

CLAIMS

What is claimed is:

1. A decoder configuration method, executed by a computing device, the method comprising:

acquiring at least two compatibility grade configurations used for configuring decoding parameters of a decoder, the different compatibility grade configurations being different in priority level, decoding property and decoder compatibility;

selecting a compatibility grade configuration from the at least two compatibility grade configurations according to the priority levels from high to low;

for the current selected compatibility grade configuration:

configuring the decoder according to the compatibility grade configuration;

starting the decoder, and performing decoding abnormality detection processing on the decoder to obtain an abnormality detection result; and

performing hardware decoding processing on a to-be-decoded video according to the compatibility grade configuration to obtain a decoding processing result in response to the abnormality detection result indicating that the decoder is normal, and determining that the current compatibility grade configuration is applicable to the decoder in response to the decoding processing result indicating that decoding is successful.

2. The decoder configuration method according to claim 1, further comprising:

acquiring the decoding parameters of the decoder and determining a parameter configuration rule corresponding to a decoding demand;

configuring the decoding parameters according to the parameter configuration rule to obtain a plurality of configuration results of the decoding parameters, different configuration results corresponding to different decoding properties;

setting at least two compatibility grades according to the decoding parameters, the different compatibility grades being different in decoder compatibility; and

performing parameter grade matched processing on the at least two compatibility grades and the plurality of configuration results to obtain the at least two compatibility grade configurations.

3. The decoder configuration method according to claim 2, wherein the decoding

parameters include frame rate setting parameters and decoding hoarded frame parameters, and the parameter configuration results include frame rate configuration results, hoarded frame configuration results and a default configuration result in which no configuration is performed on the decoding parameters; and

performing rule configuration processing on the decoding parameters according to the parameter configuration rule to obtain the plurality of configuration results of the decoding parameters comprises:

configuring the frame rate setting parameters according to the parameter configuration rule to obtain a plurality of frame rate configuration results; and

configuring the decoding hoarded frame parameters according to the parameter configuration rule to obtain a plurality of hoarded frame configuration results.

4. The decoder configuration method according to claim 3, wherein performing the parameter grade matched processing on the at least two compatibility grades and the plurality of configuration results to obtain the at least two compatibility grade configurations comprises:

performing parameter grade matched processing on the at least two compatibility grades and the plurality of frame rate configuration results to obtain a first compatibility grade configuration;

performing parameter grade matched processing on the at least two compatibility grades and the plurality of hoarded frame configuration results to obtain a second compatibility grade configuration; and

performing parameter grade matched processing on the at least two compatibility grades and the default configuration result to obtain a third compatibility grade configuration.

5. The decoder configuration method according to claim 2, further comprising:

performing priority level configuration on the at least two compatibility grades to obtain priority levels of the at least two compatibility grades.

6. The decoder configuration method according to claim 1, further comprising:

determining a next compatibility grade configuration of the current compatibility grade configuration from the at least two compatibility grade configurations according to the priority levels in response to the abnormality detection result indicating that the decoder is abnormal, and returning to the operation of configuring the decoder according to the compatibility grade configuration.

7. The decoder configuration method according to any one of claims 1-6, further comprising:

determining that the abnormality detection result indicates the decoder being abnormal in response to abnormal information transmitted by the decoder being received; and

determining that the abnormality detection result indicates the decoder being normal in response to the abnormal information transmitted by the decoder being not received.

8. The decoder configuration method according to any one of claims 1-6, further comprising:

determining that the decoding processing result indicates successful decoding in response to a first-frame image of a to-be-decoded video being successfully decoded and outputted from the decoder.

9. The decoder configuration method according to claim 8, further comprising:

determining a next compatibility grade configuration of the current compatibility grade configuration from the at least two compatibility grade configurations according to the priority levels in response to the decoding processing result indicating that decoding fails, and returning to the operation of configuring the decoder according to the compatibility grade configuration.

10. The decoder configuration method according to claim 8, further comprising:

performing decoding overtime detection processing on the decoder to obtain an overtime detection result in response to the decoding processing result indicating that decoding fails; and

performing decoding processing on other video frame images except the first-frame image in the to-be-decoded video in response to the overtime detection result indicating waiting overtime, and determining whether the current compatibility grade configuration is applicable to the decoder or not in the decoding process of other video frame images.

11. The decoder configuration method according to claim 10, wherein performing the decoding overtime detection processing on the decoder to obtain the overtime detection result comprises:

determining whether a decoding duration of the first-frame image of the to-be-decoded video is greater than a duration threshold or not according to a preset duration threshold; and determining that the overtime detection result is waiting overtime in response to the decoding duration being greater than or equal to or greater than the duration threshold.

12. The decoder configuration method according to claim 10, further comprising:

returning to the operation of performing decoding abnormality detection processing on the decoder in response to the overtime detection result indicating waiting no overtime.

