

KEYNOTE ADDRESS:

**THE DOCTRINE OF EQUIVALENTS
AND PROSECUTION HISTORY ESTOPPEL**

Judge Paul L. Michel*

Good afternoon everyone. I take quite literally the title of the organization and the conference, so I'm going to try to address some topics that really are in the realm of "advanced research in intellectual property." I must say, I'm very pleased to be here for many reasons, Dr. Takenaka being one. But intellectual property lawyers are absolutely wonderful; I love them. Who else would come in out of that sunny weather to a windowless classroom? That's great dedication. I also notice that the vanquished foes have retreated from the field. By which I refer to the fact that several years ago when Judge Rader and I were pleased to be here at an earlier edition of this conference, we had a chance late one day to play tennis against two of Seattle's leading patent lawyers. They were very good players, but we held our own and as I recall we actually won the match. I noticed that as Ramsey left today he said he didn't have time for tennis this summer.

I want to speak with you just very briefly on essentially four topics. The first two have to do with the doctrine of equivalents: the substantive law, the concepts, even perhaps the philosophy underlying it. The second two portions of my talk will have to do with prosecution history estoppel, as of course a particular application of the doctrine of equivalents. I'm going to have to ask you to listen hard because I'm going to cover a fairly large number of somewhat obscure points in a fairly short space of time.

Let's begin with studying the concept. With respect to the doctrine of equivalents, I would suggest that there are three limitations, in the broadest sense of the word: outer boundaries to contain the doctrine from being applied in an excessive, inappropriate, irrational or undesirable sort of way. The first of the three is captured in the case law phrase, "allowable range of equivalents." Notice that this is an issue of law. The second range boundary or border is "what no reasonable juror could find," and of course, this relates to summary judgment of non-infringement, even of the equivalent variety. Again, an issue of law. Then the third limit is of course the question of factual, or we can almost say, technological equivalents, or what some people called equivalence in fact. It, of course, is a fact issue.

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So, right away we know the three consequences: border one and border two are for the judge and not for the jury. Secondly, borders, or limits one and two, the allowable range and summary judgment standard, involve proceedings before trial and sometime after trial but not during trial. Third, on review by the court of appeals, there is no finite or required level of deference. Therefore the degree of scrutiny and the prospects of revision or reversal of the ruling of the district judge are somewhat higher on these sorts of issues than on others.

Now let's look at that magic phrase the "allowable range of equivalents." I may refer to this later as *legal* equivalence as distinct from *factual* or *technological* equivalence, just as shorthand. I would suggest to you that in our case law there are five recently well-defined, discernable, particular limiting factors that determine the allowable range of equivalents in any given case. First is prosecution history estoppel, and I'm not going to say anything further about that now because I will double back and treat that in some detail momentarily.

Secondly, I will use the label, "the rule of *Wilson*."¹ As you know, if the accused device or process is itself in the prior art, or is merely an obvious variation of the prior art, then it cannot at law be an equivalent for the purposes of equivalent infringement. So that's the second of the five key limits.

The third, of course, won't surprise you—and the order is somewhat arbitrary, admittedly—it is what I will call the *Pennwalt*² rule. It's actually better articulated in the subsequent case of *Corning Glass*³ than in *Pennwalt* itself. It's kind of odd that you cannot tell what the holding of *Pennwalt* is from reading *Pennwalt*; you have to read a decision from several years later, but such is law. Sometimes it is called the "all elements rule," but I want to suggest to you that is clearer thinking to call it the "all limitations rule," because I think that the subsequent case law obliterates any arguments for there being a distinction—although that was not so clear for awhile.

Essentially the rule of *Pennwalt* can be stated in this fashion: *every limitation of an asserted claim that is not literally met must be equivalently met, or there can be no infringement*. So the method of analyzing possible equivalent infringement proceeds on a limitation-by-limitation basis, and if any one is missing the game is over. Again it is as a matter of law. So that's the third of the five.

