

## SYSTEM AND METHOD FOR CALLEE-PAID VOICE CALL

### Field of the Invention

**[0001]** The present invention generally relates to telecommunication technologies, and more particularly to a system for enabling a subscriber of the system to establish a callee-paid voice call at any time and place designated by the subscriber, and a method for establishing a callee-paid voice call at any time and place designated by the subscriber.

### Background of the Invention

**[0002]** Mobile phones provide their users with convenience of being connected at any time. When roaming is available, the users of mobile phones can be connected at any place. However, the roaming charges are very high, especially true for those who travel overseas.

**[0003]** One primitive way for the users to minimize the roaming charges is to use different phone numbers when they are in different places. However, using different phone numbers in different places makes it difficult for their friends or business partners to contact them.

**[0004]** In current market, some VoIP providers provide call-divert services for people who travel often. The whole concept of "call-divert" is that when a caller calls a callee's mobile phone, the call will be forward to whatever phone used by the callee at that moment without disclosing callee's current phone number. FIG 1 is a block diagram illustrating current call-divert service. The call-divert service provides local fix line divert numbers to the mobile phone users. When a call-divert service is activated and a caller (1) makes a call to the mobile phone (callee) that is verseas, the call is first diverted (2) to the designated local fix line number of the callee, and then the call-divert service provider (3) forwards the call to the overseas number over VoIP. To use such a call-divert service, a callee must divert his/her incoming mobile calls to a fix line number given by a VoIP provider. In addition, the callee must pay to service providers a "call-divert" fee that is normally equal to the outgoing call rate from the callee's mobile number to the fix line number given by VoIP provider. For countries with lots of phone prefixes, it is very

difficult to provide a “call-divert” service to cover all callees. To save cost, it is important for the callee to get the best matched fix line number from VoIP provider. In other words, “call-divert” service provider needs to be able to provide phone numbers covering different countries and areas as much as possible. This is the reason why most of “call-divert” service providers can only provide local “call-divert” service.

**[0005]** While the above-discussed methods enable the users to be connected, they fail to address the costs borne by a caller, so that when the caller is concerned about the cost of making a call to a callee, the callee may lose its opportunity of hearing from the caller. This is the case when a marketing representative desires his/her contacts/customers/clients to call him/her without any concern about any cost involved. The free phone numbers (e.g., 1-800 in the US) and collect calls provides call services for callers but they are not quite suitable for mobile phone users when roaming charges are of concerns.

**[0006]** US Pat 6,865,161 discloses a method and apparatus for establishing a voice call by way of an electronic mail message. More specifically, a first party generates an electronic token representing an offer to participate in a voice call which is transmitted to an offeree party in association with an email message. Upon receiving the electronic token, the offeree has the option of accepting the offer by activating the electronic token. When the offeree activates the electronic token, a first voice call is established with the offeree and a second voice call is established with a destination party identified by the offeror. Once the two calls have been established, they are bridged together to place the offeree in voice communication with the destination party. However, the requirement of generating an electronic token for each invitation is cumbersome for a user of the system when the user needs to frequently change their phone numbers and/or inform too many contacts. In addition, the electronic token generated has a fixed phone number of the callee and caller; the token will be useless if the offeree does not have access to the extension of the fixed phone number.

### **Summary of the Invention**

**[0007]** One embodiment of the present invention provides a method for establishing a callee-paid voice call between a callee and a caller. The method comprises

making available to the caller a bookmark, wherein the bookmark contains the callee's contact information that is maintained by a system having the capacity of providing the service of callee-paid voice call, and when the caller makes a call to the callee via the bookmark the callee will bear all the charges of the voice call between the callee and caller; and initiating the callee-paid voice call by the caller by activating the bookmark and providing a phone number by which the caller wish to conduct the voice call; wherein the system establishes a first call between the system and the caller, and a second call between the system and the callee, and wherein the callee's number is determined by the bookmark; thereby when the first and second calls have been established, they are bridged together, resulting in a callee-paid voice call.

**[0008]** In another embodiment, the method further comprises subscribing by the callee to the service provided by the system having the capacity of providing the service of callee-paid voice call; wherein upon subscription, the system assigns and maintains the bookmark according to the information provided by the callee. In a further embodiment of the method, during the step of subscribing, the system assigns a pre-paid credit account for the callee, and wherein the pre-paid credit account can be replenished by the callee at any time; thereby the callee can be contacted via the bookmark by any caller as long as its pre-paid credit account has enough fund. In a still further embodiment of the method, during the step of subscribing, the system assigns an account so that the caller will be charged according to any service agreement.

