

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

Paper No. 27

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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**Ex parte** YUKIO KUBOTA, YOICHIRO SENSHU,  
AKIHIRO UETAKE, SHINICHI HASEGAWA,  
MORIYUKI KAWAGUCHI, HAJIME INOUE,  
TAKAHITO SEKI, KEIJI KANOTA,  
TETSUJIRO KONDO, and NAOKI HONDA

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Appeal No. 2000-1241  
Application No. 08/424,156

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ON BRIEF

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Before BARRETT, DIXON, and SAADAT, **Administrative Patent Judges**.  
DIXON, **Administrative Patent Judge**.

**DECISION ON APPEAL**

This is a decision on appeal from the examiner's final rejection of claims 1, 2, 6-8, 10-14, and 17-19, which are all of the claims pending in this application.

We AFFIRM-IN-PART.

## BACKGROUND

Appellants' invention relates to an apparatus for recording and reproducing digital picture data. An understanding of the invention can be derived from a reading of exemplary claim 1<sup>1</sup>, which is reproduced below.

1. An apparatus receiving an input digital picture signal and reducing the data of the received input digital picture signal by a ratio of approximately 1:9 so as to provide a recordable signal having a reduced data bit rate for recording the reduced data bit rate signal, said apparatus comprising:

a magnetic tape wound in a cassette and having a width of no more than approximately 8 mm and a thickness of no more than approximately 7  $\mu\text{m}$ , said magnetic tape having a number of predetermined characteristics including a residual magnetic flux density value of approximately 4150 G so as to enable said reduced data bit rate signal to be recorded thereon with a relatively high areal recording density; and

means for recording said reduced data bit rate signal in successive skewed tracks on said tape with said relatively high areal recording density.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Kubota et al. (Kubota)	4,506,000	Mar. 19, 1985
Kamada et al. (Kamada)	4,997,696	Mar. 5, 1991

Kondo et al. (Kondo), "Adaptive Dynamic Range Coding Scheme for Future Consumer Digital VTR," Video, Audio and Data Recording, Seventh International Conference, pp. 219-226, (1988).

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<sup>1</sup> The claim is as amended in the amendment filed under 37 CFR 1.197(b) on Oct. 6, 1997.

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Claims 1, 2, 4, 6-8, 10-14, and 17-19 stand rejected under 35 U.S.C. § 112, first paragraph as based on a disclosure which is not enabling.<sup>2</sup> Claims 1, 2, 4, 6-8, 10-14, and 17-19 stand rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which appellants regard as the invention. Claims 1, 2, 8, and 10-14 stand rejected under 35 U.S.C. § 103 as being unpatentable over Kondo in view of Kubota. Claim 7 stands rejected under 35 U.S.C. § 103 as being unpatentable over Kondo and Kubota in view of Kamada. Claims 4, 6, and 17-19<sup>3</sup> stand rejected under 35 U.S.C. § 103 as being unpatentable over Kondo and Kubota in view of Official Notice.

Rather than reiterate the conflicting viewpoints advanced by the examiner and appellants regarding the above-noted rejections, we make reference to the examiner's answer (Paper No. 14, mailed Aug. 5, 1997) for the examiner's reasoning in support of

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<sup>2</sup> We note that the examiner initially set forth this rejection as a new grounds of rejection in the examiner's answer. Appellants responded by amending each of the three independent claims and filing a reply brief. The examiner mailed an advisory action on Oct. 29, 1997, indicating that the amendment would be entered and the status of all the claims as rejected, without addressing which grounds they are rejected. Additionally, the examiner merely states that the reply brief is "entered and considered but no further response by the examiner is deemed necessary" in a communication mailed Dec. 20, 1999. Therefore, we assume that the examiner has not waived in maintaining all of the rejections as set forth in the answer, yet the examiner has not clearly indicated how he would address the claims as amended, or if the amendments to the claims would change any of the rejections.

Appellants have not disputed the status of the case procedurally, therefore, rather than remand the case, we will decide the appeal on the merits as presented by the examiner and appellants.

<sup>3</sup>The examiner indicated that claims 15-17 were rejected, but claims 15 and 16 were canceled and claims 18 and 19 were added prior to the final rejection.

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the rejections, and to appellants' substitute brief (Paper No. 13, filed May 5, 1997) and substitute reply brief (Paper No. 23, filed Nov. 30, 1999) for appellants' arguments thereagainst.

### OPINION

In reaching our decision in this appeal, we have given careful consideration to appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by appellants and the examiner. As a consequence of our review, we make the determinations which follow.

