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(54) Titre : PROCEDE ET DISPOSITIF DE STOCKAGE DE POSITION DE TERMINAL MOBILE
(54) Title: MOBILE TERMINAL POSITION STORAGE METHOD AND DEVICE

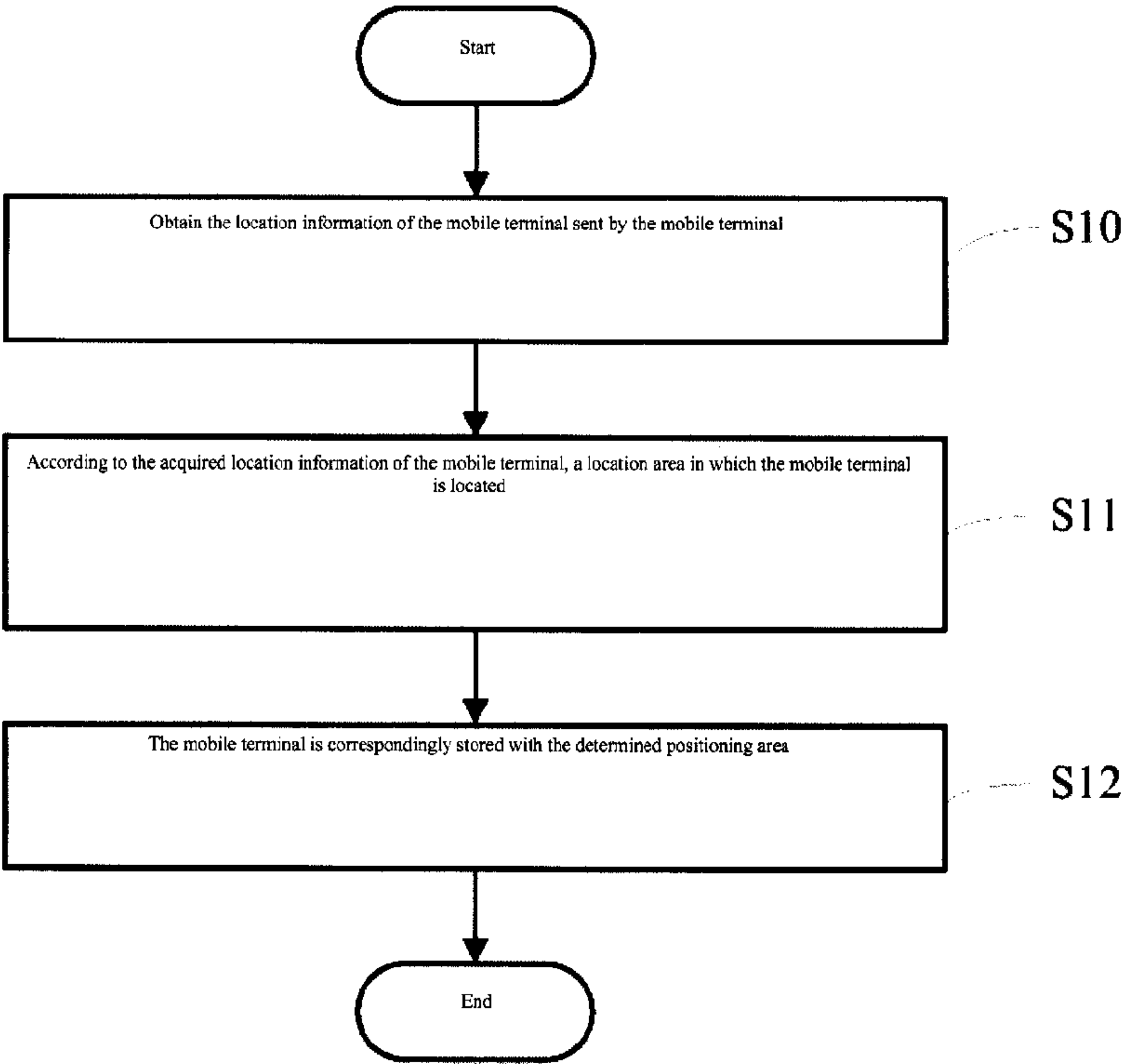


Figure 1

(57) **Abrégé/Abstract:**
Disclosed are a mobile terminal position storage method and device, the method comprising: obtaining information sent by a mobile terminal of the position where the mobile terminal is located; according to the obtained position information of the mobile terminal, determining a positioning area in which the mobile terminal is located, a plurality of positioning areas being obtained by dividing an area according to a preset rule; correspondingly saving the mobile terminal and the determined positioning area. The present invention effectively reduces the storage space required for storing mobile terminal position information.

