BOBBING AROUND IN THE WAKE OF FESTO -- Honeywell Int'l v. Hamilton Sundstrand Corp.

Prosecution Practice in View of the Broadening Definition of Estoppel to Application of to the Equivalents Doctrine

by

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I. Introduction

In follow up to Festo, the Court of Appeals for the Federal Circuit has shown still further propensity for finding instances of estoppel, inhibiting the access of patent holders to the doctrine of equivalents for enforcement. In Honeywell Int'l v. Hamilton Sundstrand Corp., 370 F.3d 1131 (Fed. Cir. 2004) (en banc), sometimes referred to as "Honeywell" herein, the Federal Circuit denied the patent holder an automatic right to the doctrine of equivalents, in a situation in which the patent holder had merely rewritten an allowable dependent claim in independent form, without further amendment. This result leaves that particular patent holder with the uncertainties inherent in trying to show a Festo II-authorized rebuttal to the applied estoppel. This unexpected direction taken by the Federal Circuit raises, again, the question of appropriate practice in patent prosecution, with respect to the issues of whether a reasonably certain level of right to the doctrine of equivalents can ever be obtained.

In this paper, we evaluate in detail the Honeywell decision, and we suggest that this Federal Circuit decision may be taken as an omen that in the future still further unforeseeable restrictions on applications of the doctrine of equivalents should be expected. Some patent practice approaches or trends are assessed with respect to the relative ability to avoid estoppel issues. Recommendations for prosecution strategies to reduce the impact of this trend of narrowing decisions are made.

II. Honeywell Int'l v. Hamilton Sundstrand Corp.

A. The facts of the Honeywell Int'l v. Hamilton Sundstrand

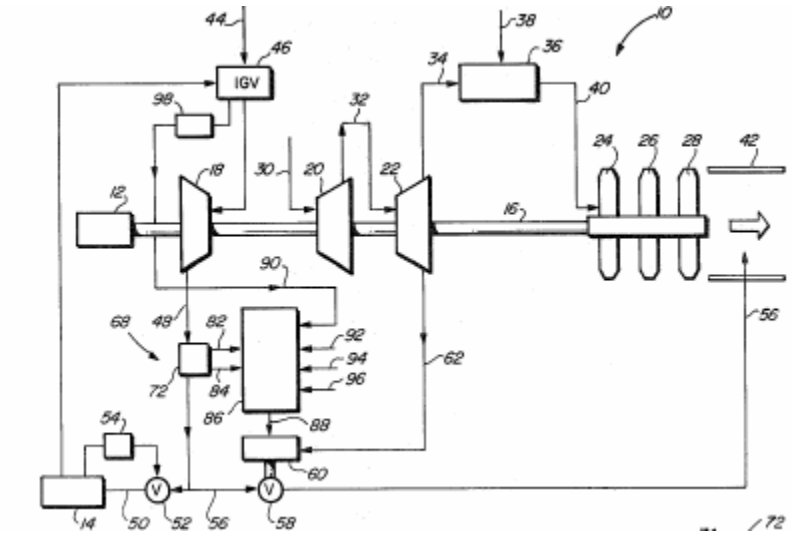
Two patents were asserted as infringed, U.S. 4,380,893 and 4,428,194, the second being a divisional of the first. The patents were assigned to The Garrett Corporation, which was part of Allied Signal. Allied Signal and Honeywell merged in 1999 and adopted the corporate name of Honeywell.

1. The technology

The patents relate to aircraft auxiliary power units (APUs), which are gas turbine engines used to generate electricity and used to provide compressed air for use by the airplane to start the main engines and to control the cabin environment of the aircraft. The problem addressed by the patents is how to control for surge conditions in the APU. As explained in Honeywell's first brief to the Federal Circuit, surge is an aerodynamic phenomenon that occurs when there is insufficient airflow through the load compressor. When the compressor faces a low-flow state, the air pressure generated within the load compressor is insufficient to overcome the pressure resident downstream of the compressor. During a surge condition, the air trying to exit the compressor is unable to do so and reverses direction to surge back. The surge back can damage or destroy the APU.

To prevent surge, as the patents explain, prior art systems have used a surge control valve to vent or bleed air form the discharge side of the compressor to the atmosphere while maintaining the flow through the compressor above the minimum surge level. US Pat. 4,380,893, col. 1, lines 43-47. The patents explain that prior art systems operated by drawing in substantially more air than the airplane needed, thereby providing a wide safety margin against a surge condition. Honeywell's brief concluded that because these systems drew in and then vented more air than was necessary to avoid surge, the APU operated inefficiently as energy used to compress the excess air was unnecessarily wasted.

The claimed inventions of Honeywell were directed to methods and systems for preventing surge and to operate more efficiently than the prior art by avoiding excess air bleeding. 370 F.3d at 1134. Reference is made to FIG. 1 of the '893 patent, below.



