

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte TSUYOSHI TODA, TAKESHI MAEDA, FUMIO KUGIYA,
HIROSHI IDE, HIROYUKI TSUCHINAGA, FUMIYOSHI KIRINO,
TOSHIMITSU KAKU and KAZUO SHIGEMATSU

Appeal No. 2006-1789
Application No. 08/436,490

ON BRIEF

Before KRASS, RUGGIERO and HOMERE, ***Administrative Patent Judges.***

HOMERE, ***Administrative Patent Judge.***

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the final rejection of claims 1 through 3, 5 through 13, and 21 through 23, all of which are pending in this application. Claims 4 and 14 through 20 have been cancelled by Appellants.

We reverse.

Invention

Appellants' invention relates generally to a method for recording data in a magneto-optical data recording medium (6). In a first operation, trial writing data are recorded into the recording medium (6) while changing the recording power conditions by varying the intensity of the light originating from a laser source (1). The recorded trial writing data are reproduced and evaluated to set an optimum recording power. Next, in a second writing operation, trial writing data are recorded into the medium (6) while changing the conditions of the servo unit (24) by controlling the position of the light spot emanating from the laser (1). The recorded trial data are reproduced and evaluated to set an optimum servo conditions. Last, in a third trial writing operation in which the servo conditions are fixed to the recording medium (6) after the optimum servo conditions have been set, trial writing data are once again recorded into the recording medium (6) while changing the recording power conditions. The recorded trial writing data are once again reproduced and evaluated to set a final optimum recording power.

Claim 1 is representative of the claimed invention and is reproduced as follows:

1. In a method of recording data into a recording medium by forming a recording region which is physically different from the nonrecorded portions, an optical data recording/reproducing method comprising:

a first trial writing operation in which trial writing data are recorded into the recording medium while changing the recording power conditions, the recorded trial writing data are reproduced, and the reproduced trial writing data are evaluated to set an optimum recording power; and

a second trial writing operation in which trial writing data are recorded into the recording medium while changing the servo conditions, the recorded trial writing data are

reproduced, and the reproduced trial writing data are evaluated to set optimum servo conditions;

wherein after the servo conditions are set by said second trial writing operation, a third trial writing operation is performed in which servo conditions are fixed to the recording medium, the trial writing data are recorded while changing the recording power, the recorded trial writing data are reproduced, and the reproduced trial writing data are evaluated to again set an optimum recording power.

References

The Examiner relies on the following references:

Bletscher Jr. et al. (Bletscher)	5,070,495	Dec. 3, 1991
Ohta	5,293,366	Mar. 8, 1994 (filed Apr. 16, 1993)
Yanagawa	5,442,609	Aug. 15, 1995 (filed June 22, 1993)

Rejection at Issue

A. Claims 1 through 3, 5 through 13 and 21 through 23 stand rejected under 35 U.S.C. § 103 as being unpatentable over the combination of Bletscher, Yanagawa and Ohta.

Rather than reiterate the arguments of Appellants and the Examiner, the opinion refers to respective details in the Appeal Brief¹ and the Examiner's Answer². Only those arguments actually made by Appellants have been considered in this decision. Arguments that Appellants could have made but choose not to make in the Appeal Brief have not been taken into consideration. See 37 CFR 41.37(c)(1) (vii) (eff. Sept. 13, 2004).

¹ Appellants filed an Appeal Brief on June 11, 1998.

² The Examiner mailed an Examiner's Answer on August 25, 1998.

OPINION

In reaching our decision in this appeal, we have carefully considered the subject matter on appeal, the Examiner's rejection, the arguments in support of the rejection and the evidence of obviousness relied upon by the Examiner as support for the rejection. We have, likewise, reviewed and taken into consideration Appellants' arguments set forth in the Appeal Brief along with the Examiner's rationale in support of the rejection and arguments in the rebuttal set forth in the Examiner's Answer.

After full consideration of the record before us, we agree with Appellants that claims 1 through 3, 5 through 13 and 21 through 23 are not properly rejected under 35 U.S.C. § 103 as being unpatentable over the combination of Bletscher, Yanagawa and Ohta. Accordingly, we reverse the Examiner's rejection of claims 1 through 3, 5 through 13 and 21 through 23 for the reasons set forth **infra**.

Appellants have indicated that for purposes of this appeal, the claims stand or fall together in three (3) groups. See page 4 of the Appeal Brief. However, the reasons set forth **infra** are applicable to all the claims. Therefore, we will consider Appellants' claims as standing or falling together, and we will consider claim 1 as being representative of the claimed invention.

