PART I Patenting for Breadth

-------------------------------------------------------------------------------------------------------------
 Page 11 (Rel. C2013)

CHAPTER 1 Drafting for Breadth

Rules of Patent Drafting

Drafting for Breadth

§ 1.01 Introduction

§ 1.02 Development

§ 1.03 Standard

§ 1.04 Drafting Rules

[1] Rule 1: Never describe the invention as a whole, or characterize the invention. Ground performance measures explicitly on objective standards

[a] The Invention as a whole—“Patent Profanity”

[i] The Invention

[ii] The invention as a whole

[b] Characterizing

[i] Required characteristic or property

[ii] Objects of the invention

[c] Objective Standards

[2] Rule 2: Describe multiple embodiments or examples, and within those embodiments, set out alternatives and variations. Use both generic and specific language to describe claim items

[a] Multiple embodiments

[b] Alternatives and variations

[i] Alternatives

[ii] Variations

[c] Generic language

[3] Rule 3: Avoid boilerplate—it does not work

§ 1.05 Conclusion

§ 1.01 Introduction

            Who knows what evil lurks in the hearts of patent prosecutors? The Federal Circuit knows, and they find it in patent specifications. They find it in Background, Summary, and Abstract, known repositories of true inventor intent. They find it in the Detailed Description, where characterizing phrases demonstrate what the claims should have said. And they find it in the single-embodiment disclosure, where the true invention awaits.

            What the Federal Circuit seeks is inventor intent—what did the inventor truly believe was her invention? Given that information, coupled with the inescapable fact that judges are the ones who perform claim construction, only one strategy will succeed: Give them intent. Instead of waiting for a claim constructor to divine intent from a specification, simply set out what the intent is. It shortcuts the process, and it puts the drafter back in control. Keep your friends close and the Federal Circuit closer.

§ 1.02 Development

            Once upon a time, if one said @#$% or ^&\*# on network television, the remark would be bleeped, and the FCC would be in an uproar. On the other hand, you could say “invention” in a patent application with no fear whatsoever. Now, that situation is completely reversed.

            That is the world of the Disclosure Revolution. We leave to others the story of how we got here, or where we should go. Our job is fashioning survival strategies.

§ 1.03 Standard

            Claim construction is a process characterized by flexibility. True, a number of principles exist, culled from Supreme Court, Federal Circuit, and C.C.P.A. opinions, primarily. For every adage pointing one way, however (“claims are the measure of the invention”) another, equally authoritative, points in the opposite direction (“claim are read in light of the specification”). What determines which of the pair governs? Judgment, of course.

            “Flexible” claim construction can be seen in a 2009 opinion, *Abbott Labs. v. Sandoz, Inc*.[[1]](#footnote-1)1 The opinion started from the principle that claims define the
-------------------------------------------------------------------------------------------------------------
 Page 13 (Rel. C2013)
patent right, and it proceeded to address the relationship between claims and specification, moving one step at a time, until it finally arrived at the observation that “sometimes the specification offers practically incontrovertible directions about claim meaning.” Purporting only to consult the specification to “clarify” claim terms, Judge Rader took pains to reassure drafters, saying “this court will not limit broader claim language to that single application ‘unless the patentee has demonstrated a clear intention to limit the claim scope using words or expressions of manifest exclusion or restriction.’” The judge’s final point revealed the true thrust, however:

[T]his court may reach a narrower construction, limited to the embodiment(s) disclosed in the specification, when the claims themselves, the specification, or the prosecution history clearly indicate that the invention encompasses no more than that confined structure or method.[[2]](#footnote-2)2

            Given that statement, one should not be surprised that the court did in fact reach a narrow claim construction.

            The court’s quest for inventor intent is reflected in the following statement from a 2002 opinion:

[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.[[3]](#footnote-3)3

            Note the assertion here: The *court* is not limiting claim scope; the *drafter herself* chose to limit that scope—she, not the court, distinguished the claims from prior art, or expressly disclaimed subject matter, or indicated that particular subject matter was particularly important to the invention. No, it is the inventors who choose to limit their own inventions. The court merely identifies the inventor’s true intent.

            If the standard is inventor intent, then the successful drafter will provide that intent.

§ 1.04 Drafting Rules

[1] Rule 1: Never describe the invention as a whole, or characterize the invention. Ground performance measures explicitly on objective standards

[a] The Invention as a whole—“Patent Profanity”

[i] The Invention

            One of the more colorful—and apt—catchphrases of the day is “patent profanity,” coined by Tom Irving of the Finnegan firm[[4]](#footnote-4)4 and propagated widely. It perfectly captures the notion that there are certain things that nice people *just don’t say*, at least not in polite society. The spirit echoes George Carlin’s “Seven Dirty Words,”[[5]](#footnote-5)5 without quite as much commercial potential.

            Patent profanity, however, produces consequences considerably more severe than having one’s mouth washed out with soap. By the time a patent reaches the Federal Circuit on appeal, a large pile of money has been spent obtaining and litigating the patent, and the rights embodied in that document are valued at a correspondingly higher sum. Yet, one profane word can send it all down the drain.

            For all the humorous approach and clever language, drafters need to approach this subject with complete attention. Accordingly, recognizing and avoiding patent profanity has become a high priority, high consequence task.

            The issues and the stakes are illustrated in a 2006 Federal Circuit decision, *Honeywell Int’l, Inc. v. ITT Indus., Inc*.[[6]](#footnote-6)6 The invention addressed the generation of static electricity in a conventional automotive fuel supply system, caused by fuel flow. The static electricity causes periodic arcing, which accelerates erosion of the system components. The specification and claims focused on the addition of electroconductive fibers to a polymer material (Fig. 1), a combination that provided an electrical path to ground, preventing static electricity buildup.[[7]](#footnote-7)7 The patent survived reexamination.[[8]](#footnote-8)8 The relevant preamble began, “A fuel injection system component for communicating fuel to the engine of a motor vehicle, said motor vehicle having an electrical plane maintained at a

graphics\pub04634\vol001\ch0001\ch1-1\_001.r001.tiff

FIGURE 1

graphics\pub04634\vol001\ch0001\ch1-1\_001.r001.pdf

            “
-------------------------------------------------------------------------------------------------------------
 Page 15 (Rel. C2013)
predetermined electrical potential,” going on to recite two elements, “a composite material forming a fuel flow path” and “conductive means forming part of the electrically conductive path.” No claim limitation restricted any claim to a particular fuel injection system component.[[9]](#footnote-9)9

            The patent disclosure, however, combined narrowly and broadly focused sections. On one hand, the title emerging from reexamination was changed from “Electrostatically Dissipative Fuel System Component” to “Electrostatically Dissipative Fuel Filter.” The first line of text reads, “This invention relates to a fuel filter for use in the fuel line that delivers fuel to a motor vehicle engine,” and the specification goes on to link the words “invention” and “fuel filter” a total of four times. A fuel filter is the only embodiment described, and other fuel system components are not mentioned. On the other hand, nothing in the disclosure states or suggests that the invention is limited to the fuel filter. Considerable discussion is devoted to producing the polymer material that is both moldable and electrostatically conductive.

            The patent owner, Honeywell, sued ITT for infringement, based on ITT’s “quick connect” components, which joined elements of a fuel injection system. Presumably, Honeywell and its litigation counsel concentrated on the fact that the claims clearly identified fuel injection system components, and that scope of coverage had been affirmed once in regular examination and then again in a re-examination, as defining a patentable distinction over the prior art.

            The Federal Circuit decision seized upon the word “invention”: “The public is entitled take the patentee at his word and the word was that the invention is a fuel filter.” Also highly relevant was the fact that the fuel filter was the only embodiment. The narrowing points set out above were interpreted as a conscious limitation by the patentee of invention scope.

            The emerging rule appears to be as follows: Any statement that can be interpreted as limiting claim scope will be deemed to express the inventor’s true intention of claim scope. Moreover, that rule appears to be applied in a hard and fast fashion, as seen in *Edwards Lifesciences, LLC v. Cook Inc.*,[[10]](#footnote-10)10 where the invention concerned vascular grafts for treating aneurysms and occlusive diseases of the blood vessels without open surgery (Fig. 8).[[11]](#footnote-11)11 The claim construction issue was whether the claim term “graft” was restricted to an intraluminal structure as opposed to the broader construction that would allow grafts to be applied outside a blood vessel.

            In facts that perfectly echo *Honeywell*, the claims broadly recite a “prosthesis”; the patent is entitled “Intraluminal Graft”; only a single embodiment is shown, and the graft shown there is intraluminal; perhaps fatally, the Field of the Invention section reads, “The present invention relates to an intraluminal graft” and the Disclosure of the Invention section begins, “in a first aspect the present invention consists in an intraluminal graft.”[[12]](#footnote-12)12 In addition, the court elided its own principle that the plain language of the claims controls meaning,[[13]](#footnote-13)13 explaining that plain meaning can be narrowed when a different meaning is set out in the specification as “important,” though in this instance, the importance had been implied, not stated.[[14]](#footnote-14)14 As had been the case in *Honeywell*, the claim was narrowly construed, resulting in no infringement.[[15]](#footnote-15)15

            At the same time, the possibility exists of using a reference to “the invention” to secure a positive outcome. In *Gillette Co. v. Energizer Holdings, Inc.,*[[16]](#footnote-16)16 the issue focused on whether the claims were limited to a razor having three blades, or if any number would fulfill the claim requirement. Here, the first sentence of the application, which proved so fatal in *Honeywell*, read, “the invention … relates in particular to safety razors having blade units with a plurality of blades.” Referring to “the invention” proved just as powerful working for the patentee as it had worked against the patentees in *Honeywell* and *Edwards Lifesciences*, overcoming the preferred embodiment and a number of other indications in the specification that only a three-blade razor had been intended.[[17]](#footnote-17)17 Deliberately calling on the “the invention” in this
-------------------------------------------------------------------------------------------------------------
 Page 17 (Rel. C2013)
manner smacks of using the Dark Side of The Force, but it certainly proved effective in this example.[[18]](#footnote-18)18

            The drafting principle to be drawn from these cases is simple: Never say the phrase “the present invention is …” Never say the phrase “the invention is …” In fact, never say the word “invention.” While this may seem a bit extreme, a number of firms, companies, and individual practitioners have adopted various substitute terms, such as “disclosure” and the like and have completely avoided any use of the word “invention.”