As explained in the '893 patent, FIG. 1, above, shows ambient air 30 drawn into the inlet of the first stage power compressor 20, compressed, and then discharged through duct 32 into the inlet of the second stage power compressor 22 where it is further compressed. Compressor 22 discharges the further compressed air through a duct 34 into a combustor 36. The combustor expands the gas 40 and forces the gas axially through power turbines

24, 26, 28 to rotate the shaft 16. The rotation of the shaft 16 drives the generator 12 and also drives the load compressor 18, used to supply compressed air to the accessory system 14. Ambient air 44 is drawn through the inlet guide vanes 46 into the load compressor 18. Compressed air bled from the compressor 18 is forced through main bleed air duct 48.

As the patent further explains, valves 52 and 58 operate to prevent surge to help maintain a minimum amount of flow through the compressor 18. The control system, shown at 68, operates to control the valve 58 in response to the varying compressed air demands of the accessory system 14. The control system receives an input signal 90, which is related to how much the inlet guide vanes are open. The control system also receives signals 82 and 84, which are related to the pressure measured within the main duct 48.

In the claimed invention, air is drawn through a set of adjustable inlet guide vanes (shown at reference numeral 46). A "set point" is established as a function of the position of the guide vanes. This set point is then compared to a flow-related parameter; in this case, the flow-related parameter represents airflow out of the compressor 18 as determined by pressure sensors 82, 84. A comparison is made between the actual flow conditions (measured by the flow-related parameter, sensors 82, 84) and the desired flow conditions (measured by 98, the position of the inlet guide vanes). If the actual flow conditions are too low, the surge bleed valve 58 opens to prevent the build up of excess pressure leading to surge.

2. The Prosecution history of the asserted claims

During prosecution of the original application and the divisional application, the independent claims were rejected for obviousness, and some of the dependent claims were indicated to contain allowable subject matter. These allowable dependent claims related to using the position of the inlet vanes as the measured set point. The patent applicant responded by canceling the independent claim and rewriting the allowable dependent claims into independent form. These formerly dependent claims rewritten into independent form were the claims asserted by Honeywell.

Each of the asserted claims requires the APU to include inlet guide vanes and requires the operation of the surge bleed valve to be a function of the inlet guide vane position.

3. The accused device

The accused device, made by Sundstrand, uses a surge control system that compares a flow-related parameter to a set point and adjusts the surge bleed valve in response. 370 F.3d at 1136. As explained in the case, Sundstrand's device established a set point dependent upon the ambient air temperature, not the position of the inlet vanes. Id. The set point is compared to a flow related parameter, called DELPQP, which measures both flow and compression through the compressor. Id.

Sundstrand explained, in its first brief to the Federal Circuit, the characteristics of this DELPQP flow parameter: As airflow increases, the value of DELPQP increases, except when airflow reaches an extremely high level. When such an extremely high level is reached, the measured DELPQP starts to decrease. The problem caused by this characteristic, explained Sundstrand, is that when extremely high levels are reached, the DELPQP would register a low value, and the control system would want to open the surge bleed valve. But exhausting the air would be unnecessary because airflow is extremely high with no danger of surge. Sundstrand explained that to address this problem, Sundstrand built into its system a test to indicate when such extreme high flow conditions have been reached. One of the inputs for the test is the position of the inlet guide vanes. When the test indicates that the extremely high flow condition has been reached, it disconnects the control signal to prevent it from unnecessarily opening the surge valve.

4. The district court

Before the district court, Sundstrand urged that the claims were narrowed by amendment and that prosecution history estoppel barred all equivalents for the inlet guide vane limitation under Festo. Id. at 1138. The district court acknowledged that there was "superficial appeal" to Sundstrand's argument, but rejected the argument. Honeywell Int'l v. Hamilton Sundstrand Corp., 2001 U.S. Dist. LEXIS 2155 (D. Del., Jan. 8, 2001).

A jury found no literal infringement, but did find infringement under the doctrine of equivalents. Both sides appealed. Honeywell did not appeal the literal infringement finding, but did appeal on damages. Sundstrand appealed several issues, including the finding of infringement under the doctrine of equivalents.

5. The arguments on appeal

On appeal, Honeywell conceded that the inlet guides vane limitation was not literally met by the Sundstrand device. One of the main disputes was what the function of the inlet guide vanes was and whether the inlet guide vanes in the Sundstrand device performed an equivalent function.

Sundstrand naturally argued in its brief that the claimed function of the inlet vanes was quite narrow -- to establish a set point. Sundstrand pointed out that its device used the inlet vanes to determine when to block control signals that operate the surge bleed valve.

In its reply brief, Honeywell naturally argued that the function of the claimed inlet vanes was quite broad -- to incorporate the position of the inlet vanes into the surge control system. That function, Honeywell contended, was something that the Sundstrand device did.

