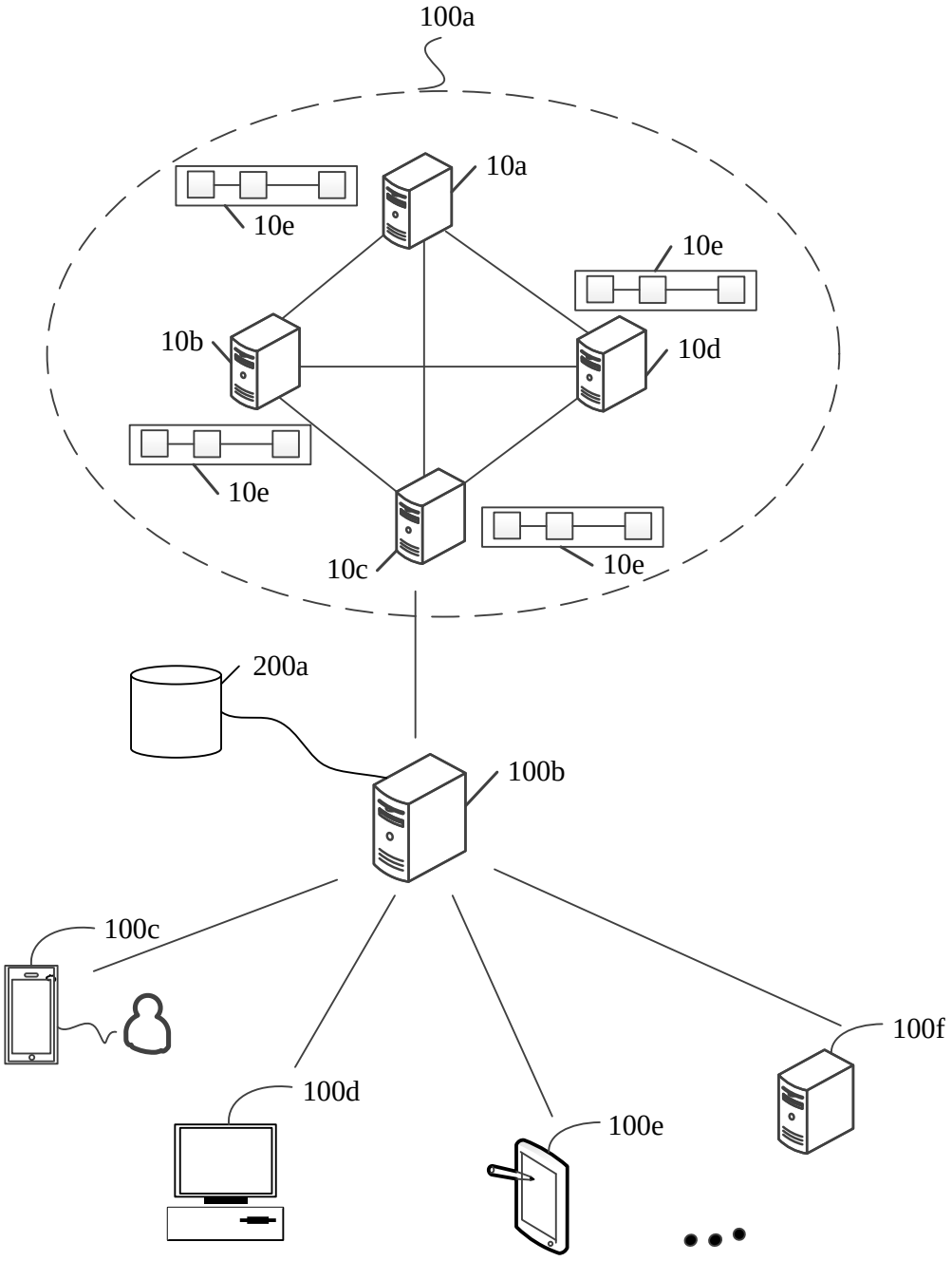

100a
10a
10e
10e
10b
10d
10e
10c
10e
200a
100b
100c
100d
100e
100f

FIG. 1

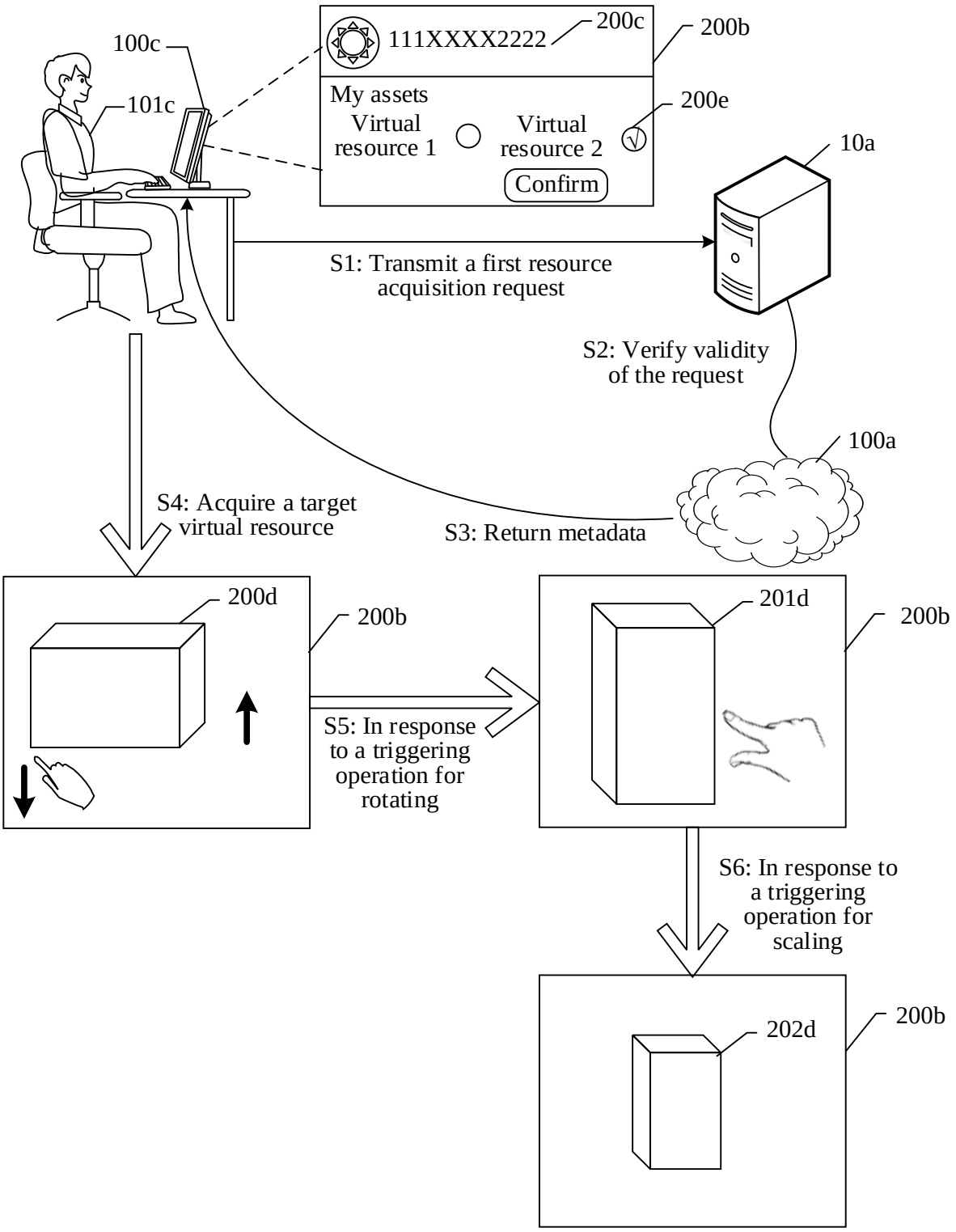

100c
101c
111XXXX2222
200c
200b
My assets
Virtual resource 1
Virtual resource 2
200e
Confirm
10a
S1: Transmit a first resource acquisition request
S2: Verify validity of the request
100a
S3: Return metadata
S4: Acquire a target virtual resource
200d
200b
S5: In response to a triggering operation for rotating
201d
200b
S6: In response to a triggering operation for scaling
202d
200b

