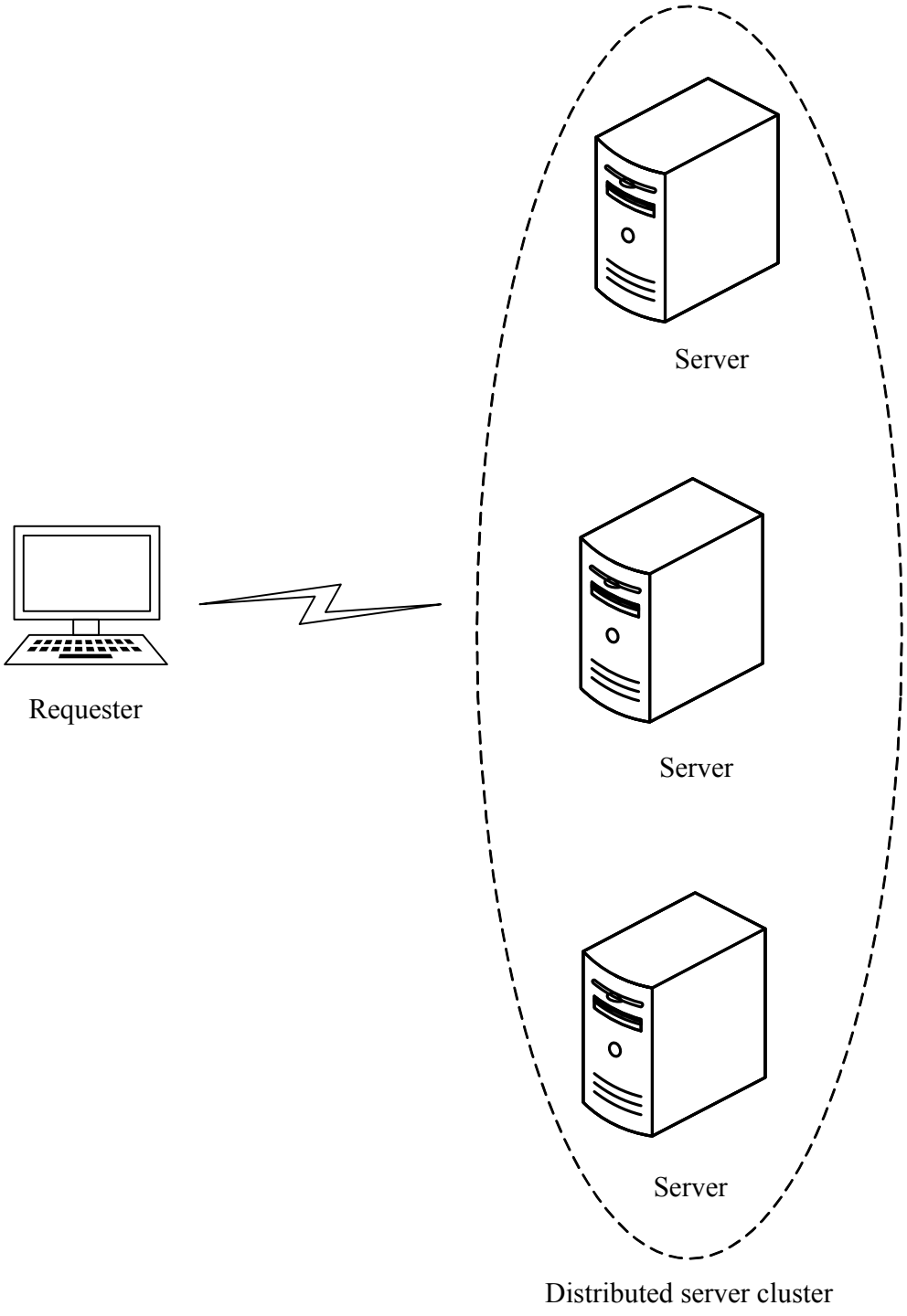
Server
Server
Server
Distributed server cluster
Requester