B. The Decision of the Federal Circuit

1. The Court's opinion

The Federal Circuit held, in an en banc decision, that Honeywell is presumptively estopped from recapturing equivalents to the inlet guide vane limitation. The Federal Circuit cited Festo, 535 U.S. 722, 740, for its basis. Specifically, the Court pointed to the amicus brief filed by the government in Festo. The government urged the Supreme Court to adopt the position that rewriting a dependent claim into independent form cannot give rise to a presumption of surrender. The Supreme Court, while approvingly citing the government's positions with respect to other issues, rejected the position of the government in this respect, stating that rewriting a dependent claim in independent form creates a presumptive surrender if the amendment is "made to secure the patent," Festo, 535 U.S. at 736. The Federal Circuit pointed to this statement in Festo:

> The PTO might require the applicant to clarify an ambiguous term, to improve the translation of a foreign word, *or to rewrite a dependent claim as independent one*. In these cases, petitioner argues, the applicant has no intention of surrendering subject matter and should not be estopped from challenging equivalent devices. While this may be true in some cases, petitioner's argument conflates the patentee's reason for making the amendment with the impact the amendment has on the subject matter.
>
> Estoppel arises when an amendment is made to secure the patent and the amendment narrows the patent's scope. . . . A patentee who narrows a claim as a condition for obtaining a patent disavows his claim to the broader subject matter, whether the amendment was made to avoid the prior art or to comply with § 112. *We must regard the patentee as having conceded an inability to claim the broader subject matter or at least as having abandoned his right to appeal a rejection. In either case estoppel may apply.*

Id. at 736-37 (emphasis added).

The Federal Circuit concluded that when a claim is rewritten from dependent into independent form, and the original independent claim is cancelled, the correct focus is on whether the amendment surrendered subject matter. 370 F.3d at 1144. Under such circumstances, the Court explained, the surrendered subject matter is defined by the cancellation of independent claims that do not include a particular limitation and the rewriting into independent form of dependent claims that do include that limitation. Id. The Court stated that equivalents are presumptively not available with respect to that added limitation. Id. The Court further explained, however, that Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 344 F.3d 1359 (Fed. Cir. 2003) (en banc) ("Festo II"), requires consideration for whether this presumption is rebutted.

The Court vacated the judgment of infringement under the doctrine of equivalents and remanded to the district court to consider whether Honeywell can rebut the presumption of surrender of equivalents. As explained in Festo II, the presumption can be rebutted by showing: (i) the alleged equivalent would have been unforeseeable at the time of the amendment; (ii) the rationale underlying the amendment bore no more than a tangential relation to the equivalent in question; or (iii) there was some other reason suggesting the patentee could not reasonably have been expected to have described the alleged equivalent. 344 F.3d 1359, 1368 (Fed. Cir. 2003).

2. The dissent

Judge Newman dissented to the decision on estoppel. She contended that under §112, fourth paragraph, a dependent claim rewritten into independent form is a claim that has never been amended, and, thus, its scope has never been changed. Because the claim scope has never been amended, it cannot be asserted to have had a narrowing amendment made to it and be subject to the estoppel principles of Festo. 370 F.3d at 1147.

In her dissent, Judge Newman challenged the majority's reliance on the passage in Festo (reproduced above), which the majority purports to support its position on rewriting a dependent claim into independent form. Judge Newman argues that the relied upon passage does not hold what the majority says it holds. Judge Newman explains that the Supreme Court said the criterion is whether the § 112 amendment was a narrowing amendment, stating that "it may be true in some cases" that an amendment under § 112 does not trigger prosecution history estoppel. Id. at 1150.

Judge Newman further distinguished prior Federal Circuit decisions in Deering Precision Instruments, L.L.C. v. Vector Distribution Sys., Inc., 347 F.3d 1314 (Fed. Cir. 2003) and Ranbaxy Pharms. Inc. v. Apotex, Inc., 350 F.3d 1235 (Fed. Cir. 2003). In Deering and Ranbaxy, the dependent claims rewritten into independent form contained further limitations on an element that had been recited in the original, rejected independent claim. Judge Newman distinguished these cases on the ground that in this case, the claimed inlet guide vanes feature in the dependent claim was not present in the independent claim.

Judge Newman concluded her dissent with a discussion on the challenge to patentees. She noted that little is left of access to infringement by equivalence. She speculated that future applicants may attempt to obtain access to the doctrine of equivalents through avoiding dependent claims. The Judge lamented that patent applications will cost more, and examination will take longer because dependent claims help to organize the claims and make them easier to understand. She observed that the losers are those patentees who had no reason to foresee the holding of this case, and future patentees who will have to cope with it.

3. The follow-up

Honeywell has filed a petition for writ of certiorari to the U.S. Supreme Court. On November 1, 2004, the U.S. Supreme Court asked the U.S. Government to file a brief in connection with the petition for writ of certiorari filed in this case.