FIG. 2

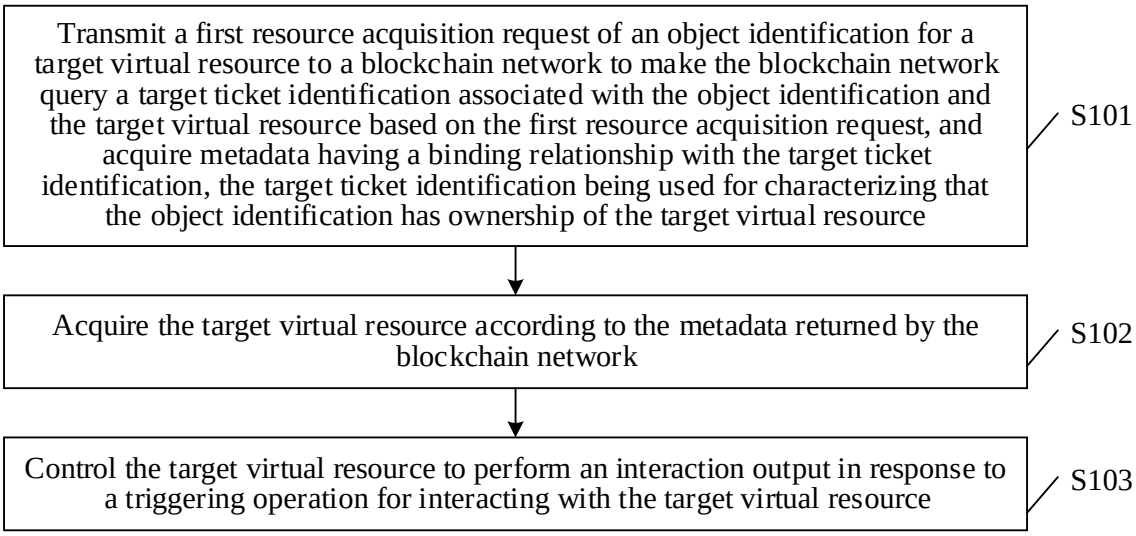

Transmit a first resource acquisition request of an object identification for a target virtual resource to a blockchain network to make the blockchain network query a target ticket identification associated with the object identification and the target virtual resource based on the first resource acquisition request, and acquire metadata having a binding relationship with the target ticket identification, the target ticket identification being used for characterizing that the object identification has ownership of the target virtual resource
S101
Acquire the target virtual resource according to the metadata returned by the blockchain network
S102
Control the target virtual resource to perform an interaction output in response to a triggering operation for interacting with the target virtual resource
S103

FIG. 3

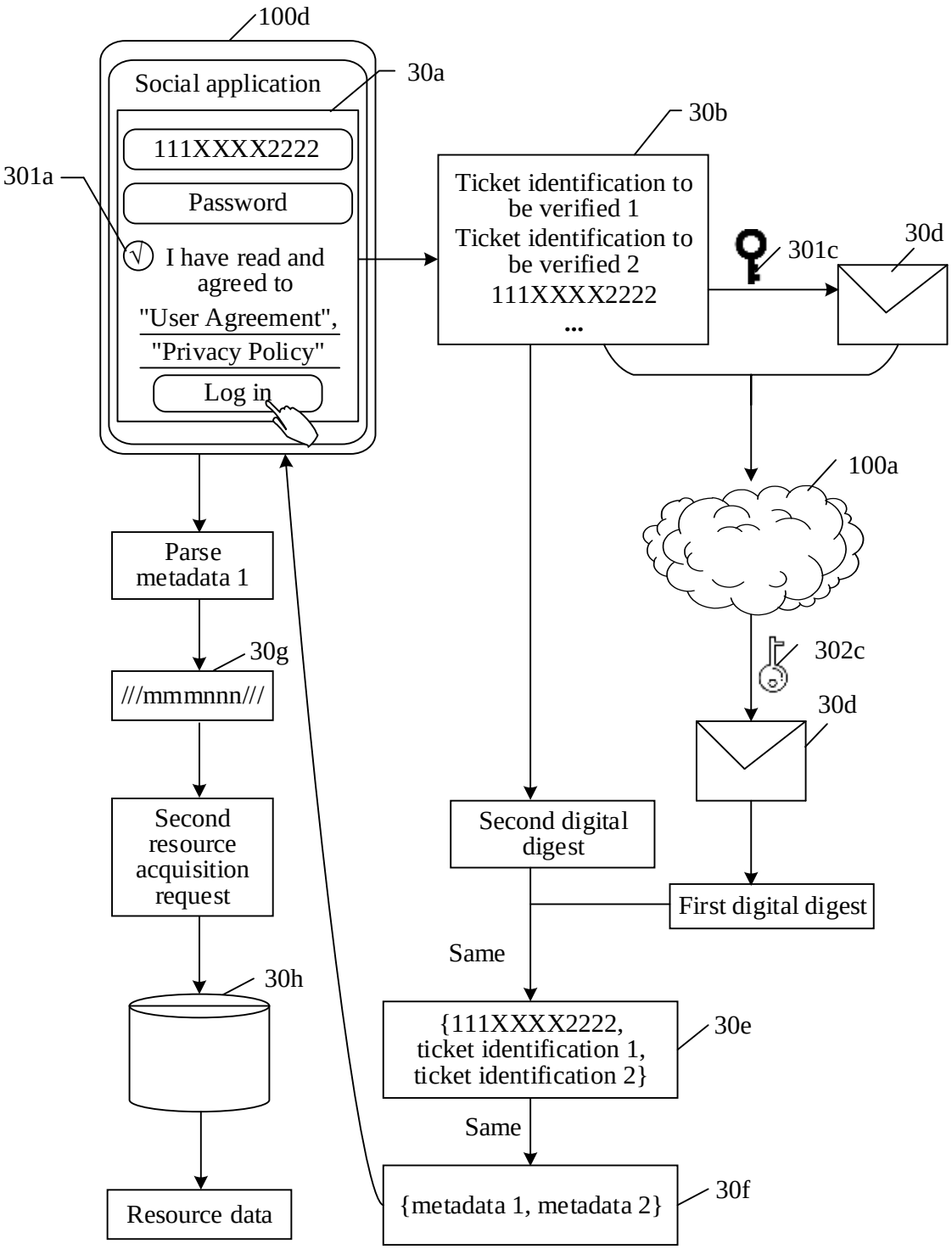

100d
Social application
30a
111XXXX2222
Password
I have read and agreed to
"User Agreement",
"Privacy Policy"
Log in
301a
30b
Ticket identification to be verified 1
Ticket identification to be verified 2
111XXXX2222
...
301c
30d
100a
Parse metadata 1
30g
///mmmnnn///
Second resource acquisition request
30h
Resource data
302c
30d
Second digital digest
First digital digest
Same
{111XXXX2222, ticket identification 1, ticket identification 2}
30e
Same
{metadata 1, metadata 2}
30f

