.S.P.Q.2d at 1385.

491 Id.

492 Id. at 1331-32, 63 U.S.P.Q.2d at 1385.

493 Id. at 1332-33, 63 U.S.P.Q.2d at 1386.

494 Bayer, 301 F.3d 1306, 64 U.S.P.Q.2d (BNA) 1001 (Fed. Cir. 2002).

495 Id. at 1316, 64 U.S.P.Q.2d at 1008.

496 Id.

497 Id. at 1319, 64 U.S.P.Q.2d at 1010.

498 768 F.2d 1318, 226 U.S.P.Q. (BNA) 758 (Fed. Cir. 1985).

499 Bayer, 301 F.3d at 1319, 64 U.S.P.Q.2d at 1010.

500 Id. at 1319-20, 64 U.S.P.Q.2d at 1010.

501 Id. at 1308, 64 U.S.P.Q.2d at 1002.

502 Id. at 1311, 64 U.S.P.Q.2d at 1004.

503 See id. at 1313, 64 U.S.P.Q.2d at 1005.

504 Id. at 1310, 64 U.S.P.Q.2d at 1003.

505 Bayer, 301 F.3d at 1310, 64 U.S.P.Q.2d at 1003.

506 Id.

507 Id.

508 See id.

509 Id. at 1312, U.S.P.Q.2d at 1004.

510 Id. at 1321, U.S.P.Q.2d at 1012.

511 Bayer, 301 F.3d at 1321, U.S.P.Q.2d at 1012.

512 See id. at 1323, 64 U.S.P.Q.2d at 1013.

513 299 F.3d 1336, 1342, 63 U.S.P.Q.2d (BNA) 1769, 1770 (Fed. Cir. 2002).

514 Id. at 1349, 63 U.S.P.Q.2d at 1776.

515 Id.

516 Id.

517 See id.

518 311 F.3d 1116, 65 U.S.P.Q.2d (BNA) 1051 (Fed. Cir. 2002).

519 Id. at 1118, 65 U.S.P.Q.2d at 1052-53.

520 Id., 65 U.S.P.Q.2d at 1053.

521 Id. at 1119, 65 U.S.P.Q.2d at 1053.

522 Id.

523 Id., 65 U.S.P.Q.2d at 1053-54.

524 Verve, 311 F.3d at 1119-20, 65 U.S.P.Q.2d. at 1054.

525 Id. at 1120, 65 U.S.P.Q.2d. at 1054.

526 Id.

527 275 F.3d 1371, 61 U.S.P.Q.2d (BNA) 1363 (Fed. Cir. 2002).

528 Id.

529 Id.

530 Id. at 1373-74, 61 U.S.P.Q.2d at 1364-65.

531 Id. at 1377, 61 U.S.P.Q.2d at 1367.

532 Talbert, 275 F.3d at 1377, 61 U.S.P.Q.2d at 1367.

533 Id.

534 Id.

535 Id. at 1378, 61 U.S.P.Q.2d at 1368.

536 Id. at 1377, 61 U.S.P.Q.2d at 1367.

537 Id. at 1378, 61 U.S.P.Q.2d at 1368.

538 Talbert, 275 F.3d at 1378, 61 U.S.P.Q.2d at 1368.

539 Id.

540 Id. at 1374, 61 U.S.P.Q.2d at 1365 (emphasis added).

541 285 F.3d 1029,1031, 62 U.S.P.Q.2d (BNA) 1431, 1432 (Fed. Cir. 2002).

542 Id. at 1032, 62 U.S.P.Q.2d at 1432

543 Id.

544 Id. at 1033, 62 U.S.P.Q.2d at 1433.

545 Id. at 1032, 1035, 62 U.S.P.Q.2d at 1433, 1435-36.

546 Id. at 1035, 62 U.S.P.Q.2d at 1435.

547 286 F.3d 1346, 62 U.S.P.Q.2d (BNA) 1504 (Fed. Cir. 2002).

548 Id. at 1354, 62 U.S.P.Q.2d at 1510.

549 Id. at 1355, 62 U.S.P.Q.2d at 1510.

550 296 F.3d 1098, 63 U.S.P.Q.2d (BNA) 1681 (Fed. Cir. 2002).

551 Id. at 1100, 63 U.S.P.Q.2d at 1682.

552 Id. at 1105, 63 U.S.P.Q.2d at 1686.

553 Id.

554 Id.

555 304 F.3d 1256, 64 U.S.P.Q.2d (BNA) 1423 (Fed. Cir. 2002).

556 Id. at 1260, 64 U.S.P.Q.2d at 1425.

557 Id. at 1263, 64 U.S.P.Q.2d at 1427.

558 Id.

559 Id.

560 Id. at 1264, 64 U.S.P.Q.2d at 1428.

561 Slip Track, 304 F.3d at 1264, 64 U.S.P.Q.2d at 1428.

562 Id., 64 U.S.P.Q.2d at 1428.

563 Id., 64 U.S.P.Q.2d at 1429.

564 Id.

565 Id.

566 276 F.3d 1327, 1333, 61 U.S.P.Q.2d (BNA) 1236, 1238-39 (Fed. Cir. 2002).

567 Id. at 1330, 61 U.S.P.Q.2d at 1237.

568 Id. at 1331, 61 U.S.P.Q.2d at 1238.

569 Id.

570 Id. at 1333, 61 U.S.P.Q.2d 1238-39 (quoting 37 C.F.R. § 1.657(a) (emphasis added)).

571 Id. (interpreting 37 C.F.R. § 1.657(b)).

572 Brown, 276 F.3d at 1327, 1332, 61 U.S.P.Q.2d at 1236, 1238.

573 Id.

574 Id.

575 Id. at 1332-33, 61 U.S.P.Q.2d at 1238.

576 Id. at 1333, 61 U.S.P.Q.2d at 1338-39.

577 Id.

578 Brown, 276 F.3d at 1327, 1333-34, 61 U.S.P.Q.2d (BNA) 1236, 1239-40 (Fed Cir. 2002).

579 Id. at 1338, 61 U.S.P.Q.2d at 1243.

580 Id. at 1339, 61 U.S.P.Q.2d at 1243.

581 Id.

582 Id.

583 Id. at 1341, 61 U.S.P.Q.2d at 1244-45.

584 281 F.3d 1243, 1246-48, 61 U.S.P.Q.2d (BNA) 1856, 1858-59 (Fed. Cir. 2002).

585 Id. at 1245, 61 U.S.P.Q.2d at 1856.

586 Id., 61 U.S.P.Q.2d at 1857.

587 Id.

588 Id. at 1246-47, 61 U.S.P.Q.2d at 1258.

589 Id. at 1247, 61 U.S.P.Q.2d at 1258 (quoting *Thomas v. Reese*, 1880 Off. Gaz. Pat. Office 196 (1880)).

590 Scott, 281 F.3d at 1243, 1247, 61 U.S.P.Q.2d at 1856, 1858.

591 Id.

592 Id.

593 Id. at 1247-48, 61 U.S.P.Q.2d at 1858-59.

594 Id. at 1248-49, 61 U.S.P.Q.2d at 1859.

595 Id. at 1249, 61 U.S.P.Q.2d at 1859.

596 304 F.3d 1256, 1260, 64 U.S.P.Q.2d (BNA) 1423, 1425 (Fed. Cir. 2002).

597 Id. at 1261, 61 U.S.P.Q.2d at 1859.

598 Id.

599 Id. at 1267, 64 U.S.P.Q.2d at 1430.

600 Id., 64 U.S.P.Q.2d at 1431.

601 Id., 64 U.S.P.Q.2d at 1430.

602 Slip Track, 304 F.3d at 1256, 1267, 64 U.S.P.Q.2d at 1423, 1430-31.

603 Sachs v. Wadsworth, 48 F.2d 928, 929, 9 U.S.P.Q. (BNA) 252, 254 (C.C.P.A. 1931).

604 34 F.3d 1058, 32 U.S.P.Q.2d (BNA) 1115 (Fed. Cir. 1994).

605 550 F.2d 1277, 1278, 193 U.S.P.Q. (BNA) 145, 146-47 (C.C.P.A. 1977).

606 Id., 193 U.S.P.Q.2d at 147.

607 Id. at 1279, 193 U.S.P.Q.2d at 147-48.

608 In re Watkinson, 900 F.2d 230, 14 U.S.P.Q.2d (BNA) 1407 (Fed. Cir. 1990).

609 293 F.3d 1355, 63 U.S.P.Q.2d (BNA) 1161 (Fed. Cir. 2002).

610 Id. at 1356, 63 U.S.P.Q.2d at 1162.

611 Id.

612 Id.

613 Id.

614 Id. at 1357, 63 U.S.P.Q.2d at 1162.

615 In re Doyle, 293 F.3d 1355, 1357, 63 U.S.P.Q.2d (BNA) 1161, 1162 (Fed. Cir. 2002).

616 Id., 63 U.S.P.Q.2d at 1163.

617 Id. at 1359, 63 U.S.P.Q.2d at 1164.

618 Id. at 1358, 63 U.S.P.Q.2d at 1164.

619 Id. at 1360, 63 U.S.P.Q.2d at 1165.

620 Quantum Corp. v. Rodime, PIC, 65 F.3d 1577, 36 U.S.P.Q.2d (BNA) 1162, 1169 (Fed. Cir. 1995).

621 Id., 36 U.S.P.Q.2d at 1165 (applying Hockerson-Halberstadt, Inc. v. Converse, Inc., 183 F.3d 1369, 51 U.S.P.Q.2d (BNA) 1518 (Fed. Cir. 1999)).

622 Id.

623 305 F.3d 1337, 64 U.S.P.Q.2d (BNA) 1385 (Fed. Cir. 2002).

624 Id. at 1343, 64 U.S.P.Q.2d at 1389.

625 Id. at 1344, 64 U.S.P.Q.2d at 1389 (emphasis added).

626 Id.

627 Id.

628 Id.

629 305 F.3d at 1345, 64 U.S.P.Q.2d at 1390.

630 Id. at 1346, 64 U.S.P.Q.2d at 1390-91.

631 292 F.3d 1363, 63 U.S.P.Q.2d (BNA) 1065 (Fed. Cir. 2002).

632 Id. at 1367, 63 U.S.P.Q.2d at 1067.

633 Id. at 1368, 63 U.S.P.Q.2d at 1068.

634 Id. at 1369-70, 63 U.S.P.Q.2d at 1069.

635 Id. at 1371, 63 U.S.P.Q.2d at 1070.

636 Id. at 1369, 63 U.S.P.Q.2d at 1068.

637 Frank's Casing Crew, 292 F.3d at 1368, 63 U.S.P.Q.2d at 1068.

638 Id. at 1369, 63 U.S.P.Q.2d at 1069.

639 Id.

640 Id.

641 Id. at 1370-71, 63 U.S.P.Q.2d at 1070.

642 Id. at 1375, 63 U.S.P.Q.2d at 1073.

643 Frank's Casing Crew, 292 F.3d at 1373, 63 U.S.P.Q.2d at 1072.

644 Id. at 1375, 63 U.S.P.Q.2d at 1073.

645 Id. at 1376, 63 U.S.P.Q.2d at 1074.

646 Id.

647 Id. at 1377, 63 U.S.P.Q.2d at 1075.

648 299 F.3d 1292, 63 U.S.P.Q.2d (BNA) 1865 (Fed. Cir. 2002).