If the Supreme Court does not grant cert, the case will be remanded to the district court for consideration of whether the presumption for estoppel is rebutted, under the factors of Festo II. There have been only a few Federal Circuit decision, thus far, considering the factors for rebuttal against the presumption. One decision was Festo II, itself, in which the Federal Circuit remanded to the district court to consider whether the equivalent was unforseeable, while finding that the patentee had not rebutted under the "tangential reason" test nor under the "some other reason" test. 344 F.3d at 1372-73. Another decision was Glaxo Wellcome, Inc. v. Impax Labs, Inc., 356 F.3d 1348 (Fed. Cir. 2004), in which the Federal Circuit found the patentee had not rebutted the presumption because the equivalent should have been foreseen, while also finding no rebuttal under the "tangential reason" test nor under the "some other reason" test. While Festo II and Glaxo found the presumption had not been rebutted, there has been one Federal Circuit case that did find the presumption rebutted. That decision is Insituform Tech., Inc. v. CAT Contracting, Inc., 385 F.3d 1360 (Fed. Cir. 2004) (on remand from the U.S. Supreme Court).

The Insituform court found that the patent holder successfully rebutted the Festo presumption by establishing that the amendment narrowing the claimed invention bore no more than a tangential relation to the equivalent in question. Id. at 1370. The claim was amended during prosecution, including adding the use of "a cup" connected to a vacuum source. Id. at 1369. The purpose for narrowing the claim was to avoid a prior art patent, which disclosed the use of a continuous vacuum and the creation of that vacuum from a single vacuum source at the far end of the tube. The patent holder told the Examiner that the prior art patent was ineffective when dealing with a long length of tube because it required an exceedingly large suction compressor. The patent holder solved the problem by placing the suction source closer to the resin front and thus allowing the use of a smaller suction compressor. Id.

In Insituform, the accused process used multiple cups, which the court had construed to be outside of the literal claim coverage. Id. at 1368. The Federal Circuit stated that Insituform made it clear that the difference between its process and the prior art was that its process did not have the disadvantage of the prior art process of a large compressor at the end of the liner. Thus, the Court concluded, based on the file history, that there was no relationship between the narrowing amendment and the multiple cup process. Id. at 1370.

As mentioned above, the Honeywell court remanded to the district court for consideration of the Festo II rebuttals. In Festo II, the Federal Circuit said that 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. Festo II, 344 F.3d at 1370. Interestingly, the Insituform court decided this issue on the record before it, without sending it back down to the district court. The Insituform court found that the record was fully developed on the point. Insituform, 385 F.3d at 1368.

In applying the teaching of the Insituform case to the facts of Honeywell, Honeywell will presumably argue that the reason for the amendment was that the prior art asserted against the rejected independent application claim bore no relation to the idea of incorporating the position of the inlet guide vanes into the system for controlling surge.

It is noted that in the prosecution history, when the amendment was made, the attorney for The Garrett Corporation (Honeywell) did not attempt to argue distinctions over the prior art; rather, the attorney acknowledged the Examiner's indication of allowable subject matter of the dependent claim and stated that the case was in condition for allowance because only allowed claims were still pending. In contrast, in the Insituform case, the patentee made arguments in the record for why the claims distinguished the prior art, and the Federal Circuit considered those arguments when determining whether the amendment bore no more than a tangential relation to the equivalent in question. The only file history to be considered in Honeywell is the remark about rewriting the dependent claim into independent form.

There is at least the possibility that upon further review, the courts will determine that the circumstances in the Honeywell prosecution give rise to the second rebuttal of Festo II, and that the presumption is overcome; thus, equivalents will be available, and Judge Newman's and the Patent Bar's concerns are premature.

III. Responding as a Patent Practitioner to the Apparent Direction of Honeywell -- Superficial Responses that may have only Limited Practicality

This section discusses possible reactions to the decision in Honeywell. While some of these approaches may have broad appeal, the authors suggest that these approaches are, by and large, superficial and if applied without strategy, may not really help the client in many instances.

A. Avoid Dependent Claims (Judge Newman's Dissent)

In her dissent, Judge Newman speculated that one way astute practitioners may respond to this decision is by presenting nothing but independent claims for prosecution. In other words, Judge Newman's dissent suggests that instead of presenting an examiner with the opportunity to reject an independent claim while indicating allowable a dependent claim, an astute practitioner will merely write that dependent claim as an independent claim upfront. Thus, there would be no opportunity to have a dependent claim rewritten into independent form and thereby be subject to the rule of this case.

The authors are skeptical of this approach in part for reasons of economic practicality. Presenting an examiner with, for example, 10 independent claims will add significantly to the expense of the patent application. Each independent claim over three currently costs $200 each (up from $88 each just recently, and likely to further increase in the future). To file 10 independent claims would cost $1,400 in excess claim fees alone, not including the base application fee. For clients with large patent portfolios, this approach, if applied across the board, and not strategically, will lead very quickly to skyrocketing intellectual property budgets.

Further, based on the experience of these authors, a practice of filing a patent application with many independent claims will irritate many examiners. As Judge Newman pointed out, dependent claims help to organize the claims and make them easier to understand. A large plurality of independent claims will not organize as well, and it will take examiners longer to search and apply the prior art. This practice will result in unhappy and uncooperative examiners. Experience suggests examiners will likely respond to this practice by forcing a restriction requirement, whether proper under the law or not. Examiners may also give more rejections under indefiniteness for having an undue multiplicity of claims (MPEP § 2173.05(n)).

