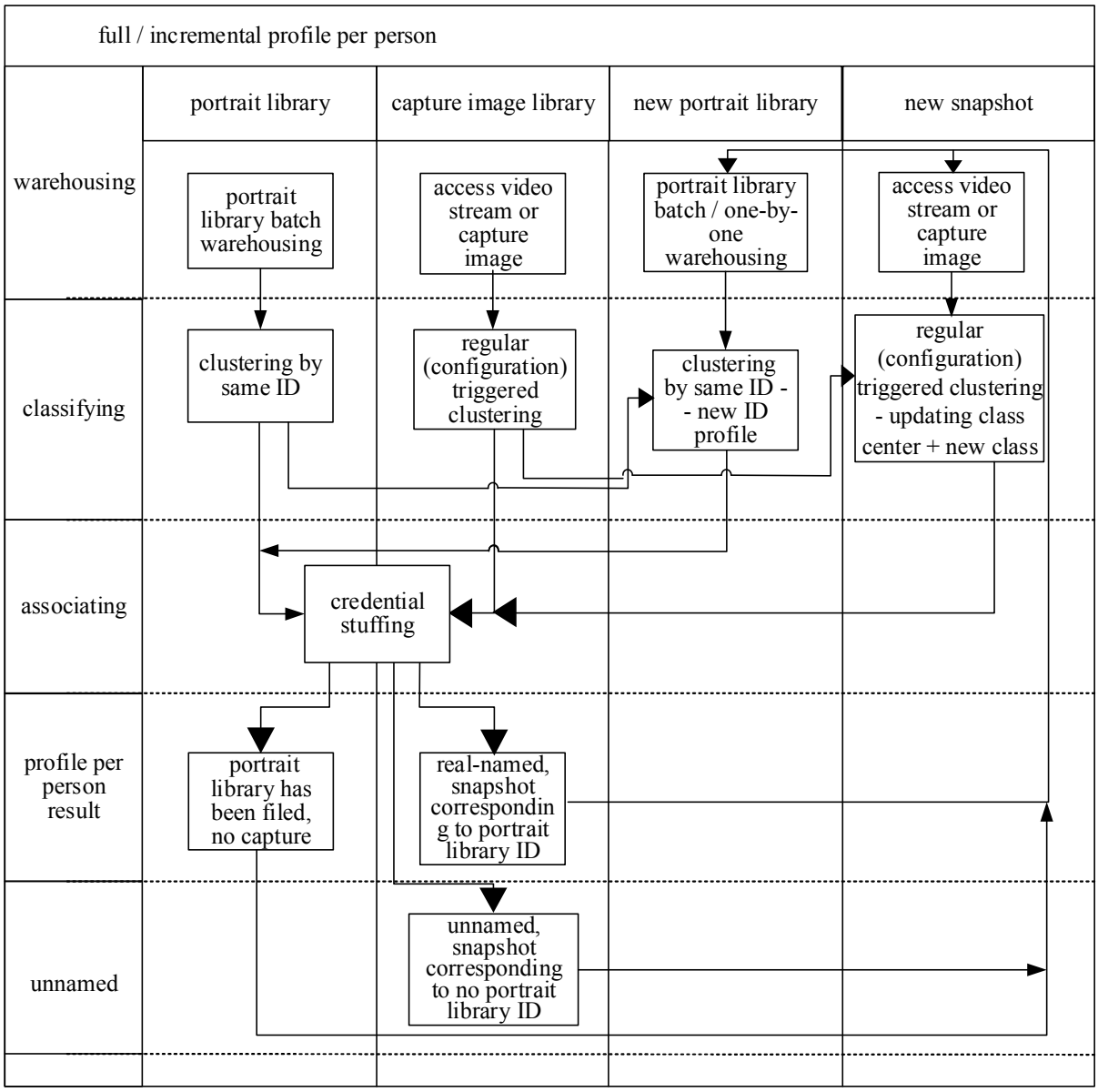

full / incremental profile per person
portrait library
capture image library
new portrait library
new snapshot
warehousing
classifying
associating
profile per person result
unnamed
portrait library batch warehousing
access video stream or capture image
portrait library batch / one-by-one warehousing
access video stream or capture image
clustering by same ID
regular (configuration) triggered clustering
clustering by same ID - - new ID profile
regular (configuration) triggered clustering - updating class center + new class
credential stuffing
portrait library has been filed, no capture
real-named, snapshot corresponding to portrait library ID
unnamed, snapshot corresponding to no portrait library ID