FIG. 1

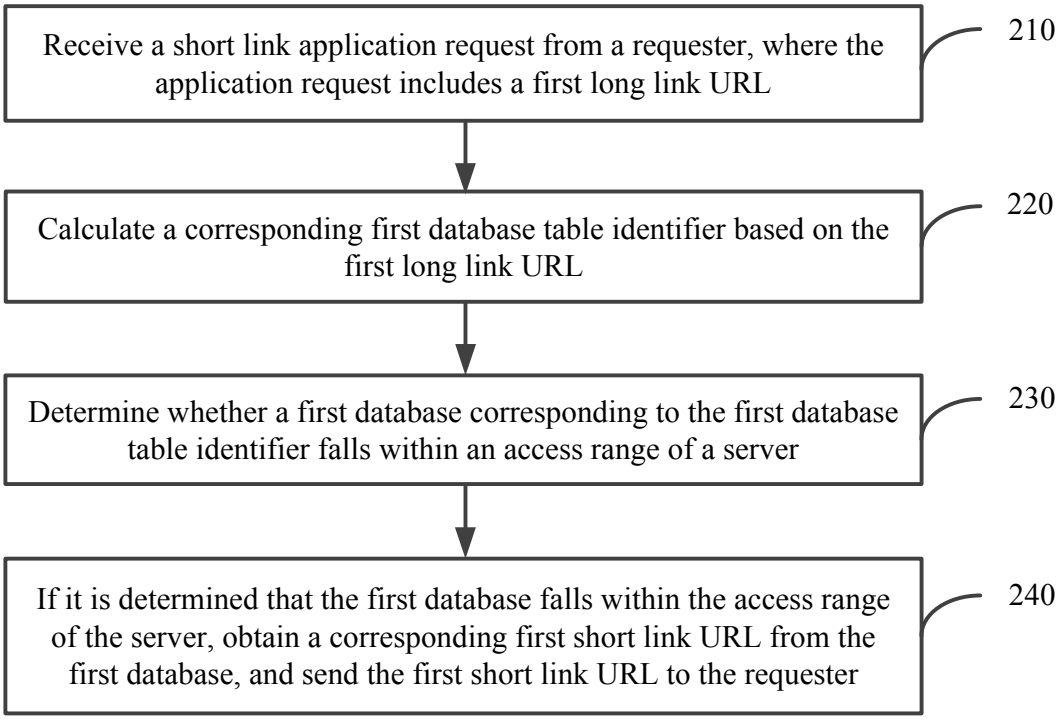
Receive a short link application request from a requester, where the application request includes a first long link URL
210
Calculate a corresponding first database table identifier based on the first long link URL
220
Determine whether a first database corresponding to the first database table identifier falls within an access range of a server
230
If it is determined that the first database falls within the access range of the server, obtain a corresponding first short link URL from the first database, and send the first short link URL to the requester
240

FIG. 2

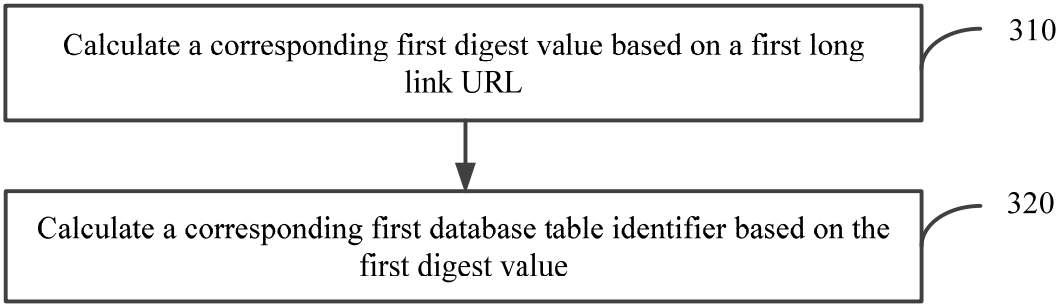
Calculate a corresponding first digest value based on a first long link URL
310
Calculate a corresponding first database table identifier based on the first digest value
320

