

**CHOOSE YOUR WORDS CAREFULLY –
POSITIONS TAKEN WHEN APPLYING FOR A PATENT MAY LIMIT
YOUR FUTURE PATENT PROTECTION**

By Alex Chartove
Akin, Gump, Strauss, Hauer & Feld, L.L.P.
Washington, DC Office

June 18, 1998

Introduction

Under the doctrine of equivalents, a U.S. patent may be infringed by a product or process that is not identical to the patented invention, so long as the product or process and the patented invention exhibit a sufficient degree of similarity. The doctrine of equivalents is intended to prevent alleged infringers from avoiding infringement liability by changing only minor or insubstantial details of a claimed invention, while retaining the invention's essential functionality. However, a patentee may not always be free to apply the doctrine of equivalents.

Under the doctrine of prosecution history estoppel, a patentee is prevented from using the doctrine of equivalents to obtain, in litigation, patent protection for subject matter which the patentee surrendered during the patent application process.¹ Amendments to the patent claims and arguments made by the patentee during the patent application process may thereby limit the range of equivalents to which the patentee is later entitled under the doctrine of equivalents. To determine whether the doctrine of prosecution history estoppel limits the doctrine of equivalents, the patent's prosecution history must be reviewed to determine whether the patentee surrendered particular subject matter by claim amendment or argument.

The relationship between the doctrine of equivalents and the doctrine of prosecution history estoppel gives rise to several basic questions. For example, under what circumstances will an amendment to a patent claim create an estoppel? If an estoppel is created, does this completely prevent the patentee from asserting infringement of the amended claim under the doctrine of equivalents? If the patentee is not completely prevented from asserting infringement of the amended claim, then what is the range of equivalents to which the patentee is entitled?

Several of these basic questions were considered in the recent decision of the U.S. Court of Appeals for the Federal Circuit ("the CAFC")² in the case of Litton Systems, Inc. v. Honeywell, Inc.³ A detailed discussion of the Litton case and the CAFC's decision is provided below. This is followed by a description of some guidelines which companies

should now consider when evaluating the question of whether, and to what extent, the doctrine of prosecution history estoppel may prevent a patentee from asserting infringement under the doctrine of equivalents.

The Trial and the Appeal

The subject patent⁴ in Litton claimed a method of coating a substrate with several layers of material. The claimed method used an ion beam from a "Kaufman-type" ion beam source to deposit material on the substrate. The accused methods used ion beams from sources that were not "Kaufman-type" ion beam sources.

At trial, the jury returned a verdict in favor of the patentee. The trial court, however, granted the alleged infringer's motion for judgment as a matter of law (JMOL). The trial court determined that: (1) the first of the two accused processes did not literally infringe the patent, but upheld the jury's verdict of infringement under the doctrine of equivalents; (2) the second of the two accused processes did not infringe, either literally or under the doctrine of equivalents. The patentee appealed.

On appeal, the CAFC reversed the trial court's grant of JMOL. The CAFC determined that substantial evidence supported the jury's findings that the accused processes infringed the patent.⁵ Following the CAFC's decision, the alleged infringer filed a petition for certiorari with the U.S. Supreme Court. The Supreme Court granted the alleged infringer's petition, but subsequently vacated the judgment and remanded the case to the CAFC for further consideration in view of the Supreme Court's decision in the case of Warner-Jenkinson Co. v. Hilton Davis Chemical Co.⁶

The Remand

On remand, the CAFC first addressed the issue of literal infringement. The CAFC concluded that the claim language "Kaufman-type ion beam source" defined an ion beam source with a cathode. Neither of the accused processes used an ion beam source with a cathode. The CAFC therefore affirmed the grant of JMOL that the accused processes did not literally infringe the asserted claims.

The CAFC then addressed the issue of infringement under the doctrine of equivalents. The patentee argued that the accused ion beam sources were equivalents of the claimed Kaufman-type ion beam source. The alleged infringer, in contrast, argued that the accused ion beam sources were not equivalents, and that admissions and amendments made during prosecution estopped the patentee from asserting any equivalents to the

claimed Kaufman-type ion beam source.

