

CLAIMS

1. A vehicle damage assessment method, comprising:

acquiring a partial picture of a vehicle to be subject to damage assessment;

searching for a corresponding vehicle body picture in a preset image database according to a

5 model and a vehicle body position corresponding to the partial picture, wherein the corresponding vehicle body picture is a corresponding picture of a complete vehicle body position;

preprocessing the partial picture so that the preprocessed partial picture conforms to a preset image effect;

10 comparing pixel values of all pixel points in the vehicle body picture and the partial picture to obtain a comparison result, wherein the comparison result indicates pixel value differences between the pixel points in the partial picture and related pixel points in the vehicle body picture, as well as a coverage area of the pixel points, having absolute values of the pixel value differences greater than a preset threshold, in the partial picture, and the related pixel points refer to pixel points corresponding to a same shooting position as the pixel points in the partial picture; and

15 determining the damage degree of the vehicle to be subject to damage assessment on the basis of the comparison result, wherein the damage degree is related to the pixel value differences and the coverage area,

wherein the damage degree is positively related to an average value of the pixel value differences and the coverage area, and

20 wherein comparing pixel values of all pixel points in the vehicle body picture and the partial picture to obtain a comparison result, includes: determining based on an image matching algorithm the positions of pixel points, relating to the pixel points in the partial picture, in the vehicle body picture; and comparing pixel values of all the pixel points in the partial picture with pixel values of the related pixel points in the vehicle body picture to obtain the comparison result.

25 2. The vehicle damage assessment method according to Claim 1, wherein the method further comprises the following steps which are performed before the step of acquiring the partial picture of the vehicle to be subject to damage assessment:

receiving model information of the vehicle to be subject to damage assessment; and

displaying preset view boxes matched with all vehicle body positions of a corresponding model according to the model information to allow a user to select the corresponding view box to shoot a picture of the corresponding vehicle body position.

3. The vehicle damage assessment method according to Claim 2, wherein the method further comprises the following steps to be performed after the step of acquiring the partial picture of the vehicle to be subject to damage assessment:

determining a model corresponding to the partial picture according to the received model information of the vehicle to be subject to damage assessment; and

determining a vehicle body position corresponding to the partial picture on the basis of the view box selected by the user.

4. The vehicle damage assessment method according to Claim 1, wherein the method further comprises the following step to be performed the step of acquiring the partial picture of the vehicle to be subject to damage assessment:

carrying out image recognition on the partial picture, and determining a model and a vehicle body position corresponding to the partial picture.

5. The vehicle damage assessment method according to any one of Claims 1-4, wherein the method further comprises the following steps to be performed after the step of determining the damage degree on the basis of the comparison result:

calculating an estimated amount of compensation of the vehicle to be subject to damage assessment on the basis of the model, the vehicle body position, and the damage degree; and

outputting the estimated amount of compensation of the vehicle to be subject to damage assessment.

6. The vehicle damage assessment method according to Claim 5, wherein if two or more partial pictures of the vehicle to be subject to damage assessment are acquired, the step of searching for a corresponding vehicle body picture in a preset image database according to a model and a vehicle body position corresponding the partial picture, and the subsequent steps are performed for each said partial picture; and the step of calculating an estimated amount of compensation of the vehicle to be

subject to damage assessment on the basis of the model, the vehicle body position, and the damage degree particularly comprises:

calculating the estimated amount of compensation of the vehicle to be subject to damage assessment on the basis of the model, the vehicle body positions corresponding to the two or more partial pictures, and the damage degree.

7. An electronic device, comprising a memory, a processor, and a computer readable instruction which is stored in the memory and is to be run on the processor, wherein the processor executes the computer readable instruction to implement the following steps:

acquiring a partial picture of a vehicle to be subject to damage assessment;

searching for a corresponding vehicle body picture in a preset image database according to a model and a vehicle body position corresponding to the partial picture, wherein the corresponding vehicle body picture is a corresponding picture of a complete vehicle body position;

preprocessing the partial picture so that the preprocessed partial picture conforms to a preset image effect;

comparing pixel values of all pixel points in the vehicle body picture and the partial picture to obtain a comparison result, wherein the comparison result indicates pixel value differences between the pixel points in the partial picture and related pixel points in the vehicle body picture, as well as a coverage area of the pixel points, having absolute values of the pixel value differences greater than a preset threshold, in the partial picture, and the related pixel points refer to pixel points corresponding to a same shooting position as the pixel points in the partial picture; and

determining the damage degree of the vehicle to be subject to damage assessment on the basis of the comparison result, wherein the damage degree is related to the pixel value differences and the coverage area,

wherein the damage degree is positively related to an average value of the pixel value differences and the coverage area, and

wherein comparing pixel values of all pixel points in the vehicle body picture and the partial picture to obtain a comparison result, includes: determining based on an image matching algorithm the positions of pixel points, relating to the pixel points in the partial picture, in the vehicle body picture; and comparing pixel values of all the pixel points in the partial picture with pixel values of

the related pixel points in the vehicle body picture to obtain the comparison result.

