CLAIMS

1. A method for predicting a video colour component, applied to a decoder and comprising:

acquiring ~~a~~ first colour component neighboring reference ~~value~~ values, second colour component neighboring reference values and ~~a~~ first colour component reconstructed ~~value~~ values corresponding to a current block, wherein the first and second colour component neighboring reference ~~value represents a~~ values represent respectively values of different first and second colour components ~~component parameter~~ corresponding to a neighboring reference sample of the current block, the current block having a plurality of neighboring reference samples, and the first colour component reconstructed ~~value represents~~ values represent~~one or more~~ reconstructed ~~parameters~~ values of a first colour component corresponding to the current block;

determining a weight coefficient corresponding to ~~the~~ each neighboring reference sample according to a correlation between the neighboring reference sample and the current block;

determining a scaling factor according to the weight ~~coefficient~~ coefficients, ~~and~~ the first colour component neighboring reference ~~value~~ values and the second colour component neighboring reference values; and

obtaining ~~a~~ second colour component predicted ~~value~~ values corresponding to the current block based on a linear model corresponding to the scaling factor and the first colour component reconstructed values.

~~2. The method of claim 1, wherein determining the weight coefficient corresponding to the neighboring reference sample comprises:~~

~~determining the weight coefficient according to a correlation between the current block and the neighboring reference sample.~~

~~3. The method of claim 1, before determining the scaling factor according to the weight coefficient and the first colour component neighboring reference value, further comprising:~~

~~acquiring a second colour component neighboring reference value corresponding to the current block, the second colour component neighboring reference value being a second colour component parameter corresponding to the neighboring reference sample and different from the first colour component parameter.~~

42. The method of claim 31, wherein determining the scaling factor according to the weight coefficient coefficients, and the first colour component neighboring reference values and the second colour component neighboring reference valuesvalue comprises:

inputting the weight coefficientscoefficient, the first colour component neighboring reference value values and the second colour component neighboring reference value values to a preset factor calculation model to obtain the scaling factor.

53. The method of claim 31, before obtaining the second colour component predicted value values corresponding to the current block based on the linear model corresponding to the scaling factor and the first colour component reconstructed values, further comprising:

acquiring a second colour component estimated value values corresponding to the current block, wherein the second colour component estimated value isvalues are obtained by performing component prediction according to a second colour component corresponding to the current block.

6. The method of claim 4, wherein obtaining the second colour component predicted value corresponding to the current block based on the linear model corresponding to the scaling factor comprises:

obtaining the second colour component predicted value based on the linear model corresponding to the scaling factor and the first colour component reconstructed value.

7. The method of claim 5, wherein obtaining the second colour component predicted value corresponding to the current coding block based on the linear model corresponding to the scaling factor comprises:

obtaining the second colour component predicted value according to the scaling factor and the second colour component estimated value.

84. The method of claim 1, further comprising:

setting weight coefficients of part of reference samples corresponding to part of neighboring reference values as zero, wherein position correlations between the current block and the part of reference samples do not meet a preset threshold; or,

removing part of reference samples from the neighboring reference samples, wherein position correlations between the current block and the part of reference samples do not meet

a preset threshold; or

performing screening on the neighboring reference samples.

~~9~~5. The method of claim ~~8~~4, wherein performing screening on the neighboring reference samples comprises:

performing downsampling on the neighboring reference samples to determine part of reference samples.

~~10~~6. The method of claim 1, wherein the neighboring reference samples comprise at least one of an upper reference sample of the current block, an upper-left reference sample of the current block or a left reference sample of the current block; and

the neighboring reference samples further comprise at least one of an upper-right reference sample of the current block or a bottom-left reference sample of the current block.

~~11~~7. The method of claim 1, wherein the scaling factor is a coefficient of the linear model, and the linear model is configured for predicting a second colour component according to the first colour component.

