

# United States

## Doctrine of equivalents: where we now stand

Under the Patent Act, a patentee's right to exclude others from using its invention extends only to that which is "distinctly claimed" in the patent (35 USC Section 112(2)). Therefore, the proper interpretation of the written claims of a patent is the first step when attempting to establish the limits of the patent. To evaluate infringement, the properly interpreted claim must be compared with the accused device. Literal infringement exists when each element (or limitation) of the claim exists within the accused device. Although much uncertainty exists over the proper interpretation of the words in the written claims, the claims still serve an important and useful public notice function, enabling competitors and the public to gauge the limits of the patentee's exclusive right regarding the invention.

However, infringement analysis does not stop with the evaluation of literal infringement. Even if the accused device does not literally infringe a patent claim, it may still infringe under the doctrine of equivalents. The doctrine of equivalents extends the patentee's rights beyond the literal limits of the written claims, greatly increasing the uncertainty that exists in evaluating whether an accused product infringes. Thus, a competitor must always consider the potential not only for literal infringement, but also for infringement under the doctrine of equivalents.

The doctrine of equivalents is a concept created by the judiciary, serving the equitable purpose of "prevent[ing] an infringer from stealing the benefit of an invention" (*Texas Instruments Inc v US International Trade Commission*, 805 F 2d 1558, 1572 (Fed Cir 1986)). The Supreme Court explained the doctrine as follows: "[T]o permit imitation of a patented invention which does not copy every literal detail would be to convert the protection of the patent grant into a hollow and useless thing. Such a limitation would leave room for – indeed encourage – the unscrupulous copyist to make unimportant and insubstantial changes." (*Graver Tank & Mfg Co v Linde Air Prods Co*, 339 US 605, 607 (1950)).

Although the doctrine is ostensibly intended to help prevent such deliberate copying, the intent of the infringer is irrelevant. Innocent infringement under the doctrine of equivalents is infringement nonetheless, just as intent is irrelevant in determining literal infringement (*Warner-Jenkinson Co v Hilton Davis Chem Co*, 520 US 17, 35 (1997)). Further, notwithstanding that unscrupulous copying is frowned upon, deliberately designing around an invention in order to avoid infringement is assumed to benefit the public (*Warner-Jenkinson; Teva Pharmaceuticals USA Inc v Pfizer Inc*, 395 F 3d 1324 (Fed Cir 2005)). Assuming that the device in question does not literally infringe (ie, does not meet the literal requirements of the properly interpreted patent claim), the question remains: what is an infringing equivalent?

A significant effect of patent claims is to notify the public of the boundaries of the invention. The doctrine of equivalents undermines the notice function by extending the scope of patent coverage beyond the literal language of the claim into more indefinite territory.

For example, in *Warner-Jenkinson* a patent process included the claim limitation of a pH range "from approximately 6 to approximately 9". The accused process incorporated a pH of only 5, which the patentee conceded did not literally infringe its patent. However, both the Federal Circuit and the Supreme Court agreed that the accused process infringed under the doctrine of equivalents. How could a competitor predict that a pH of 5 is equivalent to a pH of "from approximately 6 to approximately 9"? What about a pH of 4.9 or 4.5? Where is the actual limit of the claim?

### All elements rule lacks clarity

One limitation imposed on the doctrine of equivalents is the 'all elements' rule. For infringement to exist under the doctrine of equivalents, the accused device must contain at least an equivalent for each limitation. In other words, the infringement analysis under the doctrine of

equivalents must be conducted on a limitation-by-limitation basis, rather than on an overall invention basis (*Warner-Jenkinson*; *Pennwalt Corp v Durand-Wayland Inc*, 833 F 2d 931 (Fed Cir 1987)).

In practice, the all elements rule is often unclear. It is difficult to ascertain exactly what is a claim limitation, as opposed to what is merely a part or component of a limitation. This may depend on how the claim is drafted, where various lines of the claim are indented in the printed patent or other arguably insubstantial distinctions.

