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	Filing Date		2011-12-05
	First Named Inventor	Wood, et al.	
	Art Unit		
	Examiner Name		
	Attorney Docket Number	ENIT 9834C2	

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	8	6219696	B1	2001-04-17	Wynblatt, et al.	

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	19	6751455	B1	2004-06-15	Acampora	

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	2	10336127	JP		1998-12-18			<input type="checkbox"/>
	3	441719	JP		1999-09-28			<input type="checkbox"/>
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	5	2000165826	JP		2000-06-16			<input type="checkbox"/>

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Signature	/David L. Howard/	Date (YYYY-MM-DD)	2011-12-05
Name/Print	David L. Howard	Registration Number	41502

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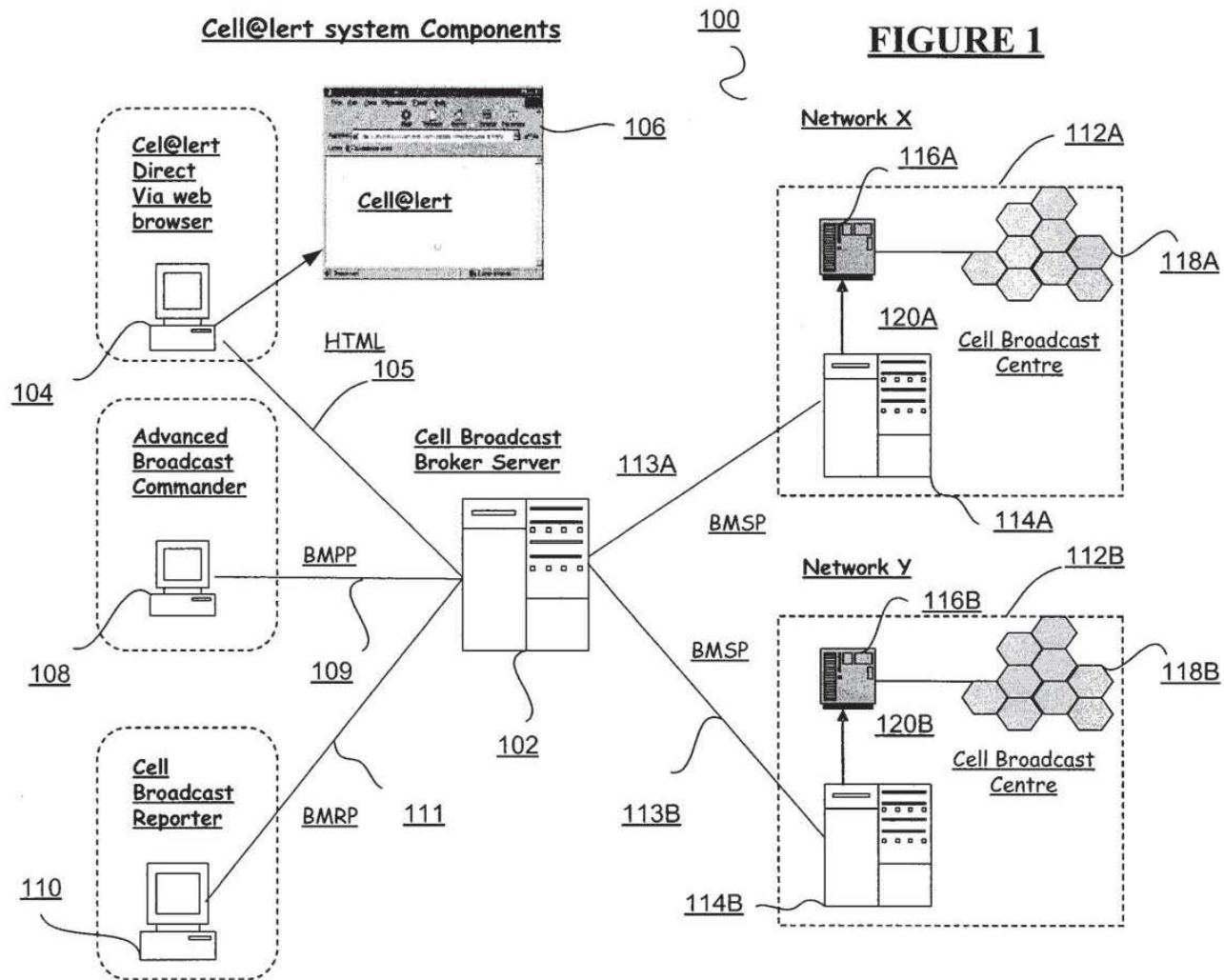
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9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.



ABSTRACT

A message processing system and method for providing a broadcast message to a plurality of user devices located within a geographically defined broadcast target area, the system including a broadcast service bureau communicatively coupled for receiving from one of a plurality of coupled broadcast agent access systems providing a broadcast request from an originating broadcast agent associated one broadcast agent message origination systems. The received broadcast request includes a broadcast agent identification, the geographically defined broadcast target area, and a broadcast message, the broadcast service bureau configured for verifying the broadcast request as a function of the broadcast agent identification including an authority of the originating broadcast agent to send the broadcast message to the broadcast target area. The broadcast service bureau processing the verified broadcast request for transmission to one or more broadcast message networks providing broadcast message alerting service to at least a portion of the broadcast target area.