#### 35 U.S.C. § 112, FIRST PARAGRAPH

A claim which omits matter disclosed to be essential to the invention as described in the specification or in other statements of record is subject to rejection under 35 U.S.C. § 112, first paragraph, as not enabling, and/or under 35 U.S.C. § 112, second paragraph, as failing to particularly point out and distinctly claim the subject matter which an applicant regards as his invention. **See In re Mayhew**, 527 F.2d 1229, 1233, 188 USPQ 356, 358 (CCPA 1976) (claims which failed to recite the use of a cooling zone, specially located, which the specification taught as essential, was not supported by enabling disclosure); **In re Venezia**, 530 F.2d 956, 959, 189 USPQ 149, 152 (CCPA 1976) (since all of the essential parts of the "kit" are recited in the claims, there is no basis for holding the claims incomplete); and **In re Collier**, 397 F.2d 1003, 1005, 158 USPQ 266, 268 (CCPA 1968) (claim failed to interrelate essential elements

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and failed to distinctly claim what appellant in his brief insisted was his invention). **See also Reiffin v. Microsoft Corp.**, 48 USPQ2d 1274, 1277 (N.D. Cal. 1998) (omitted elements test), **rev'd, remanded on other grounds** 214 F.3d 1342, 54 USPQ2d 1915 (Fed. Cir. 2000); and **Manual of Patent Examining Procedure** §§ 2172, 2172.01.

Here, the examiner has not maintained that the specification has identified all of the magnetic tape characteristics as essential or required to produce the desired result. The examiner has merely maintained that all of the relevant characteristics are required to provide the claimed desired result of a recording capacity having a "relatively high areal recording density." (See answer at page 7.) Here, the claimed invention sets forth a desired result of a recording capacity having a "relatively high areal recording density." We find that this is a broad recitation of a desired goal and merely requires one of the many characteristics that a material may possess. We disagree with the examiner and agree with appellants that the language of the claim is broad in scope rather than lacking in enablement. Clearly, the specification at pages 36-37 describes the characteristics of the magnetic tape produced by the process described on the immediate preceding pages. The examiner has not maintained that this process to be non-enabling, nor has the examiner questioned the disclosure of the actual use of the tape in a recording device. Therefore, we cannot sustain the examiner's rejection of claims 1, 2, 4, 6-8, 10-14, and 17-19 based upon 35 U.S.C. § 112, first paragraph.

**35 U.S.C. §112, SECOND PARAGRAPH**

As discussed above, we find that the limitations which the examiner has challenged in the claims are broad rather than lacking in enablement or lacking in particularity. Therefore, we cannot sustain the examiner's rejection of claims 1, 2, 4, 6-8, 10-14, and 17-19 based upon 35 U.S.C. § 112, second paragraph.

**35 U.S.C. § 103**

“To reject claims in an application under section 103, an examiner must show an un rebutted *prima facie* case of obviousness. **See In re Deuel**, 51 F.3d 1552, 1557, 34 USPQ2d 1210, 1214 (Fed. Cir. 1995). In the absence of a proper *prima facie* case of obviousness, an applicant who complies with the other statutory requirements is entitled to a patent. **See In re Oetiker**, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). On appeal to the Board, an applicant can overcome a rejection by showing insufficient evidence of *prima facie* obviousness or by rebutting the *prima facie* case with evidence of secondary indicia of nonobviousness.” **In re Rouffet**, 149 F.3d 1350, 1355, 47 USPQ2d 1453, 1455 (Fed. Cir. 1998). Here, we find that appellants have not overcome the *prima facie* case of obviousness by showing insufficient evidence by the examiner of obviousness or by rebutting the *prima facie* case with secondary evidence. Therefore, we will sustain the rejection of claims 1, 2, 4, 6-8, and 10-14 based upon 35 U.S.C. § 103, and we will not sustain the rejection of claims 4, 6, 7, and 17-19 based upon 35 U.S.C. § 103.

As discussed above concerning the breadth of the claim limitations with respect to 35 U.S.C. § 112, we find that the claim limitations are quite broad and use nonspecific relative terms, such as, "with a relatively high areal recording density." This non-specific language lends itself to a broad interpretation under 35 U.S.C. § 103.

We consider all of appellants' arguments in turn. However, arguments appellants might have presented, but chose not to rely upon, are deemed waived. See 37 CFR § 1.192(a) ("Any arguments or authorities not included in the brief will be refused consideration by the Board of Patent Appeals and Interferences, unless good cause is shown.")

The examiner maintains that Kondo teaches all of the claimed features but for the residual magnetic flux density of "approximately 4150 G." As evidence of the known use of residual magnetic flux density of approximately 4150 G, the examiner relies upon the teachings of Kubota which teaches at col. 1 a magnetic tape layer in the range of 3000-5000 G, which includes the value of 4150. Additionally, the examiner provides a motivation for the combination of the teaching to provide "superior reproduced signal output over an entire frequency band and low noise." (See answer at page 4.)

