

JUDGE KOEHL



IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF NEW YORK

LASERDYNAMICS, LLC,
a Limited Liability Company,

Plaintiff,

v.

ALCO ELECTRONICS LTD.,
ALCO ELECTRONICS INC. and
ALCO HOLDINGS LIMITED

Defendants.

Case No. **14 CV 1704**

**COMPLAINT FOR PATENT
INFRINGEMENT**

DEMAND FOR JURY TRIAL

**PLAINTIFF LASERDYNAMICS'
COMPLAINT FOR PATENT INFRINGEMENT
AND DEMAND FOR JURY TRIAL**

Plaintiff LaserDynamics, LLC ("LaserDynamics" or "Plaintiff") by and for its Complaint against defendants Alco Electronics Ltd., Alco Electronics Inc. and Alco Holdings Limited ("Alco" or "Defendants") hereby alleges as follows:

NATURE OF THE CASE

1. This is an action for patent infringement arising under the patent laws of the United States. LaserDynamics holds the rights in U.S. Patent No. 5,587,981 ("the '981 patent"). The United States patent laws grant the holder of a patent the right to exclude infringers from making, using, selling or importing the invention claimed in a patent, and to recover damages for the infringer's violations of these rights, and to recover treble damages where the infringer willingly infringed the patent. Under 35 U.S.C. § 282(a), the '981 Patent is entitled to a presumption of validity. LaserDynamics is suing Defendants for infringing its patent, and doing

so willfully. LaserDynamics seeks to recover damages from Defendants, including treble damages for willful infringement.

2. The '981 patent generally relates to methods for discriminating between different types of optical discs (e.g., a compact disc ("CD") versus a digital video disc ("DVD")) inserted into an optical disc drive. The '981 patent has been licensed extensively to many well-known electronics and optical disc drive manufacturers.

THE PARTIES

3. LaserDynamics is a limited liability company, organized and existing under the laws of the State of Delaware, having a place of business at 75 Montebello Road, Suffern, New York 10901-3740.

4. Upon information and belief, Alco Electronics Ltd. ("AEL") is a corporation existing under the laws of Hong Kong. Upon information and belief, AEL's corporate headquarters are located at 11th Floor, Zung Fu Industrial Building, 1067 King's Road, Quarry Bay, Hong Kong.

5. Upon information and belief, Alco Electronics Inc. ("AEI") is a corporation existing under the laws of North Carolina with a principal place of business located at 8392 Six Forks Rd., Suite 104, Raleigh, NC 27615, USA.

6. Upon information and belief, Alco Holdings Limited ("AHL") is a corporation existing under the laws of Hong Kong. Upon information and belief, AEL and AEI are indirect wholly owned subsidiaries of AHL, which is publicly traded company listed on the Hong Kong Stock Exchange. Upon information and belief, AHL's corporate headquarters are located at 11th Floor, Zung Fu Industrial Building, 1067 King's Road, Quarry Bay, Hong Kong.

JURISDICTION

7. This is an action for patent infringement arising under the patent laws of the United States of America, more specifically under 35 U.S.C. § 100, *et seq.* Subject matter jurisdiction is proper in this Court pursuant to 28 U.S.C. §§ 1331 and 1338.

8. Personal jurisdiction is also proper in this Court and this judicial district under N.Y. Civ. Pract. L. R. § 302 because, upon information and belief, Defendants have sufficient contacts within the State of New York and within this judicial district to subject itself to the jurisdiction of this Court. Defendants have purposefully availed themselves of the privileges of conducting business in the State of New York and this judicial district. Defendants have sought protection and benefit from the laws of the State of New York. Defendants regularly conduct business within the State of New York and within this judicial district. Plaintiff's cause of action arises directly from Defendants' business contacts and other activities in the State of New York and in this District.

9. More specifically, personal jurisdiction is proper in this judicial district because, upon information and belief, Defendants, directly and/or through its intermediaries, transacts business in this judicial district, including using, distributing, importing, making, offering for sale, selling, and/or marketing, supporting and advertising of its infringing products in the United States, the State of New York and the Southern District of New York. In particular, Defendants import into the United States, solicit and sell DVD/Blu-Ray players in the United States, including within the Southern District of New York DVD/Blu-Ray players under the RCA®, Venturer®, Durabrand®, Audiovox® and Trutech® brand names ("Brand Names").

