

PRUDENT PATENT PROSECUTION UNDER *FESTO*

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I. INTRODUCTION

On May 28, 2002, the Supreme Court delivered its decision in *Festo Corp. v. Shoketsu Kinzoku Kabushiki Co.*, 535 U.S. 722, 122 S. Ct. 1831 (2002). Previously, the Federal Circuit held en banc in a 5-4 decision that (1) estoppel arises from any amendment that narrows a claim to comply with the Patent Act, not only from amendments made to avoid prior art, and (2) when estoppel applies, it stands as a complete bar against any claim of equivalents. The Supreme Court vacated and remanded the case back to the Federal Circuit. The Supreme Court agreed with the Federal Circuit that prosecution history estoppel may apply to any claim amendment made to satisfy the Patent Act's requirements, not just to avoid prior art. However, the Supreme Court disagreed with the Federal Circuit that the estoppel is an absolute bar against every equivalent to the amended claim element.

This paper first provides the facts and holdings in *Festo*. This paper then suggests concrete prosecution strategies to maximize patent protection in accordance with the rules of law in *Festo* and current Federal Circuit law. Particular focus is directed at certain Federal Circuit cases wherein the accused infringer asserted prosecution history estoppel. The views expressed herein are solely those of the author.

II. SUMMARY OF THE FACTS AND HOLDINGS IN FESTO

Festo involved two patent claims, Claim 9 of the Carroll patent (U.S. Patent No. 3,779,041), and Claim 1 of the Stoll patent (U.S. Patent No. 4,354,125).

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Claim 9 of the Carroll Patent – A “Pair” of Resilient Sealing Rings

Claim 9 of the Carroll patent stated in pertinent part, “A device for moving articles, which comprises . . . and a pair of resilient sealing rings situated near opposite axial ends of the central mounting member and engaging the cylinder to effect a fluid-tight seal therewith;”

During patent prosecution, the patentee did not originally claim the pair of resilient sealing rings, but instead voluntarily added that claim during reexamination. At no time during the prosecution history did the patentee or the Examiner distinguish the prior art in reexamination based on the resilient sealing rings.

The accused infringer, SMC, used a single two-way sealing ring at the end of the piston that is contact with the pressure fluid, as opposed to the “pair” of sealing rings. The district court granted summary judgment that SMC infringed claim 9 under the doctrine of equivalents. Festo presented unchallenged evidence of interchangeability and technologic equivalency showing that the accused two-way sealing ring performed the same function, in the same way, with the same result as Festo’s claimed pair of sealing rings.

Claim 1 of the Stoll Patent – “First Sealing Rings” and Sleeve Made of “Magnetizable Material”

Claim 1 of the Stoll patent stated, in pertinent part, “In an arrangement having a hollow cylindrical tube and driving and driven members movable thereon for conveying articles, the improvement comprising ... first sealing rings located axially outside said guide rings for wiping said internal wall as said piston moves along said tube to thereby cause any impurities that may be present in said tube to be pushed along said tube so that said first annular magnets will be free of interference from said impurities, wherein said driven member includes a cylindrical sleeve made of a magnetizable material and encircles said tube, ...”

The Stoll application was filed in the U.S. as a counterpart to a German application. The prosecution history of the Stoll patent showed that there was no prior art rejection, and the only comment in the first U.S. Office Action was under 35 U.S.C. §112 regarding the method being unclear, and the objection that some claims were drafted in improper multiple dependent form. In response, Festo included in its independent claim 1 the subject

matter relating to the sealing means and the magnetizable material from initially dependent claims. Festo provided no reason for making such amendments and submitted two German patents cited during examination of the corresponding German application, stating only that the subject matter of the present U.S. application was clearly distinguishable over the these German patents.

SMC argued that by simply voluntarily amending the claims, for whatever reason, Festo is estopped or presumed to be estopped from relying on the doctrine of equivalents to find infringement for the amended claims. A jury found infringement of claim 1 of the Stoll patent.

The Federal Circuit Panel Decision

The 3-judge panel found that there was substantial evidence, established by undisputed expert testimony, for the jury to find that the Stoll claim element of “first sealing rings” associated with the additional function of wiping away impurities was found in SMC’s two-way sealing ring in combination with SMC’s guide rings performing the wiping function. Additionally the panel held that the undisputed testimony regarding the interchangeability of the ring structures and the substantial identity of function, way and result provided the substantial evidence necessary to sustain a verdict of infringement under the doctrine of equivalents.

The panel also found the cylindrical sleeve of SMC’s device was made of an aluminum alloy that is not magnetizable. SMC argued that the magnetizable material was a separate claim element. The panel, however, agreed with Festo, which argued that *Corning Glass Works v. Sumitomo Electric U.S.A. Inc.* stands for the proposition that “a patentee is, for example, free to frame the issue of equivalency if it chooses, as equivalency to a combination of limitations.” *Corning Glass Works v. Sumitomo Electric U.S.A. Inc.*, 868 F.2d 1251, 1259 n.6, 9 U.S.P.Q.2d (BNA) 1962, 1968 n.6 (Fed. Cir. 1989). The panel reasoned that although a change of the material or properties of a component may defeat equivalency as a matter of fact, it does not bar access to the doctrine of equivalents as a matter of law. The panel concluded that although there was a factual dispute at trial regarding the equivalence of the aluminum alloy and the magnetizable material, there was substantial evidence for a jury to find in favor of Festo. SMC did not present data or test evidence on its behalf.