The Federal Circuit has also recognised that the all elements rule can be satisfied by combining two elements of the accused device or by allowing a single element of the accused device to satisfy multiple claim limitations (eg, see *Dolly Inc v Spalding & Evenflo Cos*, 16 F 3d 394, 398 (Fed Cir 1994): “Equivalency thus can exist when two components of the accused device perform a single function of the patented invention... Equivalency can also exist when separate claim limitations are combined into a single component of the accused device”; *Corning Glass Works v Sumitomo Elec USA Inc*, 868 F 2d 1251, 1255 to 1256, 1258 to 1259 (Fed Cir 1989) - with respect to each element in the all elements rule, “element may be used to mean...a series of limitations which, taken together, make up a component of the claimed invention”).

#### Failure of courts to articulate consistent and predictable test to identify infringing equivalent

*Warner-Jenkinson* and other decisions finding infringement under the doctrine of equivalents have injected uncertainty into infringement analysis because the opinions have failed to articulate a consistent test for evaluating doctrine of equivalents infringement. The most frequently used test is the tripartite test: does the accused equivalent limitation perform “substantially the same function in substantially the same way to obtain the same result” as the limitation in the patent claim? (*Graver Tank Mfg Co v Linde Air Products*, 339 US 605 (1950) at 608.) Some Federal Circuit opinions have espoused the insubstantial differences test, which is “the substantiality of the differences between the claimed and accused” devices (*Warner-Jenkinson*).

The Supreme Court has made it clear that these two tests do not serve as the only permissible doctrine of equivalents tests, and in some cases one or the other, or neither, may be more appropriate: “The particular linguistic framework used is less important than whether the test is probative of the essential inquiry: Does the accused product or process contain elements identical or equivalent to each claimed element of the patented invention? Different linguistic frameworks may be more

suitable to different cases, depending on their particular facts.” (*Warner-Jenkinson* at 39 to 40.) The Supreme Court also explained that ‘known interchangeability’ is highly relevant for measuring similarities or differences between the claimed limitation and the accused equivalent.

#### Jury should decide whether an alleged equivalent is infringing

Further uncertainty arguably results from the courts’ insistence that infringement under the doctrine of equivalents is an issue of fact that must be adjudicated by the fact finder, which in many cases is a jury (*Graver*; *Warner-Jenkinson* at 38). The jury’s decision is likely to be guided along the following lines (taken from Federal Circuit Bar Association Model Patent Jury Instruction 8.4): “A claim limitation is present in an accused product under the doctrine of equivalents if the differences between them are insubstantial. One way to determine this is to look at whether or not the accused product performs substantially the same function, in substantially the same way, to achieve substantially the same result as the claimed invention. Another way is to consider whether or not people of ordinary skill in the field of the invention believe that the structure of the accused product and the structure recited in the patent claim limitation are interchangeable. A person of ordinary skill is a person with average education and training in the field.”

This jury instruction incorporates both the tripartite and the insubstantial difference tests, and at the same time references the known interchangeability consideration.

#### Permissible range of equivalents may depend upon the relevant technology

The permissible range of equivalents may depend upon whether the technology can be characterised as a ‘pioneer’ invention. However, the courts have not provided an objective method of determining when a patent qualifies as a pioneer invention (*Augustine Medical Inc v Gaymar Industries Inc*, 181 F 3d 1291, 1301 (Fed Cir 1999)). Furthermore, the Federal Circuit has made it clear that even a non-pioneer invention is entitled to a range of equivalents (eg, see *Perkin-Elmer Corp v Westinghouse Electric Corp*, 822 F 2d 1528 (Fed Cir 1987)).

All valid patents are by definition based upon a non-obvious advance over the prior art, and no basis has ever been articulated in the patent law to compare or measure an invention’s technological, economic or other social benefits. The concept of pioneer invention has added no clarity to doctrine of equivalents infringement analysis.