649 Id. at 1294-95, 63 U.S.P.Q.2d at 1865.

650 Id. at 1295, 63 U.S.P.Q.2d at 1865.

651 Id. at 1298, 63 U.S.P.Q.2d at 1867.

652 Id.

653 Id.

654 Trovan, 299 F.3d at 1298, 63 U.S.P.Q.2d at 1867.

655 Id. at 1299, 63 U.S.P.Q.2d at 1868.

656 Id., 63 U.S.P.Q.2d at 1869.

657 Id.

658 Id. at 1299-1300, 63 U.S.P.Q.2d at 1869.

659 Id. at 1300, 63 U.S.P.Q.2d at 1869.

660 Trovan, 299 F.3d at 1300, 63 U.S.P.Q.2d at 1869.

661 Id.

662 Id., 63 U.S.P.Q.2d at 1870.

663 Id.

664 Id.

665 Id.

666 Trovan, 299 F.3d at 1300, 63 U.S.P.Q.2d at 1870.

667 Id.

668 Id.

669 Id. at 1300, 63 U.S.P.Q.2d at 1869.

670 Id.

671 Id. at 1300-1, 63 U.S.P.Q.2d at 1870.

672 Trovan, 299 F.3d at 1311, 63 U.S.P.Q.2d at 1877.

673 Id. at 1302, 63 U.S.P.Q.2d at 1871.

674 Id. at 1303-04, 63 U.S.P.Q.2d at 1872.

675 Id. at 1305, 63 U.S.P.Q.2d at 1873.

676 Id. at 1306, 63 U.S.P.Q.2d at 1874.

677 Id.

678 Trovan, 299 F.3d at 1292, 1309-10, 63 U.S.P.Q.2d at 1865, 1876-77.

679 Id. at 1310, 63 U.S.P.Q.2d at 1877.

680 Id.

681 Id.

682 Id. at 1311, 63 U.S.P.Q.2d at 1878.

683 Id. at 1312-13, 63 U.S.P.Q.2d at 1879.

684 Filmtec Corp. v. Allied Signal, Inc., 939 F.2d 1568, 1573, 19 U.S.P.Q.2d (BNA) 1508, 1512 (Fed. Cir. 1991).

685 Heidelberg Harris, Inc. v. Loebach, 145 F.3d 1454, 1459, 46 U.S.P.Q.2d (BNA) 1948, 1952 (Fed. Cir. 1998).

686 284 F.3d 1323, 62 U.S.P.Q.2d (BNA) 1188 (Fed. Cir. 2002), rev'd en banc, 271 F.3d 1081, 60 U.S.P.Q.2d (BNA) 1785 (Fed. Cir. 2001).

687 Id. at 1083, 60 U.S.P.Q.2d at 1786.

688 Id. at 1087, 60 U.S.P.Q.2d at 1789 (applying Heidelberg Harris, Inc. v. Loebach, 145 F.3d 1454, 46 U.S.P.Q.2d (BNA) 1948 (Fed. Cir. 1998)).

689 Id.

690 Id.

691 Id. at 1325, 62 U.S.P.Q.2d at 1189.

692 Rhone-Poulenc, 284 F.3d at 1325, 62 U.S.P.Q.2d at 1189.

693 272 F.3d 1335, 60 U.S.P.Q.2d (BNA) 1769 (Fed. Cir. 2001).

694 Rhone-Poulenc, 284 F.3d at 1325, 62 U.S.P.Q.2d at 1187.

695 Id.

696 284 F.3d at 1325-26, 62 U.S.P.Q.2d at 1187.

697 Id. at 1327, 62 U.S.P.Q.2d at 1189.

698 Id.

699 Id. at 1326, 62 U.S.P.Q.2d at 1187.

700 Id. at 1327, 62 U.S.P.Q.2d at 1189.

701 Id. at 1328, 62 U.S.P.Q.2d at 1190.

702 Rhone-Poulenc, 284 F.3d at 1328, 62 U.S.P.Q.2d at 1190.

703 Id. at 1328, 62 U.S.P.Q.2d at 1191.

704 Id. at 1329, 62 U.S.P.Q.2d at 1190.

705 Id. at 1329, 62 U.S.P.Q.2d at 1191-92.

706 Id. at 1334, 62 U.S.P.Q.2d at 1195.

707 Id.

708 Rhone-Poulenc, 284 F.3d at 1334, 62 U.S.P.Q.2d at 1195.

709 278 F.3d 1288, 61 U.S.P.Q.2d (BNA) 1450 (Fed. Cir. 2002).

710 Id.

711 Id.

712 Id.

713 Id.

714 Id.

715 VanVoorhies, 278 F.3d at 1289, 61 U.S.P.Q.2d at 1451.

716 Id.

717 Id.

718 Id.

719 Id. at 1294, 61 U.S.P.Q.2d at 1452.

720 Id.

721 VanVoorhies, 278 F.3d at 1297-98, 61 U.S.P.Q.2d at 1454-55.

722 Id.

723 292 F.3d 728, 63 U.S.P.Q.2d (BNA) 1251 (Fed. Cir. 2002).

724 Id. at 731, 63 U.S.P.Q.2d at 1252.

725 Id. at 733, 63 U.S.P.Q.2d at 1253.

726 Id.

727 Id.

728 Id.

729 Juicy Whip, 292 F.3d at 733, 63 U.S.P.Q.2d at 1253.

730 Id.

731 Id.

732 Id. at 734, 63 U.S.P.Q.2d at 1254.

733 Id.

734 Id. at 733, 63 U.S.P.Q.2d at 1254.

735 Juicy Whip, 292 F.3d at 734, 63 U.S.P.Q.2d at 1254.

736 Id.

737 Id.

738 Id.

739 Id.

740 Id.

741 Juicy Whip, 292 F.3d at 734, 63 U.S.P.Q.2d at 1255.

742 Id. at 735, 63 U.S.P.Q.2d at 1255.

743 Id.

744 Id.

745 Id.

746 See id.

747 Juicy Whip, 292 F.3d 744, 63 U.S.P.Q.2d at 1262.

748 Id. at 745, 63 U.S.P.Q.2d at 1262 (Chief Judge Mayer's dissent did not address the inequitable conduct issue.).

749 Id.

750 Id. at 744, 63 U.S.P.Q.2d at 1262.

751 Id.

752 Id.

753 Juicy Whip, 292 F.3d 744, 63 U.S.P.Q.2d at 1262.

754 81 F.3d 1576, 38 U.S.P.Q.2d (BNA) 1665 (Fed. Cir. 1996).

755 Id. at 1583, 38 U.S.P.Q.2d at 1671.

756 Id.

757 Id. at 1581, 38 U.S.P.Q.2d at 1669.

758 Id.

759 Juicy Whip, Inc. v. Orange Bang, Inc., 185 F.3d 1364, 1368, 51 U.S.P.Q.2d (BNA) 1700, 1703 (Fed. Cir. 1999).

760 Juicy Whip, Inc. v. Orange Bang, Inc., 292 F.3d 745, 63 U.S.P.Q.2d (BNA) 1263 (Fed. Cir. 2002).

761 Id.

762 Id.

763 Id.

764 Id.

765 Id.

766 Juicy Whip, 292 F.3d at 745, 63 U.S.P.Q.2d at 1263.

767 292 F.3d 1363, 63 U.S.P.Q.2d (BNA) 1065 (Fed. Cir. 2002).

768 Id. at 1366, 63 U.S.P.Q.2d at 1066-67.

769 Id. at 1368, 63 U.S.P.Q.2d at 1068.

770 Id. at 1370, 63 U.S.P.Q.2d at 1070.

771 Id. at 1376, 63 U.S.P.Q.2d at 1074.

772 Id.

773 Frank's Casing Crew, 292 F.3d at 1376, 63 U.S.P.Q.2d at 1074.

774 Id.

775 Id.

776 Id. at 1378, 63 U.S.P.Q.2d at 1075-76.

777 Id. at 1377, 63 U.S.P.Q.2d at 1075.

778 Id., (quoting *Stark v. Advanced Magnetics, Inc.*, 119 F.3d 1551, 1556, 43 U.S.P.Q.2d (BNA) 1321, 1325 (Fed. Cir. 1997)).

779 *Frank's Casing Crew*, 292 F.3d at 1377, 63 U.S.P.Q.2d at 1075.

780 Id.

781 Id.

782 299 F.3d 1336, 1342, 63 U.S.P.Q.2d (BNA) 1769, 1770 (Fed. Cir. 2002).

783 Id. at 1342, 63 U.S.P.Q.2d at 1771.

784 Id.

785 Id.

786 Id.

787 Id. at 1343, 63 U.S.P.Q.2d at 1771.

788 *Allen Eng'g*, 299 F.3d at 1343, 63 U.S.P.Q.2d at 1778.

789 Id. at 1351, 63 U.S.P.Q.2d at 1778.

790 Id. at 1351, 63 U.S.P.Q.2d at 1778.

791 Id.

792 Id. at 1352, 63 U.S.P.Q.2d at 1778.

793 See *Uruguay Round Agreements Act* § 532, Pub. L. No. 103-465, 108 Stat. 4809 (1994) (codified in 35 U.S.C. § 154 (2000)).

794 35 U.S.C. § 154(c)(1) (2000).

795 298 F.3d 1377, 64 U.S.P.Q.2d (BNA) 1045 (Fed. Cir. 2002).

796 Id. at 1378, 64 U.S.P.Q.2d at 1046.

797 Id.

798 Id.

799 Id.

800 Id. at 1379, 64 U.S.P.Q.2d at 1046.

801 Bayer, 298 F.3d at 1379, 64 U.S.P.Q.2d at 1047.

802 Id. at 1379, 64 U.S.P.Q.2d at 1047.

803 Id. at 1381-82, 64 U.S.P.Q.2d at 1048-49.

804 Id. at 1381, 64 U.S.P.Q.2d at 1049.

805 Id.

806 See Johnson Worldwide Assoc., Inc. v. Zebco Corp., 175 F.3d 985, 988, 50 U.S.P.Q.2d (BNA) 1607, 1609 (Fed. Cir. 1999); Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1454, 46 U.S.P.Q.2d (BNA) 1169, 1172 (Fed. Cir. 1998) (en banc).

807 Johnson Worldwide, 175 F.3d at 988, 50 U.S.P.Q.2d at 1609; Cybor, 138 F.3d at 1454, 46 U.S.P.Q.2d at 1172; See also Tegal Corp. v. Tokyo Electron America, Inc., 257 F.3d 1331, 59 U.S.P.Q.2d (BNA) 1385, 1393-95 (Fed. Cir. 2001) (stating, “We need not address each of the parties’ claim construction arguments directly. Rather, we construe the term [“electrode” and “plasma”] according to the normal rules of claim construction,” and proceed to do so independently of the parties’ arguments.).

808 See, e.g., Burke, Inc. v. Bruno Indep. Living Aids, Inc., 183 F.3d 1334, 1338, 51 U.S.P.Q.2d (BNA) 1295, 1298 (Fed. Cir. 1999); Cybor, 138 F.3d at 1456, 46 U.S.P.Q.2d at 1172.

809 Johnson Worldwide, 175 F.3d at 988, 50 U.S.P.Q.2d at 1609; Renishaw PLC v. Marposs Societa’ Per Azioni, 158 F.3d 1243, 1247-48, 48 U.S.P.Q.2d (BNA) 1117, 1120 (Fed. Cir. 1998).

810 See SRI Int’l v. Matsushita Elec. Corp. of Am., 775 F.2d 1107, 1125, 227 U.S.P.Q. (BNA) 577, 589 (Fed. Cir. 1985) (en banc).

811 See, e.g., K-2 Corp. v. Salomon S.A., 191 F.3d 1356, 1365, 52 U.S.P.Q.2d (BNA) 1001, 1006 (Fed. Cir. 1999) (noting that “claim construction is firmly anchored in reality by the understanding of those of ordinary skill in the art”).

812 288 F.3d 1359, 1366, 62 U.S.P.Q.2d (BNA) 1658, 1662 (Fed. Cir. 2002).

813 Id. at 1366, 62 U.S.P.Q.2d at 1662.

814 Id. at 1366-67, 62 U.S.P.Q.2d at 1662-63. See also *Amgen, Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1317, 65
U.S.P.Q.2d (BNA) 1385, 1395 (Fed. Cir. 2003). [Internal citations omitted] (Clevenger, dissenting on different grounds. “In the
end, TKT has not directed our attention to anything in the intrinsic record that rebuts the presumption that the plain meaning of the
terms controls.”).