FIG. 4

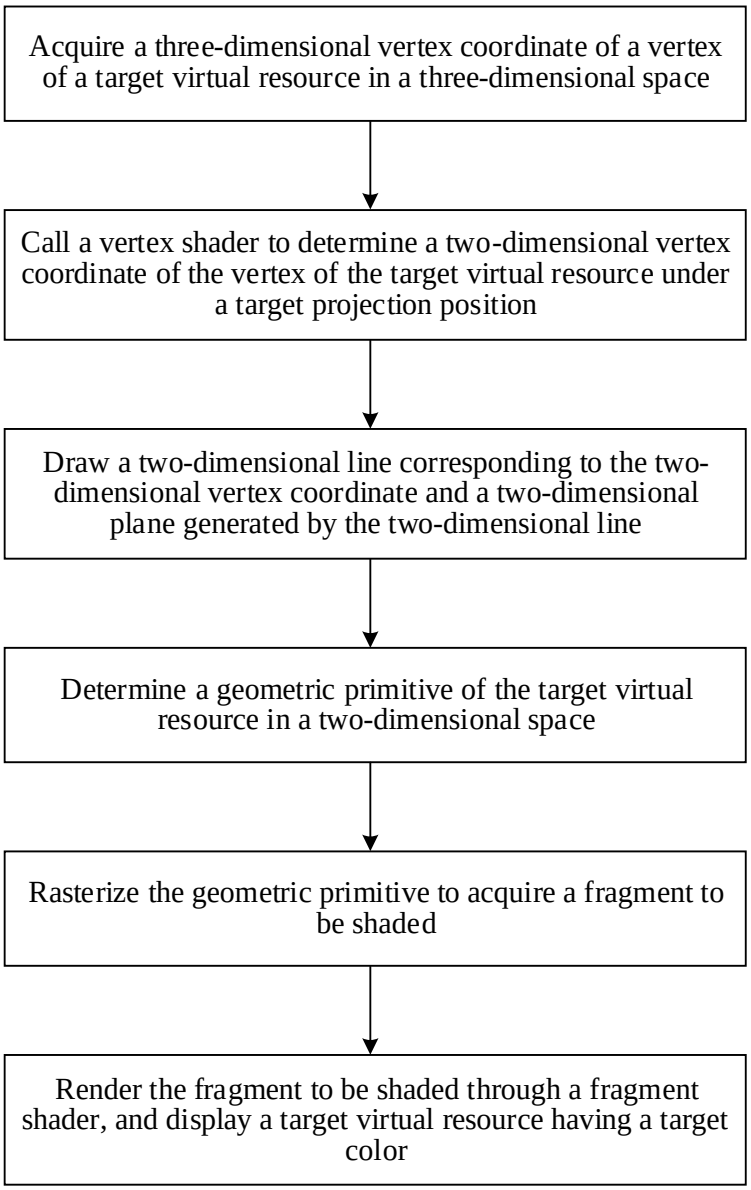

Acquire a three-dimensional vertex coordinate of a vertex of a target virtual resource in a three-dimensional space
Call a vertex shader to determine a two-dimensional vertex coordinate of the vertex of the target virtual resource under a target projection position
Draw a two-dimensional line corresponding to the two-dimensional vertex coordinate and a two-dimensional plane generated by the two-dimensional line
Determine a geometric primitive of the target virtual resource in a two-dimensional space
Rasterize the geometric primitive to acquire a fragment to be shaded
Render the fragment to be shaded through a fragment shader, and display a target virtual resource having a target color