FIG. 3

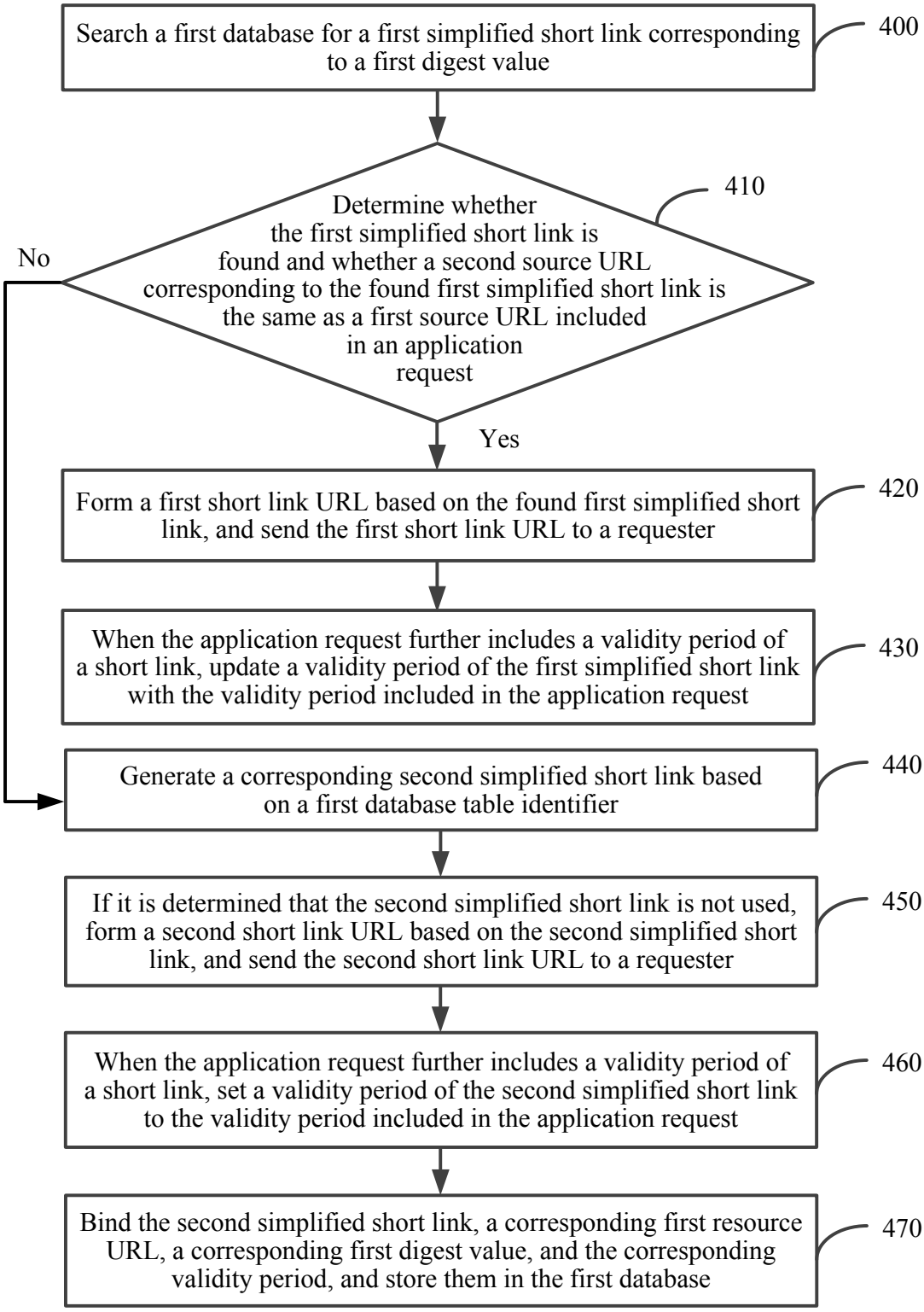
Search a first database for a first simplified short link corresponding to a first digest value
400
Determine whether the first simplified short link is found and whether a second source URL corresponding to the found first simplified short link is the same as a first source URL included in an application request
410
No
Yes
Form a first short link URL based on the found first simplified short link, and send the first short link URL to a requester
420
When the application request further includes a validity period of a short link, update a validity period of the first simplified short link with the validity period included in the application request
430
Generate a corresponding second simplified short link based on a first database table identifier
440
If it is determined that the second simplified short link is not used, form a second short link URL based on the second simplified short link, and send the second short link URL to a requester
450
When the application request further includes a validity period of a short link, set a validity period of the second simplified short link to the validity period included in the application request
460
Bind the second simplified short link, a corresponding first resource URL, a corresponding first digest value, and the corresponding validity period, and store them in the first database
470