¹ *Wilson Sporting Goods Co. v. David Geoffrey & Associates*, 904 F.2d 677 (Fed.Cir. 1990).

² *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931 (Fed.Cir. 1987).

³ *Corning Glass works v. Sumitomo Electric USA, Inc.*, 868 F.2d 1251 (Fed.Cir. 1989).

The fourth, I am going to call the “Rule of *Dolly, Sage and Wiener*,” after the names of three cases.⁴ I must give credit to the author of all three of these decisions, who sits in the back of the room and saves me from humiliation at tennis, my colleague, Judge Rader. I think subsequent cases articulate this rule as really an application or an interpretation of the *Pennwalt* rule, and I don’t disagree with that. I call it a separate rule because it kind of looks different as you do the analysis. The key words of all three cases, particularly the *Dolly* cases—although they are not as detailed as one might hope—are “specifically excluded,” by which I take it that our court means that if, by the language itself, by the articulation in the way it was chosen, there is sort of a negative premise, then other things are being disclaimed. Then, of course, the rule against recapturing disclaimed subject matter comes into force. If you have a violation of what I’m calling the “Rule of *Dolly, Sage and Wiener*,” once again, you cannot have equivalent infringement as a matter of law. So that is the fourth.

The fifth is a little bit of sport, a little bit more ethereal and a little more controversial, but I raise it with you because I think it is alive and perhaps even well as a doctrine or rule. It goes by the name of “Maxwell,” *Maxwell v. Baker*⁵ being the case. The way I interpret it, unlike *Dolly, Sage and Wiener*, this is really not an aspect of *Pennwalt*, nor is it a derivative of prosecution history estoppel. It is really an all-together separate though loosely-related concept. The way I would state the rule of *Maxwell* would be something like this: *Subject matter that is fully disclosed and enabled in the specification, but not claimed, will be deemed by the courts to be dedicated to the public, to be placed in the public domain.* All of those parts are important: it has to be fully disclosed, fully enabled and plainly not claimed. So, at the margin, we can argue about a particular case, but that’s what I’m saying is the rule.

Now a caveat to good lawyers. There’s a subsequent case called *YBM Magnex*,⁶ which seems to say—I’m putting this a little crudely—that *Maxwell* didn’t really mean what *Maxwell* said. Don’t believe it! I am not saying take my word for it; I will simply cite the rule of *Newell*,⁷ that a subsequent panel doesn’t get to modify the decision of a prior panel, only the court *en banc* may do so.

⁴ *Dolly, Inc. v. Spaulding & Evenflo Cos. Inc.*, 16 F.3d 394 (Fed.Cir. 1994), *Sage Products, Inc. v. Devon Industries, Inc.*, 126 F.3d 1420 (Fed.Cir. 1997), *Wiener v. NEC Electronics, Inc.*, 102 F.3d 534 (Fed.Cir. 1996).

⁵ *Maxwell v. Baker*, 86 F.3d 1098 (Fed.Cir. 1996).

⁶ *YBM Magnex, Inc. v. International Trade Commission*, 145 F.3d 1317 (Fed.Cir. 1998).

⁷ *Newell Cos., Inc., v. Kenney Mfg. Co.*, 864 F.2d 757 (Fed.Cir. 1988).

Secondly, *dicta* in a subsequent case certainly cannot overcome the holding of a prior case. So I rest on those grounds for saying, *YBM Magnex* notwithstanding, *Maxwell* is alive and, I think, well.

We have five legal limits on the allowable range of equivalents, so we have a lot of potential for summary judgment before trial, or a JMOL (judgment as a matter of law) to be granted at the end of the plaintiff patentee's case or perhaps at a later stage, after a jury verdict finding equivalent infringement.

