RL31156

# CRS Report for Congress

## Patent Law: The *Festo* Case and the Doctrine of Equivalents

Updated July 25, 2002

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Distributed by Penny Hill Press

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Prepared for Members and
Committees of Congress

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## Summary

On May 28, 2002, the U.S. Supreme Court handed down its unanimous decision in *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 535 U.S. ___, 122 S. Ct. 1831, 152 L. Ed. 2d 944 [hereinafter *Festo*], reversing the most controversial of the holdings in the case by the U.S. Court of Appeals for the Federal Circuit (CAFC), vacating the decision, and remanding the case for further proceedings. The CAFC decision had been criticized as upsetting well-settled expectations and understandings concerning the operation of certain legal principles, namely, the doctrine of equivalents and prosecution history estoppel. The doctrine of equivalents provides that a product or process that does not literally infringe a patent can still be found to be infringing if the differences between the allegedly infringing product or process and the patented invention are minimal and insubstantial, that is, if the allegedly infringing product or process is substantially equivalent to the patented invention. The doctrine of equivalents is limited by prosecution history estoppel. Prosecution history estoppel provides that, as a patent applicant surrenders subject matter during prosecution to avoid rejection, *i.e.*, amends claims to narrow them for reasons related to patentability, the patentee also surrenders that subject matter for purposes of any infringement suit based on the doctrine of equivalents. For example, an applicant applies to patent a plastic-top table with metal legs. The examiner rejects the claim for metal legs because prior art includes a plastic-top table with rigid metal legs, so the applicant narrows the claim to distinguish it from prior art by amending it to cover a plastic-top table with collapsible metal legs folding into two parts; the patent is granted. The patentee cannot now claim that a plastic-top table with rigid metal legs is equivalent and should be found infringing, because the patentee surrendered rigid metal legs in the narrowing amendment. In the past the CAFC had applied a "flexible bar" rule which meant that, out of a range of possible equivalents, *e.g.*, a plastic-topped metal-legged table that folds differently from the patented table, prosecution history estoppel did not necessarily bar a finding of infringement under the doctrine of equivalents for the entire range. In *Festo*, the CAFC established a new "complete bar" rule which meant prosecution history estoppel would completely bar the application of the doctrine of equivalents.

The Supreme Court reversed this holding, reinstating and affirming the "flexible bar" rule as the appropriate rule and the one more consistent with the spirit of the doctrine of equivalents. At the same time, the Court affirmed the holding of the CAFC that prosecution history estoppel applies to an amendment which narrowed claims in order to satisfy any patent requirement, rejecting the petitioner's argument that such estoppel only applies to an amendment which narrowed claims to avoid prior art. The Court remanded the case for further proceedings to decide whether the amendments made by the Festo Corporation surrendered the particular equivalents at issue in the case under the "flexible bar" rule. It noted that the concerns of those who desired a clearer, "bright line" rule with regard to estoppel and equivalents would be best directed to Congress which could alter the doctrine legislatively. In the wake of its *Festo* decision, on June 3, 2002, the Supreme Court granted certiorari in nine patent cases, then vacated prior rulings in those cases and remanded them for further proceedings taking into consideration the rules announced in *Festo*.

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# Patent Law: The *Festo* Case and the Doctrine of Equivalents

On May 28, 2002, the U.S. Supreme Court handed down its unanimous decision in *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 535 U.S. ___, 122 S. Ct. 1831, 152 L. Ed. 2d 944 [hereinafter *Festo]*, reversing the most controversial aspect of the holdings in the decision of the U.S. Court of Appeals for the Federal Circuit (CAFC), vacating the decision, and remanding the case for further proceedings. Last June, the Court had granted certiorari to consider a highly controversial *en banc* opinion issued by the CAFC in the *Festo* case. This CAFC opinion had been criticized as upsetting well-settled expectations and understandings concerning the operation of certain patent law principles, namely, the doctrine of equivalents and prosecution history estoppel, in favor of establishing a supposedly clearer rule that would yield greater certainty about infringement. The Court held in favor of restoring the flexible approach, noting that the policy arguments of those who desired a clearer, "bright line" rule with regard to the doctrine of equivalents and prosecution history estoppel would be best addressed to Congress which could alter the doctrine legislatively.

## Background

The patent application process is commonly referred to as a patent prosecution. Generally, this is a non-adversarial process wherein the patent applicant submits the application, consisting of specifications and claims delineating and describing the invention, and engages in a dialogue with the patent examiner to further clarify and distinguish the invention from the prior art, which consists of existing inventions. Consequently, it is common for a patent applicant to amend the application to satisfy objections and questions raised by the examiner. The applicant must provide in the specifications a disclosure of the invention which is in "such full, clear, concise, and exact terms as to enable any person skilled in the art . . . to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention" (35 U.S.C. § 112). In the claims, the applicant must describe the invention in a manner which distinguishes it as new and non-obvious compared with the prior art, and must also describe the utility of the invention.[1]

Patent infringement occurs when a person uses, manufactures, sells, or imports a product or process covered by an unexpired patent without authorization by the patent holder. The patent holder typically will sue the alleged infringer seeking to

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[1]The requirement of novelty is found at 35 U.S.C. §§ 101 and 102; the requirement of non-obviousness is found at 35 U.S.C. § 103; and the requirement of utility or usefulness is found at 35 U.S.C. § 101.

prevent further unauthorized activities and monetary damages. Once the patent is established as valid, the court will analyze and compare literal language describing the elements of the claims in the patent with the elements of the defendant's product or process to determine whether the patent claims completely cover every element of the allegedly infringing product or process. If they do literally cover or "read on" the product or device, then there is literal infringement by the defendant.