FIG. 4

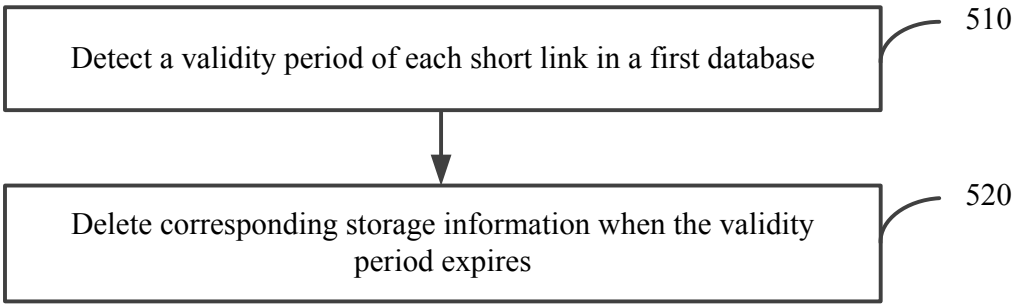
Detect a validity period of each short link in a first database
510
Delete corresponding storage information when the validity period expires
520

FIG. 5

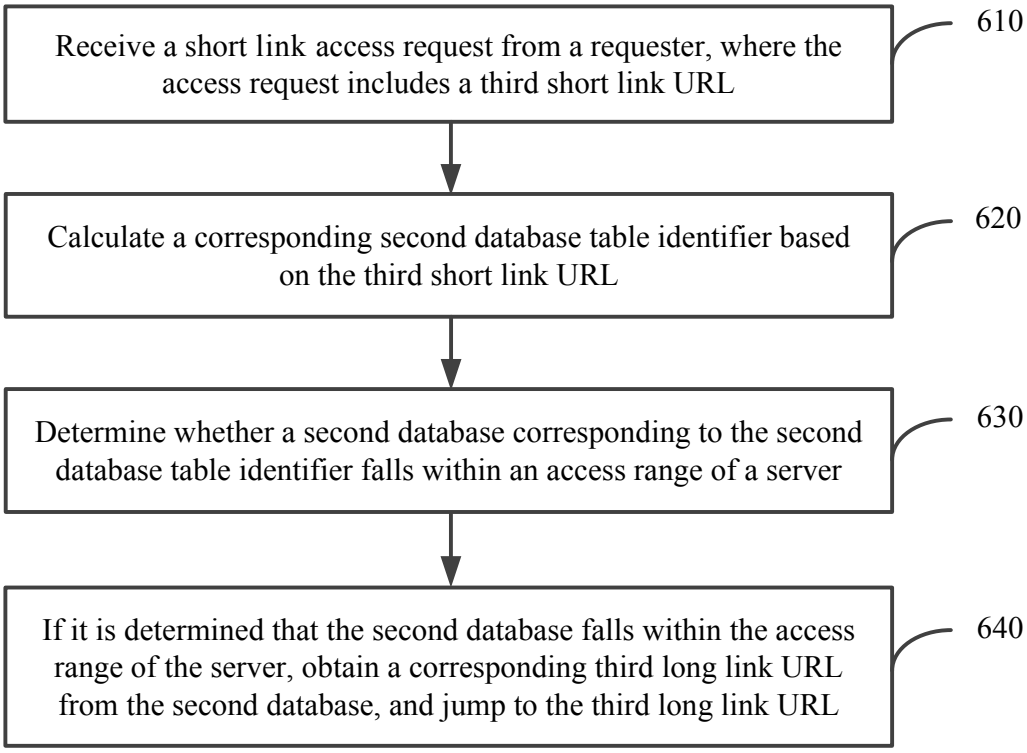
Receive a short link access request from a requester, where the access request includes a third short link URL
610
Calculate a corresponding second database table identifier based on the third short link URL
620
Determine whether a second database corresponding to the second database table identifier falls within an access range of a server
630
If it is determined that the second database falls within the access range of the server, obtain a corresponding third long link URL from the second database, and jump to the third long link URL
640