VENUE

10. Venue properly lies within this judicial district and division, pursuant to 28 U.S.C. §§ 1391(b) and 1400(b).

INFRINGEMENT OF U.S. PATENT NO. 5,587,981

11. LaserDynamics incorporates by reference the allegations set forth in the preceding paragraphs.

12. On December 24, 1996, the '981 patent, entitled "Multi-standard Optical Disk Reading Method Having Distinction Process," was duly and lawfully issued based upon an application filed by the inventor, Yasuo Kamatani. A true and correct copy of the '981 Patent is attached hereto as Exhibit 1.

13. On December 15, 2009, the United States Patent and Trademark Office ("USPTO") issued a Reexamination Certificate for the '981 patent. A true and correct copy of the Reexamination Certificate is attached hereto as Exhibit 2.

14. LaserDynamics is the assignee and the owner of all right, title and interest in and to the '981 patent, and has the right to sue and recover damages for infringement thereof.

15. Upon information and belief, Defendants are engaged in making, using, importing, selling or offering for sale DVD/Blu-Ray players under the Brand Names in the United States generally, and in the Southern District of New York specifically.

16. Upon information and belief, by acts including, but not limited to use, making, importation, offers to sell, sales and marketing of the products that fall within the scope of at least Claim 3 of the '981 patent, Defendants have directly infringed, literally and/or upon information and belief, equivalently, and are continuing to infringe the '981 patent and are thus liable to LaserDynamics pursuant to 35 U.S.C. § 271.

17. Defendants' infringement of the '981 patent is without consent of, authority of, or license from LaserDynamics.

18. Upon information and belief, Defendants' infringement of the '981 patent has been and is willful. This action, therefore, is "exceptional" within the meaning of 35 U.S.C. § 285 entitling LaserDynamics to its attorneys' fees and expenses.

19. As a result of Defendants' acts of infringement, LaserDynamics has suffered and will continue to suffer damages in an amount to be proven at trial.

PRAYER FOR RELIEF

WHEREFORE, LaserDynamics requests this Court enter judgment as follows:

- A. That the '981 patent is valid and enforceable;
- B. That Defendants have directly infringed one or more claims of the '981 patent;
- C. That such infringement has been willful;
- D. That Defendants account for and pay to LaserDynamics all damages pursuant to 35 U.S.C. § 284 to adequately compensate LaserDynamics for Defendants' infringement of the '981 patent, but in no event less than a reasonable royalty for the use made by Defendants of the inventions set forth in the '981 patent;
- E. That LaserDynamics receives enhanced damages, in the form of treble damages, pursuant to 35 U.S.C. § 284;
- F. That this is an exceptional case under 35 U.S.C. § 285;
- G. That Defendants pay LaserDynamics all of LaserDynamics' reasonable attorneys' fees and expenses pursuant to 35 U.S.C. § 285;

H. That LaserDynamics be granted pre-judgment and post-judgment interest in accordance with 35 U.S.C. § 284 on the damages caused to it by reason of Defendants' infringement of the '981 patent, including pre-judgment and post-judgment interest on any enhanced damages or attorneys' fees award;

I. That costs be awarded in accordance with 35 U.S.C. § 284 to LaserDynamics; and

J. That LaserDynamics be granted such other and further relief as the Court may deem just and proper under the circumstances.

DEMAND FOR JURY TRIAL

LaserDynamics hereby demands a trial by jury on all issues so triable in this
action.

Dated: March 12, 2014

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US005587981A

United States Patent [19]
Kamatani

[11] **Patent Number:** **5,587,981**
[45] **Date of Patent:** **Dec. 24, 1996**

[54] **MULTI-STANDARD OPTICAL DISK
READING METHOD HAVING DISTINCTION
PROCESS**

5,465,245 11/1995 Yanagawa 369/44.25 X

Primary Examiner—Thang V. Tran

[76] **Inventor:** **Yasuo Kamatani**, 2-12-2 Yokoyama,
Sagamihara-shi, Kanagawa 229, Japan

[57] **ABSTRACT**

An optical disk reading method to provide an optical disk reading system which is able to reproduce encoded optical data from varied optical disk format fabricated in accordance with different standard. Before start reproducing data on an optical disk, a set of standard data which includes data of total number of data layer, pit density and track pitch is identified by reading a total of contents data encoded in a reading region of the optical disk. If the total of contents data is not encoded on the optical disk, any encoded pits on the optical disk is processed until the standard of the optical disk is identified. After the standard of the optical disk is identified, modulation of each servo circuit such as a focusing lens servo circuit and a tracking servo circuit is settled to start reproducing data on the optical disk.

