

## The Ambiguity of Or

David Maher & Jennifer Hammond\*

Lawyers (and for that matter nearly everyone else) use "and" and "or" without giving much thought to any complexities in their meaning. Lawyers especially are fond of "and/or" even though it is regarded as an abomination by those who care about English style.<sup>1</sup> Nowadays, Lexis and Westlaw have heightened the awareness of Boolean operators, and most lawyers are perhaps reluctantly becoming conscious of the rigorous demands of logic in framing searches. Lawyers have begun to take notice of the ambiguity of "or", and now two recent decisions handed down by the U.S. Court of Appeals for the Federal Circuit have forced lawyers, and patent lawyers in particular, to focus on the slippery meanings of "or" and think about them more clearly.

The two Federal Circuit decisions, both construing patent claims, were decided within thirteen days of each other. They appear, on their face, to be citable for diametrically opposed interpretations of "or". The first decision, *Kustom Signals, Inc. v. Applied Concepts Inc.*<sup>2</sup> ("Kustom"), was handed down on September 5, 2001. It affirms a lower court decision construing "or" as exclusive, *i.e.*, meaning "a choice between either one or two alternatives, but not both".<sup>3</sup> The second decision, *Brown v. 3M*<sup>4</sup> ("Brown") was handed down on September 18, 2001, and affirms a lower court decision construing "or" as inclusive, *i.e.*, meaning a choice between alternatives or a combination of them.<sup>5</sup> In the two Federal Circuit decisions, not only is their discussion of "or" baffling, but, worse yet, the majority opinions conceal important issues of claim interpretation that are only addressed in the dissenting opinions of Chief Judge Mayer.

Kustom involved an allegation of infringement of a patent entitled "Traffic Radar with Digital Signal Processing" (U.S. Patent No. 5,528,246). The lower court granted summary judgment of non-infringement, and the Federal Circuit affirmed, with Chief Judge Mayer dissenting. In the Court's opinion, it said that the patentee used "or" in "its ordinary meaning as stating alternatives" but *not* allowing the possibility that it meant a combination of the alternatives.<sup>6</sup>

Brown also began as an infringement case, but was decided on summary judgment of invalidity based on the principle: "That which infringes if later anticipates if earlier."<sup>7</sup> Both Kustom and Brown both involve questions of claim interpretation applied to a given device; however, in Kustom, there was a device alleged to infringe and in Brown there was a device described by a claim of a prior patent.

In Brown, the lower court granted summary judgment of invalidity of Claim 16 of a patent entitled "Apparatus and Method For Processing Year-date Data in Computer Systems" (U.S. Patent No. 5,852,824).<sup>8</sup> The Federal Circuit affirmed the grant of summary judgment. The lower court opinion said that "or" should be interpreted according to its "ordinary meaning"<sup>9</sup> - that is, an inclusive meaning, describing a list of alternative things in which one may choose one option or any combination of alternative options. In affirming, the Federal Circuit agreed with the lower court's interpretation of "or". Chief Judge Mayer dissented, as he did in Kustom.<sup>10</sup> It should be noted that the lower court decision did not necessarily turn on the interpretation of "or". Although this issue was raised by the parties,<sup>11</sup> the court's holding is based on anticipation of elements of the claim in question by the prior art, regardless of the interpretation of "or".

What is the "ordinary meaning" of "or"? Neither decision cites a definition from any of the commonly available English dictionaries. This is probably just as well, since, after Kustom and Brown, no patent draftsman will be able to use "or" in a claim without giving some serious consideration to the ways it can be interpreted (or misinterpreted) as used in that claim, and no layman's dictionary will be of much help.

\* Patent attorneys and members of Sonnenschein's Intellectual Property and Technology Practice Group.