More specifically, the alleged infringer argued that since the patentee had added the "Kaufman-type" claim limitation by amendment for reasons related to patentability, protection of all equivalents of the "Kaufman-type" claim limitation was automatically barred by prosecution history estoppel. In other words, the alleged infringer's position was that if an amendment was made to claim language during prosecution for reasons related to patentability, then the amended claim language had no range of equivalents. The CAFC rejected this strict "any-amendment, no-equivalents" rule. The CAFC stated that adding a claim limitation during prosecution to overcome the prior art does not necessarily surrender all subject matter beyond the literal scope of the added limitation. Instead, prosecution history estoppel only bars the patentee from recapturing subject matter which was actually surrendered during prosecution.

The CAFC stated that the application of prosecution history estoppel depends upon the reasons for the claim amendment. For example, if a claim is amended to overcome the prior art, then prosecution history estoppel prevents the patentee from recapturing the subject matter surrendered to obtain patent protection. However, if a claim is amended for reasons other than overcoming the prior art, then the prosecution history does not necessarily prevent infringement under the doctrine of equivalents. In other words, the amendment of a claim during prosecution does not automatically and necessarily result in an estoppel.

The amendment of a claim during prosecution does, however, give rise to certain presumptions. For example, if a claim is narrowed during prosecution, then it is presumed that the patentee narrowed the claim for a reason related to patentability. If the patentee cannot show a reason for the amendment other than patentability, then it is presumed that prosecution history estoppel applies.

However, even when a claim is amended to overcome the prior art, prosecution history estoppel does not necessarily limit a patentee to the literal language of the amended claim. The limiting effect of an amendment made to a claim in response to a prior art rejection may range from great to zero.

The CAFC further noted that an amendment made to a claim for reasons other than patentability may also result in prosecution history estoppel. For example, if a patentee makes an amendment to a claim that is unrelated to patentability but which clearly demonstrates an unmistakable surrender of subject matter, then that action will prevent recapture of the surrendered subject matter under the doctrine of equivalents. Similarly, arguments made during prosecution may prevent a patentee from recapturing

surrendered matter under the doctrine of equivalents, if the arguments are sufficient to demonstrate a clear and unmistakable surrender of subject matter. If the patentee made the surrender sufficiently clear and unmistakable that the public may reasonably rely on it, then estoppel may arise even if the arguments were not necessary to overcome the prior art.

The Prosecution History

After discussing the law of prosecution history estoppel, the CAFC examined the prosecution history of the subject patent in Litton. The prosecution history indicated that, as originally filed, the claims in the patent application merely recited "an ion beam" source, and did not recite a "Kaufman-type ion beam source." These original claims were rejected as obvious under §103.

During the course of prosecution, the patentee submitted an Information Disclosure Statement ("IDS") identifying eighty-two references. The patentee separately distinguished each of these references from the claimed invention.

The examiner issued a final rejection of the claims under §103. The examiner pointed out that the patentee had not limited the claims to any particular type of ion beam source.

The patentee responded that the examiner had misconstrued the claims as broadly including a duoplasmatron ion beam source, whereas the claims were related only to a Kaufman-type ion beam source. In addition, the patentee submitted three declarations attesting to the unexpected results produced by a Kaufman-type ion beam source.

The examiner then conditioned allowance of the application on an amendment which limited the claims to a Kaufman-type ion beam source.

The patentee responded by amending the claims to replace the phrase "an ion beam" with the phrase "an ion beam produced by or derived from a Kaufman-type ion beam source." The patentee stated that this claim amendment was made to overcome the examiner's rejection under 35 U.S.C. §112, ¶2.

The examiner then allowed the amended claims.

Was the Amendment Related to Patentability?

After completing its review of the prosecution history, the CAFC addressed the issue of

whether the "Kaufman-type" amendment was related to patentability.

