

CLAIMS

1. A target tracking method, comprising:

obtaining feature data of a reference frame of a first image frame, wherein the
5 first image frame and at least one second image frame have a same reference frame;
and

determining a position of a tracking target in the first image frame based on
the feature data of the reference frame,

wherein obtaining the position of the tracking target in the first image frame
10 based on the feature data of the reference frame comprises:

obtaining, based on the feature data of the reference frame, relative position
information of the tracking target in the first image frame relative to the tracking
target in the reference frame; and

obtaining the position of the tracking target in the first image frame based on
15 the relative position information and position information of the tracking target in the
reference frame.

2. The method according to claim 1, wherein determining the position of the tracking
target in the first image frame based on the feature data of the reference frame
20 comprises:

performing feature extraction on the first image frame to obtain feature data of
the first image frame; and

obtaining the position of the tracking target in the first image frame based on
the feature data of the reference frame and the feature data of the first image frame.

25 3. The method according to claim 2, wherein obtaining the position of the tracking
target in the first image frame based on the feature data of the reference frame and the
feature data of the first image frame comprises:

connecting the feature data of the first image frame to the feature data of the

reference frame to obtain a connection feature; and

obtaining the position of the tracking target in the first image frame based on the connection feature.

5 ~~4. The method according to any one of claims 1 to 3, wherein obtaining the position of the tracking target in the first image frame based on the feature data of the reference frame comprises:~~

~~obtaining, based on the feature data of the reference frame, relative position information of the tracking target in the first image frame relative to the tracking target in the reference frame; and~~

10 ~~obtaining the position of the tracking target in the first image frame based on the relative position information and position information of the tracking target in the reference frame.~~

15 ~~54.~~ The method according to any one of claims 1 to ~~43~~, wherein obtaining the feature data of the reference frame comprises:

obtaining the feature data of the reference frame from a memory.

~~65.~~ The method according to any one of claims 1 to ~~54~~, further comprising:

20 determining whether the first image frame is used as an updated reference frame.

~~76.~~ The method according to claim ~~65~~, wherein determining whether the first image frame is used as the updated reference frame comprises:

25 determining, based on the position of the tracking target in the first image frame and the position of the tracking target in the reference frame, whether the first image frame is used as the updated reference frame; and/or

determining, based on an interval between the first image frame and the reference frame, whether the first image frame is used as the updated reference frame.

87. The method according to claim 76, wherein determining, based on the position of the tracking target in the first image frame and the position of the tracking target in the reference frame, whether the first image frame is used as the updated reference frame comprises:

determining, based on an intersection over union between a first bounding box of the tracking target in the first image frame and a second bounding box of the tracking target in the reference frame, whether the first image frame is used as the updated reference frame.

98. The method according to claim 87, wherein determining, based on the intersection over union between the first bounding box of the tracking target in the first image frame and the second bounding box of the tracking target in the reference frame, whether to use the first image frame as the updated reference frame comprises:

in response to the intersection over union between the first bounding box and the second bounding box being less than or equal to a preset threshold, determining that the first image frame is used as the updated reference frame.

109. The method according to any one of claims 6 to 95 to 8, further comprising:

storing feature data of the first image frame in response to determining that the first image frame is as the updated reference frame.

110. A target tracking apparatus, comprising:

a feature obtaining unit, configured to obtain feature data of a reference frame of a first image frame, wherein the first image frame and at least one second image frame; and

a position determining unit, configured to determine a position of a tracking target in the first image frame based on the feature data of the reference frame,

obtain, based on the feature data of the reference frame, relative position

information of the tracking target in the first image frame relative to the tracking target in the reference frame, and

obtain the position of the tracking target in the first image frame based on the relative position information and position information of the tracking target in the reference frame.

~~12~~11. The apparatus according to claim ~~11~~10, wherein the position determining unit comprises:

a feature extraction module, configured to perform feature extraction on the first image frame to obtain feature data of the first image frame; and

a position module, configured to obtain the position of the tracking target in the first image frame based on the feature data of the reference frame and the feature data of the first image frame.

~~13~~12. The apparatus according to claim ~~12~~11, wherein the position module is configured to connect the feature data of the first image frame to the feature data of the reference frame to obtain a connection feature; and

obtain the position of the tracking target in the first image frame based on the connection feature.

~~14. The apparatus according to any one of claims 11 to 13, wherein the position determining unit is configured to obtain, based on the feature data of the reference frame, relative position information of the tracking target in the first image frame relative to the tracking target in the reference frame, and~~

~~obtain the position of the tracking target in the first image frame based on the relative position information and position information of the tracking target in the reference frame.~~

~~15~~13. The apparatus according to any one of claims ~~11 to 14~~10 to 12, wherein the

feature obtaining unit is configured to obtain the feature data of the reference frame of the first image frame from a memory.

5 ~~16~~14. The apparatus according to any one of claims ~~11 to 15~~10 to 13, further comprising:

a reference determining unit, configured to determine, based on the position of the tracking target in the first image frame and the position of the tracking target in the reference frame, whether the first image frame is used as the updated reference frame; and/or

10 use the first image frame as an updated reference frame if an interval between the first image frame and the reference frame meets a preset condition.

15 ~~17~~15. The apparatus according to claim ~~16~~14, wherein the reference determining unit is configured to determine, based on an intersection over union between a first bounding box of the tracking target in the first image frame and a second bounding box of the tracking target in the reference frame, whether the first image frame is used as the updated reference frame.

20 ~~18~~16. An electronic device, comprising: a memory configured to store executable instructions; and

a processor configured to communicate with the memory to execute the executable instructions so as to implement the target tracking method according to any one of claims 1 to ~~10~~9.

25 ~~19~~17. A computer storage medium, configured to store computer-readable instructions that, when being executed by a processor, cause the processor to execute the target tracking method according to any one of claims 1 to ~~10~~9.

~~20~~18. A computer program product, configured to store computer-readable instructions that, when being executed, cause a computer to execute the target tracking method according to any one of claims 1 to ~~10~~9.