DESCRIPTION

Title of Invention: RECORDING MEDIUM, PLAYBACK METHOD, AND PLAYBACK DEVICE

Technical Field

[0001]

The present disclosure relates to a recording medium in which is recorded an encoded video stream, a playback method of the video stream, and a playback device.

Background Art

[0002]

Technology relating to DVDs has conventionally been disclosed (e.g., PTL 1).

Citation List

Patent Literature

[0003]

PTL 1: Japanese Unexamined Patent Application Publication No. 9-282848

Summary ~~of Invention~~

~~Technical Problem~~

[0004] In an aspect of the present disclosure, there is a playback device that reads out and plays a content from a recording medium in which are recorded

a video stream of high-luminance range that is a broader luminance range than a standard-luminance range,

a subtitle stream of the high-luminance range, and

a playlist file storing playback control information of the content, and including a management region,

the management region storing first playback control information specifying that the video stream of the high-luminance range and the subtitle stream of the high-luminance range are to be played in combination,

the recording medium further having recorded therein a management information file including a map region storing map information indicating positions of independently decodable pictures included in video streams,

the map region storing first map information indicating a position, in the video stream of the high-luminance range, of an independently decodable picture included in the video stream of the high-luminance range,

the playlist file further including a sub-playlist region storing the playback control information relating to a sub-stream composited on and played at a same time with the video stream of the high-luminance range,

second playback control information relating to an enhanced video stream, which is the sub-stream, for extending the luminance range of the video stream of the high-luminance range, being stored in the sub-playlist region,

the map region storing the first map information, and second map information indicating a position, in the enhanced video stream, of an independently decodable picture included in the enhanced video stream, and

the enhanced video stream, for extending the luminance range of the video stream of the high-luminance range, being composited on and played at a same time with the video stream of the high-luminance range,

the playback device comprising:

a video player that reads out and plays the video stream of the high-luminance range and the subtitle stream of the high-luminance range based on the first playback control information and the first map information, and also reads out and plays the enhanced video stream based on the second playback control information and the second map information, in a case of playing the content as a content of a luminance range that has been extended beyond the high-luminance range. According to an aspect, there is a playback method of reading out and playing a content from a recording medium in which are recorded
a video stream of high-luminance range that is a broader luminance range than a standard-luminance range,
a subtitle stream of the high-luminance range, and
a playlist file storing playback control information of the content, and including a management region,
the management region storing first playback control information specifying that the video stream of the high-luminance range and the subtitle stream of the high-luminance range are to be played in combination,
the recording medium further having recorded therein a management information file including a map region storing map information indicating positions of independently decodable pictures included in video streams,
the map region storing first map information indicating a position, in the video stream of the high-luminance range, of an independently decodable picture included in the video stream of the high-luminance range,
the playlist file further including a sub-playlist region storing the playback control information relating to a sub-stream composited on and played at a same time with the video stream of the high-luminance range,
second playback control information relating to an enhanced video stream, which is the sub-stream, for extending the luminance range of the video stream of the high-luminance range, being stored in the sub-playlist region,
the map region storing the first map information, and second map information indicating a position, in the enhanced video stream, of an independently decodable picture included in the enhanced video stream, and
the enhanced video stream, for extending the luminance range of the video stream of the high-luminance range, being composited on and played at a same time with the video stream of the high-luminance range,
the playback method comprising:
reading out and playing the video stream of the high-luminance range and the subtitle stream of the high-luminance range, based on the first playback control information and the first map information, and also reading out and playing the enhanced video stream based on the second playback control information and the second map information, in a case of playing the content as a content of a luminance range that has been extended beyond the high-luminance range.

Recorded in a recording medium according to an ~~aspect~~ embodiment of the present disclosure are a video stream of standard-luminance range, and a video stream of high-luminance range that is a broader luminance range than the standard-luminance range, which are used selectively in accordance with a playback environment, a subtitle stream of the standard-luminance range, and a subtitle stream of the high-luminance range, which are used selectively in accordance with the playback environment, and a playlist file storing playback control information of content, the playlist file including a management region where the playback

control information relating to a main stream is stored, and an extended region. The management region stores first playback control information specifying that a video stream of the high-luminance range and a subtitle stream of the high-luminance range are to be played in combination. The extended region stores second playback control information specifying that a video stream of the standard-luminance range and a subtitle stream of the standard-luminance range are to be played in combination.

What is claimed is:

1. A playback device that reads out and plays a content from a recording medium in which are recorded

a video stream of high-luminance range that is a broader luminance range than standard-luminance range,

a subtitle stream of the high-luminance range, and

a playlist file storing playback control information of the content, and including a management region,

the management region storing first playback control information specifying that the video stream of the high-luminance range and the subtitle stream of the high-luminance range are to be played in combination,

the recording medium further having recorded therein a management information file including a map region storing map information indicating a position of an independently decodable picture included in a video stream,

the map region storing first map information indicating a position, in the video stream of the high-luminance range, of an independently decodable picture included in the video stream of the high-luminance range,

the playlist file further including a sub-playlist region storing the playback control information relating to an enhanced video stream to be integrated with the video stream of the high-luminance range,

second playback control information relating to the enhanced video stream for extending the luminance range of the video stream of the high-luminance range being stored in the sub-playlist region,

and the map region storing, beside the first map information, a second map information indicating a position, in the enhanced video stream, of an independently decodable picture included in the enhanced video stream,

the playback device comprising:

a video player that reads out and plays the video stream of the high-luminance range and the subtitle stream of the high-luminance range, based on the first playback control information and the first map information, and also reads out and integrates the enhanced video stream based on the second playback control information and the second map information, in a case of playing the content as a content of a luminance range that has been extended beyond the high-luminance range.