The *Festo* case concerns the application and interplay of two long-standing principles of patent law: the doctrine of equivalents and prosecution history estoppel (also known as file wrapper estoppel). The doctrine of equivalents provides that a product or process that does not literally infringe a patent can still be found to be infringing if the differences between the allegedly infringing product or process and the patented invention are minimal and insubstantial, that is, if the allegedly infringing product or process is substantially equivalent to the patented invention. There is equivalents infringement if the elements of an infringing product or process perform substantially the same function in substantially the same way to obtain the same result as the elements of the patent claims. This doctrine evolved in the federal courts around the mid-nineteenth century and is generally acknowledged to have been first expressed and applied in a U.S. Supreme Court case in *Winans v. Denmead*, 15 How. 330, 14 L. Ed. 717 (1853). The doctrine seeks to balance the right of a patent holder to a just and fair scope of protection with the right of the public and potential competitors to know the scope of the patent protection granted to the patent holder. Potential competitors must know with fair certainty the limits of the patent grant in order to be able to innovate and "design around" the patent to avoid infringement; the patent policy seeks to encourage further genuine innovation in a given industry. At the same time, patent holders merit protection from competitors who attempt to design around a patent with minor changes to elements of an invention covered by a patent.

The doctrine of equivalents is limited by prosecution history estoppel. Prosecution history estoppel provides that if a patent applicant surrenders subject matter during prosecution to avoid rejection, *i.e.*, amends claims to narrow them for reasons of subject matter patentability, the patentee cannot later claim that this surrendered subject matter is equivalent to surviving claims in the patent. For example, an applicant applies to patent a plastic-top table with metal legs. The examiner rejects the claim for metal legs because prior art includes a plastic-top table with rigid metal legs. The applicant then narrows the claim to distinguish it from prior art by amending it to cover a plastic-top table with collapsible metal legs folding into two parts and the patent is granted. The patentee cannot now claim that a plastic-top table with rigid metal legs is equivalent and should be found infringing, because the patentee surrendered rigid metal legs in the narrowing amendment. The patent applicant could surrender subject matter by amending a claim voluntarily or at the request of the patent examiner. Additionally, the applicant could surrender subject matter by making an argument on the record to answer the concerns of the examiner without actually amending the claims. Before *Festo*, the standard for applying both amendment-based and argument-based prosecution history estoppel was whether a person reasonably skilled in the art would reasonably believe that the patentee had surrendered subject matter during prosecution. This balanced the public notice function of the prosecution history with the fair, adequate and just scope of patent protection.

In *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*, 520 U.S. 17 (1997), the U.S. Supreme Court explicitly affirmed the continued vitality of the doctrine of equivalents, but established the "all elements" rule, clarifying that the allegedly infringing product or process must be more than equivalent overall to the patented invention, rather, the doctrine must be applied on an element-by-element basis. Equivalence refers to the equivalence of a claimed element of a patented invention with an element substituted in the allegedly infringing product or process. Otherwise, an overall equivalence could expand a patent beyond its claims in a manner which effectively eliminates a particular claimed element. In the example of the plastic table with collapsible metal legs folding into two parts, assuming estoppel did not apply, a court could not just look at an item that allegedly infringes on the patent for that table, for example, a wood-top table with rigid metal legs, and find that overall the wood-top table is equivalent to the plastic table. The court would have to look at each element, the wood top and the rigid metal legs, and decide whether the wood top was equivalent to the plastic top, the rigid metal legs equivalent to the collapsible metal legs in two parts. Otherwise, a court might eventually find that all tables are equivalent to each other since they perform the same function in the same way, which would completely eliminate the significance of any distinct element.

The Court further found that prosecution history estoppel was a valid defense against infringement, but that if a patentee could demonstrate that an amendment was made for a reason unrelated to patentability, a court must consider that reason to determine whether estoppel is precluded. Where the reason for an amendment cannot be determined from the prosecution record, a rebuttable presumption arises that the reason is related to patentability and therefore that estoppel would apply. The burden of proof is on the patentee to rebut the presumption and establish a reason unrelated to patentability. In *Warner-Jenkinson*, Hilton Davis Chemical Company had applied for a patent on an ultrafiltration purification process for dyes. During prosecution the original claims were rejected because prior art existed for a process operating at pH levels above 9.0. To distinguish the invention from prior art, Hilton Davis amended the application to claim a process which operated at a pH range of 6.0 to 9.0. Then Warner-Jenkinson Company developed a process which operated at a pH level of 5.0. Hilton Davis sued Warner-Jenkinson for infringement on the theory that the process operating at a pH of 5.0 was equivalent to the process operating at a pH of 6.0 to 9.0. Because the record did not reveal the reason why Hilton Davis Chemical Company had added the lower pH 6.0 limit to the pH range, the Court remanded the case for further proceedings to determine whether there was a reason which might avoid estoppel. Per further discussion below, the *Festo* case had previously been granted certiorari, vacated and remanded by the Supreme Court for further consideration in light of *Warner-Jenkinson*.

