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JPH0983925A PICTURE DEVICE

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PICTURE DEVICE

Abstract

PROBLEM TO BE SOLVED: To reduce the time for retrieving a moving picture at the time of reproduction by additionally recording index data and a still picture corresponding to the time of photographing the moving picture. SOLUTION: A judging circuit 6 records an inputted video signal in a disk in a prescribed form corresponding to a moving picture photographing switch 4 and a still picture photographing switch 5. Only when the mobile picture photographing switch 4 is operated, in addition to moving picture recording operation a control signal is outputted to a coding circuit 1 and an index data preparation circuit 2 from the judging circuit 6 to forcedly record a dummy still picture and index data.

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[0001] BACKGROUND OF THE INVENTION 1. Field of the Invention The present invention relates to an image recording / reproducing apparatus, and more particularly to an image apparatus capable of recording / reproducing still images and moving images using a random access disk.

[0002] 2. Description of the Related Art Conventionally, a system capable of recording a mixture of moving images and still images, and adding index data to an image, Japanese Patent Application Laid-Open No. 7-98965 using an image recording medium as a video tape, JP-A-6-113253 and the like are known. In the technique disclosed in Japanese Patent Laid-Open No. 7-98965, as shown in FIG. 4, image tracks are continuously arranged on a video tape, and each track is provided with a subcode area 41, and a still image index is displayed. Record in this area. A still image index is recorded on an arbitrary frame automatically when shooting a still image and manually by an operator when shooting a moving image.

[0003] In the technique disclosed in Japanese Patent Laid-Open No. 6-113253, as shown in FIG. 5A, the video image group 51 arranges images corresponding to a series of moving image data in the time axis direction t in units of frames. ing. This video image group 51 is subjected to a kind of video slice processing in a direction Ht indicated by an arrow in the figure, and a video index (still image) is formed as shown in FIG. That is, the vertical slit 54 set on the frame 52 is scanned in the horizontal (H) direction at a predetermined speed, and when reaching the right end of the frame 52, it is repeatedly scanned from the left end (reference position) in the H direction again. . Accordingly, the vertical slit 54 is scanned in the oblique Ht direction in the three-dimensional space including the time axis.

[0004] The vertical slit 54 scans the video signal group 51 from the left end to the right end in the Ht direction, and when the N slits 52 are crossed as shown in FIG. A video index screen is formed by sampling a plurality of sheets and joining the slit images in the horizontal direction. Here, L is the width of the frame 52, that is, the horizontal direction of the screen.

[0005] According to the apparatus disclosed in Japanese Patent Laid-Open No. 7-98965, it is necessary for an operator to manually add a still image index when shooting a moving image, and Japanese Patent Laid-Open No. 6-113253. The still image automatically formed by the device shown in Fig. 3 is a combination of a plurality of moving images that differ in time in the form of slits, which are combined and combined. For example, a subject moves at high speed in a video scene. The subject image may be distorted in the synthesized still image.

[0006] In the present invention, in order to easily search for a desired moving image scene from a random access disk in which still images and moving images are mixedly recorded, dummy index data is recorded at the time of moving image shooting, and the image quality of dummy still images is further improved. The purpose is to prevent deterioration.

[0007] In order to solve the above-described problems, an image device according to the present invention records a still image in an image device using a random access disk capable of recording a mixture of still images and moving images. In addition, index data corresponding thereto is added, and when a moving image is recorded, a dummy still image and index data corresponding thereto are forcibly recorded.

[0008] DESCRIPTION OF THE PREFERRED EMBODIMENTS Embodiments of the present invention will be described below with reference to the drawings. In FIG. 1, an encoding circuit 1 performs data conversion in order to write an input image signal in a data format corresponding to a still image and a moving image, and a recording / reproducing control circuit 3 performs recording / reproducing on the disc. The index creation circuit 2 creates index data accompanying the still image recording, and the determination circuit 6 determines whether the coding circuit 1 and the index are in accordance with the state of the moving image shooting switch 4 and the still image shooting switch 5. The creation circuit 2 and the recording / reproduction control circuit 3 are controlled.

[0009] When the still image shooting switch 5 is operated, a control signal for converting image data into still image data is output from the determination circuit 6 to the encoding circuit 1, and a control signal for generating index data is output to the index generation circuit 2. A control signal for recording image data and index data on the random access disk is output to the recording / playback control circuit 3, and still images and index data are recorded on the disk.

[0010] When the moving image shooting switch 4 is operated, a control signal for converting image data into moving image data is output from the determination circuit 6 to the encoding circuit 1, and a control signal for generating index data is not output to the index generating circuit. A control signal for recording data on the random access disk is output to the reproduction control circuit 3, and a moving image is recorded on the disk. At this time, the determination circuit 6 is a dummy forcibly recording at the time of moving image shooting as shown in FIG. When the still image data and the index data are recorded at the beginning of the moving image to be recorded on the random access disk, the moving image is recorded, and when the still image shooting switch 5 is operated during the shooting of the moving image, Overwrite and record on the forcibly recorded still image and index data portion.

[0011] In the present embodiment, dummy still image data and index data are recorded at the head of the moving image to be recorded, but this recording area can be at any position on the random access disk. For example, as shown in FIG. 3A, it may be recorded in an area (area) different from the moving picture data recording area on the same disk surface on which the moving picture data is recorded, as shown in FIG. As shown in FIG. 3, it may be recorded on a surface opposite to the disk surface on which the moving image data is recorded. As shown in FIG. 3C, a predetermined track is recorded on the same recording surface of the random access disk. It may be assigned as a recording-only track.