[21] **Appl. No.:** **523,461**

[22] **Filed:** **Sep. 5, 1995**

[51] **Int. Cl.⁶** **G11B 7/00**

[52] **U.S. Cl.** **369/58; 369/54; 369/44.26**

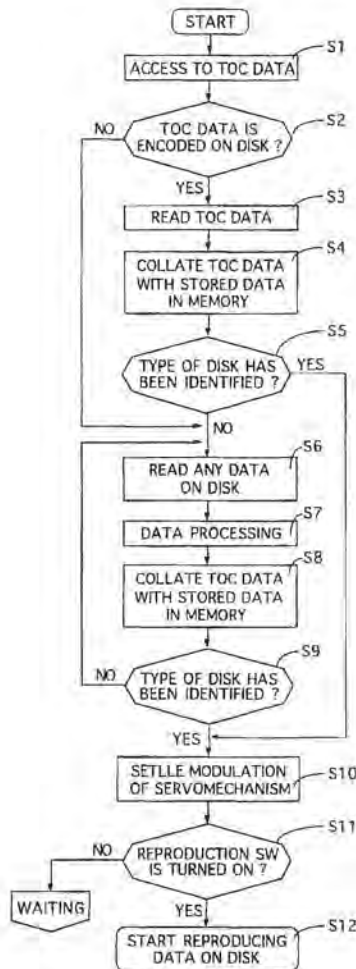
[58] **Field of Search** **369/44.26, 44.25,
369/13, 54, 47, 48, 116, 94, 58**