815 308 F.3d 1167, 1171, 64 U.S.P.Q.2d (BNA) 1545, 1547 (Fed. Cir. 2002).

816 Id. at 1172, 64 U.S.P.Q.2d at 1548.

817 Id. at 1174, 64 U.S.P.Q.2d at 1549.

818 Id. at 1177-78, 64 U.S.P.Q.2d at 1552.

819 Id. at 1178, 64 U.S.P.Q.2d at 1552.

820 Id. at 1178, 64 U.S.P.Q.2d at 1552.

821 *Union Carbide*, 308 F.3d at 1179, 64 U.S.P.Q.2d at 1553.

822 305 F.3d 1318, 64 U.S.P.Q.2d (BNA) 1644 (Fed. Cir. 2002).

823 Id. at 1319, 64 U.S.P.Q.2d at 1642.

824 Id. at 1322, 64 U.S.P.Q.2d at 1643.

825 Id. at 1323-24, 64 U.S.P.Q.2d at 1644.

826 Id. at 1324, 64 U.S.P.Q.2d at 1645.

827 Id. at 1325, 64 U.S.P.Q.2d at 1646.

828 175 F.3d 985, 50 U.S.P.Q.2d (BNA) 1607 (Fed. Cir. 1999).

829 Id. at 990, 50 U.S.P.Q.2d at 1610.

830 Id.

831 Id.

832 158 F.3d 1243, 48 U.S.P.Q.2d (BNA) 1117 (Fed. Cir. 1998).

833 Id. at 1248, 48 U.S.P.Q.2d at 1120 (citations omitted); See also *Tate Access Floors, Inc. v. Maxcess Tech., Inc.*, 222 F.3d 958, 55 U.S.P.Q.2d (BNA) 1513 (Fed. Cir. 2000) (“Although claims must be read in light of the specification of which they are a part, see *Renishaw*, 158 F.3d at 1248, 48 U.S.P.Q.2d at 1120, it is improper to read limitations from the written description into a claim, see *Kemco Sales, Inc. v. Control Papers Co.*, 208 F.3d 1352, 1362, 54 U.S.P.Q.2d (BNA) 1308, 1314 (Fed. Cir. 2000). Moreover, ‘although the specification may well indicate that certain embodiments are preferred, particular embodiments appearing in the specification will not be read into the claims when the claim language is broader than such embodiments.’” Id.).

834 *Renishaw*, 158 F.3d at 1250, 48 U.S.P.Q.2d at 1122 (citation omitted).

835 197 F.3d 1377, 53 U.S.P.Q.2d (BNA) 1161 (Fed. Cir. 1999).

836 242 F.3d 1337, 58 U.S.P.Q.2d (BNA) 1059 (Fed. Cir. 2001).

837 242 F.3d 1347, 58 U.S.P.Q.2d (BNA) 1076 (Fed. Cir. 2001).

838 199 F.3d 1295, 53 U.S.P.Q.2d (BNA) 1065 (Fed. Cir. 1999).

839 262 F.3d 1258, 59 U.S.P.Q.2d (BNA) 1865 (Fed. Cir. 2001).

840 285 F.3d 1353, 62 U.S.P.Q.2d (BNA) 1266 (Fed. Cir. 2002).

841 299 F.3d 1313, 63 U.S.P.Q.2d (BNA) 1374 (Fed. Cir. 2002).

842 288 F.3d 1359, 62 U.S.P.Q.2d (BNA) 1658 (Fed. Cir. 2002).

843 314 F.3d 1313, 65 U.S.P.Q.2d (BNA) 1385 (Fed. Cir. 2003).

844 299 F.3d 1313, 63 U.S.P.Q.2d (BNA) 1374 (Fed. Cir. 2002).

845 Id. at 1327, 63 U.S.P.Q.2d at 1382.

846 Id. at 1324-27, 63 U.S.P.Q.2d at 1380-82.

847 Id. at 1318, 63 U.S.P.Q.2d at 1376.

848 Id.

849 Id.

850 Id.

851 *Teleflex*, 299 F.3d at 1319, 63 U.S.P.Q.2d at 1379.

852 Id. at 1322, 63 U.S.P.Q.2d at 1378.

853 Id. at 1326, 63 U.S.P.Q.2d at 1381.

854 Id.

855 Id. at 1327, 63 U.S.P.Q.2d at 1382.

856 Id. 1327-28, 63 U.S.P.Q.2d at 1382.

857 Teleflex, 299 F.3d at 1328-29, 63 U.S.P.Q.2d at 1383.

858 288 F.3d 1359, 62 U.S.P.Q.2d (BNA) 1658 (Fed. Cir. 2002).

859 Id. at 1362, 62 U.S.P.Q.2d at 1660.

860 Id.

861 Id.

862 Id.

863 Id. at 1364, 62 U.S.P.Q.2d at 1661.

864 CCS Fitness, 288 F.3d at 1370, 62 U.S.P.Q.2d at 1666.

865 Id. at 1367, 62 U.S.P.Q.2d at 1663.

866 242 F.3d 1337, 58 U.S.P.Q.2d 1059 (Fed. Cir. 2001).

867 199 F.3d 1295, 53 U.S.P.Q.2d 1065 (Fed. Cir. 1999).

868 CSS Fitness, 288 F.3d at 1368, 62 U.S.P.Q.2d at 1664.

869 Id. at 1368, 62 U.S.P.Q.2d at 1664.

870 308 F.3d 1193, 1202, 64 U.S.P.Q.2d (BNA) 1812, 1818 (Fed. Cir. 2002).

871 Id. at 1197, 64 U.S.P.Q.2d at 1815.

872 Id.

873 Id. at 1216, 64 U.S.P.Q.2d at 1828-29.

874 Id. at 1201-02, 64 U.S.P.Q.2d at 1817 (quoting *Interactive Gift Express, Inc. v. Compuserve, Inc.*, 256 F.3d 1323, 1331, 59 U.S.P.Q.2d (BNA) 1401, 1406 (Fed. Cir. 2001)).

875 Id. at 1202, 64 U.S.P.Q.2d at 1817.

876 *Tex. Digital*, 308 F.3d at 1202, 64 U.S.P.Q.2d at 1818.

877 Id.

878 Id.

879 Id. at 1202-03, 64 U.S.P.Q.2d at 1818.

880 Id. at 1203, 64 U.S.P.Q.2d at 1818-19 (citations omitted).

881 Id., 64 U.S.P.Q.2d at 1819.

882 *Tex. Digital*, 308 F.3d at 1204-05, 64 U.S.P.Q.2d at 1819-20 (citations omitted).

883 Id. at 1204, 64 U.S.P.Q.2d at 1819 (citations omitted).

884 Id. (citations omitted).

885 Id. at 1205, 64 U.S.P.Q.2d at 1820.

886 289 F.3d 801, 62 U.S.P.Q.2d (BNA) 1781 (Fed. Cir. 2002).

887 Id. at 808, 62 U.S.P.Q.2d at 1784 (quoting *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251, 1257, 9 U.S.P.Q.2d (BNA) 1962, 1966 (Fed. Cir. 1989)).

888 Id. at 808, 62 U.S.P.Q.2d at 1784 (quoting *Pitney Bowles, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305, 51 U.S.P.Q.2d (BNA) 1161, 1166 (Fed. Cir. 1999)).

889 Id. at 808, 62 U.S.P.Q.2d at 1784-85 (quoting *Rowe v. Dror*, 112 F.3d 473, 478, 42 U.S.P.Q.2d (BNA) 1550, 1553 (Fed. Cir. 1997)).

890 Id. at 808, 62 U.S.P.Q.2d at 1785 (citations omitted).

891 Id.

892 Catalina Mktg., 289 F.3d at 808-809, 62 U.S.P.Q.2d at 1785 (citations omitted).

893 Id. at 808-09, 62 U.S.P.Q.2d at 1785-86 (quoting *Roberts v. Ryer*, 91 U.S. 150, 157 (1875)) (citations omitted).

894 Id. at 805, 62 U.S.P.Q.2d at 1782.

895 Id., 62 U.S.P.Q.2d at 1782-83.

896 Id. at 806, 62 U.S.P.Q.2d at 1783.

897 Id. at 812-13, 62 U.S.P.Q.2d at 1788.

898 Catalina Mktg., 289 F.3d at 810, 62 U.S.P.Q.2d at 1786.

899 Id.

900 Id. at 810-11, 62 U.S.P.Q.2d at 1787.

901 Id. at 811-12, 62 U.S.P.Q.2d at 1787.

902 308 F.3d 1304, 64 U.S.P.Q.2d (BNA) 1832 (Fed. Cir. 2002).

903 Id. at 1306, 64 U.S.P.Q.2d at 1834.

904 Id. at 1306-07, 64 U.S.P.Q.2d at 1834.

905 Id. at 1306, 64 U.S.P.Q.2d at 1834.

906 Id. at 1308-09, 1311, 64 U.S.P.Q.2d at 1836.

907 Id. at 1310-11, 64 U.S.P.Q.2d at 1837.

908 Schumer, 308 F.3d at 1310, 64 U.S.P.Q.2d at 1837.

909 Id.

910 Id. at 1311, 64 U.S.P.Q.2d at 1838.

911 Id.

912 Id. at 1317, 64 U.S.P.Q.2d at 1842.

913 308 F.3d 1304, 64 U.S.P.Q.2d (BNA) 1832 (Fed. Cir. 2002).

914 “The body of claim 1 provides in relevant part: ‘receiving a definition of a second coordinate system for the digitizer, which second coordinate system allows specification of points specified in the digitizer’s coordinate system but is not congruent wit the digitizer’s coordinate system because one of the following elements is different from the digitizer’s coordinate system: location of the point of origin, or angle of rotation, or scale.’” (emphasis in original) Id. at 1311, 64 U.S.P.Q.2d 1837-38.

915 Id. at 1309, 64 U.S.P.Q.2d at 1836.

916 Id. at 1312, 64 U.S.P.Q.2d at 1838.

917 Id. (citing *Gottschalk v. Benson*, 409 U.S. 63, 71, 175 U.S.P.Q. (BNA) 673, 676 (1972)).

918 See *Johnson & Johnston Assoc. Inc. v. R.E. Serv. Co., Inc.*, 285 F.3d 1046, 62 U.S.P.Q.2d (BNA) 1225 (Fed. Cir. 2002) (en banc) (per curiam).

919 287 F.3d 1097, 62 U.S.P.Q.2d (BNA) 1545 (Fed. Cir. 2002).

920 Id. at 1099, 62 U.S.P.Q.2d at 1546.

921 Id.

922 Id. at 1100, 62 U.S.P.Q.2d at 1546.

923 Id. at 1101, 62 U.S.P.Q.2d at 1547.

924 Id., 61 U.S.P.Q.2d at 1548.

925 *Abbott Labs*, 287 F.3d at 1101, 61 U.S.P.Q.2d at 1548.

926 Id. at 1101-02, 62 U.S.P.Q.2d at 1548.

927 Id. at 1102, 62 U.S.P.Q.2d at 1548.

928 Id. at 1108, 62 U.S.P.Q.2d at 1553.

929 Id. at 1107-08, 62 U.S.P.Q.2d at 1552.

930 304 F.3d 1235, 64 U.S.P.Q.2d (BNA) 1344 (Fed. Cir. 2002).

931 Id. at 1238, 64 U.S.P.Q.2d at 1345.

932 Id.

933 Id. at 1239, 64 U.S.P.Q.2d at 1346.

934 Id. at 1238-39, 64 U.S.P.Q.2d at 1346.

935 Id. at 1239, 64 U.S.P.Q.2d at 1346.

936 PIN/NIP, 304 F.3d at 1239, 64 U.S.P.Q.2d at 1346.

937 Id. at 1248, 64 U.S.P.Q.2d at 1353.

938 Id. at 1244, 64 U.S.P.Q.2d at 1349-50.

939 Id., 64 U.S.P.Q.2d at 1350.

940 Id. at 1245, 64 U.S.P.Q.2d at 1350.

941 Id. at 1248, 64 U.S.P.Q.2d at 1353.

942 Fin Control Sys. Pty, Ltd. v. OAM, Inc., 265 F.3d 1311, 1318, 60 U.S.P.Q.2d (BNA) 1203, 1208 (Fed. Cir. 2001).

943 279 F.3d 1022, 61 U.S.P.Q.2d (BNA) 1470 (Fed. Cir. 2002).