The Federal Circuit En Banc Decision (2000)

In an en banc decision, the Federal Circuit reversed the panel decision. *Festo Corp. v. Shoketsu Kinzoku Kabushiki Co.*, 234 F.3d 558 (Fed. Cir. 2000). The en banc decision held that: (1) any reason for amendment that is related to patentability will give rise to prosecution history estoppel; (2) voluntary amendments are treated the same as other amendments for purposes of prosecution history estoppel; (3) when amendment creates prosecution history estoppel, there is no range of equivalents available for the amended element; (4) “unexplained” amendments are not entitled to any range of equivalents; and (5) prosecution history estoppel barred any finding that the magnetizable cylindrical sleeve and the sealing ring elements of the asserted patents were infringed under the doctrine of equivalents.

The Supreme Court Decision and Holdings

The Supreme Court vacated and remanded the Federal Circuit en banc decision. *Festo Corp. v. Shoketsu Kinzoku Kabushiki Co.*, 535 U.S. 722, 122 S. Ct. 1831 (2002). The Supreme Court held the following:

“Prosecution history estoppel requires that the claims of a patent be interpreted in light of the proceedings in the PTO during the application process. Estoppel is a ‘rule of patent construction’ that ensures that claims are interpreted by reference to those ‘that have been cancelled or rejected.’ *Schriber-Schroth Co. v. Cleveland Trust Co.*, 311 U.S. 211, 220-221 (1940).” 122 S. Ct. at 1838.

“The doctrine of equivalents allows the patentee to claim those insubstantial alterations that were not captured in drafting the original patent claim but which could be created through trivial changes.” 122 S. Ct. at 1838.

“When, however, the patentee originally claimed the subject matter alleged to infringe but then narrowed

the claim in response to a rejection, he may not argue that the surrendered territory comprised unforeseen subject matter that should be deemed equivalent to the literal claims of the issued patent.” 122 S. Ct. at 1838.

“Where the original application once embraced the purported equivalent but the patentee narrowed his claims to obtain the patent or to protect its validity, the patentee cannot assert that he lacked the words to describe the subject matter in question.” 122 S. Ct. at 1839.

“We agree with the Court of Appeals that a narrowing amendment made to satisfy any requirement of the Patent Act may give rise to an estoppel.” 122 S. Ct. at 1839.

“A patentee’s decision to narrow his claims through amendment may be presumed to be a general disclaimer of the territory between the original claim and the amended claim.” 122 S. Ct. at 1842.

“We hold here that the patentee should bear the burden of showing that the amendment does not surrender the particular equivalent in question.” 122 S. Ct. at 1842.

“The patentee must show that at the time of the amendment one skilled in the art could not reasonably be expected to have drafted a claim that would have literally encompassed the alleged equivalent.” 122 S. Ct. at 1842.

“There are some cases, however, where the amendment cannot reasonably be viewed as surrendering a particular equivalent. The equivalent may have been unforeseeable at the time of the application; the rationale underlying the amendment may bear no more than a tangential relation to the equivalent in question; or there may be some other reason suggesting that the patentee could not reasonably be expected to have described the insubstantial substitute in question. In those cases the patentee can overcome the presumption that prosecution history estoppel bars a finding of equivalence.” 122 S. Ct. at 1842.

The Federal Circuit En Banc Consideration on Remand

Shortly after the Supreme Court remand, the Federal Circuit ordered an en banc hearing to answer the following four questions, 304 F.3d 1289, 1290 (Fed. Cir. 2002) (en banc):

1. Whether the rebuttal of the presumption of surrender, including issues of foreseeability, tangentialness, or reasonable expectations of those skilled in the art, is a question of law or one of fact; and what role a jury should play in determining whether a patent owner can rebut the presumption.

2. What factors are encompassed by the criteria set forth by the Supreme Court.

3. If a rebuttal determination requires factual findings, then whether, in this case, remand to the district court is necessary to determine whether *Festo* can rebut the presumption that any narrowing amendment surrendered the equivalent now asserted, or whether the record as it now stands is sufficient to make those determinations.

4. If remand to the district court is not necessary, then whether *Festo* can rebut the presumption that any narrowing amendment surrendered the equivalent now asserted.

On September 26, 2003, the Federal Circuit issued its en banc decision on remand. As to the four questions, the Federal circuit provided the following answers.