The second thing to notice in this survey of the terrain is that the *Pennwalt* rule actually has application in the analysis of the jury, as well as in pre-trial phases by the judge. It always surprises me how many times I see jury instructions where there is no *Pennwalt* element-by-element instruction included, or what is included is so garbled as to be utterly unintelligible and insufficient under the *Pennwalt* case and subsequent cases interpreting it.

The third thing that we should notice is that there is a quandary here, because normally pre-trial issues that are matters of law for the judge can be done with little or no evidentiary hearing. Of course for a preliminary injunction we still may have a mini-trial, half a day, or perhaps two, but almost never longer. One way of blocking the assertion of infringement under the doctrine of equivalents is to argue that the accused product—let's say I'm defending the accused infringer—is merely an obvious variation of the prior art. How can I prove that in summary judgment papers? Maybe in a very clear case, an affidavit or deposition transcripts could do it. However, in some other cases, you might have to have a mini-trial that is an aspect of what later will be a summary judgment motion, I think. So we have some interesting procedural variations here.

Now, part two. I am still talking about the doctrine itself, not prosecution history estoppel. How to define, "What's the test?" Some of my colleagues, including the one here, have gone to great effort to come up with a verbal formulation that works better than what the Supreme Court, kind of in a hurry, bequeathed to us in the 1950s in the *Graver Tank*⁸ case, which, of course, we go by the shorthand *function, way and result*. However, in *Warner-Jenkinson*,⁹ the Supreme Court was not as enthusiastic about our alternative verbiage. In my reading, they acknowledged that *function, way and result* was not crystal clear, either. I always find that usually the function and the result are one in the same, are really not controverted. So then you have this sort of metaphysical question of: Is the way substantially the same, or is the way somewhat different? It really becomes hard to operate on a rational plane to answer that kind of question.

⁸ *Graver Tank v. Linde Air Products Co.*, 339 U.S. 605 (1950).

⁹ *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*, 520 U.S. 17 (1997).

So, the whole definition of when do you have equivalence—this is, of course, as a factual matter in the eyes of the jury or the judge on the bench, no longer part of a pre-trial state. So, what to do? In my view, in *Hilton*¹⁰—and of course the Supreme Court's version of the same case is known as *Warner-Jenkinson*—and also the Supreme Court's *Graver Tank* decision, considerable emphasis is placed on the concept of *known interchangeability*. If the substituted widget was known to be interchangeable with the claimed widget, then you probably have equivalent infringement. Of course, *Warner* also settled the issue of the time at which it has to be known to be interchangeable, and we now know, rightly or wrongly, that it is at the time of infringement, not the time of the patent filing.

So, where does this leave us? It seems to me that one question we might ask is whether all of this business about known interchangeability could be restated as a rule that would sound like the rule of obviousness. For example, we can ask ourselves, "Does it mean that the substituted element in the accused device has to be an obvious variation of the claim limitation?" It is sort of like obviousness, but a little bit different. In the obviousness-type double patenting, as our friend John Whealan¹¹ can well recall, we have some very interesting tests, including the one-way and the two-way obviousness tests.

I wonder if we might not someday evolve a doctrine that will be a kind of two-way obviousness test. Of course, the first way would be whether the accused device's particular element in question is itself merely an obvious variation of the prior art, the prior art compared to the patent. Because, as we agreed earlier, if it is, there is no equivalent infringement, end of analysis.

Then stage two, the flip use of the obviousness concept would be: even if the accused element is within the range of legally allowable equivalence under the first type of obviousness test, is it an obvious variation of the claim limitation? If it's not, as a matter of law, then no doctrine of equivalents. That is not the law of today. It is just a theory that I'm throwing at you to try to stimulate a little bit of debate.

As I said, there are a lot of procedural tangles and we don't quite have time to pursue them now, but they include whether you have some sort of trial before the trial. Now I have made a proposal along this line, in the course of a speech about a year ago to the New Jersey Patent Law Association. So if anybody is interested in pursuing the details—"What is he talking about? Why does he think that?"—there is a little more coherent version of this available from that occasion. I know some in this room have read that.