[56] **References Cited**

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3 Claims, 2 Drawing Sheets



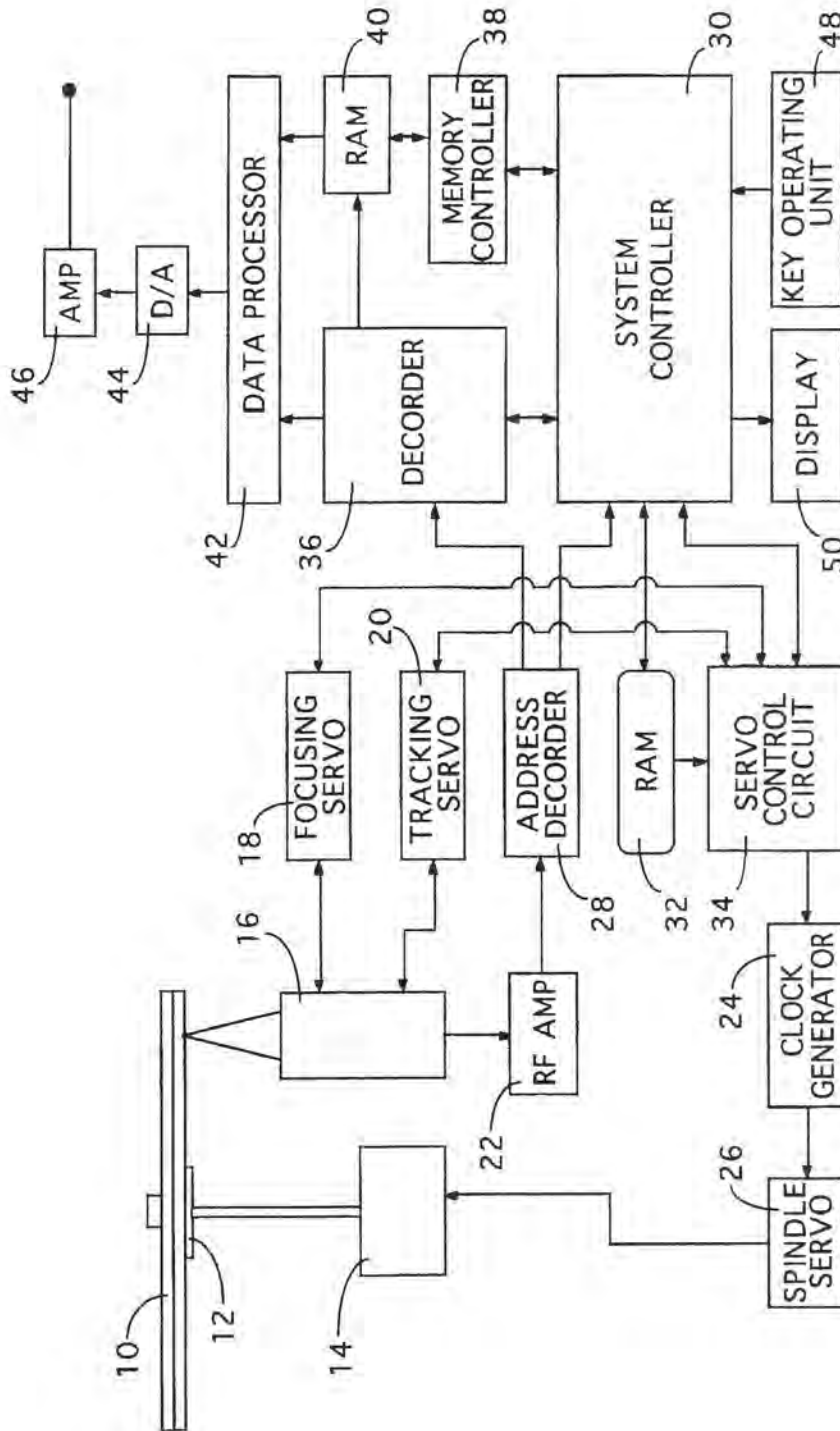


Fig 1

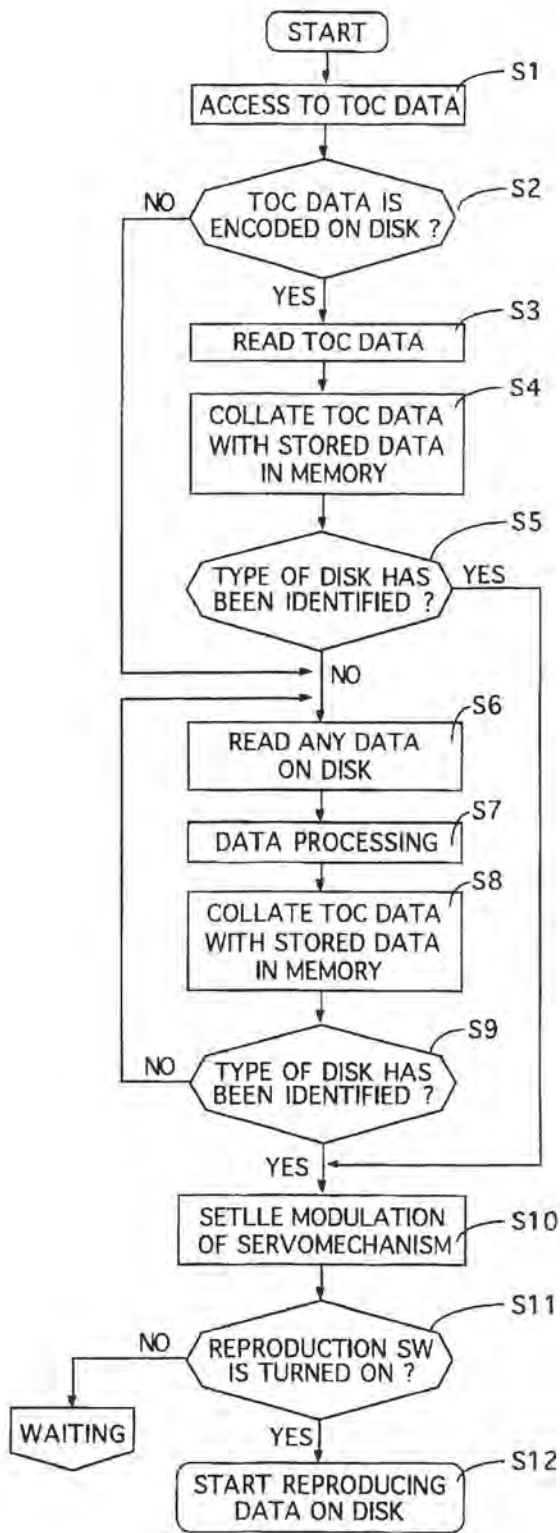


Fig 2

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MULTI-STANDARD OPTICAL DISK READING METHOD HAVING DISTINCTION PROCESS

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to optical data storage systems. More specifically, this invention relates to an optical reading method for an optical data reproducing system which is able to reproduce encoded data at different pit density on varied types of optical disk format.

