Paper No. 29

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DANA H. BROWN, MARK D. HAGEN
and JOHN C. PURKETT

Appeal No. 1998-2499
Application No. 08/632,639

ON BRIEF

Before KRASS, FLEMING, and BLANKENSHIP, Administrative Patent Judges.

KRASS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1, 3, 4, 6, 8, 11 and 12, all of the claims remaining in the application.

The invention is directed to a system for positioning an actuator in a direct access storage device (DASD). More particularly, the invention pertains to a phase modulated servo positioning system used with narrow transducer heads in

a disk file. The read element has a width less than the write element and the read element width is less than half of the width of a data cylinder.

Representative independent claim 1 is reproduced as follows:

> 1. Apparatus for servo positioning in a disk file comprising:
> at least one disk mounted for rotation about an axis and having at least one disk surface for storing data;
> transducer means mounted for movement across said disk surface for writing to and for reading data and servo patterns from said disk surface; said transducer means including a read element and a write element, said read element having a width less than said write element and said and element being greater than 1/3 of the width of a data cylinder and less than 1/2 the width of the data cylinder; and
> a servo pattern written on said data disk surface having a non-zero track pitch of less than 1/2 of the width of a data cylinder and said servo pattern repeating in a selected number of data cylinders; said selected number being a value equal to a positive power of two.

The examiner relies on the following references:

Axmear et al. (Axmear)	4,549,232	Oct. 22, 1985
Moon et al. (Moon)	4,669,004	May 26, 1987

Additionally, the examiner relies on background information, i.e., admitted prior art [APA], described at page 1, line 11 through page 3, line 23 of the instant specification.

Claims 1, 3, 4, 6, 8, 11 and 12 stand rejected under 35 U.S.C. § 103. As evidence of obviousness, the examiner cites Moon and APA with regard to claims 1, 4, 6 and 8, adding Axmear to this combination with regard to claims 3, 11 and 12.

Reference is made to the briefs and answer for the respective positions of appellants and the examiner.

OPINION

We reverse.

The examiner has not established a prima facie case of obviousness with regard to the instant claimed subject matter.

Both the examiner and appellants agree that Moon fails to disclose separate reading and writing heads and that Moon fails to teach the claimed "read element having a width less than said write element and said read element being greater than 1/3 of the width of a data cylinder and less than 1/2 the width of the data cylinder," i.e., Moon does not disclose the

use of a read head which is between 1/3 and 1/2 of the track pitch.

The examiner attempts to remedy this deficiency of Moon by referring to APA, at page 2 of the specification, contending that APA discloses the use of separate read and write heads and a read head which is less than 50% of the track pitch.

However, while the portion of the specification on which the examiner relies states that in order to optimize the soft-error rate, "a reading transducer width that is less than 50% of the track pitch is required," the disclosure then goes on to state that in such situations, "position linearity becomes unacceptably poor with the conventional 1/2 track pitch servo tracks" [pages 2-3 of the specification]. Accordingly, rather than support the examiner's position that this portion of the instant claimed subject matter was known in the art, and thus obvious to combine such a teaching with that of Moon, the portion of the background in the specification on which the examiner relies actually teaches away from employing a read

element having a width between 1/3 and 1/2 of the width of the data cylinder.

Since the APA appears to teach away from the claimed subject matter, the examiner is missing a critical feature of the instant claims (both independent claims 1 and 11 require the read element to have a width between 1/3 and 1/2 of the width of the data cylinder) which is not provided by any of the applied references. Accordingly, no prima facie case of obviousness has been provided.

Moreover, since APA teaches away from the claimed subject matter, we find no basis for combining Moon and APA. Further, the examiner has provided no convincing rationale as to why the skilled artisan would have sought to combine the separate read/write heads of APA with the single head system of Moon.

The examiner's decision rejecting claims 1, 3, 4, 6, 8, 11 and 12 under 35 U.S.C. 103 is reversed.

REVERSED

ERROL A. KRASS Administrative Patent Judge	)
MICHAEL R. FLEMING Administrative Patent Judge	) BOARD OF PATENT APPEALS AND INTERFERENCES
HOWARD B. BLANKENSHIP Administrative Patent Judge	)

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REVERSED

Prepared: June 8, 2001