

# United States Court of Appeals for the Federal Circuit

99-1182  
(Serial No. 07/419,911)

IN RE GILBERT P. HYATT

Raphael V. Lupo, McDermott, Will & Emery, of Washington, DC, argued for appellant. Of counsel was Paul Devinsky.

John M. Whealan, Acting Deputy Solicitor, Office of the Solicitor, of Arlington, Virginia, argued for appellee, Commissioner of Patents and Trademarks. With him on the brief were Albin F. Drost, Acting Solicitor, and Raymond T. Chen, Associate Solicitor. Of counsel was Nancy C. Slutter.

Appealed from: Patent and Trademark Office, Board of Patent Appeals and Interferences.

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DECIDED: May 12, 2000

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Before LOURIE, RADER, and BRYSON, Circuit Judges.

BRYSON, Circuit Judge.

This is an appeal from a decision of the Patent and Trademark Office's Board of Patent Appeals and Interferences. The appellant, Gilbert P. Hyatt, seeks review of the Board's decision upholding a patent examiner's action rejecting several claims of Mr. Hyatt's patent application. We affirm the decision of the Board.

I

Mr. Hyatt's application addresses the problem of defects or faults in certain systems, including illumination systems. In an illumination system using display panels with many display devices, the invention compensates for a defect in one of the devices by using the surrounding devices to generate the intensity that was supposed to be generated by the defective device. Mr. Hyatt refers to that aspect of his invention as "device detection and

intensity sharing.” According to the written description, the invention produces an acceptable image “even when 10% to 50% or more” of the devices are faulty.

The four claims at issue are claims 1, 8, 24, and 30. The claims read as follows:

1. A sharing system comprising:

an intensity signal generator generating input intensity signals;

a device detector generating device condition signals;

a sharing generator coupled to the intensity signal generator and to the device detector and generating shared intensity signals in response to the input intensity signals and in response to the device condition signals; and

a plurality of devices coupled to the sharing generator and excited by the shared intensity signals.

8. An array system comprising:

an intensity signal generator generating input intensity signals;

a device detector generating device condition signals;

a sharing generator coupled to the intensity signal generator and to the device detector and generating shared intensity signals in response to the input intensity signals and in response to the device condition signals; and

an array of devices coupled to the sharing generator and excited by the shared intensity signals.

24. A display system comprising:

a display signal generator generating input illumination intensity display signals;

a fault detector generating fault condition signals;

a sharing generator coupled to the display signal generator and to the fault detector and generating shared illumination intensity display signals in response to the input illumination intensity display signals and in response to the fault condition signals;

and

a plurality of display devices coupled to the sharing generator and excited by the shared illumination intensity display signals.

30. A liquid crystal display system comprising:

a display signal generator generating input illumination intensity display signals;

a degraded device memory storing degraded liquid crystal device condition signals to identify a degraded liquid crystal device;

a sharing generator coupled to the display signal generator and to the degraded device and generating shared illumination intensity display signals in response to the input illumination intensity

display signals and in response to the degraded liquid crystal device condition signals; and  
a plurality of liquid crystal display devices coupled to the sharing generator and excited by the shared illumination intensity display signals.

In reviewing the prior art, the examiner focused on U.S. Patent No. 4,825,201 to Watanabe et al., which discloses a display error detection and correction system. The examiner found many of the claims of the application distinguishable over Watanabe because they explicitly recite limitations “directed to changing the intensity of devices adjacent to the defective device to compensate for the intensity of the defective device.” The examiner, however, rejected the four claims at issue in this appeal on the ground of anticipation, finding that because they do not expressly recite the limitations of changing the intensity of adjacent devices to correct for a defect, they are not distinguishable over the second embodiment disclosed in Watanabe.

The Watanabe patent discloses an “optical measuring device” positioned in front of an array of display units. The optical measuring device measures various optical properties of the display units, including brightness and color tone. The optical measuring device generates a signal that is sent to the “correction-value determining device,” which calculates both the position of the display unit that needs correction and the “correction value” to be applied to that display unit. The correction-value determining device includes a central processing unit, a read-only memory, and a random access memory. Based on the signal from the optical measuring device and on stored data for running the program, the

correction-value determining device generates a “correction signal” that is sent to a controller, which in turn transmits a correction data signal to correction circuits connected to the display units. Although the correction data signal is available to all of the correction circuits, the controller enables only the particular correction circuit corresponding to the display unit that needs correction. Thus, the correction data from the controller is transmitted through only the correction circuit corresponding to the display unit that needs correcting.