With regard to the issue of the extent to which prosecution history estoppel restricts the doctrine of equivalents, one should note the existence of two alternative solutions, exemplified by two cases. One line of cases, leading back to *Hughes Aircraft Co. v. United States*, 717 F.2d 1351 (Fed. Cir. 1983), applies the "flexible bar" rule, under which there is a range of equivalents which may be available for a claim element, not all of which are necessarily barred by prosecution history estoppel. In the example of the plastic-topped table with the collapsible metal legs folding into two parts, literal infringement would require an identical table and

claims of equivalence with regard to plastic-topped tables with rigid metal legs are estopped. However, plastic-topped tables with collapsible legs folding into three parts, while not literally infringing because each leg is in three parts, not two, could lie within the range of equivalents because they perform substantially the same function (folding up to be easily stored) in substantially the same way (collapsible metal legs) to achieve the same object (an table that can be stored in a small space). The *Hughes* case was the first case concerning this issue which the CAFC decided after it was established in 1982. The other line of cases, leading back to *Kinzenbaw v. Deere & Co.*, 741 F.2d 383 (Fed. Cir. 1984), *cert. denied*, 470 U.S. 1004 (1984), applies the "complete bar" rule, which provides that there is no range of equivalents; the application of the doctrine of equivalents is completely barred. Although this rule provides a "bright line" rule, it can have harsh consequences for a patentee. In the example of the plastic-topped table with collapsible metal legs in two parts, not only would claims of equivalence for rigid metal legs be estopped, but also any other possible range of equivalents, such as the collapsible legs in three parts. The *Hughes* "flexible bar" rule has been followed most often over the last twenty years.

# The *Festo* Case in the Lower Courts

## Patents at Issue and Early Procedural History

Festo Corporation had two patents – the "Stoll" patent and the "Carroll" patent – concerning components of a conveyer belt system. The Stoll patent covered a device consisting of a cylinder; a piston which moved inside the cylinder and included magnets, two sealing rings, and two guide rings; and a sleeve which moved outside the cylinder and included magnets and was made of a magnetizable material, so that the movement of the piston inside the cylinder caused a corresponding movement of the sleeve outside the cylinder. The patent examiner had originally rejected all of the original claims, citing failure to satisfy the specification and claims requirements under 35 U.S.C. § 112 and also citing three patents as pertinent references. Stoll amended some claims and cancelled others in the application and also cited two patents, including arguments with the amendments that the revised claims were distinguishable from the cited patents. The amended language included the description of the sleeve as made of magnetizable material.

The Carroll patent covered a device also consisting of a piston, cylinder and sleeve arrangement. Carroll had requested reexamination of the patent to account for a prior German patent that was not of record in the original prosecution history and which called into question the patentability of the Carroll device. The claims were amended to cite a pair of sealing rings on the piston engaging the cylinder to effect a fluid-tight seal, and multiple magnets and cushioning parts on the piston. The sleeve outside the cylinder of the Carroll device also included multiple magnets which magnetically coupled the sleeve to the piston so that they moved together. The sleeve also had a gripping device mounted on it to move objects along a conveyor belt.

Festo sued Shoketsu Kinzoku Kogyo Kabushiki Company, also known as SMC Corporation, for infringement of the two patents. The district court granted Festo

summary judgment of infringement of the Carroll patent. A jury concluded that both patents were valid and found that a claim of the Stoll patent was infringed under the doctrine of equivalents. The jury found that the non-magnetizable sleeve and single sealing ring of SMC Corporation's device performed substantially the same function in substantially the same way as the magnetizable sleeve and two sealing rings of the Stoll patented device. On appeal to the CAFC, the panel affirmed the judgment of infringement under the doctrine of equivalents of the Stoll and Carroll patents.[2] SMC petitioned the Supreme Court for a writ of certiorari, which the Court granted. In the meantime, the Court had decided *Warner-Jenkinson* and thus vacated the decision of the CAFC in the *Festo* case and remanded it for consideration in light of *Warner-Jenkinson*. A panel of the CAFC affirmed most of the earlier judgment again, remanding it in part because the prior record was insufficient for the CAFC to make a determination regarding prosecution history estoppel for the Stoll patent.[3] SMC Corporation petitioned for rehearing *en banc*, which the CAFC granted. The CAFC sitting *en banc* reversed, holding that prosecution history estoppel completely barred the application of the doctrine of equivalents.[4]

## *En Banc* Decision in the Federal Circuit

### Opinion of the Court.

The CAFC asked the parties to brief the following five questions and, by an 8-4 majority, answered them accordingly:

1. For the purposes of determining whether an amendment to a claim creates prosecution history estoppel, is "a substantial reason related to patentability" limited to those amendments made to overcome prior art under 35 U.S.C. §§ 102 and 103 or does "patentability" mean any reason affecting the issuance of a patent?

   No, "a substantial reason related to patentability" is not limited to amendments made to overcome prior art, but includes other reasons related to the statutory requirements for a patent. Thus, any amendment narrowing the scope of a claim element for any reason related to such requirements will give rise to estoppel with respect to that claim element. The CAFC does not find this decision to be inconsistent with *Warner-Jenkinson*, which focused on amendments to avoid prior art but did not limit estoppel to such amendments. The rationale underlying prosecution history estoppel, to prevent the patentee from recapturing subject matter previously surrendered during prosecution, is valid for amendments made for patentability reasons other than avoiding prior art. In the instant case, the court found that the narrowing amendments made to the Stoll patent to satisfy the requirements of 35 U.S.C. § 112 were amendments made for a "a substantial reason related to patentability." The court found that

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[2]72 F.3d 857 (Fed. Cir. 1995).

[3]172 F.3d 1361 (Fed. Cir. 1999).

[4]234 F.3d 558 (Fed. Cir. 2000).

the amendments made during the reexamination of the Carroll patent were made, at least partly, to avoid the prior art of the German patent.

2. Under *Warner-Jenkinson*, should a voluntary claim amendment – one not required by the examiner or made in response to a rejection by an examiner for a stated reason – create prosecution history estoppel?