[0012] At this time, it is effective to add information such as “which track is the starting point of a moving image including the still image” to the dummy still image or index data. , Titles, flags, etc. Furthermore, the data itself may be handled as index data. In this embodiment, dummy still images and index data that are forcibly recorded at the time of moving image shooting are recorded and recorded at the start of moving image shooting, but only dummy still image shooting is performed at the start of moving image shooting, and dummy index data is recorded. The recording may be performed at the end of moving image shooting.

[0013] According to the above embodiment of the present invention, the following configuration is obtained. (1) An image device for recording a moving image or a still image on a randomly accessible video recording disk, and recording the still image data together with the corresponding index data when recording the still image apparatus. (2) The image device according to (1), wherein a still image or index data is forcibly recorded during moving image shooting. (3) The forcible recording is performed by overwriting the forcibly recorded data when a still image recording operation is performed after the forcibly recording the still image or the index data. Image device. (4) The image apparatus according to (1), wherein when a still image is recorded during moving image shooting, the still image or index data is recorded at the head of the moving image recording area. (5) The image apparatus according to (1), (2), or (4), wherein the index data recording area is separated from the image recording area.

[0014] According to the image apparatus to which the present invention is applied, a desired moving image scene can be easily accessed and retrieved quickly by searching index data added to the moving image scene and reproducing a still image. Can be played.

[0015] Brief Description of Drawings

[0016] 1 is a block diagram showing an embodiment of the present invention.

[0017] 2 is a diagram showing an example of the recording portion of the still image and the index data.

[0018] 3 is a diagram showing an example of the recording portion of the still image and the index data.

[0019] 4 is a schematic diagram showing one of the conventional examples.

[0020] 5 is a schematic diagram showing one of the conventional examples.

[0021] Explanation of symbols

[0022] 1 Coder 2 Index creation circuit 3 Recording / playback control circuit 4 Movie shooting switch 5 Still image shooting switch 6 Judgment circuit 41 Subcode area 51 Video image group 52 Frame 54 Vertical slit

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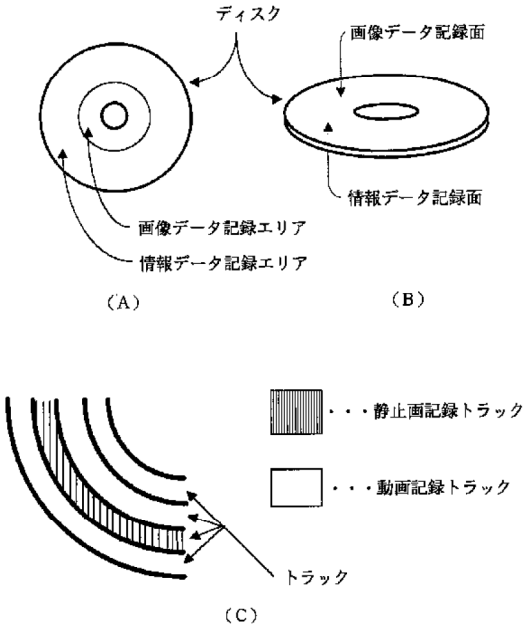
In an image device using a random access disk capable of recording both still images and moving images, when recording a still image, a corresponding index data is added, and when recording a moving image, a corresponding dummy still An image apparatus for forcibly recording images and index data.

The image apparatus according to claim 1, wherein when a still image shooting operation is performed during moving image shooting, the forcibly recorded dummy data is overwritten and recorded.

2. The image apparatus according to claim 1, wherein the forcibly recorded dummy data is placed at a head portion of a moving image recording track.

【図３】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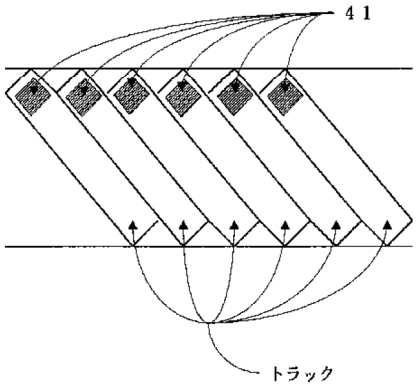
【図４】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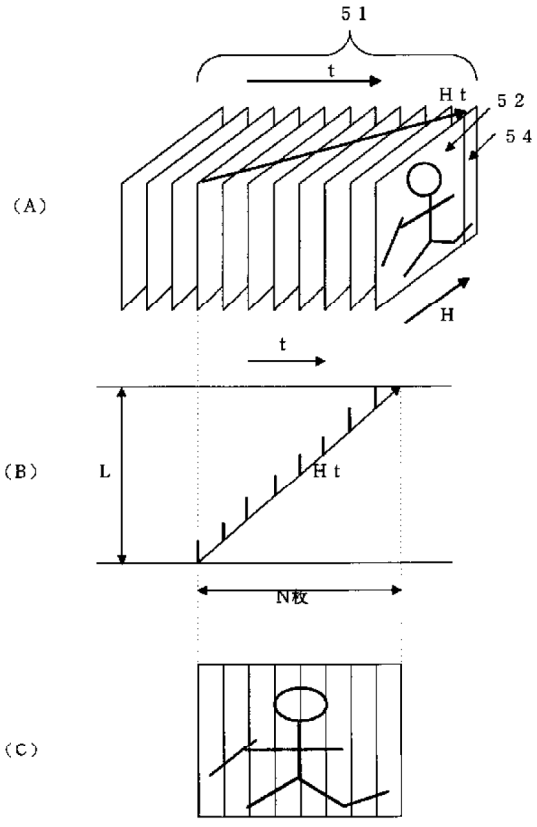
トラック

【図５】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