FIG. 1

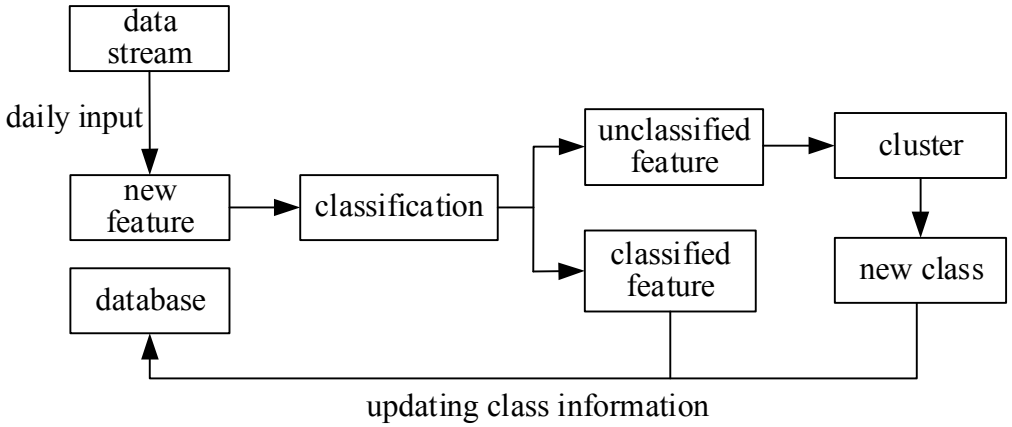

data stream
daily input
new feature
classification
unclassified feature
cluster
classified feature
new class
database
updating class information

FIG. 2

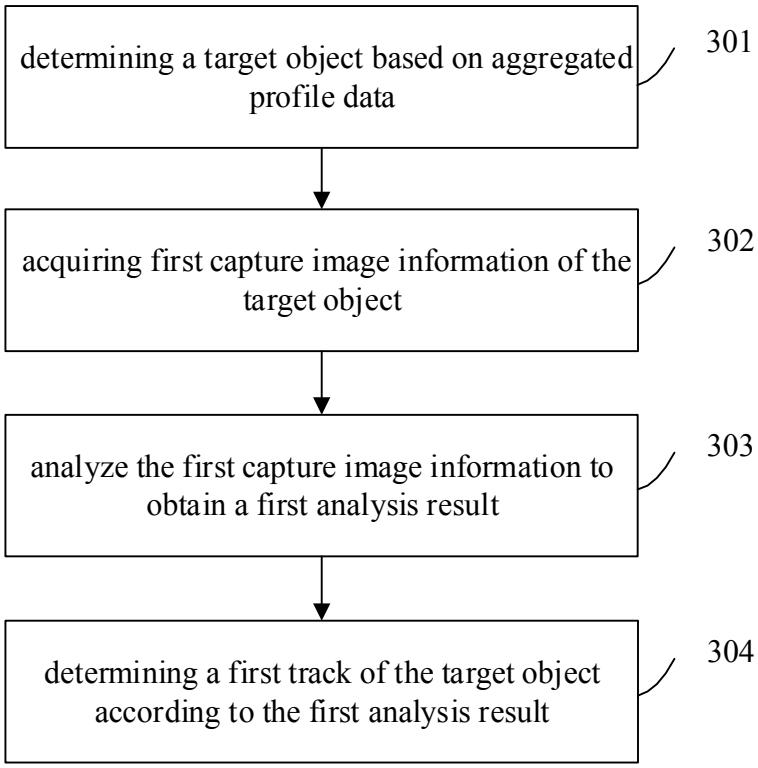

determining a target object based on aggregated profile data
301
acquiring first capture image information of the target object
302
analyze the first capture image information to obtain a first analysis result
303
determining a first track of the target object according to the first analysis result
304

