
Claiming in the Alternative: Beware the Minefield!

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Four recent decisions, three in the Court of Appeals for the Federal Circuit and one in the federal District Court for the District of Kansas, have shed some murky light on the problem of claiming an invention that involves alternatives.¹

In order to analyze the problem, let us imagine a hypothetical patent application. Assume that the drafter of a patent application is presented with the problem of claiming an invention involving a key component of the machinery used in the cold fusion process, the framistan, a device that can be used to process data concerning neutrinos. It is well known in the prior art that there are different forms of neutrinos, namely, electron neutrinos, muon neutrinos, tau neutrinos and, hypothetically, sterile neutrinos. Some framistans in the prior art have been capable of counting electron neutrinos, but no framistans have been capable of counting the other types of neutrinos. Our inventor has developed a new improved framistan that is capable of discriminating between the different forms of neutrinos and processing the data concerning electron and tau neutrinos separately, so that the framistan readout unit will give a reading that shows either the number of electron neutrinos per millisecond ("en/ms"), or the number of tau neutrinos per millisecond ("tn/ms").

Our claim drafter has written the following two claims:

"1. In a machine for performing cold fusion, a framistan comprising:
[computer apparatus] and
x) means for displaying either en/ms or tn/ms, whereby either the number of en/ms or the number of tn/ms appears on the register."

¹ An earlier study of two of these decisions appeared as "The Ambiguity of Or", David W. Maher and Jennifer Hammond, Volume 84, No. 3, Journal of the Patent and Trademark Office Society, March 2002, pp. 245-250.

and

“2. A method of processing information about neutrinos in a machine for performing cold fusion comprising the steps of:
[steps performed by framistan] and
x) searching said components in memory for the component that displays in a register either the number of en/ms or the number of tn/ms.”

Satisfied with her work but wanting to be as careful as possible, the drafter decides to check some recent patent law decisions on claims which involve the word “or” and claims that involve alternatives. She finds the following relevant decisions:

Kustom Signals, Inc. v. Applied Concepts, Inc., 264 F.3d 1326, 60 USPQ2d 1135 (Fed. Cir. 2001) (“Kustom I”)

Brown v. 3M, 265 F.3d 1349, 60 USPQ2d 1375 (Fed. Cir. 2001) (“Brown”)

Schumer v. Laboratory Computer Systems Inc. 64 USPQ2d 1832 (Fed.Cir.2002) (“Schumer”)

Kustom Signals, Inc. v. Applied Concepts, Inc., 66 USPQ2d 1891 (D. Kansas 2003) (“Kustom II”)

In Kustom I, the Federal Circuit affirmed a lower court’s summary judgment of non-infringement of a patent. The claims construed included one method and two apparatus claims. Our drafter notes that the claims refer to alternatives in a manner nearly identical in form to the ones she has drafted.

In Kustom I, the court’s opinion states that the patentee used “or” in “its ordinary meaning as stating alternatives” (in other words, the “exclusive” meaning of “or”), but not allowing the possibility that it meant a combination of the alternatives. The accused device in Kustom I provided readouts of two types of data. The lower court found no literal infringement, and the Federal Circuit affirmed. Our drafter is clearly dismayed by this view of claim interpretation. She realizes that, after publication of the invention covered by her patent, it would be a trivial matter to create a framistan that gave readouts of both en/ms and tn/ms, and she wants her claim to cover such a device.

Our drafter then redrafts her claims as follows (new language in italics):

“1. In a machine for performing cold fusion, a framistan comprising:
[framistan apparatus] and
x) means for displaying either en/ms or tn/ms *or both*, whereby either the number of en/ms or the number of tn/ms *or both* appears on the register.”

and

"2. A method of processing information about neutrinos in a framistan in a machine for performing cold fusion comprising the steps of:
[steps performed by framistan] and
x) searching said components in memory for the component that displays in a register either the number of en/ms or the number of tn/ms or both."