944 Id. at 1031, 61 U.S.P.Q.2d at 1476 (quoting Phonometrics, Inc. v. N. Telecom Inc., 133 F.3d 1459, 1465, 45 U.S.P.Q.2d (BNA) 1421, 1426 (Fed. Cir. 1998)).

945 Id. at 1025, 61 U.S.P.Q.2d 1472.

946 Id. at 1025-26, 61 U.S.P.Q.2d 1472.

947 Id.

948 Id.

949 Id. at 1031, 61 U.S.P.Q.2d at 1476.

950 275 F.3d 1371, 61 U.S.P.Q.2d (BNA) 1363 (Fed. Cir. 2002).

951 Id. at 1373, 61 U.S.P.Q.2d at 1364.

952 Id. at 1374, 61 U.S.P.Q.2d at 1365.

953 Id.

954 Id.

955 Id. at 1375, 61 U.S.P.Q.2d at 1365.

956 Talbert Fuel, 275 F.3d at 1378, 61 U.S.P.Q.2d at 1368.

957 Id. at 1374-75, 61 U.S.P.Q.2d at 1365.

958 Id. at 1375, 61 U.S.P.Q.2d at 1365-66.

959 Id. at 1376, 61 U.S.P.Q.2d at 1366.

960 275 F.3d 1371, 61 U.S.P.Q.2d (BNA) 1363 (Fed. Cir. 2002).

961 Id. at 1376, 61 U.S.P.Q.2d at 1367.

962 Id., 61 U.S.P.Q.2d at 1366.

963 Id.

964 Id.

965 276 F.3d 1319, 61 U.S.P.Q.2d (BNA) 1368 (Fed. Cir. 2002).

966 Id. at 1320, 61 U.S.P.Q.2d at 1369.

967 Id. at 1321, 61 U.S.P.Q.2d at 1369.

968 Id., 61 U.S.P.Q.2d at 1370.

969 Id., 61 U.S.P.Q.2d at 1369.

970 Id. at 1322, 61 U.S.P.Q.2d at 1370.

971 Rheox, 276 F.3d at 1322, 61 U.S.P.Q.2d at 1370.

972 Id. at 1323, 61 U.S.P.Q.2d at 1371.

973 Id. at 1323-24, 61 U.S.P.Q.2d at 1371-72.

974 Id. at 1327, 61 U.S.P.Q.2d at 1374.

975 Id. at 1322, 61 U.S.P.Q.2d at 1370.

976 Id. at 1325, 61 U.S.P.Q.2d at 1372.

977 Rheox, 276 F.3d at 1326-27, 61 U.S.P.Q.2d at 1373.

978 Id. at 1327, 61 U.S.P.Q.2d at 1373-74 (quoting Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1583, 39 U.S.P.Q.2d (BNA) 1573, 1578 (Fed. Cir. 1996)).

979 Id., 61 U.S.P.Q.2d (BNA) at 1374 (quoting Southwall Techs., Inc. v. Cardinal IG Co., 54 F.3d 1570, 1576, 34 U.S.P.Q.2d (BNA) 1673, 1676 (Fed. Cir. 1995)).

980 Id. 1371, 61 U.S.P.Q.2d (BNA) 1363 (Fed. Cir. 2002).

981 Id. at 1376, 61 U.S.P.Q.2d at 1366.

982 Id., 61 U.S.P.Q.2d at 1367.

983 Rheox, 275 F.3d at 1376, 61 U.S.P.Q.2d at 1366 (quoting Hoechst Celanese Corp. v. BP Chems. Ltd., 78 F.3d 1575, 1581, 38 U.S.P.Q.2d (BNA) 1126, 1130 (Fed. Cir. 1996)).

984 Id.

985 284 F.3d 1365, 62 U.S.P.Q.2d (BNA) 1340 (Fed. Cir. 2002).

986 Id. at 1368, 62 U.S.P.Q.2d at 1341.

987 Id. at 1369, 62 U.S.P.Q.2d at 1342.

988 Id.

989 Id. at 1370, 62 U.S.P.Q.2d at 1342-43.

990 Id. at 1369, 62 U.S.P.Q.2d at 1342.

991 Pickholtz, 284 F.3d at 1370, 62 U.S.P.Q.2d at 1343.

992 Id., 62 U.S.P.Q.2d at 1347.

993 Id. at 1374, 62 U.S.P.Q.2d at 1346.

994 Id. at 1373, 62 U.S.P.Q.2d at 1345.

995 Id.

996 Id. at 1374, 62 U.S.P.Q.2d at 1345-46.

997 287 F.3d 1108, 62 U.S.P.Q.2d (BNA) 1564 (Fed. Cir. 2002).

998 Id. at 1114, 62 U.S.P.Q.2d at 1568.

999 Id. at 1111, 62 U.S.P.Q.2d at 1566.

1000 Id., 62 U.S.P.Q.2d at 1567.

1001 Id. at 1113-14, 62 U.S.P.Q.2d at 1568.

1002 Id. at 1112, 62 U.S.P.Q.2d at 1566.

1003 Fantasy Sports, 287 F.3d at 1120, 62 U.S.P.Q.2d at 1573.

1004 Id. at 1114, 62 U.S.P.Q.2d at 1569.

1005 Id. at 1115, 62 U.S.P.Q.2d at 1569.

1006 Id.

1007 Id.

1008 See, e.g., *Wang Labs., Inc. v. Am. Online, Inc.*, 197 F.3d 1377, 53 U.S.P.Q.2d (BNA) 1161 (Fed. Cir. 1999) (In response to Wang’s argument that a statement in a parent application did not apply to the CIP application that matured into the patent-in-suit, the Federal Circuit noted that “this subject matter is common to the continuation-in-part application, and argument concerning the Fleming reference was correctly viewed as applying to the common subject matter.” 197 F.3d at 1384, 53 U.S.P.Q.2d (BNA) at 1165 (citing *Jonsson v. Stanley Works*, 903 F.2d 812, 818, 14 U.S.P.Q.2d (BNA) 1863, 1869 (Fed. Cir. 1990)) (noting arguments made in related applications)).

1009 *Advanced Cardiovascular Sys., Inc. v. Medtronic, Inc.*, 265 F.3d 1294, 60 U.S.P.Q.2d (BNA) 1161 (Fed. Cir. 2001) (the reason ACS had filed the application maturing into the patent-in-suit was to obtain broader claim coverage than in the parent applications).

1010 287 F.3d 1097, 62 U.S.P.Q.2d (BNA) 1545 (Fed. Cir. 2002) (Some parts of that decision may not be good law after the Supreme Court’s *Festo* decision).

1011 Id. at 1104-05, 62 U.S.P.Q.2d at 1550.

1012 302 F.3d 1352, 64 U.S.P.Q.2d (BNA) 1302 (Fed. Cir. 2002).

1013 Id. at 1356, 64 U.S.P.Q.2d at 1304.

1014 Id. at 1354, 64 U.S.P.Q.2d at 1303.

1015 Id.

1016 Id.

1017 Id. at 1355, 64 U.S.P.Q.2d at 1303.

1018 Jack Guttman, 302 F.3d at 1355, 64 U.S.P.Q.2d at 1303.

1019 Id., 64 U.S.P.Q.2d at 1304.

1020 Id. at 1356, 64 U.S.P.Q.2d at 1304.

1021 Id. at 1356-57, 64 U.S.P.Q.2d at 1304-05.

1022 Id. at 1358, 64 U.S.P.Q.2d at 1305-06.

1023 Id. at 1359, 64 U.S.P.Q.2d at 1306.

1024 Jack Guttman, 302 F.3d at 1359, 64 U.S.P.Q.2d at 1306.

- 1025 Id., 64 U.S.P.Q.2d at 1307.
- 1026 Id. at 1360, 64 U.S.P.Q.2d at 1307.
- 1027 287 F.3d 1108, 62 U.S.P.Q.2d (BNA) 1564 (Fed. Cir. 2002).
- 1028 Id. at 1114-15, 62 U.S.P.Q.2d at 1568-69.
- 1029 Id.
- 1030 Id.
- 1031 Id. at 1115, 62 U.S.P.Q.2d at 1569.
- 1032 Id. at 1115-16, 62 U.S.P.Q.2d at 1570.
- 1033 Fantasy Sports, 287 F.3d at 1116, 62 U.S.P.Q.2d at 1570.
- 1034 See *Personalized Media Communications, LLC v. Int’l Trade Comm’n*, 161 F.3d 696, 703-04, 48 U.S.P.Q.2d (BNA) 1880, 1887 (Fed. Cir. 1998); *Greenberg, M.D. v. Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580, 1583, 39 U.S.P.Q.2d (BNA) 1783, 1787 (Fed. Cir. 1996) (“[T]he use of the term ‘means’ has come to be so closely associated with ‘means-plus-function’ claiming that it is fair to say that the use of the term ‘means’ (particularly as used in the phrase ‘means for’) generally invokes section 112(6) and that the use of a different formulation generally does not.”).
- 1035 *Rodime PLC v. Seagate Tech., Inc.*, 174 F.3d 1294, 1302, 50 U.S.P.Q.2d (BNA) 1429, 1434 (Fed. Cir. 1999), cert. denied, 120 S. Ct. 933 (2000). See also *Wenger Mfg., Inc. v. Coating Machinery Sys., Inc.*, 239 F.3d 1225, 1232, 1237, 57 U.S.P.Q.2d (BNA) 1679, 1684, 1688 (Fed. Cir. 2001) (construing “air circulating means” as a means-plus-function limitation, but construing “means defining a plurality of separate product coating zones longitudinally spaced along said reel” as either (1) stating no function or (2) as defining sufficient structure to take the phrase outside the ambit of §112(6)).
- 1036 See *TurboCare v. Gen. Elec. Co.*, 264 F.3d 1111, 1120-21, 60 U.S.P.Q.2d (BNA) 1017, 1024-25, (Fed. Cir. 2001) (although “radial positing means” and “compressed spring means” used the word “means” and were thus presumptively subject to §112(6), the claim recited sufficient structure for both to avoid §112(6); see also *Cole v. Kimberly-Clark Corp.*, 102 F.3d 524, 531, 41 U.S.P.Q.2d (BNA) 1001, 1006 (Fed. Cir. 1996) (“To invoke [§112, paragraph 6], the alleged means-plus-function claim element must not recite a definite structure which performs the described function.”); *Sage Prod., Inc. v. Devon Indus., Inc. (Sage II)*, 126 F.3d 1420, 1427-28, 44 U.S.P.Q.2d (BNA) 1103, 1109-10 (Fed. Cir. 1997) (the Federal Circuit acknowledged that “where a claim recites a function, but then goes on to elaborate sufficient structure, material, or acts within the claim itself to perform entirely the recited function, the claim is not in means-plus-function format,” but held that a “closure means ... for controlling access” limitation was properly construed as a means-plus-function limitation, because a function was recited for the means and the claim did not “explicitly recite[] the structure, material, or acts needed to perform [the function].”) .
- 1037 See *Watts v. XL Sys., Inc.*, 232 F.3d 877, 880-81, 56 U.S.P.Q.2d (BNA) 1836, 1838 (Fed. Cir. 2000) (quoting *Greenberg v. Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580, 1583, 39 U.S.P.Q.2d (BNA) 1783, 1786 (Fed. Cir. 1996)); *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 62 U.S.P.Q.2d (BNA) 1658 (Fed. Cir. 2002); *Allen Eng’g Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1347, 63 U.S.P.Q.2d (BNA) 1769, 1774 (Fed. Cir. 2002); *Greenberg, M.D. v. Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580, 1583, 39 U.S.P.Q.2d (BNA) 1783, 1786 (Fed. Cir. 1996) (“‘Detent’ ... is just such a term. Dictionary definitions make clear that the noun ‘detent’ denotes a type of device with a generally understood meaning in the mechanical arts, even though the definitions

are expressed in functional terms.”); *Cole v. Kimberly-Clark Corp.*, 102 F.3d 524, 531, 41 U.S.P.Q.2d (BNA) 1001, 1006 (Fed. Cir. 1996) (using the dictionary definition of “perforation” to decide whether one of ordinary skill in the art would understand that term to denote structure.)