[ii] The invention as a whole

            Ducking the I-word trap, however, does not get one all the way home. There remains the danger of describing the invention as a whole, which can produce the same result. That problem was clearly illustrated in *C.R. Bard, Inc. v. U.S. Surgical Corp.*,[[19]](#footnote-19)19 involving an implantable device used to repair hernias. The device itself is generally conical in shape (Fig. 2), but the shape forms no part of the only claim in suit, which read as follows:

An implantable prosthesis for repairing a tissue or muscle wall defect, comprising:

a hollow plug, formed of a surgical mesh fabric having openings therein for tissue ingrowth, constructed and arranged to securely fit within and occlude the tissue or muscle wall defect and which is radially compressible upon insertion into the defect from a first configuration which is larger than the defect into a second configuration which approximates the shape of the defect, the surface of said hollow plug being conformable to irregularities in the tissue or muscle wall defining the defect upon insertion of said hollow plug into the defect, said hollow plug being extremely pliable, allowing localized portions of the hollow plug to adapt to irregularities in the tissue or muscle wall defect.[[20]](#footnote-20)20

graphics\pub04634\vol001\ch0001\ch1-2\_001.r001.tiff

FIGURE 2

graphics\pub04634\vol001\ch0001\ch1-2\_001.r001.pdf

            The claim construction issue was whether the device was required to be pleated. As the defendant pointed out, all of the disclosed embodiments were pleated. In terms of the actual description, the drafter was careful to begin the Summary of the Invention with, “The present invention is an implantable prosthesis and a method for reinforcing and repairing a weakened muscular wall,”[[21]](#footnote-21)21 so the “invention” was not directly described. Some 50 lines later, however, in the following paragraph, the drafter wrote: “The implant includes a pleated surface …” Because that sentence occurred in the Summary of the Invention: a location, according to the court, that “can signal the likelihood that the statement will support a limiting definition of a claim term,” the court concluded that the patent was “defined globally as requiring a pleated surface.”[[22]](#footnote-22)22

            The rationale underlying this analysis can be clearly seen in what is often cited as the fundamental decision in this area, *SciMed Life Systems, Inc. v. Advanced Cardiovascular Systems, Inc.*[[23]](#footnote-23)23 The technology concerned balloon catheters, shown in Fig. 3, used in angioplasty procedures. These catheters include two passageways, or lumens—a guidewire lumen, which rides over the guide wire extended into a patient’s artery; and an inflation lumen, which connects to the balloon and upon inflation, compresses the material blocking the artery to facilitate vascular flow. Two-lumen designs were known in the art, specifically including a coaxial design, in which the

graphics\pub04634\vol001\ch0001\ch1-3\_001.r001.tiff

FIGURE 3

graphics\pub04634\vol001\ch0001\ch1-3\_001.r001.pdf

-------------------------------------------------------------------------------------------------------------
 Page 19 (Rel. C2013)
guide wire lumen was located inside the inflation lumen, as well as a side-by-side design in which the two lumens were arranged in parallel.

            Unquestionably, all of the catheters described in the SciMed patents in suit were coaxial designs. Descriptions of those designs equally unquestionably described the coaxial arrangement. Additionally, the side-by-side arrangement was mentioned, and it was characterized as having disadvantages over the coaxial design. In what the court described as the “most compelling” portion of the specification, a coaxial arrangement was described as “the basic sleeve structure for all embodiments of the present invention, contemplated and disclosed herein.” Because the court considered that statement “broad and unequivocal,” it concluded that “the coaxial lumen configuration was a necessary element of every variant of the claimed invention.”[[24]](#footnote-24)24

            Although these decisions purport merely to elucidate what the patent drafter intended, the drafter herself would undoubtedly disagree. If the drafter of the C.R. Bard patent, for example, had intended to require a pleated surface, why was it not claimed? If the coaxial lumen design asserted as necessary in *SciMed* were really required to distinguish that invention from the prior art, why was that limitation not present in the claims? In light of the common experience of drafting patent applications, one cannot seriously attribute a limiting intent to the drafters.

            The only effective preventive measure here is to avoid all general description. Also, descriptions must be clearly identified with—and limited to—specific embodiments of the overall invention. The desire to accomplish these goals has produced clashes with the goal of writing understandable patents, as well as a talismanic reliance on boilerplate.[[25]](#footnote-25)25 Nonetheless, drafters must become conscious of exactly what they are describing, and they must focus that description carefully and specifically.

[b] Characterizing

[i] Required characteristic or property

            Characterizing aspects of the claimed invention can produce results as deadly as those seen in describing the invention as a whole. Claim limitations in this area, however, at least give the appearance of being more tied to the drafter’s actual intent. These limitations flow from genuine characterizations made in the specification, so the court seems less engaged in inferring intent than in giving the drafter what she said she wanted.

            If a patent specification says that a particular ingredient, property, or characteristic is important, then that statement will be read into the claims.

            That rule is simply stated, and it is straightforwardly applied. In an excellent example, a patent addressed the synthesis of difluoro-methane, where the claim set out,

A method of synthesizing dichloromethane through the gas phase fluoridation of ethylene chloride, with hydrogen fluoride, in the presence of an amount of oxygen within a particular temperature range, and with a chromium catalyst.[[26]](#footnote-26)26

            The parties disputed what sort of catalyst would be covered by the claim term, with the patentee arguing that metal oxides and non-inert additives should be sufficient. The infringement defendant, however, pointed to the following statement from the specification: “it is necessary to have a catalyst containing solely chromium.” Necessary means necessary, and the characterization was given effect, requiring pure chromium catalyst.[[27]](#footnote-27)27

            Identifying a feature as “important” has the same effect. A 2008 case, *Decisioning.com, Inc. v. Federated Department Stores, Inc.*,[[28]](#footnote-28)28 presents a system that allows a consumer to open a financial account, such as a loan, from a remote location. The primary claim specified that the applicant would be “located at a remote interface,” not specifying any particular type of interface. The specification indicates a number of “important” features, with a statement that “The use of a kiosk to make available to borrowers the communications capability for applying for a loan or credit card is another important feature of the present invention.” The patentee argued that “remote interface” should be given a sufficiently broad construction to read on the personal computer employed by the accused infringer to perform the application functions.

            The result is somewhat puzzling. Analyzing the specification, the court noted, “On one hand, it is clear that the invention is not limited to a remote interface that is housed in a kiosk structure. The patent describes the kiosk housing as merely a preferred embodiment.”[[29]](#footnote-29)29 While it is true that the patent specification consistently refers to the kiosk as a “preferred embodiment,” it is also true that no other embodiment is presented. In any event, the court reasoned that the truly important feature was not the kiosk structure but rather public accessibility for the system, so that the system could be installed in any public location but not in an individual user’s personal computer.[[30]](#footnote-30)30

            This decision is somewhat deceptive. On one hand, the court stopped short of limiting the invention to a kiosk implementation. The drafter referred to the kiosk as the “preferred embodiment,” and that reference left room for other
-------------------------------------------------------------------------------------------------------------
 Page 21 (Rel. C2013)
embodiments. More importantly, though, the court did enforce a public access requirement, which was also labeled as important without the “preferred embodiment” qualifier. From the viewpoint of the plaintiff, the details of the rationale made little difference. It still lost.

            Any time a claim can be implemented in a number of ways, and the specification goes beyond setting out a preferred embodiment to express strong preference for one of the possible choices, the drafter risks incorporating that choice into the claims. For example, a patent directed to a novel personal digital assistant (PDA) recited “a host interface adapted so as to provide communications between the digital assistant module and the host computer,” without specifying any particular type of interface.[[31]](#footnote-31)31 The only interface set out in the patent, however, was a direct parallel bus connection, described as a “very important feature” of the device. Serial interfaces were specifically disparaged in the Background section. The court considered those two factors together and limited the claims to devices incorporating a direct parallel bus.[[32]](#footnote-32)32 On the other hand, identifying a given floating point format as “particularly optimal when applied to various aspects of the graphical computations,” without more, fell short of evincing an intent to limit all claims to that format.[[33]](#footnote-33)33

            Ancillary features of the invention, such as manufacturing processes not claimed in any way, can also be interpreted as claim limitations. A 2007 case, *Andersen v. Fiber Composites, LLC,*[[34]](#footnote-34)34 illustrates this point. The patents at issue concerned a material made by the combination of various polymers with wood fiber, and the claims address various formulations of these compositions of matter. None of the claims contains any manufacturing process limitation. The specification includes manufacturing steps, of course, discussing palletizing and extruding processes, and statements such as, “The invention relates to a composition comprising a polymer and wood fiber composite that can be used in the form of a linear extrudate or thermoplastic pellet to manufacture structural members.” The court seized upon such statements to conclude that “linear extrusion or pelletization are not merely embodiments, but are essential features of the claimed composite composition.” In short, the court concluded that the drafter intended that only composite compositions manufactured by the stated methods were covered by the patent claims.

            Any function that is stated to be “necessary,” “essential,” or “required” is likely to be read as a limitation. Where a network-related patent included claims reciting a system or with central, server, and client computers, without detailing specific functions but describing caching as a required function of the local computer, then the caching function was held required in properly construed claims.[[35]](#footnote-35)35 And where a particular configuration of elements is described as “universal to all the embodiments,” those words will be treated as a “clear and unmistakable disavowal of claim scope.”[[36]](#footnote-36)

            Negative characterization—disparagement—can operate to disavow claim scope. The claims in *Wireless Agents, Inc. v. Sony Ericsson Mobile Communications AB*[[37]](#footnote-37)36 addressed an “alphanumeric keyboard,” described as having “a substantially full set of alphanumeric keys.” Certainly one could argue that this language embraces a 12-key mobile phone keypad, except for the description of cellphone keypads as “extremely slow, awkward, error prone, and not appropriate for a device intended to transfer textual data on a regular basis.” The court’s reaction to that language seems predictable: “[T]he specification’s repeated derogatory statements about the twelve-digit keypad convince us that the ‘alphanumeric keyboard’ does not include a twelve-digit keypad.”[[38]](#footnote-38)37 A number of reasons have been traditionally cited for avoiding disparaging remarks in a specification, particularly regarding prior art, and claim limitations can be added to that list. Although a recent example showed a patentee escaping any disavowal after describing certain conventional techniques as “not … completely satisfactory” and having “shortcomings”, without expressions of manifest exclusion or restriction,[[39]](#footnote-39)38 drafters are well-advised to follow their mothers’ advice on what to say if one cannot say something nice.