   Yes. Voluntary claim amendments should be treated the same as other amendments. There is no reason why estoppel should arise if a patent examiner rejects a claim as unpatentable, but should not arise if the applicant voluntarily amends a claim because he believes it to be unpatentable. Furthermore, this holding is consistent with the doctrine of argument-based estoppel, under which arguments made voluntarily during prosecution may give rise to estoppel if the evidence a surrender of subject matter.

3. If a claim amendment creates prosecution history estoppel, under *Warner-Jenkinson* what range of equivalents, if any, is available under the doctrine of equivalents for the claim element so amended?

   No range of equivalents is available for a claim amendment which creates prosecution history estoppel. The application of the doctrine of equivalents is completely barred. The court found that this issue of the range of equivalents available under estoppel had never been before the Supreme Court and had never been decided by it, contrary to the dissent of Judge Michel. It further noted the *Hughes* case and the *Kinzenbaw* case, with their competing rules regarding a flexible bar and complete bar, respectively. The court observed that after twenty years of experience with the range-of-equivalents issue, it rejected the "flexible bar" approach as resulting in too much uncertainty about the scope of patent protection to fulfill adequately the public notice function of patent claims. The "flexible bar" approach was "unworkable." Under the certainty of the "complete bar" approach, competitors of a patentee will be more inclined to develop innovative elements of a product or process which otherwise might lie within the uncertain range of equivalent products or processes around the literal terms of a narrowed claim, free from the fear of infringement litigation.

4. When no explanation for a claim amendment is established, thus invoking the presumption of prosecution history estoppel under *Warner-Jenkinson*, what range of equivalents, if any, is available under the doctrine of equivalents for the claim element so amended?

   No range of equivalents is available for unexplained claim amendments. Under *Warner-Jenkinson*, an unexplained amendment gives rise to a presumption that the reason was related to patentability and thus prosecution history estoppel applies against the doctrine of equivalents. Accordingly, it results in a complete bar, just as for narrowing amendments known to be made for substantial reasons related to patentability.

5. Would a judgment of infringement in this case violate the "all elements" rule of *Warner-Jenkinson*, that is, the requirement that the application of the doctrine

of equivalents is not allowed such broad play as to eliminate an element in its entirety?

This issue went unanswered; since the court found that prosecution history estoppel applied completely to bar the doctrine of equivalents, it did not reach this issue.

### Concurrences and Dissents.

There were two concurring opinions. Judge Plager considered the CAFC decision to be a "second-best solution to an unsatisfactory situation," suggesting that the best solution would be for the court to hold that the doctrine of equivalents is firmly rooted in equity principles and to allow the courts to develop a set of known factors to determine when the doctrine of equivalents would apply, thus allowing for flexibility within a predictable analytical framework. Judge Lourie responded to the proponents of the "flexible bar" rule, noting that it was not working, led to uncertainty, encouraged clever lawyers to argue infringement outside the scope of claims, and discouraged innovation. Although occasional injustices may result in allowing some copiers to avoid infringement, overall, the new "complete bar" rule would encourage innovation, lessen uncertainty and reduce litigation.

There were four opinions concurring in part and dissenting in part. Basically, the dissenters took issue with the court's resolution of issue no. 3, establishing a complete bar, "bright line" rule governing the application of prosecution history estoppel to the doctrine of equivalents. Judge Michel, joined by Judge Rader, believed that the "complete bar" rule was inconsistent with *Warner-Jenkinson* and other Supreme Court decisions; that the court's holding provided a guide to infringers, allowing them avoid infringement by making trivial modifications to claimed elements which had patentability-related amendments; and that the "complete bar" rule deprives most patentees of recourse to the doctrine of equivalents because most patent claims were amended during the prosecution. Judge Rader opined in his dissent that the new rule would completely eliminate patent protection for amended claims with respect to after-arising technology, technology which comes into existence after a patent is issued and is equivalent to the claimed invention. This would be illogical, according to Judge Rader, because prosecution history estoppel is intended to prevent a patentee from recapturing subject matter surrendered during prosecution, but by definition, a patentee could not have surrendered after-arising technology. Judge Linn foresaw an increase in the cost and complexity of patent prosecutions to the detriment of individual inventors and start-up or smaller businesses which do not have the resources to pursue lengthy, expensive prosecutions. Furthermore, there would be an increased, undue emphasis on skill in claims drafting. Like Judge Michel, Judge Linn believes that the new rule allows unscrupulous copyists a free ride by providing a guide on how to avoid infringement. Finally, Judge Newman also objected to the "complete bar" rule as a departure from the holdings of *Warner-Jenkinson* and as a rejection of long-standing Supreme Court and Federal Circuit precedent without adequate consideration and debate about the impact of the new rule.

# The U.S. Supreme Court Decision

Festo Corporation petitioned the Supreme Court for a writ of certiorari, which was granted on June 18, 2001, at 121 S. Ct. 2519, 150 L. Ed. 2d 692 (2001) (Docket No. 00-1543). In its petition for a writ of certiorari, Festo argued that the decision of the CAFC disables the congressional scheme balancing the promotion of creativity with certainty regarding the scope of the patent, noting that Congress could have enacted laws expanding prosecution history estoppel and eliminating the doctrine of equivalents if it had wanted to, but that it has not done so. The Court certified two questions:

- Whether every claim-narrowing amendment designed to comply with any provision of the Patent Act – including those provisions not related to prior art – automatically creates prosecution history estoppel regardless of the reason for the amendment; and

- Whether the finding of prosecution history estoppel completely bars the application of the doctrine of equivalents.