FIG. 3

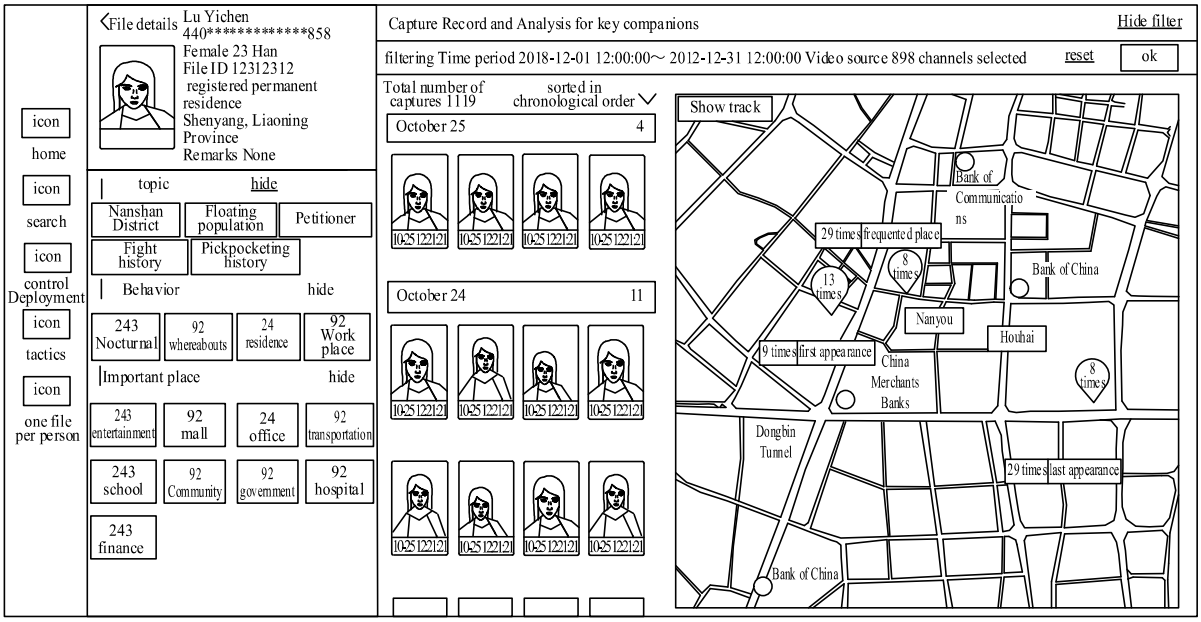

icon
home
icon
search
icon
control Deployment
icon
tactics
icon
one file per person
File details
Lu Yichen
440**********858
Female 23 Han
File ID 12312312
registered permanent residence
Shenyang, Liaoning Province
Remarks None
topic
hide
Nanshan District
Floating population
Petitioner
Fight history
Pickpocketing history
Behavior
hide
243 Nocturnal
92 whereabouts
24 residence
92 Work place
Important place
hide
243 entertainment
92 mall
24 office
92 transportation
243 school
92 Community
92 government
92 hospital
243 finance
Capture Record and Analysis for key companions
Hide filter
filtering Time period 2018-12-01 12:00:00~ 2012-12-31 12:00:00 Video source 898 channels selected
reset
ok
Total number of captures 1119
sorted in chronological order
October 25
4
October 24
11
Show track
Bank of Communicatio ns
29 times frequented place
8 times
13 times
Bank of China
Nanyou
Houhai
9 times first appearance
China Merchants Banks
8 times
Dongbin Tunnel
29 times last appearance
Bank of China

FIG. 4

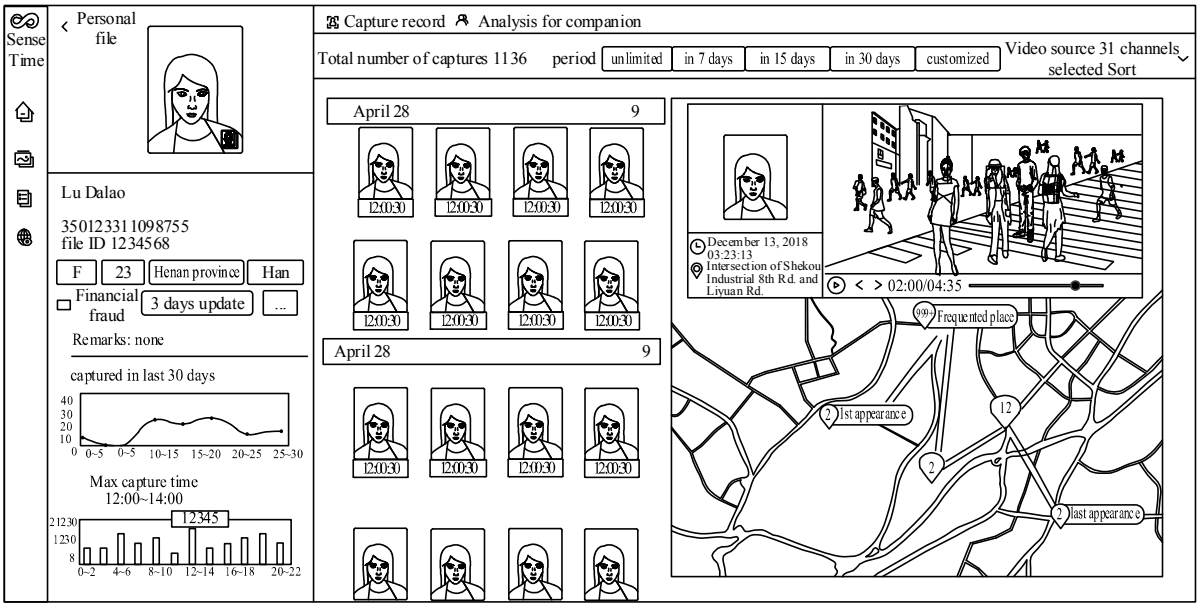

Sense Time
Personal file
Capture record
Analysis for companion
Total number of captures 1136
period
unlimited
in 7 days
in 15 days
in 30 days
customized
Video source 31 channels selected Sort
Lu Dalao
350123311098755
file ID 1234568
F
23
Henan province
Han
Financial fraud
3 days update
Remarks: none
captured in last 30 days
Max capture time
12:00~14:00
April 28
9
December 13, 2018
03:23:13
Intersection of Shekou Industrial 8th Rd. and Liyuan Rd.
02:00/04:35
Frequented place
1st appearance
last appearance