FIG. 5

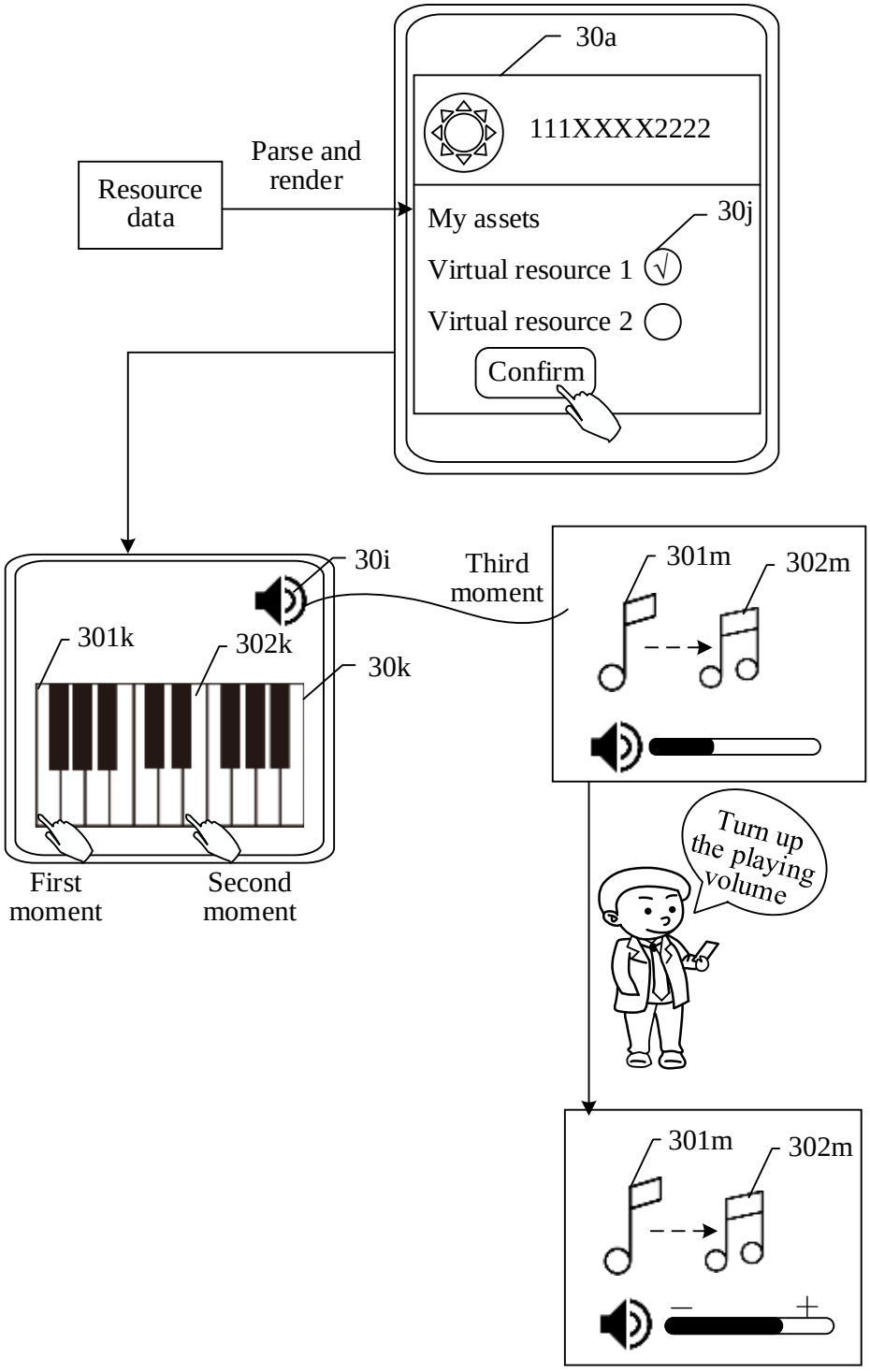

30a
111XXXX2222
Resource data
Parse and render
My assets
30j
Virtual resource 1
Virtual resource 2
Confirm
30i
301k
302k
30k
First moment
Second moment
Third moment
301m
302m
Turn up the playing volume
301m
302m

FIG. 6

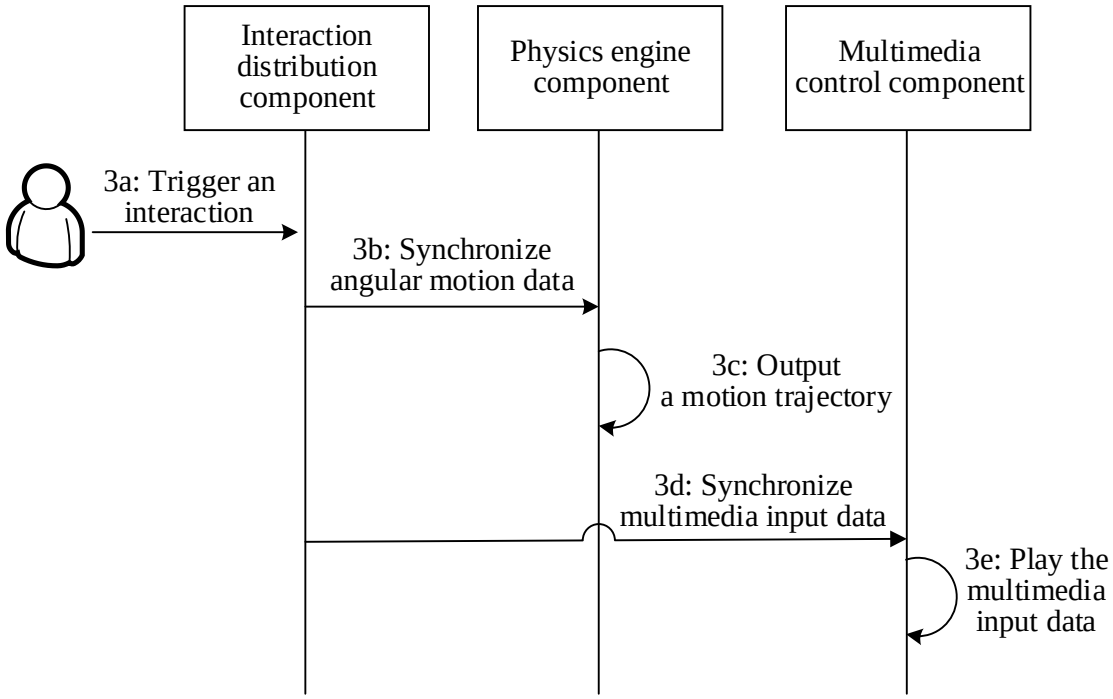

Interaction distribution component
Physics engine component
Multimedia control component
3a: Trigger an interaction
3b: Synchronize angular motion data
3c: Output a motion trajectory
3d: Synchronize multimedia input data
3e: Play the multimedia input data

FIG. 7

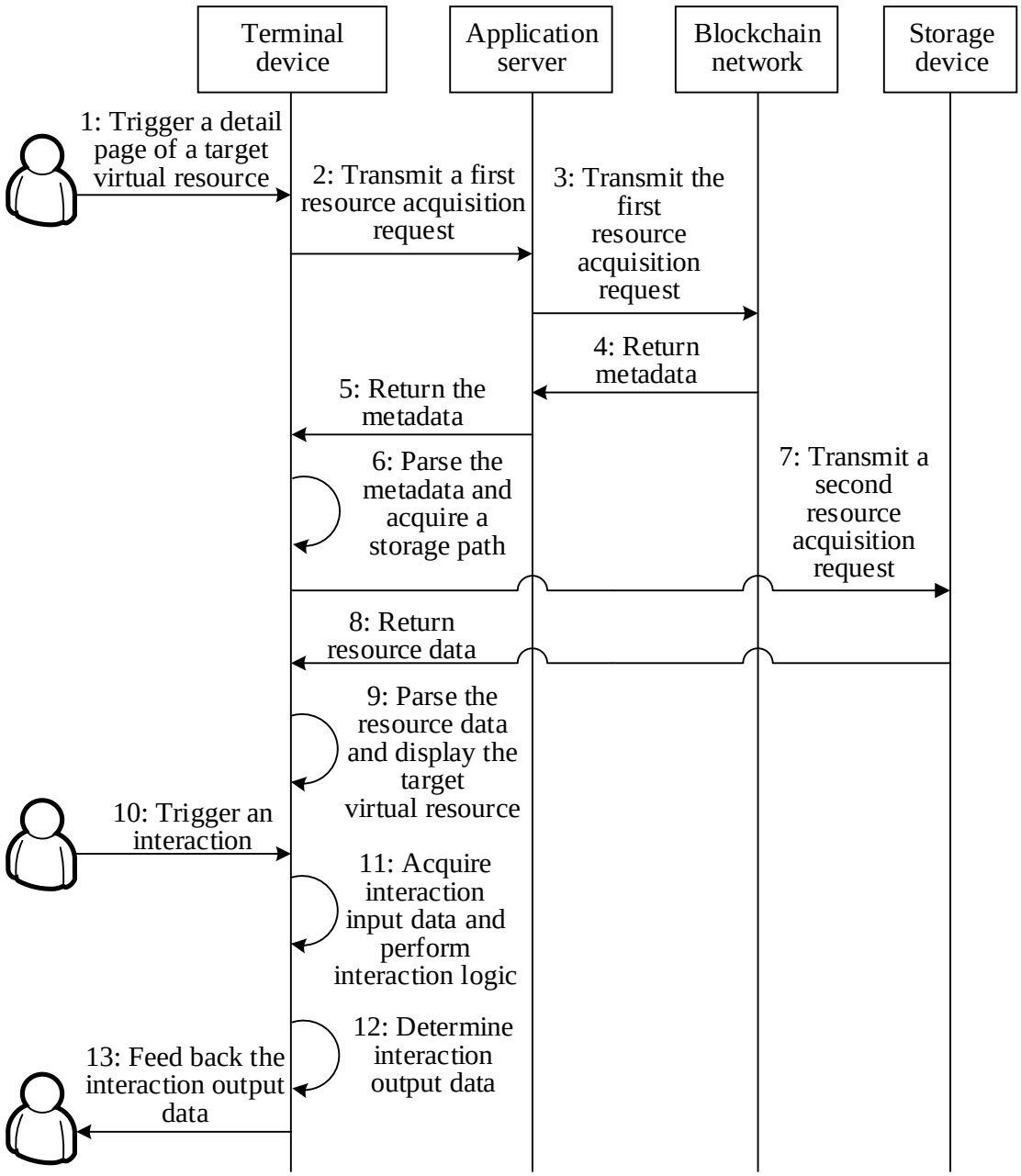

Terminal device
Application server
Blockchain network
Storage device
1: Trigger a detail page of a target virtual resource
2: Transmit a first resource acquisition request
3: Transmit the first resource acquisition request
4: Return metadata
5: Return the metadata
6: Parse the metadata and acquire a storage path
7: Transmit a second resource acquisition request
8: Return resource data
9: Parse the resource data and display the target virtual resource
10: Trigger an interaction
11: Acquire interaction input data and perform interaction logic
12: Determine interaction output data
13: Feed back the interaction output data