Moreover, the authors believe that the courts may still find a way to conclude that anything but a first action allowance on the merits of all of the pending claims leads to some type of narrowing in claim scope. The courts could, for example, compare the scope of the issued independent claims to the scope of any of the application independent claims that did not issue due to, for example, a rejection over prior art. The differences in claim scope between the canceled application independent claims and the issued independent claims will give the courts a reason to find a "narrowing" and, thus, estoppel. While this possible analysis by the courts seem inappropriate, these authors cannot rule it out as a possibility.

B. Use of Means (or Step) Plus Function to Gain Access to Equivalents

In a recent publication of the ABA Section of Intellectual Property Law Newsletter, it was suggested that one at least partial response to the rule in Honeywell would be to use means (or step) plus function language under § 112, paragraph 6. The idea proposed was that because means plus function incorporates, by statute, into the literal limitations of the claims the embodiments disclosed in the specification and their equivalents, it allows one to reach an equivalents analysis while analyzing for literal infringement. It was pointed out in that article that §112, paragraph 6, requires identical rather than just equivalent function; and that, nonetheless, if the claimed function is identically satisfied, equivalent structure to that disclosed in the specification will still be covered without the burden of Festo. William Atkinson, Kirk Bradley, S. Benjamin Pleune, "The extension of Festo in Honeywell v. Hamilton Sundstrand," the ABA Section of Intellectual Property Law Newsletter, Vol. 22, No. 4, Summer 2004.

These authors are skeptical in applying this reasoning in any broad, non-strategic approach. While this approach may help under some doctrine of equivalents analyses, one has to consider whether it postures the claims in a worse position for literal infringement analysis. The article concedes that identity in function is required for literal infringement under means (or step) plus function. There will always be substantial argument for whether the function truly is identical. Only if it is concluded that there is identical function does one reach the question of equivalents of the structure disclosed in the specification. Thus, this approach would seem to be a form of attempting to solve the problem of access to the doctrine of equivalents by inserting more uncertainty into the literal scope.

Could not one, at least in some instances, be better off just claiming the structure alone, or the function alone, and not in the format of means (or step) plus function? Suppose, for example, the original claim read:

A widget comprising A and B.

Suppose the claim was rejected over prior art. In one form, it is amended to say:

(1) A widget comprising A, B, and C. (C being a structure that, among other things, according to the specification, can perform a function X.)

In another form, it is amended to say:

(2) A widget comprising A, B, and means for Xing.

Under amended claim (1), literal infringement can be found if structure literally including a C is present with A and B, without regard to whether this "C" performs an identical function X. Under amended claim (2), to find literal infringement, the function "Xing" must be identical in the accused device to the patent. Thus, an extra, problematic, step is added for evaluation under literal infringement.

Of course, another approach that may be useful is to amend the application to include both amended claim (1) and amended claim (2). It is possible that no literal infringement will be found for amended claim (1), but identity in function (Xing) is found for amended claim (2). In this instance, the literal infringement approach could afford the patent holder the benefit of some equivalents analysis, with respect to the equivalents of the structure disclosed in the specification. Of course, the patentee would need to make the differences between the claims very clear, and the patentee would need to write the application disclosure in a manner anticipating such amendments.

C. Specifically use the term "or its equivalent" in the claim

One claim practice that is sometimes used is to specifically recite, in the literal language of the claim, the claimed element "or its equivalent." In theory, such claim language would have the scope, under literal infringement, of the structure plus its equivalent structure. Unlike § 112, paragraph 6 (means plus function), there would be arguably no requirement for identity in function, unless a function were claimed as part of the structure. Indeed, if merely a "widget or its equivalent" were recited, the literal claim scope should give the patent holder the benefit of any equivalents to the widget. Thus, if faced with having to amend the claims to add the limitation of a widget, the patent practitioner could add to the literal scope of the claim, "a widget or its equivalent."

There is some old case law that suggests the weight of authority is against the use of phrases such as "or its equivalent" in describing elements of the claim. See, for example, Ex Parte Haasz, 1873 CD 170 (Comm'r. 1873); Ex Parte Phillips, 1908 CD 195 (Comm'r 1801). These very old decisions of the Commissioner suggest that these types of claims should be objected to as serving no useful purpose and being purely superfluous. Instead, a generic expression should be adopted which embraces the

equivalent structures. Ex Parte Caldwell, et al., 1906 CD 58 (Comm'r. 1905) (discussing the claim term "or the like"). A more recent decision, Ex Parte Pappas, 23 USPQ2d 1636 (BPAI 1992), is consistent with these old Commissioner decisions, by finding the claim language "or similar structure" to be indefinite under § 112, second paragraph.

Nevertheless, despite these decisions, a search of U.S. patents that have issued within the last 15 years shows that some patent examiners are allowing the use of this language in claims. See, for example, U.S. Patent No. 4,804,144 ("a siphon tube or its equivalent"); and U.S. Patent No. 4,842,617 ("a rate of from 1.0 - 20 lbs. per 8,000 lbs. of fuel oil or its equivalent").

