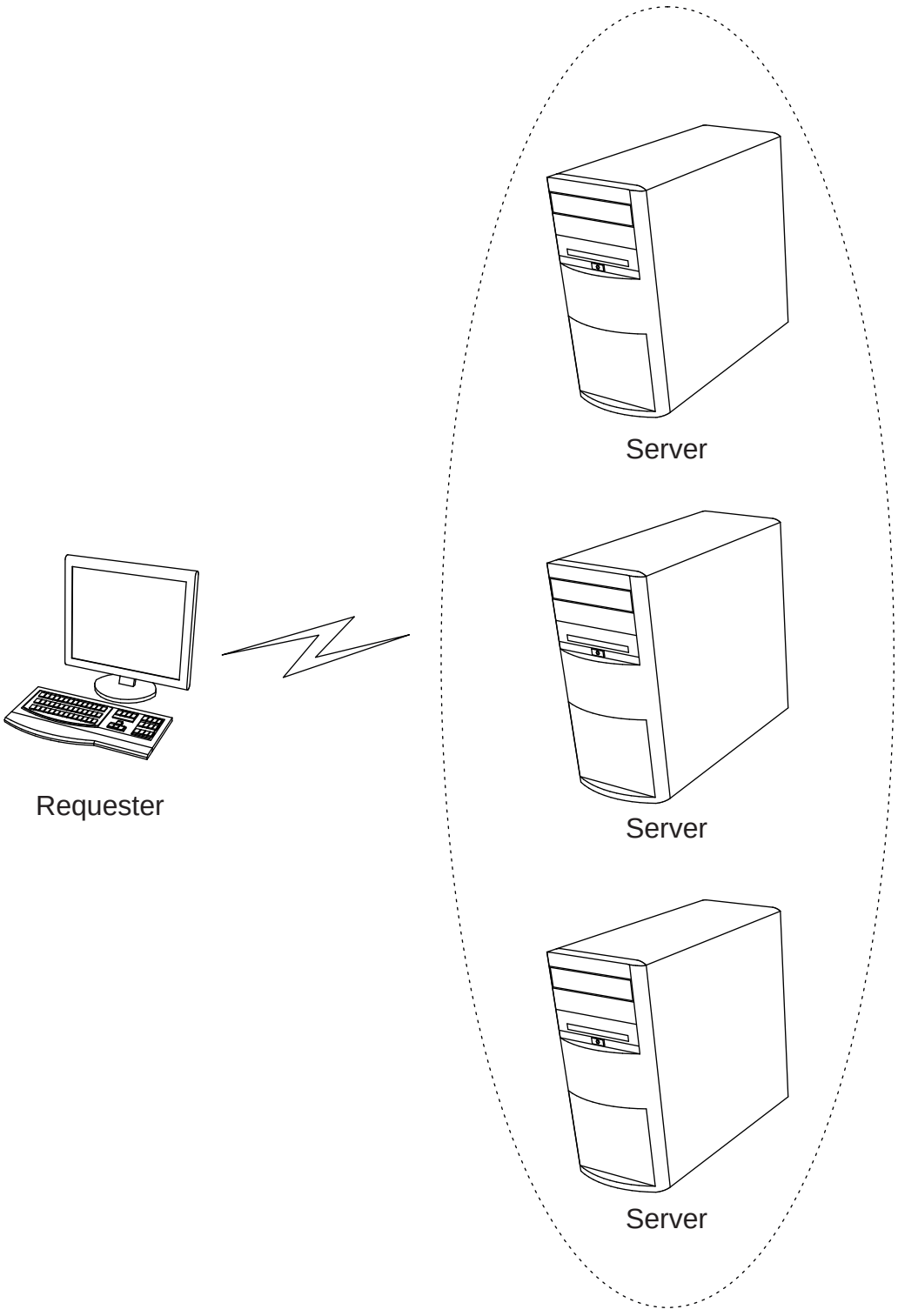
Server
Server
Server
Requester
Distributed server cluster