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(54) Title: MOBILE TERMINAL POSITION STORAGE METHOD AND DEVICE

(54) 发明名称: 一种移动终端的位置存储方法及装置

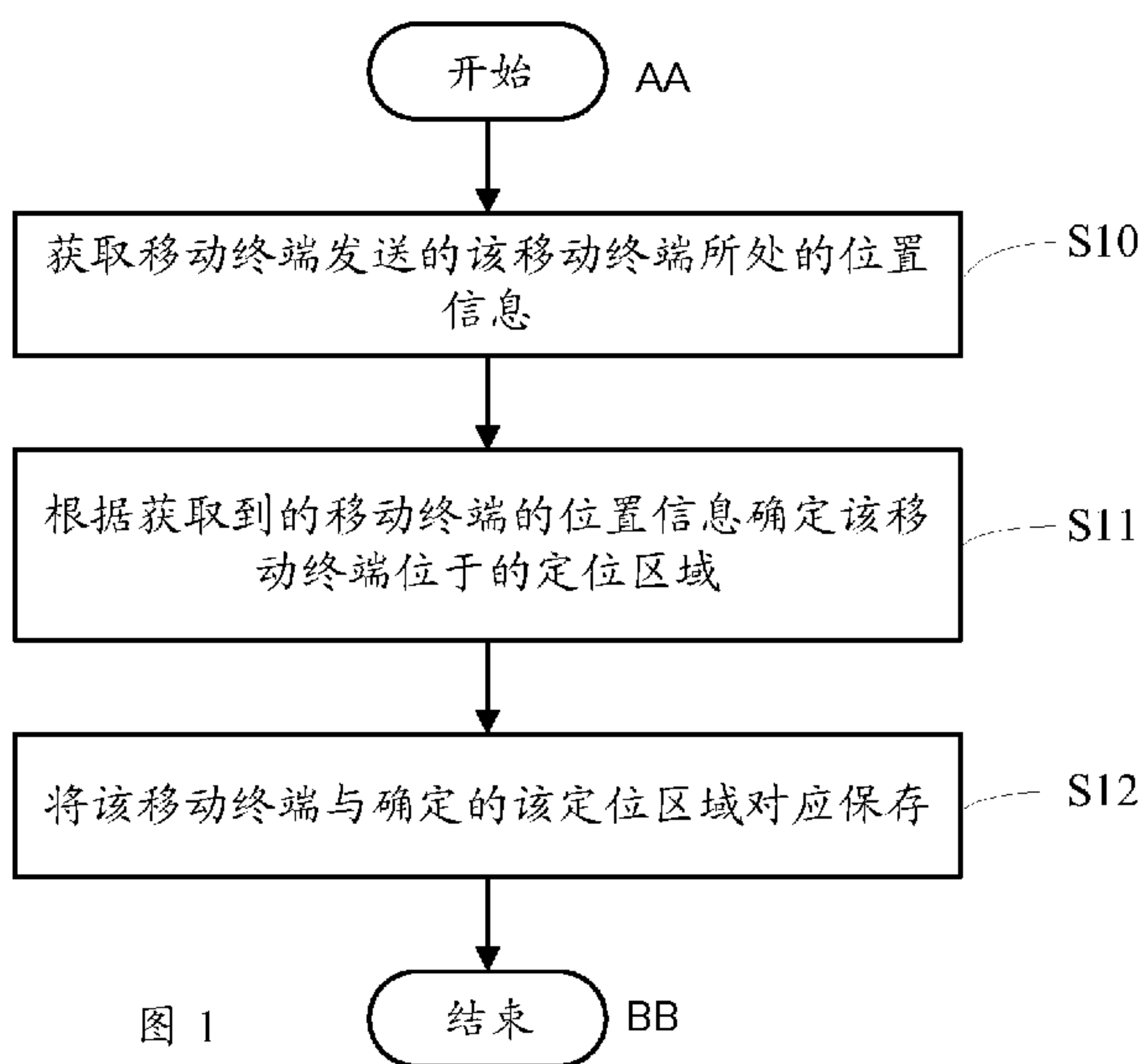


图 1

(57) Abstract: Disclosed are a mobile terminal position storage method and device, the method comprising: obtaining information sent by a mobile terminal of the position where the mobile terminal is located; according to the obtained position information of the mobile terminal, determining a positioning area in which the mobile terminal is located, a plurality of positioning areas being obtained by dividing an area according to a preset rule; correspondingly saving the mobile terminal and the determined positioning area. The present invention effectively reduces the storage space required for storing mobile terminal position information.