Appellants argue that it is improper for the examiner to combine the teachings of Kondo and Kubota. (See brief at page 11.) Appellants further cite various authorities concerning the use of hindsight and motivation to combine teachings in the prior art.

(See brief at pages 11-13.) We agree with appellants that there must be some motivation either expressly stated in the art or a convincing line of reasoning established by the examiner for the combination. Here, the examiner has relied upon a convincing line of reasoning as set forth in the statement of the rejection.

Appellants argue that Kondo specifically states that the tape described therein has a residual magnetic flux density of 3200 G and in light of this specific teaching, it would not have been obvious to one of ordinary skill in the art at the time of the invention to increase the residual magnetic flux density to 4150 G. (See brief at page 13.) We disagree with appellants. We disagree with appellants that this teaching of 3200 G in Kondo would have suggested to skilled artisans at the time of the invention that the residual magnetic flux could not be any other value such as that taught and suggested by Kubota. The value appears to only an example for a short wavelength signal. Therefore, appellants have not adequately rebutted the examiner's case of obviousness, and we will sustain the rejection of independent claims 1 and 11. Since claims 2, 10 and 12-14 stand or fall with claims 1 and 11, we will sustain the rejection of dependent claims 2, 10 and 12-14.

With respect to claim 7, the examiner relies upon the teachings of Kamada to teach an average surface roughness of not more than 0.005  $\mu\text{m}$  while claim 7 recites an average surface roughness of approximately 0.0015  $\mu\text{m}$ . (See answer at page 5.) While we agree with the examiner that Kamada teaches a range of values, we find no

teaching or suggestion that the average surface roughness of approximately 0.0015  $\mu\text{m}$  is achievable, as argued by appellants. (See brief at page 14.) Therefore, it would be speculation on our part to conclude that Kamada teaches or suggests the claimed average surface roughness of approximately 0.0015  $\mu\text{m}$  as recited on claim 7.

Therefore, the examiner has not provided a teaching of a tape with an average surface roughness of approximately 0.0015  $\mu\text{m}$  and therefore the examiner has not established a *prima facie* case of obviousness, and we cannot sustain the rejection of dependent claim 7.

With respect to independent claim 17, the examiner acknowledges that Kondo and Kubota both lack a teaching of the use recording heads having azimuth angles from  $\pm 20^\circ$ . The examiner relies upon Official Notice as motivation for skilled artisans to modify the teachings of Kondo with respect to azimuth angles from  $\pm 10^\circ$  to azimuth angles from  $\pm 20^\circ$  and the well-known tradeoffs between track width and signal to noise ratio with respect to selection of azimuth angles. (See answer at pages 5-6.)

Appellants argue that it would not have been obvious to skilled artisans to have modified the teachings of Kondo because of disadvantageous results, such as, the reduction in the level of playback. Appellants then state that while the azimuth angles from  $\pm 20^\circ$  produce a decrease in playback signal, it is believed to still be at an acceptable level for digital signals. (See brief at page 17 and specification at page 47.) While appellants' argument may also tend to support the examiner's position with

respect to well-known tradeoffs, the examiner has provided neither support nor line of reasoning which would have motivated skilled artisans to modify the teaching in the combination of Kondo and Kubota to use recording heads having gaps with different azimuth angles of substantially  $\pm 20^\circ$ . Therefore, the examiner has not established a ***prima facie*** case of obviousness in rejecting independent claim 17 and dependent claims 18 and 19.

As discussed above, the combination of Kondo and Kubota does teach or fairly suggest the invention recited in independent claim 1, but the examiner's reliance upon Official Notice does not provide any teaching or line of reasoning to support the examiner's conclusion that the invention recited in claims 4 and 6 would have been obvious. Therefore, we cannot sustain the rejection of dependent claims 4 and 6.

### **CONCLUSION**

To summarize, the decision of the examiner to reject claims 1, 2, 4, 6-8, 10-14, and 17-19 under 35 U.S.C. § 112, first paragraph is reversed; the decision of the examiner to reject claims 1, 2, 4, 6-8, 10-14, and 17-19 under 35 U.S.C. § 112, second paragraph is reversed; the decision of the examiner to reject claims 1, 2, 8, and 10-14 under 35 U.S.C. § 103 is affirmed; and the decision of the examiner to reject claims 4, 6, 7, and 17-19 under 35 U.S.C. § 103 is reversed.

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

**AFFIRMED-IN-PART**

LEE E. BARRETT	)	
Administrative Patent Judge	)	
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JOSEPH L. DIXON	)	APPEALS
Administrative Patent Judge	)	AND

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MAHSHID D. SAADAT  
Administrative Patent Judge

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