**FIG. 1**

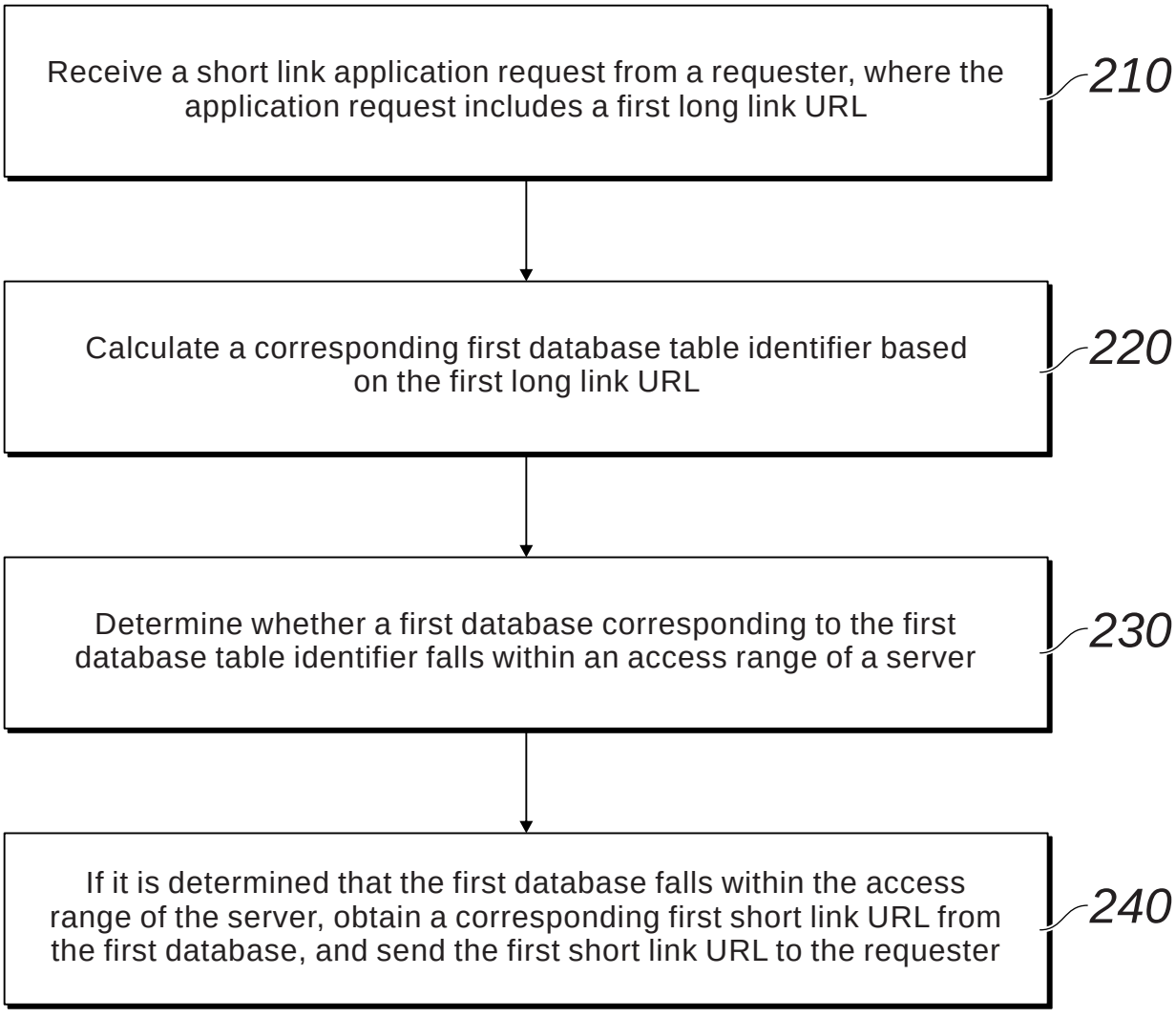
Receive a short link application request from a requester, where the application request includes a first long link URL
210
Calculate a corresponding first database table identifier based on the first long link URL
220
Determine whether a first database corresponding to the first database table identifier 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**

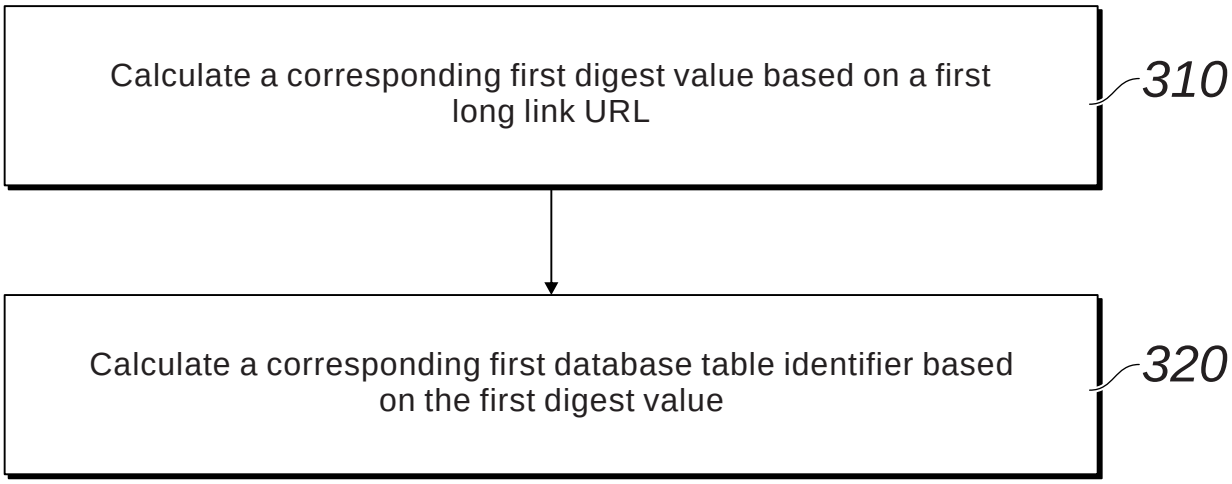
Calculate a corresponding first digest value based on a first long link URL
310
Calculate a corresponding first database table identifier based on the first digest value
320