FIG. 8

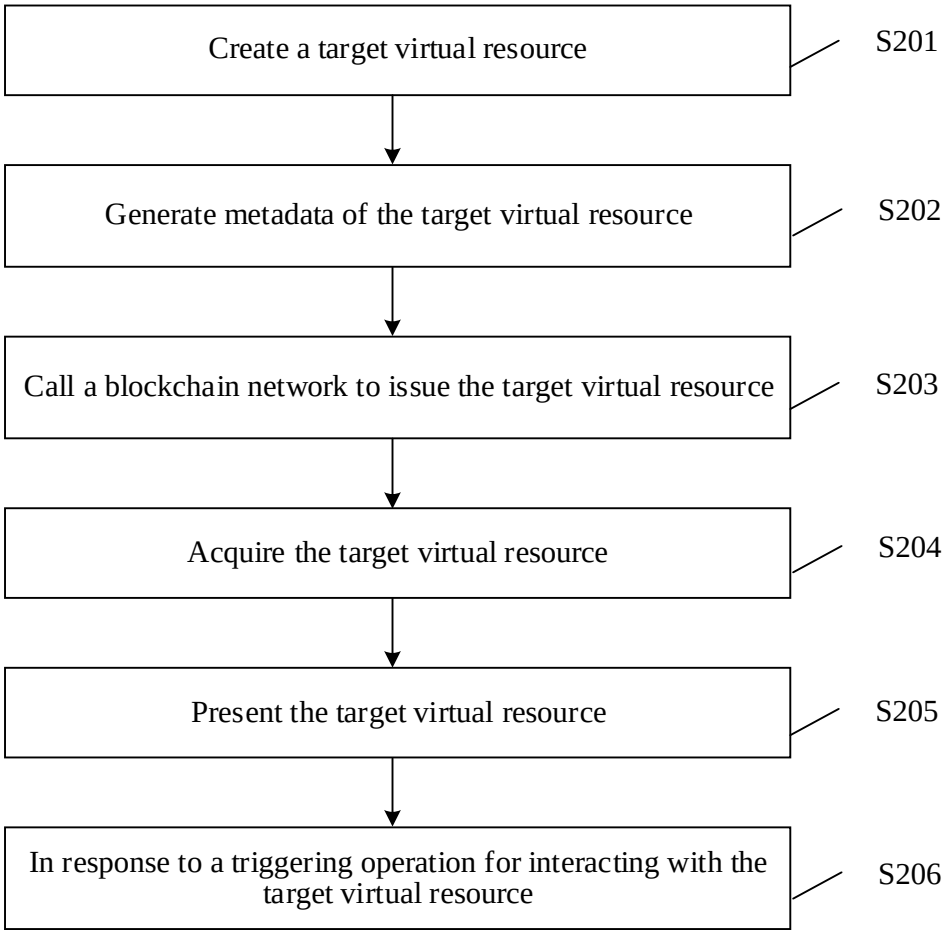

Create a target virtual resource
S201
Generate metadata of the target virtual resource
S202
Call a blockchain network to issue the target virtual resource
S203
Acquire the target virtual resource
S204
Present the target virtual resource
S205
In response to a triggering operation for interacting with the target virtual resource
S206

FIG. 9

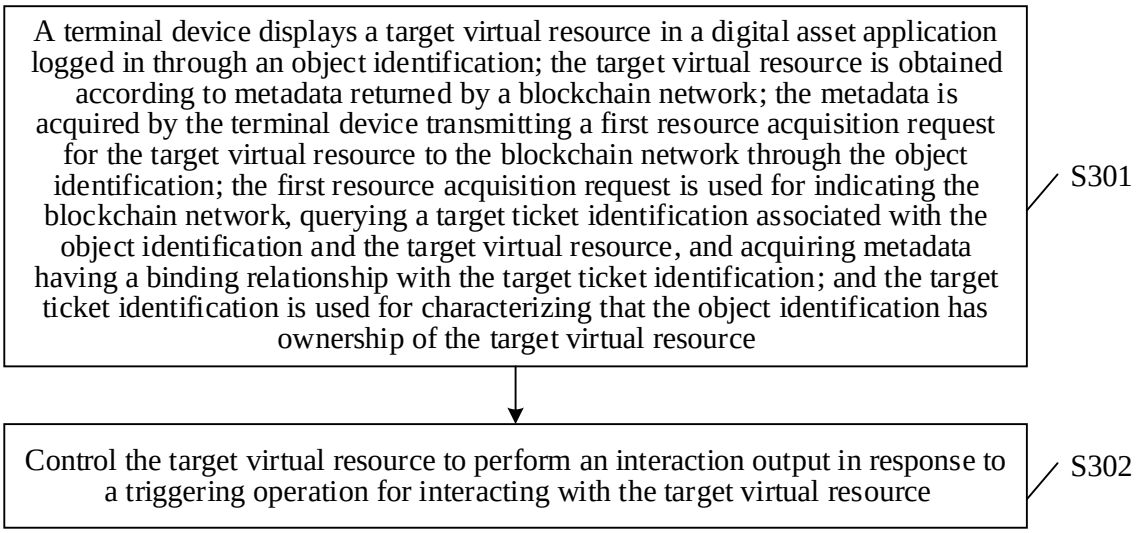

A terminal device displays a target virtual resource in a digital asset application logged in through an object identification; the target virtual resource is obtained according to metadata returned by a blockchain network; the metadata is acquired by the terminal device transmitting a first resource acquisition request for the target virtual resource to the blockchain network through the object identification; the first resource acquisition request is used for indicating the blockchain network, querying a target ticket identification associated with the object identification and the target virtual resource, and acquiring metadata having a binding relationship with the target ticket identification; and the target ticket identification is used for characterizing that the object identification has ownership of the target virtual resource
S301
Control the target virtual resource to perform an interaction output in response to a triggering operation for interacting with the target virtual resource
S302