8. The electronic device according to Claim 7, wherein the processor executes the computer readable instruction to further implement the following steps:

receiving model information of the vehicle to be subject to damage assessment before the partial
5 picture of the vehicle to be subject to damage assessment is acquired; and

displaying preset view boxes matched with all vehicle body positions of the corresponding model according to the model information to allow a user to select the corresponding view box to shoot a picture of the corresponding vehicle body position.

9. The electronic device according to Claim 8, wherein the processor executes the computer
10 readable instruction to further implement the following steps:

determining a model corresponding to the partial picture according to the received model information of the vehicle to be subject to damage assessment after the partial picture of the vehicle to be subject to damage assessment is acquired; and

determining a vehicle body position corresponding to the partial picture on the basis of the view
15 box selected by the user.

10. The electronic device according to Claim 7, wherein the processor executes the computer readable instruction to further implement the following step:

after the partial picture of the vehicle to be subject to damage assessment is acquired, carrying out image recognition on the partial picture, and determining a model and a vehicle body position
20 corresponding to the partial picture.

11. The electronic device according to any one of Claims 7-10, wherein the processor executes the computer readable instruction to further implement the following steps:

calculating an estimated amount of compensation of the vehicle to be subject to damage assessment on the basis of the model, the vehicle body position, and the damage degree; and

25 outputting the estimated amount of compensation of the vehicle to be subject to damage assessment.

12. The electronic device according to Claim 11, wherein the processor executes the computer readable instruction to further implement the following steps: in the case where two or more partial

pictures of the vehicle to be subject to damage assessment are acquired, the step of searching for a corresponding vehicle body picture in a preset image database according to a model and a vehicle body position corresponding the partial picture, and the subsequent steps are performed for each said partial picture;

5 the step of calculating an estimated amount of compensation of the vehicle to be subject to damage assessment on the basis of the model, the vehicle body position, and the damage degree particularly comprises:

calculating the estimated amount of compensation of the vehicle to be subject to damage assessment on the basis of the model, the vehicle body positions corresponding to the two or more
10 partial pictures, and the damage degree.

13. An electronic device, comprising:

an acquisition module used for acquiring a partial picture of a vehicle to be subject to damage assessment;

a searching module used for searching for a corresponding vehicle body picture in a preset image
15 database according to a model and a vehicle body position corresponding to the local picture acquired by the acquisition module, wherein the corresponding vehicle body picture is a corresponding picture of a complete vehicle body position;

a preprocessing module used for preprocessing the partial picture acquired by the acquisition module so that the preprocessed partial picture conforms to a preset image effect;

20 a pixel value comparison module used for comparing pixel values of all pixel points in the vehicle body picture searched out by the searching module and in the partial picture to obtain a comparison result, wherein the comparison result indicates pixel value differences between the pixel points in the partial picture and related pixel points in the vehicle body picture, as well as a coverage area of the pixel points, having absolute values of the pixel value differences greater than a preset
25 threshold, in the partial picture, and the related pixel points refer to pixel points corresponding to a same shooting position as the pixel points in the partial picture; and

a determination module used for determining the damage degree of the vehicle to be subject to

damage assessment on the basis of the comparison result, wherein the damage degree is related to the pixel value differences and the coverage area,

wherein the damage degree is positively related to an average value of the pixel value differences and the coverage area, and

5 wherein comparing pixel values of all pixel points in the vehicle body picture and the partial picture to obtain a comparison result, includes: determining based on an image matching algorithm the positions of pixel points, relating to the pixel points in the partial picture, in the vehicle body picture; and comparing pixel values of all the pixel points in the partial picture with pixel values of the related pixel points in the vehicle body picture to obtain the comparison result.

10 14. The electronic device according to Claim 13, wherein the electronic device further comprises:

a reception module used for receiving model information of the vehicle to be subject to damage assessment; and

15 a display module used for displaying preset view boxes matched with all vehicle body positions of a corresponding model according to the model information to allow a user to select the corresponding view box to shoot a picture of the corresponding vehicle body position.

15. The electronic device according to Claim 14, wherein the electronic device further comprises:

20 a model determination module used for determining the model corresponding to the partial picture according to the model information, received by the reception module, of the vehicle to be subject to damage assessment; and

a vehicle body position determination module used for determining the vehicle body position corresponding to the partial picture on the basis of the view box selected by the user.

25 16. The electronic device according to any one of Claims 13-15, wherein the electronic device further comprises:

an evaluation module used for calculating an estimated amount of compensation of the vehicle to be subject to damage assessment on the basis of the model, the vehicle body position, and the damage degree; and

an output module used for outputting the estimated amount of compensation obtained by

calculation of the evaluation module.

17. The electronic device according to Claim 16, wherein if two or more partial pictures of the vehicle to be subject to damage assessment are acquired by the acquisition module, the searching module is triggered for each said partial picture; and

5 the evaluation module is particularly used for calculating the estimated amount of compensation of the vehicle to be subject to damage assessment on the basis of the model, the vehicle body positions corresponding to the two or more partial pictures, and the damage degree.

18. A computer readable storage medium, having a computer readable instruction stored therein, wherein the computer readable instruction is executed by a processor to implement the steps
10 according to any one of claims1-6.