The authors believe that this claim technique will not be successful in avoiding the rule of Honeywell. The PTO cannot be counted on to consistently allow the usage of this type of claim terminology. Furthermore, it is uncertain how the courts would treat such language.

These authors also speculate whether, to recite this type of language in a claim, it would be necessary to have literal support in the specification for the words "or its equivalent." Also, if this language is called out in the specification, but then not recited in the claims, would there be a risk of dedication to the public of unclaimed subject matter (the equivalents of the structure)? If this language is not called out in the specification, is there risk of a new matter problem to literally claiming the equivalents?

IV. Resting More Easily in the Wake -- Managing Patent Prosecution in View of the Federal Circuit

Positions taken by the Federal Circuit with respect to such decisions as Festo, Honeywell, Deering and Ranbaxy, indicate that the Court assumes, in order to maintain maximal access to the doctrine of equivalents and broad literal scope, that the following are true:

1. Clients will accept a substantial increase in the cost of patent applications, due to the need for excessive development of specifications to include all alternate, foreseeable, equivalents and alternatives within the disclosure;

2. The attorneys do not have a time pressure requirement with respect to completion and filing of disclosures due to bar dates or potential client disclosures;

3. Patent holders have resources available to be directed to the process of developing a variety of alternatives and all arguably foreseeable equivalents to preferred embodiments or portions of preferred embodiments for addition to patent applications when initially written; and

4. That patent attorneys, when the patent applications are written, have a complete and perfect understanding of the prior art and a complete and

perfect understanding of how the examiner will choose to interpret and apply the prior art.

Current experience of almost any patent practitioner tells us that none of these assertions is true. Yet, the Federal Circuit's decisions indicate clearly an assumption to the contrary. For example, in recent cases such as Phillips v. AWH Corp., 363 F.3d 1207 (Fed. Cir. 2004) (to be reheard en banc, 376 F.3d 1382 (Fed. Cir. 2004); and C.R. Bard Inc. v. U.S. Surgical Corp., 2004 WL 2414612 (Fed. Cir. October 29, 2004), the Federal Circuit is limiting literal claim coverage to cover only the illustrated embodiment. In other cases, such as International Rectifier Corp. v. IXYS Corp., 361 F.3d 1363 (Fed. Cir. 2004); and Chef America, Inc. v. Lamb-Weston, Inc., 358 F.3d 1371 (Fed. Cir. 2004), the Federal Circuit is being so strict on the literal interpretation, that even the patentee's illustrated embodiment is being excluded from literal coverage. Because managing theses types of issues requires more description of alternative embodiments, the Federal Circuit must be assuming that the above four points are true.

With respect to estoppel from using the doctrine of equivalents, the Supreme Court has made it clear under Festo II that if the equivalents are foreseeable, the patentee will not be entitled to a finding of infringement, unless it can be established that the amendment narrowing the claimed invention bore no more than a tangential relation to the equivalent in question (which the patentee will not know when making the amendment). Thus, in order to cover foreseeable equivalents, the patentee must rely on literal coverage; that is, the patent applicant is charged with anticipating, describing, and claiming all possible foreseeable equivalents when the patent application is filed in order to literally cover them. Again, to manage this issue requires time, economic investment, and perfect knowledge of what is considered foreseeable, which the Federal Circuit apparently assumes should be available.

Given: (a) the difference between the assumptions about patent practice built into the positions taken by the Federal Circuit and actual experience; and (b) that the Federal Circuit holds the advantageous position of decisional authority, it is apparent that efforts at boxing with the Federal Circuit by trying to develop formulated prosecution techniques to preserve equivalents, and thus claim scope, will likely continue to fail. For example, as mentioned above, the approach taken by the patent prosecutor with respect to prosecution of the patents at issue in Honeywell would have been a perfectly reasonable approach in response to Festo, given the direction of that decision, in spite of the Federal Circuit's comments in Honeywell to the contrary. That is, in follow-up to Festo, a reasonable position taken by the patent bar would have been that dependent claims considered allowable by the Examiner in the first office action could be written in independent form with complete retention of rights under the doctrine of equivalents.

This position followed from the logic that each claim, independent or dependent, stands on its own. Thus, it was reasonably believed that there should have been no substantive difference between a dependent claim rewritten in independent form and the identical independent claim initially offered in the application. The Federal Circuit showed that this fully reasonable and predictable response to Festo was inappropriate for retention of access to the doctrine of equivalents, at least as a matter of right; and the patent holder is left with the unpredictable issue of trying to prove rebuttal of the

estoppel. Of course, it remains to be seen whether the second rebuttal of Festo II will eventually be found in the Honeywell prosecution.

As indicated by the above discussions, these authors conclude that given the present trend of cases (with the possible exception of emerging technologies), it will be very difficult to predict whether any approach using "old style" prosecution practices will ensure that the Federal Circuit will find rights under the doctrine of equivalents. A strategic approach to obtaining desired claim scope, then, will at least require more effort at: (a) development of an initial claim set within foresight; (b) development of claim formats less likely to require amendments; and (c) development of prosecution records consistent with Festo II rebuttals when amendments are made.