1 "The ugly device . . ." Fowler's Modern English Usage, 2d Ed., 1987, Oxford Univ. Press; "This horrible practice . . ." Eric Partridge, Usage & Abuse, 1969, Penguin Books

2 60 USPQ2d 1135 (Fed. Cir. 2001)

3 *Id.*, 1138

4 60 USPQ2d 1375 (Fed. Cir. 2001)

5 *Brown v. 3M*, 60 USPQ2d 1298, 1301 (DC Ariz 2000)

6 60 USPQ2d 1135, 1138 (Fed. Cir. 2001)

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

8 *Brown v. 3M*, 60 USPQ2d 1298 (DC Ariz 2000)

9 *Id.*, 1301, 1302, citing *Markman v. Westview Instruments, Inc.*, 517 U.S. at 388.

10 Although the two Federal Circuit decisions were handed down only thirteen days apart, there is no reference in either of them to the other. This seems additionally surprising since two of the three judges in each panel were the same, Chief Judge Mayer and Judge Newman, and the Chief Judge dissented in both cases.

11 60 USPQ2d 1298, 1301

In Kustom, the court dealt with an argument advanced by the plaintiff-appellant, based on the conventional interpretation of logical operators found in the *Computer Dictionary* (Microsoft Press, 3d ed., 1997). This text "distinguishes among logical operators, defining 'or' (which returns a 'true' value when one or both values are true), 'and' (which returns a 'true' value if and only if both values are true), and 'exclusive or' (which returns a 'true' value when only one value is true)."<sup>12</sup> Plaintiff-appellant urged the first, that is, inclusive interpretation of "or". Its argument was rejected, as will be discussed more fully below.

In Kustom, three independent claims were construed (numbers 1, 16 and 20). Claim 1 was in the form of a method claim:

"1. A method of processing [traffic radar information] comprising the steps of:

...  
e) searching said components in memory for the component that meets preselected magnitude or frequency criteria, and. . ."

Claim 16 was an apparatus claim paralleling Claim 1, and Claim 20 was also an apparatus claim in the form:

"20. In a traffic radar, apparatus . . . comprising:

... and

f) means . . . for selecting either a greatest magnitude or highest frequency search, whereby either strongest signal or fastest signal target identification is provided."

The accused device in Kustom performed both a fastest and strongest search of signals. Both the district court and the Federal Circuit held that there was no literal infringement. The Federal Circuit said "the alternative 'or' excludes devices that search both magnitude and frequency".

Kustom had argued that "comprising" saved the day for its claim of infringement. The Federal Circuit responded "The open-ended transition 'comprising' does not free the claim from its own limitations."<sup>13</sup> The opinion also includes an interesting discussion of the possible application of the doctrine of equivalents and concludes that Kustom's claim analysis was estopped by the prosecution history of the claims.<sup>14</sup>

As noted above, Kustom had strongly argued that the *Computer Dictionary* supported its interpretation of "or" in its first meaning and not the "exclusive or" meaning. The Federal Circuit acknowledged that a

<sup>12</sup> 60 USPQ2d 1135, 1138

<sup>13</sup> id., 1139

<sup>14</sup> id., 1140

"patentee may choose to be his own lexicographer and use terms in a manner other than their ordinary meaning, as long as the special definition of the term is clearly stated in the patent specification or file history."<sup>15</sup> This was still no help to Kustom, because, according to the Court, " . . . whatever the meaning of 'or' as a logical operator, it is quite clear from the patent documents that Kustom was not using 'or' as a technical programming operator, but in its ordinary meaning as stating alternatives. If a divergent specialized usage were intended, the context was such that it was required to be clearly explained in the patent documents."<sup>16</sup>

The last point is especially intriguing because it provided the basis of Chief Judge Mayer's dissent. The Chief Judge said, "In this case, 'or' should be construed inclusively to mean 'one or another or both.' First, 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."<sup>17</sup> He then went on to point out that the patent drawings included flow charts which are consistent with the Boolean definition of "or" as inclusive, supporting Kustom's argument that its use of "or" was explained in the patent documents.

In Brown, the sole claim in suit was Claim 16, an apparatus claim in the form:

"16. An apparatus for processing . . . data in a computer system . . . comprising:

...  
at least one database file stored in the memory containing records with year-date data with years being represented by at least one of two-digit, three-digit, or four-digit year-date representations; and  
a mechanism for converting the year-date data representations in the database file to a two-digit year-date data representation."