**FIG. 3**

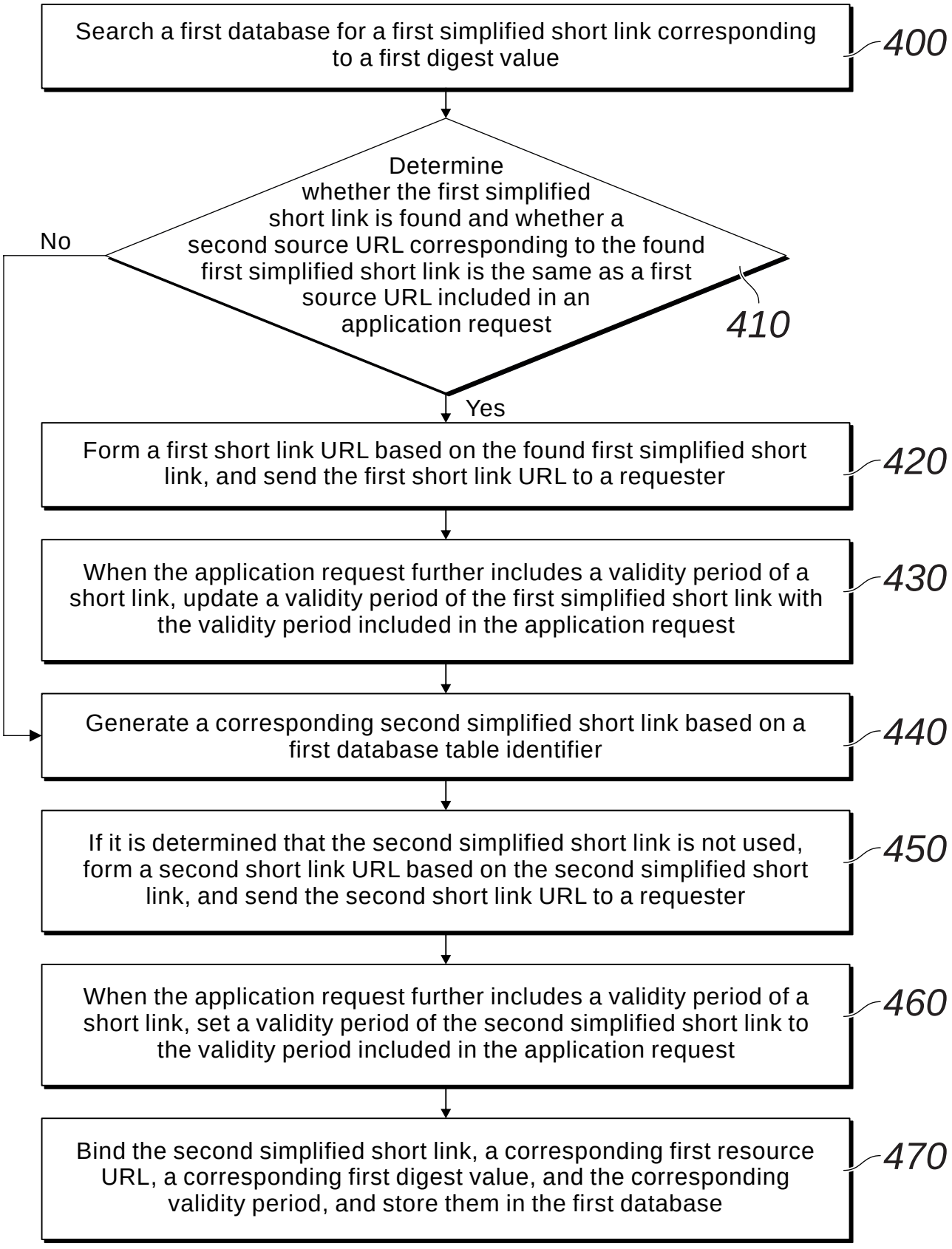
Search a first database for a first simplified short link corresponding to a first digest value
400
Determine whether the first simplified short link is found and whether a second source URL corresponding to the found first simplified short link is the same as a first source URL included in an application 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**

