

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 23

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte TOSHIHIDE HAMAGUCHI

Appeal No. 1996-3996
Application 08/250,578¹

ON BRIEF

Before HAIRSTON, FLEMING and HECKER, **Administrative Patent Judges.**

FLEMING, **Administrative Patent Judge.**

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1 through 5, all of the claims pending in the present application.

The claimed subject matter is directed to a magnetic recording/reproducing (R/R) apparatus for recording and reproducing a digital signal by helical-scanning of a magnetic tape,

¹ Application for patent filed May 27, 1994.

including both a standard play mode (SP), and a long play mode (LP). In order to record and reproduce to a magnetic tape that includes both SP and LP modes, the inventor sets out as objectives, an LP mode that has favorable signal R/R characteristics, a track pitch that is identical for both modes, an improved signal to noise ratio, an identical cylinder rotation speed, and the ability to handle both recording and reproduction in LP mode. To meet these objectives, the claimed invention has a reduced tape speed for LP mode to $1/N$ of SP mode, data compression of the signal to be recorded, and recording only for every N rotations in LP mode. N is an even number.

Beginning on page 24 of the specification, Appellant has disclosed an embodiment where the factor N is two. Figure 4 illustrates the basic mechanism of the invention, where rotary head cylinder 5 rotates at a cylinder rotation speed that is the same for both SP and LP modes. The tape 8 runs at a constant tape speed for LP mode that is half that of SP mode. Figure 9 illustrates the track pattern in LP mode, where each track A and B has a width of one track pitch t , and recording or reproduction is done during a period corresponding to one rotation of every 2 rotations of the rotary head cylinder. Figure 10 illustrates the formation of record data blocks wherein the amount of information is reduced to half. Compression of the signal by half allows recording within a track pitch t for LP mode. Appellant also describes that the RF pulses in the LP mode are identical to the RF pulses in the SP mode.

Independent claim 1 is reproduced as follows:

1. A magnetic recording/reproduction apparatus of an azimuth system for recording and/or reproducing a digital signal by helical-scanning a magnetic tape, including a standard play mode, and a long play mode of a recording and reproducing time period N (N is an even number) times that of said standard play mode, as recording and reproducing modes, said magnetic recording/reproduction apparatus comprising:

mode specifying input means for receiving a signal specifying one of said standard play mode and said long play mode to be executed,

a rotary head cylinder driven to rotate at the same rotation speed in either of said standard play mode and said long play mode,

a pair of magnetic head units having opposite azimuth, disposed in close proximity on a circumferential face of said rotary head cylinder with a difference in level therebetween corresponding to a predetermined track pitch (t) so that two continuous tracks are scanned simultaneously at said predetermined track pitch on said magnetic tape for every one rotation of said rotary head cylinder,

tape speed control means for reducing the travel speed of a said magnetic tape running while being wound around said rotary head cylinder to $1/N$ the travel speed of said standard play mode when said long play mode is specified,

signal processing means for compressing the amount of data of a digital signal to be recorded to $1/N$ the amount of data of the standard play mode to provide the compressed data to said pair of magnetic head units as record data of two channels, and/or for expanding the amount of data of digital signals of two channels reproduced by said pair of magnetic head units by N times, when said long play mode is specified, and

head control means for driving said pair of magnetic head units to carry out recording or reproduction by said pair of magnetic head units in a unit of said two continuous tracks on said magnetic tape, for every one rotation of said rotary head cylinder when said standard play mode is specified, and for every N rotations of said rotary head cylinder when said long play mode is specified, wherein said predetermined track pitch is maintained in both standard and long play modes.

The Examiner has not relied on any references for the rejection.

The Examiner objected to Appellant's specification under 35 U.S.C. § 112, first paragraph, for failing to provide an enabling disclosure. Claims 1 through 5 stand rejected under 35 U.S.C. § 112, first paragraph, based upon the reasons set forth in the objection to the specification.

Rather than repeat the arguments of Appellant or the Examiner, we make reference to the brief and the answer for the details thereof.

OPINION

After a careful review of the evidence before us, we disagree with the Examiner that claims 1 through 5 are non-enabling under 35 U.S.C. § 112, first paragraph. We will reverse the rejection of the claims under 35 U.S.C. § 112, first paragraph, for the reason set forth **infra**.

The Examiner argues that the specification does not support the limitation "wherein said predetermined track pitch is maintained in both standard and long play modes." The Examiner further reasons that recording every other revolution of the cylinder would not return the track spacing to the same width as for the SP mode, and

would not return the track angle to the SP standard. Specifically, the Examiner argues that for LP mode, the track spacing and the angle between the head and track would have to change.