Cell@lert system Components

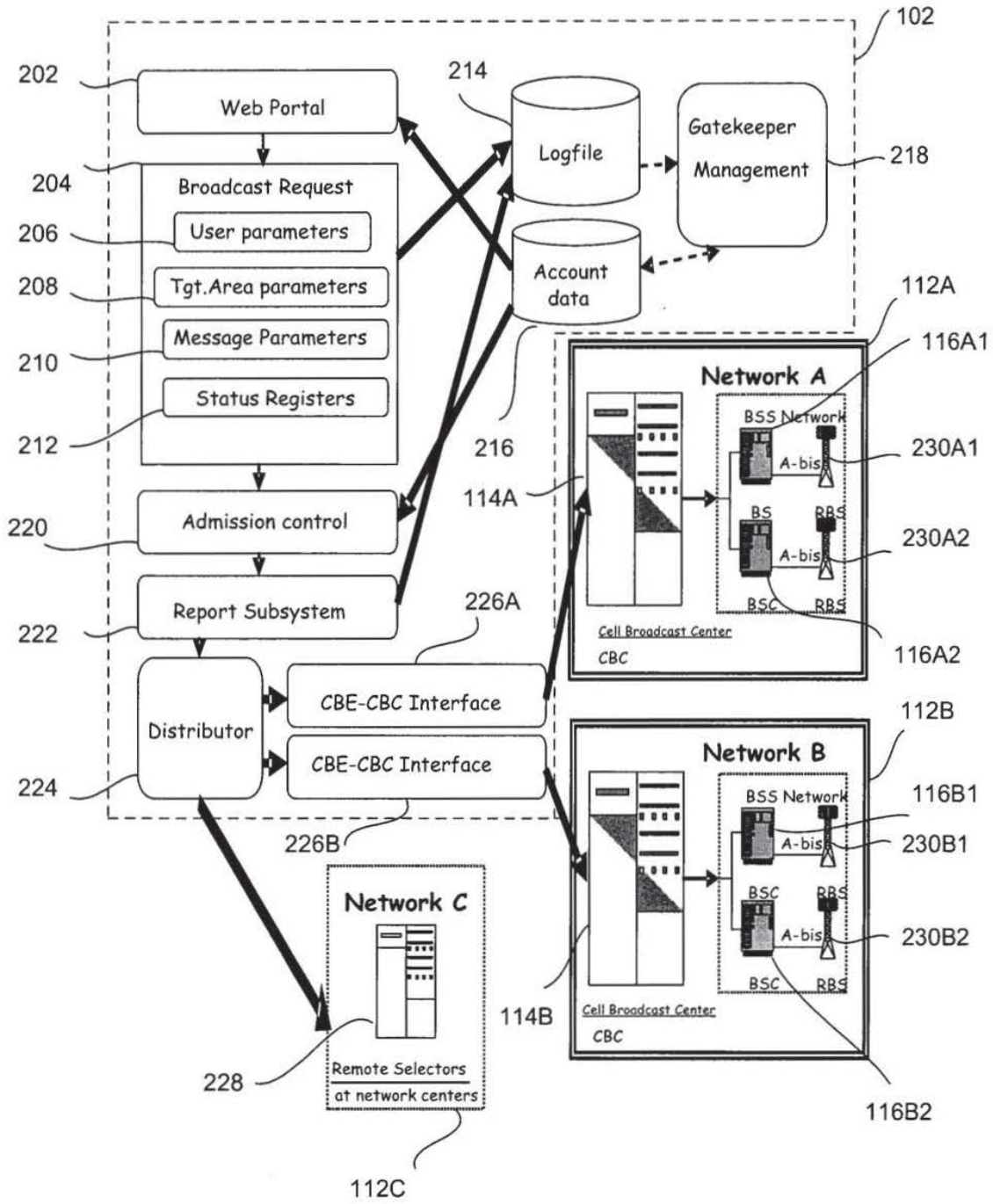


**FIGURE 1**

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**FIGURE 2**

**Cell Broadcast Broker V2. (CBE)**



**FIGURE 3**

**CBB Admission Control Algorithm**

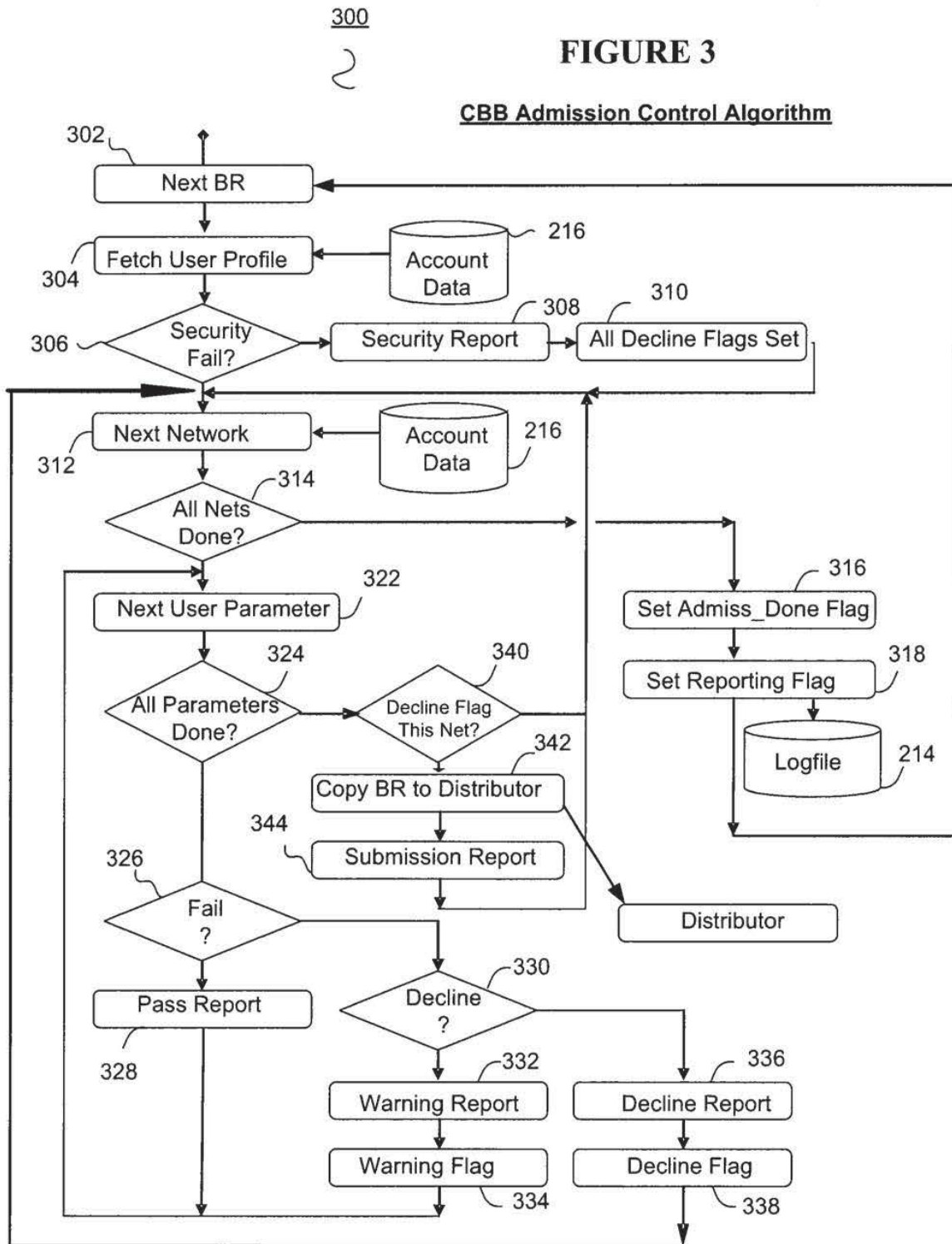
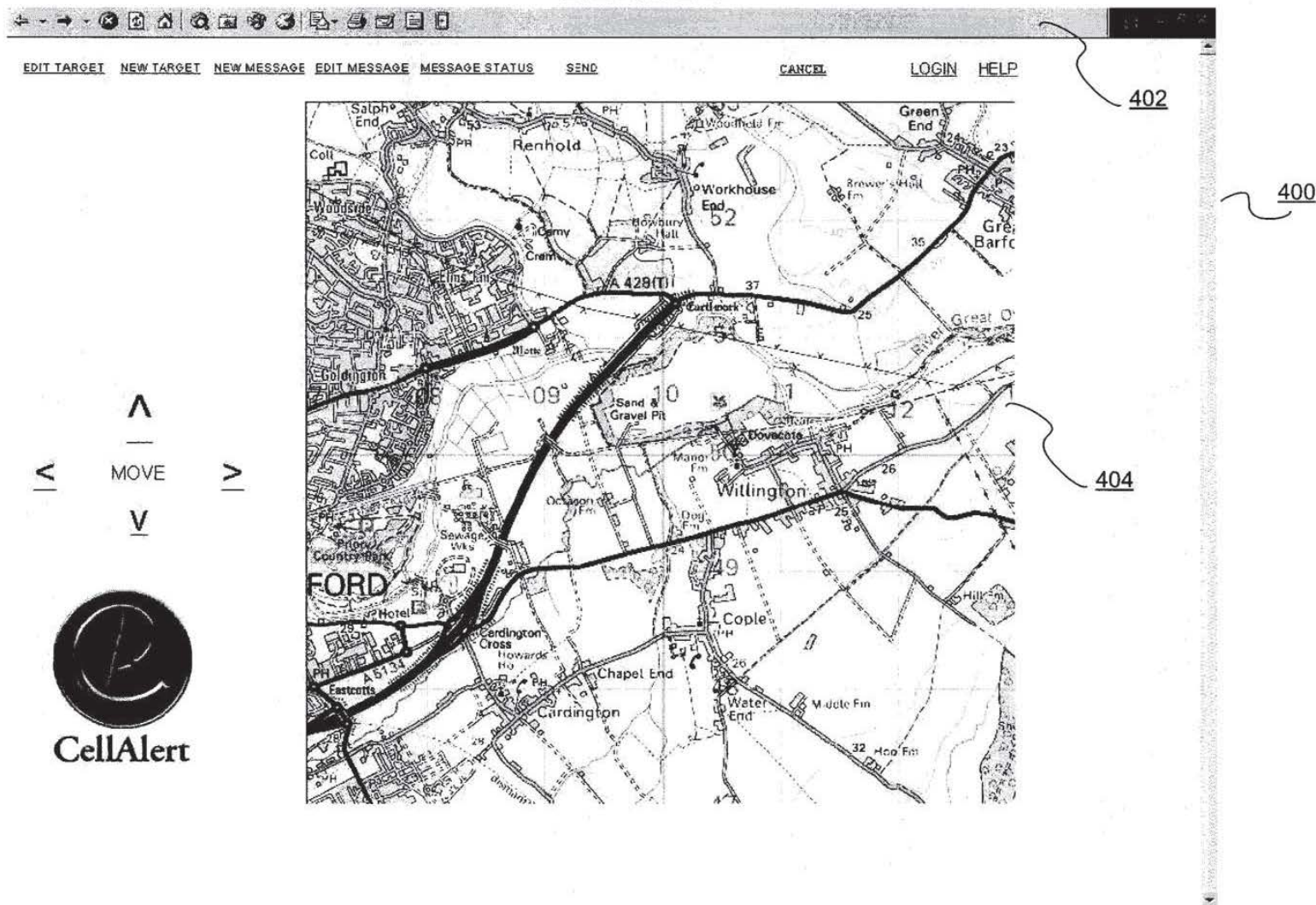
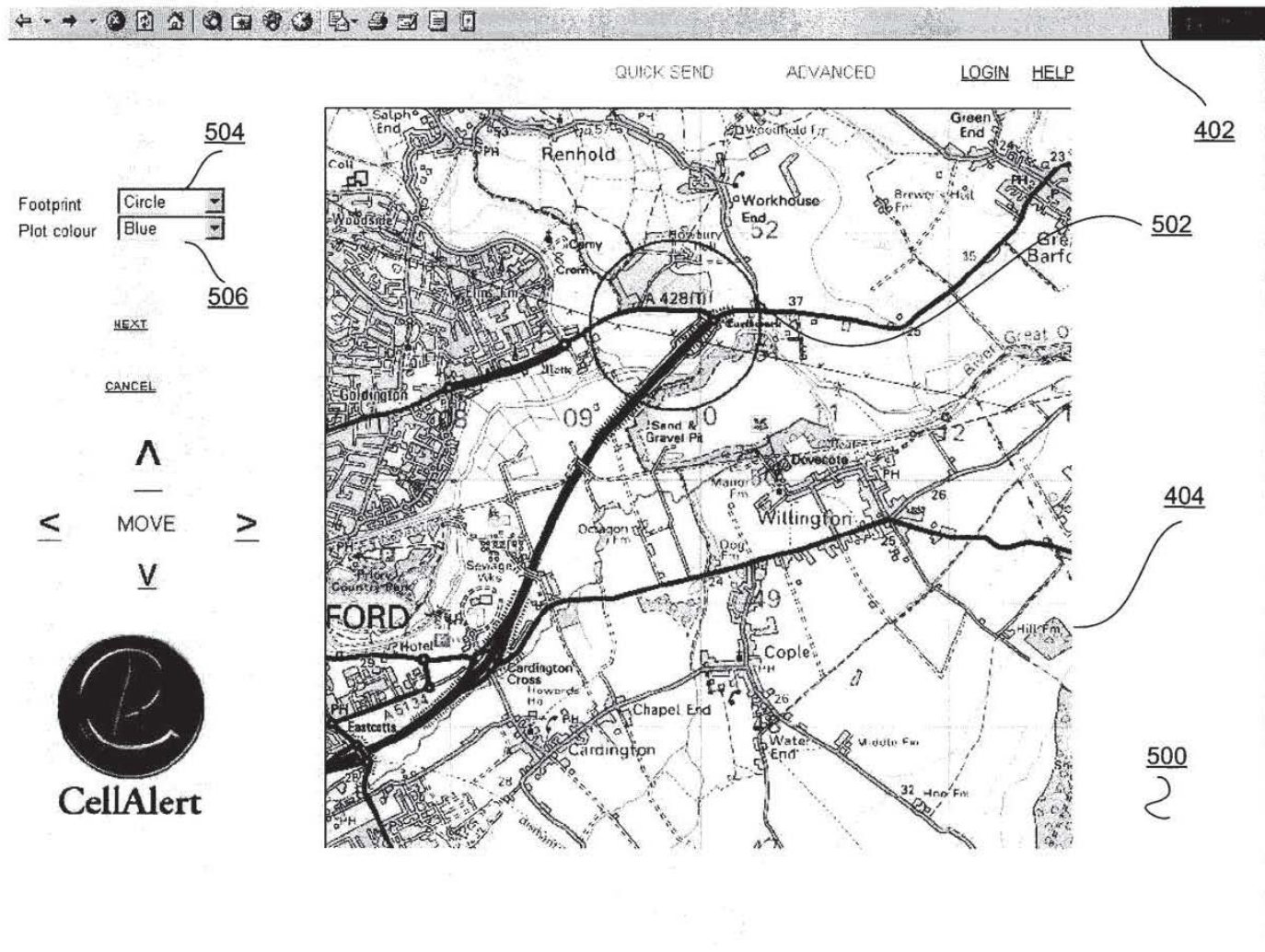