## Petitioner's Arguments

In its brief on the certified issues, Festo argued that narrowing amendments triggering prosecution history estoppel are limited to those made to avoid prior art or to satisfy "substantive" statutory provisions concerning patentability, and do not include amendments to satisfy requirements concerning the "form" of the applications. With regard to the complete bar, Festo argued that the Court should adhere to its traditional understanding of the reach of prosecution history estoppel, that such estoppel does not completely bar every possible range of equivalents for an amended claim element; and that the new rule would complicate patent prosecution and litigation and would injure the patent system. Festo argued that the CAFC decision departed from past precedent when it held that every narrowing amendment to satisfy patent requirements gives rise to estoppel and then established its "complete bar" rule. The petitioner alleged that the complete bar on equivalents cast doubt on many currently existing, unexpired patents that were amended during prosecution when narrowing amendments did not incur such a stringent penalty.

Festo and other critics of the "complete bar" rule alleged that a range of undesirable consequences would arise from it,[5] including:

- the drafting of narrower claims, with increased resort to litigation of doctrine of equivalents issues in infringement suits as a means of avoiding narrowing amendments which might give rise to prosecution history estoppel;

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[5]Brief for Petitioner on writ of certiorari at 39-45 and Brief of *Amicus Curiae* American Intellectual Property Law Association in support of petitioner at 13-19, *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, (No. 00-1543); James Toupin & John Whealan, *Effects of Festo Decision on USPTO Operations* (Feb. 28, 2001), at http://www.uspto.gov/web/offices/com/advisory/acrobat/ppacpres2-01.pdf.

- more arguments to overcome prior art rather than amendments, since the "complete bar" rule apparently only applies to amendment-based estoppel, not argument-based estoppel;

- more complex and expensive patent prosecutions disadvantaging smaller companies and individuals;

- more refusals to amend to satisfy claim rejections and thus more frequent appeals of claim rejections, which would burden the patent system, extend the time before patent issuance and thus reduce the term of patent protection;

- harm to U.S. efforts with respect to international harmonization of patent regimes;

- unfair retroactive application of the complete bar to the approximately 1.2 million extant patents that were issued prior to the *Festo* decision of the CAFC, which would disturb well-settled expectations concerning the operation of prosecution history estoppel to restrict application of the doctrine of equivalents, possibly even implicating the Takings Clause of the Fifth Amendment of the U.S. Constitution, according to at least one commentator;

- more reexamination requests by third-parties seeking to force amendments giving rise to a complete bar to doctrine of equivalents under prosecution history estoppel.

- filing of narrower claims, then trying to broaden them later (only narrowing claims trigger prosecution history estoppel)

- more provisional applications being filed, with more precisely drafted applications being filed later; and

- more extensive prior art searches and better disclosure (which may prove beneficial in building the body of prior art for business methods patents).

## Respondent's Arguments

The respondent argued that the CAFC holding should be affirmed because the narrowing amendments made by Festo were made to avoid prior art or were unexplained and therefore are presumed under the *Warner-Jenkinson* rule to be related to patentability. Reasons related to patentability were not limited to avoidance of prior art, especially since a patent applicant could manipulate the prosecution record by trying to characterize an amendment as merely clarifying an ambiguity rather than narrowing the scope to avoid prior art. With regard to the complete bar, the respondent argued that the CAFC adopted a rule supported in Supreme Court precedent that any subject matter outside claim language after amendment was automatically considered abandoned. The flexible bar was rightly rejected as uncertain, unworkable and a deterrent to innovation and competition. Finally, the respondent denies that any claim of reasonable reliance, that is, of disruption of settled expectations regarding the doctrine of equivalents and prosecution history estoppel, can defeat the CAFC adoption of a complete bar, noting

the alleged Supreme Court precedent for a complete bar and the realities of patent practice.

## Government's Arguments

The Federal Government filed an amicus curiae brief and was granted permission to participate in oral arguments. In its brief, the Government agreed that the CAFC correctly held that prosecution history estoppel applies to claims amended to comply with the Patent Act and not just to claims amended to avoid prior art; however, it disagreed with the "complete bar" rule adopted by the CAFC. The Government argued that a narrowing amendment to comply with any requirement of the Patent Act gives rise to prosecution history estoppel with respect to the amended portion of the claim and presumptively precludes application of the doctrine of equivalents for the amended portion of the claim. This presumption can be rebutted where the patentee shows a concrete basis, based on the prosecution history and relevant to the specific context of the infringement suit, for a non-literal extension of a claim element that was narrowed to secure a patent. The Government noted two scenarios where the presumption might be rebutted: (1) the alleged equivalent is a development of after-arising technology unforeseeable by persons of ordinary skill in the art (field of the invention) at the time of the amendment[6] and (2) the subject matter of the claim is such that it would have been impossible for the patent applicant to draft an amendment that literally encompassed the allegedly equivalent claim element while disclaiming the surrendered subject matter.

## Supreme Court Opinion

Justice Kennedy delivered the unanimous opinion of the Court on May 28, 2002, holding that any narrowing amendment made to satisfy any requirement of the Patent Act may give rise to prosecution history estoppel, regardless of whether the amendment was made to avoid prior art, but that such estoppel does not necessarily bar a suit for infringement against any equivalent to the amended claim element.