A. Consider the Strategy of Dependent Claims.

In general, there should be a strategic purpose behind each and every claim in a patent application. It is apparent that more strategic consideration is needed with respect to the selection of topics for dependent claims.

In general, there are two viable strategies behind dependent claims:

1. Doctrine of claim differentiation; and
2. Testing the waters for allowable subject matter beyond the scope of the claim from which the dependent claim depends, for example the independent claim.

The first purpose, a very specific purpose, is readily addressed. It is an effort to provide a limitation in a dependent claim in order to show that limitation should not be read into the independent claim. The approach can be used to inhibit a literal interpretation of an independent claim that is unduly narrow.

In general, if claim differentiation is the strategic direction for the dependent claim, and the dependent claim is a narrowing of a limit present in an incorporated claim, as opposed to an additional limit added to that referenced claim, then it would be best to write the specification to allow for at least one alternative to that specific dependent claim. Alternatives to dependent claims can be foreseen at the time the patent application is written, so that at least one alternative, and preferably more, can be described.

When the purpose of the dependent claim is to further test the limits of patentability, beyond the independent claim, typically one of two situations is presented. In the first, a similar situation to the described scenario for claim differentiation, the dependent claim further limits an element present in the claim from which it depends. In this instance, the added specificity is in order to see if the examiner will bite at that specificity for allowability over the art. In the second instance, the additional limit is an added new element to the claim from which it depends, as opposed to a narrowing of an element present. In this instance, the purpose remains the same, to test whether the examiner will bite at allowability. The basic strategy, then, of the patent attorney with respect to these types of dependent claims is to see where the examiner places a limit on "obviousness" objections with respect to prior art.

When a dependent claim is being written for this type of purpose, it needs to be approached as if it was being written as an independent claim, with a different theory of patentability than the original independent claim. This approach means that the dependent feature needs to be written with a strategic breadth similar to what it would be given, if the patent attorney and inventors considered it as the original definition of the invention. Consideration of strategic breadth of the dependent claim is needed because once the examiner recognizes the dependent claim as allowable, and the claim is rewritten in independent form, it is, in fact, the new definition of the invention. It is as if the patent application were originally directed toward that breadth in the first instance. To ensure that the breadth of literal interpretation is as desired, when enforcement occurs, it is necessary to write the patent disclosure around a strategy that the subject of the dependent claim, in combination with the limits of the independent claim or otherwise, is indeed one of the inventions. This ensurance of claim breadth would require a disclosure around that dependent claim feature that would have multiple layers of definition including broadest, intermediate, and specific definitions, as well as provision of discussions of foreseeable alternatives or equivalents.

B. Consider reformatting the claim, once the dependent claim is recognized as patentable

Once a dependent claim is recognized as patentable, but the independent claim or series of claims from which it depends is not, it is appropriate for the practicing patent attorney to consider, in addition to writing the dependent claim in independent form, crafting a new, broader, independent claim directed to the inventive subject matter as now recognized by the examiner. Again, the examiner has taken the position that the limitations written in the independent claim do not define patentable subject matter over the art. To carry those same limits into the overall combination claim may not be necessary for defining patentable subject matter because these limits do not necessarily add to the reasons the examiner allowed the claim.

When this rephrasing of the invention is done, it will be desirable in some instances to avoid using the same element definitions or phrases that were provided in the independent claim. This avoidance of definitions and phrases used in the independent claim is desirable because the Honeywell Court has told us that there would be no automatically available doctrine of equivalents for those previously phrased limits anyway, and because we cannot expect a rule of interpretation that would have language given a different scope or interpretation in different claims. Thus, as part of a dependent claim strategy based upon the idea of an additional invention being defined, it would be appropriate to set up the specification that allows for the focusing on that feature, as the invention, with a broader definition elsewhere.

C. If the disclosure includes more than one invention, begin with multiple filings in the United States

Especially with respect to increasing application fees and prolonged time periods between the filing date and a determination of whether product direction warrants escalating investment, there may be a trend in the U.S. toward including more than one invention related to a given embodiment or product in a single application. A practice of

this type generally involves identifying the various alternate inventions in dependent claims and then deciding whether to file independent claims in future divisional applications focused on these various inventions (that do not have the same limitations as the original independent claim). In this way, the initial examination can be used to help identify the PTO reaction to these "dependent" inventions and also the PTO position regarding relevant prior art, while avoiding initial escalating of fees. Then, at a future point in time when the level of investment can be better understood, divisional applications are filed with independent claim focus on these multiple inventions.

Given the issues identified herein, it may be preferred to file multiple applications at the initial filing date, with separate independent claims, not crafted with the same limits and the same phrasing to address the different inventions. Then, each independent claim would more likely be interpreted as free from the prosecution history of the others, as well as the potential effect of estoppel issues.

D. Consider having patents written and prosecuted by the same small group of individuals, in close communication regarding strategy, examiner positions, prior art, etc.