FIGURE 4







**FIGURE 5**

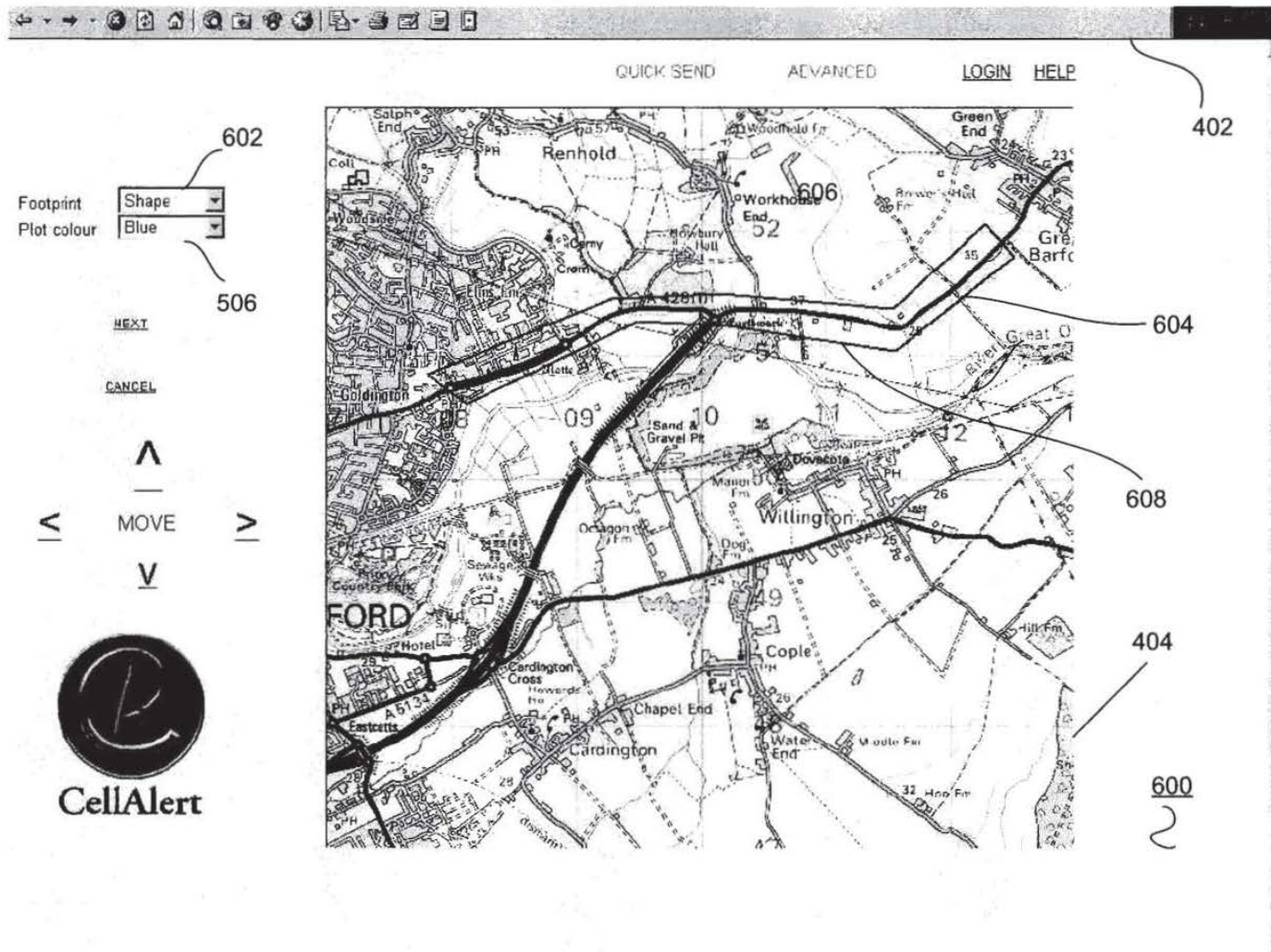
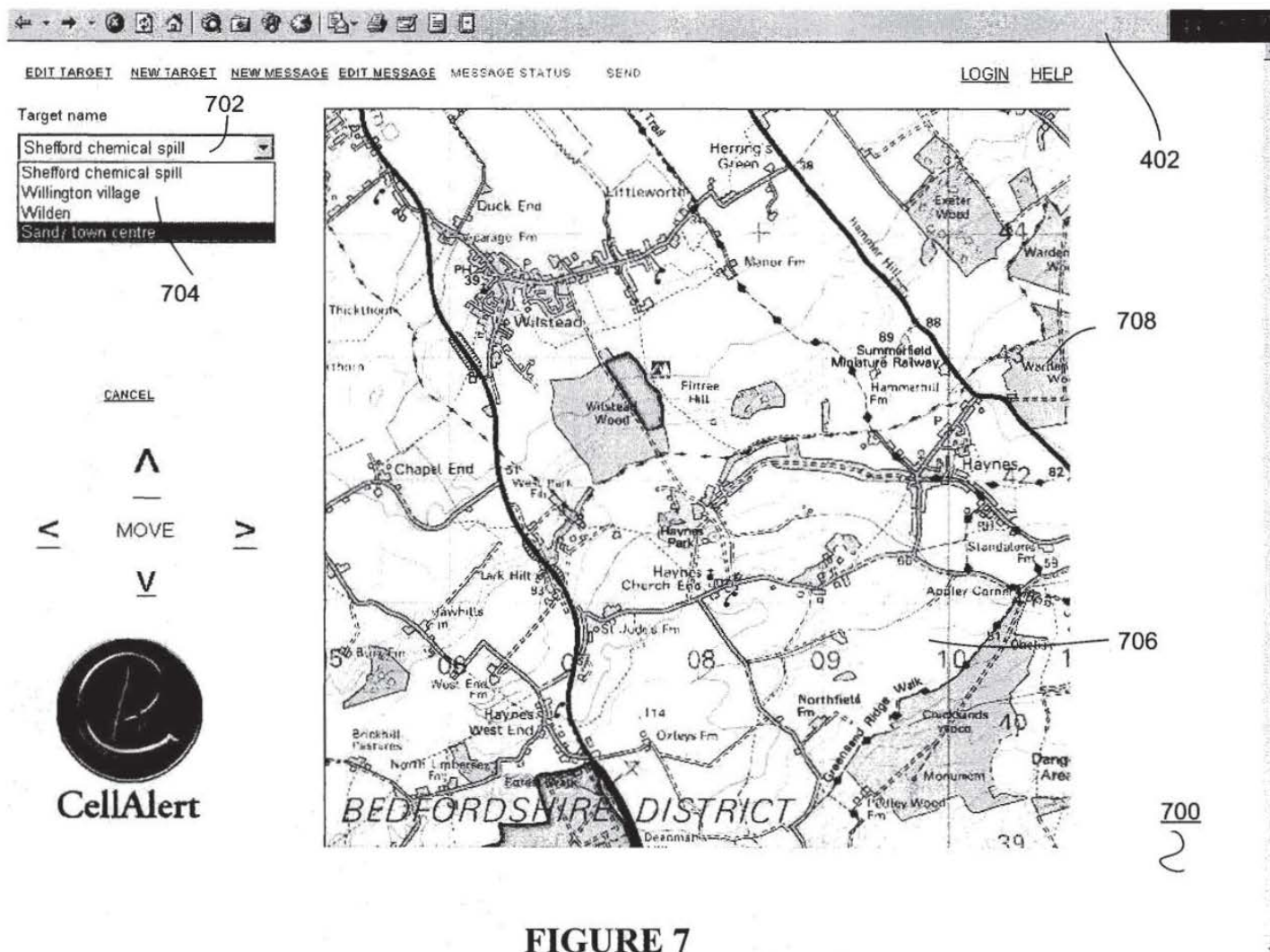