1. The rebuttal of the presumption of surrender is a question of law.

2. The relevant factors encompassed by each of the three *Festo* rebuttal criteria are best left to development on a case-by-case basis. However, the following general guidance should be applied:

- The first criteria, i.e., “unforeseeability,” is an objective inquiry, asking whether the alleged equivalent would have been unforeseeable to one of ordinary skill in the art at the time of the amendment. Usually, if the alleged equivalent represents later-developed technology, or technology that was not known in the relevant art, then it would not have been foreseeable. In contrast, old technology, while not always foreseeable, would more likely have been

foreseeable. Objective foreseeability depends on underlying factual issues relating to, for example, the state of the art and the understanding of a hypothetical person of ordinary skill in the art at the time of the amendment. In determining whether an alleged equivalent would have been unforeseeable, a district court may hear expert testimony and consider other extrinsic evidence relating to the relevant factual inquiries.

- The second criteria, i.e., “tangentialness”, asks whether the reason for the narrowing amendment was peripheral, or not directly related to the alleged equivalent. An amendment made to avoid prior art that contains the equivalent in question is not tangential; it is central to allowance of the claim. Whether the patentee has established a merely tangential reason for a narrowing amendment is for the court to determine from the prosecution history record without the introduction of additional evidence, except, when necessary, testimony from those skilled in the art as to the interpretation of that record.
- The third criteria, i.e., the catch-all “some other reason,” is a vague but necessarily narrow category. It is available in order not to totally foreclose a patentee from relying on reasons, other than unforeseeability and tangentialness, to show that it did not surrender the alleged equivalent. The third criterion may be satisfied when there was some reason, such as the shortcomings of language, why the patentee was prevented from describing the alleged equivalent when it narrowed the claim. When at all possible, determination of the third rebuttal criterion should also be limited to the prosecution history record, and a patentee may not rely on the third rebuttal criterion if the alleged equivalent is in the prior art.

With respect to the *Festo* case itself, the Federal Circuit concluded that the patentee could not overcome a presumption of estoppel by demonstrating that the rationale underlying the narrowing amendments bore no more than a tangential relation to the accused equivalents or by demonstrating that there was “some other reason” such that the patentee could not reasonably have been expected to have described the accused equivalents. The Court remanded to the district court to determine whether the patentee could rebut the presumption of surrender by

establishing that the equivalents in question would have been unforeseeable to one of ordinary skill in the art at the time of the amendments.

III. PROSECUTION STRATEGIES IN VIEW OF FESTO

Two general prosecution “strategies” immediately come to mind as to how the patent prosecutor should proceed in view of *Festo*:

- First, spend more time on applications because the doctrine of equivalents is no longer the “safety net” it once was; and
- Second, don’t amend claims so there will be no presumptions of surrendered subject matter.

Unfortunately, these general prosecution “strategies” are not practical strategies of meaningful value to patent prosecutors. For one thing, they are easier said than done. Further, they do not provide any guidance on what a patent prosecutor is suppose to do with their additional time spent on applications, or what they should do when claims are rejected.

More practical advice, which takes *Festo* and other case law into account, is provided below.

A. Pre-Filing Strategies

1. First, Have A Thorough Search Done For Prior Art

A pre-filing search will serve several valuable purposes. Most important, the search results will provide the patent prosecutor with prior art that he/she must be able distinguish in the claims to be drafted for the application.

Take the following fact scenario. The applicant has a prior art search performed prior to filing an application for an ultrafiltration process and discovers that there is a prior art patent for an ultrafiltration process that, among other differences from the applicant’s process, operates at a pH of above 9. The applicant’s process operates at a pH of less than 9, and in a preferred embodiment operates at a pH of 6 to 9. The applicant takes into account the prior art patent when drafting the claims before filing the application, and includes the limitation of operating the process “at a pH from approximately 6.0 to 9.0” in the broadest claim. In doing so, the applicant would have avoided the prior art rejection that was at issue in *Warner-Jenkinson Co. v. Hilton Davis*, 520 U.S. 17,

29, 117 S. Ct. 1040, 1054 (1997), and the need to overcome the prior art patent by amending the claim to include the pH limitation. Thus, the applicant would have been able to avoid the later prosecution history estoppel argument by an accused infringer who practiced the same process except at a pH of 5.0.

A thorough prior art search may also lead the applicant to think of new embodiments and/or uses for the invention, all of which should then be included in the application. The prior art may give also suggest claiming strategies not suggested by the invention disclosure and/or that may have not been considered by the prosecuting attorney absent the prior art located in the search.

A thorough prior art search may also result in the inventor coming to an earlier appreciation of the prior art and realistic expectations of obtainable patent protection. Even if the prior art search indicates that any realistic patent protection will be of limited, direct commercial value, the client should still consider filing an application for defensive purposes so that a competitor cannot later successfully claim the invention as its own.