(57) 摘要: 本发明公开了一种移动终端的位置存储方法及装置, 其中, 该方法包括: 获取移动终端发送的所述移动终端所处的位置信息; 根据获取到的移动终端的位置信息确定所述移动终端位于的定位区域; 其中, 按照预设规则将一区域划分而得到多个所述定位区域; 以及将所述移动终端与确定的所述定位区域对应保存。通过上述方式, 本发明能够有效降低存储移动终端位置信息所需的存储空间。

- S10 Obtain information sent by mobile terminal of position where mobile terminal is located
- S11 According to obtained position information of mobile terminal, determine positioning area in which mobile terminal is located
- S12 Correspondingly save mobile terminal and determined positioning area
- AA Start
- BB End

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— 包括国际检索报告(条约第 21 条(3))。

Mobile Terminal Position Storage Method And Device

- [1] [Technical Field]
- [2] The present invention relates to the field of data management technologies, and in particular, to a method and a device for storing a location of a mobile terminal.
- [3] [Background Technology]
- [4] With the 2G / 3G and even the 4G era is coming, as well as the widespread of WiFi hotspot, it marks the advent of the era of big data today. All the user's daily behaviour can theoretically achieve processing a variety of data by means of the network constructed by mobile data network provided by major operators, wireless local area networks such as WiFi and Internet technology. Therefore, the network environment has advantages over the offline real world in terms of user-friendliness. In such an environment, e-commerce has become increasingly widely used in a variety of commercial trade activities, the so-called e-commerce is a business operation model that based on the browser and server applications helps consumer realize online shopping, online transactions between merchants and online electronic payments, as well as a variety of business activities, trading activities, financial activities and related integrated service activities in the Internet open network environment.
- [5] Many mobile terminals, for an example, cell phones, have receiving devices that can receive wireless signals transmitted by satellites and, based on global positioning system (GPS) measurements, can estimate the location of mobile terminals that have such receiving devices installed. The position estimation technique using this receiving device is a common basic technique that is important in various fields such as navigation, security, entertainment and the like. However, location estimation techniques based on GPS measurements require a long time of synchronization when activated, and since servers, such as server platforms that manage multiple mobile terminals, store latitude and longitude information of the mobile terminal, for the case of managing a large number of mobile users under the server requires massive storage space.
- [6] [Summary of the Invention]
- [7] The technical problem to be solved by the present invention is to provide a method and a device for storing a location of a mobile terminal, which can effectively reduce the storage space required for storing the location information of the mobile terminal.
- [8] In order to solve the above technical problem, another technical solution adopted by the

present invention is to provide a method for storing a location of a mobile terminal, where the method includes: acquiring location information of the mobile terminal sent by the mobile terminal; wherein the location area of the mobile terminal is located; according to a pre-set rule, wherein an area is divided to obtain a plurality of the location areas; the location information of the mobile terminal and the determined location area are save correspondingly.

- [9] In order to solve the above technical problem, another technical solution adopted by the present invention is to provide a location storage device for a mobile terminal, where the device includes: an acquisition module, configured to acquire a location of the mobile terminal sent by the mobile terminal; a positioning module, configured to determine, according to the location information of the mobile terminal acquired by the acquisition module, a positioning area where the mobile terminal is located; wherein the positioning module is configured to divide an area in advance according to a pre-set rule to obtain more positioning areas; and a saving module, configured to save the mobile terminal correspondingly to the positioning area determined by the positioning module.
- [10] Different from the prior technology, the present invention provides a method and device for storing location of a mobile terminal. After acquiring the location information of the mobile terminal, the server divides an area into a plurality of location areas in advance, and according to the location of the mobile terminal Information to determine a corresponding positioning area, thereby implementing positioning and location information saving for the mobile terminal. With the method taught by the examples of the present invention, the storage space required for storing the location information of the mobile terminal can be reduced.
- [11] [Brief Description]
- [12] Figure 1 is a schematic flowchart of a method for storing a location of a mobile terminal according to one example of the present invention;
- [13] Figure 2 is a schematic diagram of obtaining a plurality of positioning areas by dividing an area according to an example of the present invention;
- [14] Figure 3 is a schematic structural diagram of a location storage device of a mobile terminal according to an example of the present invention.
- [15] [Description of the Preferred Examples]
- [16] The present invention will be described in detail below with reference to the accompanying drawings and examples.
- [17] Referring to Figure 1, it is a schematic flowchart of a method for storing a location of a mobile terminal according to the present invention. The method flow shown in this

example includes:

- [18] Step S10, acquire location information of the mobile terminal sent by the mobile terminal.
- [19] Wherein, the location information of the mobile terminal is obtained by the mobile terminal.
- [20] Further, the location information of the mobile terminal obtained by the server is obtained by the mobile terminal based on the global positioning system. Of course, the mobile terminal can also obtain its own location information according to other positioning methods, for example, positioning by using a communication base station.
- [21] In step S10, the server acquires the location information of the mobile terminal in real time and updates the saved location area corresponding to the mobile terminal according to the current location information. In this example, the server is an e-commerce transaction platform, and the mobile terminal is a corresponding client.
- [22] Further, when obtaining the location information of the mobile terminal, the service may further update the location information of the mobile terminal: detecting whether the location area corresponding to the mobile terminal has been saved, and when it is determined that the location of the mobile terminal has been saved, determine the corresponding positioning area according to the currently received position information; if the determined positioning area is different from the previously stored positioning area, modify the positioning area of the mobile terminal to be the current positioning area accordingly, so as to realize the position of the mobile terminal Information update.
- [23] Similarly, when the server determines and saves the location area of the mobile terminal, the mobile terminal information (for an example, a name) may also be deleted from the location area according to the corresponding instruction so as to delete the location information of the mobile terminal.
- [24] Step S11, determine a positioning area where the mobile terminal is located according to the acquired location information of the mobile terminal.
- [25] Wherein, the server divides an area according to a pre-set rule to obtain multiple positioning areas.
- [26] In an example, according to latitude and longitude, the server divides an area to obtain a plurality of positioning areas.
- [27] Further, the area of each positioning area is the same.
- [28] In another example, the server divides a region evenly to obtain a plurality of positioning regions.
- [29] In another example, the positioning area is obtained by the server dividing the area according to the acquired number of the mobile terminals.

- [30] The area is an area within a predetermined range that is determined by the server according to the acquired location information of the mobile terminal.
- [31] Step S12, save the mobile terminal corresponding to the determined positioning area.
- [32] In step S12, the server divides an area into a plurality of positioning areas, and each of which has corresponding position information. When the location information of the mobile terminal is received, the location of the mobile terminal is stored in the corresponding location area, so as to determine the location of the mobile terminal in this area.
- [33] Please also refer to Figure 2, which is a schematic diagram of dividing a region for a server to obtain multiple positioning regions. For example, the server averages this area into 6x5 grids, with each grid corresponding to a targeting area. When the location information of the mobile terminal is received, the corresponding grid is determined according to the location information of the mobile terminal and is located in the grid, and the mobile terminal and the positioning area represented by the grid are saved at the same time to complete the location of the mobile terminal storage.
- [34] In the above solution, after obtaining the location information of the mobile terminal, the server divides an area into a plurality of location areas in advance, and determines the corresponding location area according to the location information of the mobile terminal so as to implement the location and location information of the mobile terminal save. With the present invention, the storage space required for the server to save the location information of the mobile terminal can be reduced.
- [35] Referring to Figure 3, it is a schematic structural diagram of a location storage device for a mobile terminal according to an example of the present invention. The device 30 shown in this example includes an acquisition module 31, a positioning module 32, and a saving module 33. In this example, the device 30 is a server running an e-commerce transaction platform. The mobile terminal is a corresponding client, and it may be an electronic device such as a smart phone or a tablet computer.
- [36] The acquisition module 31 is configured to obtain the location information of the mobile terminal sent by the mobile terminal.
- [37] Further, the location information of the mobile terminal acquired by the acquisition module 31 is obtained by the mobile terminal based on the global positioning system. Of course, the mobile terminal can also obtain its own location information according to other positioning methods, for example, positioning by using a communication base station.
- [38] Further, the acquisition module 31 acquires the location information of the mobile terminal in real time, so that the positioning module 32 updates the saved location area

corresponding to the mobile terminal according to the current location information.