1038 *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1370, 62 U.S.P.Q.2d (BNA) 1658, 1665 (Fed. Cir. 2002) (“This suffices for purposes of §112(6) and the presumption thereto, since a term need not connote a precise physical structure in order to avoid the ambit of that provision.”); see also, *Personalized Media*, 161 F.3d at 705, 48 U.S.P.Q.2d at 1888).

1039 *Cole*, 102 F.3d at 531, 41 U.S.P.Q.2d at 1006.

1040 See *Personalized Media Communications, LLC v. Int’l Trade Comm’n*, 161 F.3d 696, 704, 48 U.S.P.Q.2d (BNA) 1880, 1887 (Fed. Cir. 1998); *Watts v. XL Sys., Inc.*, 232 F.3d 877, 880-81, 56 U.S.P.Q.2d (BNA) 1836, 1838 (Fed. Cir. 2000); *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 62 U.S.P.Q.2d (BNA) 1658, 1664 (Fed. Cir. 2002).

1041 299 F.3d 1336, 1342, 63 U.S.P.Q.2d (BNA) 1769, 1170 (Fed. Cir. 2002).

1042 *Id.* at 1343, 63 U.S.P.Q.2d 1771.

1043 *Id.*

1044 *Id.* at 1357, 1344-49, 63 U.S.P.Q.2d at 1782, 1772-77.

1045 *Id.* at 1348, 63 U.S.P.Q.2d at 1775.

1046 288 F.3d 1359, 1362-63, 62 U.S.P.Q.2d (BNA) 1658, 1659-60 (Fed. Cir. 2002).

1047 *Id.* at 1363, 62 U.S.P.Q.2d at 1660.

1048 *Id.* at 1365, 62 U.S.P.Q.2d at 1661.

1049 *Id.* at 1369, 62 U.S.P.Q.2d at 1665.

1050 *Id.* at 1367, 1369, 62 U.S.P.Q.2d at 1663, 1665.

1051 *Id.* at 1370, 62 U.S.P.Q.2d at 1665

1052 279 F.3d 1022, 61 U.S.P.Q.2d (BNA) 1470 (Fed. Cir. 2002).

1053 *Id.* at 1025, 61 U.S.P.Q.2d at 1472.

1054 *Id.* at 1025-26, 61 U.S.P.Q.2d at 1472.

1055 Id.

1056 Id. at 1032, 61 U.S.P.Q.2d at 1477.

1057 Id. at 1028, 61 U.S.P.Q.2d at 1474.

1058 Epcon Gas, 279 F.3d at 1028, 61 U.S.P.Q.2d at 1474.

1059 Id. at 1028-29, 61 U.S.P.Q.2d at 1475.

1060 303 F.3d 1316, 64 U.S.P.Q.2d (BNA) 1182 (Fed. Cir. 2002).

1061 115 F.3d 1576, 1582, 42 U.S.P.Q.2d (BNA) 1777 (Fed. Cir. 1997).

1062 Id. at 1583, 42 U.S.P.Q.2d at 1782.

1063 172 F.3d 836, 50 U.S.P.Q.2d 1225 (Fed. Cir. 1999).

1064 Id. at 849-50, 50 U.S.P.Q.2d at 1234.

1065 Masco, 303 F.3d at 1327, 64 U.S.P.Q.2d at 1188.

1066 Id. at 1319, 64 U.S.P.Q.2d at 1183.

1067 Id. at 1320, 64 U.S.P.Q.2d at 1183-84.

1068 Id.

1069 Id. at 1322, 64 U.S.P.Q.2d at 1185.

1070 Id. at 1326, 64 U.S.P.Q.2d at 1188.

1071 Masco, 303 F.3d.at 1327, 64 U.S.P.Q.2d at 1189.

1072 Id.

1073 Id.

1074 Id.

1075 296 F.3d 1106, 63 U.S.P.Q.2d 1725 (Fed. Cir. 2002).

1076 Id. at 1108, 63 U.S.P.Q.2d at 1726.

1077 Id., 63 U.S.P.Q.2d at 1727.

1078 Id. at 1114-15, 63 U.S.P.Q.2d at 1731.

1079 Id. at 1115, 63 U.S.P.Q.2d at 1732.

1080 Id. at 1116, 63 U.S.P.Q.2d at 1732.

1081 Cardiac Pacemaker, 296 F.3d at 1116, 63 U.S.P.Q.2d at 1732.

1082 Id. at 1119, 63 U.S.P.Q.2d at 1735.

1083 305 F.3d 1337, 64 U.S.P.Q.2d (BNA) 1385 (Fed. Cir. 2002).

1084 250 F.3d 1369, 1376-77, 58 U.S.P.Q.2d (BNA) 1801, 1806 (Fed. Cir. 2001).

1085 259 F.3d 1364, 1367, 59 U.S.P.Q.2d (BNA) 1745, 1746 (Fed. Cir. 2001).

1086 198 F.3d 1374, 1382, 53 U.S.P.Q.2d (BNA) 1225, 1230 (Fed. Cir. 1999).

1087 Creo Prods. 305 F.3d at 1347, 64 U.S.P.Q.2d at 1391.

1088 See id., 64 U.S.P.Q.2d at 1392.

1089 Id. at 1341, 64 U.S.P.Q.2d at 1387.

1090 Id. at 1346, 64 U.S.P.Q.2d at 1391.

1091 305 F.3d at 1347, 64 U.S.P.Q.2d at 1391-92 (citations omitted).

1092 Creo Prods., 305 F.3d at 1347-48, 64 U.S.P.Q.2d at 1392.

1093 Id. at 1348, 64 U.S.P.Q.2d at 1392.

1094 Id. at 1353, 64 U.S.P.Q.2d at 1397.

1095 279 F.3d 1357, 61 U.S.P.Q.2d (BNA) 1647 (Fed. Cir. 2002).

1096 Id. at 1360, 61 U.S.P.Q.2d at 1648.

1097 Id. at 1364, 61 U.S.P.Q.2d at 1652.

1098 Id.

1099 Id. at 1372, 61 U.S.P.Q.2d (BNA) at 1658.

1100 49 F.3d 1575, 1583, 34 U.S.P.Q.2d (BNA) 1120, 1126 (Fed. Cir. 1995).

1101 Tate, 279 F.3d at 1365, 61 U.S.P.Q.2d at 1654.

1102 But see *Hebert v. Lisle Corp.*, 99 F.3d 1109, 1117, 40 U.S.P.Q.2d (BNA) 1611, 1616 (Fed. Cir. 1996) (any prior rulings that suggested that the doctrine of equivalents had an equitable threshold “have been superseded by the [Federal Circuit’s] en banc decision in *Hilton Davis*.”).

1103 Tate, 279 F.3d at 1367, 61 U.S.P.Q.2d at 1654.

1104 Id.

1105 Id.

1106 Id., 61 U.S.P.Q.2d at 1654-55.

1107 339 U.S. 605, 608-09, 85 U.S.P.Q.2d (BNA) 328, 330 (1950) (the doctrine applies “where a device is so far changed in principle from a patented article that it performs the same or a similar function in a substantially different way, but nevertheless falls within the literal words of the claim....” In such a case the reverse doctrine of equivalents “may be used to restrict the claim and defeat the patentee’s action for infringement.”).

1108 Tate, 279 F.3d at 1368, 61 U.S.P.Q.2d at 1655.

1109 Id.

1110 Id.

1111 307 F.3d 1351, 64 U.S.P.Q.2d (BNA) 1737 (Fed. Cir. 2002).

1112 Id. at 1361, 64 U.S.P.Q.2d at 1745 (citations omitted) (citing *Embrex, Inc. v. Serv. Eng’g Corp.*, 216 F.3d 1343, 1349, 55 U.S.P.Q.2d (BNA) 1161, 1164 (Fed. Cir. 2000) and *Roche Prods., Inc. v. Bolar Pharm. Co.*, 733 F.2d 858, 863, 221 U.S.P.Q. (BNA) 937, 940 (Fed. Cir. 1984)).

1113 Id. at 1352, 64 U.S.P.Q.2d at 1738-39.

1114 Id., 64 U.S.P.Q.2d 1739.

1115 Id.

1116 Id.

1117 Madey, 307 F.3d at 1352, 64 U.S.P.Q.2d at 1739.

1118 Id.

1119 Id. at 1353, 64 U.S.P.Q.2d at 1739.

1120 Id.

1121 Id.

1122 Id.

1123 Madey, 307 F.3d at 1355-56, 1361, 64 U.S.P.Q.2d at 1741-42, 1746.

1124 Id. at 1361, 64 U.S.P.Q.2d at 1746.

1125 Id. at 1362, 64 U.S.P.Q.2d at 1746.

1126 Id.

1127 Id.

1128 Madey, 307 at 1362, 64 U.S.P.Q.2d at 1746.

1129 Id., 64 U.S.P.Q.2d at 1746-47.

1130 Id. at 1362, 64 U.S.P.Q.2d at 1747.

1131 307 F.3d 1351, 64 U.S.P.Q.2d (BNA) 1737 (Fed. Cir. 2002).

1132 Id. at 1361, 64 U.S.P.Q.2d at 1745.

1133 Id.

1134 Id., 64 U.S.P.Q.2d at 1746.

1135 276 F.3d 1368, 61 U.S.P.Q.2d (BNA) 1414 (Fed. Cir. 2002).

1136 268 F.3d 1323, 60 U.S.P.Q.2d (BNA) 1576 (Fed. Cir. 2001).

1137 Id. at 1332, 60 U.S.P.Q.2d at 1583.

1138 276 F.3d at 1376, 61 U.S.P.Q.2d at 1419-20.

1139 289 F.3d 775, 777, 62 U.S.P.Q.2d (BNA) 1609, 1610 (Fed. Cir. 2002).

1140 Id. at 777, 62 U.S.P.Q.2d at 1610.

1141 Id.

1142 Id.

1143 Id.

1144 Id. at 778, 62 U.S.P.Q.2d at 1610.

1145 Minn. Mining, 289 F.3d at 778, 62 U.S.P.Q.2d at 1610.

1146 Id.

1147 Id.

1148 Id., 62 U.S.P.Q.2d at 1610-11.

1149 Id., 62 U.S.P.Q.2d at 1611.

1150 Id. at 779, 62 U.S.P.Q.2d at 1611.

1151 Minn. Mining, 289 F.3d at 779, 62 U.S.P.Q.2d at 1611.

1152 Id.

1153 Id.

1154 Id. at 782-83, 62 U.S.P.Q.2d at 1614-15.

1155 Id. at 783, 62 U.S.P.Q.2d at 1614-15.

1156 Warner-Lambert Co. v. Apotex Corp. 316 F.3d 1348, 1354-55, 65 U.S.P.Q.2d (BNA) 1481, 1484 (Fed. Cir. 2003).

1157 Id.

1158 Id. at 1354, 65 U.S.P.Q.2d at 1484.

1159 Id. at 1351, 65 U.S.P.Q.2d at 1482.

1160 Id. at 1351-52, 65 U.S.P.Q.2d at 1482.

1161 Id. at 1352, 65 U.S.P.Q.2d at 1482.

1162 Warner-Lambert, 316 F.3d at 1352, 65 U.S.P.Q.2d at 1482.

1163 Id.

1164 Id.

1165 Id.

1166 Id., 65 U.S.P.Q.2d at 1482-83.

1167 Id. at 1352-53, 65 U.S.P.Q.2d at 1483.

1168 Warner-Lambert, 316 F.3d at 1353, 65 U.S.P.Q.2d at 1483.

1169 Id.

1170 Id.

1171 Id.

1172 Id. at 1366, 65 U.S.P.Q.2d at 1492.

1173 Id. at 1355-56, 65 U.S.P.Q.2d at 1485.

1174 Warner-Lambert, 316 F.3d at 1356, 65 U.S.P.Q.2d at 1485.

1175 Id., 65 U.S.P.Q.2d at 1487.

1176 Id. at 1358, 65 U.S.P.Q.2d at 1486-87.

1177 Id. at 1351-52, 65 U.S.P.Q.2d at 1482.

1178 Id. at 1352, 65 U.S.P.Q.2d at 1482.

1179 Id.

1180 Warner-Lambert, 316 F.3d at 1358-59, 65 U.S.P.Q.2d at 1487.

1181 Id. at 1356, 65 U.S.P.Q.2d at 1485.

1182 Id. at 1366, 65 U.S.P.Q.2d at 1492.

1183 291 F.3d 780, 784-85, 62 U.S.P.Q.2d (BNA) 1834, 1837 (Fed. Cir. 2002).