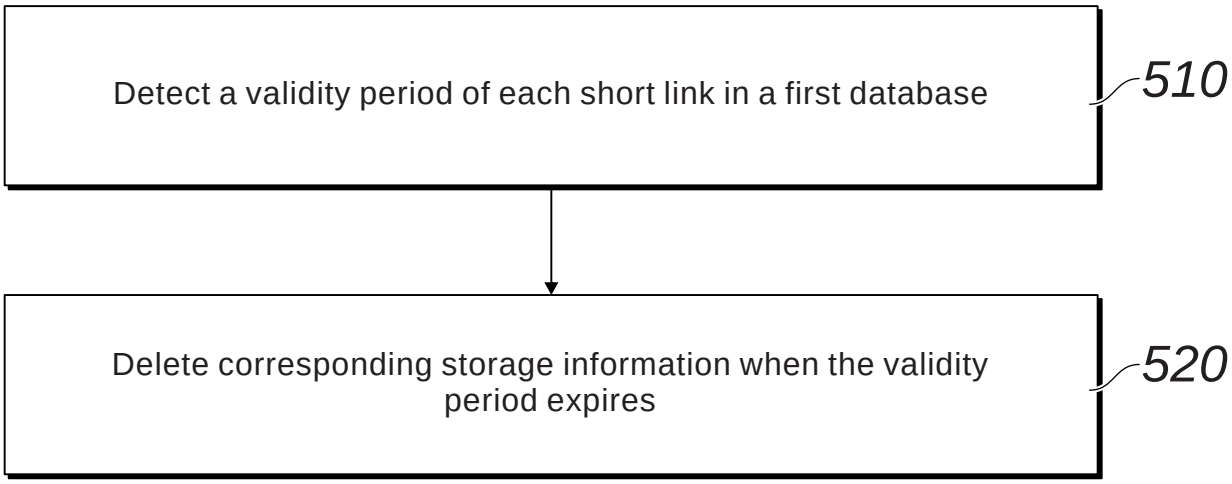
Detect a validity period of each short link in a first database
510
Delete corresponding storage information when the validity period expires
520

FIG. 5

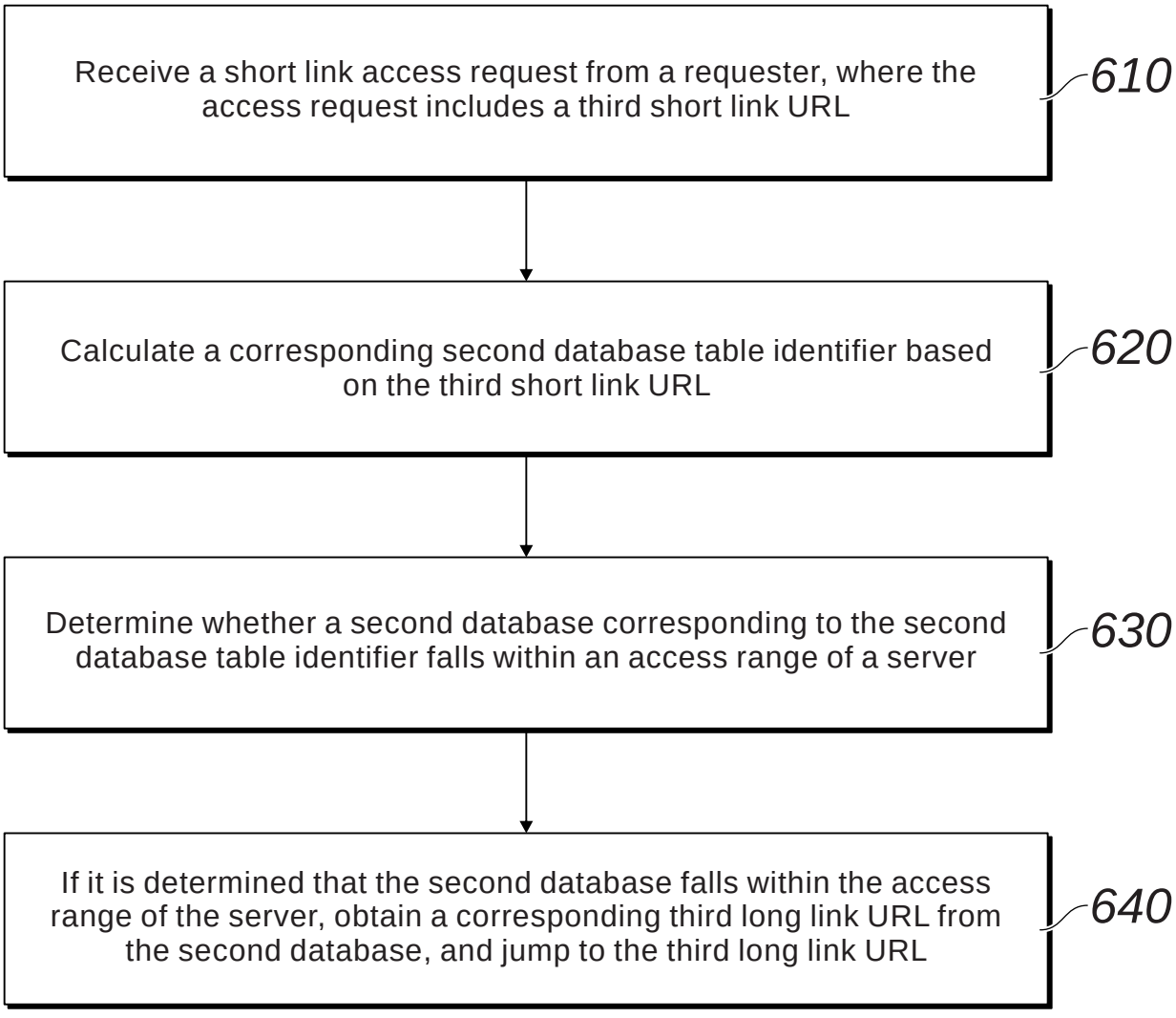
Receive a short link access request from a requester, where the access request includes a third short link URL
610
Calculate a corresponding second database table identifier based on the third short link URL
620
Determine whether a second database corresponding to the second database table identifier 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**