Another benefit of a prior art search is the ability to make the application “special” and obtain earlier patent issuance. More specifically, a patent search performed by a prior art search company can be used in support for a petition to make the application special under MPEP 708.02 (VIII. Special Examining Procedure For Certain New Applications – Accelerated Examination). Under this procedure, the applicant files a petition that includes a statement that a pre-examination search was made, listing the field of search by class and subclass, publication, Chemical Abstracts, foreign patents, etc. (a search by a foreign patent office satisfies this requirement). The applicant also submits one copy of each of the references deemed most closely related to the subject matter encompassed by the claims if the references are not already of record; and submits a detailed discussion, which points out, with particularity required by 37 CFR 1.111(b) and (c), how the claimed subject matter is patentable over the references. One way of doing this last step is to recite the abstract of each reference, followed by a paragraph that states that the reference does not teach the claimed invention and then recite the broadest claim. When the petition is granted, the now “special” application jumps ahead of earlier filed non-special applications, and the Examiner will examine the application earlier than if the application was not made “special.” The author of this paper has successfully used this procedure to obtain utility patent issuance within one year of the application filing

date.

2. Ensure That The Subject Matter Disclosed In The Specification Is Claimed

Shortly before the Supreme Court decision in *Festo*, the Federal Circuit made clear that a patentee cannot apply the doctrine of equivalents to cover unclaimed subject matter disclosed in the specification. *Johnson & Johnston Associates Inc. v. R.E. Service Co.*, 285 F.3d 1046 (Fed. Cir. 2002) (en banc). In *Johnson*, the patent specifically limited the claims to “a sheet of aluminum” and “the aluminum sheet.” The specification of the patent stated: “While aluminum is currently the preferred material for the substrate, other metals, such as stainless steel or nickel alloys may be used.” The Federal circuit held that the patentee “cannot now invoke the doctrine of equivalents to extend its aluminum limitation to encompass steel.” 285 F.3d at 1055. The Federal Circuit noted that a patentee who inadvertently fails to claim disclosed subject matter can remedy the situation within two years from the grant of the original patent by filing a reissue application, as well as file a separate application claiming the disclosed subject matter under continuation application practice, 35 U.S.C. § 120. *Id.*

Thus, check the specification and claims to ensure that all the disclosed embodiments and examples are claimed.

3. Consider Defining Claim Elements In The Specification
As You Want Them To Be Understood

You want others to understand your invention. To avoid any question as to what you might mean, consider defining claim elements in functional terms and then initially claiming those claim elements in functional terms. For example, the patentee in *Festo* could have provided the following definition in the Carroll patent application: “The term seal as used in this invention is any suitable structure and composition of material, that prevents the flow of fluid from one region to the other.” This functional language could have prompted the patentee to consider more closely other ways to form the seal other than with a pair of resilient sealing rings, and then describe and claim those other ways. Further, when the patentee filed the reexamination request to cite prior art not previously of record, claim 9 of the Carroll patent could have read as follows: “A device for moving articles, which comprises . . . at least

one fluid-tight seal comprising resilient material.” The accused infringing device would have literally infringed this claim element.

4. Consider Means-Plus-Function Or Step-Plus-Function Claims

Using means-plus-function or step-plus-function language in the claims in accordance with 35 U.S.C. §112, ¶6 is a classic way of obtaining patent coverage of subject matter expressly disclosed in the specification and equivalents thereof. While equivalents under 35 U.S.C. §112, ¶6 is not as broad as equivalents under the doctrine of equivalents, some equivalents is better than none.

Take, for example, the fact scenario in *Festo*. The invention comprised structure, *i.e.*, a pair of resilient sealing rings, that in combination with a central mounting member, engages a cylinder to effect a fluid-tight seal. The applicant could have originally claimed the following: “a means for effecting a fluid-tight seal between the central mounting member and the cylinder.” Under 35 U.S.C. §112, ¶6, such a patent claim would have covered the corresponding structure described in the specification, *i.e.*, a pair of resilient sealing rings at opposite axial ends of the central mounting member and engaging the cylinder to effect a fluid-tight seal, and equivalents thereof. At the infringement trial, the patentee could then prove literal infringement of the means-plus-function claim by merely proving that as of the patent filing date, the accused single two-way sealing ring at one end of the piston had the identical function as the disclosed pair of resilient sealing rings, and would have been considered by one of ordinary skill in the art to be equivalent. Moreover, there would have been no amendment of the claims, and thus, no presumption of prosecution history estoppel.

Careful consideration should be made before deciding whether or not to use means-plus-function or step-plus-function language. Under 35 U.S.C. §112, ¶6, equivalents are determined at date of patent filing. Under the doctrine of equivalents, equivalents are determined at the date of the alleged infringement. Under 35 U.S.C. §112, ¶6, literal infringement requires that the accused structure perform the identical function claimed. Under the doctrine of equivalents, there can be infringement when the accused structure performs an equivalent function. *Al-Site Corp. v. VSI Int’l, Inc.*, 174 F.3d 1308, 1316 (Fed. Cir. 1999); *Odetics Inc. v. Storage Technology Corp.*, 185

F.3d 1259, 1267-68 (Fed. Cir. 1999).