FIGURE 6





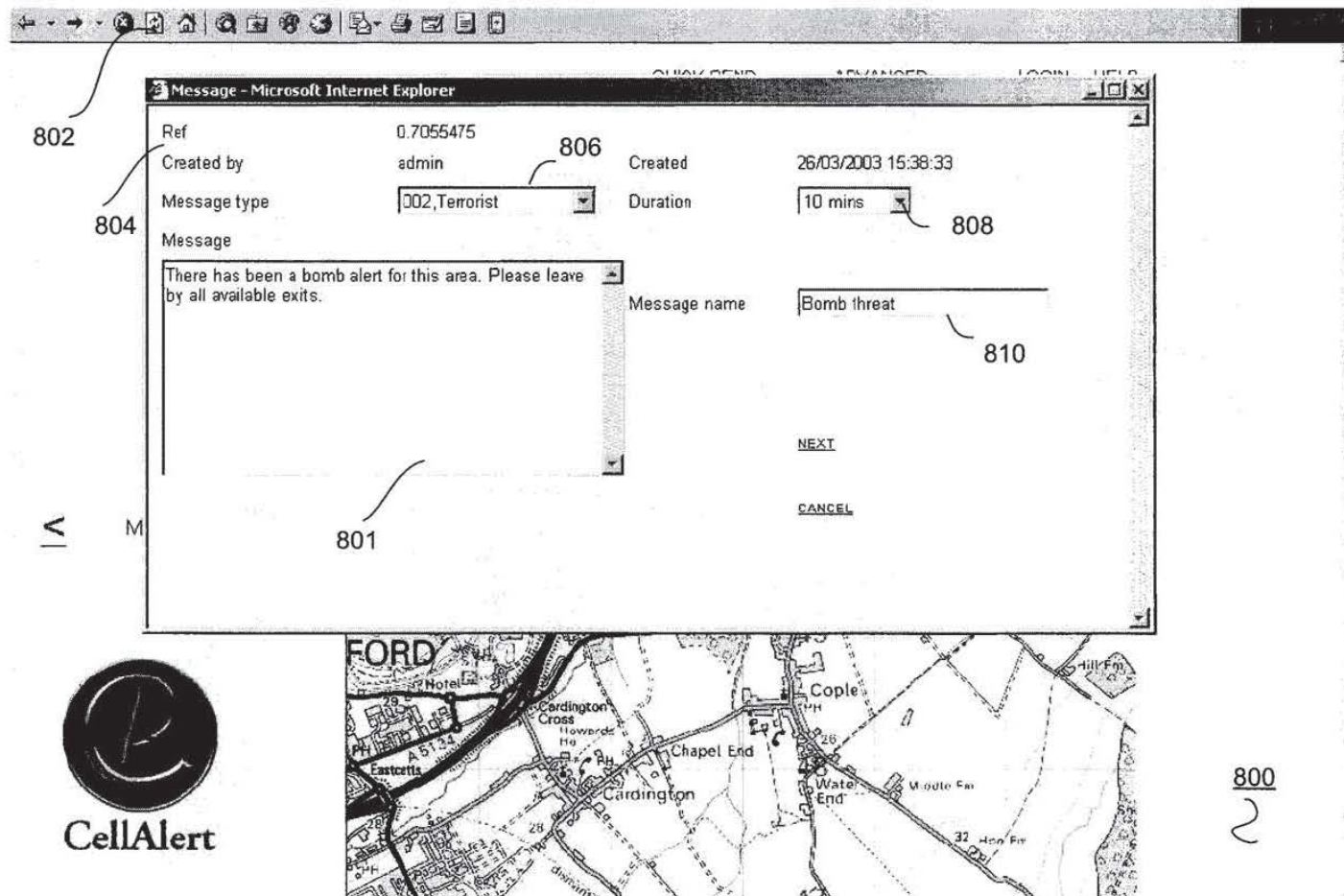


FIGURE 8

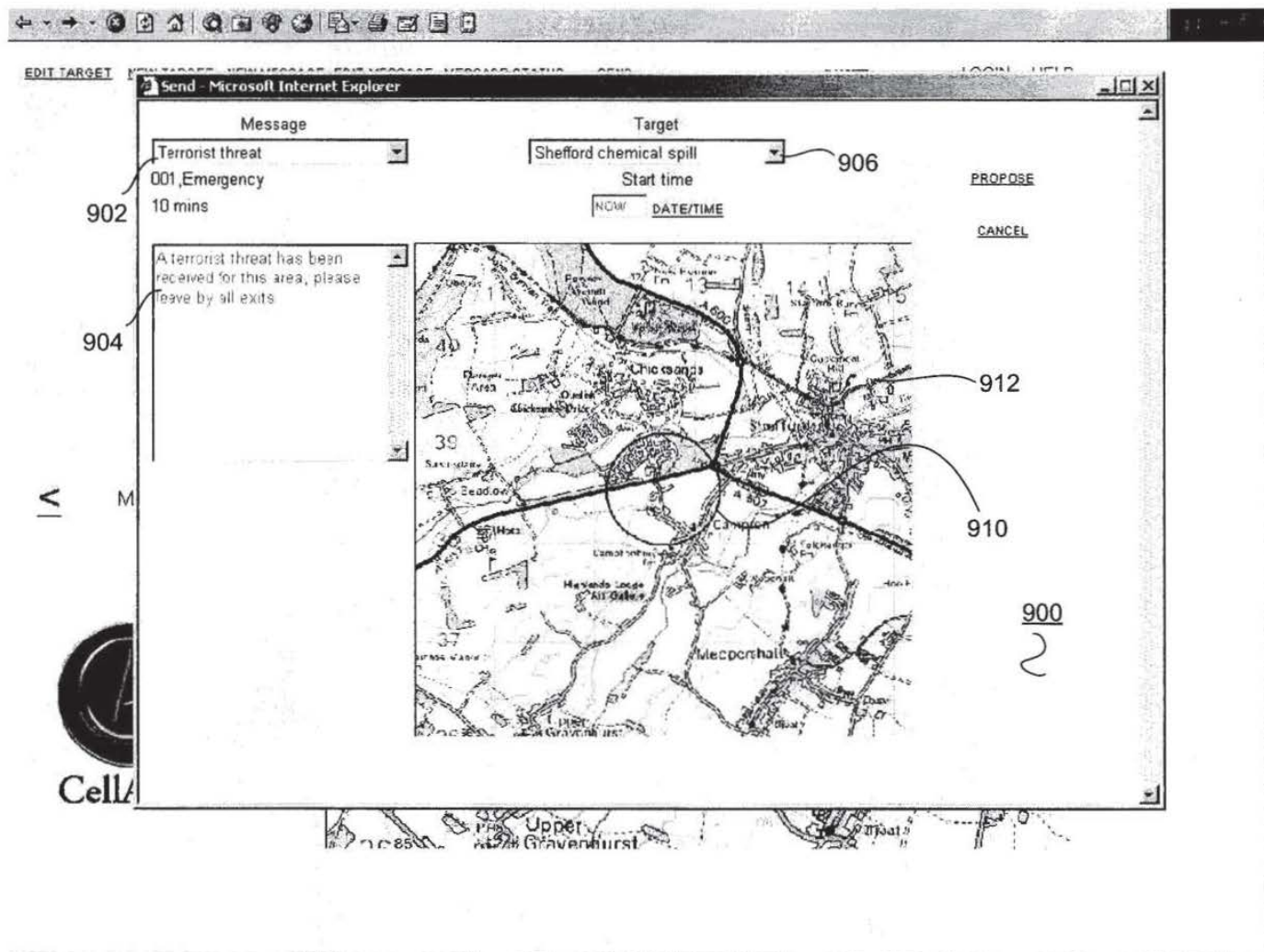


FIGURE 9



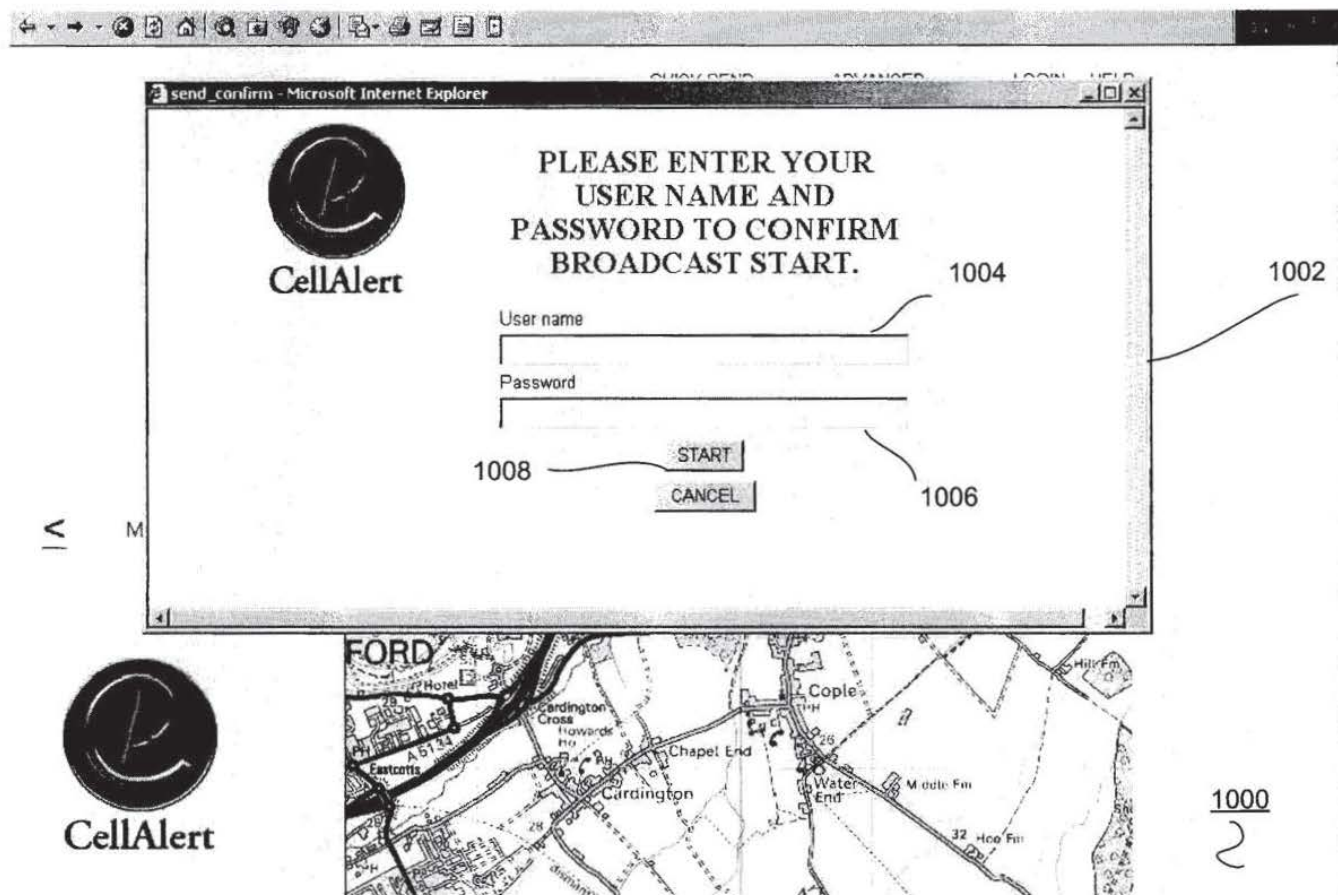
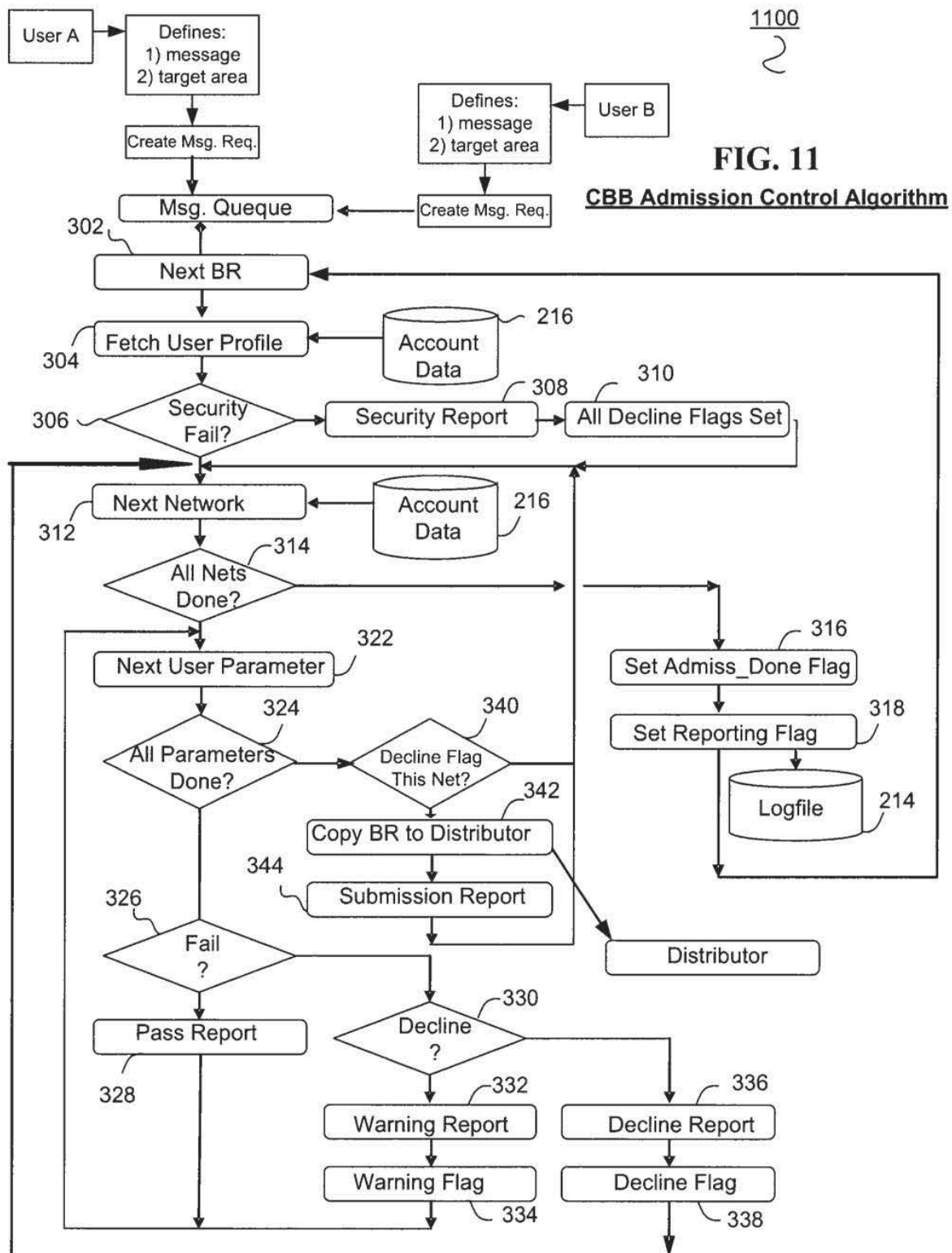


FIGURE 10



CLAIMS

What is claimed is:

1. A message alert broadcast broker system for providing a broadcast message to a plurality of user devices located within a geographically defined broadcast target area, the system comprising:

a broadcast service bureau communicatively coupled for receiving from one of a plurality of coupled broadcast agent access systems providing a broadcast request from an originating broadcast agent associated one broadcast agent message origination systems, the broadcast request including a broadcast agent identification, the geographically defined broadcast target area, and a broadcast message, the broadcast service bureau configured for verifying the broadcast request as a function of the broadcast agent identification including an authority of the originating broadcast agent to send the broadcast message to the broadcast target area,

the broadcast service bureau processing the verified broadcast request for transmission to one or more broadcast message networks providing broadcast message alerting service to at least a portion of the broadcast target area.

2. The system of claim 1 wherein the broadcast service bureau is configured for receiving the broadcast request, and identifying the one or more broadcast message networks providing message alerting service to at least a portion of the broadcast target area.

3. The system of claim 2 wherein the one or more message broadcast message networks includes at least one selected from the group consisting of wireless mobile carrier network, wireless Wi-Fi network, digital private radio systems operator network, private radio system network, internet service provider networks, wireline telecommunication network, satellite network, CATV network, radio system, and television system.

4. The system of claim 1 wherein the broadcast service bureau further includes a distributor receiving the broadcast message and broadcast target area and mapping the broadcast target area to determine which one or more of the broadcast message networks from among a plurality of broadcast message networks has a broadcast message distribution system serving at least a portion of the broadcast target area, and wherein the distributor identifies the one or more broadcast message networks.

5. The system of claim 4 wherein the one or more message broadcast message networks includes at least one selected from the group consisting of wireless mobile carrier network, wireless Wi-Fi network, digital private radio systems operator network, private radio system network, internet service provider networks, wireline telecommunication network, satellite network, CATV network, radio system, and television system.

6. The system of claim 1 wherein the broadcast service bureau includes an output interface for coupling to one of the one or more broadcast message networks providing message alerting service to at least a portion of the broadcast target area.

7. The system of claim 6 wherein the output interface is configured to interface with a message broadcast message network selected from the group consisting of wireless mobile carrier network, wireless Wi-Fi network, digital private radio systems operator network, private radio system network, internet service provider networks, wireline telecommunication network, satellite network, CATV network, radio system, and television system.

8. The system of claim 1 wherein the broadcast service bureau verifies an authority of the broadcast agent to transmit the broadcast message to the broadcast target area as a function of a broadcast message jurisdiction stored in the broadcast service bureau for the originating broadcast agent, the verifying ensuring that the broadcast message jurisdiction of the originating broadcast agent includes the broadcast target area.

9. The system of claim 6 wherein the output interface is configured for interfacing with a carrier broadcast center of a wireless mobile carrier network, the carrier broadcast center converting the broadcast target area to network addresses of wireless transmission devices serving the broadcast target area including determining particular wireless network transmission devices serving at least a portion of the broadcast target area, and identifying the network addresses for each determined particular wireless transmission device and transmitting the broadcast message to the network addresses of the particular wireless transmission devices for wireless transmission by the particular wireless transmission devices to user receiving devices.