- [39] The positioning module 32 is configured to determine, according to the location information of the mobile terminal acquired by the acquisition module 31, a positioning area where the mobile terminal is located. The positioning module 32 divides an area according to a pre-set rule in advance to obtain a plurality of positioning areas.
- [40] In an example, the positioning module 32 divides an area according to latitude and longitude to obtain a plurality of positioning areas. Further, the area of each positioning area is the same.
- [41] In another example, the positioning module 32 evenly divides a region to obtain a plurality of positioning regions.
- [42] In another example, the positioning area is obtained by the server dividing the area according to the acquired number of the mobile terminals.
- [43] The area is an area within a predetermined range that is determined by the positioning module 32 according to the acquired location information of the mobile terminal.
- [44] The saving module 33 saves the mobile terminal correspondingly to the positioning area determined by the positioning module.
- [45] In the above solution, the positioning module 32 previously divides an area into a plurality of positioning areas, each of which has corresponding position information. When the acquisition module 31 receives the location information of the mobile terminal, the positioning module 32 stores the location of the mobile terminal in the corresponding location area, so as to determine the location of the mobile terminal in this area.
- [46] In the above solution, after the acquisition module acquires the location information of the mobile terminal, the positioning module previously divides an area into a plurality of positioning areas and determines the corresponding positioning area according to the location information of the mobile terminal so as to implement the positioning of the mobile terminal and location information saved. With the present invention, the storage space required for the server to save the location information of the mobile terminal can be reduced.
- [47] In the above examples, the present invention has been exemplary described only, but various modifications to the present invention can be made by those skilled in the area after reading this patent application without departing from the spirit and scope of the present invention.

The Claims

- [Claim 1] A location storage method of a mobile terminal, wherein the method comprises:
Obtain location information of the mobile terminal sent by the mobile terminal;
Determining a positioning area where the mobile terminal is located according to the obtained location information of the mobile terminal; wherein, dividing an area according to a pre-set rule to obtain a plurality of the positioning areas; and
Save the mobile terminal corresponding to the determined positioning area.
- [Claim 2] According to Claim 1, the storing method of the said mobile terminal also include:
Acquiring the location information of the mobile terminal in real time and updating the saved positioning area corresponding to the mobile terminal according to the current location information.
- [Claim 3] The method according to the position storing method of the mobile terminal of Claim 1, wherein a plurality of the positioning areas are obtained by dividing the area according to latitude and longitude.
- [Claim 4] The method for storing a location of a mobile terminal according to Claim 1, wherein the area is divided equally to obtain a plurality of the positioning areas.
- [Claim 5] The method for storing a location of a mobile terminal according to any one of Claims 1 to 5, wherein the location area is obtained by dividing the area according to the acquired number of the mobile terminals .
- [Claim 6] The location storage method for a mobile terminal according to Claim 1, wherein the acquired location information of the mobile terminal is obtained by the mobile terminal based on a global positioning system.
- [Claim 7] The location storing method for a mobile terminal according to Claim 1, wherein the acquired location information of the mobile terminal is obtained by the mobile terminal based on a communication base station.
- [Claim 8] A location storage device of a mobile terminal, wherein the device comprises:
An acquisition module, configured to obtain location information of the mobile terminal sent by the mobile terminal;
A positioning module configured to determine a positioning area where the mobile terminal is located according to the location information of the mobile terminal acquired by the acquisition module; wherein the positioning module previously divides an area according to a pre-set rule to obtain a plurality of the positioning area; and

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A saving module, configured to save the mobile terminal correspondingly to the positioning area determined by the positioning module.

[Claim 9] The location storage device for a mobile terminal according to Claim 8, wherein the positioning module is further configured to divide the area in advance according to longitude and latitude to obtain a plurality of the positioning areas.

The location storage device for a mobile terminal according to Claim 8, wherein the positioning module is further configured to divide the area evenly in advance to obtain a plurality of the positioning areas.

