CLAIMS

1. A decoding method, comprising:

decoding a bitstream corresponding to a current picture block to obtain a reconstructed picture block, wherein the reconstructed picture block comprises a first initial component and a second initial component, wherein the reconstructed picture block is a reconstructed picture block in a YUV format, the first initial component is a luma component, and the second initial component is a chroma U component and a chroma V component;

generating an adjusted component corresponding to the second initial component based on the first initial component and the second initial component; and

performing feature enhancement on the adjusted component, to obtain a restored target component corresponding to the second initial component;

wherein generating the adjusted component corresponding to the second initial component based on the first initial component and the second initial component comprises:

obtaining a first picture feature corresponding to the first initial component, wherein the first picture feature comprises a picture feature not processed by a neural network;

obtaining a second picture feature corresponding to the second initial component, wherein the second picture feature comprises a picture feature not processed by a neural network; and

generating the adjusted component based on the first picture feature and the second picture feature;

wherein the first picture feature comprises a Haar wavelet frequency domain feature, and the second picture feature comprises a Haar wavelet frequency domain feature;

wherein generating the adjusted component corresponding to the second initial component based on the first initial component and the second initial component comprises:

performing one or more Haar wavelet transforms on the first initial component to obtain transformed frequency bands as a first feature map;

performing one or more Haar wavelet transforms on the second initial component to obtain transformed frequency bands as a second feature map; and

performing a concatenation operation on the first feature map and the second

feature map, to obtain the adjusted component;

wherein performing the concatenation operation on the first feature map and the second feature map comprises:

performing the concatenation operation on the first feature map and the second feature map along a channel dimension.

2. The method according to claim 1, wherein

performing one or more Haar wavelet transforms on the first initial component to obtain the transformed frequency bands comprises:

performing two Haar wavelet transforms on the first initial component to obtain the frequency bands after the two Haar wavelet transforms;

performing one or more Haar wavelet transforms on the second initial component to obtain the transformed frequency bands comprises:

performing two Haar wavelet transforms on the second initial component to obtain the frequency bands after the two Haar wavelet transforms.

3. The method according to claim 1, wherein

performing the Haar wavelet transforms on the first initial component to obtain the transformed frequency bands comprises:

performing two Haar wavelet transforms on the first initial component to obtain the frequency bands after the two Haar wavelet transforms;

performing the Haar wavelet transforms on the second initial component to obtain the transformed frequency bands comprises:

performing two Haar wavelet transforms on the second initial component to obtain the frequency bands after the two Haar wavelet transforms.

4. The method according to claim 2 or 3, wherein

performing the two Haar wavelet transforms on the first initial component to obtain the frequency bands after the two Haar wavelet transforms comprises:

performing a first Haar wavelet transform on the first initial component to obtain frequency bands after the first Haar wavelet transform; and

performing a second Haar wavelet transform on the frequency bands after the

first Haar wavelet transform to obtain the frequency bands after the two Haar wavelet transforms; and

performing the two Haar wavelet transforms on the second initial component to obtain the frequency bands after the two Haar wavelet transforms comprises:

performing a first Haar wavelet transform on the second initial component to obtain frequency bands after the first Haar wavelet transform; and

performing a second Haar wavelet transform on the frequency bands after the first Haar wavelet transform to obtain the frequency bands after the two Haar wavelet transforms.

5. The method according to any one of claims 1-4, wherein performing feature enhancement on the adjusted component to obtain the restored target component corresponding to the second initial component comprises:

performing feature enhancement on the adjusted component by a plurality of residual block networks, to obtain the target component.

6. The method according to any one of claims 1-4, wherein the adjusted component corresponding to the second initial component comprises an adjusted chroma U component and an adjusted chroma V component, and the method further comprises:

performing feature enhancement on the adjusted chroma U component by a first residual block network to obtain a restored target chroma component corresponding to the chroma U component; and performing feature enhancement on the adjusted chroma V component by a second residual block network to obtain a restored target chroma component corresponding to the chroma V component.

7. The method according to any one of claims 1-6, wherein a resolution of the first initial component is greater than or equal to a resolution of the second initial component.

8. An encoding method, comprising:

encoding a first initial component and a second initial component of a current picture block, to obtain a bitstream corresponding to the current picture block, wherein the current picture block is a reconstructed picture block in a YUV format, the first initial component is

a luma component, and the second initial component is a chroma U component and a chroma V component;

wherein a decoding device decodes the bitstream corresponding to the current picture block to obtain a reconstructed picture block, wherein the reconstructed picture block comprises a first initial component and a second initial component; the decoding device generates an adjusted component corresponding to the second initial component based on the first initial component and the second initial component; and the decoding device performs feature enhancement on the adjusted component, to obtain a restored target component corresponding to the second initial component;

wherein generating the adjusted component corresponding to the second initial component based on the first initial component and the second initial component comprises:

obtaining a first picture feature corresponding to the first initial component, wherein the first picture feature comprises a picture feature not processed by a neural network;

obtaining a second picture feature corresponding to the second initial component, wherein the second picture feature comprise a picture feature not processed by a neural network; and

generating the adjusted component based on the first picture feature and the second picture feature;

wherein the first picture feature comprises a Haar wavelet frequency domain feature, and the second picture feature comprises a Haar wavelet frequency domain feature;

wherein generating the adjusted component corresponding to the second initial component based on the first initial component and the second initial component comprises:

performing one or more Haar wavelet transforms on the first initial component to obtain transformed frequency bands as a first feature map;

performing one or more Haar wavelet transforms on the second initial component to obtain transformed frequency bands as a second feature map; and

performing a concatenation operation on the first feature map and the second feature map, to obtain the adjusted component;

wherein performing the concatenation operation on the first feature map and the second feature map comprises:

performing the concatenation operation on the first feature map and the

second feature map along a channel dimension.

