CLAIMS

1. A navigation map evaluation method, comprising:

acquiring a travelling simulation video, wherein the travelling simulation video is: a simulation video that simulates a user travelling on a road section to be tested according to a navigation prompt of a first map, and the travelling simulation video comprises: a navigation simulation image of the first map at each location point on the road section to be tested;

acquiring a real environment image of each location point on the road section to be tested;

generating a linkage video according to the navigation simulation image and the real environment image of each location point on the road section to be tested, wherein different frame images of the linkage video comprise: navigation simulation images and real environment images at different location points on the road section to be tested; and

determining navigation performance of the first map according to the linkage video;

wherein before the acquiring a travelling simulation video, the method further comprises:

acquiring multiple start points and end points within a target area, wherein the target area belongs to an area covered by the first map; and

clustering the multiple start points and end points to obtain a set of road sections, the set of road sections comprises a plurality of road sections to be tested, wherein the number of navigation requests for each road section to be tested in the plurality of road sections to be tested exceeds a preset threshold, and the road sections to be tested of the set of road sections evenly distribute in the target area.

2. The navigation map evaluation method according to claim 1, wherein the determining navigation performance of the first map according to the linkage video comprises:

determining evaluation result of navigation simulation image comprised in each frame image in the linkage video to obtain multiple evaluation results;

determining a problem level of each evaluation result of the multiple evaluation results, wherein the problem level is used to indicate a degree of accuracy of a navigation prompt corresponding to the navigation simulation image; and

determining the navigation performance of the first map according to the problem level of each evaluation result of the multiple evaluation results.

3. The navigation map evaluation method according to claim 2, wherein the determining evaluation result of navigation simulation image comprised in each frame image of in the linkage video to obtain multiple evaluation results comprises:

determining real map data of a location point corresponding to a first image for a real environment image comprised in the first image in the linkage video, wherein the first image is any one image comprised in the linkage video; and

determining whether a navigation prompt corresponding to the navigation simulation image comprised in the first image is correct according to the real map data, to obtain an evaluation result of the first image.

4. The navigation map evaluation method according to any one of claims 1 to 3, wherein after the generating a linkage video according to the navigation simulation image and the real environment image of each location point on the road section to be tested, the method further comprises:

when a navigation prompt corresponding to navigation simulation image of a first location point on the road section to be tested comprises voice navigation, converting the voice navigation into a text; and

adding the text to an image corresponding to the first location point in the linkage video.

5. The navigation map evaluation method according to any one of claims 1 to 3, wherein the acquiring a travelling simulation video comprises:

triggering an element representing the user on the first map to drive on a navigation path of the first map at a preset speed, so that an electronic device generates the simulation video that simulates the user travelling on the road section to be tested according to the navigation prompt of the first map; and

recording a screen of the electronic device to obtain the travelling simulation video.

6. The navigation map evaluation method according to any one of claims 1 to 3, wherein:

the travelling simulation video is: a simulation video that simulates the user travelling on the road section to be tested according to a navigation prompt of a second map, and the

travelling simulation video further comprises: a navigation simulation image of the second map at each location point on the road section to be tested;

the different frame images of the linkage video comprise: navigation simulation images of the first map, navigation simulation images of the second map and the real environment images corresponding to different location points.

~~7. The navigation map evaluation method according to any one of claims 1 to 3, wherein before the acquiring a travelling simulation video, the method further comprises:~~

~~acquiring multiple start points and end points within a target area, wherein the target area belongs to an area covered by the first map; and~~

~~clustering the multiple start points and end points to obtain a set of road sections, the set of road sections comprises a plurality of road sections to be tested, wherein the number of navigation requests for each road section to be tested in the plurality of road sections to be tested exceeds a preset threshold, and the road sections to be tested of the set of road sections evenly distribute in the target area.~~