2. Description of the Prior Art

Initialized by the vast increase in information that needs to be processed, optical data storage system have become very important system particularly because of their high storage density per area. Most of the recent optical information storage systems rotating single optical disk are used on which the information is digitally stored in concentric circular tracks in an ordered, predefined manner to allow chronological fast reading and fast random access to desired pits of data.

At present, varied type of optical disk systems are provided, for example, compact disk (CD) system, Mini-Disk (MD) system and multilayered optical disk for digital video disk (DVD) system. Each of these optical disk format is fabricated dependent upon different standard. And thickness or pit density of the each optical disk is different from one and another. An optical reading system is needed which is able to reproduce the encoded data from any types of optical disk format.

SUMMARY OF THE INVENTION

The present invention has for its object to provide a multi-standard optical disk reading system having distinction process, which can read encoded pits on varied types of optical disk format.

The object of the present invention can be achieved by an optical disk reading method having distinction process, the steps comprising: to read a total of contents (TOC) data in a read-in region of an optical disk before starting reproduction process, to read any encoded pits until identifying a type of the optical disk format if the TOC data is not encoded on the optical disk, to collate the TOC data or any processed data with stored data in a memory, to obtain data about standard of the optical disk from the memory, to set up modulation of first stage position of a focusing lens or to select a focusing lens, to set up modulation of a tracking servo, and to start reproducing data on the optical disk.

In an optical disk such as a compact disk (CD), a Mini-Disk (MD) and a digital video disk (DVD), a TOC data is encoded in the read-in region of the disk. And at first, the TOC data is reproduced by a pickup head. The TOC data includes total number of portions of information such as music, movie or computer program, and time consuming data for reproduction. Also, the TOC data of some types of optical disk contains address of each of the information and reproduction time of each of the information.

In addition, the TOC data also represents the standard of the optical disk, such as pit density, total data capacity and reproducing speed. Such data about the standard of the optical disk can be encoded as TOC data. Otherwise, the standard of the optical disk is identified by reproducing the TOC data which is encoded in accordance with the standard. The data about the standard of the optical disk is better to be

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contained in the TOC data in order to start reproducing process faster. However even the data about the standard is not contained in TOC data, the standard of the optical disk can be identified by processing TOC data or certain amount of pits to certify the total number of data encoded surfaces, the pit density and track pitch. After making sure the standard of the optical disk, each movement of a focusing lens servo, a tracking servo or a spindle servo is determined to reproduce the data on the optical disk. The focusing lens servo is modulated to focus laser beam onto encoded pit on the optical disk by moving the focusing lens or changing the focusing lens. If the optical disk has more than one data surface, the focusing lens servo has to be modulated to read each of the data surface. The tracking servo and the spindle servo are modulated in order to trace the encoded pit lane on the optical disk with the focal point.

For a fuller understanding of the nature and advantages of the present invention reference should be made to the following detailed description taken in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 shows block diagram of an example of an optical reading apparatus to which the present invention can be applied;

FIG. 2 is a flowchart for a description of a multi-standard optical disk reading method of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Embodiments of the present invention will be explained with reference to the drawings.

FIG. 1 is a block diagram of an example of an optical reading apparatus to which the optical disk reading methods of the present invention can be applied. An optical disk 10 represent one of optical disk formats among a compact disk (CD), a Mini-Disk (MD), a digital video disk (DVD) or the other. The optical disk 10 is mounted on and secured by a turntable 12 to be rotated by a spindle motor 14. Encoded pit on the optical disk 10 is read by a pickup 16 which includes a laser diode, a focusing lens, a focusing lens actuator, a tracking actuator and a photo-detector. The output signal from the pickup 16 is transmitted to a focusing servo circuit 18, a tracking servo circuit 20 and an RF amplifier 22. According to focusing error signal, the focusing servo circuit 18 modulates the focusing lens actuator to move the focusing lens. And according to tracking error signal, the tracking servo circuit 20 modulates the tracking actuator to move the pickup 16. A clock generator 24 produces a demodulating reproduction clock signal which is generated to a spindle servo circuit 26. The spindle servo circuit 26 modulates the spindle motor 14 in order to track linear velocity of the optical disk 10.