¹⁰ *Hilton Davis Chemical Co. v. Warner-Jenkinson Co.*, 62 F.3d 1512 (Fed.Cir. 1995).

¹¹ Deputy Solicitor, United States Patent and Trademark Office.

Let's now turn to part three of our tour together, and focus on prosecution history estoppel, particularly in light of *Warner-Jenkinson*. The first thing I want to suggest is that we have to do some very serious categorization if we are going to do a serious analysis that's logical and consistent with case law under prosecution history estoppel as it is now articulated in all the critical precedents.

The first thing we have to ask, and there are really five key questions, is: "Is the amendment compelled by an examiner's rejection, or is it purely voluntary?" Right away you have to decide between category A or category B, and certain things may flow from that. Question number two: "Is the amendment a narrowing amendment, or not?" If it is a broadening amendment, obviously prosecution history estoppel goes out the window. If it is what I call an equal amendment, then it's hard to see why it would be logical to say that equivalent infringement wouldn't be available. If it is a narrowing amendment, that is a different story. So, question two, the second categorization: is it narrowing or not. Question three—now I'm particularly talking about *Warner*: "Is the reason for it explained?" Can you look in the prosecution history and find the reason explained? That is question three.

Question four. If the reason is explained, you have to categorize it: "Is it a prior art-related reason or is it not?" Then there are sub-questions. If it is not a prior art reason, is it still a patentability-related reason? Then the second sub-question, or the consequence, if it is either a prior art-related reason or a non-prior art but still patentability-related reason, then it seems to be that prosecution history estoppel arises; then we get to the question of what is the scope of that estoppel. There seems to be basically two choices—and I think they are before our court now and even implied in question three that was circulated to the parties and potential *amici*—it's essentially a choice between what I'll call a *total* bar and a *partial* or *flexible* bar. That's a question that the *Festo*¹² decision may answer; it's certainly a question in the case.

Then question five of these broad categorizations: "If the amendment is unexplained, then we know from *Warner* that you have to give the patentee a chance to explain what the purpose or reason was." And the Court remanded three cases to us in the wake of *Warner* itself, essentially for that reason. Now, of course we know that if the record itself does not show the reason and the patentee can't prove the reasons, then the Supreme Court has dictated that the reason must be at that point conclusively—no longer rebuttably—but conclusively viewed as being of no equivalents allowed, because it is assumed to be a prior art-type reason, a fully estopping-type reason. Then, if the patentee can, at a hearing years later, prove an explanation for the reason, then you have to go back to the earlier part of my theory

¹² *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co. Ltd.*, 172 F.3d 1361 (Fed.Cir. 1999).

and analysis, and go through the same steps again, starting with question four.

So, this brings me to the fourth aspect of prosecution history estoppel. If you look at *Hughes-Warner*,¹³ 1983, and *Hughes II*,¹⁴ 1998, I think you can say that the rules can be expressed as follows: The extent of the surrender decides the scope of estoppel.

What I want to try to focus on now is a methodology for lawyers, and also for judges, in an analysis where it's not just about lawyers using the same tools, but trying to reason with the same sort of logic. What I want to suggest is that there are two ways of pursuing the issue. One is to emphasize logic and the other is to emphasize language. I don't want to see *dicta*, because it is not always so clear that it is a *dicta*.

You get a different answer, I suggest, depending on which approach you take. Now, if you decide there is a total bar of equivalents any time that prosecution history applies, then there is a question about why it applies. One possible answer would be because there might be a non-patentability reason for the amendment. At least, so the Supreme Court says. As for the patent prosecutor, how many times has he proposed a narrowing amendment when it has nothing to do with it? I am not sure what the Supreme court had in mind about a non-patentability reason. What would it be? I am a little confused about it.