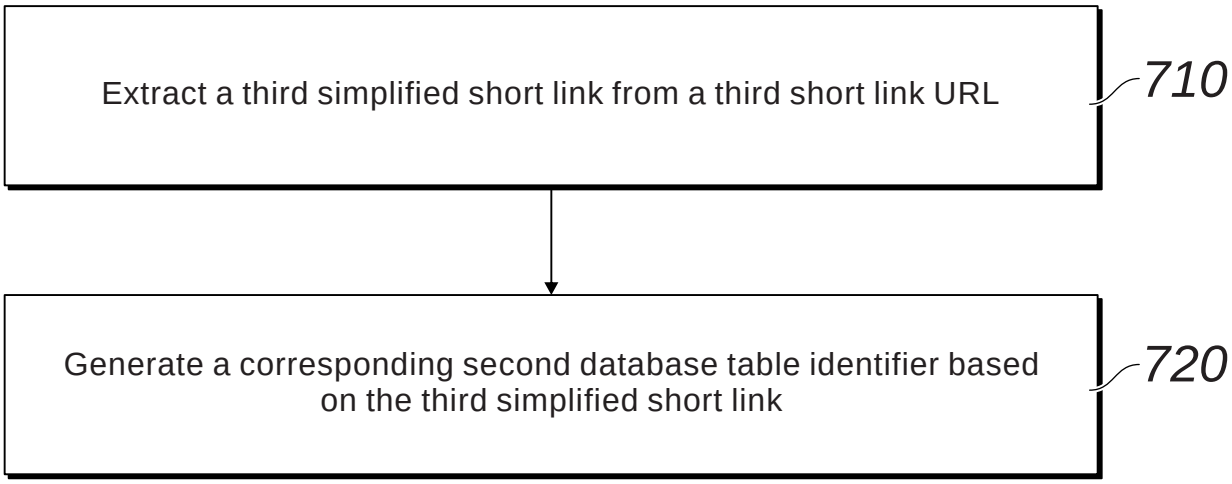
Extract a third simplified short link from a third short link URL
710
Generate a corresponding second database table identifier based on the third simplified short link
720

**FIG. 7**

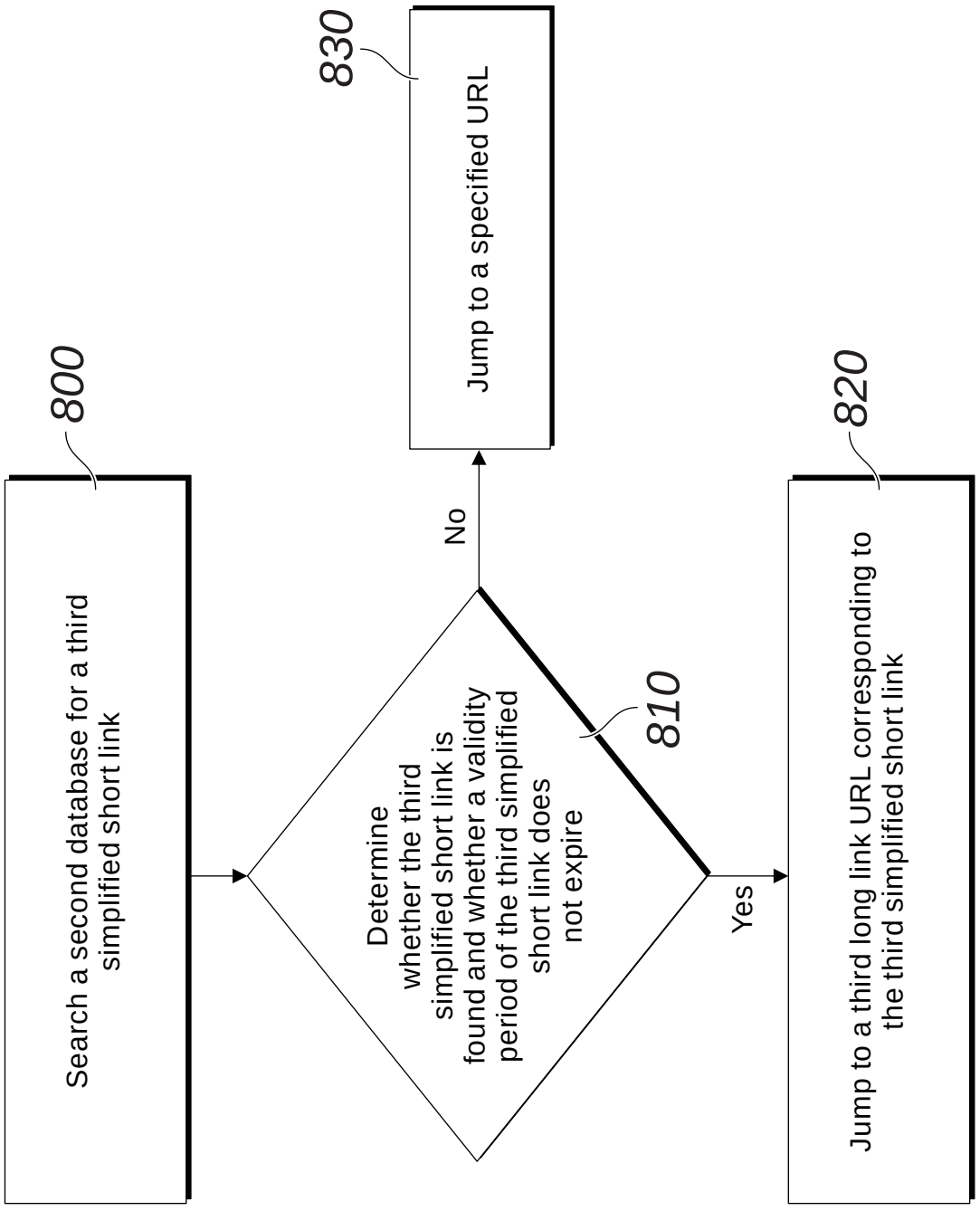
800
Search a second database for a third simplified short link
810
Determine whether the third simplified short link is found and whether a validity period of the third simplified short link does not expire
No
830
Jump to a specified URL
Yes
820
Jump to a third long link URL corresponding to the third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