10. The system of claim 9 wherein the wireless transmission devices serving the broadcast target area and the particular wireless transmission devices are wireless cellular network transmitters and each of the wireless cellular network transmitters has a cell id network address and the identified network addresses are cell id network addresses.

11. The system of claim 9 wherein the wireless transmission devices serving the broadcast target area and the particular wireless transmission devices are Wi-Fi network transmitters, each of the Wi-Fi network transmitters having a Wi-Fi id network address, wherein the identified network addresses are Wi-Fi id network addresses.

12. The system of claim 1 wherein the broadcast request includes a message type identifying the type of message of the broadcast message request.

13. The system of claim 1 wherein the broadcast request includes a broadcast message that is an alerting system administrative message selected from the group consisting of:  
message recall, language identifier, network selector, and request for message progress status.



14. The system of claim 1 wherein the broadcast message of the broadcast request is a first broadcast message, the first broadcast message being in a first language, and wherein the broadcast request includes a second broadcast message in a second language, and wherein the broadcast service bureau is configured to transmit the broadcast request including at least one of the first broadcast message in the first language and the second broadcast message in the second language.

15. The system of claim 1 wherein the broadcast message is a multimedia message.

16. The system of claim 15 wherein the multimedia message includes at least one of a photograph and a map.

17. The system of claim 1 wherein the broadcast request includes a message type.

18. The system of claim 17 wherein the broadcast service bureau is coupled to a plurality of broadcast message networks, and is configured to select the one or more broadcast message networks from among the plurality of coupled broadcast message networks responsive to at least of the message type and the broadcast target area.

19. A method of public service broadcast messaging to a broadcast target area, the method comprising:

receiving over an input interface a broadcast request including a broadcast agent identification, a geographically defined broadcast target area, and a broadcast message from one of a plurality of coupled broadcast agent message origination systems;

verifying an authority of the broadcast agent identification including an authority of the originating broadcast agent to send the broadcast message to the broadcast target area; and

ENIT 9834C2

transmitting the broadcast message over an output interface to one or more coupled broadcast message networks providing broadcast message alerting service to at least a portion of the broadcast target area.

20. The method of claim 19 wherein the broadcast request includes a message type, further comprising:

selecting the one or more broadcast message networks from among the plurality of coupled broadcast message networks responsive to at least of the message type and the broadcast target area.

**BROADCAST ALERTING MESSAGE AGGREGATOR/GATEWAY  
SYSTEM AND METHOD**

**CROSS REFERENCE TO RELATED APPLICATIONS**

**[0001]** This application is a continuation of U.S. Application Serial No. 12/559,405, filed September 14, 2009, which is now U.S. Patent 8,073,903; which was a continuation of U.S. Application Serial No. 11/057,704, filed February 14, 2005, which is now U.S. Patent No. 7,752,259 (issued on July 6, 2010); which was based on Provisional U.S. Application Serial No. 60/544,739, filed February 13, 2004, the entire disclosures of which are incorporated herein by reference.

**FIELD**

**[0002]** The present disclosure relates to message broadcast systems and in particular location-specific message broadcasting aggregator and gateways.

**BACKGROUND**

**[0003]** With the events of 9/11, there has been increased concern with the ability of present systems for providing public service broadcasting of messages and warnings to the public. Existing public service warning systems are antiquated and provide only limited access to the public who may be in need of knowing of potential emergencies or danger. Additionally, existing systems do not provide for location-based notification or broadcasting.

**[0004]** As such, there is a need for an improved method and system for providing timely information to the public related to potential hazards affecting them. One suggested solution is the utilization of the subscription-based Short Message Service (SMS) messaging capability for mass messaging using mobile telephones and compatible devices. However, SMS systems and technology have significant technical limitations and experience with such systems has been disappointing due to significant delays in the delivery of SMS messages and negative impacts to the networks due to congestion.

**[0005]** Short Message Service (SMS) is only offered or available on a limited basis. This is due to the limited technical and network support for the service and is also

due to the service being offered by Mobile Service Providers and wireless network providers on a subscription basis. As such, use of the SMS service capability for emergency broadcasting is very limited.

**[0006]** Additionally, the use of SMS technology for broadcasting requires enormous network infrastructure utilization. A telecommunication system can suffer from congestion, not only in its voice traffic channels, but also in its narrow-band data channels as are used for the SMS service. To send an SMS message, network components are utilized to provide an SMS message call set up for each individual SMS message recipient. In order to send a single SMS message, all SMS message call processing procedures have to be repeated for each and every message, one by one, for all intended recipients. A single SMS message requires signaling and processor capacity and utilization similar to that required to establish a voice call. As such, the impact on network resources for broadcasting SMS messages is the same as having thousands of phone users attempt to initiate a voice call at the same time. Telecommunication networks are not designed or deployed to handle such high levels of simultaneous call attempts.

**[0007]** When an SMS message is transmitted, the SMS message is signaled to an SMS center of the telecommunication service provider. The SMS center acknowledges each and every requested SMS message individually and attempts to deliver the SMS message through an interrogation of the Home Location Register (HLR) of the telecommunication service. An HLR is a data base which registers or keeps track of the presence of a mobile unit user within the HLR's defined serving network. The HLR queries the database and determines whether the intended SMS message recipient is currently attached to the network and if so, to which network switch the user is attached. The HLR is queried using the telecommunication signaling network.

**[0008]** If an intended user is located or attached to a switch in the telecommunication service provider's network, the particular network switch is signaled over the telecommunications signaling network to set up the SMS message call. That serving network switch of the mobile carrier initiates a query or message attempt to every cell in the location area where the intended user's mobile unit was last known to be operating. If the intended recipient is located in the particular cell area, the mobile unit is

paged. As such, potentially thousand of cells are queried in order to determine the presence of an intended mobile unit. Each queried cell requires paging and calling capacity resources for each mobile unit which is attempted to be paged. In some cases, if the mobile unit does not reply, the whole Mobile Service Carrier (MSC) area is paged which in many instances requires the paging of several thousands of cells.

**[0009]** When the mobile unit replies by sending an access burst to the cell transceiver currently serving the mobile unit, the cell site allocates a stand-alone dedicated control channel (SDCCH) to perform SMS call set up with the mobile unit. Next, a cipher key is sent by the Home Location Register (HLR)/Authentication Center (AUC) to the mobile unit, assuming that the mobile unit had previously activated the ciphering of the channel. Once the cipher key is successfully received and acknowledged, the SMS message is sent over the control channel to the mobile unit. The SMS message transmission utilizes about 5 seconds of control channel time per SMS message.

**[0010]** If, however, the intended recipient is not located in the home serving area of the HLR, then signaling message is sent to the serving mobile network's Visitor Location Register (VLR). The VLR registers and tracks mobile unit users who are outside of their home location. In that case, the VLR is queried via the signaling network to verify that the user is currently attached to the remote switch.

**[0011]** Each SMS message is a narrow-cast message in that each message is generated and transmitted via the SMS Center to a particular telecommunication user or unit. The SMS message is delivered, as discussed above, to the intended recipient by capable networks wherever the intended recipient is located, independent of geographic area or location.

**[0012]** As such, SMS messaging for emergency-based messaging requires that SMS messages be created and sent to each mobile unit even though the particular user phone is not located in the particular geographic area in which the emergency is located. SMS service is not capable of position-specific messaging.

**[0013]** Additionally, SMS messaging requires considerable call processing load on the telecommunication system and infrastructure considering that the above process is multiplied by the demand of thousands or tens of thousands of SMS call set up requests at



the same time. The potential initiation of broadcast SMS volumes will not only affect network resources for SMS messaging, but also negatively affect ability of the telecommunication networks to set up and support voice traffic during any period of message broadcasting as these resources are shared by both services.

**[0014]** As a further example of the limitation of existing solutions to message broadcasting, the well deployed Global Standard for Mobile Communications (GSM) system typically deploys in a single GSM cell several transceivers. A typical GSM cell configuration includes between 6 and 12 transceivers. Each such transceiver includes 8-timeslots. Each timeslot supports a single phone call.

**[0015]** In such an arrangement, one of the transceivers is selected to be the SMS carrier. The SMS carrier transceiver is arranged differently, having one timeslot dedicated to broadcast SMS messages and paging and another one which is utilized to from 8 control channels which are referred to as Stand-Alone Dedicated Control Channels (SDCCH). The SDCCH carry out control and call set-up functions and carry the SMS traffic which is not normally handled by the traffic channels on the other timeslots.

**[0016]** However, in this prior art system, SMS and Wireless Access Protocol (WAP) messaging utilize capacity on these channels making them unavailable for other purposes such as voice call set up. Additionally, each of the SDCCH channels can only handle a limited number of SMS and/or paging calls. As such, during heavy messaging, the related high volumes of messaging traffic may have a negative affect on other services including the set up of voice calls.

**[0017]** To compensate for these and other SMS messaging limitations, dynamic channel allocation was developed. Dynamic channel allocation utilizes an additional traffic channel which is converted into another 8 control channels for the duration of the peak SMS or paging loads. However, this results in the loss of the traffic channel for voice communications.

**[0018]** Further strategies have included the immediate assignment to a traffic channel. In this system, when a voice call is attempted, the voice call is sent to a traffic channel directly where signaling will be performed on the traffic channel. This, however, occupies the traffic channel for a longer time than would otherwise be the case. There is

a limit on the number of traffic channels that can utilize this feature. In most cases, only one traffic channel is converted thereby only limited the solution to 8 new SDCCH channels. The impact of call failure due to control channel depends on the traffic capacity of the cell. In high density cells, when a large quantity of SMS messaging traffic is offered, congestion occurs due to the each cell having over one hundred traffic channels within the cell.

**[0019]** In operation, the telecommunication service provider addresses this limitation by throttling the SMS messaging rate so that it is manageable and does not create congestion problems. However, such message load management negatively impacts the opportunity for using SMS messaging for broadcasting emergency messages to users of those networks. Throttling often significantly delays the delivery of the SMS message, even though it's timing delivery in an emergency is critical. Furthermore, if a message fails to be delivered, the SMS center repeatedly attempts to deliver the message, thereby causing further congestion and message backlog.

**[0020]** Additionally, as discussed SMS messaging is not location based and does not send messages to intended recipients located within a defined geographic location. Since many telecommunication users will be messages independent of their location, many of the generated SMS messages are sent to users who are not in the intended area.

**[0021]** In the alternative, some next-generation phone systems include a basic cell-based broadcasting capability, e.g., GSM, CDMA and UMTS. In such systems, the cell broadcasting capability allocates a portion of each timeslot bandwidth capacity in each cell as a reserved broadcast timeslot. While the cell broadcast capability is included in many new equipment being deployed, cell broadcasting systems and services have not been developed which effectively utilize the technology.

SUMMARY

[0022] The embodiments of the present disclosure provide one or more improvements over the prior art.

[0023] In one aspect, a message alert broadcast broker system for providing a broadcast message to a plurality of user devices located within a geographically defined broadcast target area, the system including a broadcast service bureau communicatively coupled for receiving from one of a plurality of coupled broadcast agent access systems providing a broadcast request from an originating broadcast agent associated one broadcast agent message origination systems. The received broadcast request includes a broadcast agent identification, the geographically defined broadcast target area, and a broadcast message, the broadcast service bureau configured for verifying the broadcast request as a function of the broadcast agent identification including an authority of the originating broadcast agent to send the broadcast message to the broadcast target area. The broadcast service bureau processing the verified broadcast request for transmission to one or more broadcast message networks providing broadcast message alerting service to at least a portion of the broadcast target area.