13. A decoder configuration apparatus, comprising:

a decoder configuration module configured to acquire at least two compatibility grade configurations used for configuring decoding parameters of a decoder, the different compatibility grade configurations being different in priority level, decoding property and decoder compatibility; select a compatibility grade configuration from the at least two compatibility grade configurations according to the priority levels from high to low; wherein

for the current selected compatibility grade configuration:

the decoder configuration module is configured to configure the decoder according to the compatibility grade configuration and start the decoder;

an abnormality detection module is configured to perform decoding abnormality detection processing on the decoder to obtain an abnormality detection result; and

a decoding processing module is configured to perform hardware decoding processing on a to-be-decoded video according to the current selected compatibility grade configuration to obtain a decoding processing result in response to the abnormality detection result indicating the decoder being normal, and determine that the current compatibility grade configuration is applicable to the decoder in response to the decoding processing result indicating that decoding is successful.

14. The apparatus according to claim 13, further comprising:

a rule configuration module configured to acquire the decoding parameters of the decoder and determine a parameter configuration rule corresponding to a decoding demand, the parameter configuration rule being a decoding parameter configuration rule determined according to the decoding demand of the to-be-decoded video; and perform rule configuration processing on the decoding parameters according to the parameter configuration rule to obtain a plurality of configuration results of the decoding parameters, different configuration results corresponding to different decoding properties; and

a compatibility grade configuration module configured to set at least two compatibility grades according to the decoding parameters, the different compatibility grades being different in decoder compatibility; and perform parameter grade matched processing on the at least two compatibility grades and the plurality of configuration results to obtain the at least two compatibility grade configurations.

15. The apparatus according to claim 14, wherein the decoding parameters include frame rate setting parameters and decoding hoarded frame parameters, and the configuration results include frame rate configuration results, hoarded frame configuration results and a default configuration result in which no configuration is performed on the decoding parameters; and

the rule configuration module is further configured to:

configure the frame rate setting parameters according to the parameter configuration rule to obtain a plurality of frame rate configuration results; and

configure the decoding hoarded frame parameters according to the parameter configuration rule to obtain a plurality of hoarded frame configuration results.

16. The apparatus according to claim 15, wherein the compatibility grade configuration module is further configured to:

perform parameter grade matched processing on at least two compatibility grades and the plurality of frame rate configuration results to obtain a first compatibility grade configuration;

performing parameter grade matched processing on the at least two compatibility grades and the plurality of hoarded frame configuration results to obtain a second compatibility grade configuration; and

perform parameter grade matched processing on the at least two compatibility grades and the default configuration result to obtain a third compatibility grade configuration.

17. The apparatus according to claim 14, wherein the compatibility grade configuration module is further configured to: perform priority level configuration on the at least two compatibility grades to obtain priority levels of the at least two compatibility grades.

18. The apparatus according to claim 13, wherein the decoding processing module is further configured to: trigger a grade configuration module to determine a next compatibility grade configuration of the current compatibility grade configuration from the at least two compatibility grade configurations according to the priority levels in response to the abnormality detection result indicating that the decoder is abnormal, configure the decoder again according to the compatibility grade configuration, restart the decoder, and trigger the abnormality detection module to perform decoding abnormality detection processing on the decoder again.

~~19. The apparatus according to any one of claims 13-18, wherein the decoding processing module is further configured to: determine that the decoding processing result indicates successful decoding in response to a first frame image of the to-be-decoded video being~~

successfully decoded and outputted from the decoder.

~~20. The apparatus according to claim 19, wherein the decoding processing module is further configured to: trigger the grade configuration module to determine a next compatibility grade configuration of the current compatibility grade configuration from the at least two compatibility grade configurations according to the priority levels in response to the decoding processing result indicating that decoding fails, configure the decoder again according to the compatibility grade configuration, restart the decoder, and trigger the abnormality detection module to perform decoding abnormality detection processing on the decoder again.~~

~~21. The apparatus according to claim 19, wherein the decoding processing module is further configured to: perform decoding overtime detection processing on the decoder to obtain an overtime detection result in response to the decoding processing result indicating that decoding fails; and perform decoding processing on other video frame images except the first frame image in the to be decoded video in response to the overtime detection result indicating waiting overtime, and determine whether the current compatibility grade configuration is applicable to the decoder or not in the decoding process of other video frame images.~~

~~22. The apparatus according to claim 21, wherein the decoding processing module is further configured to: determine whether a decoding duration of the first frame image of the to be decoded video is greater than a duration threshold or not according to a preset duration threshold; and determine that the overtime detection result is waiting overtime in response to the decoding duration being greater than or equal to or greater than the duration threshold.~~

~~23~~19. A computer-readable medium, storing a computer program, the computer program, when executed by a processor, implementing the decoder configuration method according to any one of claims 1 to 12.

~~24~~20. An electronic device, comprising:

a processor; and

a memory, configured to store executable instructions of the processor;

the processor being configured to execute the executable instructions to perform the decoder configuration method according to any one of claims 1 to 12.