FIG. 5

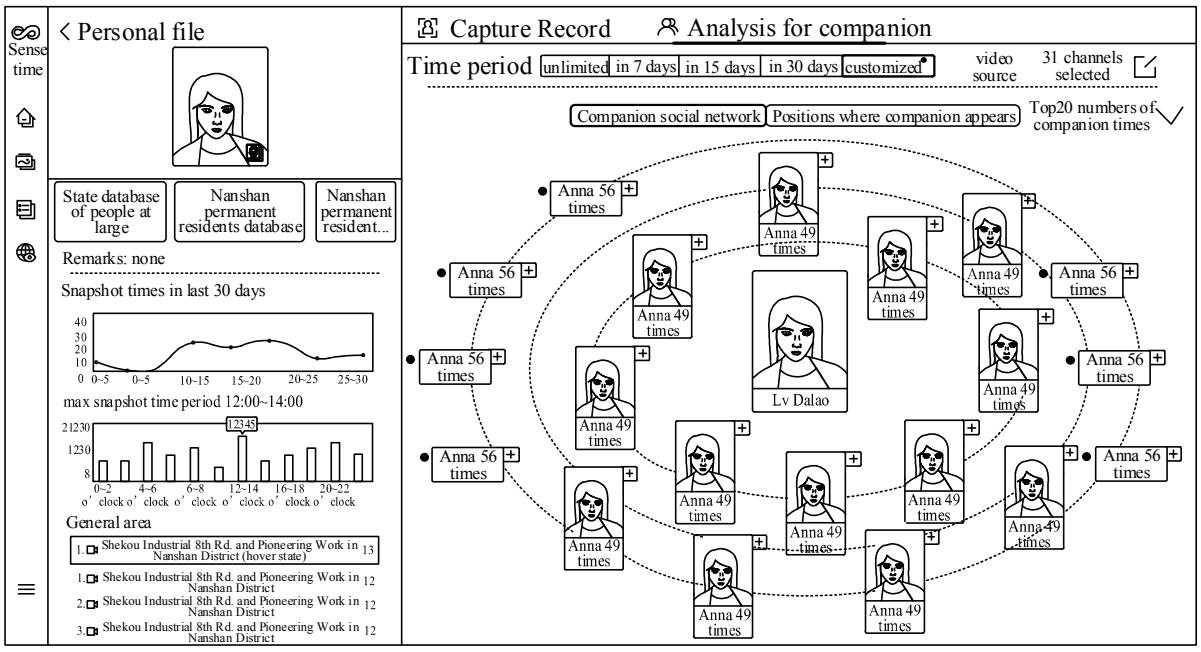

Sense time
Personal file
Capture Record
Analysis for companion
Time period
unlimited
in 7 days
in 15 days
in 30 days
customized
video source
31 channels selected
Companion social network
Positions where companion appears
Top20 numbers of companion times
State database of people at large
Nanshan permanent residents database
Nanshan permanent resident...
Remarks: none
Snapshot times in last 30 days
max snapshot time period 12:00~14:00
General area
1. Shekou Industrial 8th Rd. and Pioneering Work in Nanshan District (hover state) 13
1. Shekou Industrial 8th Rd. and Pioneering Work in Nanshan District 12
2. Shekou Industrial 8th Rd. and Pioneering Work in Nanshan District 12
3. Shekou Industrial 8th Rd. and Pioneering Work in Nanshan District 12
Anna 56 times
Anna 49 times
Lv Dalao