5. Review With The Inventor/Client Whether There Are Any Foreseeable Equivalents

If there are any “foreseeable” equivalents, then the time to take them into account is in the application before it is filed. For example, consider the following fact scenario in *Hughes Aircraft Co. v. United States*, 717 F.2d 1351 (Fed. Cir. 1983). It is 1960 and your client has invented a synchronous communications satellite having an orbital period equaling the rotational period of the earth. The satellite operates in part by sending a position indication to an external location, *i.e.*, the ground, and pulsating a precession jet within a fixed time after receipt of a control signal from that external location. Under *Festo*, it would be prudent to discuss with the inventor/client whether there is any known technology that could be used to operate the satellite without sending the position indication to the ground. If there is such technology, then the application and the claims should be written to take that technology into account.

However, if there is no such technology, then it is not a “foreseeable” equivalent. Should no foreseeable equivalent arise during prosecution, and the inventor need to amend the claims to include the limitation “means disposed on said body for providing an indication to a location external to said body,” then under *Festo*, the patent owner should be able to rebut the presumption that the after-arising equivalent, *i.e.*, a satellite with an on board modern day computer, was not surrendered during prosecution.

6. Consider Modification To Standard Boilerplate In The Specification

Most patent specifications include some boilerplate language. With *Festo*, consider the following underlined changes to an example of pre-*Festo* boilerplate.

“Many modifications and variations may be made in the techniques and structures described and illustrated herein without departing from the spirit and scope of the present invention. Accordingly, the techniques and structures described and illustrated herein should be understood to be illustrative only and not limiting upon the scope of the present invention. The scope of the present invention is defined by the claims, which includes known

equivalents and unforeseeable equivalents at the time of filing of this application.”

This boilerplate language may be helpful to a patentee in a later infringement suit. It expressly puts competitors on notice that known and unforeseeable equivalents are covered by the claims. It will also “set up” an argument that any later narrowing amendment only relinquished certain equivalents that were foreseeable at the time of filing of the application, and overcome the presumption that prosecution history estoppel bars a finding of unforeseeable equivalents.

7. Keep The “Background of the Invention” Brief

There is little need for a detailed dissertation of the prior art. The focus of the Background section should be kept brief and directed at the problems involved in the prior art. A detailed recitation of prior art structure and/or operation could be used at a later time against the patentee. For example, if the patentee voluntarily recites the detailed structure and operation of a prior art device in the Background section, an accused infringer could later claim that all such detailed structure and operation was surrendered during prosecution.

8. Have Another Patent Prosecutor Review The Application And Claims

Having a second set of eyes review the application and claims prior to filing may be worth the expense in certain cases. A different patent prosecutor may identify an alternative claiming strategy and/or may provide some additional suggestions.

B. Post-Filing Strategies

1. Swear Behind A Cited Reference When Possible

If faced with a prior art rejection, swearing behind a cited reference, when possible, is a particularly useful approach to avoid prosecution history estoppel. In view of *Festo*, this approach should always be considered.

2. Follow Case Law Examples When Filing Substantive Responses

Take the situation where you are faced with an Office Action that rejects at least some of the claims. How

do you best present your Response to enable the patentee to rebut any presumption of prosecution history estoppel?

The best approach is to follow case law examples. Certain examples are provided below.

i. Emphasize The Functional Difference(s) To Distinguish Means-Plus-Function Claims From The Prior Art

In *Cybor Corp. v. FAS Technologies, Inc.*, 138 F.3d 1448 (Fed. Cir. 1998) (en banc), the Federal Circuit held for the first time en banc that prosecution history estoppel was a matter of law for the court to decide. 138 F.3d at 1460. Two means-plus-function limitations were at issue – “the second pumping means” and the “means to enable said second pumping means to collect and/or dispense the fluid, or both.” 138 F.3d at 1451 and 1456.

The accused infringer, Cybor, relied on two responses by the inventors to the examiner’s obviousness rejection of the claims for its position that a pump structure with any external reservoir was given up during prosecution. The prior art Storkebaum patent disclosed a container that collects permeate, and also vents or discharges the fluid. However, the design of the prior art container was not for the controlled dispensing of fluid as in the claimed invention.

In the first response, the inventors argued that “Storkebaum specifically provides a *separate* container 12 for collecting permeate. Obviously, Storkebaum does not teach the collection of fluid in a second pumping means.” (Emphasis added).

In response to a later rejection, the inventors argued that “Storkebaum discloses a permeate collecting container 12 that is *separate* from the conveying pump 13. Nothing in Storkebaum discloses or makes obvious the claimed invention, nor the precise or flexible control provided by the second pump means of Claim 1.” (Emphasis in original).

From these statements, Cybor contended that the patent owner, FAS, was precluded from asserting that a pump device with an external reservoir is a structural equivalent under §112, ¶6 to its patented device. Cybor further contended that the district court, as a matter of law, should not have permitted the jury to consider its external reservoir in determining whether the differences in Cybor’s second pump and the patent’s second pumping means were insubstantial.