The Court noted the difficulty in precisely describing the patent claims which necessitated the doctrine of equivalents. Patent laws attempt to strike a balance between the exclusive rights awarded to an inventor for present innovation and the incentive to others to pursue innovations beyond the scope of the inventor's exclusive rights. Therefore, scope of a patent right must be clear so that the public may have notice of what constitutes an infringement on a patent and what is permissible innovation. However, language cannot always adequately capture the essence of an invention. Although the clearest and most certain infringement rule would be infringement of the literal terms of the patent, such a rule would not necessarily be the most economically efficient and desirable because it may result in the destruction of the value of a patent by the availability of equivalents. Therefore, the scope of a patent is not limited to its literal terms but may include equivalents to the claims

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[6]The notion of an unforeseeability standard for determining whether equivalents infringement is barred by prosecution history estoppel apparently was advocated in another amicus curiae brief in *Festo* and in Matthew J. Conigliaro, Andrew C. Greenberg, & Mark A. Lemley, *Foreseeability in Patent Law*, 16 Berkeley Tech. L.J. 1045 (2001).

described. The doctrine of equivalents may create uncertainty and result in more litigation about the scope of a patent, but it is more equitable toward the inventor than a literal rule. The Court noted that it had recently affirmed the doctrine of equivalents in *Warner-Jenkinson* and had commented in that case that Congress could legislate the doctrine out of existence at any time.

The Court describes the nature and role of prosecution history estoppel as a means of ensuring that the doctrine of equivalents remains linked to its underlying purpose. If the doctrine remedies the inherent limitations of language in adequately delineating the scope of a patent, then prosecution history estoppel prevents the inventor from claiming equivalents infringement where the act of making a narrowing amendment indicates a recognition of the difference between the invention claim described by the original language and the one described by the amended language. The patentee has acknowledged that there is no equivalence for innovations that fall within the scope of the original claim but outside the scope of the amended claim and the estoppel works to prevent him from regaining through litigation that which was lost through the application process.

Having reviewed the underlying rationale for the doctrine of equivalents and prosecution history estoppel, the Court considered the issues presented for consideration. It noted that although it had made clear that estoppel applies to amendments made for a "substantial reason related to patentability," it had not defined the term nor enumerated reasons, and had even suggested that an amendment for a reason unrelated to patentability might require estoppel. The Court affirmed the holding of the CAFC that a narrowing amendment made to satisfy any requirement of the Patent Act may give rise to estoppel. Although estoppel had been discussed most often in the context of an amendment to avoid prior art, this did not mean that estoppel only applied in this context. The underlying rationale, that prosecution history estoppel rebuts the inference that the proper scope of a patent was indescribable, still exists where a narrowing amendment made to secure a patent was for a purpose other than avoiding prior art.

The Court disagreed with the holding of the CAFC that prosecution history estoppel is a complete bar to equivalents infringement because a complete bar is inconsistent with the underlying purpose of the doctrine of equivalents and prosecution history estoppel. A "complete bar" rule would foreclose any consideration of what subject matter had been surrendered and whether there were equivalents to the remaining subject matter. The Court noted that even amended language may not necessarily perfectly capture the essence of an invention and therefore a patentee should not be restricted to claiming the literal language of a claim for infringement. A narrowing amendment may indicate what subject matter was surrendered but not necessarily what remains. The Court affirmed the *Warner-Jenkinson* ruling that a patentee has the burden of proving that an amendment was not made for a reason related to patentability and that where the reason is unclear or unexplained, the presumption is that the reason was related to patentability and estoppel applies. The Court then held that the patentee should also bear the burden of showing that a narrowing amendment for patentability does not surrender the particular equivalent at issue.

Since the patentee is master of his claim, the presumption is that he knows what he is surrendering when making a narrowing amendment. However, there may be reasons why the patentee could not be reasonably expected to have covered the alleged equivalent in the literal language of a claim, including the unforeseeability of some equivalents under after-arising technology. This new rule is similar to that advocated by the Federal Government. Since the record did not clearly show that the patentee had rebutted the presumption that the surrendered subject matter covered the disputed equivalent, the case was remanded. One should note that the Court also criticized the CAFC for disrupting settled expectations regarding the doctrine of equivalents and prosecution history estoppel and stated that Congress has the responsibility for changing those well-established principles of patent case law.

## *Festo*-Related Cases

On June 3, 2002, the Supreme Court granted certiorari in nine patent cases, then vacated prior rulings in those cases and remanded them for further proceedings in light of its holdings in the *Festo* case.

**Pioneer Magnetics, Inc. v. Micro Linear Corp., ___ U.S. ___, 122 S. Ct. 2322, 153 L. Ed. 2d 151 (2002).** In *Pioneer Magnetics, Inc. v. Micro Linear Corp.*, 238 F.3d 1341 (Fed. Cir. 2001), the CAFC held that a patentee's assertion that it inadvertently narrowed claims in an amendment cannot overcome the presumption that the amendment was made for reasons of patentability where the amendment was unexplained in the prosecution history. Pioneer Magnetics filed a petition for certiorari asking whether a single word that was added inadvertently to a claim during prosecution without any nexus to a statutory requirement for patentability automatically gives rise to prosecution history estoppel.

**Insituform Technologies v. CAT Contracting, et al., ___ U.S. ___, 122 S. Ct. 2322, 153 L. Ed. 2d 151 (2002).** In a non-precedential, unreported ruling, *Insituform Technologies v. CAT Contracting, Inc.*, 10 Fed. Appx. 871, 58 U.S.P.Q. 2d 1392 (Fed. Cir. 2001), the CAFC held that the "complete bar" rule of *Festo* applies retroactively to any open patent case. Insituform Technologies filed a petition for writ of certiorari, asking whether reasons for a claim amendment during a prosecution and disclosed in the prosecution history can ever overcome prosecution history estoppel as a bar to the application of the doctrine of equivalents.