9. The method according to claim 8, wherein a resolution of the first initial component is greater than or equal to a resolution of the second initial component.

10. A decoding device, comprising:

a decoding module, configured to decode a bitstream corresponding to a current picture block to obtain a reconstructed picture block, wherein the reconstructed picture block comprises a first initial component and a second initial component, wherein the reconstructed picture block is a reconstructed picture block in a YUV format, the first initial component is a luma component, and the second initial component is a chroma U component and a chroma V component;

a determining module, configured to generate an adjusted component corresponding to the second initial component based on the first initial component and the second initial component; and

a processing module, configured to perform feature enhancement on the adjusted component, to obtain a restored target component corresponding to the second initial component;

wherein generating the adjusted component corresponding to the second initial component based on the first initial component and the second initial component comprises:

obtaining a first picture feature corresponding to the first initial component, wherein the first picture feature comprises a picture feature not processed by a neural network;

obtaining a second picture feature corresponding to the second initial component, wherein the second picture feature comprise a picture feature not processed by a neural network; and

generating the adjusted component based on the first picture feature and the second picture feature;

wherein the first picture feature comprises a Haar wavelet frequency domain feature, and the second picture feature comprises a Haar wavelet frequency domain feature;

wherein generating the adjusted component corresponding to the second initial component based on the first initial component and the second initial component comprises:

performing one or more Haar wavelet transforms on the first initial component to obtain transformed frequency bands as a first feature map;

performing one or more Haar wavelet transforms on the second initial component to obtain transformed frequency bands as a second feature map; and

performing a concatenation operation on the first feature map and the second feature map, to obtain the adjusted component;

wherein performing the concatenation operation on the first feature map and the second feature map comprises:

performing the concatenation operation on the first feature map and the second feature map along a channel dimension.

11. An encoding device, comprising:

an encoding module, configured to encode a first initial component and a second initial component of a current picture block, to obtain a bitstream corresponding to the current picture block, wherein the current picture block is a reconstructed picture block in a YUV format, the first initial component is a luma component, and the second initial component is a chroma U component and a chroma V component;

wherein a decoding device decodes the bitstream corresponding to the current picture block to obtain a reconstructed picture block, wherein the reconstructed picture block comprises a first initial component and a second initial component; the decoding device generates an adjusted component corresponding to the second initial component based on the first initial component and the second initial component; and the decoding device performs feature enhancement on the adjusted component, to obtain a restored target component corresponding to the second initial component;

wherein generating the adjusted component corresponding to the second initial component based on the first initial component and the second initial component comprises:

obtaining a first picture feature corresponding to the first initial component, wherein the first picture feature comprises a picture feature not processed by a neural network;

obtaining a second picture feature corresponding to the second initial component, wherein the second picture feature comprise a picture feature not processed by a neural network; and

generating the adjusted component based on the first picture feature and the second picture feature;

wherein the first picture feature comprises a Haar wavelet frequency domain feature, and the second picture feature comprises a Haar wavelet frequency domain feature;

wherein generating the adjusted component corresponding to the second initial component based on the first initial component and the second initial component comprises:

performing one or more Haar wavelet transforms on the first initial component to obtain transformed frequency bands as a first feature map;

performing one or more Haar wavelet transforms on the second initial component to obtain transformed frequency bands as a second feature map; and

performing a concatenation operation on the first feature map and the second feature map, to obtain the adjusted component;

wherein performing the concatenation operation on the first feature map and the second feature map comprises:

performing the concatenation operation on the first feature map and the second feature map along a channel dimension.

12. A decoding device, comprising: one or more processors and one or more machine-readable storage media, wherein the one or more machine-readable storage media store machine executable instructions that can be executed by the one or more processors; and the one or more processors are configured to execute the machine executable instructions to implement the method according to any one of claims 1 to 7.

13. An encoding device, comprising: one or more processors and one or more machine-readable storage media, wherein the one or more machine-readable storage media store machine executable instructions that can be executed by the one or more processors; and the one or more processors are configured to execute the machine executable instructions to implement the method according to claim 8 or 9.

14. A non-transitory machine-readable storage medium, wherein the machine-readable storage medium stores computer instructions, and one or more processors execute the computer instructions to implement the decoding method according to any one of claims

1-7, or the encoding method according to claim 8 or 9.

15. A computer program product, comprising a computer program, wherein the computer program, when executed by one or more processors, implements the decoding method according to any one of claims 1-7, or implements the encoding method according to claim 8 or 9.