CLAIMS

1. A decoding device comprising:

circuitry configured to

receive coded data and conversion information, the coded data pertaining to an image having luminance in a first dynamic range and the conversion information pertaining to a conversion of dynamic range of the luminance of the image from the first dynamic range into a second dynamic range; and

decode the received coded data so as to generate the image,

wherein

the conversion uses a knee function, and

the conversion information includes the conversion persistence information which indicates whether or not the conversion information is applied to a plurality of continuous images.

2. The decoding device according to claim 1, wherein the conversion uses a knee point.

3. The decoding device according to claim 2, wherein the conversion uses the knee function to map the dynamic range of the luminance of the image from the first dynamic range into the second dynamic range, and the knee function is defined by the knee point.

4. The decoding device according to claim 3, wherein the conversion information includes pre-conversion information indicating a range of luminance which is a knee function target in the first dynamic range and post-conversion information indicating a range of luminance in the second dynamic range that corresponds to the range of luminance which is the knee function target in the first dynamic range.

5. The decoding device according to claim 4, wherein the pre-conversion information indicates the range of luminance which is converted by knee function at a same conversion ratio as a conversion range of the first dynamic range.

6. The decoding device according to claim 1, wherein the conversion uses the knee function which is defined by a plurality of knee points.

7. The decoding device according to claim 6, wherein the conversion information includes a plurality of pairs of the pre-conversion information and the post-conversion information.

8. The decoding device according to claim 1, wherein the conversion uses the knee function by mapping the dynamic range of the luminance of the image from the first dynamic range into the second dynamic range, and a plurality of adjacent segments of the first dynamic range of the luminance are mapped to a corresponding plurality of adjacent segments of the second dynamic range of the luminance based on boundaries between adjacent segments defined by a plurality of knee points.

9. The decoding device according to claim 3, wherein the conversion uses the knee function by mapping the dynamic range of the luminance of the image from the first dynamic range into the second dynamic range at a first conversion ratio to a point defined by the knee point and at a second conversion ratio from the point defined by the knee point.

10. The decoding device according to claim 1, wherein the knee function is specified by an SEI message.

11. The decoding device according to claim 10, wherein the SEI message includes a setting of a knee_function_id.

12. A decoding method of causing a decoding device to perform:

receiving coded data and conversion information, the coded data pertaining to an image having luminance in a first dynamic range and the conversion information pertaining to a conversion of dynamic range of the luminance of the image from the first dynamic range into a second dynamic range; and

decoding the received coded data so as to generate the image,

wherein

the conversion uses a knee function, and

the conversion information includes the conversion persistence information which indicates whether or not the conversion information is applied to a plurality of continuous images.

13. A coding device comprising:

circuitry configured to

set conversion information pertaining to a conversion of dynamic range of a luminance of an image from a first dynamic range into a second dynamic range; and

code the image having luminance in the first dynamic range so as to generate coded data,

wherein

the conversion uses a knee function, and

the conversion information includes the conversion persistence information which indicates whether or not the conversion information is applied to a plurality of continuous images.

14. A non-transitory computer-readable medium having stored thereon

coded data and conversion information, the coded data pertaining to an image having luminance in a first dynamic range and the conversion information pertaining to a conversion of dynamic range of the luminance of the image from the first dynamic range into a second dynamic range,

wherein

a decoding device decodes the coded data, generates the image based on the decoded data, and converts the dynamic range based on the conversion information including a knee point, and

the conversion information further includes the conversion persistence information which indicates whether or not the conversion information is applied to a plurality of continuous images.