[ii] Objects of the invention

            A listing of “Objects of the Invention” was a normal part of the Summary of the Invention at least until mid-1990s. Objects generally were listed, more or less as a rote exercise, having little to no consequence. As it turns out, that section might as well have been labeled “Unwitting Claim Limitations.” Consider *Alloc, Inc. v. I.T.C.,*[[40]](#footnote-40)39 where the patent at issue disclosed a method of laying and mechanically joining floor panels, depicted in Fig. 4. The claims included no limitations regarding panel dimensions, and nothing

graphics\pub04634\vol001\ch0001\ch1-4\_001.r001.tiff

FIGURE 4

graphics\pub04634\vol001\ch0001\ch1-4\_001.r001.pdf

-------------------------------------------------------------------------------------------------------------
 Page 23 (Rel. C2013)
was mentioned about play—the tightness of fit—between adjacent panels, which fit together using a locking groove and locking surface. The specification did contain one or a section entitled “Technical Problems and Objects of the Invention,” where “the invention” was described as providing a system in which

the panels, when joined together, can occupy a relative position in said second direction where a play exists between the locking groove and a locking surface on the locking element that is facing the joint edges and is operative in said second mechanical connection.

            Also, the specification teaches that elements have a certain amount of play, permitting easy assembly and disassembly. Taking the disclosure together, the court concluded that the “specification indicates that the invention is indeed exclusively directed toward flooring products including play.”[[41]](#footnote-41)40

            The court explained its reasoning, and that explanation merits consideration in full:

[T]his court recognizes that it must interpret the claims in light of the specification, yet avoid impermissibly importing limitations from the specification. That balance turns on how the specification characterizes the claimed invention. In this respect, this court looks to whether the specification refers to a limitation only as a part of less than all possible embodiments or whether the specification read as a whole suggests that the very character of the invention requires the limitation be a part of every embodiment. For example, it is impermissible to read the one and only disclosed embodiment into a claim without other indicia that the patentee so intended to limit the invention. On the other hand, where the specification makes clear at various points that the claimed invention is narrower than the claim language might imply, it is entirely permissible and proper to limit the claims.[[42]](#footnote-42)41

            Given the premise that anything called an “object” expresses the clear intent of the patentee, courts have found such language useful in a number of contexts. In *Vehicular Techs. Corp. v. Titan Wheel Int’l., Inc.*,[[43]](#footnote-43)42 for example, the disclosure concerned an automotive differential including two concentric springs and a pin, rather than the conventional spring-disk-pin assembly. The specification did contain a listing of objectives, the “primary objective” being simplification of manufacture and installation. The disclosure listed “reliability of the resilient means” as “another objective.” The accused infringing device contained only a single spring, which the district court reasoned could not be as reliable as dual springs. Thus, the accused device could not perform the same function as the patented device, precluding infringement under the doctrine of equivalents. Facts developed at trial showed that the inventor had disavowed the “reliability” objective, and that the dual-spring arrangement did not, in fact, provide increased reliability. Mere facts, however, could not avail against the “clear disclosures and assertions in the patent itself.”[[44]](#footnote-44)43

            As was the case with “invention,” these cases lead to a simple rule: Never list objects of the invention, and never include language that could be interpreted as setting out an object or purpose.

[c] Objective Standards

            While one certainly does not want to employ any subjective or comparative statements about the claimed invention, that requirement does not preclude any use of adjectives altogether. After all, demonstrating the performance of the device or composition will occasionally require adjectives. The crucial point is how adjectives are used, and even more important, how they are supported.[[45]](#footnote-45)44

            A 2005 case, *Rhodia Chimie v. PPG Indus., Inc.*,[[46]](#footnote-46)45 concerned an improvement in spheroidal precipitated silica particles, used as a filler to reinforce elastomeric products such as automobile tires and as carriers in nutraceutical products. The claimed product generated less dust than did prior art products, and the claim preamble included the terms “dust-free and non-dusting.”
-------------------------------------------------------------------------------------------------------------
 Page 25 (Rel. C2013)
The infringement defendant insisted that “dust-free” must mean no dust whatsoever, but both the district court and the Federal Circuit recognized that nothing could be absolutely dust-free.

            The drafter, however, had not relied upon common understanding of language to support this term. A standard had been established by the German organization DIN for measuring fines content and weight loss by abrasion, and the specification cited the product’s performance relative to that standard. Moreover, the specification included 10 working examples, some of which had been tested according to the DIN standard. Given this objective support for an otherwise subjective term, the court relied upon the DIN standard to construe the claim term.[[47]](#footnote-47)46

            Standards must be employed with care, however. The drafter should not only cite to the applicable objective standard, but she must also show how that standard is applied in practice. In the *Rhodia Chimie* case discussed above, for example, the DIN standard, as written, applied to sooting from carbon black, but the physical similarity between that process and dusting from the silica particles involved in that patent was sufficiently similar to allow the DIN test to establish a standard of “dust-free.”[[48]](#footnote-48)47 Similarly, *Callaway Golf Co. v. Acushnet Co*.[[49]](#footnote-49)48 poses the problem of measuring the hardness of golf balls. The court was specifically concerned whether hardness should be measured from the material itself, before being applied to the ball, or “on the ball.” The specification cited an applicable standard set by ASTM, but that standard states that hardness should not be tested on a rounded or curved surface, which would preclude “on the ball” testing. Whatever the ASTM standard required, the final authority was the patent specification, where the examples clearly show tests performed on molded and finished golf balls. Moreover, the evidence also showed that the ball’s cover was molded on the product, effectively rendering impossible any testing off the ball.

            Objective standards can apply to nouns as well as adjectives. The well-known case, *Vitronics Corp. v. Conceptronic, Inc*.,[[50]](#footnote-50)49 involved reflow soldering of surface-mount devices to a printed circuit board, and a claim recited a “solder reflow temperature.” The claim construction issue was whether this temperature indicated the peak temperature of the process or some other temperature. Here, no standard was available to guide the court, but the drafter had included detailed examples, one of which was labeled a preferred embodiment. The example devoted several sentences to the topic of solder temperature, discussing considerations such as possible damage to the printed circuit board and ending with a desired temperature range. The court adopted that temperature range as the specific definition of “solder reflow temperature.”

            Even when one achieves a desired claim construction at trial, a failure to set out objective standards can produce protracted litigation at great cost. A patent claiming a drug with a non-eluting expandable stent having a non-thrombogenic surface included a limitation to “long-term non-thrombogenicity.”[[51]](#footnote-51)50 The specification failed to provide any specific definition or examples of that term other than “longer than two weeks,” and the infringement defendant proposed a highly restrictive claim construction. The patentee ultimately prevailed but only after a district court battle and an appeal on that point.

            The drafter is completely in charge of the quality and quantity of information available to support claim construction. Courts continually repeat the mantra of “inventor’s intent,” and the clear path to achieving a desired claim construction is to ensure that the inventor’s intent—the real intent, not a construction derived with the help of opposing counsel—is stated clearly and expressly in the specification. Reference to an objective standard, particularly where an otherwise ambiguous term is used in a claim, assists this effort. At the end of the day, one can never completely eliminate undesired claim constructions, but they can certainly be minimized by effective drafting.

[2] Rule 2: Describe multiple embodiments or examples, and within those embodiments, set out alternatives and variations. Use both generic and specific language to describe claim items

[a] Multiple embodiments

            Along with their ABC’s and multiplication tables, patent lawyers learn two basic principles. First, claims define the invention. Second, a court should not read limitations from a single embodiment into the claims, absent a demonstrated clear intention by the patentee to do so.[[52]](#footnote-52)51

            Don’t believe it.

-------------------------------------------------------------------------------------------------------------
 Page 27 (Rel. C2013)

            When the Federal Circuit brings up the principle that one should not import the limitations of a single embodiment into a broader claim, expect the opinion to show how, under the particular, specifically limited facts of the present case, the inventor actually intended to limit the claims to the disclosed embodiment. The decision in *Abbott Labs. v. Sandoz, Inc.*,[[53]](#footnote-53)52 discussed above, provides an excellent example of the court’s reasoning. There, the fact that the patent presented only a single example served as a starting point, after which the court was able to find “clear intent” to limit a broad claim term, “crystalline,” to a particular crystal.

            The Federal Circuit’s analysis process can be seen clearly in *Gen. Am. Trans. Corp. v. Cryo-Trans, Inc.*,[[54]](#footnote-54)53 construing a claim limitation of “a plurality of openings … adjacent each of said sidewalls and end walls,” in a refrigerator compartment, located above a storage compartment, as seen in Fig. 5. The openings around the perimeter of the compartment allowed cold air to flow downward and around the walls of the storage compartment located below. The specification and drawings disclosed a single embodiment having separate openings on the end walls and sidewalls. The accused infringing device had openings along two walls, not four. In construing the claim to require the exact structure shown in the embodiment, the court employed language that is practically paradigmatic in single-embodiment cases:

This is not just the preferred embodiment of the invention; it is the only one described. Nothing in the claim language, specification, or drawings suggests that any of the dedicated side or end wall openings may be eliminated, or that an opening may be “adjacent” to more than one wall.[[55]](#footnote-55)54

graphics\pub04634\vol001\ch0001\ch1-5\_001.r001.tiff

FIGURE 5

graphics\pub04634\vol001\ch0001\ch1-5\_001.r001.pdf

            Note clearly the difference between this analysis and the traditional view. In the “claims define the invention” world, the technological territory between the border defined by the disclosure and that defined by the claims constitutes part of the invention. The patentee is allowed to claim beyond the scope of the disclosure, so long as the claim is supported under § 112, ¶ 1 and further, that the claim stops short of the prior art. In Disclosure World, that territory belongs to no one, because the invention is really defined by the specification.