It is apparent that the number of issues with the Patent Office are exacerbated, when the patent applications are written by different attorneys who do not all have the same knowledge and understanding of the prior art issues. If all of a company's patents in a given subject area are written by the same attorney or only several attorneys, and these attorneys are charged with regular interactions with the same examiners over patent specification language, claim language, prior art interpretation, etc., the built-up knowledge will facilitate prosecution with fewer rejections, amendments and thus estoppel risk.

The following example shows the effect of this. Attorney 1 writes patent A in subject area B that prosecutes before Examiner 1 with respect to prior art X.

When the same Attorney 1 writes the next patent A' in subject area B, that attorney expects to be before Examiner 1 and to be evaluated on the basis of art X again, plus potentially some additional art. Lessons learned during the prosecution of the first patent should be applied in the writing and prosecution of the second to limit the likelihood of similar issues and rejections with the Examiner, and thus similar risk of estoppel.

E. Avoid problematic language

Certain types of claim terms are more likely to lead to issues with prior art than alternatives. A particular type of claim limit likely to lead to rejections is a limit written with reliance upon adjectives or adverbs for definition of limitation and prior art distinction. While sometimes the language merely raises § 112, second paragraph concerns, in many instances the rejections will give rise to an art rejection by the examiner as well, and, thus, a more difficult prosecution with respect to estoppel issues.

F. Avoid over-claiming

In many instances, prior art rejections result from a claim breadth that is substantially broader than the commercial needs of the patentee. That is, the patent attorney has "cleverly" attempted to boil the essence of the invention down to such broad terms that it applies to subjects not of interest to the patentee, and a great detail of prior art would be relevant to evaluating its validity. By drafting the claim in this form, the attorney has invited greater rejections from the examiner, based on art and a claim scope outside of the practical commercial interests of the client. An initial limitation to areas of more interest to the client decreases: (i) the risk of such rejections; (ii) the need for resulting amendments; and, thus, (iii) estoppel and rebuttal issues.

G. Develop prosecution records consistent with the Festo II rebuttals, when amendments are made

The first and third rebuttals of Festo II are somewhat problematic for the patent practitioner, when trying to create a helpful record when before the Patent Office. The first rebuttal is the argument that "the alleged equivalent had been unforeseeable at the time of the amendment." It is at least reasonable to conclude that it would be difficult to prove this rebuttal, unless the claim is directed to an emerging technology, and this proof would not occur before the Patent Office but rather, in litigation.

The third rebuttal is that "there was some other reason suggesting the patentee could not reasonably have been expected to have described the alleged equivalent." Again, before the Patent Office, there is little that can be done. Before the courts, at least in representing corporations that hold large patent portfolios, it seems that it would be difficult to prove this rebuttal in the absence of a position that the corporation and its employees are somehow extremely stupid, relative to one of skill in the art, and, thus, their justification for failing to foresee and describe an equivalent is that they lack the capacity to do so.

The second rebuttal, which is the only successful rebuttal that has been subject to Federal Circuit decision, is discussed above in reference to the Insituform case and lends itself for prosecution, record-making processes. In particular, the patent practitioner needs to be perfectly clear when amending the claim about the purpose of the amendment. The argument should be focused to the amendment that is being made and the distinctions of the claim from the prior art. In Insituform, the Federal Circuit pointed to the file history where the patentee made it clear that the difference between its claimed process and the prior art was that its process did not have the disadvantage of the prior art process of a large compressor at the end of the liner. Because this amendment bore no more than a tangential relationship to the accused process, the presumption was rebutted.

V. Some Concluding Thoughts

The logic of Honeywell Int'l v. Hamilton Sundstrand Corp., to date, can be read as no more than that the amendment which occurred when the dependent claim was rewritten in independent form, gives rise to a presumption of estoppel. A review of

whether the estoppel presumption can be rebutted in such circumstances has yet to be made.

Nevertheless, the trend of cases reflected by the Festo and Honeywell decisions, indicate an increasing level of antagonism by the Courts toward conclusions of infringement under the doctrine of equivalents. This trend warns the prosecutor to develop a more strategic approach toward patent application writing, claim drafting and application prosecution. A failure to heed this warning by creative strategic patent prosecution approaches will no doubt have undesired consequences.

These authors, however, do not view the Federal Circuit direction as having no redeeming value. For example, the U.S. patent practitioner will be substantially better positioned to strategically draft and prosecute patent applications with respect to these issues than foreign patent writers. Thus, if the major U.S. competition from your client is a foreign corporation that uses foreign patent attorneys to draft the initial patent disclosures, your position with respect to claim scope interpretation in the U.S. to manage competing product areas will be stronger.

Secondly, the above approaches to managing the issues of Festo and Honeywell will lead to better, stronger, more creatively written patents in the long run. These approaches will necessarily support the clients' commercial objectives.

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Articles Authored

A New Look at Global Design Protection: Strategies and Recommendations
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MSBA Advanced Patent Practice Seminar February 2004

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