[0024] In another aspect, a method of public service broadcast messaging to a broadcast target area, the method including receiving over an input interface a broadcast request including a broadcast agent identification, a geographically defined broadcast target area, and a broadcast message from one of a plurality of coupled broadcast agent message origination systems. The method also includes verifying an authority of the broadcast agent identification including an authority of the originating broadcast agent to send the broadcast message to the broadcast target area. The method further includes transmitting the broadcast message over an output interface to one or more coupled broadcast message networks providing broadcast message alerting service to at least a portion of the broadcast target area.

[0025] Further aspects of the present disclosure will become apparent from the detailed description provided hereinafter. It should be understood that the detailed description and specific examples, while indicating the preferred embodiment of the disclosure, are intended for purposes of illustration only and are not intended to limit the scope of the disclosure.

## BRIEF DESCRIPTION OF THE DRAWINGS

[0026] The present disclosure will become more fully understood from the detailed description and the accompanying drawings.

[0027] FIG. 1 is a functional block diagram of a public service message location broadcast system according to one embodiment.

[0028] FIG. 2 is a second functional block diagram of a public service message location broadcast system according to one embodiment.

[0029] FIG. 3 is a flow chart for an admission control process within the public service message location broadcast system service bureau according to one embodiment.

[0030] FIG. 4 is a screen shot of the Broadcast Agent Portal Webpage.

[0031] FIG. 5 is a screen shot of the Broadcast Agent Portal Webpage illustrating a Broadcast Agents initial designation of a target broadcast area.

[0032] FIG. 6 is a screen shot of the Broadcast Agent Portal Webpage illustrating use of a shape tool to refine the designation of a target broadcast area.

[0033] FIG. 7 is a screen shot of the Broadcast Agent Portal Webpage illustrating a library of foot print or predefined target broadcast areas.

[0034] FIG. 8 is a screen shot of the Broadcast Agent Portal Webpage illustrating a dialogue box enabling the Broadcast Agent to create a message and parameters of the Broadcast Request.

[0035] FIG. 9 a screen shot of the Broadcast Agent Portal Webpage illustrating a library of target broadcast areas and a library of messages.

[0036] FIG. 10 is a screen shot of the Broadcast Agent Portal Webpage illustrating a Broadcast Agent Confirmation Entry prompt/window.

[0037] FIG. 11 is a second flow chart for an admission control process within the public service message location broadcast system service bureau as shown in FIG. 3 according to another embodiment.

[0038] Corresponding reference characters indicate corresponding parts throughout the several views of the drawings.

DETAILED DESCRIPTION

[0039] The following description is merely exemplary in nature and is in no way intended to limit the disclosure, its application, or uses.

[0040] The public service message location broadcasting system (PLBS) according to one or more embodiments provide for an improved system and method for public service broadcast messaging. A public service message location broadcasting system (PLBS) operator provides a Broadcast Agent Web Portal or Webpage or other similar GUI interface, implementation and maintenance of the networks' cell-broadcast messaging components, networks and platforms, administration and operation of the public service message location broadcasting system, and interfaces to local telecommunication service providers including mobile unit service providers.

[0041] According to one embodiment in the event of a serious public emergency, a short text message is sent over the location broadcast channel. A mobile unit or Broadcast Agent phone that is configured to receive location broadcast messages, which is in the idle mode and which is located in the predefined cell receives the broadcast message and displays the message on its screen.

[0042] Location broadcasting is transmitted from the predefined cell in a downlink only mode and therefore does not require functionality or network resources from the mobile services provider or from their any portion of the mobile service provider's mobility management resources, e.g., HLR, VLR, etc.

[0043] Public service message location broadcasting system provides for the simultaneous sending of public service messages to millions of subscribers with less impact on the supporting networks than a single SMS-message. As such, minimal to no network congestion will result.

[0044] A public service message location broadcasting system (PLBS) receives emergency or public service messaging and identification of the target broadcast area from public service or government entities. The PLBS provides location broadcast message enablement, security and multi-carrier interoperability and connectivity to the telecommunication service providers offering services within the target broadcast area.

[0045] A public service message location broadcasting system and method according to one or more embodiments provides for the development, transmission,



delivery and display of a message that is an official government-to-citizen information broadcast to all compatible telecommunication receiving devices in, or entering, an predefined at-risk geographic location or area.

**[0046]** The PLBS system sends any public service or emergency information associated with any event, determined by authorized messaging entities that may affect public safety. These include utility outages, missing child alerts, severe weather warnings, flood warnings, and terrorist threat warnings. The messages are broadcast by public service message location broadcasting systems participating with local telecommunication networks.

**[0047]** Unlike other emergency messaging services that require the recipient's identity, a predetermined fixed delivery location, and usually the payment of a service fee, public service message location broadcasting system uses broadcast messaging technology to reach an unlimited number of people in real time, with no pre-event subscriber action required.

**[0048]** Public service message location broadcasting system uses cell-broadcast SMS (C-BSMS) technology to provide a message or alert to a single cell geographic location, a neighborhood, a city, or an entire nation with minimal impact to the hosting telecommunication networks.

**[0049]** Local telecommunications service providers such as mobile or cellular telephone service providers provide the local infrastructure and deployed technologies to enable the service message location broadcasting system to transmit public messages in a timely manner to the public that may be at risk using a standard and commonplace mobile telephone unit.

**[0050]** The public service message location broadcast system and methods described herein provide the functions and steps necessary to ensure that the Broadcast Agents are authorized to send the requested broadcast messages to the defined broadcast target area. The PLBS configuration described herein provide for internal controls for insuring that the network and components are secure and that messages are authorized prior to transmittal. The public service message location broadcast system provides the interface to the Broadcast Agents to ensure simple and timely definition of the broadcast target area, the message and the authentication of the Broadcast Agent. The public

service message location broadcast system also provides the interconnectivity and functionality for interface or the number telecommunication service providers which provide for the delivery of the broadcast message to the broadcast target area.

[0051] The public service message location broadcasting system consists of five parts:

- [0052] 1. Public Service Location Broadcast Service Bureau
- [0053] 2. Broadcast Agent Terminal/Web Portal/Web Page
- [0054] 3. Public Service Broadcast Controller
- [0055] 4. Carrier Broadcast Center
- [0056] 5. Public Service Location Broadcast Reporter

[0057] The Public Service Location Broadcast Service Bureau (PLB-SB) is located at a PLBS Operators location which is preferably secure. The PLBS-SB ensures the authenticity of the message and the authority of the sender to create such a message. Administrative Operators establish the User Profile in the Administration Subsystem to control Broadcast Agent rights and privileges. The signal from the Broadcast Agent Terminal, for example, at the police station, to the PLBS-SB, would only indicate the geographical area to be covered, plus the message. PLBS-SB then sends the broadcast request signal to the Carrier Broadcast Center at the office of each local carrier concerned.

[0058] PLBS-SB may also perform a billing gateway administrative function as may be required to allocate costs. PLBS-SB can utilize stored location broadcast messaging data and may have access, in one embodiment, to the geographical coverage requested by the Public Service Broadcast Agent. PLBS-SB may be configured to determine or calculate population density of the broadcast area. PLBS-SB may also manage customer account data, authentication, security, and administration and application of restrictions on a customer, jurisdiction, or Broadcast Agent.

[0059] For each account, a Broadcast Agent Administrator is appointed. A person of whose authority is recognized, such as a police chief or city manager would be suitable for such a role, though he may likely delegate this to someone in the Information Technology services group. The Broadcast Agent Administrator (or his delegate) has

under his control several Broadcast Agent accounts, which have authority under him, but on no account greater. For example, the jurisdiction of a Broadcast Agent is within that of a Broadcast Agent Administrator.

[0060] Using the PLBS-SB, an Administrative Operator checks and/or verifies the authenticity of the Broadcast Agent Administrator and defines or validates the jurisdictional area of the Broadcast Agent's organization. The Administrative Operator administers customer and agent profiles within the PLBS Service Bureau System. The Administrative Operator has secure access for administering the operational and administrative data and profiles for operation of the PLBS-SB. Best practices and Memoranda of Understanding (MOU) are defined by government agencies and/or local carriers. For example, a Coast Guard commander may have access only to coastal areas, though the area would be very large. In another example, a River Authority manager would have a guideline indicating that he could warn of imminent flooding, but not urge people to shower less. The river authority Jurisdiction may include only rivers, waterways and flood plains.

[0061] Any data and/or factor may be input to the PLBS-SB by the Administrative Operator and used by the PLBS-SB for system operation. Each Broadcast Agent Administrator has an account to which the Broadcast Agent belongs. The account is updated to indicate usage accumulated by the Broadcast Agent Administrator. Factors and data recorded include:

- [0062] 1. Language or Languages for warnings
- [0063] 2. Broadcast Agent Administrator account holder contact details
- [0064] 3. Total number of messages broadcast
- [0065] 4. Total Pops reached
- [0066] 5. Mess-Pops figure (number of messages times the pops reached)
- [0067] 6. Log, (Each broadcast is recorded on the account for later review)
- [0068] 7. Date of expiry of contract
- [0069] 8. Which networks are permitted for this Broadcast Agent Administrator?
- [0070] 9. Which channel numbers are allowed?
- [0071] 10. Message, Footprint and Broadcast libraries

- [0072] 11. Jurisdictional limits
- [0073] 12. Pop limits
- [0074] 13. Message length limits
- [0075] 14. Language for web portal
- [0076] 15. Report parameters and addresses
- [0077] 16. Admissions rules and operational events such as denials of service.

[0078] In some circumstances a report in the form of an e-mail or web-page may be sent or made available to the Administrative Operator and/or the Broadcast Agent Administrator. Such a report may include a warning that the account credit is about to expire, or the status of an account or activity. Such reports may be defined or requested or provided one a regular or specified interval.

[0079] Service may be automatically denied to a Broadcast Agent or Broadcast Agent Administrator who has exceeded his quota.

[0080] In other cases information about account status may be signaled to the Broadcast Agent at log on and when proposing messages. This may cause the Broadcast Agent to think again about conserving his quota if near to his limit.

[0081] The PLBS-SB may also define broadcast message jurisdiction is a geographical area for a particular Broadcast Agent Administrator and associated Broadcast Agents. Broadcast Message Jurisdiction may define any number of factors, data, or services. A first is definition or allocation of geographic territory or areas to be accessed or displayed in map format to the Broadcast Agents of the Broadcast Agent Administrator. Additional, all or a portion of the Broadcast Message Jurisdiction may be enabled or disabled for defining one or more broadcast message target areas or "Broadcast Target Area/Footprints" in which a public service broadcast message is to be sent. A second is the identification and specification of carrier or telecommunication local carriers that will be included in the public service location broadcast message messages originated by the particular Broadcast Agent Administrator or Broadcast Agent. This may also include defining one or more networks, network components (such as Carrier Broadcast Center or network switching centers) or sub-networks to be provided the broadcast messages.

**[0082]** The Broadcast Agent Administrator is capable of setting further restrictions or rules related to its Broadcast Message Jurisdiction and one or more Broadcast Agents under its control or within its Broadcast Message Jurisdiction. For example, it may establish differ levels of authority for various personnel within a police department or fire department or allocation sub-areas or sub-jurisdictions based on police or fire department sub-boundaries.

**[0083]** For each Broadcast Agent Administrator, the Broadcast Target Area/Footprint Library is generated and shared among the Broadcast Agents. However in some cases, the Broadcast Agent Administrator may wish to pre-define Broadcast Target Area/Footprints on the basis of existing agreements. For example, these may include tornado watch boxes or mandated warning zones around a chemical plant.

**[0084]** In this case, the Broadcast Agent Administrator has the option to allow some Broadcast Agents only to access the Broadcast Target Area/Footprint library, or to be able to use the library and the map tool. Other Broadcast Agents may have the authority to create new Broadcast Target Area/Footprints and store them in the library.