1184 Id.

1185 Id.

1186 See Cotton-Tie Co. v. Simmons, 106 U.S. 89, 95 (1882) (discussing “reconstructed” cotton-bale ties); Morgan Envelope Co. v. Albany Perforated Wrapping Paper Co., 152 U.S. 425, 434 (1894) (explaining that in Cotton-Tie, “the use of the tie was intended to be as complete a destruction of it as would be the explosion of a patented torpedo”).

1187 Husky, 291 F.3d at 785, 62 U.S.P.Q.2d at 1837.

1188 50 U.S. 109 (1850); see also Heyer v. Duplicator Mfg. Co., 263 U.S. 100, 101-02 (1923).

1189 365 U.S. 336, 128 U.S.P.Q. (BNA) 354 (1961).

1190 Husky, 291 F.3d at 785-86, 62 U.S.P.Q.2d at 1837.

1191 See Sage Prods., Inc. v. Devon Indus., Inc., 45 F.3d 1575, 1578, 33 U.S.P.Q.2d (BNA) 1765, 1767 (Fed. Cir. 1995).

1192 Husky, 291 F.3d at 786, 62 U.S.P.Q.2d at 1838.

1193 See *Wilbur-Ellis Co. v. Kuther*, 377 U.S. 422, 424, 141 U.S.P.Q. (BNA) 703, 704-05 (1964) (“[p]etitioners in adapting the old machines to a related use were doing more than repair in the customary sense; but what they did was kin to repair for it bore on the useful capacity of the old combination”); see generally, *Surfco Hawaii v. Fin Control Sys. Pty. Ltd.*, 264 F.3d 1062, 60 U.S.P.Q.2d (BNA) 1056 (Fed. Cir. 2001).

1194 *Husky* 291 F.3d at 787, 62 U.S.P.Q.2d at 1839.

1195 264 F.3d 1062, 1066, 60 U.S.P.Q.2d (BNA) 1056, 1058-59 (Fed. Cir. 2001) (citations omitted).

1196 *Husky*, 291 F.3d at 788, 62 U.S.P.Q.2d at 1839.

1197 *Id.* at 782, 62 U.S.P.Q.2d at 1834-35.

1198 *Id.*, 62 U.S.P.Q.2d at 1835.

1199 *Id.*

1200 *Id.* at 783, 62 U.S.P.Q.2d at 1835.

1201 *Id.* at 787, 63 U.S.P.Q.2d at 1839.

1202 291 F.3d 1317, 62 U.S.P.Q.2d (BNA) 1846 (Fed. Cir. 2002).

1203 *Id.* at 1319-20, 62 U.S.P.Q. 2d at 1848.

1204 *Id.* at 1319, 62 U.S.P.Q.2d at 1847 (emphasis added).

1205 *Id.*, 62 U.S.P.Q.2d at 1848.

1206 *Id.* at 1319-20, 62 U.S.P.Q.2d at 1848.

1207 234 F.3d 558, 56 U.S.P.Q.2d (BNA) 1865 (Fed. Cir. 2000).

1208 *Cooper Cameron*, 291 F.3d at 1320, 62 U.S.P.Q.2d at 1848.

1209 *Id.* at 1322, 62 U.S.P.Q.2d at 1850.

1210 305 F.3d 1303, 64 U.S.P.Q.2d (BNA) 1481 (Fed. Cir. 2002).

1211 *Id.* at 1306, 64 U.S.P.Q.2d at 1482.

- ¹²¹² Id. at 1310, 64 U.S.P.Q.2d at 1484.
- ¹²¹³ Id. at 1311, 64 U.S.P.Q.2d at 1485.
- ¹²¹⁴ Id. at 1306, 64 U.S.P.Q.2d at 1482.
- ¹²¹⁵ Id. at 1317, 64 U.S.P.Q.2d at 1490 (quoting *Ethicon Endo-Surgery, Inc. v. U.S. Surgical Corp.*, 149 F.3d 1309, 1320, 47 U.S.P.Q.2d (BNA) 1272, 1280 (Fed. Cir. 1998)) (citations omitted).
- ¹²¹⁶ 285 F.3d 1046, 1054, 62 U.S.P.Q.2d (BNA) 1225, 1230 (Fed. Cir. 2002) (en banc) (per curiam).
- ¹²¹⁷ 86 F.3d 1098, 39 U.S.P.Q.2d (BNA) 1001 (Fed. Cir. 1996).
- ¹²¹⁸ Id. at 1106, 39 U.S.P.Q.2d at 1006 (quoting *Unique Concepts, Inc. v. Brown* 939 F.2d 1558, 19 U.S.P.Q.2d (BNA) 1500 (Fed. Cir. 1991)).
- ¹²¹⁹ 145 F.3d 1317, 46 U.S.P.Q.2d (BNA) 1843 (Fed. Cir. 1998).
- ¹²²⁰ *Johnson*, 285 F.3d at 1051-52, 62 U.S.P.Q.2d at 1228.
- ¹²²¹ Id. at 1049, 62 U.S.P.Q.2d at 1226.
- ¹²²² Id. at 1050, 62 U.S.P.Q.2d at 1227.
- ¹²²³ Id.
- ¹²²⁴ Id.
- ¹²²⁵ Id. at 1050-51, 62 U.S.P.Q.2d at 1227.
- ¹²²⁶ *Johnson*, 285 F.3d at 1051, 62 U.S.P.Q.2d at 1227.
- ¹²²⁷ Id.
- ¹²²⁸ Id. at 1055, 62 U.S.P.Q.2d at 1231.
- ¹²²⁹ Id. at 1052, 62 U.S.P.Q.2d at 1228.
- ¹²³⁰ Id. at 1054, 62 U.S.P.Q.2d at 1230 (quoting *Sage Prods, Inc. v. Devon Indus., Inc.* 126 F.3d 1420, 1424, 44 U.S.P.Q.2d (BNA) 1103, 1107 (Fed. Cir. 1997)).

1231 Id. (quoting *Maxwell v. J. Baker, Inc.*, 86 F.3d at 1107, 39 U.S.P.Q.2d at 1006).

1232 Johnson, 285 F.3d at 1055, 62 U.S.P.Q.2d at 1231.

1233 Id.

1234 35 U.S.C. § 102(b) (2000).

1235 See, e.g., *Am. Permahedge, Inc. v. Barcana, Inc.*, 105 F.3d 1441, 1445-46, 41 U.S.P.Q.2d (BNA) 1614, 1618 (Fed. Cir. 1997).

1236 520 U.S. 17, 41 U.S.P.Q.2d (BNA) 1865 (1997).

1237 Id. at 29-33, 41 U.S.P.Q.2d at 1871-72.

1238 Id. at 33, 41 U.S.P.Q.2d at 1873.

1239 *Southwall Techs., Inc. v. Cardinal IG, Co.*, 54 F.3d 1570, 1583, 34 U.S.P.Q.2d (BNA) 1673, 1682 (Fed. Cir. 1995) (“Clear assertions made during prosecution in support of patentability, whether or not actually required to secure allowance of the claim, may also create an estoppel.”).

1240 Id. at 1584, 34 U.S.P.Q.2d at 1683 (“once an argument is made regarding a claim term so as to create an estoppel, the estoppel will apply to that term in other claims.”).

1241 *Eagle Comtronics, Inc. v. Arrow Communication Labs., Inc.*, 305 F.3d 1303, 1316, 64 U.S.P.Q.2d (BNA) 1481, 1489 (Fed. Cir. 2002).

1242 *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 122 S. Ct. 1831, 1842, 62 U.S.P.Q.2d (BNA) 1705, 1714 (2002).

1243 Id. at 1854, 62 U.S.P.Q.2d at 1712. On September 20, 2002, the Federal Circuit recalled its mandate and requested additional briefing. Interestingly, the court asked for briefing on, *inter alia* “[w]hether rebuttal of the presumption of surrender, including issues of foreseeability, tangentialness, or reasonable expectations of those skilled in the art, is a question of law or one of fact; and what role a jury should play in determining whether a patent owner can rebut the presumption.”

1244 Id. at 1839, 62 U.S.P.Q.2d at 1711-12.

1245 See *Elkay Mfg. Co. v. Ebco Mfg. Co.*, 192 F.3d 973, 979, 52 U.S.P.Q.2d 1109, 1113 (Fed. Cir. 1999) (scope of coverage may change if a patentee has “relinquished [a] potential claim construction in an amendment to the claim or in an argument to overcome or distinguish a reference”); see also *Southwall Techs., Inc. v. Cardinal IG, Co.*, 54 F.3d 1570, 1583, 34 U.S.P.Q.2d (BNA) 1673, 1682-83 (Fed. Cir. 1995) (“Clear assertions made during prosecution in support of patentability, whether or not actually required to secure allowance of the claim, may also create an estoppel.”).

1246 *Southwall*, 54 F.3d at 1584, 34 U.S.P.Q.2d at 1683 (“Once an argument is made regarding a claim term so as to create an estoppel, the estoppel will apply to that term in other claims.”).

1247 Festo, 122 S. Ct. at 1839, 62 U.S.P.Q.2d at 1711.

1248 Id. at 1839-40, 62 U.S.P.Q.2d at 1711-12.

1249 Id. at 1841-42, 62 U.S.P.Q.2d at 1713 (citing Warner-Jenkinson, 520 U.S. 17, 33, 41 U.S.P.Q.2d (BNA) 1865, 1873 (1997)).

1250 Id. at 1842, 62 U.S.P.Q.2d at 1713.

1251 Id.

1252 Id., 62 U.S.P.Q.2d at 1714.

1253 Festo, 122 S. Ct. at 1842, 62 U.S.P.Q.2d at 1714 (emphasis added).

1254 Id. at 1840, 62 U.S.P.Q.2d at 1712.

1255 Id. at 1841, 62 U.S.P.Q.2d at 1712.

1256 Id. at 1842, 62 U.S.P.Q.2d at 1714.

1257 Id., 62 U.S.P.Q.2d at 1713.

1258 287 F.3d 1097, 62 U.S.P.Q.2d (BNA) 1545 (Fed. Cir. 2002).