The output signal applied to the RF amplifier 22 from the pickup 16, is transmitted to an address decoder 28. Then the decoded signal is processed by a system controller 30. The system controller 30 has a signal processor which recognizes pit density of the optical disk 10, accompanying with a ROM (Read Only Memory) 32. The signal from the photo-detector in the pickup 16 is amplified by the RF amplifier 22, and the amplified signal is decoded by an address decoder 28 to be collated by the system controller 30 with the ROM 32 which stores data about pit density standards. After the standard of the optical disk 10 is identified, a servo control circuit 34 determines position or selection of the focusing lens by

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modulating the focusing servo circuit 18, and the tracking servo circuit 20 is modulated to move the pickup 16 in order to trace the pit lane which is fabricated in accordance with the pit density standard.

The output signal of the RF amplifier 22 in the clock generator 24 together with the reproduction clock signal is applied to the address decoder 28 including a frame synchronizing circuit. The reproduction clock signal is converted by the address decoder 28, and the converted clock signal is transmitted to the servo control circuit 34 which modulate or stabilize the spindle motor 14 accompanying with the clock generator 24 and the spindle servo circuit 26. The demodulation data signal of the address decoder 28 is transmitted to a decoder 36 which also controls a memory controller 38. The decoded data signal is stored in a RAM (Random Access Memory) 40 for a shock proof function or a continuous data processing function with multi data surface optical disk. The decoded data signal by the decoder 36 or the stored data signal by the RAM 40 is processed by a data processor 42, and the processed data signal is converted from digital signal to analog signal by a D/A (digital to analog) converter 44. Then, after the data signal is amplified by a amplifier 46, the data reproduction is completed.

Each of a control signal of the servo control circuit 34, the address decoder 28, the decoder 36 and the memory controller 38 is supplied from a system controller 30. The system controller 30 is operated by an operation signal from a key operating unit 48 which transmits all operating signal of a user or an operator. The system controller 48 also controls a display unit 50 to show the data reproducing status to the operator.

FIG. 2 shows a flowchart of an operation processing in the system controller 30 in FIG. 1. When a power switch is turned on and the optical disk is mounted on the turntable, the system controller operates the pickup to access to the TOC data by modulating the servo control circuit, tracking servo circuit and focusing servo circuit (step 1: S1). In step 2 (S2), the system controller recognizes whether the TOC data is encoded on the optical disk or not. When the TOC data is encoded on the optical disk, the TOC data is read with an operation of the system controller (S3). Then the read TOC data is collated with stored data in the RAM to identify type of the optical disk format along with its total number of data layers and pit density (S4). In the step 5 (S5), the system controller determines whether type of the optical disk along with its total number of data layers and its pit density standard is identified or not. In case that the TOC data is not encoded on the optical disk in step 2 (S2) and the case that type of the optical disk is not identified in step 5 (S5), the system controller operates the pickup to read any data on the optical disk by modulating the servo control circuit, tracking servo circuit and the focusing servo circuit (S6). In step 7 (S7), the system controller operates the decoder to process the data. Then the processed data is collated with stored data in the RAM to identify type of the optical disk format along with its total number of data layers and its pit density (S8). In the step 9 (S9), the system controller determines whether type of the optical disk along with its total-number of data layers and its pit density standard is identified or not. In case that type of the optical disk is not identified in step 9 (S9), the process has to go back to step 6 (S6). When type of the optical disk is identified in step 5 (S5) or step 9 (S9), the

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system controller determines each set up of the all servo circuit dependent upon the recognized type of the optical disk (S10). In step 10 (S10), the system controller determines each modulation such as the focusing servo circuit, tracking servo circuit or spindle servo circuit. In the step 10 (S10), the focusing servo circuit modulates the focusing lens actuator to move the focusing lens or change the focusing lens, the tracking servo circuit modulates the tracking actuator to move the pickup, and the spindle servo circuit modulates the spindle motor to track linear velocity of the optical disk. Also in step 10 (S10), the system controller can determine which decoding circuit is used to process the data dependent upon the type of the optical disk. When a data reproduction switch is turned on in step 11 (S11), the system controller starts reproducing data on the optical disk in step 12 (S12). When a data reproduction switch is not turned on in step 11 (S11), the data reproducing has to be waited.

