

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 16

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte CHANG-HUN OH

Appeal No. 2002-0992
Application 09/116,018

ON BRIEF

Before HAIRSTON, JERRY SMITH and BLANKENSHIP, Administrative Patent Judges.

JERRY SMITH, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1-17, which constitute all the claims in the application. The examiner has since withdrawn the rejection with respect to claims 13-15 and 17. Therefore, this appeal is directed to the examiner's rejection of claims 1-12 and 16.

The disclosed invention pertains to a method and apparatus for use in a Code

Appeal No. 2002-0992
Application No. 09/116,018

Division Multiple Access (CDMA) mobile communications system. The invention serves to eliminate interference signals received at a different angle than the reception angle of the desired signal as well as multiple access interference signals included in signals received at the reception angle of the desired signal.

Representative claim 1 is reproduced as follows:

1. A receiving method in a Code Division Multiple Access (CDMA) mobile communications system, comprising the steps of:

controlling beam patterns and directions of an adaptive array antenna to coincide with a reception direction of a desired signal;

forming a beam in the reception direction of the desired signal;

eliminating an interference signal received at a different angle than the reception angle of the desired signal; and

eliminating multiple access interference signals included in signals received at the reception angle of the desired signal.

The examiner relies on the following references:

Talwar	5,152,010	Sep. 29, 1992
Raleigh et al. (Raleigh)	6,101,399	Aug, 08, 2000 (filed June 16, 1995)

Claims 1-12 and 16 stand rejected under 35 U.S.C. § 103(a). As evidence of obviousness the examiner offers Raleigh in view of Talwar.

Rather than repeat the arguments of appellant or the examiner, we make reference to the main brief and the answer for the respective details thereof.

OPINION

We have carefully considered the subject matter on appeal, the rejection advanced by the examiner and the evidence of obviousness relied upon by the examiner as support for the rejection. We have, likewise, reviewed and taken into consideration, in reaching our decision, the appellant's arguments set forth in the main brief along with the examiner's rationale in support of the rejection and arguments in rebuttal set forth in the examiner's answer.

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the obviousness of the invention as set forth in claims 1-12 and 16. Accordingly, we reverse.

Appellant has indicated that for purposes of this appeal the claims will all stand or fall together as a single group [brief, page 4]¹. Consistent with this indication appellant has made no separate arguments with respect to any of the claims on appeal. Accordingly, all the claims before us will stand or fall together. Note In re King, 801 F.2d 1324, 1325, 231 USPQ 136, 137 (Fed. Cir. 1986); In re Sernaker, 702 F.2d 989,

¹ We note that appellant argued independent claims 9 and 12 for the first time in the reply brief. Although it does not matter in this particular case, appellant is advised that we do not consider separate arguments for patentability which are not included in the main brief. Allowing an appellant to make separate arguments for patentability for the first time in the reply brief would simply encourage an appellant to withhold such arguments until the examiner is foreclosed from making a response.

Appeal No. 2002-0992
Application No. 09/116,018

991, 217 USPQ 1, 3 (Fed. Cir. 1983). Therefore, we will consider the rejection against independent claim 1 as representative of all the claims on appeal.

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the examiner to establish a factual basis to support the legal conclusion of obviousness. See In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. Note In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). If that burden is met, the burden then shifts to the applicant to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the

evidence as a whole and the relative persuasiveness of the arguments. See Id.; In re Hedges, 783 F.2d 1038, 1039, 228 USPQ 685, 686 (Fed. Cir. 1986); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); and In re Rinehart, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976). Only those arguments actually made by appellant have been considered in this decision. Arguments which appellant could have made but chose not to make in the brief have not been considered and are deemed to be waived by appellant [see 37 CFR § 1.192(a)].

With respect to representative, independent claim 1, the examiner seems to assert that Raleigh teaches a CDMA mobile communication system but that Raleigh fails to teach any of the steps recited in claim 1. The examiner finds, however, that Talwar teaches each of the steps of claim 1 and that it would have been obvious to the artisan to modify the system of Raleigh to include the teachings of Talwar [answer, pages 2-4].

Appellant argues that Talwar fails to teach the step of eliminating multiple access interference signals included in signals received at the reception angle of the desired signal. Specifically, appellant argues that Talwar only discloses eliminating signals which are outside the predetermined angle. Thus, appellant argues, Talwar allows signals, such as interference signals, which are not desired and are within the predetermined angle from the center of the null to be received [brief, pages 7-8].

The examiner responds that Talwar teaches that within the desired receiving

angle null 52, there is a small or a larger angular deviation, signals with interference being eliminated by the injecting cancellation signal into the interfering signals received along with the desired signal [answer, pages 6-7].

We will not sustain the examiner's rejection of the claims on appeal for essentially the reasons argued by appellant in the main brief. Talwar does not teach the elimination of multiple access interference signals included in signals which are received at the reception angle of the desired signal. Talwar teaches a system which allows signals from the desired angle to be received but which cancels signals which deviate from the desired angle. Thus, all signals from the desired angle are received in Talwar. There is no cancellation of undesired signals, such as multiple access interference signals, which arrive from the desired direction in Talwar. The multiple access interference signals in claim 1 are signals which come from the same direction as the desired signal. Signals which are detected from other angles are already eliminated by eliminating an interference signal step of claim 1. Thus, we interpret claim 1, and the other claims, as requiring that the multiple access interference signals be signals which come from the same direction as the desired signal. With this interpretation in mind, Talwar does not teach the final eliminating step of claim 1.

In summary, we have not sustained the examiner's rejection of the claims on appeal. Therefore, the decision of the examiner rejecting claims 1-12 and 16 is reversed.

Appeal No. 2002-0992
Application No. 09/116,018

REVERSED

KENNETH W. HAIRSTON)	
Administrative Patent Judge)	
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JERRY SMITH)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
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