1259 Id. at 1099, 62 U.S.P.Q.2d at 1546.

1260 Id.

1261 Id.

1262 Id. at 1100, 62 U.S.P.Q.2d at 1546.

1263 Id., 62 U.S.P.Q.2d at 1547.

1264 Abbott Labs, 287 F.3d at 1104, 62 U.S.P.Q.2d at 1550.

1265 Id. at 1100, 62 U.S.P.Q.2d at 1546-47.

1266 Id.

1267 Id.

1268 Id.

1269 Id. at 1101, 62 U.S.P.Q.2d at 1547-48.

1270 Abbott Labs, 287 F.3d at 1101, 62 U.S.P.Q.2d at 1548.

1271 Id.

1272 Id. at 1101-02, 62 U.S.P.Q.2d at 1548.

1273 Id.

1274 Id. at 1102-03, 62 U.S.P.Q.2d at 1548-49.

1275 Id. at 1108, 62 U.S.P.Q.2d at 1553.

1276 Abbott Labs, 287 F.3d at 1103, 62 U.S.P.Q.2d at 1549.

1277 Id. at 1104-05, 62 U.S.P.Q.2d 1550.

1278 Id. at 1104, 62 U.S.P.Q.2d at 1550.

1279 Id. at 1105, 62 U.S.P.Q.2d at 1550.

1280 Id.

1281 Id.

1282 Abbott Labs, 287 F.3d at 1107-08, 62 U.S.P.Q.2d at 1552.

1283 35 U.S.C. § 287(a) (2000).

1284 Maxwell v. J. Baker, Inc., 86 F.3d 1098, 1111, 39 U.S.P.Q.2d (BNA) 1001, 1010 (Fed. Cir. 1996).

1285 299 F.3d 1336, 63 U.S.P.Q.2d (BNA) 1769 (Fed. Cir. 2002).

1286 575 F.2d 1152, 197 U.S.P.Q. (BNA) 726 (6th Cir. 1978) .

1287 Ryco, Inc. v. Ag-Bag Corp., 857 F.2d 1418, 8 U.S.P.Q.2d (BNA) 1323 (Fed. Cir. 1988).

1288 Id. at 1427, 8 U.S.P.Q.2d at 1330-31.

1289 Grain Processing Corp. v. Am. Maize-Products Co., 185 F.3d 1341, 1351, 51 U.S.P.Q.2d (BNA) 1556, 1563 (Fed. Cir. 1999). In essence, infringers defending against a claim of lost profits damages now have another arrow in their quiver, namely that they could have and would have produced an acceptable non-infringing alternative.

1290 Id. at 1351-54, 51 U.S.P.Q.2d at 1563-64.

1291 279 F.3d 1378, 61 U.S.P.Q.2d (BNA) 1851 (Fed. Cir. 2002).

1292 Id. at 1379, 61 U.S.P.Q.2d at 1852.

1293 Fiskars, Inc. v. Hunt Mang. Co., 221 F.3d 1318, 55 U.S.P.Q.2d (BNA) 1569 (Fed. Cir. 2000), cert. denied, 121 S. Ct. 1603 (2001).

1294 Fiskars, 279 F.3d at 1379, 61 U.S.P.Q.2d at 1852.

1295 Id. at 1380, 61 U.S.P.Q.2d at 1853.

1296 Id.

1297 Id. at 1382, 61 U.S.P.Q.2d at 1855.

1298 Id., 61 U.S.P.Q.2d at 1854-55.

1299 Id. at 1380, 61 U.S.P.Q.2d at 1853.

1300 Fiskars, 279 F.3d at 1379, 61 U.S.P.Q.2d at 1852.

1301 Id., 61 U.S.P.Q.2d at 1855.

1302 Id. at 1382, 61 U.S.P.Q.2d at 1855.

1303 Id. at 1383, 61 U.S.P.Q.2d at 1855.

1304 BIC Leisure Prods., Inc. v. Windsurfing Int'l, Inc., 1 F.3d 1214, 1218, 27 U.S.P.Q.2d (BNA) 1671, 1674 (Fed. Cir. 1993).

1305 Water Tech. Corp. v. Calco Ltd., 850 F.2d 660, 671, 7 U.S.P.Q.2d (BNA) 1097, 1106 (Fed. Cir. 1988).

1306 Minco, Inc. v. Combustion Eng'g, Inc., 95 F.3d 1109, 1119, 40 U.S.P.Q.2d (BNA) 1001, 1008 (Fed. Cir. 1996); State Indus., Inc.

v. Mor-Flo Indus., Inc., 883 F.2d 1573, 1577, 12 U.S.P.Q.2d (BNA) 1026, 1028 (Fed. Cir. 1989).

¹³⁰⁷ See King Instrs. Corp. v. Perego, 65 F.3d 941, 952-53, 36 U.S.P.Q.2d (BNA) 1129, 1137 (Fed. Cir. 1995); see also Crystal Semiconductor Corp. v. TriTech Microelectronics Int'l, Inc., 246 F.3d 1352, 57 U.S.P.Q.2d (BNA) 1953 (Fed. Cir. 2001).

¹³⁰⁸ 298 F.3d 1302, 63 U.S.P.Q.2d (BNA) 1819 (Fed. Cir. 2002) (damage model based on incorrect assumption that an injunction would have precluded use of entire drilling platform).

¹³⁰⁹ 278 F.3d 1366, 61 U.S.P.Q.2d (BNA) 1545 (Fed. Cir. 2002).

¹³¹⁰ Id. at 1370, 61 U.S.P.Q.2d at 1546.

¹³¹¹ Id. at 1371, 61 U.S.P.Q.2d at 1547.

¹³¹² Id.

¹³¹³ Id.

¹³¹⁴ Id.

¹³¹⁵ Vulcan Eng'g, 278 F.3d at 1371, 61 U.S.P.Q.2d at 1547.

¹³¹⁶ Id.

¹³¹⁷ Id.

¹³¹⁸ Id. at 1376-77, 61 U.S.P.Q.2d at 1551.

¹³¹⁹ Id.

¹³²⁰ Id.

¹³²¹ Vulcan Eng'g, 278 F.3d at 1377, 61 U.S.P.Q.2d at 1551-52.

¹³²² Id.

¹³²³ Id. at 1378, 61 U.S.P.Q.2d at 1552.

¹³²⁴ Id.

¹³²⁵ 278 F.3d at 1377, 61 U.S.P.Q.2d at 1551 (citing Brooktree Corp. v. Advanced Micro Devices, Inc., 977 F.2d 1555, 1580, 24

U.S.P.Q.2d (BNA) 1401, 1419 (Fed. Cir. 1992) (price erosion losses may accrue before the infringement has been proved, but they must be reasonably related to the infringing activity)).

1326 Id.

1327 284 F.3d 1365, 63 U.S.P.Q.2d (BNA) 1340 (Fed. Cir. 2002).

1328 Id. at 1368, 62 U.S.P.Q.2d at 1341.

1329 Id. at 1369, 62 U.S.P.Q.2d at 1342.

1330 Id.

1331 Id. at 1370, 62 U.S.P.Q.2d at 1343.

1332 Id.

1333 Pickholtz, 284 F.3d at 1370-71, 62 U.S.P.Q.2d at 1343.

1334 Id. at 1374, 62 U.S.P.Q.2d at 1346.

1335 Id. at 1375, 62 U.S.P.Q.2d at 1347.

1336 Massengale v. Ray, 267 F.3d 1298, 1303 (11th Cir. 2001).

1337 Pickholtz, 284 F.3d at 1377, 63 U.S.P.Q.2d at 1348.

1338 28 U.S.C. § 1920 (2000).

1339 Arcadian Fertilizer, L.P. v. MPW Indus. Serv., Inc., 249 F.3d 1293, 1297 (11th Cir. 2001).

1340 282 F.3d 1355, 62 U.S.P.Q.2d (BNA) 1145 (Fed. Cir. 2002).

1341 Id. at 1360, 62 U.S.P.Q.2d at 1449.

1342 Id. at 1361, 62 U.S.P.Q.2d at 1150.

1343 315 F.3d 1304, 65 U.S.P.Q.2d (BNA) 1293 (Fed. Cir. 2003).

1344 Id. at 1305, 65 U.S.P.Q.2d at 1293.

1345 Id. at 1306, 64 U.S.P.Q.2d at 1293.

1346 Id.

1347 Id., 64 U.S.P.Q.2d at 1294.

1348 Id. at 1307, 65 U.S.P.Q.2d at 1294 (quoting Fla. Stat. ch. 607.1422(3) (2001)).

1349 Paradise Creations, 315 F.3d at 1307, 65 U.S.P.Q.2d at 1294.

1350 Id. at 1307, 65 U.S.P.Q.2d at 1295 (quoting Keene Corp. v. U.S., 508 U.S. 200, 207 (1993)).

1351 Id., 65 U.S.P.Q.2d at 1295.

1352 Id. at 1310, 65 U.S.P.Q.2d at 1297.

1353 Id. at 1307, 65 U.S.P.Q.2d at 1295.

1354 Id. at 1309, 65 U.S.P.Q.2d at 1296 (emphasis in original).

1355 134 F.3d 1090, 45 U.S.P.Q.2d (BNA) 1368 (Fed. Cir. 1998).

1356 Id. at 1092, 45 U.S.P.Q.2d at 1370.

1357 Id. at 1093, 45 U.S.P.Q.2d at 1371.

1358 Id. at 1093-94, 45 U.S.P.Q.2d at 1371.

1359 Paradise Creations, 315 F.3d at 1310, 65 U.S.P.Q.2d at 1296.

1360 240 F.3d 1016, 57 U.S.P.Q.2d 1819 (Fed. Cir. 2001).

1361 Paradise Creations, 315 F.3d at 1310, 65 U.S.P.Q.2d at 1296.

1362 Id.

1363 Id.

1364 Id. at 1308, 65 U.S.P.Q.2d at 1295.

1365 Id. at 1311, 65 U.S.P.Q.2d at 1297.

1366 Id., 65 U.S.P.Q.2d at 1267-98.

1367 Paradise Creations, 315 F.3d at 1311, 65 U.S.P.Q.2d at 1297.

1368 Id., 65 U.S.P.Q.2d at 1298.

1369 304 F.3d 1249, 64 U.S.P.Q.2d 1370 (BNA) (Fed. Cir. 2002).

1370 Id. at 1250, 64 U.S.P.Q.2d at 1371.

1371 Id.

1372 Id. at 1251, 64 U.S.P.Q.2d at 1371.

1373 Id.

1374 Id. at 1251-52, 64 U.S.P.Q.2d at 1371-72.

1375 Vanquard Research, 304 F.3d at 1251-52, 64 U.S.P.Q.2d at 1371-72.

1376 Id. at 1253, 64 U.S.P.Q.2d at 1372-73.

1377 Id., 64 U.S.P.Q.2d at 1373.

1378 Id. at 1255, 64 U.S.P.Q.2d at 1374.

1379 Id.

1380 Id.

1381 Vanquard Research, 304 F.3d at 1255, 64 U.S.P.Q.2d at 1374.

1382 28 U.S.C. § 1295 (2000).

1383 28 U.S.C. § 1338 (2000).

1384 895 F.2d 736, 745, 13 U.S.P.Q.2d (BNA) 1670, 1678 (Fed. Cir. 1990) (en banc).

1385 122 S. Ct. 1889, 62 U.S.P.Q.2d (BNA) 1801 (2002).

1386 *Id.* at 1892, 62 U.S.P.Q.2d at 1802.

1387 *Id.*

1388 *Vornado Air Circulation Systems, Inc. v. Duracraft Corp.*, 58 F.3d 1498, 35 U.S.P.Q.2d (BNA) 1332 (10th Cir. 1995) [hereinafter *Vornado I*].

1389 *Holmes Group*, 122 S. Ct. at 1892, 62 U.S.P.Q.2d at 1802.

1390 *Id.*

1391 *Id.*

1392 *Id.*

1393 *Midwest Indus., Inc. v. Karavan Trailers, Inc.*, 175 F.3d 1356, 50 U.S.P.Q.2d (BNA) 1672 (Fed. Cir. 1999).

1394 *Holmes Group*, 122 S. Ct. at 1892, 62 U.S.P.Q.2d at 1802.

1395 *Id.*

1396 *Id.*

1397 532 U.S. 23, 58 U.S.P.Q.2d (BNA) 1001 (2001).

1398 *Holmes Group*, 122 S. Ct. at 1892, 62 U.S.P.Q.2d at 1802-03.