The Federal Circuit disagreed and held that substantial evidence supported the jury verdict of literal

infringement:

From our reading of the patent document and the prosecution history, we agree with the district court's construction and jury instructions. While it is quite clear the inventors limited the scope of their claims to overcome the Storkebaum reference, they emphasized the separateness of Storkebaum's container, both physically and functionally, as compared to the claimed invention. For example, the statements noted that Storkebaum "provides a separate container" and that it has a container "that is separate from the conveying pump." The specification of the '837 patent elaborates on the structure of the second pumping means and its "means to enable" as having tubing connecting the second pumping means to the second incremental pump advancement means, *see* col. 5, lines 49-52. While in the preferred embodiment, the '837 patent disclosed a storage reservoir inside the pump, it is not disputed that the claimed second pumping means encompasses both a pump and a reservoir having connecting tubing.

* * *

In view of the significant differences between the cited Storkebaum patent and the claimed invention, including the structurally separate container and independent function of discharging excess fluid in Storkebaum, the prosecution statements cannot properly be interpreted as precluding coverage of every type of external reservoir. In particular, we agree with the district court's apparent conclusion that these statements only disclaimed a physically unattached reservoir which has independent functionality. They did not disclaim a reservoir which is physically connected to the pump and which only collects fluid to be dispensed by that pump. 138 F.3d at 1458 (Emphasis added).

Cybor also argued no infringement under the doctrine of equivalents because prosecution history estoppel precludes FAS both from claiming an external reservoir and a pump as equivalent to the second pumping means of claims 11 and 12 and from claiming an external, attached reservoir as the equivalent to the means to enable the second diaphragm-type pump in claim 16 to accumulate, dispense, or both accumulate and dispense the liquid.

The Federal Circuit again disagreed:

These arguments are unpersuasive for the same reasons that we rejected them under our §112, ¶6 claim construction and literal infringement analysis. The inventor's statements to the PTO regarding the Storkebaum reference, given the marked differences between the reference and the patented and accused devices, do not show the deliberate, unequivocal surrender of all external reservoirs. * * * Because Cybor's pump and reservoir with connecting tubing do not fall within the range of subject matter relinquished, prosecution history does not preclude infringement under the doctrine of equivalents. 138 F.3d at 1460.

As illustrated in *Cybor*, it is prudent to emphasize functional differences to distinguish means-plus-function claims from the prior art. Had the patentee in *Cybor* merely distinguished the prior art on the ground that the asserted claim was patentable because Storkebaum reference had an external reservoir, then the Federal Circuit quite possibly may have held that the patentee made an unequivocal surrender of all external reservoirs, and that

prosecution history estoppel precluded infringement under the doctrine of equivalents.

ii. Emphasize The Problems In Using The Prior Art And How Those Problems Are Reduced Or Are Not Present When Using The Claimed Invention

In *Insituform Technologies, Inc. v. CAT Contracting, Inc.*, 99 F.3d 1098 (Fed. Cir. 1996), the defendants (collectively referred to as “Inliner”), appealed among other things, the district’s final decision of finding infringement under the doctrine of equivalents. The processes at issue were directed at repairing cracked sewer pipe without having to dig up the pipe. More specifically, the processes at issue involved drawing a vacuum through at least one opening somewhere downstream of a “resin front.” After the resin is put into place and pressed out to conform to the pipe under repair, hot water is pumped through the lining to harden the resin.

When the applicant (Wood) filed his application, he cited only one prior art reference, U.S. Patent No. 4,182,262 to Everson. The Everson patent taught attaching the vacuum to the tube to be impregnated at only one place – the end opposite the resin-containing leading end – and applying that vacuum continuously throughout the impregnation process.

As initially filed, the Wood application contained nine claims, only the first four of which were relevant to the appeal. These four claims were rejected in light of the Everson patent under 35 U.S.C. 103. In response, Wood canceled the original claims and submitted three new claims that recited in new form the limitations of original claims 4 through 6. Wood also submitted the following argument:

Everson’s method is ineffective when dealing with long lengths of tube because that method requires an exceedingly large suction compressor. Applicant’s method solves the problem of impregnating long lengths of tubing by forming a window in the tube’s impermeable skin, drawing resin to the region of the window by a vacuum while squeezing the tube to force the resin to flow toward the evacuated region, sealing the window, and repeating the process at another window farther downstream. Thus, by iterating and reiterating that process, the resin is drawn along to impregnate the entire length of tube.

It is submitted that applicant has taught an improvement upon Everson’s method which makes feasible the impregnation of long tube lengths and that the grant of a patent on that improvement is merited. 99 F.3d at 1104.

The examiner then allowed the claims without further argument or comment.

The Federal Circuit held that the only correct and reasonable interpretation of claim 1 limits the scope of

that claim to a process using only one vacuum cup which inherently creates a discontinuous vacuum. 99 F.3d at 1106. Since Inliner's both of accused processes created a continuous vacuum, neither literally infringed the claim, and the Federal Circuit affirmed the district court's JNOV of no literal infringement. 99 F.3d at 1106-07.