~~8~~7. A navigation map evaluation apparatus, comprising:

a first acquisition module, configured to acquire a travelling simulation video, wherein the travelling simulation video is: a simulation video that simulates a user travelling on a road section to be tested according to a navigation prompt of a first map, and the travelling simulation video comprises: a navigation simulation image of the first map at each location point on the road section to be tested;

a second acquisition module, configured to acquire a real environment image of each location point on the road section to be tested;

a linkage module, configured to generate a linkage video according to the navigation simulation image and the real environment image of each location point on the road section to be tested, wherein different frame images of the linkage video comprise: navigation simulation images and real environment images at different location points on the road section to be tested; and

a determination module, configured to determine navigation performance of the first map according to the linkage video;

wherein the apparatus further comprises:

a clustering module, configured to: acquire multiple start points and end points within a target area before the first acquisition module acquires the travelling simulation video, wherein the target area belongs to an area covered by the first map; and

cluster the multiple start points and end points to obtain a set of road sections, wherein the set of road sections comprises a plurality of road sections to be tested; the number of navigation requests for each road section to be tested in the plurality of road sections to be tested exceeds a preset threshold, and the road sections to be tested of the set of road sections evenly distributes in the target area.

~~9~~8. The navigation map evaluation apparatus according to claim ~~8~~7, wherein the determination module comprises:

a first determination unit, configured to determine evaluation result of navigation simulation image comprised in each frame image in the linkage video to obtain multiple evaluation results;

a second determination unit, configured to determine a problem level of each evaluation result of the multiple evaluation results, wherein the problem level is used to indicate a degree of accuracy of a navigation prompt corresponding to the navigation simulation image; and

a third determination unit, configured to determine the navigation performance of the first map according to the problem level of each evaluation result of the multiple evaluation results.

~~10~~9. The navigation map evaluation apparatus according to claim ~~9~~8, wherein:

the first determination unit, configured to: determine real map data of a location point corresponding to a first image for a real environment image comprised in the first image in the linkage video, wherein the first image is any one image comprised in the linkage video; and determine whether a navigation prompt corresponding to the navigation simulation image comprised in the first image is correct according to the real map data, to obtain an evaluation result of the first image.

~~11~~10. The navigation map evaluation apparatus according to any one of claims ~~8~~ 7 to ~~10~~9, further comprising:

a conversion module, configured to: after the linkage module generates a linkage video according to the navigation simulation image and the real environment image of each location

point on the road section to be tested, when a navigation prompt corresponding to navigation simulation image of a first location point on the road section to be tested comprises voice navigation, convert the voice navigation into a text, and add the text to an image corresponding to the first location point in the linkage video.

~~12~~11. The navigation map evaluation apparatus according to any one of claims ~~8~~ 7 to ~~10~~9, wherein:

the first acquisition module, configured to: trigger an element representing the user on the first map to drive on a navigation path of the first map at a preset speed, so that an electronic device generates the simulation video that simulates the user travelling on the road section to be tested according to the navigation prompt of the first map; and record a screen of the electronic device to obtain the travelling simulation video.

~~13~~12. The navigation map evaluation apparatus according to any one of claims ~~8~~ 7 to ~~10~~9, wherein:

the travelling simulation video is: a simulation video that simulates the user travelling on the road section to be tested according to a navigation prompt of second map, and the travelling simulation video further comprises: a navigation simulation image of the second map at each location point on the road section to be tested;

the different frame images of the linkage video comprise: navigation simulation images of the first map, navigation simulation images of the second map and the real environment images corresponding to different location points.

~~14. The navigation map evaluation apparatus according to any one of claims 8 to 10, further comprising:~~

~~a clustering module, configured to: acquire multiple start points and end points within a target area before the first acquisition module acquires the travelling simulation video, wherein the target area belongs to an area covered by the first map; and~~

~~cluster the multiple start points and end points to obtain a set of road sections, wherein the set of road sections comprises a plurality of road sections to be tested; the number of navigation requests for each road section to be tested in the plurality of road sections to be tested exceeds a preset threshold, and the road sections to be tested of the set of road sections evenly distributes in the target area.~~

~~15~~13. An electronic device, comprising:

at least one processor; and

a memory communicatively connected with the at least one processor; wherein:

the memory stores thereon instructions executable by the at least one processor, and when being executed by at least one processor, the instructions enable the at least one processor to carry out the method according to any one of claims 1 to ~~7~~6.

~~16~~14. A non-transitory computer-readable storage medium storing thereon computer instructions which are used to cause an electronic device to carry out the method according to any one of claims 1 to ~~7~~6.

~~17~~15. A computer program product, when the computer program product runs on an electronic device, causes the electronic device to carry out the method according to any one of claims 1 to ~~7~~6.