FIG. 8

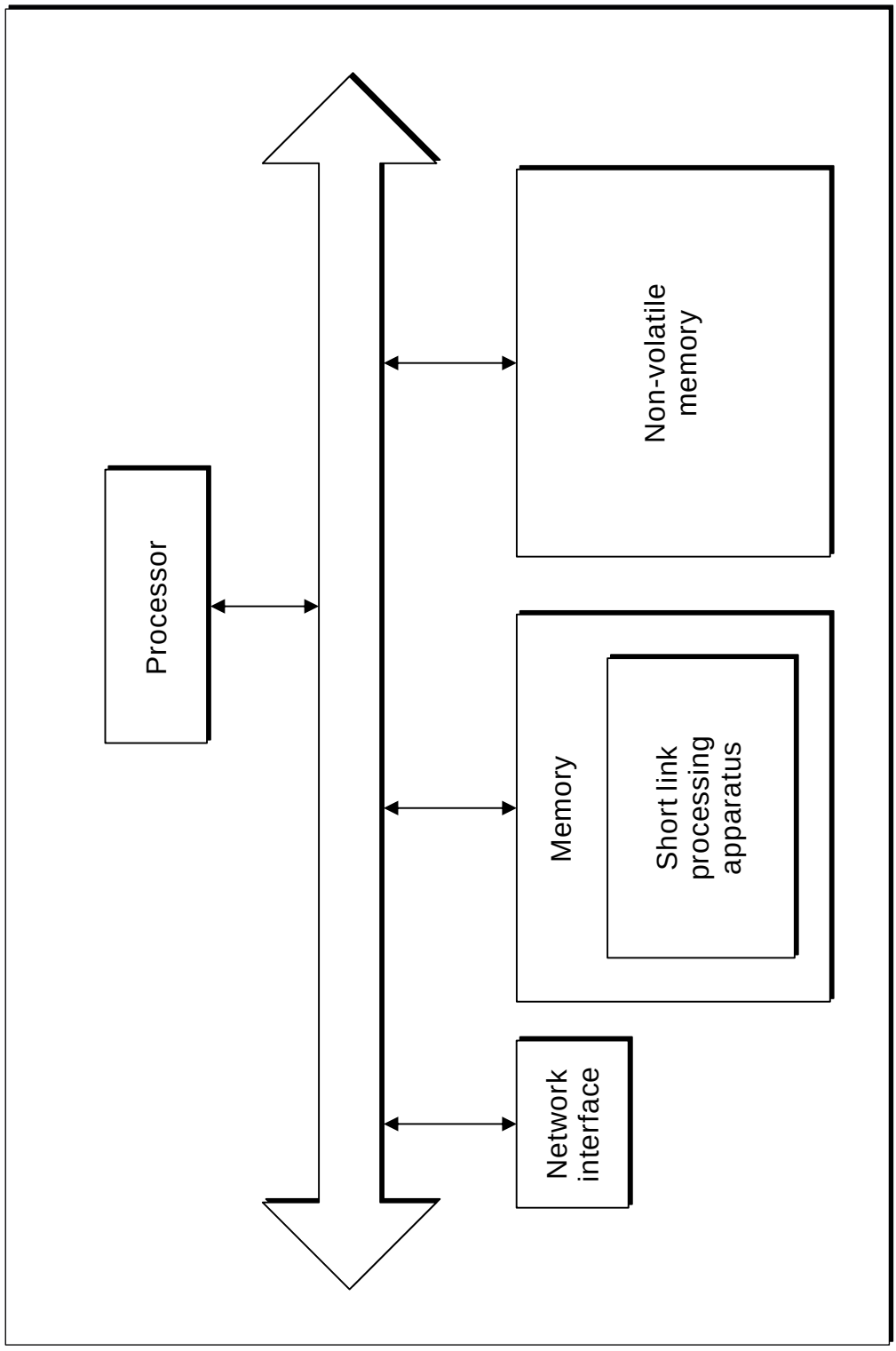
Processor
Non-volatile memory
Memory
Short link processing apparatus
Network interface