However, the Federal Circuit disagreed with Inliner's contentions that the prosecution history estopped Insituform from asserting infringement under the under the doctrine of equivalents:

[T]he standard for determining what subject matter was surrendered is objective and depends on what a competitor, reading the prosecution history, would reasonably conclude was given up by the applicant.

* * *

Insituform solved [the problem needing a large suction compressor in Everson] by placing the suction source closer to the resin front, thus allowing the use of a smaller suction compressor. Thus, Insituform unequivocally gave up coverage to a process in which a single vacuum source is located at the far end of the tube.

It is true that, in explaining its amendments, Insituform discussed the use of a single vacuum source which was to be moved along the tube as the resin front advanced. This suggests that Insituform envisioned the sue of a discontinuous vacuum created sequentially by only one vacuum source. However, this statement alone is too equivocal to be read as a statement which would estop Insituform from equivalently covering a number of small compressors spread along the tube creating a continuous vacuum. The prosecution history makes clear that the problem to be solved was the need for a large compressor when the vacuum was created a significant distance from the resin source. The use of one vacuum source repeatedly moved down the tube as the resin advances and the use of a number of vacuum sources spread along the tube so that one is always near the advancing resin both solve the problem presented by Everson by placing the vacuum source close to the resin, thereby allowing the use of a smaller vacuum source.

* * *

[I]t cannot be said that a reasonable competitor could conclude that Insituform relinquished coverage of processes using either multiple vacuum sources or a continuous vacuum. At no point did Insituform indicate that the Everson problem could be solved only in the manner used by Insituform, *i.e.*, Insituform never stated that the problem could not be solved by using more than one vacuum source or a continuous vacuum. Rather, the only express limitation put on the invention by Insituform was the use of a vacuum source close to the resin. Thus, in light of the equivocal nature of Insituform's statements, no reasonable competitor could conclude that Insituform gave up coverage of continuous vacuum created by one or more vacuum sources. 99 F.3d 1107-1109.

As illustrated in *Insituform*, it is prudent to emphasize the problems in using the prior art and how those problems are reduced or not present when using the claimed invention. Had the patentee in *Insituform* merely distinguished the prior art on the ground that the asserted claim was patentable because it used a single cup and/or that the vacuum not continuous, then the Federal Circuit would probably have held that the patentee made an

unequivocal surrender of continuous vacuum created by one or more vacuum sources, and that prosecution history estoppel precluded infringement under the doctrine of equivalents.

As also illustrated in *Insituform*, the prudent prosecutor will be careful not to indicate that the problems of the prior art could be solved only in accordance with the preferred embodiment disclosed in the specification.

iii. Consider Canceling A Rejected Independent Claim, And Adding A New Independent Claim That “Redefines” An Original Limitation Without Narrowing The Claim

When the Patent Office has rejected a claim, consider canceling the claim and adding a new claim that redefines a claim limitation without narrowing the claim. In *Turbocare Division of Demag Delaval Turbomachinery Corp. v. General Electric Co.*, 264 F.3d 1111 (Fed. Cir. 2001), the original claim, having a “clearance position limitation,” was rejected as anticipated by the prior art Warth patent. The applicant then cancelled the original independent claim and added a new independent claim that specifically defined the “small diameter” or “small clearance” position with reference to contact between certain surfaces. The “small clearance position” limitation was present in the original claim. Although the cancelled claim did not specifically state that the small clearance position was delineated by “contact” between the surfaces that was the meaning that the patentee gave to the term “small diameter position” in the specification. 264 F.3d at 1125.

The Federal Circuit stated “the newly added claim only redefined the small clearance position limitation without narrowing the claim,” and “[t]herefore *Festo* is not applicable.” 264 F.3d at 1126. The Federal Circuit remanded the case to the district court to address the patentee’s doctrine of equivalents argument with respect to certain accused devices.

In view of *Turbocare*, the prudent prosecutor should consider making the following statement in the Remarks section after canceling a rejected independent claim and adding a new independent claim:

“The [insert] limitation was present in the original claim 1. The newly added independent claim only redefines the [insert] limitation without narrowing the claim. The newly added independent claim does not constitute a surrender of any equivalents of the [insert] limitation. The amendment does not give rise to any prosecution history estoppel as to this limitation.”

iv. Consider Amending The Rejected Claim To Make Express What Had Been Implicit In The Claim As Originally Worded And Emphasize The Problems In Using The Prior Art And How Those Problems Are Reduced Or Are Not Present When Using The Claimed Invention

Consider combining the strategies in subsections ii and iii above. In *Interactive Pictures Corp. v. Infinite Pictures, Inc.*, 274 F.3d 1371 (Fed. Cir. 2001), the Federal Circuit applied the same type of reasoning in *Turbocare* in connection with an amendment to an original rejected claim. The Federal Circuit stated:

We agree with Interactive that the claim amendment and arguments do not estop Infinite from asserting infringement on the ground that the “image transform processor means” limitation is met by equivalence. As to the amendment-based estoppel issue, we conclude that the addition of the words “transform calculation” was not a narrowing amendment because that addition did nothing more than make express what had been implicit in the claims as originally worded.