On appeal, the Board of Patent Appeals and Interferences upheld the rejections. The Board adopted the examiner’s findings that various features in Watanabe anticipate the claimed intensity signal generator, the claimed device detector, the claimed sharing generator, and the claimed plurality of devices. With respect to the “sharing” limitation, the Board found that Watanabe’s correction data signal is shared by all of the display devices — and thus meets the sharing limitation found in all four claims — because it is available to all of the correction circuits, even though it is transmitted through only that correction circuit corresponding to the display unit that needs correction. The Board agreed with the examiner in rejecting Mr. Hyatt’s argument that the sharing limitation in each of the rejected claims incorporates the requirement for changing the intensity of the devices adjacent to the defective device in order to compensate for the intensity of the defective device. Because it found that the correction data signal in Watanabe is available to all of the correction circuits at the same time, the Board found that Watanabe discloses the “sharing” limitation of all four rejected claims when that limitation is given its broadest reasonable interpretation consistent with the specification.

A

In challenging the Board's decision, Mr. Hyatt first argues that the examiner and the Board failed to analyze the claims on an element-by-element and claim-by-claim basis. That failure, according to Mr. Hyatt, renders the Board's decision inadequate under our holding in Gechter v. Davidson, 116 F.3d 1454, 43 USPQ2d 1030 (Fed. Cir. 1997).

The central thrust of Gechter is that the Board must explain the basis for its rulings sufficiently to enable meaningful judicial review. Gechter, 116 F.3d at 1458, 43 USPQ2d at 1033. As we stated, "For an appellate court to fulfill its role of judicial review, it must have a clear understanding of the grounds for the decision being reviewed," which requires that "[n]ecessary findings must be expressed with sufficient particularity to enable [the] court, without resort to speculation, to understand the reasoning of the Board, and to determine whether it applied the law correctly and whether the evidence supported the underlying and ultimate fact findings." Id. at 1457, 43 USPQ2d at 1033. Under that standard, the court in Gechter concluded that it could not properly review the Board's decision to reject the claim at issue for anticipation because the Board's decision addressed only one of several limitations in the claim. In addition, the court found that it was not clear from the Board's discussion what construction it had placed on the one limitation that it did discuss. Id. at 1459-60, 43 USPQ2d at 1035.

In this case, the Board addressed the limitations of each claim in a manner adequate to permit judicial review. In particular, in his answer to Mr. Hyatt's appeal before the Board of Patent Appeals and Interferences, the examiner explained which aspects of Watanabe anticipate each of the limitations of claim 1. With respect to the critical terms "sharing" and "shared intensity signals," the examiner pointed out that "there is no structural recitation

providing patentably distinguishing language regarding the disclosed feature of adjusting the brightness of adjacent devices to compensate for the brightness of a defective device.” That statement implicitly construes the “sharing” limitation to embrace its broadest common meaning — to “undergo in common.” Webster’s New International Dictionary 2087 (3d ed. 1968). The Board adopted the examiner’s analysis with additional remarks explaining why the “sharing” limitation was found in *Watanabe*. With respect to the remaining claims, the examiner explained that those claims are not materially different from claim 1 and that the patentability of those claims stands or falls with claim 1.

While the explanation given by the examiner and the Board could have been more expansive, particularly with regard to claims 8, 24, and 30, their analysis is sufficient to apprise us of the basis on which they rejected each of the disputed claims. Accordingly, we decline the invitation to vacate the Board’s decision on the ground that it failed to explain its reasoning sufficiently to enable us to review its rulings.

## B

On the merits, Mr. Hyatt argues that the examiner and the Board were incorrect in finding that the *Watanabe* reference anticipates the four rejected claims. At its core, Mr. Hyatt’s argument is that rejected claims 1, 8, 24, and 30 are distinguishable over *Watanabe* because they are directed to changing the intensity of devices surrounding the defective device in order to compensate for the intensity of the defective device.

Three general and undisputed propositions guide our review of the Board’s decision. First, anticipation is a question of fact. See *Bischoff v. Wethered*, 76 U.S. (9 Wall.) 812, 814-15 (1869); *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997). Second, we uphold decisions of the Board on factual matters if there is substantial

evidence in the record to support the Board's findings. See In re Gartside, 203 F.3d 1305, 1315, 53 USPQ2d 1769, 1775 (Fed. Cir. 2000). Third, during examination proceedings, claims are given their broadest reasonable interpretation consistent with the specification. See In re Graves, 69 F.3d 1147, 1152, 36 USPQ2d 1697, 1701 (Fed. Cir. 1995); In re Etter, 756 F.2d 852, 858, 225 USPQ 1, 5 (Fed. Cir. 1985) (en banc). That last proposition "serves the public interest by reducing the possibility that claims, finally allowed, will be given broader scope than is justified," In re Yamamoto, 740 F.2d 1569, 1571, 222 USPQ 934, 936 (Fed. Cir. 1984), and it is not unfair to applicants, because "before a patent is granted the claims are readily amended as part of the examination process," Burlington Indus., Inc. v. Quigg, 822 F.2d 1581, 1583, 3 USPQ2d 1436, 1438 (Fed. Cir. 1987). Operating in conjunction as they do in this case, these three propositions make the applicant's task on appeal to this court a daunting one.

