CLAIMS

1. A video predictive encoding device comprising:

input means which inputs a plurality of pictures constituting a video sequence;

encoding means which conducts predictive coding of the pictures and generates compressed picture data, the predictive encoding conducted using a plurality of reference pictures which have been encoded and then decoded and reproduced in the past;

reconstruction means which decodes the compressed picture data to reconstruct a reproduced picture;

picture storage means which stores at least one said reproduced picture as a reference picture to be used for encoding of a subsequent picture; and

buffer management means which controls the picture storage means, wherein (prior to processing of the picture), the buffer management means controls the picture storage means on the basis of buffer description information BD[k], the buffer description information BD[k] relating to a plurality of reference pictures which are used in predictive encoding of the picture and, at the same time, encodes the buffer description information BD[k], using buffer description information BD[m] for a picture different from the picture, and thereafter adds the encoded data thereof to the compressed picture data.

2. A video predictive encoding method comprising:

an input step of inputting a plurality of pictures constituting a

video sequence;

an encoding step of predictively encoding the pictures, using a plurality of reference pictures which have been encoded and then decoded and reproduced in the past, to generate compressed picture data;

a reconstruction step of decoding the compressed picture data to reconstruct a reproduced picture;

a picture storage step of storing at least one said reproduced picture as a reference picture to be used for encoding of a subsequent picture; and

a buffer management step of controlling the picture storage step,

wherein (prior to processing of the picture), the buffer management step controls the picture storage means on the basis of buffer description information BD[k] relating to a plurality of reference pictures, which are used in predictive encoding of the picture and, at the same time, encoding the buffer description information BD[k], with reference to buffer description information BD[m] for another picture different from the picture and thereafter adding encoded data thereof to the compressed picture data.

3. A video predictive decoding device comprising:

input means which inputs compressed picture data for each of a plurality of pictures constituting a video sequence, the compressed picture data containing data resulting from predictive coding using a plurality of reference pictures, which have been decoded and

reproduced in the past, and encoded data of buffer description information BD[k] relating to the plurality of reference pictures,;

reconstruction means which decodes the compressed picture data to reconstruct a reproduced picture;

picture storage means which stores at least one said reproduced picture as a reference picture to be used for decoding of a subsequent picture; and

buffer management means which controls the picture storage means,

wherein (prior to reconstruction of the reproduced picture), the buffer management means decodes, with reference to buffer description information BD[m] for another picture different from the reproduced picture, the encoded data of the buffer description information BD[k] for the reproduced picture, the picture storage means controlled by the buffer management means on the basis of the decoded buffer description information BD[k].

4. A video predictive decoding method comprising:

an input step of inputting compressed picture data for each of a plurality of pictures constituting a video sequence, the compressed picture data containing data resulting from predictive coding usinga plurality of reference pictures, which have been decoded and reproduced in the past, and encoded data of buffer description information BD[k] related to the plurality of reference pictures;

a reconstruction step of decoding the compressed picture data to reconstruct a reproduced picture;

a picture storage step of storing at least one said reproduced picture as a reference picture to be used for decoding of a subsequent picture; and

a buffer management step of controlling the picture storage step,

wherein (prior to reconstruction of the reproduced picture), the buffer management step comprises decoding, with reference to buffer description information BD[m] for another picture different from the reproduced picture, the encoded data of the buffer description information BD[k] for the reproduced picture, and then controlling the picture storage step on the basis of the decoded buffer description information BD[k].

CLAIMS

1. A video predictive encoding device comprising:

input means which inputs a plurality of pictures constituting a video sequence;

encoding means which conducts predictive coding of the pictures and generates compressed picture data, the predictive encoding conducted using a plurality of reference pictures which have been encoded and then decoded and reproduced in the past;

reconstruction means which decodes the compressed picture data to reconstruct a reproduced picture;

picture storage means which stores at least one said reproduced picture as a reference picture to be used for encoding of a subsequent picture; and

buffer management means which controls the picture storage means, and

wherein prior to processing of the picture, the buffer management means controls the picture storage means on the basis of buffer description information BD[k], the buffer description information BD[k] relating to a plurality of reference pictures which are used in predictive encoding of the picture and, at the same time, encodes the buffer description information BD[k], using buffer description information BD[m] for a picture different from the picture, and thereafter adds the encoded data thereof to the compressed picture data.

