

METHOD AND DEVICE FOR COMPARING MEDIA FEATURES

Cross reference to related applications

5 [0001] This application claims the priority of Chinese patent application No. 201810273673.2, filed on March 29, 2018, which is incorporated herein by reference in its entirety.

Field

10 [0002] The present disclosure relates to the technical field of media processing, in particular to a method and a device for comparing media features.

Background

15 [0003] Media features such as video features and audio features (or media fingerprints), media feature comparison and media feature retrieval are widely used in our "multimedia information society". The comparison of media features may avoid the repeated uploading of videos and audios, thus preventing the embezzlement of media and optimizing the storage of media. In addition, the comparison of media features may also be used for media content monitoring,
20 copyright detection, etc.

[0004] The existing media feature comparison methods are poor in accuracy and efficiency, which causes huge consumption of computing resources and storage resources.

25 Summary of the Invention

[0005] The object of the present disclosure is to provide a new method and device for comparing media features.

[0006] The object of the present disclosure is to be realized by adopting the following technical scheme. In a first aspect, the present disclosure provides a
30 method for comparing media features

comprising: obtaining first media

feature sequences of a first media object and second media feature sequences of a second media object, wherein the first media feature sequence comprises a plurality of first media feature units arranged in sequence, and the second media feature sequence comprises a plurality of second media feature units arranged in sequence; determining unit similarities between the first media feature units and the second media feature units; determining a similarity matrix between the first media feature sequences and the second media feature sequences according to the unit similarities; and determining a similarity of the first media object and the second media object according to the similarity matrix.

10 **[0007]** The object of the present disclosure can be further realized by adopting the following technical measures.

[0008] The method for comparing media features aforementioned, wherein, the first media feature units and the second media feature units are floating point number features; the determining unit similarities between the first media feature units and the second media feature units comprises: determining the unit similarities according to a cosine distance between the first media feature units and the second media feature units.

20 **[0009]** The method for comparing media features aforementioned, wherein, the first media feature units and the second media feature units are binary features and have the same feature unit length; the determining unit similarities between the first media feature units and the second media feature units comprises: determining the unit similarities according to a Hamming distance between the first media feature units and the second media feature units.

25 **[0010]** The method for comparing media features aforementioned, wherein, the obtaining first media feature sequences of a first media object and second media feature sequences of a second media object comprises: obtaining various types of first media feature sequences of the first media object, and obtaining various types of second media feature sequences of the second media object; the determining unit similarities between the first media feature units and the second media feature

start and an end of the first matching straight line or second matching straight line reach a preset unit similarity value, removing portions of the start and the end that do not reach the preset unit similarity value, and keeping and defining a middle segment of the straight line as a third matching straight line; and determining the similarity of the first media object and the second media object according to the linear similarity of the third matching straight line, and determining a start and end time of matching segments according to a start point and an end point of the third matching straight line.

[0011] The object of the present disclosure is also realized by adopting the following technical scheme. In a second aspect, the present disclosure provides a device for comparing media features, comprising: a media feature sequence obtaining module, configured to obtain first media feature sequences of a first media object and second media feature sequences of a second media object, wherein the first media feature sequence comprises a plurality of first media feature units arranged in sequence, and the second media feature sequence comprises a plurality of second media feature units arranged in sequence; a unit similarity determining module, configured to determine unit similarities between the first media feature units and the second media feature units; a similarity matrix determining module, configured to determine a similarity matrix between the first media feature sequences and the second media feature sequences according to the unit similarities; and a similarity determining module, configured to determine a similarity of the first media object and the second media object according to the similarity matrix.

[0012] The object of the present disclosure can be further realized by adopting the following technical measures.

[0013] The device for comparing media features aforementioned, further comprising a module for performing the steps of any one of the aforementioned.

[0014] The object of the present disclosure can be realized by adopting the following technical measures. In a third aspect, the present disclosure provides a

hardware device for comparing media features

, comprising: a memory, configured to store non-transitory computer readable instructions; and a processor, configured to execute the computer readable instructions, wherein, when the computer readable instructions are executed by the processor, such that the method for comparing media features according to any one of the aforementioned.

[0015] The object of the present disclosure can be realized by adopting the following technical measures. A terminal equipment proposed according to the disclosure, comprising the device for comparing media features according to any one of the aforementioned.

[0016] The object of the present disclosure can be realized by adopting the following technical measures. In a fourth aspect, the present disclosure provides a computer readable storage medium for storing non-transitory computer readable instructions, wherein, when the non-transitory computer readable instruction are executed by a computer, such that the computer perform the method for comparing media features according to any one of the aforementioned.

[0017] The above description is only an overview of the technical scheme of the present disclosure. In order to have a better understanding of the technical means of the present disclosure, it can be implemented in accordance with the contents of the description, and to make the above and other purposes, features and advantages of the present disclosure more obvious and understandable, the following is a preferred embodiment, and is described in detail with the accompanying drawings.

Brief Description of the Drawings

[0018] Fig. 1 is a flowchart of a method for comparing media features according to one embodiment of the present disclosure;

[0019] Fig. 2 is a gray scale diagram corresponding to a similarity matrix

according to one embodiment of the present disclosure;

[0020] Fig. 3 is a flowchart of comparison using a dynamic programming method