1399 *Id.*

1400 *Id.* at 1893, 62 U.S.P.Q.2d at 1803 (quoting *Chistianson v Colt Indus. Operating Corp.*, 486 U.S. 800, 809, 7 U.S.P.Q.2d (BNA) 1109, 1113 (1988)) (citations omitted).

1401 *Id.* at 1895, 62 U.S.P.Q.2d at 1805.

1402 *Id.* at 1898, 62 U.S.P.Q.2d at 1807.

1403 See Restatement (Second) of Judgments §§18-19.

1404 Foster v. Hallco Mfg. Co., 947 F.2d 469, 478-80, 20 U.S.P.Q.2d (BNA) 1241, 1247-49 (Fed. Cir. 1991).

1405 Epic Metals Corp. v. H.H. Robertson Co., 870 F.2d 1574, 1577, 10 U.S.P.Q.2d (BNA) 1296, 1299 (Fed. Cir. 1989) (applying Third Circuit law).

1406 Foster, 947 F.2d at 479-80, 20 U.S.P.Q.2d at 1249.

1407 Hallco Mfg. Co., Inc. v. Foster, 256 F.3d 1290, 1295 59 U.S.P.Q.2d (BNA) 1346, 1349-50 (Fed. Cir. 2001) (withdrawing its earlier opinion reported at 245 F.3d 1369, 58 U.S.P.Q.2d (BNA) 1417 (Fed. Cir. 2001)).

1408 285 F.3d 1362, 62 U.S.P.Q.2d (BNA) 1349 (Fed. Cir. 2002).

1409 Id. at 1365, 62 U.S.P.Q.2d at 1351.

1410 Id. at 1367, 62 U.S.P.Q.2d at 1352.

1411 Id.

1412 Id.

1413 Id.

1414 Ecolab, 285 F.3d at 1377, 62 U.S.P.Q. at 1359.

1415 Id.

1416 Id.

1417 Id.

1418 Id., 62 U.S.P.Q.2d at 1360.

1419 In re Freeman, 30 F.3d 1459, 1465, 31 U.S.P.Q.2d (BNA) 1444, 1448 (Fed. Cir. 1994).

1420 Id.; e.g., A.B. Dick Co. v. Burroughs Corp., 713 F.2d 700, 702, 218 U.S.P.Q. (BNA) 965, 967 (Fed. Cir. 1983).

1421 See Vardon Golf Co., Inc. v. Karsten Mfg. Corp., 294 F.3d 1330, 1333-34, 63 U.S.P.Q.2d (BNA) 1468, 1470-71 (Fed. Cir. 2002).

1422 Freeman, 30 F.3d at 1467, 31 U.S.P.Q.2d at 1450; see also Blonder-Tongue Labs. Inc. v. Univ. of Ill. Found., 402 U.S. 313, 329, 169 U.S.P.Q. 513, 520 (1971).

1423 Montana v. United States, 440 U.S. 147, 164 n.11 (1979); Freeman, 30 F.3d at 1467, 31 U.S.P.Q.2d at 1450.

1424 260 F.3d 1327, 59 U.S.P.Q.2d (BNA) 1676 (Fed. Cir. 2001).

1425 Id. at 1334, 59 U.S.P.Q.2d at 1681.

1426 303 F.3d 1316, 64 U.S.P.Q.2d (BNA) 1182 (Fed. Cir. 2002).

1427 Id. at 1318, 64 U.S.P.Q.2d at 1183.

1428 Id. at 1319, 64 U.S.P.Q.2d at 1183.

1429 Id.

1430 Id. at 1322-23, 64 U.S.P.Q.2d at 1185.

1431 Id. at 1329, 64 U.S.P.Q.2d at 1190.

1432 Masco, 303 F.3d at 1331, 64 U.S.P.Q.2d at 1191-92.

1433 Id., 64 U.S.P.Q.2d at 1192.

1434 Id. at 1329, 64 U.S.P.Q. 2d at 1190 (quoting Restatement (Second) of Judgments cmt. o (1982)).

1435 Id. at 1330, 64 U.S.P.Q.2d at 1190 (quoting Restatement (Second) of Judgments cmt. I (1982)).

1436 Id. at 1323, 64 U.S.P.Q.2d at 1186.

1437 Id. at 1325, 64 U.S.P.Q.2d at 1187.

1438 Masco, 303 F.3d at 1330, 64 U.S.P.Q.2d at 1191.

1439 Id.

1440 Hannahville Indian Cmty. v. United States, 180 Ct. Cl. 477 (Ct. Cl. 1967) (involving a factual finding by the Indian Claims Commission).

1441 Masco, 303 F.3d at 1330, 64 U.S.P.Q.2d at 1191.

1442 Id. at 1331, 64 U.S.P.Q.2d at 1192.

1443 277 F.3d 1361, 61 U.S.P.Q.2d (BNA) 1515 (Fed. Cir. 2002).

1444 Id. at 1363, 61 U.S.P.Q.2d at 1516.

1445 Id.

1446 Id.

1447 Id.

1448 Id.

1449 Symbol Techs., 277 F.3d at 1363, 61 U.S.P.Q.2d at 1516.

1450 Id.

1451 Id. at 1364, 61 U.S.P.Q.2d at 1517.

1452 263 U.S. 50 (1923).

1453 264 U.S. 463 (1924).

1454 Symbol Techs., 277 F.3d at 1364, 61 U.S.P.Q.2d at 1517.

1455 Id.

1456 Id.

1457 Id.

1458 Id.

1459 304 U.S. 159, 37 U.S.P.Q. (BNA) 351 (1938).

1460 304 U.S. 175, 37 U.S.P.Q. (BNA) 357 (1938).

1461 Symbol Techs., 277 F.3d at 1364, 61 U.S.P.Q.2d at 1517.

1462 Id. at 1365, 61 U.S.P.Q.2d at 1518.

1463 Id. at 1365-66, 61 U.S.P.Q.2d at 1518-19.

1464 Id. at 1366-68, 61 U.S.P.Q.2d at 1519-20.

1465 4 Donald S. Chisum, Patents §11.05[1] at 11-264 (1996).

1466 Symbol Techs., 277 F.3d at 1365, 61 U.S.P.Q.2d at 1518.

1467 Id. at 1366, 61 U.S.P.Q.2d at 1519 (quoting P.J. Federico, Commentary on the New Patent Act, 75 J. Pat. & Trademark Off. Soc'y 161 (1993) (reprinted from 35 U.S.C.A. 1954 ed.)).

1468 The two prior non-precedential cases on which Lemelson had relied were Bott v. Four Star Corp., 848 F.2d 1245 (Fed. Cir. 1988) and Ricoh Co. v. Nashua Corp., 185 F.3d 884 (Fed. Cir. 1999).

1469 266 F.3d 1155, 1160 (9th Cir. 2001).

1470 223 F.3d 898 (8th Cir. 2000), vacated as moot, 235 F.3d 1054 (8th Cir. 2000) (en banc).

1471 Symbol Techs., 277 F.3d at 1369-70, 61 U.S.P.Q.2d at 1521.

1472 Id. at 1369, 61 U.S.P.Q.2d at 1521.

1473 Id.

1474 Id. at 1369-71, 61 U.S.P.Q.2d at 1521-22.

1475 275 F.3d 1066, 61 U.S.P.Q.2d (BNA) 1245 (Fed. Cir. 2002).

1476 Id. at 1072, 61 U.S.P.Q.2d at 1249.

1477 Id. at 1070, 61 U.S.P.Q.2d at 1247.

1478 Id.

1479 Id.

1480 Id.

1481 Antonious, 275 F.3d at 1070, 61 U.S.P.Q.2d at 1247.

1482 Id.

1483 Id.

1484 Id.

1485 Id.

1486 Id. at 1071, 61 U.S.P.Q.2d at 1247.

1487 Antonious, 275 F.3d at 1071, 61 U.S.P.Q.2d at 1248.

1488 Id. at 1073, 61 U.S.P.Q.2d at 1249.

1489 Id. at 1071, 61 U.S.P.Q.2d at 1248.

1490 Id.

1491 Id.

1492 Id.

1493 Antonious, 275 F.3d at 1071, 61 U.S.P.Q.2d at 1248.

1494 Id.

1495 Id.

1496 Id. at 1072, 61 U.S.P.Q.2d at 1249.

1497 Id. at 1073, 61 U.S.P.Q.2d at 1249.

1498 Id.

1499 Antonious, 275 F.3d at 1074, 61 U.S.P.Q.2d at 1250.

1500 Id.

1501 Id. at 1075, 61 U.S.P.Q.2d at 1251.

1502 Id.

1503 Id.

1504 Id. at 1077, 61 U.S.P.Q.2d at 1252.

1505 286 F.3d 1360, 62 U.S.P.Q.2d (BNA) 1449 (Fed. Cir. 2002).

1506 Id. at 1368, 62 U.S.P.Q.2d at 1454.

1507 Id.

1508 Id. at 1363, 62 U.S.P.Q.2d at 1450.

1509 Id. at 1365, 62 U.S.P.Q.2d at 1452.

1510 Id. at 1365-66, 62 U.S.P.Q.2d at 1452.

1511 Techsearch, 286 F.3d at 1368, 62 U.S.P.Q.2d at 1454.

1512 Id.

1513 Id.

1514 Id. at 1369, 62 U.S.P.Q.2d at 1454.

1515 Id.

1516 Id. at 1380, 62 U.S.P.Q.2d at 1462.

1517 Techsearch, 286 F.3d at 1380, 62 U.S.P.Q.2d at 1463.

1518 Id. at 1376-77, 62 U.S.P.Q.2d at 1460.

1519 231 F.3d 572 (9th Cir. 2000) (en banc).

1520 Techsearch, 286 F.3d at 1377, 62 U.S.P.Q.2d at 1460.

1521 Id. at 1378, 62 U.S.P.Q.2d at 1461.

1522 Id.

1523 Id. at 1379, 62 U.S.P.Q.2d at 1461.

1524 Id., 62 U.S.P.Q.2d at 1461-62 (citing AMAE, at 611-14) (citations omitted).

1525 Id., 62 U.S.P.Q.2d at 1462.

1526 Techsearch, 286 F.3d at 1380, 62 U.S.P.Q.2d at 1463.

1527 Id. at 1381, 62 U.S.P.Q.2d at 1463.

1528 Id.

1529 305 F.3d 1303, 64 U.S.P.Q.2d (BNA) 1481 (Fed. Cir. 2002).

1530 Id. at 1306, 64 U.S.P.Q.2d at 1482.

1531 Id. at 1311, 64 U.S.P.Q.2d at 1486-87.

1532 Id., 64 U.S.P.Q.2d at 1487.

1533 Id.

1534 Id.

1535 Eagle Comtronics, 303 F.3d at 1311, 64 U.S.P.Q.2d at 1487.

1536 Id. at 1312, 64 U.S.P.Q.2d at 1486.

1537 Id.

1538 Id.

1539 Id. at 1314, 64 U.S.P.Q.2d at 1488.

1540 Id.

1541 285 F.3d 1362, 62 U.S.P.Q.2d (BNA) 1349 (Fed. Cir. 2002).

1542 Id. at 1365, 62 U.S.P.Q.2d at 1351.

1543 Id. at 1367, 62 U.S.P.Q.2d at 1352.

1544 Id. at 1368, 62 U.S.P.Q.2d at 1353.

1545 Id.

1546 Id. at 1369, 62 U.S.P.Q.2d at 1353.

1547 Ecolab, 285 F.3d at 1369, 62 U.S.P.Q.2d at 1354.

1548 Id. at 1369-70, 62 U.S.P.Q.2d at 1354.

1549 Id. at 1370, 62 U.S.P.Q.2d at 1354.

1550 Id. at 1371, 62 U.S.P.Q.2d at 1355.

1551 Id.

1552 Id., 62 U.S.P.Q.2d at 1354.

1553 Ecolab, 285 F.3d at 1371, 62 U.S.P.Q.2d at 1354.

1554 Id.

1555 Id. at 1378, 62 U.S.P.Q.2d at 1360.