~~12~~8. A decoder, comprising an acquisition section and a determination section, wherein

the acquisition section is configured to acquire ~~a~~ first colour component neighboring reference values, second colour component neighboring reference values ~~value~~ and ~~a~~ first colour component reconstructed ~~value~~ values corresponding to a current block, wherein the first and second colour component neighboring reference values represent respectively values of different ~~value represents a~~ first and second colour components~~component parameter~~ corresponding to a neighboring reference sample of the current block, the current block having a plurality of neighboring reference samples, and the first colour component reconstructed values represent~~value represents one or more~~ reconstructed ~~parameters~~ values of a first colour component corresponding to the current block;

the acquisition~~determination~~ section is further configured to determine a weight coefficient corresponding to ~~the~~ each neighboring reference sample according to a correlation between the neighboring reference sample and the current block; and

the determination section is configured to determine a scaling factor according to the weight coefficients, ~~coefficient and~~ the first colour component neighboring reference values and the second colour component neighboring reference values~~value~~; and

the acquisition section is further configured to obtain ~~a~~ second colour component predicted ~~value~~ values corresponding to the current block based on a linear model corresponding to the scaling factor and the first colour component reconstructed values.

~~13. The decoder of claim 12, wherein the determination section is configured to:~~

~~determine the weight coefficient according to a correlation between the current block and the neighboring reference sample.~~

~~14. The decoder of claim 12, wherein the acquisition section is configured to, before the scaling factor is determined according to the weight coefficient and the first colour component neighboring reference value,~~

~~acquire a second colour component neighboring reference value corresponding to the current block, the second colour component neighboring reference value being a second colour component parameter corresponding to the neighboring reference sample and different from the first colour component parameter.~~

~~15~~9. The decoder of claim ~~14~~8, wherein the determination section is configured to:

input the weight ~~coefficient~~ coefficients, the first colour component neighboring reference ~~value~~ values and the second colour component neighboring reference ~~value~~ values to a preset factor calculation model to obtain the scaling factor~~; and~~

~~the acquisition section is further configured to obtain the second colour component predicted value based on the linear model corresponding to the scaling factor and the first colour component reconstructed value~~.

~~16~~10. The decoder of claim ~~14~~8, wherein the acquisition section is configured to, before obtaining the second colour component predicted ~~value~~ values corresponding to the current block based on the linear model corresponding to the scaling factor and the first colour component reconstructed values,

acquire ~~a~~ second colour component estimated ~~value~~ values corresponding to the current block, wherein the second colour component estimated ~~value is~~values are obtained by performing component prediction according to a second colour component corresponding to the current block.

~~17~~11. The decoder of claim ~~12~~8, further comprising a setting section, configured to set weight

coefficients of part of reference samples corresponding to part of neighboring reference values as zero, wherein position correlations between the current block and the part of reference samples do not meet a preset threshold;

wherein the determination section is configured to:

remove part of reference samples from the neighboring reference samples, wherein position correlations between the current block and the part of reference samples do not meet a preset threshold; or,

perform screening on the neighboring reference samples.

~~18~~12. The decoder of claim ~~17~~11, wherein the determination section is configured to:

perform downsampling on the neighboring reference samples to determine part of reference samples.

~~19~~13. The decoder of claim ~~12~~8, wherein the neighboring reference samples comprise at least one of an upper reference sample of the current block, an upper-left reference sample of the current block or a left reference sample of the current block; and

the neighboring reference samples further comprise at least one of an upper-right reference sample of the current block or a bottom-left reference sample of the current block.

~~20~~14. A method for predicting a video colour component, applied to an encoder and comprising:

acquiring ~~a~~ first colour component neighboring reference values, second colour component neighboring reference values ~~value~~ and ~~a~~ first colour component reconstructed values ~~value~~ corresponding to a current ~~coding~~ block, wherein the first and second colour component neighboring reference values represent respectively values of different ~~value represents a~~ first and second colour components ~~component parameter~~ corresponding to a neighboring reference sample of the current ~~coding~~ block, the current block having a plurality of neighboring reference samples, and the first colour component reconstructed values represent ~~value represents one or more~~ reconstructed ~~parameters~~ values of a first colour component corresponding to the current ~~coding~~ block;

determining a weight coefficient corresponding to ~~the~~ each neighboring reference sample according to a correlation between the neighboring reference sample and the current block;

determining a scaling factor according to the weight coefficients,~~coefficient and~~ the

first colour component neighboring reference ~~–~~values and the second colour component neighboring reference values~~value~~; and

obtaining ~~a~~ second colour component predicted ~~value~~ values corresponding to the current ~~coding~~ block based on a linear model corresponding to the scaling factor and the first colour component reconstructed values.