            That process is repeated in *Netword, LLC v. Centraal Corp.*,[[56]](#footnote-56)55 describing a system for locating and retrieving information on a distributed computer system or network. The claimed system includes a central registry computer; one or more local server computers; and one or more client computers, in which network resources are referred to by aliases; and information about the aliases is maintained in a variety of locations. As described in the specification, local server computers cache frequently accessed data for rapid access. The main claim, however, does not require any caching by the local server computers. Because “the distinct local server functions must be present and be performed as described in the specification,”[[57]](#footnote-57)56 the Federal Circuit upheld the district court’s claim construction requiring that the local server computer perform caching operations.

            Decisions such as *Netword* may be difficult to understand, but decisions going the other way offer no help in developing any principle underlying these decisions. One of the more notable decisions refusing to import limitations from a single embodiment is *Teleflex, Inc. v. Ficosa North America Corp*.,[[58]](#footnote-58)57 where the claimed invention was directed to a shift cable that connects a shift knob with an automatic transmission on a vehicle. A claim limitation, reciting a clip for mechanically interlocking several of the components, (Fig. 6) was construed by the district court as requiring a structure identical to that shown in the single disclosed embodiment. The court provided an extended discussion of the law of claim construction and then overturned the district court’s construction, explaining,

The specification describes only one embodiment of the claimed “clip” but in the circumstances of this case the record is devoid of “clear statements of scope” limiting the term appearing in claim 1 to having [the structure disclosed in ~~the
-------------------------------------------------------------------------------------------------------------
 Page 29 (Rel. C2013)
embodiment~~ the embodiment]. Absent such clear statements of scope, we are constrained to follow the language of the claims, rather than that of the written description.[[59]](#footnote-59)58

graphics\pub04634\vol001\ch0001\ch1-6\_001.r001.tiff

FIGURE 6

graphics\pub04634\vol001\ch0001\ch1-6\_001.r001.pdf

            The rationale explaining why *Teleflex* does not acquire a limitation from the specification, yet *Netword* acquires exactly such a limitation, does not appear intuitively obvious to the casual observer. Certainly, no express statement appears in the *Netword* patent that could be construed as a statement of intent to limit claim scope. Similarly, *Teleflex* contains no statement of contrary intent. Neither decision relied upon any language from the patents, however. Rather, in both instances, the courts looked to the functioning of the inventions and simply made determinations, with no explanation, that the inventor’s clear intent required exclusion of the limitation in *Teleflex* and inclusion in *Netword*.[[60]](#footnote-60)59

            This issue assumes particular importance in determining whether a court will apply the doctrine of equivalents. The court discussed that question in *Tanabe Seiyaku Co., Ltd. v. ITC*,[[61]](#footnote-61)60 which discloses and claims a chemical process for preparing diltiazem hydrochloride, a pharmaceutical product used to treat various cardiovascular diseases. Both the claims and the specification set out specific base-solvent combinations rather than categories of bases and solvents. The applicant identified one solvent as a “lower alkyl acetate.” The court noted that the applicant could have described that solvent in broader terms as “acetone,” a description that would have been understandable by those of skill in the art. When the patentee attempted to invoke the doctrine of equivalents to gain coverage for acetone, however, the court refused to expand the claim scope. Use of the narrower term, the court explained, “would suggest to a person skilled in the art that alkyls other than acetone may not be useful for the [claimed] reaction.”[[62]](#footnote-62)61

            Again, note the search for intent. No question would have been raised had the applicant chosen to describe the solvent as an acetone. Choice of the narrower term, however, was interpreted as choosing in two directions—positively adopting the narrower term, and at the same time deliberately limiting scope by carving acetone out of the application. There, had the applicant added a single sentence, to the effect that choice of the stated solvent did not rule out other suitable choices down to the art, such as acetone, the result most likely would have been opposite.

 A novel limitation of scope against a single-embodiment patent can be seen in Mformation Techs., Inc. v. Research in Motion Ltd.,[[63]](#footnote-63) involving the order of steps in a process claim. The specific issue turned on whether “establishing a connection between the wireless device and the server” before transmitting a command. The court reasoned that the “establishing” step would become “superfluous” if the connection did not have to be established before the transmission, requiring that the steps be so ordered.[[64]](#footnote-64) The court expressly rejection any notion that the construction had been tailored to fit the patent’s single embodiment.

In a mechanical context, the same situation can be seen in *Sage Prods., Inc. v. Devon Indus., Inc.*,[[65]](#footnote-65)62 involving a sharps disposal container. The patent discloses a fairly simple structure with a container having a slot formed in its upper surface and two constrictions in the form of cowls extending over and under the slot to block access to the container’s interior (shown in fig 16). The claim set out “an elongated slot at the top of the container body … [and] a first construction extending over said slot.” The complete description of the slot and its construction follows: “The top 14 includes an elongated access slot, as shown in Fig 3. A first construction is formed over the slot …, the first constriction comprising a first cowl extending from and above one longitudinal side of the slot.”[[66]](#footnote-66)63 The accused device featured a slot located inside container body, with the constriction lying under the slot. The patentee alleged infringement under the doctrine of equivalents.

            Here, the Federal Circuit entered into an extended critique of patent drafting, worth considering in full:

The claim at issue defines a relatively simple structural device. A skilled patent drafter would foresee the limiting potential of the “over said slot” limitation. No subtlety of language or complexity of the technology, nor any subsequent change in the state of the art, such as later-developed technology, obfuscated the significance of this limitation at the time of its incorporation into the claim. If Sage desired broad patent protection for any container that performed a function similar to its claimed container, it could have sought claims with fewer structural encumbrances. Had Sage done so, then the Patent and Trademark Office (PTO) could have fulfilled its statutory role in helping to ensure that exclusive rights issue only to those who have, in fact, contributed something new, useful, and unobvious. Instead, Sage left the PTO with manifestly limited claims that it now seeks to expand through the doctrine of equivalents.
-------------------------------------------------------------------------------------------------------------
 Page 31 (Rel. C2013)
However, as between the patentee who had a clear opportunity to negotiate broader claims but did not do so, and the public at large, it is the patentee who must bear the cost of its failure to seek protection for this foreseeable alteration of its claimed structure.[[67]](#footnote-67)64

            In a footnote to the first sentence, the court added, “The public record reflects a manifest intention to claim the structure and no more. Whether actual or constructive, that inattention now binds [the patent owner].”

            Whether a narrow claim scope flows from claim construction[[68]](#footnote-68)65 or the doctrine of equivalents, the results of a narrowly drafted, single embodiment are clearly depicted. Limitations of the single embodiment are likely to be read into the claim, under the rubric of implementing the inventor’s intent, or the application of the doctrine of equivalents will be severely restricted.[[69]](#footnote-69)66 The primary route circumventing these limitations is clear: always include multiple embodiments. In decision after decision, the Federal Circuit sends one clear thought, one sole idea: There is no substitute for embodiments.

[b] Alternatives and variations

[i] Alternatives

            The preceding section should make a patent drafter decidedly averse to single-embodiment patent applications, with good reason. Unfortunately, real-world constraints, principally centering on budget and time issues, have resulted and probably will continue to result in the production of a large number of applications in which multiple embodiments either do not exist or do not justify the time and effort to include them in a patent application.

            One need not completely panic at the thought, however. Although multiple embodiments certainly should be included whenever possible, techniques are available to provide breadth beyond the minimal terms of a single embodiment. Reading the cases discussed above, it should become clear that the patents involved there not only disclosed single embodiments, but they also generally failed to suggest that the claims should cover more territory than the minimal features of the disclosed embodiments. In most instances, the addition of a few sentences would have completely cured the cited problems.

            The following section addresses two techniques, labeled alternatives and variations for expanding the disclosure of embodiments. These techniques are particularly aimed at the single-embodiment application. The first category, alternatives, suggests different ways or means for accomplishing a task—showing that the claimed electronic functionality can be implemented by discrete components mounted on a printed circuit board, or by a combination of integrated circuits, or by an application-specific integrated circuit (ASIC). The second technique, variations, adds different configurations, compositions, materials, or techniques—the material can be chosen from among the known metallic calcogenides, or the computing device can operate using any of the generally available operating systems—and similar changes. The following examples will amplify and clarify these concepts.

            A final drafting point: Do not confuse breadth with depth. That problem can be seen clearly in *Telcorda Techs., Inc. v. Cisco Systems, Inc*.,[[70]](#footnote-70)67 a 2010 case dealing with data communication. The primary patent involved there disclosed and claimed Dynamic Time Division Multiplexing (DTDM), technique for multiplexing data communication signals.[[71]](#footnote-71)68 The patent is an impressive document, with 12 drawing figures, text covering 18 columns, over 10,000 words. All of those words, however, describe only one thing—the DTDM system. Detail is supplied in abundance, down to the specific organizations of incoming and outgoing data streams. But all of that data goes to an exact picture of the DTDM system as designed by the inventor. Not a single variation, and not a single alternative, is provided. A few alternative processing capabilities are built into the system, and there one finds snippets of permissive language. Had a competitor fielded an exact copy of the DTDM system, this patent would have been highly effective. Unfortunately, as usually happens in real life, a competitive system seemed to employ the heart of the concept, but changed some of the details. Specifically, the accused infringer varied the number of data packets that could be inserted into a single data frame. The specification repeated, in considerable detail, that the DTDM system employed exactly one packet per frame. This patent was filed in 1987, so the drafter should probably be forgiven for believing that limitations were found in the claims. In Disclosure World, courts are not
-------------------------------------------------------------------------------------------------------------
 Page 33 (Rel. C2013)
nearly so constrained. The holding: “The specification clearly limits the disclosed mechanism to one packet per frame.”[[72]](#footnote-72)69

            The classic example of a failure to provide for alternatives illustrates the point that obtaining broad patent protection requires the drafter to think deeply and imaginatively about the invention. The case, *Nystrom v. TREX Co.*,[[73]](#footnote-73)70 deals with boards used for constructing an exterior floor, such as a deck. Each board has a convex upper surface, which sheds water, and a concave lower surface, which promotes stacking boards during storage (Fig. 7). The specification never mentions any alternatives to boards made of natural wood, and specific directions are provided on how the natural curvature of a log will provide the curvature set out in the claims.[[74]](#footnote-74)71

            While the evidence showed that the term “board” was universally understood as an item of sawed wood, the defendant developed a synthetic product useful for exterior applications, such as deck floors, manufactured in the form of boards and decorated to look like natural wood, with convex upper and concave lower surfaces. The patentee clearly believed that such a product infringed the patent claims, and he thought that the absence of any disavowal of scope should guarantee coverage. The patent claim, however, was directed to a “board,” not a generic item of flooring material. Because that term was generally understood to refer solely to wood, coupled with the fact that the

graphics\pub04634\vol001\ch0001\ch1-7\_001.r001.tiff

FIGURE 7

graphics\pub04634\vol001\ch0001\ch1-7\_001.r001.pdf

            specification had employed the term “board,” exclusively, the court held that the patentee

seeks to broaden the term “board” to encompass relatively obscure definitions that are not supported by the written description or prosecution history. Broadening of the ordinary meaning of a term in the absence of support in the intrinsic record indicating that such a broad meaning was intended violates the principles articulated in [previous Federal Circuit decisions].[[75]](#footnote-75)72

            Consider for a moment what disclosure would have been required to secure the patentee’s desired claim construction. Another embodiment would have been helpful, of course, but in this instance, a genuine alternative embodiment would have required another invention, producing a synthetic product like that offered by the defendant. Clearly, that requirement would exceed any reasonable expectation. But imagine a paragraph that makes the following points:

1. The term “board” is used in a functional sense indicating a generally elongated structural member.

2. The preferred embodiment employs a board formed from wood. This material is readily available, and those of skill in the art are familiar with working with such boards.