**[0085]** In some cases, the Broadcast Target Area/Footprint area may be complex. An advanced Footprint Library feature will enable the Broadcast Agent to pre-define areas to be covered, and store them in a library of Broadcast Target Area/Footprints specific to that Broadcast Agent. For example, the flood plain area of a river may be complex to define with a simple mouse click. You would want to get that done ahead of time, then call it back quickly when an urgent message is imminent. In another case, a tornado warning box is pre-defined by political means and may be easier to refer to as such.

**[0086]** This feature may also be required if a particular Broadcast Agent only has authority to cover, for example, major highways or coastal areas such as beaches. These can be pre defined by an Administrative Operator and then locked so that the Broadcast Agent has limited authority as to the Broadcast Target Area/Footprint's area.

**[0087]** There is no limit on how many users one message can reach and in theory an authorized operator may send the message to everyone in the country at the same time. Since most authority is relatively limited, the account may be set established on a per Broadcast Agent basis thereby determining the area to be addressed by one message. An



Admission Control feature checks new message for a pop figure before agreeing to proceed. If not, the message is declined and the Broadcast Agent receives a message and report with an explanation. To continue, the Broadcast Agent can either set the area to one less ambitious, or request authorization from another Broadcast Agent with more pop authority. The pop figure may also be used to generate usage statistics which the administration system would record for each Broadcast Agent. If a Broadcast Agent has exceeded the agreed limit, the account can be closed and an e-mail sent to the Broadcast Agent Administrator explaining this.

**[0088]** Control of Pops is also provided for the local carriers because the spacing of Radio Base Stations when very closely to population density. A dense urban area may be covered by more cells than the same corresponding area in a rural environment. From a signaling point of view more cells are signaled for an area in the city than in the country. Therefore the relationship between pops and network load is a valid one. For example, the number of messages times the population they have targeted [Mess\*Pops] is one possible strategy for working out billing, since we have pop figures directly from the reports generated by account administration.

**[0089]** A Broadcast message may consist of 15 82-character messages linked together. The standard default maximum size of a message may be that used by second generation GSM systems, which is 93 characters, or 82 octets of data. However, in practice each message should be less in order to support multiple language messages and for practical application reasons. The Broadcast Agent Administrator may set limits on the length of an individual message. The Broadcast Agent Administrator may also set a limit on how much in total has been sent by all of the Broadcast Agents within his control. An extended-message button on the advanced message dialogue box provides for setting further message contents as required. For future systems, messages may include multimedia messages such as photographs or maps. In such a case, a multimedia facility dialogue box is utilized.

**[0090]** The Broadcast Agent Administrator may also pre-define set messages in the message library, so that some accounts may broadcast only these messages. Others may be able to create their own and store them in the library. Past messages are also stored in the message library for later recall or repetition. Either from the advanced menu

or from an advanced button on the quick message box, the Broadcast Agent can select the advanced message panel. Here the Broadcast Agent has many more options to control messages. For example, a particular message may be used frequently, or the precise wording of a message may have been agreed at higher political level in advance and only this wording is agreed. In such a case, the Broadcast Agent selects from a Message Library of standard messages available to this Broadcast Agent. The system stores past messages and is capable of retrieving them for re-transmission.

**[0091]** The system provides for the ability to repeat a message if the emergency continues for a long time, as the location broadcast message will only last for a limited period and will need to be repeated. In other cases, the broadcast event may be triggered by an automatic machine such as a water level device. If so the event triggers the pre-defined message as set up by agreements ahead of time between the Broadcast Agent Administrator for that organization and the Administrative Operator who administers the accounts on the PLBS-SB in accordance with guidelines agreed with government authorities and local carriers.

**[0092]** A Broadcast Request includes both the message and the Broadcast Target Area/Footprint together. In some cases both the Broadcast Target Area/Footprint and the message may be pre defined by one group of Broadcast Agents giving other Broadcast Agents only the choice as to when to send the message. The Broadcast library also keeps copies of previously sent messages, and their Broadcast Target Area/Footprints, for fast recall and for internal management reasons within the Broadcast Agent organization.

**[0093]** The system also provides for the broadcasting of public messages that are in several languages. In this case the Broadcast Agent will not be allowed to proceed until messages in the other languages have been compiled. Alternatively the broadcast message may be sent in each language as each is entered. Otherwise translation servers can be signaled for a best effort translation. The account administration parameters will determine this.

**[0094]** In many cases, users may be travelers from an area where a different language is the primary language. If so, by keeping separate channels for warnings in each language, the user may receive a message in his own language. This may also be required in multilingual countries or portions of countries such as along a border. The

PLBS Operator or Broadcast Agent Administrator may also be required by government authorities to send messages in more than one language. If so, the Administration system reminds the Broadcast Agent to open up messages for all the languages required. It will then link them together so that when one is recalled, they are all recalled together and treated as if the same message.

[0095] The Broadcast Agent may not be able to read and write the message in the other language, for example, he may not read Chinese or Arabic. In this case, he can go to the library of messages, which will automatically match the other language message. However this restricts the message to those not containing any variables.

[0096] If the Broadcast Agent decides to recall a message from the network and order that its broadcast cease, the linkage will ensure that all languages are recalled at the same time.

[0097] The system also provides for the specification of how long a single broadcast continues to be broadcast. For example, for many situations a 20 minute broadcast may be long enough, after which a new command to send the message again is be initiated. The PLBS system may provide for a default time to be set in the Broadcast Agent account. Additionally, in the advanced menu options, the Broadcast Agent may be enabled to set start and stop time.

[0098] In other cases, Carriers or their networks may require that the broadcast message have a start time and stop time specified to the cell. The message is held at the cell and transmitted only when the start time arises, then transmission will be at regular intervals until the stop time arises, unless a command is received by the cell to cease the message. As such, the PLBS includes a default start time that is set by the PLBS-SB to be NOW, and the stop time to be 20 minutes. In some situations, the Broadcast Agent may have authority to set up messages for delivery at a pre-determined time in advance, or to set the broadcast time for a longer or shorter time. For example, the Broadcast Agent may be planning a highway shutdown, and may pre-program the night's messages accordingly. This frees manpower at the busy command center at the very moment when attention may be needed on the radio and elsewhere.

[0099] In the advanced message window, a start and stop time box may appear which is set to the defaults. The Broadcast Agent has the option to change these, but as

usual the administration system will check that the Broadcast Agent has authority to do so before proceeding with the message.

**[00100]** Channel codes define the type of message sent, which in turn defines the type of people being broadcasted to. The subscriber who owns the terminal has to switch on or off the channels at his discretion. The account will define which channel codes are defaults for this Broadcast Agent and which are allowed.

**[00101]** The Broadcast message is preceded by a channel code. Users may be given the option to select the type of messages they want to receive by going through a menu on their phone. Some mobile phones are sold with the default state set to disable the receipt of messages. However, to enable mass distribution of broadcast message, the channel numbers are defined for the various message types.

**[00102]** In any case, the Broadcast Agent may have another special need in mind other than to address the public for warnings. The Broadcast Agent may, for example, want to address only police officers or neighborhood watch volunteers in the area. In other instances, there may be automatic equipment in the area which needs to be commanded to perform in a certain way in some conditions and locations, for example, sirens to sound. If so, a different channel number is defined.

**[00103]** If the Broadcast Agent has the authority, the channel number may be changed. In the simple version, the default is the standard code for public safety messaging. In any case this code is checked against the Broadcast Agent profile by the Broadcast Agent Administrator before the message is sent to verify the authority of the Broadcast Agent.

**[00104]** In many areas, more than one official language is used. In such regions, people speaking one language, can be regularly crossing borders into countries which in themselves have multiple official languages, with primacy in different order. In other cases, such as the maritime service, information should be on the same code, regardless of which country the ship is in range of. Therefore, the system provides for the ability to transmit alert messages in all major official languages for a region. The system provides a mechanism to give the networks and governmental authorities flexibility in addressing this requirement.

**[00105]** Users may be required to turn one or more functions of their phone. The user may be motivated to do that if he knows that he will get messages in his language. If the user can speak more than one language, he can enable more than one code at his discretion. In addition, if the user is a tourist or traveling businessman, he will get messages in his own language if that host country transmits them as such. For example, at airports, authorities may decide to transmit in English as well as the official languages, so as to warn passengers regardless if they speak the local language or not. Popular holiday resorts are another example.

**[00106]** Furthermore there may be politically sensitive positions regarding which language is the first and which the second. In one embodiment, pre-assigning codes according the internationally recognized order specified in ISO 639 may be implemented. The use of 145 codes covers most languages (plus some spare for special cases). However, a network may use the unused codes for another purpose. In any case since there are 1,000 codes available, this loss is a low price to pay in return for a good solution.

**[00107]** There are some cases where internationally agreed codes are required. One case in point is that of the maritime service channel. Many small pleasure craft and small coastal fishing vessels are not fitted with marine radio equipment. However in many cases one of the occupants of the boat does have a mobile unit in their possession. Certainly most large ships do have a GSM installation. If so the coastal authorities may decide to relay maritime safety information over a CB maritime service channel. If so, we could expect coastal shipping to switch on this channel. In that case, the channel number should be the same for every port the ship may visit, requiring an internationally assigned channel. In another example, the United Nations (UN) has the responsibility to care for the security concerns of all international relief workers working for them and any Non Governmental Organizations (NGOs). If the UN security - coordinator (UNSECORD) had a standard channel, then this highly mobile but very vulnerable group would be reachable on a geographically specific basis, but without having to change the channel number on their phone each time they change border. These two examples, while extreme, show the benefits of the current system for supporting multi-border Broadcast Agents.



**[00108]** One embodiment of a coding scheme consistent with the PLBS is provided in Appendix 1.

**[00109]** All broadcast messages are logged by the PLBS-SB in the logfile and cannot be tampered with by the Broadcast Agent or Administrative Operator. In the case of any dispute over a message, the Broadcast Agent Administrator, the Administrative Operator, and/or a government authority may view the log to establish what has occurred.

**[00110]** This file may also be used for off line statistics and account administration. The reporting system may send a copy by e-mail to the Broadcast Agent and/or Broadcast Agent Administrators if required. In some cases billing can be derived from the message log and an off line billing gateway program which would use agreed information to derive billing.

**[00111]** The Broadcast Agent requires the permission of the local carrier to use their network for this purpose. The administration of individual accounts is provided to the Administrative Operator to define network guidelines for each Broadcast Agent Administrator. For each Broadcast Agent Administrator, the carriers who have agreed to carry his traffic are signaled individually. Broadcast Agent Administrator is provided with the ability to customize the interface between the various carriers to match the protocols or business requirements of the carriers.

**[00112]** The message is transmitted to the carrier for broadcast transmission over their network. In most cases, the message is transmitted by every known operator offering coverage of the area and may include mobile carriers, digital private radio systems operators, private radio system operators, internet providers, wireline telecommunication service providers, satellite service providers, CATV operators, etc.

**[00113]** The PLBS-SB sends a copy of the message and geographical information about the Broadcast Target Area/Footprint required to each operator's network center for further processing by the Carrier Broadcast Center (CBC) to determine which cells are involved, then send the signals to the correct switching center or Gateway platform. Some messages may be intended only for the private digital radio system used by the organization such as a police radio network. In other cases, sending a

multimedia message such as a map or photo to a text-capable 2G network may not be applicable.

**[00114]** Carriers or telecommunications operators may decline to accept messages from a message source, or of a particular subject matter, context, or content. In each case, the networks which have been selected may be checked by an Administration Subsystem or Administrative Entity before the message is transmitted.

**[00115]** In some cases the sender may decide to recall the message before it has elapsed its time. In this case the Broadcast Agent will select the message from the message library and press the recall button. Administration sends the recall command to the concerned networks or carriers.