Turning to *Brown*, our drafter notes that this is another case in which the claim in suit, an apparatus claim, refers to alternatives. However, in *Brown*, the claim states the apparatus is capable of acting on data represented by at least one of form x, form y, or form z. This time, the lower court held the claim in suit to be invalid because anticipated by a prior art patent, and the Federal Circuit affirmed. The analysis by both the lower court and the Federal Circuit turned on the question whether the device disclosed by the prior art would be an infringement if constructed later. For different reasons, both the lower court and the Federal Circuit concluded that there would be an infringement. Then, according to the maxim "that which infringes if later anticipates if earlier"², the claim in suit was held invalid.

Our drafter reads on in *Brown* and learns that the lower court read the "or" in the apparatus claim in suit to be the inclusive form of the word, *i.e.*, meaning either or both. The lower court said, "'Or' ... has always been inclusive, meaning that it was capable of converting only two-digit numbers, only three-digit numbers, only four-digit numbers, or any combination of two-, three- and four-digit numbers."³ The lower court based its judgment of invalidity on a conclusion that the prior art disclosed a device that acted on a combination of data, thereby anticipating the patent in suit.

The Federal Circuit adopted the lower court's reading of the meaning of "or." The Federal Circuit, however, held that the ability of the prior art device to act on a combination of data was not relevant. According to the Federal Circuit, the ability of the device to act on only one set of data was sufficient. "By claiming his invention in the alternative, Dr. Brown has presented a claim for which infringement would lie whether or not [there was also processing of data in three-digit or four-digit form]."⁴

² *Polaroid Corp v. Eastman Kodak Co.*, 789 F.2d 1556, 1573 (Fed. Cir. 1986)

³ 60 U.S.P.Q.2d 1298, 1301.

⁴ 265 F.3d 1349, 1352.

Our drafter is now even more dismayed because she knows that the prior art includes framistans that process data regarding electron neutrinos and give readouts of en/ms. If her new claim reads on such a device, it might therefore be invalid because anticipated.

Our drafter finds limited consolation in reading Chief Judge Mayer's dissents in both *Kustom I* and *Brown*. Possibly the only sensible discussion of the meaning of "or" in the two opinions is Chief Judge Mayer's observation in *Kustom I*, "...the plain meaning of 'or' can be 'either or both.' If a store owner says, 'If it hails or snows today, we will close the store,' then the owner will still close the store if it happens to hail *and* snow."⁵

Kustom I and *Brown*, although decided thirteen days apart, and by panels with two Federal Circuit judges overlapping, do not refer to each other. The fact that September 11, 2001 intervened between the dates of *Kustom I* and *Brown* might suggest a partial reason. Judge Newman participated in *Kustom I*, *Brown* and *Schumer*.

Our drafter now turns to the remaining two decisions that attempt to elucidate the meaning of "or". *Schumer* began as an infringement action against the manufacturer of an allegedly infringing device; it was consolidated with an action brought by the distributor of the device for declaratory judgment of noninfringement and invalidity of *Schumer*'s patent. The suit, brought in the Western District of Washington, involved a patent on digitizing tablets, computer devices that translate instructions into digital coordinates for a computer. The district court granted partial summary judgment of noninfringement of certain claims and summary judgement that two other claims were invalid and not infringed. The Federal Circuit reversed both judgments.

Our drafter notes that all but one of the *Schumer* patent claims are method claims, and that the references to alternatives are, as in the *Kustom I* claims, similar in form to those in her first draft framistan method claim.

The district court in *Schumer* based its noninfringement conclusion on a reading of the preambles of the claims. The court held that the claims could only be read to be infringed by a device that performed all of the alternatives listed in the claims in suit. The accused device did not perform all of the alternatives listed in the claims, and therefore, according to the district court, the claims were not infringed.

⁵ 264 F.3d 1326, 1333.