FIG. 6

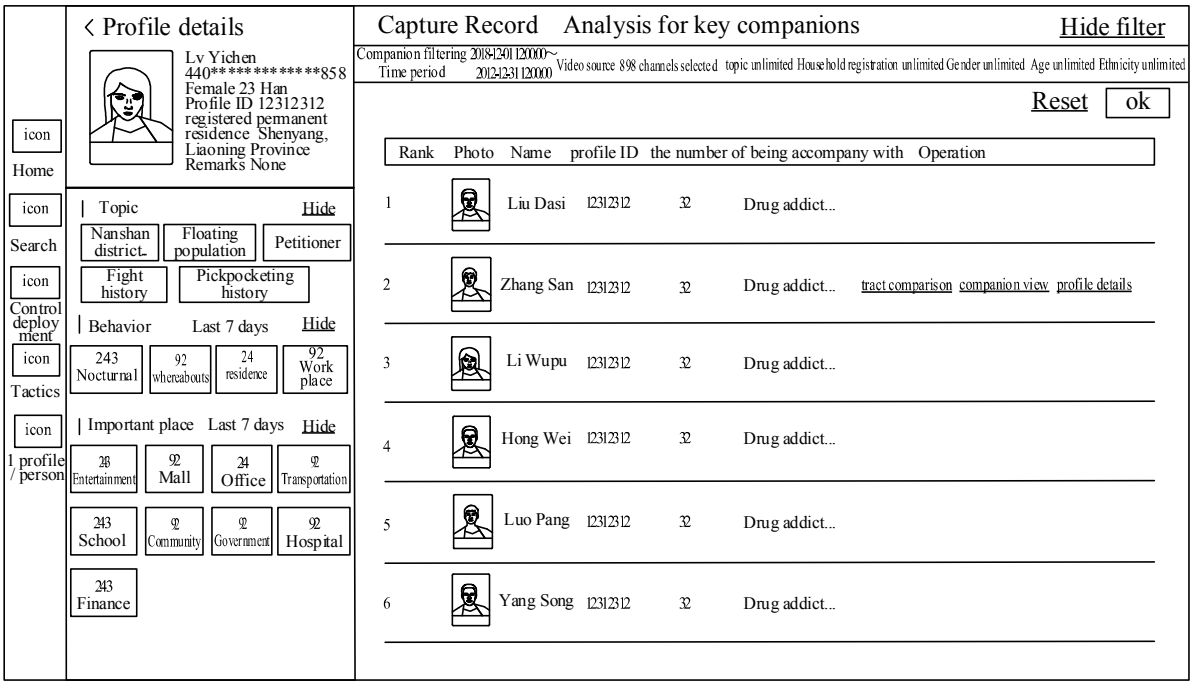

icon
Home
icon
Search
icon
Control deploy ment
icon
Tactics
icon
1 profile / person
< Profile details
Lv Yichen
440**********858
Female 23 Han
Profile ID 12312312
registered permanent residence Shenyang, Liaoning Province
Remarks None
| Topic Hide
Nanshan district
Floating population
Petitioner
Fight history
Pickpocketing history
| Behavior Last 7 days Hide
243 Nocturnal
92 whereabouts
24 residence
92 Work place
| Important place Last 7 days Hide
28 Entertainment
92 Mall
24 Office
92 Transportation
243 School
92 Community
92 Government
92 Hospital
243 Finance
Capture Record Analysis for key companions Hide filter
Companion filtering 2018-12-01 120000~
Time period 2012-12-31 120000
Video source 898 channels selected topic unlimited Household registration unlimited Gender unlimited Age unlimited Ethnicity unlimited
Reset ok
Rank Photo Name profile ID the number of being accompany with Operation
1 Liu Dasi 12312312 32 Drug addict...
2 Zhang San 12312312 32 Drug addict... tract comparison companion view profile details
3 Li Wupu 12312312 32 Drug addict...
4 Hong Wei 12312312 32 Drug addict...
5 Luo Pang 12312312 32 Drug addict...
6 Yang Song 12312312 32 Drug addict...