FIG. 6

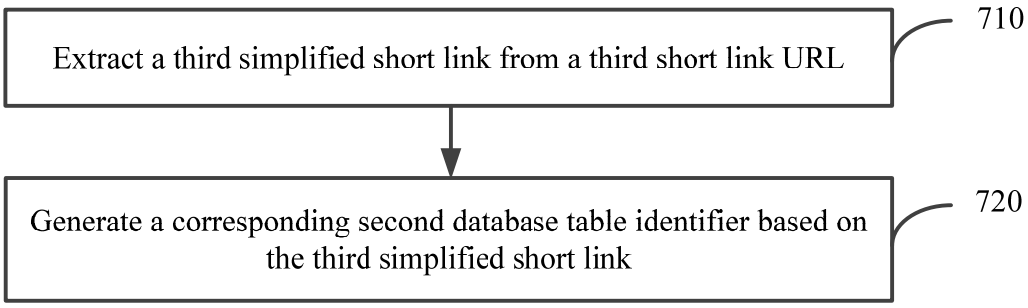
Extract a third simplified short link from a third short link URL
710
Generate a corresponding second database table identifier based on the third simplified short link
720

FIG. 7

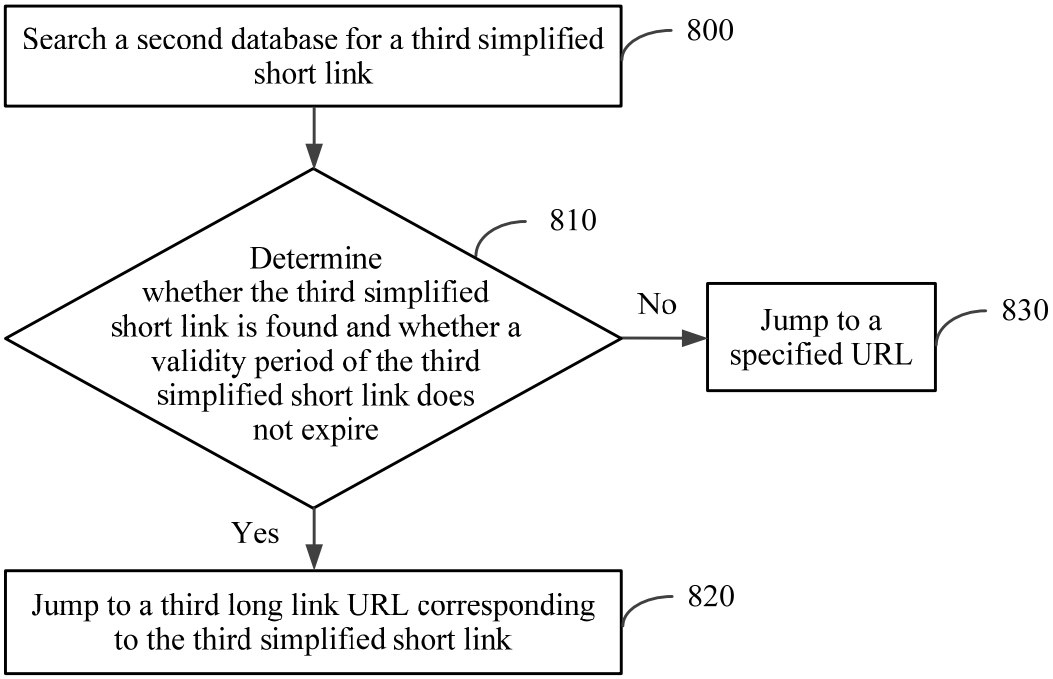
Search a second database for a third simplified short link
800
Determine whether the third simplified short link is found and whether a validity period of the third simplified short link does not expire
810
No
Jump to a specified URL
830
Yes
Jump to a third long link URL corresponding to the third simplified short link
820