We agree with the Board that most of the elements of the four disputed claims are clearly anticipated by Watanabe. First, the optical measuring device disclosed in Watanabe detects the state of various optical properties of each of the devices in an array of devices and generates signals that reflect the state of those properties. Mr. Hyatt argues that the "device detector" limitation requires the sensing of a defective or faulty panel, not simply the measurement of the illumination properties of a device. The broadest reasonable interpretation of the claim limitation, however, includes the detection of the condition of a device, such as its illumination properties. In addition, an improper illumination condition can be considered a fault or defect. Thus, the optical measuring aspect of Watanabe anticipates the "device detector [or fault detector] generating device [or fault] condition signals."

Second, the correction-value determining device of Watanabe anticipates the “intensity signal generator” or “display signal generator” recited as the first limitation in each of the disputed claims. The correction-value determining device generates correction signals based in part on signals received from the optical measuring device. Under a properly broad reading of “intensity” and “display” signals, the correction signal meets the “generates input intensity signals” or “input illumination intensity display signals” limitation further required by each claim.

Third, Watanabe discloses an array or plurality of devices, which can include liquid crystal display panels, that are excited by the correction signals originating in the controller. Except for the references to the “sharing” generator and the “shared” intensity signals, Watanabe thus plainly anticipates the fourth limitation of the four disputed claims as well.

The difficult question in the case is whether Watanabe anticipates the third limitation of each claim, which calls for a “sharing generator” that “generat[es] shared intensity signals” (or “shared illumination intensity display signals”). Mr. Hyatt argues that in order to be “shared,” the intensity signals or illumination intensity display signals must be received by more than one display device at the same time. The examiner and the Board, on the other hand, interpreted the term “shared” to require only that the intensity signal (or illumination intensity display signal) be available to more than one of the correction circuits, even if only one of the correction circuits transmits the signal to its corresponding display device.

In light of the rule that the Board must give claims their broadest reasonable construction, we uphold the Board’s decision with respect to the definition of the terms “shared” and “sharing” in Mr. Hyatt’s application. The specification, although lengthy,

contains no definition of “shared” or “sharing” that would require the Board to construe those limitations in the narrower manner asserted by Mr. Hyatt. The Board’s interpretation of those terms, although broad, is not unreasonable.

Mr. Hyatt attempts to distinguish Watanabe by arguing that the correction signal is available to only one of the correction circuits at any given time. For support, he refers to the relevant Watanabe drawing, which shows a curved line connecting each input of the correction circuits to a common line to which the signal is applied. The significance of that symbol, he asserts, is that the wire to an input is taken from a bundle of wires and is thus independent of the remaining wires in the bundle.

Mr. Hyatt did not make this argument in his brief to the Board; instead, he raised it for the first time in his second request for rehearing before the Board. Because the Board in its decision on Mr. Hyatt’s first request for rehearing did not alter its position with respect to the anticipation ruling on claims 1, 8, 24, and 30, Mr. Hyatt was not entitled under Board rules to file a second request for rehearing on that issue. See 37 C.F.R. § 1.197(b) (appellant may file one request for rehearing “unless the original decision is so modified by the decision on rehearing as to become, in effect, a new decision, and the Board of Patent Appeals and Interferences so states”). In its response to Mr. Hyatt’s second request for rehearing, the Board expressly relied on 37 C.F.R. § 1.197(b) in refusing to consider the request. Mr. Hyatt’s argument about the nature of the connection circuits shown in Watanabe was therefore not properly before the Board. As such, he is not entitled to rely on it as a basis for overturning the Board’s decision. See In re Schreiber, 128 F.3d at 1479, 44 UPSQ2d at 1433; In re Wiseman, 596 F.2d 1019, 1022, 201 USPQ 658, 661 (CCPA 1979); In re Fong, 378 F.2d 977, 981, 154 USPQ 25, 28-29 (CCPA 1967).

In any event, the Watanabe drawing clearly shows the common line to consist of N channels, with N channels also entering each input to a correction circuit. The channels correspond to the N-bits of a correction signal, as disclosed in the Watanabe written description. Thus, the correction signal reaches the input of all of the correction circuits, contrary to Mr. Hyatt's contention.

One further point remains. The second limitation of claim 30 in Mr. Hyatt's application refers to a "degraded device memory storing degraded liquid crystal device condition signals to identify a degraded liquid crystal device." Mr. Hyatt argues in passing in his brief that the examiner and Board did not establish what in Watanabe is relied on to be a "degraded device memory storing degraded liquid crystal device condition signals." The short answer to that objection is that in Watanabe the degraded device information, i.e., the output of the device detector, is stored in memory that Watanabe specifically notes is found in the correction-value determining device. The Board therefore did not err in deciding that claim 30, like related claims 1, 8, and 24, is anticipated by Watanabe.

AFFIRMED.