FIG. 7

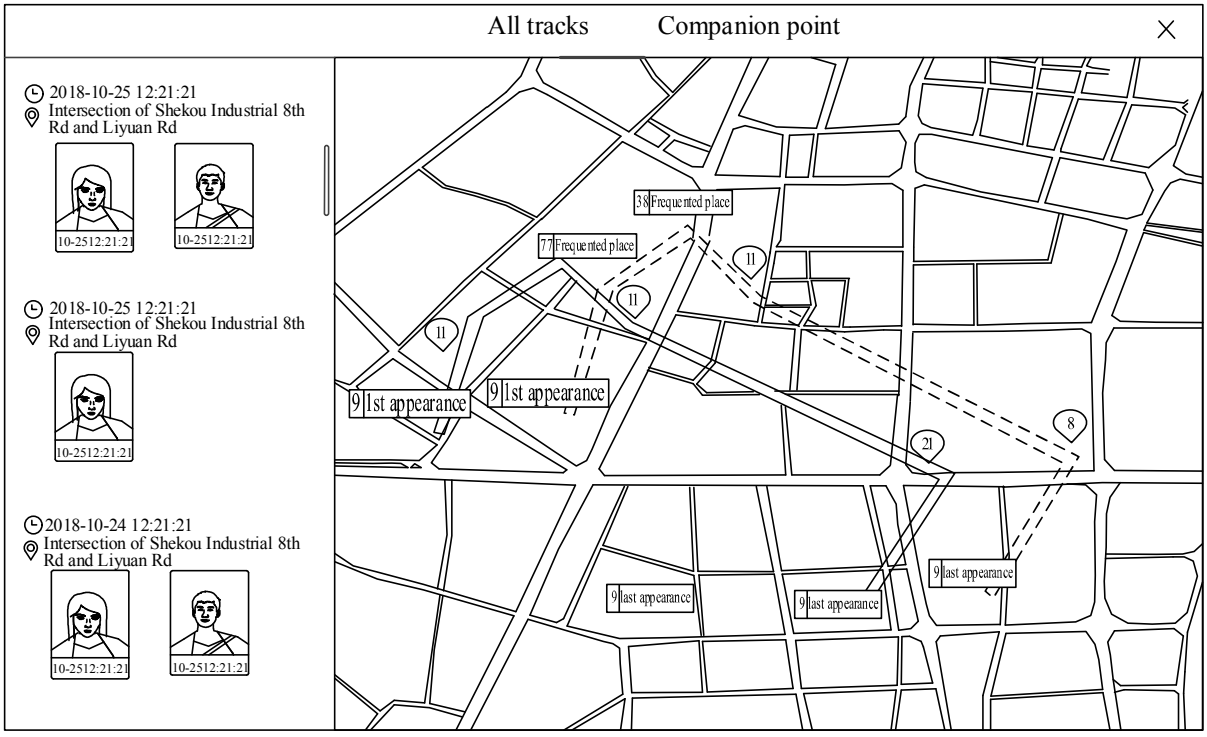

All tracks
Companion point
2018-10-25 12:21:21
Intersection of Shekou Industrial 8th Rd and Liyuan Rd
10-2512:21:21
10-2512:21:21
2018-10-25 12:21:21
Intersection of Shekou Industrial 8th Rd and Liyuan Rd
10-2512:21:21
2018-10-24 12:21:21
Intersection of Shekou Industrial 8th Rd and Liyuan Rd
10-2512:21:21
10-2512:21:21
38 Frequented place
77 Frequented place
11
11
11
9 1st appearance
9 1st appearance
21
8
9 last appearance
9 last appearance
9 last appearance
9 last appearance

FIG. 8

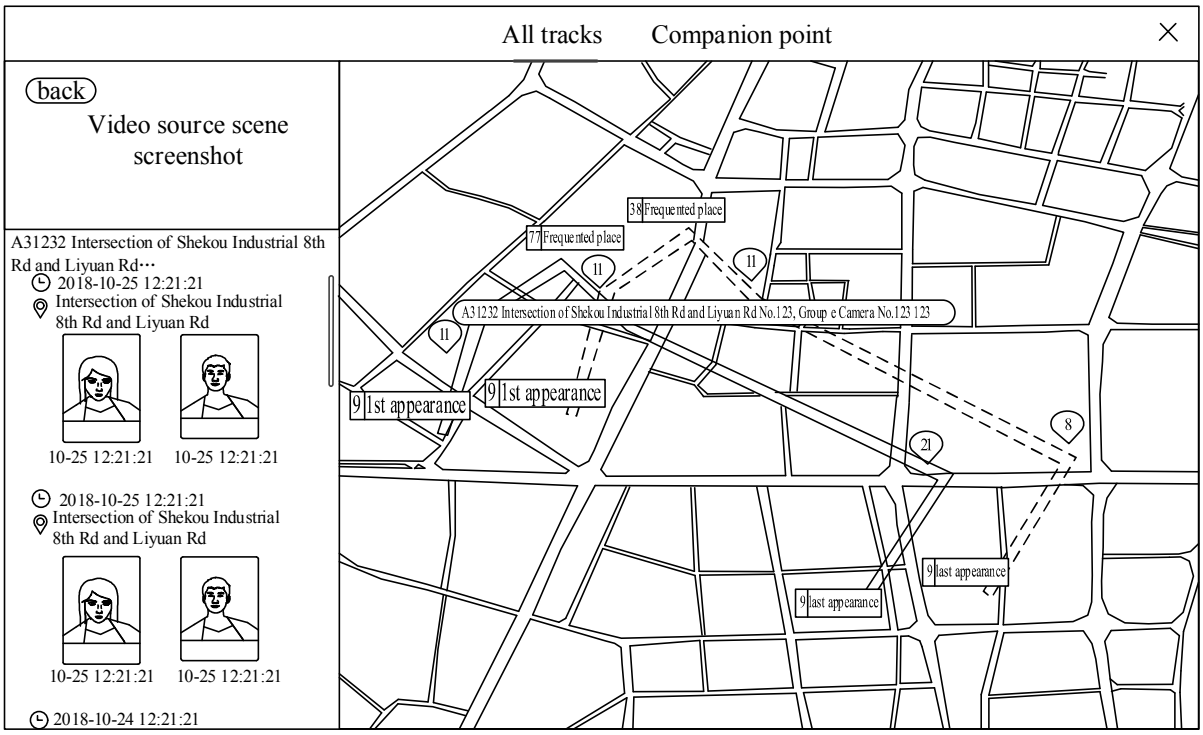

All tracks
Companion point
back
Video source scene screenshot
A31232 Intersection of Shekou Industrial 8th Rd and Liyuan Rd…
2018-10-25 12:21:21
Intersection of Shekou Industrial 8th Rd and Liyuan Rd
10-25 12:21:21
10-25 12:21:21
2018-10-25 12:21:21
Intersection of Shekou Industrial 8th Rd and Liyuan Rd
10-25 12:21:21
10-25 12:21:21
2018-10-24 12:21:21
38 Frequented place
77 Frequented place
A31232 Intersection of Shekou Industrial 8th Rd and Liyuan Rd No.123, Group e Camera No.123 123
9 1st appearance
9 1st appearance
9 last appearance
9 last appearance