FIG. 10

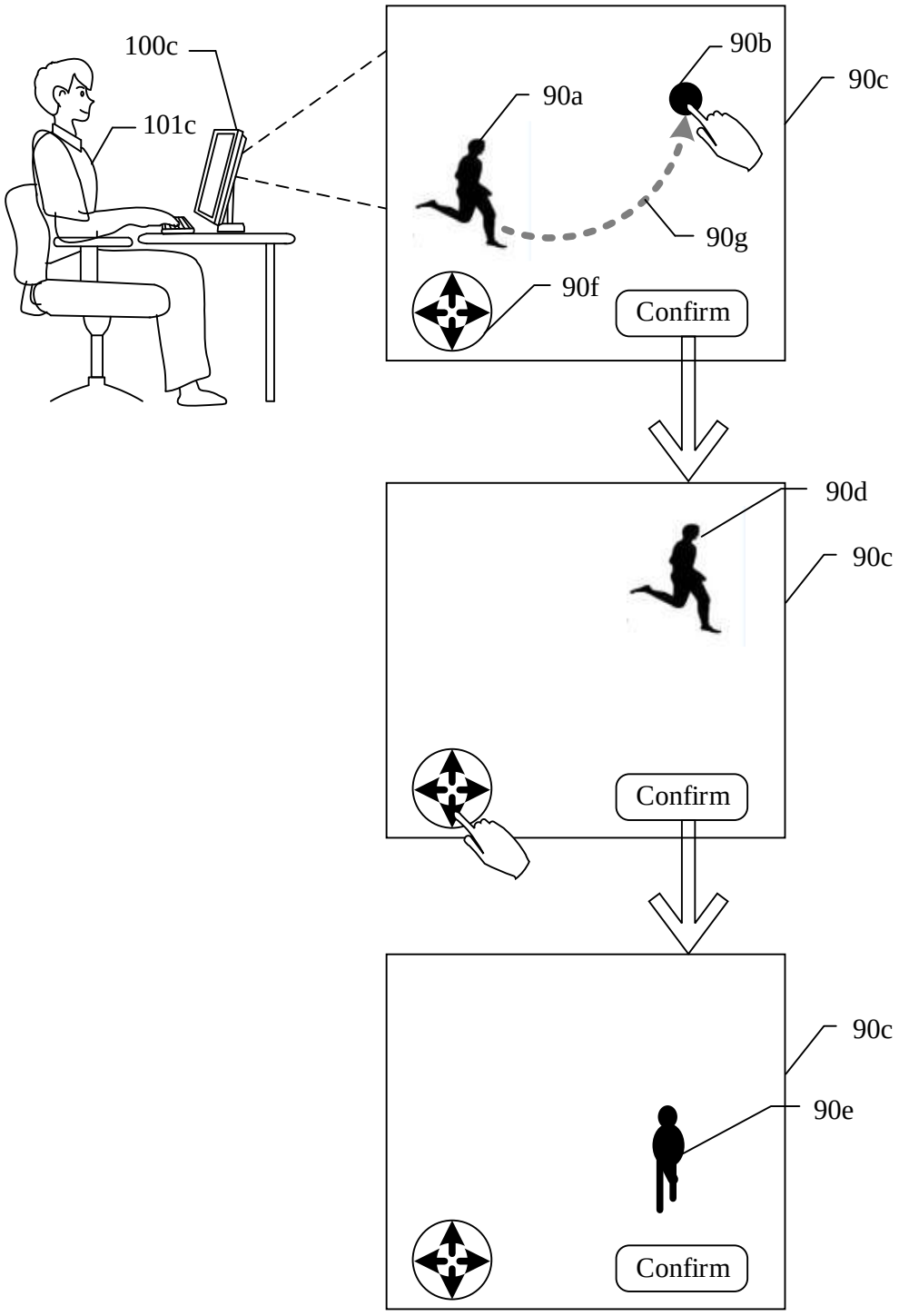

100c
101c
90b
90c
90a
90g
90f
Confirm
90d
90c
Confirm
90c
90e
Confirm

FIG. 11

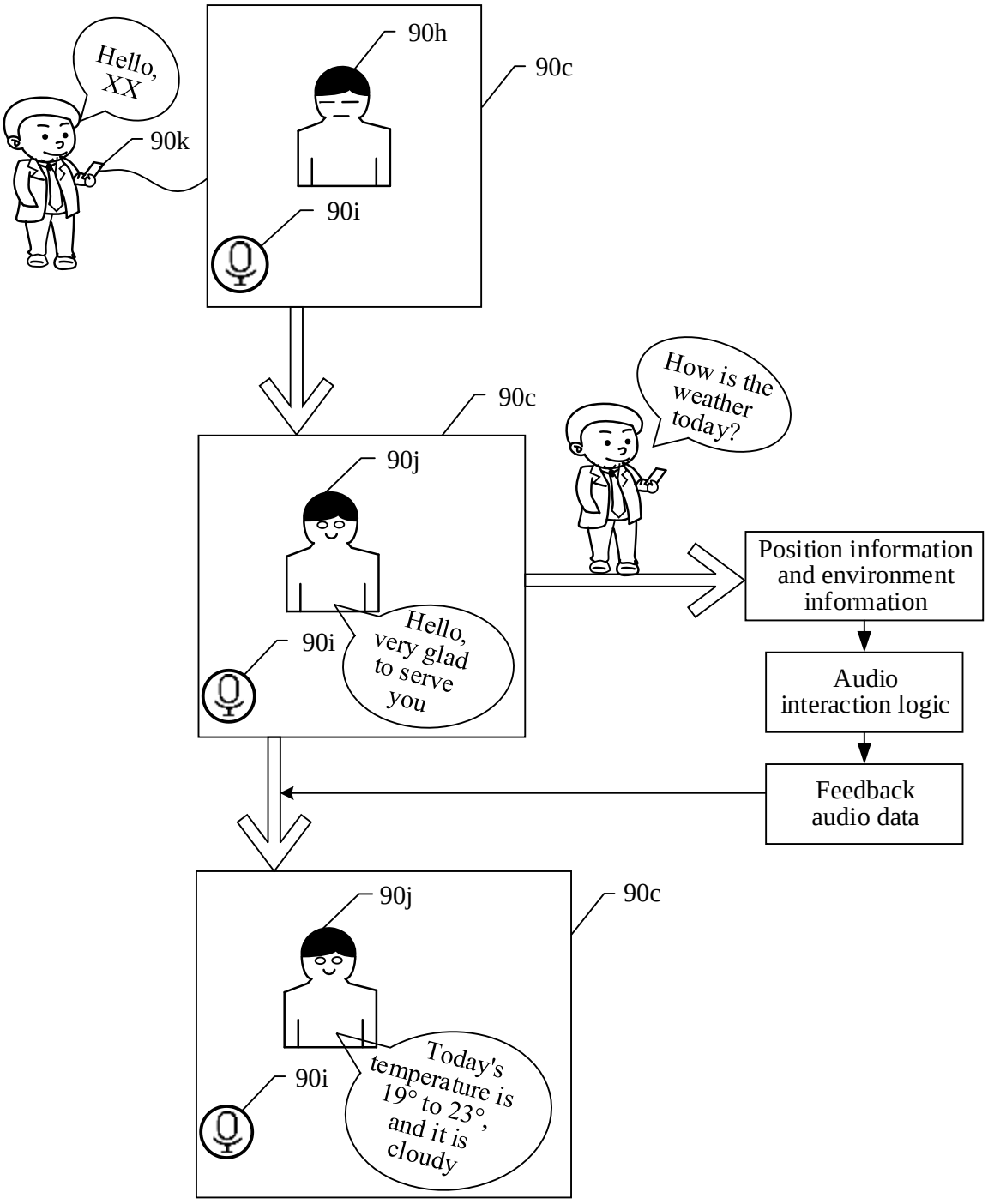

Hello, XX
90k
90h
90c
90i
How is the weather today?
90c
90j
Position information and environment information
Hello, very glad to serve you
90i
Audio interaction logic
Feedback audio data
90j
90c
Today's temperature is 19° to 23°, and it is cloudy
90i