* * *

Because the amendment merely made explicit what had been implicit in the claim, the amendment was not made for a “substantial reason related to patentability” and thus does not create prosecution history estoppel.

* * *

As to the argument-based estoppel issue, we agree with Interactive that the arguments made during prosecution to distinguish Juday’s ‘019 patent do not create estoppel.

* * *

The applicant responded to the obviousness rejection by noting, *inter alia*, three deficiencies in the Juday system, . . . (3) the lack of real time capability. Concerning the latter, the applicant stated:

Juday et al. utilizes a group of preselected ‘look-up’ tables for remapping an image into the pre-selected configurations. * * * Continuous change in orientation and magnification is not feasible in real time at video rates with the Juday et al. device. Hence, perspective corrected pan and tilt is not possible in real time with that device (in contrast to the action with the device of Applicant.) . . . Further, Juday et al. fails to provide either magnification or image rotation. These cannot be accomplished by Juday et al. without continuous redetermination of the transformal mapping, with this not being possible with the look-up table type of transformations.

We do not read those remarks as drawing a distinction between a one-step viewing system and a two-step viewing system. * * * Accordingly, because the applicant’s remarks pertain only to the invention’s capability to respond in real time to user parameters, Interactive is not estopped from asserting that Infinite’s two-step viewing software infringes the ‘667 patent under the doctrine of equivalents. 274 F.3d at 1377-79.

In view of *Interactive Pictures*, the prudent prosecutor should consider making the following statement in the Remarks section after amending a rejected claim:

“The [insert] limitation was present in the original claim 1. The amendment to claim 1 only makes express what had been implicit in claim 1 as originally worded. The amendment does not constitute a narrowing of claim 1 and does not constitute a surrender of any equivalents of the [insert] limitation. The amendment does not give rise to any prosecution history estoppel as to the [insert] limitation.”

v. Consider Expressly Stating On The Record “No Surrender Of Equivalents”

Referring back to *Warner-Jenkinson Co. v. Hilton Davis*, 520 U.S. 17, 29, 117 S. Ct. 1040, 1054 (1997), it is quite possible that the outcome would have been different if the patentee made a clear statement on the record that the amendment of “at a pH from approximately 6.0 to 9.0” is “in no way a surrender of equivalents for processes of less than approximately 6.0.” With such a clear statement on the record, the accused infringer would be hard pressed to argue an unequivocal surrender of equivalents for processes of less than approximately 6.0.

Thus, if you need to make an amendment, consider expressly stating on the record the particular subject matter that is not being surrendered. Such a statement would seem to be particularly warranted when responding the amendment relates to a rejection under 35 U.S.C. § 112. When faced with a rejection like that in *Warner-Jenkinson*, the applicant should consider the following statement in the Remarks section of the Response:

“The amendment to the claims, *i.e.*, ‘at a pH from approximately 6.0 to 9.0,’ is in no way a surrender of equivalents for processes of less than approximately 6.0. The amendment does not give rise to any prosecution history estoppel as to processes at a pH of less than approximately 6.0.”

3. Review Amendments With The Inventor Prior To Filing To Ensure That Known Equivalents Are Not Unnecessarily Being Surrendered

Under *Festo*, the patentee must show that at the time of the amendment one skilled in the art could not have reasonably be expected to have drafted a claim that would have literally encompassed the alleged equivalent. 122 S. Ct. at 1842. The prudent patent prosecutor will review known equivalents not only prior to filing the application, but also prior to filing any amendment to ensure that no known equivalents are unnecessarily being surrendered. The prudent patent prosecutor should also consider expressly stating on the record:

“The amendment to the claims is in no way a surrender of equivalents to the claimed subject matter, including, but not limited to, [insert the known equivalents].”

4. Interview The Case With The Examiner Before Filing A Substantive Response

In view of *Festo*, reviewing a draft Response to an Office Action with the Examiner before filing is a sound strategy in most cases. Conduct the interview with the objective of finding out from the Examiner the minimum amendment and/or argument that will put the claims in condition for allowance, and then only file that minimum amendment and/or argument.

5. File Continuation/CIP Applications For Commercially Significant Inventions

Clients should seriously consider filing continuation and/or continuation-in-part (CIP) applications to maintain the priority filing date for their commercially significant inventions. A pending application will give your client flexibility for additional patent coverage without the risk of its own prior art patent being cited against later applications, including continuation-in-part applications. A pending application will provide clients with the ability to obtain claims that literally cover products of competitors who have made insubstantial changes from the invention claimed in the original patent. If a competitor argues that a claim could have been written to literally cover the accused product, then the patentee could seek issuance of that claim in the continuation application. A pending application will also keep competitors guessing what claims the Patent Office may issue to your clients, which itself can discourage competitors from practicing subject matter that your clients may not have literally claimed, but which is supported by the original application.

IV. CONCLUSION

Festo has made the job of the patent prosecutor more challenging. The author hopes that the above strategies will be of assistance.