**Senior Technologies, Inc. v. R. F. Technologies, Inc., ___ U.S. ___, 122 S. Ct. 2323, 153 L. Ed. 2d 151 (2002).** In an unpublished, non-precedential ruling, *Senior Technologies, Inc. v. R.F. Technologies, Inc.*, 2001 U.S. App. Lexis 4179 (Fed. Cir. March 12, 2001), *rehearing denied*, 13 Fed. Appx. 930 (Fed. Cir. 2001), the CAFC found that certain claims of the disputed patent had been amended to overcome a rejection under 35 U.S.C. § 112, the type of amendment which the *Festo* petitioners had argued should not trigger estoppel. In accordance with its *Festo* ruling, the CAFC held that infringement of the patent under the doctrine of equivalents was precluded by prosecution history estoppel. Senior Technologies filed a petition for writ of certiorari, asking, *inter alia*, whether an amendment that was editorial and clarifying in nature triggered prosecution history estoppel. The

petitioner alleged that clarifying amendments that did not expressly narrow the original claim would create estoppel under the CAFC rationale and that issues would arise as to how trivial an amendment would have to be to not create estoppel.

**Creo Products Inc. v. Dainippon Screen Mfg. Co., Ltd., et al., ___ U.S. ___, 122 S. Ct. 2323, 153 L. Ed. 2d 151 (2002).** In an unpublished, non-precedential opinion, *Creo Products Inc. v. Dainippon Screen Mfg. Co., Ltd.*, 10 Fed. Appx. 921 (Fed. Cir. 2001), the CAFC affirmed the district court's ruling that prosecution history estoppel barred application of the doctrine of equivalents to the disputed patent claim. Creo Products filed a petition for writ of certiorari, asking whether the case should be remanded for proceedings consistent with the Supreme Court's decision in *Festo* and whether so-called "considerations of fairness" have any role in the application of the doctrine of equivalents. The petitioner focused on the fact that the inventor prosecuted the patent application without benefit of an attorney and amended the claims in accordance with the suggestions of the patent examiner. The respondent argued that the fact that the examiner suggested the amendments to an inventor unfamiliar with the legal process was irrelevant; the only relevant fact under the *Warner-Jenkinson* ruling was the reason for the amendment, *i.e.*, whether it was made for reasons related to patentability.

**Semitool, Inc. v. Novellus Systems, Inc., ___ U.S. ___, 122 S. Ct. 2323, 153 L. Ed. 2d 152 (2002).** In an unpublished, non-precedential opinion, *Semitool, Inc. v. Novellus Systems, Inc.*,12 Fed. Appx. 918 (Fed. Cir. 2001), the CAFC affirmed the lower court's finding that Semitool had amended a patent application to narrow a claim to avoid prior art, a reason related to patentability, and thus held that under the CAFC ruling in *Festo*, the prosecution history estopped application of the doctrine of equivalents completely. The CAFC further held that estoppel also completely barred equivalents infringement for a later patent derived from the same initial application and containing the same claim limitation as the amended claim in the earlier patent. Semitool filed a petition for writ of certiorari, asking "the same question presented in *Festo*," whether prosecution history estoppel completely bars application of the doctrine of equivalents. Semitool argued that estoppel should only bar the equivalent specifically disclaimed as the difference between the prior art and its invention and should not bar all other equivalents, including, allegedly, the invention of Novellus Systems. The respondent argued that this case concerned prosecution history estoppel based on arguments made by the petitioner, as well as on amendments made to the claims, as in *Festo*, but the CAFC decision could have been based on estoppel by argument alone. Therefore, the Supreme Court decision in *Festo* would have no relevance to this case because it only concerned estoppel by amendment. The petitioner replied that the CAFC explicitly referred only to estoppel by amendment in its decision and to its *Festo* decision as the basis for its decision in this case.

**Lockheed Martin Corp. v. Space Systems/Loral, Inc., ___ U.S. ___, 122 S. Ct. 2349, 153 L. Ed. 2d 152 (2002).** In *Lockheed Martin Corp. v. Space Systems/Loral, Inc.*, 249 F.3d 1314 (Fed. Cir. 2001), *rehearing en banc denied*, 2001 U.S. App. Lexis 16600 (Fed. Cir. June 25, 2001), the CAFC affirmed the lower court's decision and held that the narrowing amendment of a claim for reasons related to patentability (in this case, to distinguish the invention from prior art) triggered prosecution history estoppel which completely barred a finding of

infringement under the doctrine of equivalents. Lockheed Martin, the patent assignee and plaintiff, had argued that the addition of a limitation should not bar application of the doctrine of equivalents for a related, but distinct, original limitation in the same claim. The CAFC rejected this argument and found that the plaintiff was in essence arguing for the application of the "flexible bar" rule, which had already been rejected by the CAFC in *Festo*. Lockheed Martin filed a petition for writ of certiorari asking, in addition to the issues presented in *Festo*, (1) for the judicial basis for departing from the equitable flexible bar in favor of the absolute bar and (2) whether the absolute bar applies to equivalents for a limitation in an amended patent claim which was an original limitation and not the one added by the amendment, although arguably related to that one. The petitioner argued that the CAFC had gone beyond its *Festo* holding in this case.