FIG. 9

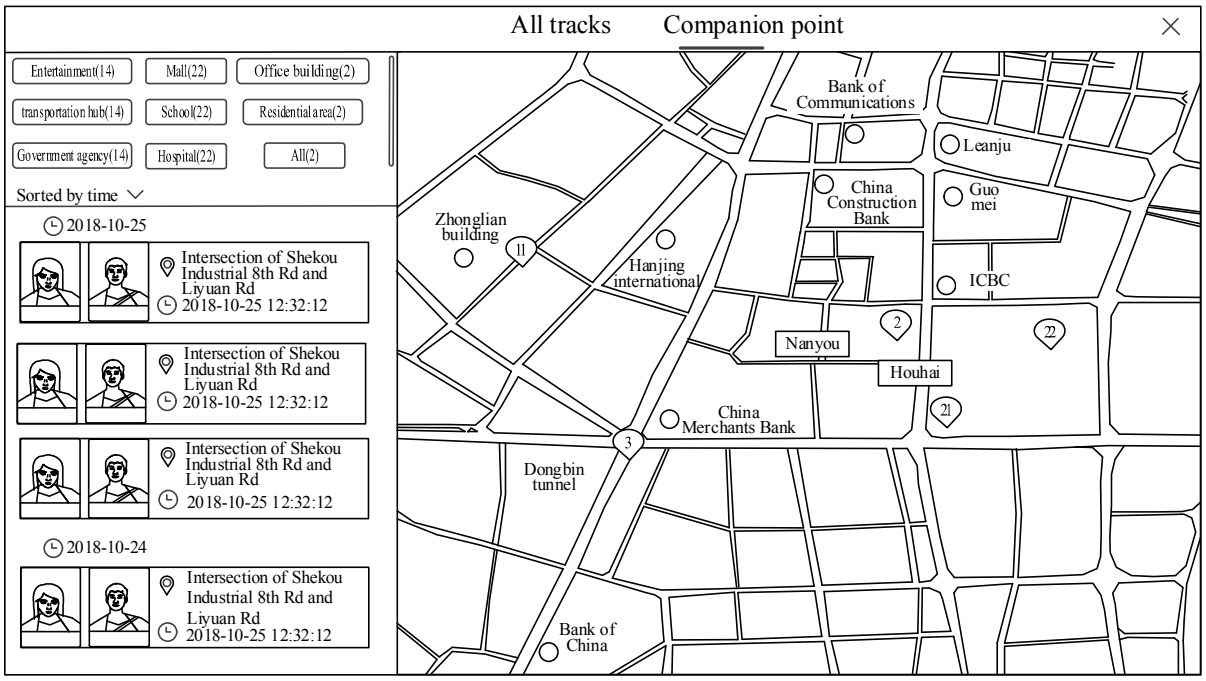

All tracks
Companion point
Entertainment(14)
Mall(22)
Office building(2)
transportation hub(14)
School(22)
Residential area(2)
Government agency(14)
Hospital(22)
All(2)
Sorted by time
2018-10-25
Intersection of Shekou Industrial 8th Rd and Liyuan Rd
2018-10-25 12:32:12
Intersection of Shekou Industrial 8th Rd and Liyuan Rd
2018-10-25 12:32:12
Intersection of Shekou Industrial 8th Rd and Liyuan Rd
2018-10-25 12:32:12
2018-10-24
Intersection of Shekou Industrial 8th Rd and Liyuan Rd
2018-10-25 12:32:12
Bank of Communications
Leanju
China Construction Bank
Guo mei
Zhonglian building
Hanjing international
ICBC
Nanyou
Houhai
China Merchants Bank
Dongbin tunnel
Bank of China