FIG. 8

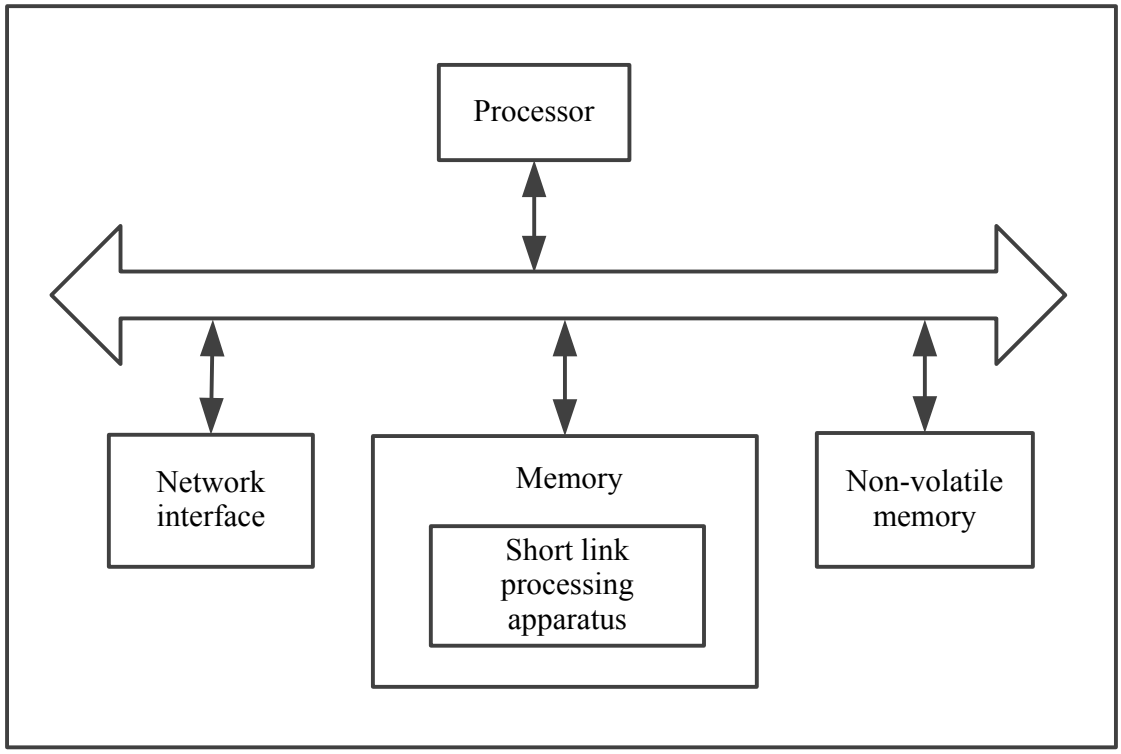
Processor
Network interface
Memory
Short link processing apparatus
Non-volatile memory