Okay, so, this is the question: What about the distinction it made up between patentability reasons that are other than prior art and patentability reasons that are prior art, because in the latter category the opinion of the Supreme Court seems to place the question of obviousness. Well, I would have thought obviousness was a prior art related non-patentability. So again, it is a little hard for me to figure out where it was pointing us. Maybe it is too hard. Certainly, it is hard, I admit that it must be very hard for it only does these things once every five or ten years, while we do it once a day. We won on practice but it's hard stuff.

Then we have a few other loose ends: what if it is a voluntary amendment—and what do you mean, a “voluntary amendment,” anyway? If it is a specific rejection that says, “I am rejecting your claim because of the third limitation: it's too broad, and you are out of here for obviousness,” and I then change the third limitation to make it narrower... Well of course, that is not voluntary, it is directly in response to final rejection. What about if the examiner cites a whole bunch of arts and says, “I think you have one small problem here: do you really mean your first problem, one-twelfth of a problem, or a third of a problem...?”

¹³ *Hughes Aircraft Co. v. United States*, 717 F.2d 1351 (Fed.Cir. 1983).

¹⁴ *Hughes Aircraft Co. v. United States*, 140 F.3d 1470 (Fed.Cir. 1998).

One word I have not mentioned I do not believe, is *surrender*. If you look at all of our case law, certainly starting in 1983 and right through *Litton* and *Hughes* and the panel version of *Festo* (of course now vacated), you can find a major case every year. I would suggest that in every one of those cases is the critical consideration that's in every estoppel analysis: how much subject matter was clearly surrendered by the patent prosecutor? So the law of surrender seems to be the heart of the estoppel analysis from 1983 through late 1999, and indeed even into the spring and summer of 2000. Of course, *Festo* remains to be decided. So whether that law gets changed, or changes in a positive way, is yet to be seen. Time will tell.

The logic to my way of thinking is that if you can't tell the reason for a surrender, a narrowing amendment, then you have to have total estoppel, because there is nothing by which you can measure the surrender if there is not some prior art or some other express consideration. People understand this, but whether that means that an explained amendment equally should have a total bar is not so clear.

Once again, I go back to what it was that the Supreme Court amended. As I read the opinion—and maybe I am misreading it—you have to decide for yourself whether the author seems to believe that, during the course of the communication back and forth between the examiner and the patent prosecutor, they were negotiating not only about the scope of liberal coverage but also about the scope of coverage under the doctrine of equivalents. I can attest that I am not an engineer or scientist; I was not a patent lawyer. I have not yet found a single patent lawyer who will admit to having negotiated with the examiner over equivalent coverage. I've talked to a lot of former examiners—maybe they're not a representative sample because they are just people I happen to know—and I have not found one yet who will admit to having negotiated with the prosecuting attorney over the possible range of extra protection under the doctrine of equivalents, beyond literal scope. Is that what the Supreme Court had in mind? It is hard for me to figure out.

They just wanted to start with estoppel questions rather than with meta-physical questions such as: can you sensibly, rationally, and permanently better define prosecution history estoppel in isolation from other limiting doctrines? For example, I think you can make some judgments about our courts in the extent that they may tend to rely more on the *Pennwalt* way so that the doctrine of equivalents is not excessively extended. I think, as the *Warner* opinion put it, courts may have a little more faith in prosecution history estoppel. So perhaps we need some integration of how these tough concepts fit together; at least, this is the theory that I throw out.

The issue we have to consider, is whether defining either prosecution history estoppel or the *Pennwalt* rule can afford a more helpful, reliable, consistent, and more prominent sort of isolation from a better analysis of the underlying doctrine of equivalents itself. The very thing that we try to do in *Hilton*, where we came up with this verbal formulation of *insubstantial change*, was better than *function/way/result*.

So now we have to start all over again. I suggest to you that we need a more thorough, penetrating analysis of the legitimate purposes of having a doctrine of equivalents in a claim-based system. More specifically, we need a system that emphasizes notice to reasonable competitors, and designing around as a lawful, socially beneficial activity. What is the scope that the doctrine should have? How should it be defined? I think that if *Festo* does include total bar versus partial bar where there is estoppel, then we'll have a more complete and permanent answer to that and related questions.