FIG. 9

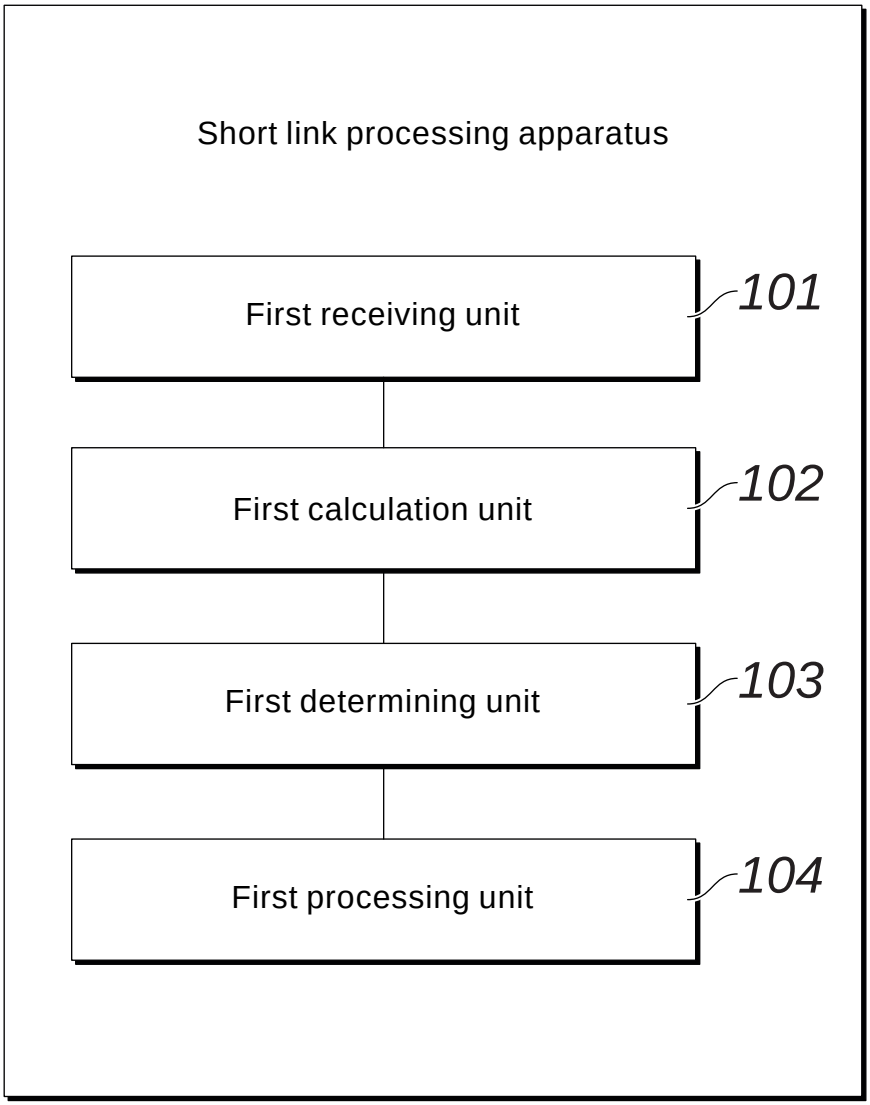
Short link processing apparatus
First receiving unit
101
First calculation unit
102
First determining unit
103
First processing unit
104