3. Other materials are available that would be suitable for alternative embodiments of the subject matter of the disclosure. Examples are metallic materials such as aluminum or any other similar materials.

4. Those in the art will understand that in any suitable material, now known or hereafter developed, may be used in forming the boards described herein.

            It is difficult to believe that a court would come to the same conclusion as did the *Nystrom* panel, in the face of such a disclosure paragraph. The suggested language does a number of things. First, it destroys any notion that the inventor intended to restrict the invention to wood boards. Second, it establishes that wood is an exemplary, not exclusive, material. Third, it shows the inventor’s recognition that other materials exist, and that those materials would be suitable for use instead of wood. Finally, the last sentence shows that the inventor expects other materials, either known now or developed later, would be useful as well.

            The resulting paragraph is simple, straightforward, and effective. Moreover, the drafter, not the inventor, can add this language with only minimal knowledge of the technology or prior art. The objective and general process of such
-------------------------------------------------------------------------------------------------------------
 Page 35 (Rel. C2013)
a paragraph is easily explained to an inventor, allowing the inventor to assist in identifying specific alternatives, without requiring extensive effort on the inventor’s part. Here, a small amount of time and effort produces a few lines of text, which then completely avoids scope limitations on the patent. Perhaps this constitutes the ultimate synergistic result.

            This technique should prove effective in a wide variety of situations. For example, the patent in *On Demand Machine Corp. v. Ingram Indus., Inc*.[[76]](#footnote-76)73 deals with high-speed book production, disclosing a system in which a customer can select a book at a kiosk or from a computer display touchscreen, and the book will be instantly printed and bound. At first glance, this patent appears to be a model of disclosure, with two embodiments employing almost 17 columns of description.[[77]](#footnote-77)74 The difficulty here stems from the nature of the infringement defendant, which sells individual copies or short runs of books to publishers, wholesalers, and retailers. For all its description, the patent discusses only business done with retail customers, and the claim includes the term “customer,” as in “enabling the customer to select which book …” Because the defendant sold only in the wholesale market, the Federal Circuit held that “the focus of the [] patent is immediate single-copy printing and binding initiated by the customer and conducted at the customer’s site.” The defendant’s actions were held noninfringing, despite a number of facts: the district court’s broad construction of “customer”; the jury’s finding of infringement; the Federal Circuit’s admission that the “invention does not concern itself with whether the ‘customer’ reads the book or obtains it for resale”;[[78]](#footnote-78)75 and the extensive disclosure in the patent document.

            A broadening exercise such as that set out above for *Nystrom* would yield at most a short paragraph, emphasizing the fact that embodiments of the claimed invention could be employed in a variety of business scenarios. Several business models could be mentioned, and it could be emphasized that the retail model set out in the embodiment offers only an example of the scope of the disclosure.

            One learns from *On-Demand* that every single claim term must be analyzed as a possible source of limitation by some court, somewhere. A 2001 decision, *Interactive Gift Express, Inc. v. CompuServe Inc*.,[[79]](#footnote-79)76 illustrates this point. There, the patent concerned a remote reproduction of information-related items, such as books and the like, and the claim preamble included “information manufacturing machines located at point of sale locations.” The infringing activity was alleged to be sale of items over the Internet, raising the question of whether a “point of sale location” could be a home. Here, the patent included a number of embodiments, covering a number of locations. The scope of disclosure evidently persuaded the court that the invention was intended to be used in practically all locations, as the court based its decision favoring a broad construction on the fact that “the specification further describes a vending machine embodiment that could be utilized in a home.”[[80]](#footnote-80)77 The patentee in *Interactive Gift Express* no more disclosed a home point-of-sale than the *On Demand* patentee described wholesale use of its publishing method. The difference is that the *Interactive Gift Express* patent contains sufficient disclosure to push the court toward a broad coverage.

            A crucial difference between alternatives and embodiments lies in the fact that alternatives can be added by the drafter, while embodiments require thought from the inventor. This fact assumes critical importance when considering that the inventor’s time is very likely highly constrained, and the client may not wish to expend the inventor’s time and attention in developing alternative embodiments that will likely never be commercially exploited. As shown in the examples above, however, the drafter can envision, draft, and include alternatives in a very short time, and very limited feedback from the inventor will allow the alternatives to be sharpened even further.

            No matter whether the inventor provides one embodiment or five, the drafter’s job is to build in as many alternatives as both she and the inventor can imagine. Then, those alternatives should be broadened further with explanations showing how the actually disclosed material is exemplary and should be construed as illustrating, not limiting, the scope of the claims.

            A final caveat: Before broadening claims, a drafter needs to remember Murphy’s First Law of Combat: If the enemy is in range, so are you. Broadening the claims expands the universe of potentially infringing devices, but it also creates a larger target for eventual litigation defendants to shoot at. Consultation with inventors and clients should seek to identify the prudent scope for possible broadening, while careful claim drafting can provide backup positions with less breadth.

[ii] Variations

            Variations and alternatives are closely linked. Alternatives present a different method, a different apparatus—or, as seen above a different starting material, any different market environment—without setting out sufficient detail to be considered a separate embodiment. In practice, one could debate the exact categorizations of particular examples, but no real pigeonhole exists, so categorization issues are completely beside the point. The objective is to provide as much material as possible to demonstrate the inventor’s intent to disclose as broad an invention as possible, entitling her to commensurate claim scope.

            Variations are one step below alternatives, in that they simply change a starting material, or a work piece, or the like. Prime candidates for variation are ancillary apparatus, such as apparatus used in a claimed method, or material, or environment. To consider a recent example, the claim in *Symantec*
-------------------------------------------------------------------------------------------------------------
 Page 37 (Rel. C2013)
*Corp. v. Computer Assoc. Int’l, Inc.*[[81]](#footnote-81)78 addressed screening data during a backup process, including a step of transferring data to “a computer system.” The patent goes into considerable detail about the screening process, but it contains very few variations when discussing that process. For example, a data communication process is simply set out, with no listing of various communication options available. Problems arose during litigation because the district court limited the term “computer system” to a single personal computer or workstation, as opposed to a networked group of computers. The Federal Circuit analyzed the specification and noted that “computer system” was not specifically defined, so the court engaged in an analysis of various dictionaries to determine meaning. After considerable discussion, the court determined that the art generally recognizes the term “computer system” as denoting either a standalone computer or a group of networked machines, overturning the District Court’s construction.

            This case produced a result in keeping with the drafter’s supposed intent (a broad construction), but one must question the cost of that determination. A drafter ready to add variations could have inserted a single sentence: “Although the preferred embodiment depicted in Fig 1 includes a single standalone computer, those in the art will understand that the computer system can comprise one computer or a group of several computers, all functioning as a computer system.” The disclosure would have mandated the district court’s construction, avoiding a large expenditure of time, energy, and money.

            That result was exactly achieved in *Linear Tech. Corp. v. ITC*,[[82]](#footnote-82)79 where a patent directed to controlling a switching voltage regulator claimed a circuit “for monitoring the current to the load.” The specification described the circuit as actually measuring the current, but the accused device measured the voltage and then applied Ohm’s Law[[83]](#footnote-83)80 to calculate the current. The specification did not provide for that possibility, but it did provide a broadening variation, stating that “other means … could be used as well.” That language was sufficient to indicate that the patentee intended a broad scope for “monitoring,” and that limiting the term to the one disclosed example was improper.

            In setting up variations, however, the drafter must take care to ensure that one does not create more problems than one solves. In *Pfizer, Inc. v. Teva Pharms. USA, Inc*.,[[84]](#footnote-84)81 the patentee sought to show that the general class of saccharides included polysaccharides. The specification had attempted to define that term, but instead of defining what saccharides are, the drafter defined what saccharides are not. Further, in listing variations, the definition included the statement, “Mannitol, lactose, and other sugars are preferred.” That statement caused even further problems, because, while lactose is a sugar, mannitol is not. In the end, extrinsic evidence was required to show that the patentee was correct in grouping polysaccharides with saccharides, but not without considerable effort.

            Variation can be an important tool in demonstrating the inventor’s intent. A problem seems to arise in confusing detail with scope. As seen in *Symantec*, considerable amounts of detail can be adduced, with no variation whatsoever.

            To determine whether sufficient variation has been introduced in the specification, employ the following test. Taking the broadest claim, look at each and every term—including terms in the preamble—and look back to see exactly what support the specification provides. Then determine how many different variations and forms can apply to the subject matter represented by that term. Had that process been done with the patent at issue in *Symantec,* each term would still have one and only one meaning, but variations would prevent those meanings from limiting the claim terms.

[c] Generic language

            Beyond embodiments, alternatives, and variations, the use of generic language in introducing claim terms can be an excellent technique for securing broad coverage. The general rule is clear that the plain meaning of claim terms is the first step of claim construction,[[85]](#footnote-85)82 but occasionally the court requires assistance in maintaining focus on the words at hand.