I think it's going to require a better look at why we have the doctrine. You can go back and look at *Graver*. It is a very unintegrated decision, not just between the majority and the dissent, but even within the majority opinion there are largely inconsistent interpretations right below the surface.

What about the other cases? *Graver* relies on *Sanitary Refrigerator*,¹⁵ *Warner-Jenkinson* relied heavily on *Exhibit Supply*,¹⁶ and so on. In all of those cases, you have the problem that I talked about earlier: what is the proper language to articulate a rationale, for deciding the particular case at hand the way it was decided? If you can discern that, you have to be very cautious about relying on all the dicta in a Supreme Court or federal circuit opinion.

That of course goes back to the point that I looked at earlier concerning the question, do you look at the logic of the decision in light of its facts as well as its language, or do you concentrate mostly on the language, even if it is a pure *dicta*, and give extrapolation? They are very different approaches. I have gone through prosecution history estoppel cases, and I can find in our court and the Supreme Court different outcomes, depending on the starting-out form. So, the starting-out form is very important.

The last consideration I want to suggest has to do with philosophy. The doctrine of equivalents is in origin and essential nature in equity. It is the old English judge wearing the "fairness hat," not following the type of the rule. It is the "hair" which creates the doctrine of equivalents, that sustains it through *Graver* and *Warner*, and now *Festo* and so forth. Of course equitable law is made by judges, not in regulations or in statutes. It is therefore to be changed by judges, and more freely than other areas of law. It raises a question: will the scope of the doctrine of equivalents, or for that matter the limiting doctrine of prosecution history estoppel, change as the membership of the Federal Circuit changes from one era to another?

When we talk about consistency and predictability as judicial and legal virtues, there are two dimensions in which you can measure that kind of predictability. First you can say that the rules ought to produce predictable outcomes over a range of varying facts. I agree with that, because of course many cases are significantly different than others, and if the rule does not

¹⁵ *Sanitary Refrigerator Co. v. Winters*, 280 U.S. 30 (1929).

¹⁶ *Exhibit Supply Co. v. Ace Patents Corp.*, 315 U.S. 126 (1942).

have a predictable result in a range of facts, then it is a rule that cannot do anything except litigate every dispute. But of course we cannot do that, because in principle our system can only review 230 patent cases in a year. There must be tens of thousand of disputes and potential disputes, and most will be solved by opinion letters written by good lawyers, like the men and women in this room, rather than by judges. There are not enough judges to decide all these disputes. Most patent disputes are actually decided by you men and women, not by judges. There will never be enough judges, compared to the universe of potential cases. So, then my question is whether it is not even more important to have predictability over time. Will the doctrine of equivalents be the same in the next generation?

Once our court issues decisions and opinions in *Festo*, will everything be clear? I want to suggest to you that it will not. For example, the deals with prosecution history estoppel do not really clarify *Pennwalt*. Furthermore, it certainly does not deal with *Maxwell* or many of these other issues that we have previously touched on. Even more than that, the *Festo* case has not come up with a specific frame. Rather, it focuses somewhat on isolation of prosecution history estoppel. I believe that until we get a better sense of the legitimate purposes of the doctrine of equivalents we will never be able to come to a predictable, consistent and rational definition of prosecution history estoppel. The two things have to go hand in hand.

I will predict that a year or two after the court issues a decision on *Festo* concerning prosecution history estoppel, there will be another case, that will perhaps deal with more definitions concerning equivalent infringement—the *function* and the *result* requirements. Then perhaps we will bounce off the wall, and another year or two after that there will be another prosecution history estoppel case. The process will be the same as herding cattle into a narrower and narrower formation, over the course of four or six years, until we can actually get it right.

Thank you very much.