2. A video predictive encoding method executed by a video

predictive encoding device, comprising:

an input step of inputting a plurality of pictures constituting a video sequence;

an encoding step of predictively encoding the pictures, using a plurality of reference pictures which have been encoded and then decoded and reproduced in the past, to generate compressed picture data;

a reconstruction step of decoding the compressed picture data to reconstruct a reproduced picture;

a picture storage step of storing at least one said reproduced picture as a reference picture to be used for encoding of a subsequent picture; and

a buffer management step of controlling the picture storage step, and

wherein prior to processing of the picture, the buffer management step controls the picture storage means on the basis of buffer description information BD[k] relating to a plurality of reference pictures, which are used in predictive encoding of the picture and, at the same time, encoding the buffer description information BD[k], with reference to buffer description information BD[m] for another picture different from the picture and thereafter adding encoded data thereof to the compressed picture data.

3. A video predictive encoding program that causes a computer to function as:

input means which inputs a plurality of pictures constituting a

video sequence;

encoding means which conducts predictive coding of the pictures and generates compressed picture data, the predictive encoding conducted using a plurality of reference pictures which have been encoded and then decoded and reproduced in the past;

reconstruction means which decodes the compressed picture data to reconstruct a reproduced picture;

picture storage means which stores at least one said reproduced picture as a reference picture to be used for encoding of a subsequent picture; and

buffer management means which controls the picture storage means, and

wherein prior to processing of the picture, the buffer management means controls the picture storage means on the basis of buffer description information BD[k], the buffer description information BD[k] relating to a plurality of reference pictures which are used in predictive encoding of the picture and, at the same time, encodes the buffer description information BD[k], using buffer description information BD[m] for a picture different from the picture, and thereafter adds the encoded data thereof to the compressed picture data.

4. A video predictive decoding device comprising:

input means which inputs compressed picture data for each of a plurality of pictures constituting a video sequence, the compressed picture data containing data resulting from predictive coding using a

plurality of reference pictures, which have been decoded and reproduced in the past, and encoded data of buffer description information BD[k] relating to the plurality of reference pictures,;

reconstruction means which decodes the compressed picture data to reconstruct a reproduced picture;

picture storage means which stores at least one said reproduced picture as a reference picture to be used for decoding of a subsequent picture; and

buffer management means which controls the picture storage means, and

wherein prior to reconstruction of the reproduced picture, the buffer management means decodes, with reference to buffer description information BD[m] for another picture different from the reproduced picture, the encoded data of the buffer description information BD[k] for the reproduced picture and then controls the picture storage means on the basis of the decoded buffer description information BD[k].

5. A video predictive decoding method executed by a video predictive decoding device, comprising:

an input step of inputting compressed picture data for each of a plurality of pictures constituting a video sequence, the compressed picture data containing data resulting from predictive coding using a plurality of reference pictures, which have been decoded and reproduced in the past, and encoded data of buffer description information BD[k] related to the plurality of reference pictures;

a reconstruction step of decoding the compressed picture data to

reconstruct a reproduced picture;

a picture storage step of storing at least one said reproduced picture as a reference picture to be used for decoding of a subsequent picture; and

a buffer management step of controlling the picture storage step, and

wherein prior to reconstruction of the reproduced picture, the buffer management step comprises decoding, with reference to buffer description information BD[m] for another picture different from the reproduced picture, the encoded data of the buffer description information BD[k] for the reproduced picture, and then controlling the picture storage step on the basis of the decoded buffer description information BD[k].

6. A video predictive decoding program that causes a computer to function as:

input means which inputs compressed picture data for each of a plurality of pictures constituting a video sequence, the compressed picture data containing data resulting from predictive coding using a plurality of reference pictures, which have been decoded and reproduced in the past, and encoded data of buffer description information BD[k] relating to the plurality of reference pictures,;

reconstruction means which decodes the compressed picture data to reconstruct a reproduced picture;

picture storage means which stores at least one said reproduced picture as a reference picture to be used for decoding of a subsequent

picture; and

buffer management means which controls the picture storage means, and

wherein prior to reconstruction of the reproduced picture, the buffer management means decodes, with reference to buffer description information BD[m] for another picture different from the reproduced picture, the encoded data of the buffer description information BD[k] for the reproduced picture and then controls the picture storage means on the basis of the decoded buffer description information BD[k].