FIG. 10

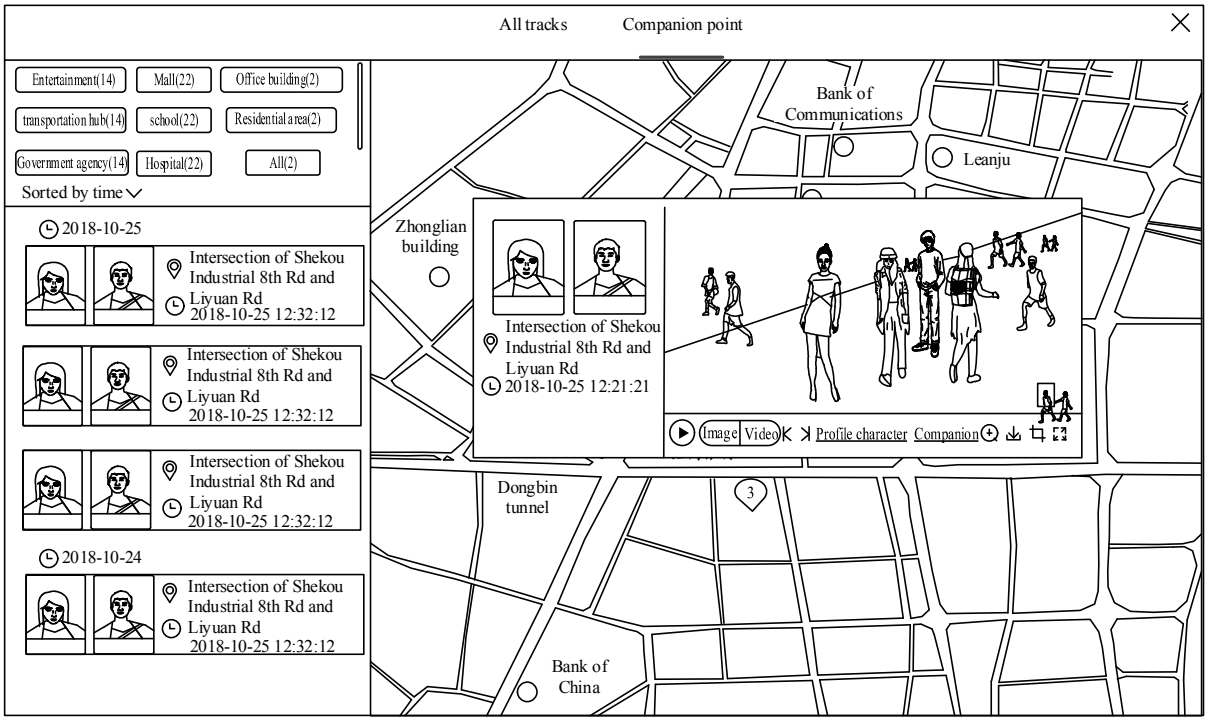

All tracks
Companion point
Entertainment(14)
Mall(22)
Office building(2)
transportation hub(14)
school(22)
Residential area(2)
Government agency(14)
Hospital(22)
All(2)
Sorted by time
2018-10-25
Intersection of Shekou Industrial 8th Rd and Liyuan Rd
2018-10-25 12:32:12
Intersection of Shekou Industrial 8th Rd and Liyuan Rd
2018-10-25 12:32:12
Intersection of Shekou Industrial 8th Rd and Liyuan Rd
2018-10-25 12:32:12
2018-10-24
Intersection of Shekou Industrial 8th Rd and Liyuan Rd
2018-10-25 12:32:12
Bank of Communications
Leanju
Zhonglian building
Intersection of Shekou Industrial 8th Rd and Liyuan Rd
2018-10-25 12:21:21
Image
Video
Profile character
Companion
Dongbin tunnel
3
Bank of China

FIG. 11

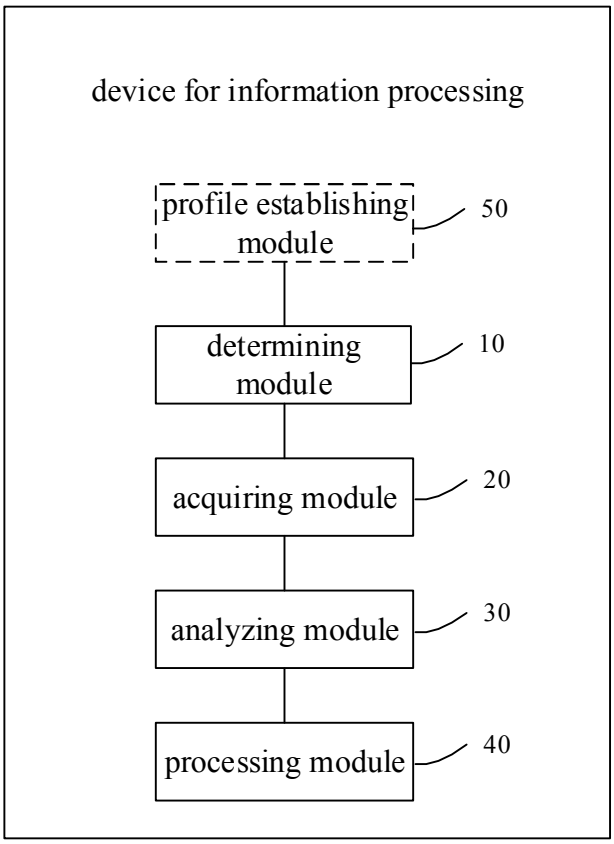

device for information processing
profile establishing module
50
determining module
10
acquiring module
20
analyzing module
30
processing module
40

FIG. 12