Comment [C1]: I have bolded "infra" to be consistent with "infra" on page 6

I. Under 35 U.S.C. § 103, is the Rejection of Claims 1 through 3, 5 through 13 and 21 through 23 as Being Unpatentable over the combination of Bletscher, Yanagawa and Ohta Proper?

In rejecting claims under 35 U.S.C. § 103, the Examiner bears the initial burden of establishing a **prima facie** case of obviousness. **In re Oetiker**, 977 F.2d 1443, 1445, 24

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USPQ2d 1443, 1444 (Fed. Cir. 1992). **See also In re Piasecki**, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). The Examiner can satisfy this burden by showing that some objective teaching in the prior art or knowledge generally available to one of ordinary skill in the art suggests the claimed subject matter. **In re Fine**, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Only if this initial burden is met does the burden of coming forward with evidence or argument shift to the Appellants. **Oetiker**, 977 F.2d at 1445, 24 USPQ2d at 1444. **See also Piasecki**, 745 F.2d at 1472, 223 USPQ at 788.

An obviousness analysis commences with a review and consideration of all the pertinent evidence and arguments. “In reviewing the [E]xaminer’s decision on appeal, the Board must necessarily weigh all of the evidence and argument.” **Oetiker**, 977 F.2d at 1445, 24 USPQ2d at 1444. “[T]he Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency’s conclusion.” **In re Lee**, 277 F.3d 1338, 1344, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002).

With respect to claims 1 through 3, 5 through 13 and 21 through 23, Appellants argue at pages 7 through 10 of the Appeal Brief that the combination of Bletscher, Yanagawa and Ohta fail to teach a third trial writing operation in which the servo conditions are fixed to the recording medium after the optimum servo conditions have already been set. Particularly, at page 8 of the Appeal Brief, Appellants state the following:

Bletscher, Jr. et al do not disclose a third trial writing operation in which optimum servo conditions have already been set...

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Even assuming that Yanagawa and Ohta disclose the second trial writing operation as claimed in the present application, such disclosure when combined with Bletscher, Jr. et al still does not disclose nor render obvious the third trial writing operation which is performed after servo conditions are fixed.

In order for us to decide the question of obviousness, “[t]he first inquiry must be into exactly what the claims define.” **In re Wilder**, 429 F.2d 447, 450, 166 USPQ 545, 548 (CCPA 1970). “Analysis begins with a key legal question-- what is the invention claimed ?”...Claim interpretation...will normally control the remainder of the decisional process.” **Panduit Corp. v. Dennison Mfg Co.**, 810 F.2d 1561, 1567-68, 1 USPQ2d 1593, 1597 (Fed. Cir. 1987), **cert denied**, 481 U.S. 1052 (1987).

We note that independent claim 1 reads in part as follows:

[W]herein after the servo conditions are set by said second trial writing operation, a third trial writing operation is performed in which servo conditions are fixed to the recording medium, the trial writing data are recorded while changing the recording power, the recorded trial writing data are reproduced, and the reproduced trial writing data are evaluated to again set an optimum recording power.

We also note that at page 21, lines 9 through 18, Appellants’ specification states the following:

After the optimum servo state is realized, the secondary trial writing operation is carried out again (211, 212, 213) to change the recording power, and the final optimum recording power is determined. The procedure for this operation is the same as the primary trial writing operation. After the final optimum recording power is determined, the trial writing end signal is output (214) to start the operation for recording, reproducing or erasing normal data (215).

Thus, the claim does require a third trial writing operation in which the servo conditions are fixed to the recording medium after the optimum servo conditions have already been set to

subsequently set the final optimum recording power.

Now, the question before us is what Bletscher, Yanagawa and Ohta would have taught to one of ordinary skill in the art? To answer this question, we find the following facts:

1. At column 5, lines 15 through 50, Bletscher states the following:

As will become apparent, the test pattern is used for independently and sequentially adjusting power level of a laser and the pulse duration of the pulses for enabling symmetry in the recorded signal pattern 12 on the optical disk. After pattern 12 is successfully recorded along a single track to be used for a calibration, the recorded pattern is read at step 15. The reading preferably includes a repeated readback in each calibration track, such as ten scans of each calibration track. The repeated readings in each calibration step tend to average out spurious components in the readback signal, such as may be caused by runout, servo drift and other parameters known in the optical recording art. The readback signals are analyzed either for symmetry or maximum power without undue intertrack interference at step 16. It is preferred that maximum power be first determined and then symmetry of the pulses along the track be established. The power or symmetry indicating signals, later described, are averaged (integrated) over the reading period. Upon completion of the repeated readback, the resultant asymmetry indicating signal is compared with a symmetry threshold. If the measured intertrack interference or asymmetry is within predetermined tolerances at OK step 17, then the calibration is complete as indicated by arrow 18. The pulse amplitude and pulse duration for achieving a desired recorded pattern occurring at step 17 are used for subsequent recording of data signals. In the event that the analyzed asymmetry or intertrack interference is beyond the desired tolerance limits, then at step 19 the laser operation is adjusted either for intensity variation (power adjustment) or for duration adjustment (pulse-width adjustment). Then as indicated by arrow 20, the pattern is again recorded at step 11. With each new adjusted laser operation, calibration is recursive until a satisfactory recording is obtained.

2. At column 2, lines 46-68, Yanagawa states the following:

An object of the present invention is to provide a system for producing a tracking error signal where the gain thereof is stable, thereby enabling a track-following servo system to operate reliably.

According to the present invention, there is provided a tracking error signal correcting system for a tracking error generating system for generating a tracking error signal based on a laser beam irradiated on a writable optical disc having a predetermined recording area.

The correcting system of the invention comprises recording means for recording data on the predetermined recording area, means for obtaining a recording tracking error signal from the recorded predetermined recording area through the tracking error generating system, a first memory storing the recording tracking error signal, a second memory storing a reading tracking error signal obtained through the tracking error generating system at reproduction of the optical disc.

Adjusting means is provided for adjusting gain of the tracking error generating system so that the level of the reading tracking error signal stored in the second memory becomes equal to the level of the recording tracking error signal stored in the first memory.

3. In the abstract of the disclosure, Ohta states the following:

An apparatus for effecting the recording and reproduction of information on an information track on a recording medium, includes a device for applying a first light spot to the information track to thereby record information, a device for applying a second light spot to the information track to thereby reproduce the information, a device for moving the recording medium relative to the first and second light spots in the lengthwise direction of the information track, a detector for detecting a tracking signal from the reflected light of the second light spot by the recording medium, a tracking controller for moving the first and second light spots in the tracking direction orthogonal to the lengthwise direction of the information track in conformity with the tracking signal, and a device for providing to the tracking signal an offset corresponding to the positional deviation between the center of the first light spot and the center of the second light spot in the tracking direction, during the recording of the information.

With the above discussion in mind, we find that the combination of Bletscher, Yanagawa and Ohta does not teach the claimed invention. First, we find that Bletscher's teaching is limited to determining and setting an optimum recording power during a writing operation. Particularly,

Bletscher discloses an iterative process for calibrating the recording of data onto a magneto-optic drive by adjusting the recording power light level of a laser source during each recording operation. Next, we find that Yanagawa's teaching is limited to adjusting the gain of an error signal following the recording of data on a disk to thereby permit a track-following servo to operate reliably and accurately. Additionally, we find that Ohta's teaching is concerned with tracking and synchronizing a first and second light spots to thereby ensure an accurate recording and reproduction of information on the recording medium. One of ordinary skill in the art at the time of the present invention would have duly recognized that the combined teachings of Bletscher, Yanagawa and Ohta merely amounts to a method of determining and setting an optimum recording power with a reduced error rate that allows a track-following servo to help achieve a reliable and accurate recording and reproduction of data on the recording medium. The ordinarily skilled artisan would have thus recognized that the combined teaching of Bletscher, Yanagawa and Ohta is not equivalent to the final setting of the optimum recording power after the optimum servo conditions have been fixed in the recording medium. Hence, we agree with Appellants that the ordinarily skilled artisan would have not been motivated to combine the cited references in the manner suggested by the Examiner to yield the claimed third trial writing. In consequence, we find error in the Examiner's position, stating that the combination of Bletscher, Yanagawa and Ohta teaches the claimed limitation of a third trial writing operation in which the servo conditions are fixed to the recording medium after the optimum servo conditions have already been set to subsequently set the final optimum recording power.

It is therefore 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 the ordinarily skilled artisan the invention as set forth in claims 1 through 3, 5 through 13 and 21 through 23. Accordingly, we will not sustain the Examiner's rejection of claims 1 through 3, 5 through 13 and 21 through 23.

CONCLUSION

In view of the foregoing discussion, we have not sustained the Examiner's decision rejecting claims 1 through 3, 5 through 13 and 21 through 23 under 35 U.S.C. § 103. Therefore, we reverse.

REVERSED

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