#### Unforeseen future technology

Another doctrine of equivalents principle is that

equivalence must be determined not at the time that the patent issued, but rather at the time of infringement (*Warner-Jenkinson Co* at 37: “Insofar as the question under the doctrine of equivalents is whether an accused element is equivalent to a claimed element, the proper time for evaluating equivalency – and thus knowledge of interchangeability between elements – is at the time of infringement, not at the time the patent issued”). Hence, later-developed technology that did not exist when the patent was invented may serve as an equivalent to the limitation in question. This provides a patent with an ever-changing scope of equivalents as new technology is developed that may serve as an alternative for one or more of a patent claim’s limitations.

### Prosecution history estoppel

The doctrine of prosecution history estoppel has reduced the number of cases in which infringement under the doctrine of equivalents is available. An amendment made to a patent claim during prosecution, if made for reasons of patentability, will presumptively eliminate all equivalents between the original claim limitation and the amended claim limitation. The patentee can overcome the presumption by demonstrating that:

- the equivalent in question was not foreseeable at the time of the amendment;
- the rationale underlying the amendment bore only a tangential relationship to the equivalent in question; or
- another reason exists why the patentee could not reasonably have been expected to claim the insubstantial change in question (*Festo Corp v Shoketsu Kinzoku Kogyo Kabushiki Co*, 535 US 722, 734 (2002)).

### Dedication to the public

The Federal Circuit has held that if a patent specification discloses a particular equivalent, but the claim language as construed does not literally encompass that equivalent, the unclaimed equivalent is considered dedicated to the public and cannot serve as a basis for infringement (*Johnson & Johnson Assocs v RE Serv Co*, 285 F 3d 1046 (Fed Cir 2002)).

### Foreseeability and patent drafter estoppel

One recurring theme in case law dealing with doctrine of equivalents infringement is the patent drafter’s ability to foresee the use of the particular equivalent limitation as part of an otherwise infringing device. In cases where the patent drafter has the ability to foresee the use of the accused equivalent, but does not draft claim language to

cover it, some courts have held that this foreseeability means that there was no infringement of the doctrine of equivalents. Although the issue has arisen from time to time, no clear rule has emerged. For example, in *Sage Products Inc v Devon Industries Inc* (126 F 3d 1420 (Fed Cir 1997)) the court suggested a doctrine of patent drafter estoppel, stating that a skilled patent drafter would have foreseen the limiting potential of the language actually used in the claim, and that the patent drafter was not prevented by any “subtlety of language or complexity of the technology” from using language that encompassed the equivalent at issue. In *Freedman Seating Co v American Seating Co* (420 F 3d 1350 (Fed Cir 2005)) the court held that the patentee had clear opportunity to negotiate broader claims but failed to do so; therefore, the patentee had to bear the cost of its failure to seek protection for this foreseeable alteration of its claimed structure. In addition, the Supreme Court in *Festo* identified a lack of foreseeability as a permissible reason to overcome the presumption of prosecution history estoppel. However, the extent to which foreseeability will affect the doctrine of equivalents remains to be seen.

### Conclusion

The courts have succeeded in reducing the number of cases in which equivalents infringement is available - for example, in opinions addressing prosecution history estoppel and public dedication. Nevertheless, the courts have failed to provide an objective and predictable standard by which infringement under the doctrine of equivalents may be evaluated.

The courts’ efforts to reduce the availability of equivalents infringement are likely to be offset to a significant extent by a more careful prosecution strategy. For example, more independent claims submitted with the application, and more time and effort spent drafting a good set of initial claims, are likely to result in fewer amendments during prosecution, thereby reducing the effect of prosecution history estoppel under *Festo*. Patentees may also be motivated to expend more effort identifying potentially problematic prior art before submitting the application, rather than being forced to amend claims in order to avoid the prior art located by the patent examiner during prosecution. Patentees should also be more motivated to draft claims to cover all the alternative embodiments referenced within the specification to avoid an argument of public dedication.

Until the Federal Circuit provides more clarity with regard to the scope of equivalents that constitute infringement, the doctrine of equivalents will continue to inject uncertainty and expense into the resolution of patent disputes.

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