            Construing a claim to a port light—a window in the wall of a boat—a district court judge considered the term “sloping drain groove.”[[86]](#footnote-86)83 Looking at the depiction of the drain groove in the figures, as well as the detailed description of the preferred embodiment, the judge construed the term to mean, “a U-shaped drain channel of constant diameter/width.” In evaluating that construction, the Federal Circuit considered the general description of the drain grooves, starting with the overall description of the element: “auxiliary draining structures are provided to effectively drain off water under virtually all conditions.” That statement sharpened the court’s analysis: “The broad term ‘draining structures’ suggests that the applicant did not limit the claim term ‘groove’ to a specific width or length. In fact, the written description does not require long and narrow grooves at any point.”[[87]](#footnote-87)84

-------------------------------------------------------------------------------------------------------------
 Page 39 (Rel. C2013)

            This example suggests an additional broadening technique for drafters. It should be noted in particular that the drain grooves are certainly a claim element, but they are most likely not the key element. Yet, the drafter took time to set out a generic description of what was required for that element. Because that effort was taken, the Federal Circuit arrived at exactly the place that the drafter had in mind.

            Another example of the use of generic language can be seen in *Varco, L.P. v. Pason Systems USA Corp*.,[[88]](#footnote-88)85 which discloses and claims a method for controlling a drill string on a drilling rig, including steps of selecting a particular signal and then “relaying said selected signal” to a drill string controller. The district court looked at the description of the preferred embodiment and noted that the relaying function was performed by “pneumatic valves that operate as relays,” and construed the relaying step to require operation by pneumatic valves. Here, the Federal Circuit was quick to note that the disclosure and the accompanying figures did not limit the invention as a whole to the use of pneumatically operated valves. Rather, “they merely list such valves as but one example of relays operable in the present invention.” The primary reason advanced for this conclusion is the following:

[T]he specification’s disclosure of valves that “operate as relays” implicitly suggests that “relay” has a broader meaning than simply the preferred pneumatically operated valves. To illustrate, the applicant could have used terminology such as “relays are pneumatically operated valves” that expressly disavows alternative structures. As written, however, the specification contemplates that other structures may “operate as relays” in addition to the preferred pneumatically operated valves. Hence, the intrinsic record does not support the district court’s interpretation of the relaying step.[[89]](#footnote-89)86

            These two cases strongly suggest employing generic descriptors, particularly for claim elements that otherwise received little attention. Looking at the court’s rationale in *Varco*, most drafters will recognize the alternative formulations that the court set out as limiting, and most drafters must admit that both of the limiting terminology patterns are used with some regularity, particularly when moving through a lengthy specification with many elements. One difficulty with the alternatives and variations approach is the time required to apply that approach to every single claim element, particularly in the context of a long, detailed disclosure. The use of generic terminology offers an additional tool for achieving the goal of desired invention scope.

[3] Rule 3: Avoid boilerplate—it does not work

            Patent prosecutors have responded to the Disclosure Revolution in much the same way that clergy and medical doctors responded to the Black Death. Medieval doctors offered incantations and ritual; patent lawyers recite boilerplate. Neither is particularly effective.

            Here, “boilerplate” refers to the general disclaimers, caveats, and restatements of aphorisms included in patent applications, for the apparent purpose of warding off evil spirits and narrow claim constructions. Specific disclaimers, as well as alternatives and variations, stand separate from boilerplate. To illustrate the difference, consider the following two statements: “The frammis illustrated in fig. 3 is not limited to the construction of detail shown there or described in the accompanying text. As those of skill in the art will understand, a suitable frammis can be fabricated from aluminum, stainless steel, or high-density polymer.” And: “Those in the art will understand that a number of variations may be made in the disclosed embodiments, all without departing from the scope of the invention, which is defined solely by the appended claims.” The first, specifically focused, is not boilerplate. The second, often appended to applications, is.

            Broadening statements are distinguished from boilerplate by their focus. The first sentence above was specifically aimed at the frammis, while the boilerplate sentence speaks generally about “disclosed embodiments.” The first sentence specifically offers a variation, that the construction detail can differ from the disclosed embodiment. That statement continues by noting specific alternative materials—“aluminum, stainless steel, or high-density polymer.” The boilerplate simply says “a number of variations may be made,” which offers no context whatsoever for the court to employ in a broadening claim construction.

            It cannot be sufficiently repeated that broadening statements like the first sentence above are routine exercises for the patent drafter. No consultation with the inventor is required, and no particular technical skill is needed.

            Patent practitioners have traditionally added a few lines or paragraph or so of boilerplate to applications, but lately these incantations seem to be becoming more important than the disclosure. Indeed, one can now easily find instances in which the volume of boilerplate actually exceeds the volume of disclosure, in some cases by a factor of two or more.[[90]](#footnote-90)87 Most boilerplate consists of entreaties seeking to avoid narrow claim constructions, including items such as eight lines devoted to how the patentee would like to have the word “and” construed.

-------------------------------------------------------------------------------------------------------------
 Page 41 (Rel. C2013)

            The Federal Circuit gives full marks to genuine broadening statements showing alternatives or variations, but boilerplate never works and is usually ignored. Broadening statements distinguish themselves by their tight focus on the subject matter at hand, and they generally offer specific indications of the inventor’s intent, rather than general pleas for mercy. In *Honeywell Int’l., Inc. v. U.S.*,[[91]](#footnote-91)88 the Court of Federal Claims had held the patent invalid for failure to set out a written description of the invention. The patent dealt with an aircraft cockpit display, and the claim at issue encompassed a number of displays. Finding that the specification only described one type of display, a CRT, the claim was held invalid.

            The Federal Circuit reversed, based on this broadening statement: “[w]hile specific configurations of the local Display … have been described, it is understood that the present invention can be applied to a wide variety of display and vision aid devices,” sufficiently broadens the disclosure to embrace display devices other than CRTs.[[92]](#footnote-92)89 This is variation, not boilerplate, because it addressed an identified element of the invention and suggested alternatives and variations and variations. The same was true in *Dealertrack, Inc. v. Huber*,[[93]](#footnote-93)90 a 2012 case, in which the specification contained boilerplate language, “It should be kept in mind that the following described embodiment(s) is only presented by way of example and should not be construed as limiting the inventive concept to any particular physical configuration.” But the description then continued with specific broadening language:

Although illustrated as a wide area network, it should be appreciated that the communications medium could take a variety of other forms, for example, a local area network, a satellite communications network, a commercial value added network (VAN) ordinary telephone lines, or private leased lines … . The communications medium used need only provide fast reliable data communication between its users.[[94]](#footnote-94)91

            That language sounds a lot like boilerplate, but the drafter has taken the trouble to provide specific examples, tailored to the application at hand. The result—broadening.

            The patentee in *Silicon Graphics, Inc. v. ATI Techs., Inc.*,[[95]](#footnote-95)92 however, relied on pure boilerplate, achieving the opposite result. The technology concerned a digital graphics system, and the claim included the term “scan conversion” to describe the process of rasterizing an image. The district court construed that term as operating “entirely on a floating point basis,” because floating point numbers were the only values described. The patentee pointed to the following language as indicating the possibility of other methods: “[O]ne or several of [the disclosed operations] can be performed in fixed pint without departing from the scope of the present invention.” Unlike *Honeywell*, however, the court classified this language as completely ineffective: “Thus general language in the specification permitting some operations to be done in fixed point does not work to contradict the specific language that requires scan conversion in floating point.”[[96]](#footnote-96)93

            Where a specification seeks to expand coverage employing vague, general terms, the Federal Circuit has failed to respond. The only point that seems more amazing than the amount of time and energy expended on boilerplate is the utter futility of all of this effort. So far as can be ascertained, this outpouring of prayer has accomplished exactly nothing.

            There seems to be only one instance where the Federal Circuit has even noticed all of this boilerplate.[[97]](#footnote-97)94 In that case, *Wireless Agents, Inc. v. Sony Ericsson Mobile Communications AB*,[[98]](#footnote-98)95 the patentee sought a construction of the claim term “alphanumeric keyboard” that would cover the defendant’s 12-key cell phone keyboard. That claim construction faced two hurdles. First, the specification had described the keyboard as including “a substantially full set of alphanumeric keys.” Further, the specification had also cited the disadvantages of the 12-key keyboard. The patentee argued that neither of these passages should limit the claims because the specification concluded with the following language:

Although the invention has been described with reference to a particular embodiment, this description is not meant to be construed in a limiting sense. Various modifications of the disclosed embodiments as well as alternative embodiments of the invention will become apparent to persons skilled in the art … . It is therefore contemplated that the appended claims will cover any such modifications or embodiments that fall within the scope of the invention.[[99]](#footnote-99)96

            The court was short and to the point: “We see nothing in this language that contradicts our reading of the specification.”[[100]](#footnote-100)97

            Except for that one case, the Federal Circuit seems to have ignored the reams upon reams of boilerplate that have crossed its threshold.[[101]](#footnote-101)98 When good
-------------------------------------------------------------------------------------------------------------
 Page 43 (Rel. C2013)
things happen, boilerplate is never credited. In the *Teleflex* decision,[[102]](#footnote-102)99 the patent in suit contained the following boilerplate:

The invention has been described in an illustrative manner, and it is to be understood that the terminology which has been used is intended to be in the nature of words of description rather than of limitation.

Obviously, many modifications and variations of the present invention are possible in light of the above teachings. It is, therefore, to be understood that within the scope of the appended claims, wherein reference numerals are merely for convenience and are not to be in any way limiting, the invention may be practiced otherwise than as specifically described.[[103]](#footnote-103)100

            The court’s rationale supporting its refusal to limit claim scope never mentioned that language.