In reversing the lower court, the Federal Circuit said, "The district court's claim construction contradicts the plain meaning of the word 'or' in the claims."⁶ The Federal Circuit turned to "standard dictionary definitions"⁷ and chose Webster's Third International Dictionary as its authority. The Federal Circuit selected the following portion of the definition:

"used as a function word to indicate (1) an alternative between different or unlike things, states, or actions ... (2) choice between alternative things, states, or courses..."⁸

It is interesting to note that the illustration used by Webster to explain the first definition is "wolves or bears are never seen in that part of the country."⁹ As Chief Judge Mayer pointed out in his example of the store keeper, the normal interpretation of such a sentence is that it includes the concept that wolves *and* bears are never seen in that part of the country.

The Federal Circuit went on to say, "We have consistently interpreted the word 'or' to mean that the items in the sequence are alternatives to each other. In *Brown v. 3M* [citation omitted], we upheld the district court's construction of the word 'or' in the claim as meaning that the apparatus was capable of converting 'only two-digit, only three-digit, only four-digit, or any combination of two-, three-, and four-digit date-data,' by finding that the interpretation of the word 'or' involved a 'plain reading of the claim text.' These are not technical terms of art, and do not require elaborate interpretation." In *Kustom Signals, Inc. v. Applied Concepts, Inc.* [citation omitted], we agreed with the district court's construction of 'or' as 'designating alternatives.' We noted that 'there is no indication that Kustom used these words in a different meaning. Particularly, there is no basis whatsoever for believing that Kustom intended its usage of 'or' somehow to embrace 'and.'"¹⁰

Our drafter now finds herself confused. The Federal Circuit in *Schumer* claims to be consistent and then illustrates its consistency by referring to one case in which "or" is clearly read as inclusive ("or any combination of ...") and the other case in which "or" is read as exclusive. This cannot be consistent.

⁶ 64 U.S.P.Q.2d 1832, 1838

⁷ *Id.*

⁸ Webster's Third New Int'l Dict. 1585 (1967)

⁹ *Id.*

¹⁰ 64 U.S.P.Q.2d 1832, 1838.

In *Schumer*, having concluded that "or" cannot be interpreted to cover a combination, the Federal Circuit viewed the accused device and asked whether the *Schumer* claims should be interpreted to mean that the method must act upon each of the "three alternative variables"¹¹ The parties to the appeal had agreed, for the purposes of the appeal, that the accused device acted upon only two of the three variables.¹² The Federal Circuit concluded that the *Schumer* claim was infringed if the accused device performed any one of the three activities.¹³

Our drafter derives little comfort from *Schumer*. The ambiguities of "or" are unresolved. Under both *Brown* and *Schumer*, her claims in either the original or revised form would read on the prior art framistans that process data regarding en/ms. As a result, the conclusion seems to be that the claims are anticipated and invalid. But our drafter knows that there is an invention waiting to be claimed. No one has been able to process the neutrino data in a way that gives both en/ms and tn/ms readings and allows the user to select either or both.

Our drafter now learns that *Kustom* has gone back to the District Court of Kansas for one more try.

Kustom II involved an attempt by the plaintiff in the original action to persuade the Kansas District Court to take another look at the issues. (*Kustom* had previously petitioned the Federal Circuit for rehearing, which was denied, and had petitioned the Supreme Court for certiorari, which was also denied.) Three years after the original district court decision, plaintiff filed a *Motion For Relief From The Judgment of Noninfringement Entered August 3, 1999*. The motion was overruled.¹⁴

The *Kustom I* and *II* decisions involve improvements in police radar. In order to screen out false targets, software is available which employs Fourier fast transforms to analyze analog radar signals and represent their frequency domains according to signal frequency or signal strength, that is, the "fastest" and the "strongest" signals. The defendant in *Kustom I* and *II* originally produced a device that processes the available data and provides a readout only of the strongest signal. *Kustom* then developed and patented a device that has one readout window, with the user having the ability to select whether the readout is the fastest or strongest. This device is the embodiment of the invention

¹¹ *Id.*

¹² 64 U.S.P.Q.2d 1832, 1840.