~~21. The method of claim 20, wherein determining the weight coefficient corresponding to the neighboring reference sample comprises:~~

~~determining the weight coefficient according to a correlation between the current coding block and the neighboring reference sample.~~

~~22. The method of claim 20, before determining the scaling factor according to the weight coefficient and the first colour component neighboring reference value, further comprising:~~

~~acquiring a second colour component neighboring reference value corresponding to the current coding block, the second colour component neighboring reference value being a second colour component parameter corresponding to the neighboring reference sample and different from the first colour component parameter.~~

~~23~~15. The method of claim ~~22~~14, wherein determining the scaling factor according to the weight coefficients,~~coefficient~~ ~~and~~ the first colour component neighboring reference values and the second colour component neighboring reference values~~value~~ comprises:

inputting the weight coefficients~~coefficient~~, the first colour component neighboring reference ~~value~~ values and the second colour component neighboring reference ~~value~~ values to a preset factor calculation model to obtain the scaling factor.

~~24~~16. The method of claim ~~22~~14, wherein the first colour component neighboring reference ~~value~~ values and the first colour component reconstructed ~~value~~ values corresponding to the current ~~coding~~ block comprise at least two groups of first colour component neighboring reference values and first colour component reconstructed values, the method further comprises:

determining weight coefficients for each group of first colour component neighboring reference values and first colour component reconstructed values;

inputting the weight coefficients, the first colour component neighboring reference values and the second colour component neighboring reference values to the preset factor

calculation model to obtain at least two groups of scaling factors corresponding to the at least two groups of first colour component neighboring reference values and first colour component reconstructed values; and

selecting one group of scaling factors from the at least two groups of scaling factors.

~~25~~17. The method of claim ~~22~~14, before obtaining the second colour component predicted ~~value~~ values corresponding to the current ~~coding~~ block based on the linear model corresponding to the scaling factor and the first colour component reconstructed values, further comprising:

acquiring ~~a~~ second colour component estimated ~~value~~ values corresponding to the current ~~coding~~ block, wherein the second colour component estimated ~~value is~~values are obtained by performing component prediction according to a second colour component corresponding to the current ~~coding~~ block.

~~26. The method of claim 23, wherein obtaining the second colour component predicted value corresponding to the current coding block based on the linear model corresponding to the scaling factor comprises:~~

~~obtaining the second colour component predicted value based on the linear model corresponding to the scaling factor and the first colour component reconstructed value.~~

~~27. The method of claim 25, wherein obtaining the second colour component predicted value corresponding to the current coding block based on the linear model corresponding to the scaling factor comprises:~~

~~obtaining the second colour component predicted value according to the scaling factor and the second colour component estimated value.~~

~~28~~18. The method of claim ~~20~~14, further comprising:

setting weight coefficients of part of reference samples corresponding to part of neighboring reference values as zero, wherein position correlations between the current ~~coding~~ block and the part of reference samples do not meet a preset threshold; or,

removing part of reference samples from the neighboring reference samples, wherein position correlations between the current ~~coding~~ block and the part of reference samples do not meet a preset threshold; or,

performing screening on the neighboring reference samples.

~~29~~19. The method of claim ~~28~~18, wherein performing screening on the neighboring reference samples comprises:

performing downsampling on the neighboring reference samples to determine part of reference samples.

~~30~~20. The method of claim ~~20~~14, wherein the neighboring reference samples comprise at least one of an upper reference sample of the current ~~coding~~ block, an upper-left reference sample of the current ~~coding~~ block or a left reference sample of the current ~~coding~~ block; and

the neighboring reference samples further comprise at least one of an upper-right reference sample of the current ~~coding~~ block or a bottom-left reference sample of the current ~~coding~~ block.