The patentee argued that the "Kaufman-type" amendment had been made only after the previous obviousness rejections had been overcome. The patentee characterized the "Kaufman-type" amendment as being made in response to a rejection under the second paragraph of 35 U.S.C. §112 for failure to claim what the patentee regarded as the invention. The patentee argued that an amendment made in response to a §112 rejection is not related to patentability, and therefore such an amendment should not be presumed to create an estoppel.

The CAFC acknowledged that amendments made in response to indefiniteness and enablement rejections under §112 are generally not made in response to the prior art. However, the CAFC further explained that a rejection for failure to claim what the patentee regards as the invention is generally made only as the patentee's position becomes clear during the course of prosecution. In other words, such a rejection almost always occurs only after the inventive subject matter has been previously rejected for another reason. Consequently, the CAFC found that it could not ignore the obviousness rejections which had preceded the rejection for failure to claim what the patentee regarded as the invention. The CAFC concluded that the examiner had, in effect, threatened to again reject the claims for obviousness unless the patentee restricted the scope of the claims to match the narrow scope of the arguments being made for patentability. In this context, the CAFC found that the §112 rejection "carried the same message" as the previous obviousness rejections made in response to the prior art. The CAFC therefore concluded that the "Kaufman-type" amendment had been made for reasons related to patentability and that, consequently, prosecution history estoppel applied to the phrase "Kaufman-type ion beam source."

What Subject Matter Did the Patentee Surrender?

The next issue considered by the CAFC was the scope of the subject matter actually surrendered by the patentee when the claims were amended to recite a "Kaufman-type ion beam source." According to the CAFC, the standard for determining whether subject matter has been surrendered is whether a skilled person would objectively conclude from the prosecution history that the patentee had surrendered the subject matter (either by amendment, or by argument, or by a combination of amendment and argument).

Regarding the scope of subject matter surrendered, the CAFC stated that a patentee may not recover through equivalency that which is unpatentable in view of the prior art, or that which is a "trivial" variation of the prior art. In other words, if a patentee responds to a prior art rejection by amending a claim to replace a first limitation with a second

limitation, then the patentee cannot later assert that the first limitation is an equivalent of the second limitation. Prosecution history estoppel thereby prevents a patentee from completely recapturing subject matter rejected during prosecution. In some cases, depending on the facts, an amendment may limit the patentee to the literal scope of the claims.

The CAFC further stated that if a patentee's arguments constitute a clear and unmistakable surrender of subject matter, then such arguments prevent recapture of the surrendered subject matter. Moreover, an argument made by a patentee during prosecution, including an argument made in an IDS, may form the basis of an estoppel without regard to whether the argument was made in response to a rejection or whether the prior art was cited by the examiner. In other words, a prior art reference may result in an estoppel even if the reference was not specifically cited as the reason for a rejection.

In the subject prosecution in Litton the prior art cited in rejecting the claims under §103 had disclosed a duoplasmatron ion beam source. It was in response to this rejection that the patentee narrowed its claim language from "ion beam source" to "Kaufman-type ion beam source." Consequently, the prosecution history excluded duoplasmatron sources from the permissible range of equivalents of the claimed "Kaufman-type ion beam source."

Whether the record also excluded the accused ion beam sources from the permissible range of equivalents was a more complex question. The references cited by the examiner in rejecting the claims did not disclose the accused ion beam sources, and the patentee did not amend its claims to overcome the accused ion beam sources. The CAFC noted, however, that these facts alone did not preclude an estoppel.

Some of the references provided by the patentee in the IDS disclosed ion beam sources that were similar to the accused ion beam sources. The CAFC noted that during prosecution the patentee had repeatedly referred to these references, had repeatedly distinguished these references, and had insisted that the claims encompassed only a Kaufman-type ion beam source. The patentee had demonstrated patentability by submitting declarations attesting to the unexpected results obtained from a Kaufman-type ion beam source. To confirm that the invention was different from the references, the patentee had amended its claims in response to the examiner's rejection.