FIG. 12

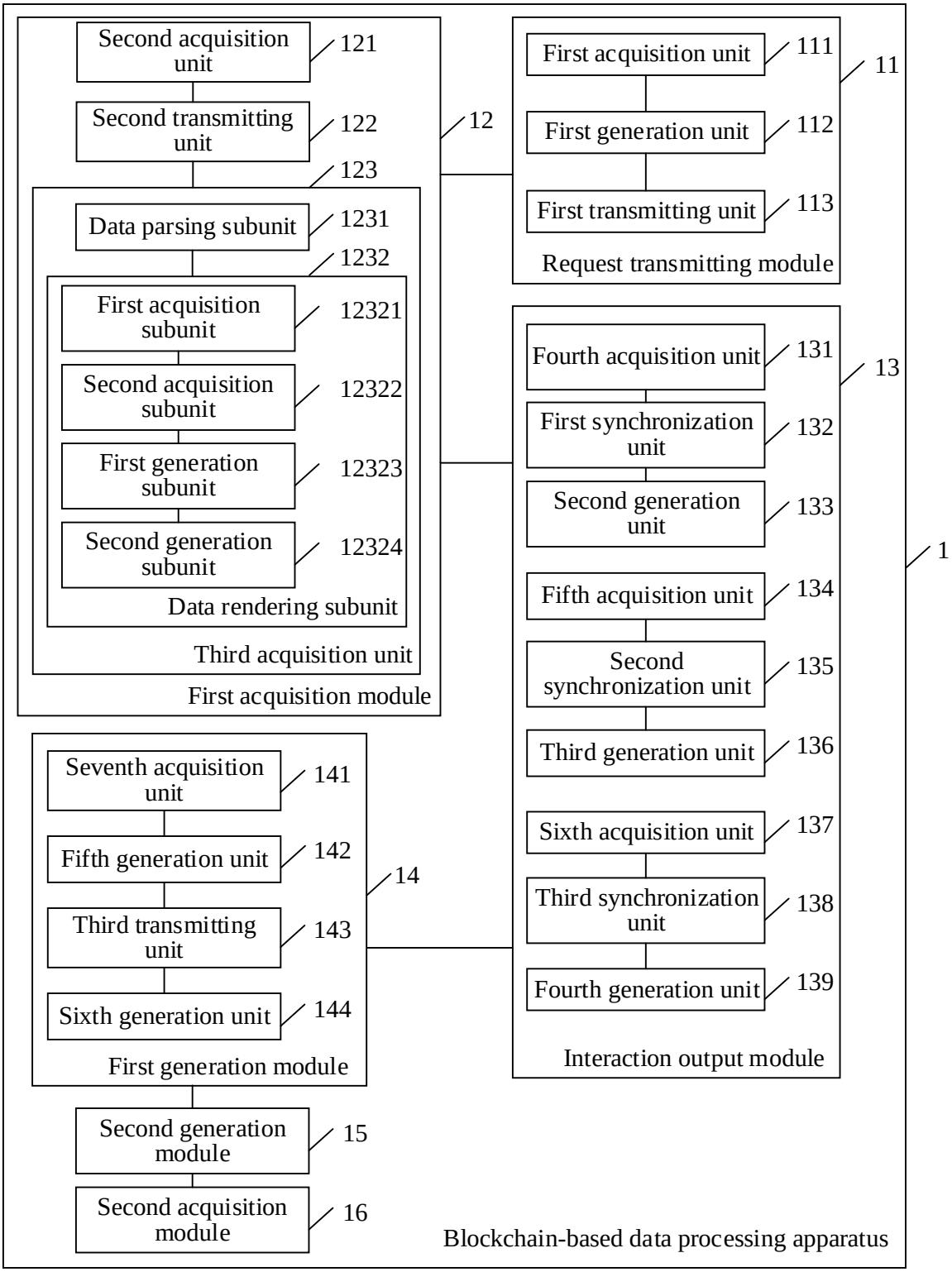

Second acquisition unit
121
Second transmitting unit
122
123
Data parsing subunit
1231
1232
First acquisition subunit
12321
Second acquisition subunit
12322
First generation subunit
12323
Second generation subunit
12324
Data rendering subunit
Third acquisition unit
First acquisition module
12
First acquisition unit
111
First generation unit
112
First transmitting unit
113
Request transmitting module
11
Fourth acquisition unit
131
First synchronization unit
132
Second generation unit
133
Fifth acquisition unit
134
Second synchronization unit
135
Third generation unit
136
Sixth acquisition unit
137
Third synchronization unit
138
Fourth generation unit
139
Interaction output module
13
1
Seventh acquisition unit
141
Fifth generation unit
142
Third transmitting unit
143
Sixth generation unit
144
First generation module
14
Second generation module
15
Second acquisition module
16
Blockchain-based data processing apparatus