¹³ *Id.*

¹⁴ 66 U.S.P.Q.2d 1891

covered by the patent in suit in *Kustom I* and *II*. Subsequently, the defendant introduced a device with two readout windows, one showing the strongest and the other the fastest signal. The latter device was accused of infringing *Kustom's* patent and was the subject of the infringement suit.

In *Kustom I*, there had been an alternative grounds for invalidating the patent claims in suit, based on prosecution history estoppel. In *Kustom II*, plaintiff's motion asked the court to revisit this issue, citing the intervening *Festo* decision by the Supreme Court, but the district court found no reason to change its original holding. In its discussion, the district court pointed out that the "doctrine of equivalents may not be invoked unless the all-elements (or all-limitations) rule is satisfied, *i.e.*, every claimed element or its equivalent must be contained in the accused device. . . . [citations omitted]."¹⁵ The court then compared the claims of the patent in suit and the accused device and again found that the claims did not read on the accused device. Referring to the device produced by the plaintiff which was the subject of plaintiff's patent, the court said, "[defendant's] radar is capable of displaying both fastest and strongest targets based on the same set of data while [plaintiff's] selectively displays either fastest or strongest targets but not both."¹⁶

Kustom II provides some gratuitous advice on patent drafting. Documents had been filed in the original proceeding indicating that, in the PTO, plaintiff had intended to claim a feature involving a display of the fastest target either in lieu of the strongest target or in addition to it.¹⁷ The court rubbed salt in plaintiff's wounds by noting, "Despite plaintiff's apparent attempt to draft an 'and/or' claim, plaintiff must accept the limited 'or' claim it obtained from the PTO....it is the patentee who must bear the cost of its failure to seek protection for this foreseeable alteration of its claimed structure....[citation omitted]"¹⁸

Our drafter is now somewhat distraught. *Kustom I* and *II* indicate that claiming a device or method for processing a combination of data is essential if the intent of the claim is to capture infringing devices that process combinations of data. But *Brown* teaches that the existence in prior art of a device capable of processing one form of data would invalidate a patent in which the claimed processing functions are

¹⁵ 66 U.S.P.Q.2d 1891, 1894.

¹⁶ 66 U.S.P.Q.2d 1891, 1895.

¹⁷ *Id.*

¹⁸ 66 U.S.P.Q.2d 1891, 1896.

described as alternatives, according to the maxim "that which infringes if later anticipates if earlier". Schumer supports the logic of the Brown analysis. The Schumer claims were held infringed by a device that performed less than all of the combination of alternatives claimed.¹⁹

In *Kustom I* and *II*, it is not clear whether the defendant/s original device, providing a single readout, was on sale more than a year prior to the filing of plaintiff's patent application. Presumably, if it had been, defendant would have used this as the basis for an argument of invalidity.

Our drafter now rethinks the invention – the capacity to process multiple types of data. She knows there is nothing in the prior art that anticipates this, other than framistans that process one and only one form of the data. She tries again and writes:

"1. In a machine for performing cold fusion, a framistan comprising:

[framistan apparatus];

x) means for processing more than one type of data about neutrinos; and

y) means for displaying either en/ms or tn/ms or both, whereby either the number of en/ms or the number of tn/ms or both appears on the register."

and

"2. A method of processing information about neutrinos in a framistan in a machine for performing cold fusion comprising the steps of:

[steps performed by framistan]

x) processing more than one type of data about neutrinos; and

y) searching said components in memory for the component that displays in a register either the number of en/ms or the number of tn/ms or both."

Our drafter now launches her application to the Patent Office.²⁰ We eagerly anticipate its proceedings, and, even more eagerly, the Federal Circuit's next bout with "or".

¹⁹ 64 U.S.P.Q.2d 1832, 1840.

²⁰ If the prior art included framistans that process multiple available forms of information about neutrinos, our drafter would of course modify the claims appropriately, and claim the ability to process multiple forms.