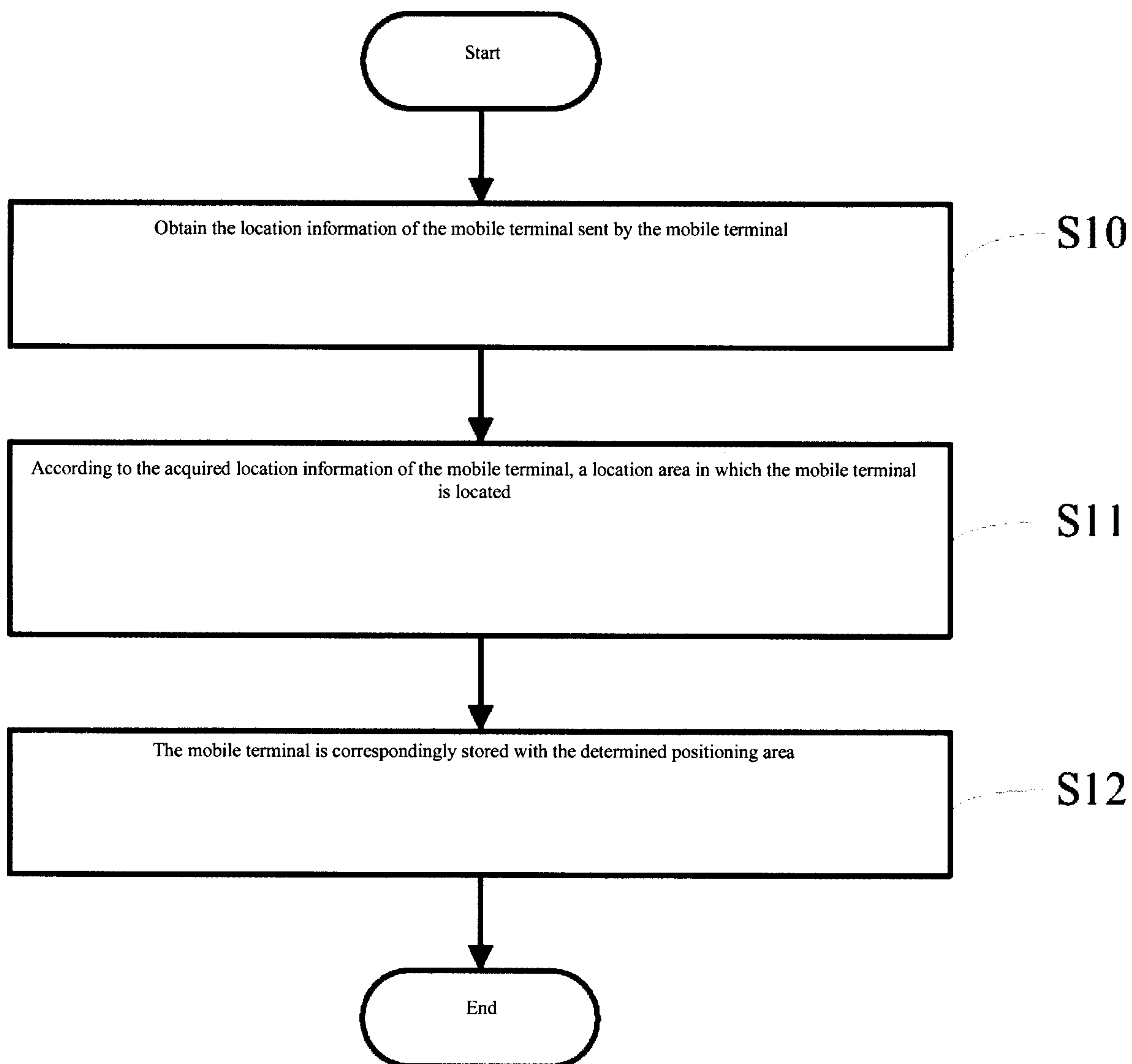


Figure 1

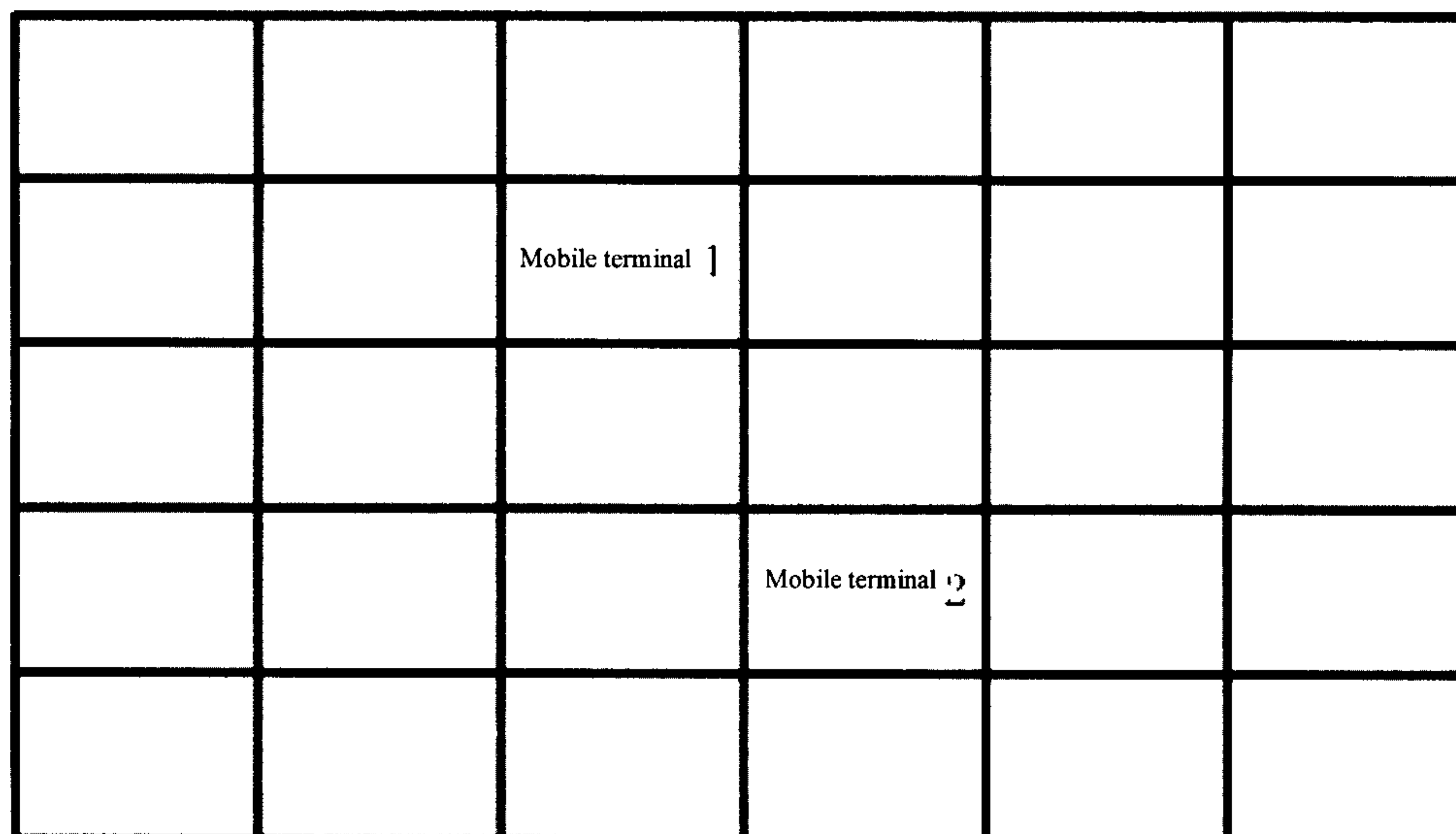


Figure 2

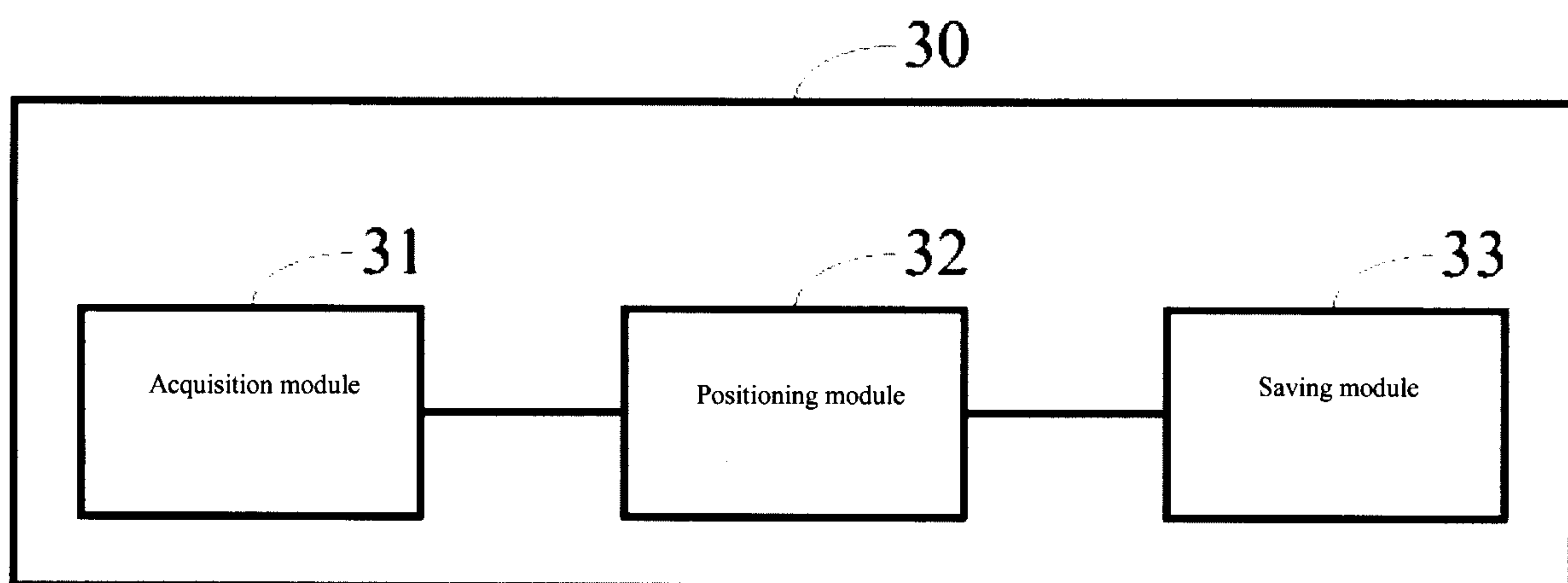
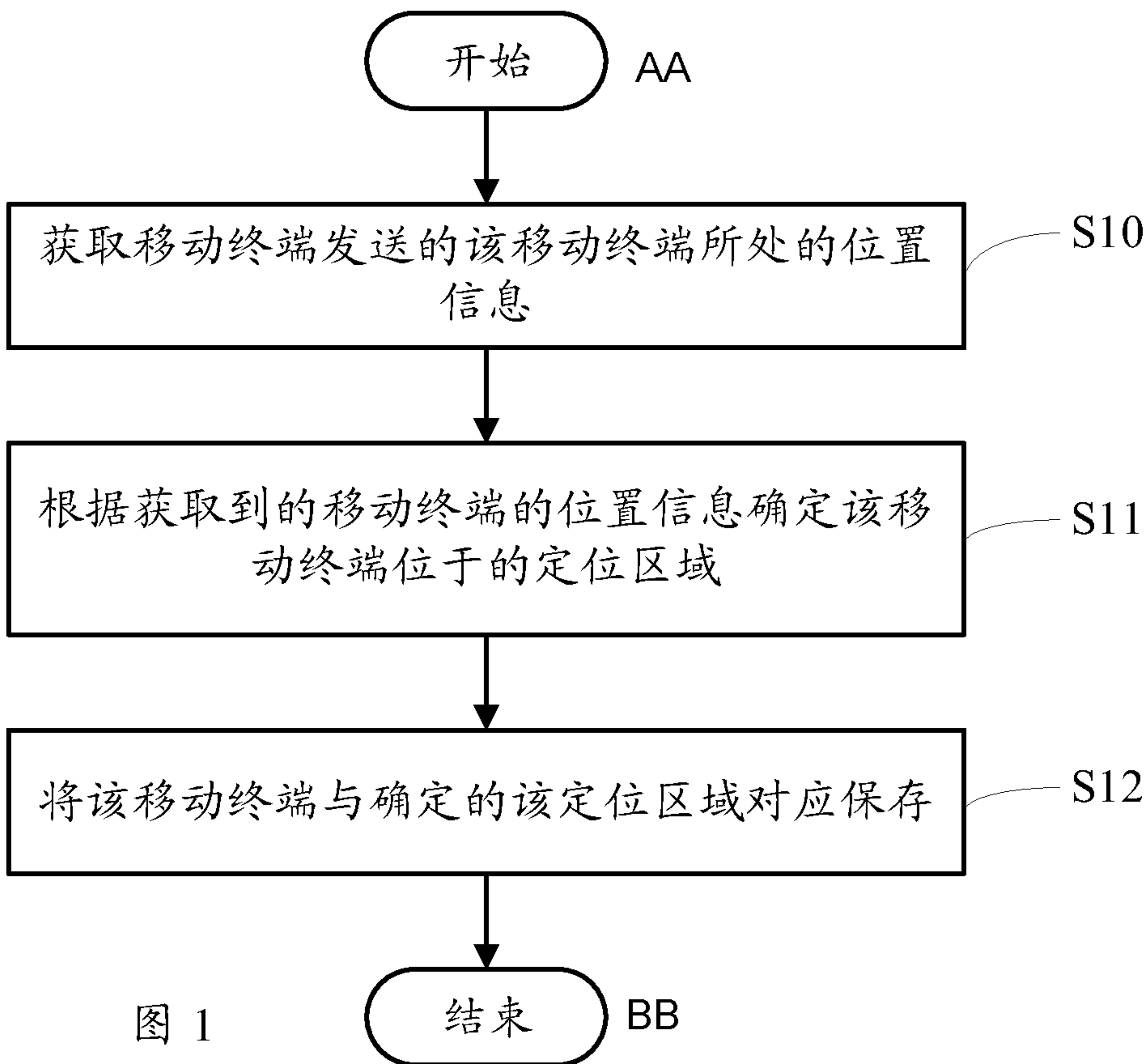


Figure 3



- S10 Obtain information sent by mobile terminal of position where mobile terminal is located
- S11 According to obtained position information of mobile terminal, determine positioning area in which mobile terminal is located
- S12 Correspondingly save mobile terminal and determined positioning area
- AA Start
- BB End