In order to comply with the enablement provision of 35 U.S.C. § 112, first paragraph, it must be determined whether a person skilled in the pertinent art, using the knowledge available to such person and the disclosure in the patent document, could make and use the invention without undue experimentation. **Northern Telecom Inc. v. Datapoint Corp.**, 908 F.2d 931, 941, 15 USPQ2d 1321, 1329 (Fed. Cir. 1990).

Although not explicitly stated in section 112, to be enabling, the specification of a patent must teach those skilled in the art how to make and use the full scope of the claimed invention without "undue experimentation." **In re Wright**, 999 F.2d 1557, 1561, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993); **In re Vaeck**, 947 F.2d 488, 495, 20 USPQ2d 1438, 1444 (Fed. Cir. 1991); **In re Wands**, 858 F.2d 731, 736-37, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988); **In re Fisher**, 427 F.2d 833, 839, 166 USPQ 18, 24 (CCPA 1970) (the first paragraph of section 112 requires that the scope of protection sought in a claim bear a reasonable correlation to the scope of enablement provided by the specification). Nothing more than objective enablement is required, and therefore it

is irrelevant whether this teaching is provided through broad terminology or illustrative examples. **Wright**, 999 F.2d at 1561, 27 USPQ2d at 1513; **In re Marzocchi**, 439 F.2d 220, 223, 169 USPQ 367, 369 (CCPA 1971).

When rejecting a claim under the enablement requirement of section 112, the PTO bears an initial burden of setting forth a reasonable explanation as to why it believes that the scope of protection provided by that claim is not adequately enabled by the description of the invention provided in the specification of the application; this includes, of course, providing sufficient reasons for doubting any assertions in the specification as to the scope of enablement. If the PTO meets this burden, the burden then shifts to the applicant to provide suitable proofs indicating that the specification is indeed enabling. **Wright**, 999 F.2d 1651-62, 27 USPQ2d at 1513; **Marzocchi**, 439 F.2d at 223-24, 169 USPQ at 369-70.

Evidence must be supported by something more than unsupported conclusory statements as to the ultimate legal question. **See Wright**, 999 F.2d at 1563, 27 USPQ2d at 1514-15; **In re Buchner**, 929 F.2d 660, 661, 18 USPQ2d 1331, 1332 (Fed. Cir. 1991); **In re Brandstadter**, 484 F.2d 1395, 1405-06, 179 USPQ 286, 293-94 (CCPA 1973).

On pages 24 through 26 of the specification, Appellant discloses a preferred embodiment of the present invention. Specifically, on page 24 of the specification, Appellant discloses that, "[i]n the LP mode, the rotation speed of rotary head cylinder 5 is maintained at

the same rotation speed as that of the SP mode, while the travel speed of tape 8 is reduced to $\frac{1}{2}$ the travel speed of the SP mode.”

On pages 24 and 25 of the specification, Appellant discloses that, “timing control unit 20 simultaneously closes switches 19a and 19b during a period corresponding to one rotation of every 2 rotations of rotary head cylinder 5 by which the head scanning position on tape 8 is shifted by 2 track pitches $2t$ to simultaneously select head units 7a and 7b as record heads or reproduction heads in order to maintain the width of each track scanned by magnetic head units 17a and 17b at one track pitch t when the LP mode is specified.”

On page 25 of the specification, Appellant discloses that, “recording and reproducing processing unit 15 reduces each data of record data blocks D1, D2, D3, ... to compress the time base thereof to $\frac{1}{2}$, whereby a plurality of record data blocks D1', D2', D3', ... having the amount of information reduced to half are formed in time sequence, as shown in Fig. 10.” Then on page 26, Appellant discloses that, “[t]he data of 2 channels ... are simultaneously recorded as shown in Fig. 9 as two continuous tracks of azimuth A and azimuth B, each having a width of one track pitch t on tape 8, intermittently for every other rotation of cylinder 5.”

Thus, the Appellant’s specification discloses an embodiment that meets the stated objectives, and is commensurate in scope with the claimed invention. There is no evidence, other than unsupported conclusory statements, of record that would demonstrate that the

disclosed embodiment, or any other embodiment within the scope of the claims would not meet the stated objectives. We find that Appellant's disclosure meets the requirements of 35 U.S.C. § 112, first paragraph. Therefore, we will not sustain the Examiner's rejection of the claims under 35 U.S.C. § 112, first paragraph.

In view of the foregoing, the decision of the Examiner rejecting claims 1 through 5 under 35 U.S.C. § 112, first paragraph is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

REVERSED

KENNETH W. HAIRSTON)
Administrative Patent Judge)
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) BOARD OF PATENT
MICHAEL R. FLEMING)
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