**[0009]** In another embodiment of the method, the bookmark contains a bookmark ID and a phone number; wherein the phone number is mapped to the bookmark ID so that the phone number may be not viewable to the caller. In a further embodiment of the method, the bookmark ID has an expiration date so that only within a time frame, the bookmark ID can be used. In another further embodiment of the method, the phone number can be mapped to more than one bookmark IDs. In another embodiment, the phone number associated with a specific bookmark ID can be changed by the callee without further notice to the caller.

**[0010]** In another embodiment of the method, the step of making a bookmark available to a caller comprises forwarding the bookmark to the caller (callee's contacts) in an electronic form. In a further embodiment of the method, the electronic form is email, SMS, wap push, and the like. In another embodiment of the method, the bookmark is

graphical icon embedded within the signature of an email message. In yet another embodiment of the method, the bookmark is a URL embedded within the signature of an email message. In another further embodiment of the method, the step of making a bookmark available to a caller comprises saving the bookmark into a contact database by the caller so that the caller can call the callee using the saved bookmark. In yet another further embodiment of the method, the contact database is a phone book, address book, or the like.

**[0011]** In another embodiment of the method, the system is operational in different languages automatically.

**[0012]** Another embodiment of the present invention provides a system for supporting the establishment of a callee-paid voice call between a callee and a caller. The system comprises an application server for assigning an account to the callee when the callee subscribes to the system, defining a bookmark for the account to the callee with a bookmark ID and a phone number provided by the callee, sending a page for a caller to provide his phone number when receiving a http request when a caller activates a bookmark sent by the callee, and outputting the phone numbers of the caller and callee; a voice server for receiving the phone numbers of the caller and callee and establishing the voice call between the caller and callee; and a VoIP provider for providing the VoIP connection between the caller and callee.

**[0013]** These and additional objectives and advantages of the invention will become apparent from the following detailed description of preferred embodiments thereof in connection with the accompanying drawings.

### **Brief Description of the Drawings**

**[0014]** Preferred embodiments according to the present invention will now be described with reference to the Figures, in which like reference numerals denote like elements.

**[0015]** FIG 1 is a block diagram illustrating a conventional "Call-Divert" service in prior arts.

[0016] FIG 2 is a flowchart illustrating a process by which a callee-paid voice call can be established in accordance with one embodiment of the present invention.

[0017] FIG 3 is a graphical illustration to show how a callee defines/sets his preferred phone number in accordance with one embodiment of the present invention.

[0018] FIG 4 is a graphical representation illustrating the bookmark embedded in an email signature in a received email in accordance with one embodiment of the present invention.

[0019] FIG 5 is a graphical representation illustrating the popup window which prompts the caller to key in his phone number in accordance with one embodiment of present invention.

[0020] FIG 6 illustrates the architecture of Global Follow Me System in accordance with one embodiment of the present invention.

[0021] FIG 7 illustrates three examples of the "Global Follow Me" bookmark.

### **Detailed Description of the Invention**

[0022] The present invention may be understood more readily by reference to the following detailed description of certain embodiments of the invention.

[0023] Throughout this application, where publications are referenced, the disclosures of these publications are hereby incorporated by reference, in their entireties, into this application in order to more fully describe the state of art to which this invention pertains.

[0024] The present invention will be described in detail with reference to the drawings. While specific examples and configurations are described for the illustration of the present invention, they are by no means to be intended to limit the present invention to the specific examples and configurations. In addition, in order not to obscure the principles of the present invention, many known features will not be described in detail.

[0025] Prior to detailed description of the system and method of the present invention, certain terms and designations are introduced herein. A "callee" is referring to a party which makes an offer of paying all charges if a call is made to him/her; a "caller" is referring to a party which receives the offer and initiates the call to the callee. The system of the present invention enables a user of the system to be contacted at any time and at any

place, being designated as “Global Follow Me” (GFM) system for the purposes of description. The service provided by the GFM system is called GFM service. The electronic notice showing the offer from the callee to the caller is denoted as GFM bookmark.

**[0026]** One embodiment of the present invention provides a method for establishing a callee-paid voice call by way of a GFM bookmark of a callee. Briefly, when a callee subscribes the GFM service from a GFM service provider with a GFM system, the GFM system assigns and maintains a GFM bookmark according to the information provided by the callee. Then, the callee can forward the GFM bookmark to a caller (callee’s contacts) over any channels such as email, SMS, wap push etc. Upon receiving the GFM bookmark, the caller can trigger the GFM service by clicking on the GFM bookmark link and providing his own phone number. A first voice call is established between the system and the caller and a second voice call is established with the callee by looking up the current preferred phone number of the callee in the GFM system. Once the two calls have been established, they are bridged together, resulting in a callee-paid voice call.