            By the same token, boilerplate has never staved off disaster. An illustrative example of that statement can be seen in *Cultor Corp. v. A.E. Staley Mfg. Co*.[[104]](#footnote-104)101 The subject matter of that case was a modified polydextrose, in which the conventional process of heating dextrose in the presence of a catalytic amount of citric acid, which produced a polydextrose having a slightly bitter taste, was modified by passing the final polydextrose, in aqueous solution, through an ion-exchange resin. The claims at issue were all directed to that process, but not one of those claims mentioned the use of citric acid. The specification, however, defined water-soluble polydextrose as being prepared by melting and heating dextrose in the presence of a catalytic amount of citric acid. In light of that disclosure, the district court limited all of the claims to polydextrose produced with citric acid as a catalyst, a limitation that resulted in a finding of no literal infringement. The Federal Circuit upheld that limitation, saying, “Having explicitly defined this term as limited to that prepared with a citric acid catalyst, this effected a disclaimer of the of the prior art acids.”[[105]](#footnote-105)102

            In reaching that result, the court completely ignored the following boilerplate: “The present invention is illustrated by the following examples. However, it should be understood that the invention is not limited to the specific details of these examples.”[[106]](#footnote-106)103

            Similarly, boilerplate cannot expand disclosure. In a dispute involving a cable assembly for controlling the door on an automotive heating/air-conditioning system, the patent in suit claimed various types of manual systems, and the infringing device operated automatically.[[107]](#footnote-107)104 The specification included the following line of boilerplate: “the strands may have the slack taken up in several ways.” That statement was completely unavailing, however, because “in several ways” does not recite any specific structure.

            There does not seem to be a single Federal Circuit decision in which boilerplate was taken into account in any way whatsoever. Thus, the overwhelming evidence is that drafters should not waste their time on anything but the most inconsequential, conventional sorts of boilerplate statements.

§ 1.05 Conclusion

            These Drafting Rules chart a path toward accomplishing a desired claim construction. Today, most responses to the Federal Circuit’s repeated narrowing of claim scope has been either gnashing of teeth or piling on ever more boilerplate. Neither of these has achieved the slightest bit of success in either changing the course of the oncoming juggernaut or in showing practitioners how to adapt to present conditions.

            Practically every Federal Circuit decision limiting claim scope by importing limitations from the specification has centered on the statement that the court has sought to determine exactly what the inventor intended to claim. According to its own lights, the court merely seeks to discover the inventor’s intent and then to implement that intent.

            That rationale also provides the means for harnessing the Federal Circuit’s analysis to accomplish the drafters’ claim construction goals. Heretofore, the court has generally been forced to infer intent, lacking any direct evidence. By employing the Drafting Rules set out above, the drafter expressly sets out the inventor’s intent for claim construction. Previously, a court could look at a single-embodiment specification and decide that the inventor really intended that embodiment to encompass the entire invention. If instead, that specification includes an additional paragraph, setting out several alternatives and variations, as well as expressly stating that the embodiment does not in fact encompass the entire invention, then courts are presented with exactly what they say they are seeking: the inventor’s intent.

            In Disclosure World, one gets what one discloses. To achieve a desired claim construction, disclose it.

            Complaining about Federal Circuit decisions accomplishes nothing, and whining does no good. Indeed, there is no crying in patent law.