**AccuScan, Inc. v. Xerox Corp., ___ U.S. ___, 122 S. Ct. 2323, 153 L. Ed. 2d 152 (2002).** *AccuScan, Inc. v. Xerox Corp.*, 18 Fed. Appx. 828 (Fed. Cir. 2001), *rehearing en banc denied*, 2001 U.S. App. Lexis 16640 (Fed. Cir. July 3, 2001), the CAFC reversed the lower court's decision denying the defendant, Xerox, a judgment of non-infringement as a matter of law. Upon initial rejection of the patent application, AccuScan had made arguments distinguishing its claims from prior art and surrendering the subject matter used by Xerox. Citing *Festo*, the CAFC held that, *inter alia*, prosecution history estoppel precluded a finding of infringement under the doctrine of equivalents by Xerox. AccuScan filed a petition for writ of certiorari asking whether the holding of *Festo* can be expanded to allow claim term interpretations of non-amending arguments to bar literal patent infringement and to estop summarily the doctrine of equivalents; whether such summary estoppel adds significantly to the body of law; and whether unchecked judicial discretion in summarily applying argument-based claim interpretation to estop the doctrine of equivalents circumvents the Seventh Amendment right to a jury trial in patent infringement cases. AccuScan argued that the CAFC had confused and blurred the line between argument-based claim term interpretation and argument-based prosecution history estoppel and that the *Festo* holding did not apply to argument-based estoppel. Xerox responded that the "complete bar" rule of *Festo* was not even applied in this case, but that the CAFC relied on well-established precedent that AccuScan could not reclaim in litigation subject matter which it had explicitly surrendered during the patent prosecution. It further argued that the traditional application of estoppel followed by the CAFC had always been an issue of law for the judge and not an issue of fact for a jury.

**PTI Technologies, Inc. v. Pall Corp. Technologies, Inc., ___ U.S. ___, 122 S. Ct. 2324, 153 L. Ed. 2d 152 (2002).** PTI and Pall each sued the other for patent infringement in different district courts; those cases were consolidated and the district court granted each summary judgment for non-infringement of the other's patent. In *Pall Corp. v. PTI Technologies, Inc.*, 259 F.3d 1383 (Fed. Cir. 2001), the CAFC affirmed the finding of non-infringement for the PTI patent and remanded the case concerning the Pall patent to resolve issues of whether certain subject matter may have been disclaimed during patent prosecution. PTI Technologies filed a petition for writ of certiorari asking whether a finding of prosecution history estoppel completely bars equivalents infringement for its patent and asking that if the Supreme Court reversed the CAFC holding in *Festo*, that it reverse and remand this case for proceedings consistent with a *Festo* reversal.

Although it conceded that narrowing amendments had been made, it argued that Pall's invention covered unforeseen technological developments which could not have been surrendered by PTI.; PTI apparently was arguing for a "flexible bar" rule. Pall responded that this case did not implicate *Festo* at all, because under well-established precedents for prosecution history estoppel, PTI had surrendered the disputed subjected matter in Pall's invention.

**Mycogen Plant Science, et al. v. Monsanto Company, ___ U.S. ___, 122 S. Ct. 2324, 153 L. Ed. 2d 153 (2002).** In *Mycogen Plant Science, Inc. v. Monsanto Co.*, 252 F.3d 1306 (Fed. Cir. 2001), *rehearing denied*, 261 F.3d 1345 (Fed. Cir. 2001), the CAFC held that cancelling a rejected claim and replacing it with a new one, as opposed to making a narrowing amendment, would not avoid the "complete bar" rule announced in *Festo*. It concluded that a distinction between such a situation and the narrowing amendments presented in *Festo* would be one of form, not of substance. Mycogen filed a petition for writ of certiorari asking, *inter alia*, (1) whether a finding of prosecution history estoppel completely bars the application of the doctrine of equivalents, the same issue presented in *Festo* and (2) whether cancelling an independent claim and amending a claim dependent on the cancelled claim in order to convert it into an independent form justifies a complete bar to equivalents infringement when the only limitation in the converted, formerly dependent claim was never amended. Basically, Mycogen seems to argue for a "flexible bar" rule or alternatively, if a "complete bar" rule had been upheld by the Supreme Court, that the specific claims for which Monsanto allegedly had equivalents had never been amended and had not been narrowed.

**Other issues.** After oral arguments before the Supreme Court in the *Festo* case, the parties in *Litton Systems Inc. v. Honeywell Inc.*, No. 00-1617, petition for certiorari filed, 69 U.S.L.W. 3702 (Apr 23, 2001), agreed to dismiss that case. The CAFC had held that the "complete bar" rule of *Festo* precluded application of the "flexible bar" rule under the doctrine of the law of the case (238 F.3d 1376 (Fed. Cir. 2001)). The "flexible bar" rule had already been applied in an earlier decision in this particular case. Although the doctrine of the law of the case normally precludes reconsideration of an issue already decided at an earlier stage of the case, the CAFC had noted that one exception to this doctrine is where, during the pendency of the case, controlling authority has issued a contrary rule of law applicable to the issue. Therefore, the new "complete bar" rule applied, rather than the earlier "flexible bar" rule. Litton Systems had petitioned the Supreme Court for a writ of certiorari, asking whether retroactive application of the CAFC *Festo* rule to this case is contrary to other decisions allowing a "flexible bar" range of equivalents.

Although the CAFC had intended to increase certainty with its "complete bar" rule in its *Festo* decision, the ruling reportedly had the opposite effect in cases pending before lower federal courts,[7] and caused confusion among patent practitioners, since it had "disrupt[ed] settled expectations."[8] The decision had also allegedly led to an increase in appeals of rejections during patent prosecutions and

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[7]*Lower Courts' Festo Interpretations Are Increasing Uncertainty, Attorneys Told*, 14, No. 4, Software L. Bull. 7 (2001) (citing several cases).

[8]*Festo*, 535 U.S. at ___, 122 S. Ct. at 1841, 152 L. Ed. 2d at 960.

increases in claims to avoid amendments.[9] Although the affirmation of the "flexible bar" rule by the Supreme Court may signal a return to prior prosecution strategy and practice, advocates for a clearer rule may seek a legislative solution, although there appears to be less support for a sharp limitation of the doctrine of equivalents than for a continuation of the flexible bar.

[9] *Judge Michel Presses for More Data and Rigor in Patent Reform Process*, 63 P.T.C.J. 1565 (2002).