FIG. 13

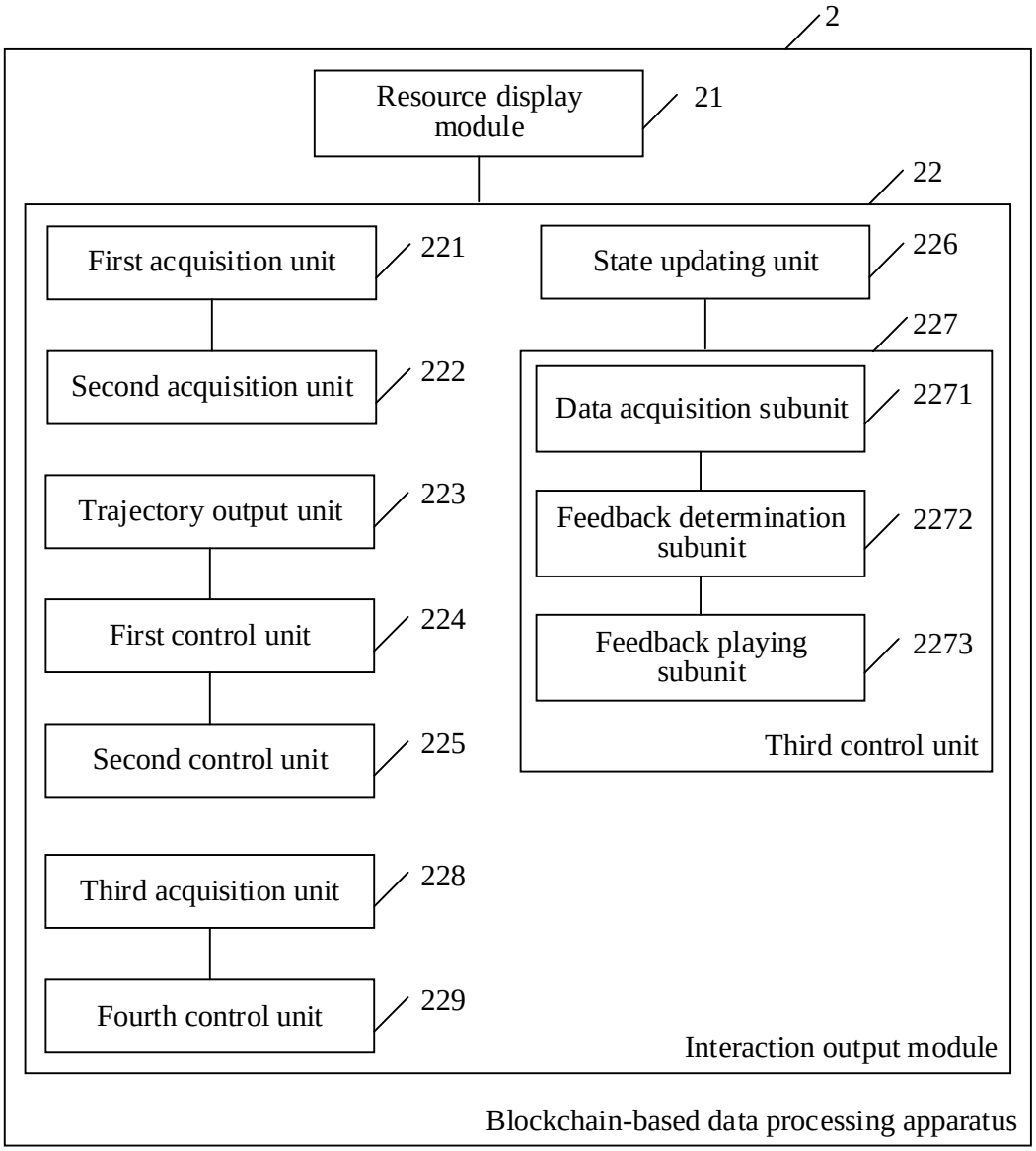

2
Resource display module
21
22
First acquisition unit
221
Second acquisition unit
222
Trajectory output unit
223
First control unit
224
Second control unit
225
Third acquisition unit
228
Fourth control unit
229
State updating unit
226
227
Data acquisition subunit
2271
Feedback determination subunit
2272
Feedback playing subunit
2273
Third control unit
Interaction output module
Blockchain-based data processing apparatus

FIG. 14

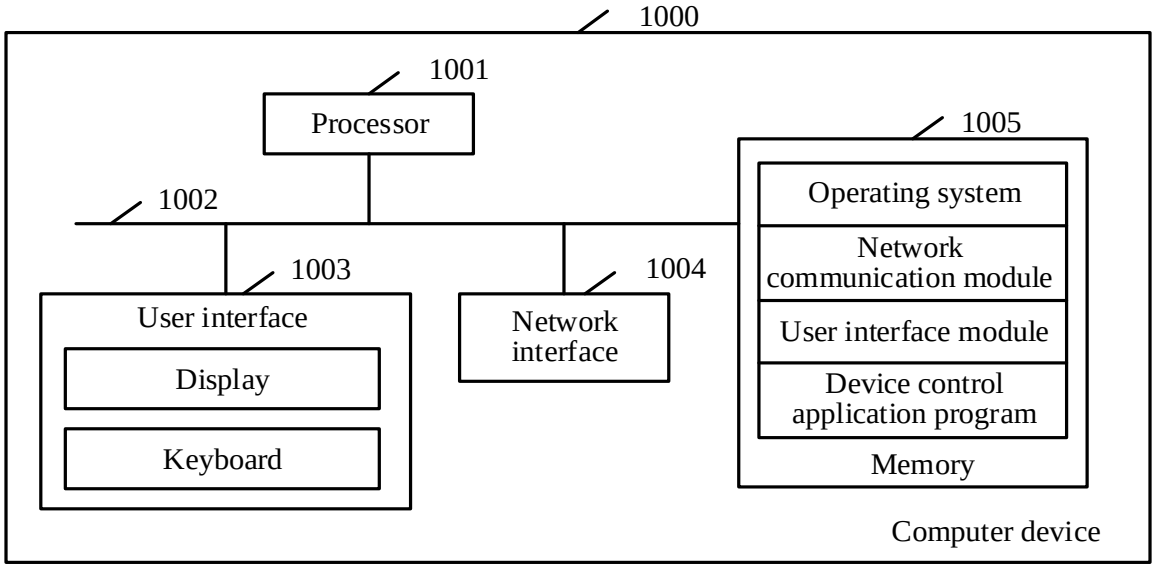

1000
1001
Processor
1005
Operating system
Network communication module
User interface module
Device control application program
Memory
1002
1003
User interface
Display
Keyboard
1004
Network interface
Computer device

FIG. 15

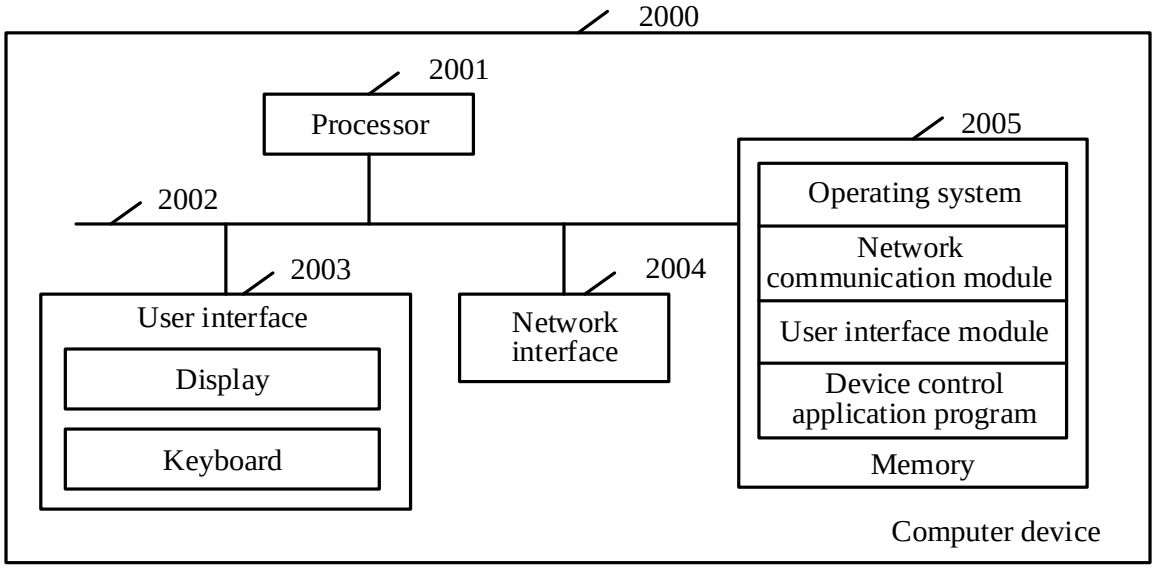

2000
2001
Processor
2005
Operating system
Network communication module
User interface module
Device control application program
Memory
2002
2003
User interface
Display
Keyboard
2004
Network interface
Computer device

FIG. 16