2. A playback method of reading out and playing content from a recording medium in which are recorded

a video stream of high-luminance range that is a broader luminance range than standard-luminance range,

a subtitle stream of the high-luminance range, and

a playlist file storing playback control information of the content, and including a management region,

the management region storing first playback control information specifying that the video stream of the high-luminance range and the subtitle stream of the high-luminance range are to be played in combination,

the recording medium further having recorded therein a management information file including a map region storing map information indicating a position of an independently decodable picture included in a video stream,

the map region storing first map information indicating a position, in the video stream of the high-luminance range, of an independently decodable picture included in the video stream of the high-luminance range,

the playlist file further including a sub-playlist region storing the playback control information relating to an enhanced video stream to be integrated with the video stream of the high-luminance range,

second playback control information relating to the enhanced video stream for extending the luminance range of the video stream of the high-luminance range being stored in the sub-playlist region,

and the map region storing, beside the first map information, a second map information indicating a position, in the enhanced video stream, of an independently decodable picture included in the enhanced video stream,

the playback method comprising:

reading out and playing the video stream of the high-luminance range and the subtitle stream of the high-luminance range, based on the first playback control information and the first map information, and also reading out and integrating the enhanced video stream based on the second playback control information and the second map information, in a case of playing

~~the content as a content of a luminance range that has been extended beyond the high-luminance range.~~

What is claimed:

1. A playback device that reads out and plays a content from a recording medium in which are recorded a video stream of high-luminance range that is a broader luminance range than a standard-luminance range, a subtitle stream of the high-luminance range, and a playlist file storing playback control information of the content, and including a management region, the management region storing first playback control information specifying that the video stream of the high-luminance range and the subtitle stream of the high-luminance range are to be played in combination, the recording medium further having recorded therein a management information file including a map region storing map information indicating positions of independently decodable pictures included in video streams, the map region storing first map information indicating a position, in the video stream of the high-luminance range, of an independently decodable picture included in the video stream of the high-luminance range, the playlist file further including a sub-playlist region storing the playback control information relating to a sub-stream composited on and played at a same time with the video stream of the high-luminance range, second playback control information relating to an enhanced video stream, which is the sub-stream, for extending the luminance range of the video stream of the high-luminance range, being stored in the sub-playlist region, the map region storing the first map information, and second map information indicating a position, in the enhanced video stream, of an independently decodable picture included in the enhanced video stream, and the enhanced video stream, for extending the luminance range of the video stream of the high-luminance range, being composited on and played at a same time with the video stream of the high-luminance range, the playback device comprising:
a video player that reads out and plays the video stream of the high-luminance range and the subtitle stream of the high-luminance range based on the first playback control information and the first map information, and also reads out and plays the enhanced video stream based on the second playback control information and the second map information, in a case of playing the content as a content of a luminance range that has been extended beyond the high-luminance range.

2. The playback device according to claim 1, wherein the enhanced video stream is not played by itself alone.

3. A playback method of reading out and playing a content from a recording medium in which are recorded a video stream of high-luminance range that is a broader luminance range than a standard-luminance range,

a subtitle stream of the high-luminance range, and a playlist file storing playback control information of the content, and including a management region, the management region storing first playback control information specifying that the video stream of the high-luminance range and the subtitle stream of the high-luminance range are to be played in combination, the recording medium further having recorded therein a management information file including a map region storing map information indicating positions of independently decodable pictures included in video streams, the map region storing first map information indicating a position, in the video stream of the high-luminance range, of an independently decodable picture included in the video stream of the high-luminance range, the playlist file further including a sub-playlist region storing the playback control information relating to a sub-stream composited on and played at a same time with the video stream of the high-luminance range, second playback control information relating to an enhanced video stream, which is the sub-stream, for extending the luminance range of the video stream of the high-luminance range, being stored in the sub-playlist region, the map region storing the first map information, and second map information indicating a position, in the enhanced video stream, of an independently decodable picture included in the enhanced video stream, and the enhanced video stream, for extending the luminance range of the video stream of the high-luminance range, being composited on and played at a same time with the video stream of the high-luminance range, the playback method comprising:

reading out and playing the video stream of the high-luminance range and the subtitle stream of the high-luminance range, based on the first playback control information and the first map information, and also reading out and playing the enhanced video stream based on the second playback control information and the second map information, in a case of playing the content as a content of a luminance range that has been extended beyond the high-luminance range.

4. The playback method according to claim 3, wherein the enhanced video stream is not played by itself alone.