Based upon: (1) the patentee's unmistakable arguments that the claims covered only a Kaufman-type ion beam source, (2) the patentee's several unambiguous declarations expressly distinguishing the invention from the references, and (3) the patentee's claim

amendment, the CAFC determined that a skilled person would reasonably conclude that the patentee had surrendered all of the ion beam sources disclosed in the references.

The CAFC acknowledged that an estoppel does not automatically arise merely because a reference is before an examiner. However, under the facts of the prosecution history in Litton, the CAFC concluded that the patentee was prevented from asserting equivalence between the claimed Kaufman-type ion beam source and any of the ion beam sources before the examiner.

How Similar Were the Accused and Surrendered Devices?

The CAFC noted, however, that the trial court had failed to make findings about the relationship, if any, between the ion beam sources before the examiner and the accused ion beam sources. More specifically, the trial court had failed to address the factual question of whether the accused ion beam sources were merely trivial variations of the ion beam sources before the examiner. If the accused ion beam sources were merely trivial variations of the ion beam sources before the examiner, then the surrender of the ion beam sources before the examiner necessarily included a surrender of the accused ion beam sources. On the other hand, if the accused ion beam sources were not merely trivial variations of the ion beam sources before the examiner, then the patentee did not surrender the accused ion beam sources by surrendering the ion beam sources before the examiner.

Because the trial court had failed to make any findings on these issues, the CAFC was unable to conclude whether prosecution history estoppel prevented the patentee from asserting that the accused ion beam sources were equivalents of the claimed Kaufman-type ion beam source. Accordingly, the CAFC remanded the case to the trial court to determine whether the accused ion beam sources were a trivial variation of any of the ion beam sources before the examiner. The CAFC instructed that if the trial court determined that the variations were trivial, then the trial court should enter judgment as a matter of law that the accused ion beam sources did not infringe under the doctrine of equivalents. On the other hand, if the trial court determined that the variations were not trivial, then the trial court should proceed with a factual determination of infringement under the doctrine of equivalents.

The alleged infringer asserted that it should prevail regardless of the triviality of the differences between the accused ion beam sources and the ion beam sources before the examiner. The alleged infringer argued that the patentee should be estopped from asserting equivalence between the claimed and accused ion beam sources because, at the time of the "Kaufman-type" amendment, skilled persons knew that the accused ion

beam sources could be substituted for the claimed Kaufman-type ion beam source. The alleged infringer argued that the knowledge of skilled persons at the time of the amendment should be imputed to the patentee, and that the patentee's prosecution arguments and amendments therefore demonstrated a surrender of all equivalents of the claimed Kaufman-type ion beam source which were known at the time of the "Kaufman-type" amendment.

In support of this argument, the alleged infringer identified a number of references presented at trial which established that the accused ion beam sources were known to skilled persons at the time of the "Kaufman-type" amendment. However, the alleged infringer was unable to identify any reference in the prosecution history which similarly established that the accused ion beam sources were known to skilled persons at the time of the "Kaufman-type" amendment.

The CAFC rejected the alleged infringer's argument as being inconsistent with the principles on which prosecution history estoppel is based. According to the CAFC, a patentee cannot surrender what the patentee does not know. The alleged infringer's argument would impute the knowledge of a skilled person to the patentee and would deem all of that knowledge surrendered. The CAFC stated, however, that when a patentee amends a claim to overcome the prior art, the patentee does not automatically surrender all substitutes to the amended claim limitation that are known at the time of the amendment. According to the CAFC, prosecution history estoppel should remain limited to the prosecution history, which history is objective evidence of the patentee's actual knowledge of the art.

The CAFC therefore vacated the grant of JMOL and remanded the case to the trial court to determine whether the accused ion beam sources were a trivial variation of any of the ion beam sources before the examiner.⁷

Conclusion

Companies seeking to maximize the protection which can be achieved using a U.S. patent, as well as companies seeking to avoid allegations of patent infringement under the doctrine of equivalents, are well advised to study the Litton case and carefully consider the following guidelines:

- Amending a claim to overcome the prior art does not necessarily result in a surrender of all subject matter beyond the literal scope of the amended claim. The scope of the estoppel can range from great to zero, depending upon the

reasons for the amendment.