**[0027]** Now referring to FIG 2, there is provided a flowchart illustrating a process by which a callee-paid voice call can be established in accordance with one embodiment of the present invention. The process **20** requires subscription to the GFM service **21**. As required, a callee needs to subscribe the GFM service over Internet. It is preferably that the GFM system assigns a pre-paid credit account for each subscriber so that the service provider can provide such service to anyone regardless of its residences. Alternatively, the GFM service may be made available on other payment schemes. For example, the GFM service may be obtained by any residential phone service subscriber so that it can be billed monthly with other charges together.

**[0028]** During the signup of subscription of the GFM service, the callee can define/set his preferred phone number used in the GFM service **22**. FIG. 3 is a graphical illustration to show how a callee defines/sets his preferred phone number and bookmark ID in accordance with one embodiment of the present invention. As shown in FIG 3, the callee can specify a Bookmark ID (e.g., “sales” and “support”), which is mapped to the preferred telephone number (e.g., 6591234567). Such a mapping between bookmark ID and telephone number can be changed anytime without affecting the caller. That is to say,

by changing the mapped telephone number, a callee can change his/her preferred phone number at anytime. In certain circumstances, the created bookmark ID may have an expiration date and only within a time frame, this specific bookmark ID can be used. A callee can define more than one bookmark ID at the same time.

**[0029]** With a valid subscription, the callee will be assigned with a GFM bookmark, and can send the GFM bookmark to his/her contacts **23**. More details of the GFM bookmark will be described hereinafter with reference to FIG 7.

**[0030]** Once a caller receives the GFM bookmark **24**, the caller can save it for future usage (e.g., phone book, address book) or click on the GFM bookmark to initiate a call to the callee **25**. The GFM bookmark can be sent/received in many kinds of formats. For example, it could be embedded in an email signature or WAP push SMS. FIG 4 is a graphical representation illustrating the GFM bookmark embedded in an email signature in a received email in accordance with one embodiment of the present invention. In FIG 4, the GFM bookmark is exemplified by a "Call Me Now" icon embedded in an email signature.

**[0031]** When the caller wishes to make a call to the callee, the caller only needs to click to open the bookmark link; then the web browser on the caller's computer will send a HTTP GET request to the GFM system and retrieve the page shown FIG 5, which prompt the caller to key in his own phone number **26**. After the caller keys in his/her own phone number **27** and initiates the call (e.g., clicking on "Call Now" button as shown in FIG 5), at least three parameters are sent to the GFM system. The parameters include the account ID of the callee in the GFM system, the caller's phone number, and the bookmark ID. Other optional parameters can be "redirecturl". For callers in different locales like different countries and with different languages, this page will be in different languages automatically. When callee is on the phone, a notification such as "Busy status" will be shown to the caller.

**[0032]** When the GFM system captures such parameters, it will establish call to the caller **28**. And at the same time, the GFM system looks up the mapped phone number of the bookmark ID **29**. After the determination of the phone number to be used for the callee, the GFM system connects to this phone number **29**. Once the two calls are established, the GFM system bridges these two calls so that the caller can talk to the callee.

**[0033]** Another embodiment of the present invention provides a GFM system that supports the establishment of a callee-paid voice call. FIG 6 illustrates the functional architecture of the GFM System in accordance with one embodiment of the present invention. The GFM system **60** comprises an application server **61**, a voice server **62**, and a VoIP provider **63**. The GFM system **60** can be accessed by Internet. As mentioned earlier, a callee can subscribe to the GFM service and input their phone numbers and bookmark IDs via Internet.

**[0034]** Now there is provided a more detailed description of the functions of each component of the GFM system. When a caller clicks the GFM bookmark link (e.g., Call Me Now icon), a HTTP request will be sent to the application server **61**, and the application server **61** will return a HTML page shown in FIG 5 to the caller. The caller keys in his own phone number and submits the call request to the application server **61**. The application server performs GFM service logic analysis such as looking up the phone number mapped to the bookmark ID, payment issue, and the like, and then sends call requests to the voice server **62**. As commanded by the application server **61**, the voice server **62** connects to the caller over E1 PRI/T1 PRI or SIP or the like. Once the caller answers the call, the voice server **62** calls the callee. If both answer the call, the voice server bridges the calls so that caller can talk to the callee.

**[0035]** Now there is provided more details of the GFM bookmark used in the present invention. FIG 7 illustrates the format of the GFM bookmark. Preferably, the GFM bookmark is a HTTP URL link, which consists of protocol – HTTP, hostname – followme.mobmeeee.com, URL path to the service - /callme/gateway and the parameters which are used to pass the information including bookmark ID, account ID, and the like. In FIG 7, three typical bookmarks are presented.

