

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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

Appeal No. 2006-1869  
Application No. 10/396,814

ON BRIEF

Before CAROFF, HANLON, and DELMENDO, Administrative Patent Judges.

CAROFF, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1-7, all of the claims pending in appellants' application.

The claims on appeal relate to a magnetic recording medium (claims 1-6), and a method of forming that medium (claim 7).<sup>1</sup>

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<sup>1</sup> For convenience, we shall refer to a magnetic recording medium by the abbreviation "MRM".

Claim 1 is illustrative:

1. A magnetic recording medium which comprises at least a magnetic layer and a protective layer comprising a hard film containing carbon as a principal component in this order on one surface of a non-magnetic support, and comprises a back coating layer comprising a hard film containing carbon as a principal component on the other surface of said non-magnetic support, wherein a surface of said back coating layer has a three-dimension center surface roughness SR<sub>a</sub> in a range of 3 to 7 nm and a three-dimension ten-point average roughness SR<sub>z</sub> in a range of 30 to 55 nm.

The prior art references relied upon by the examiner are:

Matsumura et al 5,908,684 June 1, 1999  
(Matsumura)

Onodera et al (Onodera) 6,696,183 February 24, 2004  
(Filing Date: Sept. 10, 2001)

Ochi et al (Ochi) 6,723,415 April 20, 2004<sup>2</sup>  
(Filing Date: Dec. 28, 2000)

All of the appealed claims stand rejected under 35 U.S.C. § 103(a).

Matsumura has been applied by the examiner to establish obviousness with regard to claims 1, 3-5, and 7. Onodera has been applied along with Matsumura against claim 2. Ochi has been applied along with Matsumura against claim 6.

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<sup>2</sup> We note that the patent number of the Ochi reference is listed incorrectly on page 2 of the examiner's answer.

We have carefully reviewed the evidentiary record in light of the positions taken by the examiner and the appellants on appeal. Having done so, we find that the examiner has established a prima facie case of obviousness with respect to all of the claims before us. Accordingly, we shall affirm all of the rejections at issue essentially for the reasons given in the examiner's answer.

Since the appellants do not question the examiner's rationale for combining each of Onodera and Ochi with Matsumura, we shall focus our discussion upon the rejection of claims 1, 3-5, and 7, which is based upon Matsumura alone.

The MRM of Matsumura, like that described in appellants' claims, includes a magnetic layer 2, a non-magnetic support 1 and, optionally, a backcoat layer 4.

The MRM of Matsumura may also include a perfluoropolyether lubricant layer on the surface of the magnetic layer (Matsumura: col. 11, l. 52-54). According to the examiner, the claim limitation directed to "a protective layer comprising a hard film containing carbon as a principal component" reads on the carbon-containing perfluoropolyether layer of Matsumura. This particular

finding is not disputed by the appellants.

The appellants' basic position is to the effect that Matsumura is silent with regard to surface roughness (SR<sub>a</sub>, SR<sub>z</sub>) values of the backcoat layer.

The examiner's position on this issue is that Matsumura teaches that the surface roughness characteristics SR<sub>a</sub> and SR<sub>z</sub> of the back surface of an MRM are result-effective variables which affect sliding smoothness. Matsumura does disclose SR<sub>a</sub> and SR<sub>z</sub> values within the ranges recited in the instant claims (Matsumura: Abstract; Table 1-example 1), but only with respect to the exposed back surface of layer 1b of non-magnetic support 1.

Apparently, it is the examiner's position that it would have been obvious, within the context of 35 U.S.C. § 103, to follow the guidance provided by Matsumura with regard to surface roughness when a backcoat layer (rather than the second layer of the non-magnetic support) is used as the outermost layer on the back surface of a MRM in order to maximize sliding smoothness. We agree.

In other words, when a backcoat layer is the outermost exposed layer, it logically follows that one of ordinary skill in the art would want it to have the same roughness characteristics as taught by Matsumura for exposed layer 1b

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in order to realize the benefits of improved sliding smoothness.<sup>3</sup>

For the foregoing reasons, the decision of the examiner is affirmed.

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

AFFIRMED

Marc L. Caroff	)	
Administrative Patent Judge	)	
	)	
	)	
	)	BOARD OF PATENT
Adriene Lepiane Hanlon	)	
Administrative Patent Judge	)	APPEALS AND
	)	
	)	INTERFERENCES
	)	
Romulo H. Delmendo	)	
Administrative Patent Judge	)	

MLC/mg

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<sup>3</sup> Though not necessary to our decision , we note , consistent with the examiner's rationale, that both Onodera (col. 18, l. 7-15; col. 23, l. 42-4) and Ochi (col. 8, l. 59- col.9, l. 26) explicitly disclose Sra (or Ra) values for a backcoat layer within the range recited in the instant claims.

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RADER FISHMAN & GRAUER PLLC  
LION BUILDING  
1233 20TH STREET N.W., SUITE 501  
WASHINGTON DC 20036