1. 1566 F.3d 1282 (Fed. Cir. 2009) (en banc, product by process issue only). [↑](#footnote-ref-1)
2. 2*Id.* at 1288 (citations omitted). This reasoning process was adopted and applied, with identical result, in American Calcar, Inc. v. American Honda Motor Co., 651 F.3d 1318, 99 U.S.P.Q.2d (BNA) 1137 (Fed. Cir. 2011). [↑](#footnote-ref-2)
3. 3CCS Fitness, Inc. v. Brunswick Corp., 288 F.3d 1359, 1366–66, (Fed. Cir. 2002) (citations omitted). [↑](#footnote-ref-3)
4. 4*See, e.g.*, Tom Irving, “Patently Profane at Your and Your Client’s Peril,” presentation to 2009 AIPLA Spring Meeting (May 2009). [↑](#footnote-ref-4)
5. 5*See* F.C.C. v. Pacifica Found., 438 U.S.726, 98 S. Ct. 3026. (1978). [↑](#footnote-ref-5)
6. 6452 F.3d 1312 (Fed. Cir. 2006). [↑](#footnote-ref-6)
7. 7U.S. Patent No. 5,164,879 (filed Jul. 1, 1991). [↑](#footnote-ref-7)
8. 8*Id.* Reexam. Cert., issued Sep. 8, 1998. [↑](#footnote-ref-8)
9. 9*Id.* at Reexam. Cert. Col. 1–2. [↑](#footnote-ref-9)
10. 10582 F.3d 1322 (Fed. Cir. 2009). [↑](#footnote-ref-10)
11. 11This case is discussed in connection with Claiming for Breadth, in Chapter 2. [↑](#footnote-ref-11)
12. 12U.S. Patent No. 6,582,458, col. 1, ll. 11–12, 46–47 (filed May 1, 1998). [↑](#footnote-ref-12)
13. 13*See* Phillips v. AWH Corp., 415 F.3d 1303, 1314 (Fed. Cir. 2005). [↑](#footnote-ref-13)
14. 14The court relied on *CCS* for this proposition. *See infra* note 37. [↑](#footnote-ref-14)
15. 15*See also* Lydall Thermal/Acoustical, Inc. v. Federal-Mogul Corp., 2009-1135 (Fed. Cir. 2009) (layered structure of an insulating that was described as “the present invention,” requiring that term “batt” be limited to a layered structure). [↑](#footnote-ref-15)
16. 16405 F.3d 1367 (Fed. Cir. 2005). [↑](#footnote-ref-16)
17. 17Judge Archer penned a detailed dissent articulating the rationale for limiting claims based on the specification. *See id*. (Archer, J., dissenting). [↑](#footnote-ref-17)
18. 18Similarly, employing “the present invention” loosely can allow one to dodge the bullet. Where “invention” was used to indicate both a pre-planned event and a random occurrence, the contradictory nature of that usage precluded limitation. Absolute Software, Inc. v. Stealth Signal, Inc., 659 F.3d 1121, 100 U.S.P.Q.2d (BNA) 1641 (Fed. Cir. 2011). [↑](#footnote-ref-18)
19. 19388 F.3d 858, 73 U.S.P.Q.2d (BNA) 1011 (Fed. Cir. 2004). [↑](#footnote-ref-19)
20. 20*Id.* at 860. [↑](#footnote-ref-20)
21. 21U.S. Patent No. 5,356,432, col. 1, ll. 37–39 (filed Feb. 5, 1993). [↑](#footnote-ref-21)
22. 22388 F.3d at 864. [↑](#footnote-ref-22)
23. 23242 F.3d 1337, 56 U.S.P.Q.2d (BNA) 1059 (Fed. Cir. 2001). [↑](#footnote-ref-23)
24. 24*Id.* at 1344. [↑](#footnote-ref-24)
25. 25*See* § 1.04[3]. [↑](#footnote-ref-25)
26. 26Atofina v. Great Lakes Chem. Corp., 441 F.3d 991 (Fed. Cir. 2006). [↑](#footnote-ref-26)
27. 27*Id.* at 996. [↑](#footnote-ref-27)
28. 28527 F.3d 1300 (Fed. Cir. 2008). [↑](#footnote-ref-28)
29. 29*Id.* at 1308. [↑](#footnote-ref-29)
30. 30*Id. See also* Toro Co. v. White Consol. Indus., Inc., 199 F.3d 1295, 1299–1302 (Fed. Cir. 1999) (unitary structure was described as important to the invention). [↑](#footnote-ref-30)
31. 31Inpro II Licensing S.A.R.L. v. T-Mobile USA, Inc., 450 F.3d 1350, 78 U.S.P.Q.2d (BNA) 1786 (Fed. Cir. 2006). [↑](#footnote-ref-31)
32. 32*Id.* at 1355. [↑](#footnote-ref-32)
33. 33Silicon Graphics, Inc. v. ATI Techs., Inc., 607 F.3d 784 (Fed. Cir. 2010). [↑](#footnote-ref-33)
34. 34474 F.3d 1361, 81 U.S.P.Q.2d (BNA) 1545 (Fed. Cir. 2007). [↑](#footnote-ref-34)
35. 35Netword, LLC v. Centraal Corp., 242 F.3d 1347, 58 U.S.P.Q.2d (BNA) 1076 (Fed. Cir. 2001). [↑](#footnote-ref-35)
36. X2Y Attenuators, LLC v. ITC, 757 F.3d 1358, 1362 (Fed. Cir. 2014). [↑](#footnote-ref-36)
37. 36189 Fed. Appx. 965, 2006 U.S. App. LEXIS 18933 (Fed. Cir. 2006). [↑](#footnote-ref-37)
38. 37The court relied heavily on its then-recent decision in Honeywell Int’l., Inc. v. ITT Indus., Inc., 452 F.3d 1312, 79 U.S.P.Q.2d (BNA) 1294 (Fed. Cir. 2006).The specification before the Honeywell court listed a number of reasons why carbon fibers would not be suitable as the claimed “electrically conductive fibers,” The court evaluated those statements as going “beyond expressing the patentee’s preference for one material over another. Its repeated derogatory statements concerning one type of material are the equivalent of disavowal of that subject matter from the scope of the patent’s claims.” *Id*. at 1320. [↑](#footnote-ref-38)
39. 38Epistar Corp. v. ITC, 566 F.3d 1321 (Fed. Cir. 2009). [↑](#footnote-ref-39)
40. 39342 F.3d 1361 (Fed. Cir. 2003). [↑](#footnote-ref-40)
41. 40*Id.* at 1371. [↑](#footnote-ref-41)
42. 41*Id.* at 1370 (citations omitted). [↑](#footnote-ref-42)
43. 42212 F.3d 1377, 54 U.S.P.Q.2d (BNA) 1841 (Fed. Cir. 2000) (*per curiam*). [↑](#footnote-ref-43)
44. 43*Id.* at 1382. [↑](#footnote-ref-44)
45. 44This discussion does not address terms that raise issues under § 112, ¶ 2, definiteness. Typically, these issues involve questions of ambiguity, approximate terms, and relative terms, which questions are addressed at Ch. 11, p. 285. [↑](#footnote-ref-45)
46. 45402 F.3d 1371, 74 U.S.P.Q.2d (BNA) 1321 (Fed. Cir. 2005). [↑](#footnote-ref-46)
47. 46*Id.* at 1378. Unfortunately, the patentee had not sufficiently relied upon the standard in all of these examples, and thus the objective construction did not lead to a holding of infringement. [↑](#footnote-ref-47)
48. 47*Id.* [↑](#footnote-ref-48)
49. 48576 F.3d 1331 (Fed. Cir. 2009). [↑](#footnote-ref-49)
50. 4990 F.3d 1576 (Fed. Cir. 1996). [↑](#footnote-ref-50)
51. 50Boston Scientific Scimed, Inc. v. Cordis Corp., 554 F.3d 982, 89 U.S.P.Q.2d (BNA) 1704 (Fed. Cir. 2009). [↑](#footnote-ref-51)
52. 51These and similar basic propositions are set out in Abbott Labs. v. Sandoz, Inc., 566 F.3d 1282, 1288 (Fed. Cir. 2009). [↑](#footnote-ref-52)
53. 52*See* *Id*. [↑](#footnote-ref-53)
54. 5393 F.3d 766, 39 U.S.P.Q.2d (BNA) 1801 (Fed. Cir. 1996). [↑](#footnote-ref-54)
55. 54*Id.* at 770. [↑](#footnote-ref-55)
56. 55242 F.3d 1347, 58 U.S.P.Q.2d (BNA) 1076 (Fed. Cir. 2001). [↑](#footnote-ref-56)
57. 56*Id.* at 1353. [↑](#footnote-ref-57)
58. 57299 F.3d 1313, 63 U.S.P.Q.2d (BNA) 1374 (Fed. Cir. 2002). [↑](#footnote-ref-58)
59. 58*Id.* at 1328. [↑](#footnote-ref-59)
60. 59Where the specification contains multiple embodiments, the court can point to that fact for refusing to import limitations from only one of those embodiments. *See, e.g.*, Aventis Pharma S.A. v. Hospira, Inc., 675 F.3d 1324, 102 U.S.P.Q.2d (BNA) 1445 (Fed. Cir. 2012). [↑](#footnote-ref-60)
61. 60109 F.3d 726, 41 U.S.P.Q.2d (BNA) 1976 (Fed. Cir. 1997). [↑](#footnote-ref-61)
62. 61*Id.* at 732. [↑](#footnote-ref-62)
63. 764 F.3d 1392 (Fed. Cir. 2014). [↑](#footnote-ref-63)
64. *Id.* at 1399-1400. The court based its decision on Interactive Gift Express, Inc. v. Compuserve, Inc., 256 F.3d 1323 (Fed. Cir. 2001); TALTech Ltd. v. Esquel Apparel, Inc. 279 Fed. Appx. 974 (Fed. Cir. 2008); and Function Meida, LLC v. Google, Inc., 708 F.3d 1310 (Fed. Cir. 2013). [↑](#footnote-ref-64)
65. 62126 F.3d 1420 (Fed. Cir. 1997). [↑](#footnote-ref-65)
66. 63U.S. Patent No. 4,779,728, col. 2, ll. 22–27 (filed Nov. 27, 1987) (reference numbers omitted). [↑](#footnote-ref-66)
67. 64126 F.3d at 1425 (citations and footnote omitted). [↑](#footnote-ref-67)
68. 65It should be noted that a number of decisions that specifically discuss “intent” probably should be slotted with the “full scope” enablement cases, discussed at Ch. 6, p. 178. In Wang Labs, Inc. v. America Online, Inc., 197 F.3d 1377 (Fed. Cir. 1999), the decision was framed in terms of claim construction, but the rationale was grounded in a finding that “the only embodiment enabled in the specification is limited to one implementation of a claim term.” *Id.* at 1381. The facts are strikingly similar to the two iterations of *Liebel-Flarsheim v. Medrad*, discussed at Ch. 6, p. 175, in which the court first applied to a broad claim construction, there being no contrary expressed intent, and then invalidated the patent for failure to enable the full scope of the claims. *See also* Biogen, Inc. v. Berlex Labs., Inc., 318 F.3d 1132 (Fed. Cir. 2003) (claims to a competent DNA technology and the production of human interferon limited to the use of a single DNA construct as disclosed in the specification, at least in part in order to construe the claims to preserve validity). [↑](#footnote-ref-68)
69. 66A later Federal Circuit panel interpreted *Sage Prods*. as limiting the application of the doctrine of equivalents where one claim element is necessarily missing from the accused device, no matter how the claim is construed. As a result, the court remanded for fact finding a question whether a “switch,” properly construed to be a mechanical switch, could nonetheless be equivalent to a software-operated switch. *See* Overhead Door Corp. v. Chamberlain Group, Inc., 194 F.3d 1261, 52 U.S.P.Q.2d (BNA) 1321 (Fed. Cir. 1999). [↑](#footnote-ref-69)
70. 67612 F.3d 1365 (Fed. Cir. 2010). [↑](#footnote-ref-70)
71. 68U.S. Patent No. 4,893,306 (filed Nov. 10, 1987). [↑](#footnote-ref-71)
72. 69*Id*. slip op. at 16. [↑](#footnote-ref-72)
73. 70424 F.3d 1136, 76 U.S.P.Q.2d (BNA) 1481 (Fed. Cir. 2005). [↑](#footnote-ref-73)
74. 71*See* U.S. Patent No. 5,474,831, Fig. 4 (filed Jul. 13, 1992). [↑](#footnote-ref-74)
75. 72424 F.3d at 1145–46. [↑](#footnote-ref-75)
76. 73442 F.3d 1331, 78 U.S.P.Q.2d (BNA) 1428 (Fed. Cir. 2006). [↑](#footnote-ref-76)
77. 74*See* U.S. Patent No. 5,465,213 (filed Jul. 12, 1993). [↑](#footnote-ref-77)
78. 75442 F.3d at 1340. [↑](#footnote-ref-78)
79. 76256 F.3d 1323 (Fed. Cir. 2001). [↑](#footnote-ref-79)
80. 77*Id.* at 1334. [↑](#footnote-ref-80)
81. 78522 F.3d 1279, 86 U.S.P.Q.2d (BNA) 1449 (Fed. Cir. 2008). [↑](#footnote-ref-81)
82. 79379 F.3d 1311 (Fed. Cir. 2004). [↑](#footnote-ref-82)
83. 80Ohm’s Law defines the relationship among voltage, current and resistance as I = E/R. [↑](#footnote-ref-83)
84. 81429 F.3d 1364, 77 U.S.P.Q.2d (BNA) 1257 (Fed. Cir. 2005). [↑](#footnote-ref-84)
85. 82*See* discussion of ordinary meaning at Ch. 10, p. 257. [↑](#footnote-ref-85)
86. 83Beckson Marine, Inc. v. NFM, Inc., 292 F.3d 718, 63 U.S.P.Q.2d (BNA) 1031 (Fed. Cir. 2002). [↑](#footnote-ref-86)
87. 84*Id.* at 724. [↑](#footnote-ref-87)
88. 85436 F.3d 1368, 77 U.S.P.Q.2d (BNA) 1948 (Fed. Cir. 2006). [↑](#footnote-ref-88)
89. 86*Id.* at 1375. [↑](#footnote-ref-89)
90. 87*See, e.g.*, U.S. Patent Publication No. 2008/0025445 (filed Jan. 31, 2008). [↑](#footnote-ref-90)
91. 88596 F.3d 800 (Fed. Cir. 2010). [↑](#footnote-ref-91)
92. 89*Id*. at 16. [↑](#footnote-ref-92)
93. 90674 F.3d 1315,101 U.S.P.Q.2d (BNA) 1325 (Fed. Cir. 2012). [↑](#footnote-ref-93)
94. 91*Id*. at 1322. [↑](#footnote-ref-94)
95. 92607 F.3d 802 (Fed. Cir. 2010). [↑](#footnote-ref-95)
96. 93*Id*. [↑](#footnote-ref-96)
97. 94As used here, “boilerplate” refers to language generally directed to influence construction of the specification. Broadening language aimed at particular terminology is thus not boilerplate. [↑](#footnote-ref-97)
98. 95189 Fed. Appx. 965 (Fed. Cir. 2006). [↑](#footnote-ref-98)
99. 96U.S. Patent No. 6,665,173, col. 13, ll. 20–28 (filed Dec. 20, 2000). [↑](#footnote-ref-99)
100. 97189 Fed. Appx. at \*6. [↑](#footnote-ref-100)
101. 98A possible exception is seen in SRI Int’l v. Matsushita Elec. Corp., 775 F.2d 1107, 227 U.S.P.Q. (BNA) 577 (Fed. Cir. 1985) (en banc, on separate issue), where the court reversed a district court’s claim interpretation that had imported limitations from a preferred embodiment. In discussing the limitation, which dealt with whether certain grid stripes needed to be vertical, the court noted that one figure in the specification had shown vertical stripes, but that limitation was set out together with the boilerplate “by way of example.” The court’s rationale for reversal was not completely clear, however because the court only mentioned the boilerplate in passing; the reversal depended primarily on claim differentiation, as a nonasserted dependent claim did not expressly require a vertical orientation. The court summarized its reasoning as, “It is settled law that when a patent claim does not contain a certain limitation and another claim does, that limitation cannot be read into the former claim in determining either validity or infringement.” *Id.* at 1122. Thus, it does not appear that the Federal Circuit relied upon boilerplate here. *See also*, Fuji Photo Film Co. v. ITC, 386 F.3d 1095, 1105 (Fed. Cir. 2008) (improper to read limitations of preferred embodiment into claim, because all discussion of preferred embodiment related to that embodiment and not to the invention as a whole; one of the quoted statements included words “by way of example,” but that example was one of many, and boilerplate is not mentioned). [↑](#footnote-ref-101)
102. 99*See* 299 F.3d 1313, 63 U.S.P.Q.2d (BNA) 1374 (Fed. Cir. 2002). [↑](#footnote-ref-102)
103. 100U.S. Patent No. 5,632,182, col. 3, ll. 34-44 (filed Nov. 21, 1995). [↑](#footnote-ref-103)
104. 101224 F.3d 1328, 56 U.S.P.Q.2d (BNA) 1208 (Fed. Cir. 2000). [↑](#footnote-ref-104)
105. 102*Id.* at 1331. [↑](#footnote-ref-105)
106. 103U.S. Patent No. 5,667,593, col 8, ll. 21–24 (filed Aug. 29, 1990). [↑](#footnote-ref-106)
107. 104Nagle Indus., Inc. v. Ford Motor Co., 1999 U.S. App. LEXIS 13918 (Fed. Cir. 1999) (per curiam) (non-precedential). [↑](#footnote-ref-107)