Although the invention has been particularly shown and described, it is contemplated that various changes and modification may be made without departing from the scope of the invention as set forth in the following claims.

What is claimed is:

1. An optical disk reading method comprising the steps of: reading a total of contents data in a read-in region of an optical disk to identify total number of data layers and pit configuration standard of the optical disk; and settling modulation of servomechanism means dependent upon the total of contents data;
 - (a) the servomechanism means including:
 - a focusing lens servo to modulate position of a focusing lens; and
 - a tracking servo to modulate movement of a pickup.
2. An optical disk reading method comprising the steps of: reading a total of contents data in a read-in region of an optical disk to identify total number of data layers and pit configuration standard of the optical disk; collating the total of contents data with an optical disk standard data which is stored in a memory; and settling modulation of servomechanism means dependent upon the optical disk standard data which corresponds with the total of contents data;
 - (b) the servomechanism means including:
 - a focusing lens servo to modulate position of a focusing lens; and
 - a tracking servo to modulate movement of a pickup.
3. An optical disk reading method comprising the steps of: processing an optical signal reflected from encoded pits on an optical disk until total number of data layers and pit configuration standard of the optical disk is identified; collating the processed optical signal with an optical disk standard data which is stored in a memory; and settling modulation of servomechanism means dependent upon the optical disk standard data which corresponds with the processed optical signal;
 - (c) the servomechanism means including:
 - a focusing lens servo to modulate position of a focusing lens; and
 - a tracking servo to modulate movement of a pickup.

* * * * *



US005587981C1

(12) **EX PARTE REEXAMINATION CERTIFICATE (7232nd)**
United States Patent
Kamatani (10) **Number: US 5,587,981 C1**
 (45) **Certificate Issued: Dec. 15, 2009**

(54) **MULTI-STANDARD OPTICAL DISK READING METHOD HAVING DISTINCTION PROCESS**

(75) Inventor: **Yasuo Kamatani**, Sagamihara (JP)

(73) Assignee: **Laser Dynamics, Inc.**, Sagamihara, Kanagawa-Ken (JP)

Reexamination Request:
 No. 90/008,937, Nov. 20, 2007

Reexamination Certificate for:
 Patent No.: **5,587,981**
 Issued: **Dec. 24, 1996**
 Appl. No.: **08/523,461**
 Filed: **Sep. 5, 1995**

(51) **Int. Cl.**
G11B 27/32 (2006.01)
G11B 19/12 (2006.01)
G11B 7/00 (2006.01)
G11B 7/0037 (2006.01)
G11B 7/09 (2006.01)

(52) **U.S. Cl.** **369/47.54; 369/44.26; 369/47.55; 369/53.2**

(58) **Field of Classification Search** None
 See application file for complete search history.

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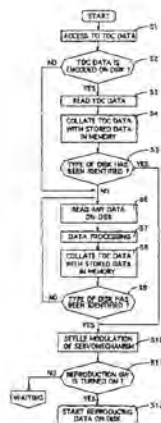
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Primary Examiner—Charles Craver

(57) **ABSTRACT**

An optical disk reading method to provide an optical disk reading system which is able to reproduce encoded optical data from varied optical disk format fabricated in accordance with different standard. Before start reproducing data on an optical disk, a set of standard data which includes data of total number of data layer, pit density and track pitch is identified by reading a total of contents data encoded in a reading region of the optical disk. If the total of contents data is not encoded on the optical disk, any encoded pits on the optical disk is processed until the standard of the optical disk is identified. After the standard of the optical disk is identified, modulation of each servo circuit such as a focusing lens servo circuit and a tracking servo circuit is settled to start reproducing data on the optical disk.



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EX PARTE
REEXAMINATION CERTIFICATE
ISSUED UNDER 35 U.S.C. 307

THE PATENT IS HEREBY AMENDED AS
INDICATED BELOW.

2
AS A RESULT OF REEXAMINATION, IT HAS BEEN
DETERMINED THAT:
The patentability of claim 3 is confirmed.
5 Claim 1 is cancelled.
Claim 2 was not reexamined.

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