- An amendment made in response to a rejection under §112, ¶2, for failure to claim what the patentee regards as the invention may be related to patentability and may result in an estoppel.
- Any clear and unmistakable surrender of subject matter may create an estoppel, regardless of whether the patentee surrendered the subject matter: (a) by a claim amendment, (b) by an argument, (c) in response to a specific prior art reference, or (d) in an Information Disclosure Statement. It is thereby possible for an estoppel to result from a prior art reference which was never cited as a basis for a claim rejection.
- If a patentee surrenders subject matter to overcome the prior art, then the patentee also surrenders protection for “trivial” variations of that prior art. A patentee may not use the doctrine of equivalents to protect that which is unpatentable in view of the prior art, or that which is a "trivial" variation of the prior art.
- A patentee cannot surrender what the patentee does not know. When a patentee amends a claim to overcome the prior art, the patentee does not automatically surrender all substitutes to the amended claim that are known at the time of the amendment. The surrender (and the estoppel) is limited only to the patentee's actual knowledge of the art, which knowledge is objectively demonstrated by the prosecution history.

Consideration of the guidelines suggested by the CAFC in the Litton Systems, Inc. v. Honeywell, Inc. decision and expressed in this article should provide companies with some useful insights into the U.S. law of prosecution history estoppel.

Biography

Alex Chartove practices in the Washington D.C. office of Akin, Gump, Strauss, Hauer & Feld, LLP. Mr. Chartove attended Brandeis University (BA, Physics, magna cum laude, 1976) and the Massachusetts Institute of Technology (Ph.D. Candidate). He received his JD degree in 1980 from Duke University Law School, and is a member of the Bars of California, New York and the District of Columbia. His practice is directed to the representation of client matters before the various federal tribunals and agencies located in Washington D.C., including the U.S. Patent and Trademark Office, the Court of

Appeals for the Federal Circuit, the International Trade Commission and the Copyright Office. For the past five years, Mr. Chartove has been the author of the “Federal Circuit Yearbook,” published by the Practising Law Institute (<http://www.pli.edu>). Mr. Chartove’s “Yearbook” provides a comprehensive summary and analysis of every patent law decision published by the CAFC during the past year. E-mail: achartove@akingump.com.

¹ In this context, the word “prosecution” refers to the process by which patents are applied for and obtained, and the term “prosecution history” refers to the written record of communications between the patentee and the U.S. Patent Office created during the patent application process.

² By law, the decisions of the U.S. Court of Appeals for the Federal Circuit are controlling in all U.S. patent disputes. See 28 U.S.C. §1295(a). The U.S. Court of Appeals for the Federal Circuit (also referred to as the “Federal Circuit,” “Fed. Cir.” or “CAFC”) is therefore generally recognized as being the most important U.S. court regarding patent law issues.

³ 46 USPQ2d 1321 (Fed. Cir. 1998).

⁴ U.S. Patent No. Re. 32,849.

⁵ Litton Systems, Inc. v. Honeywell, Inc., 87 F.3d 1559, 39 USPQ2d 1321 (Fed. Cir. 1996).

⁶ 117 S. Ct. 1040 (1997). See Honeywell, Inc. v. Litton Sys., Inc., 117 S. Ct. 1240 (1997).

⁷ In a partial dissent, Judge Newman stated her disagreement with the majority decision that an IDS, filed in compliance with the duty of disclosure, can result in prosecution history estoppel as to the complete content of all references listed in the IDS. According to Judge Newman, prosecution history estoppel is not generated by references which are merely filed and explained in an IDS, but which are not cited or relied upon by the examiner.

Judge Newman viewed the use of an IDS to create an estoppel as to references not cited or relied upon by the examiner as a major change in the law. According to Judge Newman, the consequence of this new rule was to convert into an estoppel all of the information provided in accordance with the duty of disclosure. This produced an apparently anomalous result, in which a patentee fully complying with the duty of

disclosure would suffer an increased risk that the range of equivalents would be limited by prosecution history estoppel.