**FIG. 10**

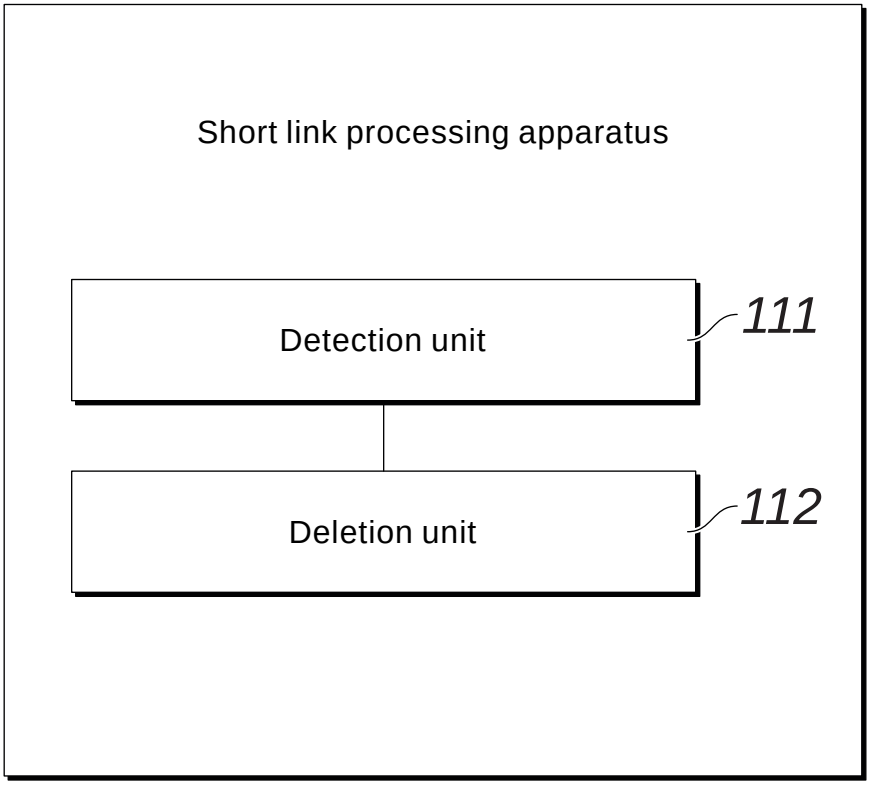
Short link processing apparatus
Detection unit
111
Deletion unit
112

**FIG. 11**

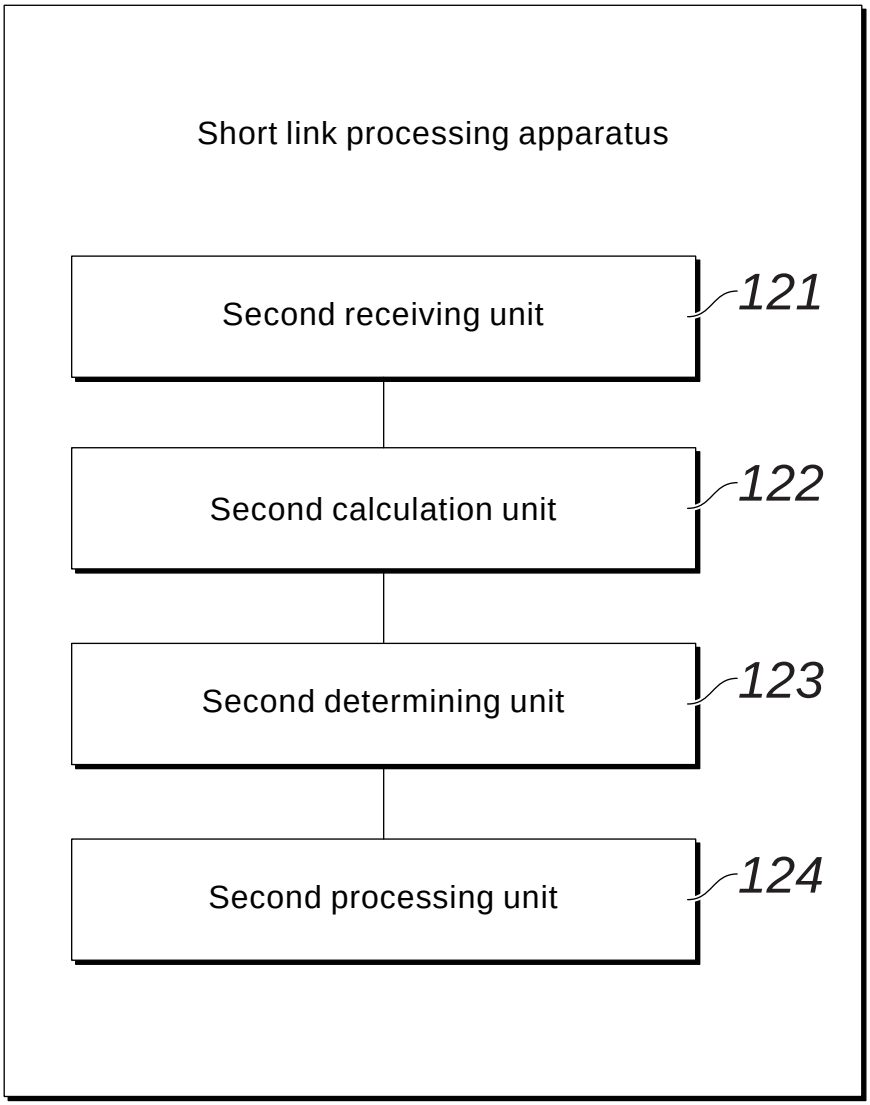
Short link processing apparatus
Second receiving unit
121
Second calculation unit
122
Second determining unit
123
Second processing unit
124

FIG. 12