~~31~~21. The method of claim ~~20~~14, wherein the scaling factor is a coefficient of the linear model, and the linear model is configured for predicting a second colour component according to the first colour component.

~~32~~22. An encoder, comprising an acquisition section and a determination section, wherein

the acquisition section is configured to acquire ~~a~~ first colour component neighboring reference values, second colour component neighboring reference values ~~value~~ and ~~a~~ first colour component reconstructed values~~value~~ corresponding to a current ~~coding~~ block, wherein the first and second colour component neighboring reference values represent respectively values of different ~~value represents a~~ first and second colour components~~component parameter~~ corresponding to a neighboring reference sample of the current ~~coding~~ block, the current block having a plurality of neighboring reference samples, and the first colour component reconstructed values represent ~~value represents one or more~~ reconstructed ~~parameters~~ values of a first colour component corresponding to the current ~~coding~~ block;

the acquisition~~determination~~ section is further configured to determine a weight coefficient corresponding to ~~the~~ each neighboring reference sample according to a correlation between the neighboring reference sample and the current block; and

the determination section is configured to determine a scaling factor according to the weight coefficients, ~~coefficient and~~ the first colour component neighboring reference values and the second colour component neighboring reference values~~value~~; and

the acquisition section is further configured to obtain ~~a~~ second colour component

predicted ~~value~~ values corresponding to the current ~~coding~~ block based on a linear model corresponding to the scaling factor and the first colour component reconstructed values.

~~33. The encoder of claim 32, wherein the determination section is configured to:~~

~~determine the weight coefficient according to a correlation between the current coding block and the neighboring reference sample, wherein the correlation represents a position correlation between the current coding block and the neighboring reference sample.~~

~~34. The encoder of claim 32, wherein~~

~~the acquisition section is further configured to acquire a second colour component neighboring reference value corresponding to the current coding block before the scaling factor is determined according to the weight coefficient and the first colour component neighboring reference value, the second colour component neighboring reference value being a second colour component parameter corresponding to the neighboring reference sample and different from the first colour component parameter.~~

~~35~~23. The encoder of claim ~~34~~22, wherein the first colour component neighboring reference values ~~value~~ and the first colour component reconstructed values~~value~~ corresponding to the current ~~coding~~ block comprise at least two groups of first colour component neighboring reference values and first colour component reconstructed values, and the determination section is configured to:

determine weight coefficients for each group of first colour component neighboring reference values and first colour component reconstructed values;

input the weight coefficients, the first colour component neighboring reference values and the second colour component neighboring reference values to the preset factor calculation model to obtain at least two groups of scaling factors corresponding to the at least two groups of first colour component neighboring reference values and first colour component reconstructed values; and

select one group of scaling factors from the at least two groups of scaling factors.

~~36. The encoder of claim 32, wherein the acquisition section is further configured to:~~

~~obtain the second colour component predicted value based on the linear model corresponding to the scaling factor and the first colour component reconstructed value.~~

~~37~~24. The encoder of claim ~~32~~22, further comprising a setting section, configured to set weight coefficients of part of reference samples corresponding to part of neighboring reference values as zero, wherein position correlations between the current ~~coding~~ block and the part of reference samples do not meet a preset threshold;

wherein the determination section is configured to:

remove part of reference samples from the neighboring reference samples, wherein position correlations between the current ~~coding~~ block and the part of reference samples do not meet a preset threshold; or,

perform screening on the neighboring reference samples.

~~38~~25. The encoder of claim ~~32~~22, wherein the neighboring reference samples comprise at least one of an upper reference sample of the current ~~coding~~ block, an upper-left reference sample of the current ~~coding~~ block or a left reference sample of the current ~~coding~~ block; and

the neighboring reference samples further comprise at least one of an upper-right reference sample of the current ~~coding~~ block or a bottom-left reference sample of the current ~~coding~~ block.