The prior art patent which was held to invalidate Brown's patent (following the maxim "That which infringes if later anticipates if earlier."<sup>18</sup>) taught "the handling of year dates in two-digit format".<sup>19</sup> Brown argued that it did not anticipate the larger capability of the Brown invention to convert three and four digit representations, but the argument was unavailing. In the words of the Federal Circuit:

<sup>15</sup> Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996)

<sup>16</sup> 60 USPQ2d 1135, 1138

<sup>17</sup> id., 1140

<sup>18</sup> Polaroid Corp. v. Eastman Kodak Co., 789 F.2d 1556, 1573, (Fed. Cir. 1986)

<sup>19</sup> 60 USPQ2d 1375, 1377 (Fed. Cir. 2001)

The district court construed the word "or" in claim 16 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 data-data." Slip op. at 9. We agree with this construction of the claim, for it is the plain reading of the claim text. These are not technical terms of art, and do not require elaborate interpretation. There is no basis in the specification or prosecution history for reading "or" as "and" — nor does Dr. Brown request such a reading.<sup>20</sup>

The Federal Circuit went on to say that a device employing the teachings of the prior art patent would literally infringe, since "Claim 16 is written in the alternative."<sup>21</sup> Although the Federal Circuit appears thus to hold that "or" should be interpreted in its exclusive meaning, the majority opinion then further muddies the waters by raising, and rejecting, a totally inappropriate reading of "or" as mandating an "and" interpretation.

Chief Judge Mayer's dissent in Brown says the "court errs by reading the claim term 'or' exclusively, while the district court appropriately read it inclusively when construing the claim."<sup>22</sup> Why would Chief Judge Mayer vote to reverse, if he believed that the district court was correct in its interpretation of "or"? It appears that he agreed with the appellant's argument that the claim in question covers a capability to act on a combination of data - an alleged advance over the prior art which, according to the Chief Judge, did not disclose this capability. This is consistent with the lower court's reading of the claim and its interpretation of "or" as inclusive, but inconsistent with the lower court's view that the prior art adequately disclosed the ability to act on a combination.<sup>23</sup>

Thus, the Kustom and Brown decisions shed no light on the question of the ordinary meaning of "or". A careful reading shows that, in any event, this definitional question is a red herring that serves only to have distracted the panels from more serious issues of claim interpretation. Clearly the cases involve two entirely different problems. Kustom, as plaintiff-appellant, argued that its "either-or" claim was

<sup>20</sup> *ibid*

<sup>21</sup> *id.*, 1378

<sup>22</sup> *ibid*.

<sup>23</sup> Adding to the confusion, while the lower court in Brown held that the prior art did disclose the ability to handle a combination of data (60 USPQ2D 1298, 1303), the Federal Circuit held that it did not matter since the ability to handle just one type of data (in two digit form) was anticipated and that was sufficient to invalidate (60 USPQ2d 1375, 1378).

infringed by a device that did both. Dr. Brown, as plaintiff-appellant, argued that his "at least one of a,b,c or d" claim would not be infringed by a device that only did "a". These are entirely different questions of claim interpretation that do not necessarily turn on the so-called ordinary meaning of "or". Chief Judge Mayer's dissents in both cases unfortunately appear to focus on the ordinary meaning issue. More significantly, the dissents also propose an analysis of the more important underlying issues.

In the Kustom case, Chief Judge Mayer pointed out that Kustom's patent included flow charts consistent with a Boolean interpretation of "or", that is, including the possibility that a combination of the alternatives was an allowable interpretation. The Chief Judge would have remanded for determination of fact issues in accordance with this interpretation. In Brown, the Chief Judge points out that this should not be read as "a case of a species anticipating a genus"<sup>24</sup> and he urges an interpretation of the claim that takes into account the added functionality not found in the allegedly anticipating patent.

Two conclusions are clear. First, for patent drafters, think long and hard about any use of "or" in a claim. Second, for litigators, be careful of supporting any argument about the ordinary meaning of "or" with citations to either of the Kustom or Brown decisions.