FIG. 9

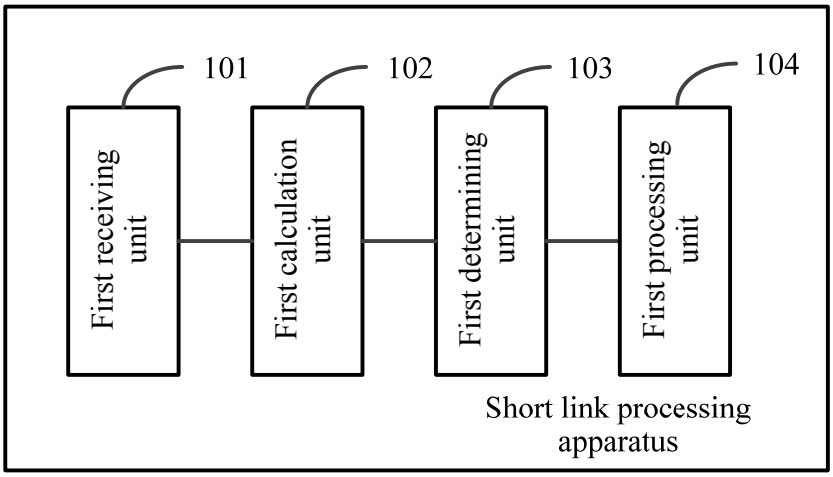
101
102
103
104
First receiving unit
First calculation unit
First determining unit
First processing unit
Short link processing apparatus

FIG. 10

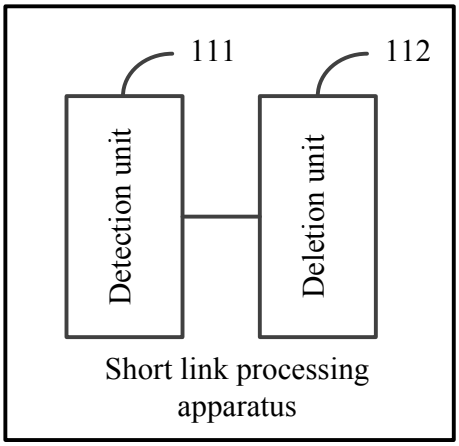
111
112
Detection unit
Deletion unit
Short link processing apparatus

FIG. 11

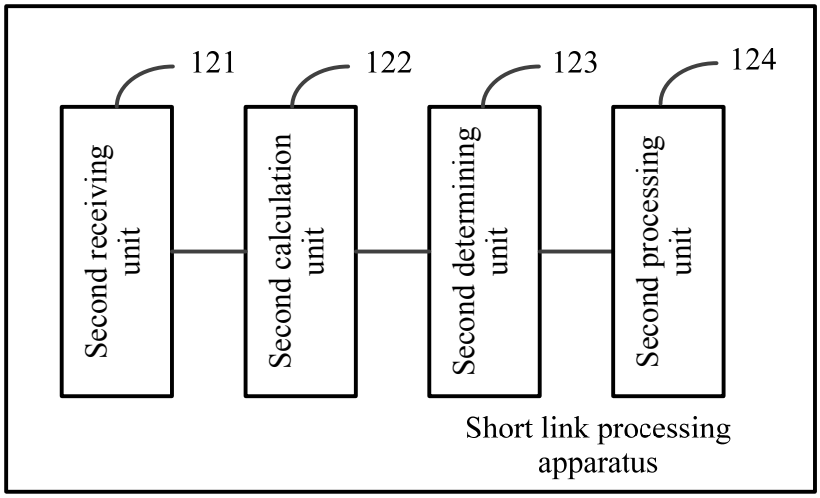
121
122
123
124
Second receiving unit
Second calculation unit
Second determining unit
Second processing unit
Short link processing apparatus

FIG. 12