**[0036]** (1)http://followme.mobmeeee.com/callme/gateway?accountid=6591234567

**[0037]** (2)http://followme.mobmeeee.com/callme/gateway?accountid=659123456  
&bookmarkid=sales

**[0038]** (3)http://followme.mobmeeee.com/callme/gateway?accountid=659123456  
&bookmarkid=sales&redirecturl=http://anotherwebpage

**[0039]** Once the application server **62** receives this bookmark request, it returns the following HTTP form back to the caller:

[0040]       < f o r m           a c t i o n = 'http://followme.mobmeee.com/callme/gateway'  
method='post'>

[0041]       <input type='text' name='destination' value=''/>

[0042]       <input type='hidden' name='accountid' value='6591234567' />

[0043]       <input type='hidden' name='bookmarkid' value='sales' />

[0044]       <input type='hidden' name='redirecturl' value='http://anotherwebpage' />

[0045]       <input type='submit' name='callme' value='call me' />

[0046]       </form>

[0047]       For the parameters of a bookmark (see FIG 7), only accountid is compulsory. If no bookmark ID is available, the GFM system will use the accountid as the phone number of the callee. The parameter “redirecturl” is used to redirect the browser.

[0048]       While the present invention has been described with reference to particular embodiments, it will be understood that the embodiments are illustrative and that the scopes of the appended claims are not so limited. Alternative embodiments of the present invention have been set forth by implication and will be apparent to those having ordinary skill in the art to which the present invention pertains. Such alternate embodiments are considered to be encompassed within the scope of one or more of the appended claims. Accordingly, the scope of the present invention is described by the appended claims and is supported by the foregoing description.

**CLAIMS**

What is claimed is:

1. A method for establishing a callee-paid voice call between a callee and a caller, said method comprising:

making available to a caller a bookmark, wherein the bookmark contains the callee's contact information that is maintained by a system having the capacity of providing the service of callee-paid voice call, and when the caller makes a call to the callee via the bookmark the callee will bear all the charges of the voice call between the callee and caller; and

initiating the callee-paid voice call by the caller by activating the bookmark and providing a phone number by which the caller wish to conduct the voice call;

wherein the system establishes a first call between the system and the caller, and a second call between the system and the callee, and wherein the callee's number is determined by the bookmark; thereby when the first and second calls have been established, they are bridged together, resulting in a callee-paid voice call.

2. The method of claim 1, further comprising:

subscribing by the callee to the service provided by the system having the capacity of providing the service of callee-paid voice call; wherein upon subscription, the system assigns and maintains the bookmark according to the information provided by the callee.

3. The method of claim 2, wherein during the step of subscribing, the system assigns a pre-paid credit account for the callee, and wherein the pre-paid credit account can be replenished by the callee at any time; thereby the callee can be contacted via the bookmark by any caller as long as its pre-paid credit account has enough fund.

4. The method of claim 2, wherein during the step of subscribing, the system assigns an account so that the caller will be charged according to any service agreement.

5. The method of claim 1, wherein the bookmark contains a bookmark ID and a phone number; wherein the phone number is mapped to the bookmark ID so that the phone number may be not viewable to the caller.
6. The method of claim 5, wherein the bookmark ID has an expiration date so that only within a time frame, the bookmark ID can be used.
7. The method of claim 5, wherein the phone number can be mapped to more than one bookmark IDs.
8. The method of claim 5, wherein the phone number mapped to the bookmark ID can be changed by the callee without further notice to the caller.
9. The method of claim 1, wherein the step of making a bookmark available to a caller comprises forwarding the bookmark to the caller (callee's contacts) in an electronic form.
10. The method of claim 9, wherein the electronic form is email, SMS, wap push, and the like.
11. The method of claim 10, wherein the bookmark is graphical icon embedded within the signature of an email message.
12. The method of claim 10, wherein the bookmark is a URL embedded within the signature of an email message.
13. The method of claim 9, wherein the step of making a bookmark available to a caller comprises saving the bookmark into a contact database by the caller so that the caller can call the callee using the saved bookmark.
14. The method of claim 13, wherein the contact database is a phone book, address book, or the like.

15. The method of claim 1, wherein the system is operational in different languages automatically.

16. A system for supporting the establishment of a callee-paid voice call between a callee and a caller, said system comprises:

- an application server for assigning an account to a callee when the callee subscribes to the system, defining a bookmark for the account to the callee with a bookmark ID and a phone number provided by the callee, sending a page for a caller to provide his phone number when receiving a http request when a caller activates a bookmark sent by the callee, and outputting the phone numbers of the caller and callee;

- a voice server for receiving the phone numbers of the caller and callee and establishing the voice call between the caller and callee; and

- a VoIP provider for providing the VoIP connection between the caller and callee.