telecommunication system **10** may accommodate any number of subscriber units **30**. Subscriber units **30** are preferably communication devices capable of receiving voice and/or data from satellites **20** and/or gateway **40**. By way of example, subscriber units **30** may be hand-held, mobile satellite cellular telephones adapted to transmit to and receive transmissions from satellites **20** and/or gateway **40**. Moreover, subscriber units **30** may be computers capable of sending email messages, video transmitters or facsimile machines just to name a few.

How subscriber units **30** physically transmit voice and/or data to and receive voice and/or data from satellites **20** is well known to those of ordinary skill in the art. In the preferred embodiment of the present invention, subscriber units **30** communicate with satellite **20** using a limited portion of the electromagnetic spectrum that is divided into numerous channels. The channels are preferably combinations of L-Band, K-Band and/or S-band frequency channels but may encompass Frequency Division Multiple Access (FDMA) and/or Time Division Multiple Access (TDMA) and/or Code Division Multiple Access (CDMA) communication or any combination thereof. Other methods may be used as known to those of ordinary skill in the art.

Gateway **40** communicates with and controls satellite **20**. There may be multiple gateways **40** located at different regions on the earth. For example, there may be one gateway **40** located in Honolulu, another located in Los Angeles and another in Washington, D.C. Another example is to have separate gateways **40** located in each country on the earth. Gateways **40** may provide satellite control commands to satellite **20** so that satellite **20** maintains its proper position in its orbit and performs other essential house-keeping tasks. Gateways **40** may be additionally responsible for receiving voice and/or data from satellite **20**. How gateway **40** physically communicates (e.g., spread spectrum) with satellites **20** and/or subscriber units **30** is well known to those of ordinary skill in the art.

A "gateway" **40** as referred to throughout this description includes home gateways, visited gateways, alternate home gateways, alternate visited gateway, ground stations, ground control stations, base stations, earth terminals or any other term representing a facility that determines which satellite or base station should service a particular subscriber unit.

FIG. **2** shows a general view of the components of satellite **20** and/or gateway **40** according to a preferred embodiment of the present invention. For purposes of this description, reference will be made to satellite **20**, although most of the components are similar to those in gateway **40**. Satellite **20** comprises at least the following components: antenna **21**, transceiver **22**, processor **23** and memory **24**. There may be other components of satellite **20** that are not shown which are necessary for operating a satellite but are not important to the present invention. These other components are well known to those of ordinary skill in the art, including for example, solar arrays and fuel propulsion system in satellites **20**, or switches and network routers in gateways **40**. Moreover, there may be more than one of the components in satellite **20**, such as multiple processors **23**, for example.

Antenna **21** of satellite **20** is coupled to transceiver **22**, while transceiver **22**, processor **23** and memory **24** are inter-coupled to each other. Transceiver **22** is able to transmit or receive data or voice, and may be for example, a modem. Transceiver **22** is also capable of receiving data from subscriber units **30** and/or gateway **40**. Processor **23**, via a software program controls the operation of satellite **20** and the other components of satellite **20**. Memory **24** stores part of the software executable version of method **100** (described below) and other software programs. Antenna **21**, transceiver **22**, processor **23** and memory **24** are all well known to those of ordinary skill in the art.

FIG. **3** shows a flowchart of method **100** for assigning subscriber units to visited gateways according to a preferred embodiment of the present invention. Method **100** is a software program that is executed by a number of network components (e.g., currently serving satellite, home gateway, alternate home gateway (if needed), visited gateway and alternate visited gateway (if needed)) in the preferred embodiment. The network components may execute other software programs as well.

Method **100** begins in step **102** when a subscriber unit accesses the network **10** and sends a connection request to a satellite currently serving it. The connection request includes information about the subscriber unit, including for example, a location of the subscriber unit on earth, a home gateway identification (ID) and a priority of the call, such as whether the call is an emergency call.

The currently serving satellite determines in step **104** whether the home gateway is capable of handling the connection request. The determination is based on whether the home gateway is down, overloaded or some other factor that makes it incapable of handling the connection request. The status of each gateway, including the home gateway, is stored in each satellite and is periodically updated in one or more satellites whenever the status of a gateway changes.

If the home gateway is incapable of servicing the connection request, the currently serving satellite determines in step **106** which alternate home gateway will service the connection request. The currently serving satellite chooses an alternate home gateway from an alternate list of home gateways. It is preferred that there be at least one alternate home gateway for each home gateway. However, in alternative embodiments, there may be no alternate home gateways due to political considerations or nationalist concerns, for example; however, the number of home gateways may be equal to the total number of gateways in the system. In the preferred embodiment, the currently serving satellite selects an alternate home gateway based on which alternate home gateway is the next best choice in the list of alternate home gateways. The next best choice is based on whether the alternate home gateway has the capability to handle the call. If the currently serving satellite knows that the alternate home gateway is also incapable of servicing the connection request for any reason, the currently serving satellite may choose another alternate home gateway from the list of alternate home gateways.

In the preferred embodiment, an alternate home gateway will be chosen in step **106**. However, in an alternative embodiment, if an alternate home gateway is not chosen (because no other gateway can handle the request), method **100** skips to step **124** and rejects the connection request. This step may involve sending a message to the subscriber unit that indicates to the subscriber unit that the connection request is rejected.

If an alternate home gateway is chosen by the currently serving satellite, the alternate home gateway ID is substituted for the original home gateway ID in the connection request. The currently serving satellite and the other satellites in the network use the home gateway ID contained in the connection request to route the connection request to the subscriber unit's home gateway.

If the home gateway is capable of handling the connection request as determined in step **104** or an alternative home