**[00116]** Emergency situations are very dynamic, and the situation may change shortly after sending the message and before the expiry of the message time. If so, the PLBS provides the Broadcast Agent with the ability to recall the message. The system also includes a recall button to recall the message as displayed in the window. Each message is given a daily number for fast recall purposes.

**[00117]** The User may wish to know that the broadcast has indeed been passed to the networks for broadcasting. This can be by an e-mail or a report box on the browser.

**[00118]** Since the actual broadcast is managed by the local carrier through his network of gateways and switches, PLBS-SB cannot have any further influence on the process after the handoff to the network has been done. Therefore any progress information we can pass back is only valid up to the moment of handoff.

**[00119]** The report system can send a pop up window back to the Broadcast Agent provided he has not logged off the server by then. This can show ticks indicating that the message was handed off to network. However it does not indicate that the message is actually being transmitted at this time.

[0100] Optionally the report system can send an e-mail to the Broadcast Agent Administrator to inform him that messages have been sent. Should any irregularities occur or other trigger events, such as the near exhaustion of agreed messages, then a report can be sent to the Broadcast Agent Administrators e-mail reporting this.

[0101] Reports may be automatically generated as plain text messages and sent to an electronic address or e-mail account defined by the Broadcast Agent Administrator and/or Administrative Operator.

[0102] The Web Portal, as hosted directly or indirectly by the PLBS Service Bureau communicates with a Web Browser at the Broadcast Agent's location, as discussed below. The objective of the Portal is the creation of a Broadcast Request, a file which holds the following information.

[0103] a. Broadcast Target Area/Footprint

[0104] b. Broadcast Message and related parameters

[0105] c. Broadcast Agent User ID and Password.

[0106] d. Status of the Broadcast Request, (times Proposed, Authenticated, Handed off) and status reports.

[0107] The Admission Control Subsystem ensures that the proposed Broadcast Request by the particular Broadcast Agent at this time is authentic before passing it to the networks.

[0108] For the Broadcast Agent and session, the Portal provides an environment for the Broadcast Agent consisting of the maps of his jurisdiction and the Broadcast Target Area/Footprint, message and broadcast libraries that apply. Portal gets this information from the Account data. When the Multi-Language feature is required, appropriate windows will be provided in the message window.

[0109] Broadcast Agent Web Portal creates a Broadcast Request record with the name of being the current system date and time from when the Create Message button was pressed.

[0110] When the Broadcast Agent presses the GO-button, the Admission system fetches the Broadcast Agent profile from the account database. It will now check all the parameters of the Broadcast Agent and message to see if the message will be admitted or declined.

**[0111]** When a message is declined, the Broadcast Record is marked as such by its status register and sent to reporting; a report is then generated and e-mailed as per the parameters in the account data. The broadcast record is then stored along with the reports in the broadcast log. The Broadcast Agent creates a new broadcast which has a new number.

**[0112]** The Broadcast Agent ID and password details are then checked against the profile to authenticate the Broadcast Agent. If not authentic then the message is declined. Admission will then check the Broadcast Target Area/Footprint against the profile, If not within the Jurisdiction, and then the message will be declined. Admission will then calculate the Pops figure for this message by multiplying the area derived from the Broadcast Target Area/Footprint, by the population density. Population density figure is fetched from Account data. The [total messages], [Pop density], and [total mess\*pop] figure is then fetched from the account data, and the new figure is added in the broadcast record but not written into the account data. The total result is checked against the limits set in account data. If the limit is exceeded then the admission rules are checked to see if the broadcast may go ahead or not. If not then the message is declined. Alternatively a report may be generated according to the admission rules.

**[0113]** Multi language messaging checks may be performed to see if the Broadcast Agent has defined a message for each language as required by the government authorities. If not then the Broadcast may or may not be declined according to admission control rules.

**[0114]** The networks requested are checked against the Account Data. Portal may have defined networks that the account data has indicated, however in some cases some networks may accept some channels while others do not. If so, the broadcast may continue on the allowed networks and declined on others, or it may be declined altogether.

**[0115]** If Admission is satisfied that the Broadcast Request is valid, then it is sent to the distribution system.

**[0116]** The Admission control ensures that that any Broadcast Request meets with the approval based on preset guidelines. The parameters as to what is acceptable and what is not are set by the Administrative Operator in the Administration Data Base.

Each registered Broadcast Agent, that is everyone who is allowed to create Broadcasts, has a separate Profile recorded in the Administration Database. Only the Administrative Operator has access to this file and can create, edit and delete Broadcast Agents. All Broadcast Agents belong to a Broadcast Agent Administrator, and may on no account have authority exceeding their Broadcast Agent Administrator.

[0117] The parameters used in the Administration Data Base are reviewed in the PLBS-SB System description document. There are other parameters about the User ID, the Broadcast Agent Administrator to whom the Broadcast Agent reports, and the current password and authentication key for each Broadcast Agent that may also be included.

[0118] The Administration subsystem is responsible for creating an object called the Broadcast Request. This file details everything known about each proposal. It also contains a check list of flags which are used by the system to track the progress of each Broadcast Request. A Broadcast Request is known by a unique ID consisting of the PLBS-SB which accepted the proposal, and the date time group identifying when it was accepted as a valid proposal.

[0119] When the Broadcast Agent presses the "propose" or "GO" button, Administration will check that the Broadcast Request has been created with enough required information, and is formatted correctly. When the Proposal is correctly formatted, it is recorded in the logfile data base, in an area where pending proposals are kept. The Administration system then orders the Admission control system to run.

[0120] Referring to Figs. 3 and 11, the methods 300 and 1100 are admission control processes within the public service message location broadcast system service bureau and utilize the convention of having a yes answer coming out of the side, and a no answer from the bottom is applicable unless otherwise indicated.

[0121] Next Broadcast Agent - When activated, the Admission Control (admission) fetches the next Broadcast Agent from the logfile area where pending Broadcast Agents are waiting as shown in Process 302. The AC also copies all the parameters.

[0122] Fetch User Profile - The User ID is read and the Broadcast Agent profile is fetched from the Administration Data Base as shown in Process 304.

**[0123]** Security Fail - The User ID is checked against the password and authentication key entered in the database as shown in Process 306. (The Administration control system has validated the data link and network address of the originating terminal in the case of secure tunneling or Virtual Private Network or VPN access).

**[0124]** Security Report - If the security check fails, a short message explaining the reason for the failure is generated as shown in Process 308. The short message is appended to the report field for this Broadcast Request. In the case of a security offense or alert, additional data may be included such as details related to the attempted action.

**[0125]** All Decline Flags Set - To avoid a transmission of this Broadcast Agent, the Decline Flag is set for a Broadcast Request on all the network fields to restrict transmission as shown in Process 310.

**[0126]** Next Network - If there is no security problem, the Broadcast Request is examined to see which is the first network to be attempted. See Process 312. The Admission Parameters for this network will now be queried from the Administration Data Base and examined in Process 312. When this is performed for all networks, a copy of the Broadcast Request is sent to the distributor system that converts the Broadcast Request into a signal for sending to the Carrier Broadcast Center at the Network management center. A communication protocol is used which may be a standard protocol or an application specific protocol such as a Broadcast Message Submission Protocol (BMSP)).

**[0127]** All Nets Done - The end of file marker is checked and read to determine whether all required networks have been analyzed as shown in Process 314. When all networks will have been signaled, a copy is transmitted to the Broadcast Agent.

**[0128]** Copy To Reporting - A copy of all Broadcasts and Broadcast Requests are written to or stored to the Broadcast Request reporting field that is sent to the reporting subsystem for transmission to the Broadcast Agent Administrator and to the Carrier Broadcast Centers or their reporting subsystem.

**[0129]** Copy to Logfile - The Broadcast Request is stored in the Logfile and deleted from the pending area as shown in Process 214.

**[0130]** Admiss Done - An Admiss Done flag or notification is set on the Broadcast Request record along with a timestamp indicating completion of the



administration process as shown in Process 316. Furthermore, as shown in Process 318, the reporting flag is set, and the method returns to Process 302 for processing of the next Broadcast Record.

**[0131]** Next Broadcast Agent Parameter - The Next Broadcast Agent parameter is retrieved from the Administration Data Base and compared to the requesting Broadcast Agent as shown in Process 322.

**[0132]** All Parameters Done - The All Parameters Done process ensures that all parameters have been evaluated and the file processing is near completion as shown in Process 324.

**[0133]** Fail? - The Fail process determines if a parameter in the Broadcast Request does not meet predefined criteria for a Broadcast Message as defined by the PLBS and/or of the Broadcast Agent Administrator as shown in Process 326.

**[0134]** Pass Report - If the parameter is within the predefined criteria, the reporting system appends to the Broadcast Request report a short message indicating which parameter has been passed as shown in Process 328. This provides for trouble shooting and resolving disputes. After process 334, the method returns for processing of the next user parameter by Process 322.

**[0135]** Decline? - If the parameter under test does not fall within the predefined criteria, the parameter fails and special handling procedures are applied as shown in Process 330. Such procedures may enable a system override or an operator override such the Broadcast Request may continue even in light of the parameter within the predefined criteria. Such procedure may include checking the Decline parameter.

**[0136]** Warning Report - If the Decline Parameter is not met, a warning message is generated and appended to the Broadcast Request as shown in Process 332.

**[0137]** Warning Flag - A warning flag is set against the particular network as shown in Process 334. After Process 334, the method returns for processing of the next user parameter by Process 322.

**[0138]** Decline Report - If the Decline parameter indicates that the Broadcast Request is declined, a Decline Report is generated and appended to the Broadcast Request as shown in Process 336.

**[0139]** Decline Flag - A Decline Flag is set against that network upon indication of a Decline Parameter as shown in Process 338. A Decline Flag may apply to one or more networks as a function of the network facilities or arrangements. After setting this warning flag, the method returns for processing of the next network of Process 312.

**[0140]** Decline Flag set this Network - When all the parameters have been evaluated, the All Parameters Done message is returned. Prior to sending a Broadcast Request to a Broad Distributor for sending to the particular Carrier and Carrier's network or Carrier Broadcast Center (CBC), a determination of whether the Broadcast Request or message has been declined by the entity or system is determined. If the broadcast message has not been declined for the particular network, then the message is passed on as shown in Process 340.

**[0141]** Copy to Broadcast Request Distributor - A copy all or the relevant parts of the Broadcast Request is sent to the Broadcast Distributor or placed in a queue as shown in Process 342. The Broadcast Distributor may reformat the data according to one or more predefined parameters, formats or protocol associated with the transmission facility or link for communicating to the Carrier or the Carrier Broadcast Center (CBC).

**[0142]** Submission Report - A submission date and timestamp are appended to the report, and stored by the BLBS and/or Broadcast Agent Access Device as shown in Process 344. The process returns to the Next Network point so that the next network is evaluated since each network will have network specific criteria and parameters. After process 344, the method returns for processing of the next network by Process 312.

**[0143]** As shown in Fig. 11 prior to Process 302, using the Broadcast Agent Access Device, a Broadcast Agent defines the target area by drawing shapes or indicating areas on a map to where the broadcast message should be sent. As the target area will likely be served by two or more carriers or telecommunications service providers, the PLBS determines which carriers serve all or a portion of the target area. The PLBS may perform this function by a Broadcast Distributor which may be an integral system or module or a separate standalone system or module. It may be implemented in hardware or software. The Broadcast Distributor routes the broadcast message to the Carrier Broadcast Center (CBC) of the carriers providing service to all or a part of the target area

as defined in the Broadcast Request. This may be implemented in any possible arrangement including a table, chart, or map.

**[0144]** Operators may in turn have different models of Carrier Broadcast Center (CBC), for example, the GMG 1.5, CellTech, or the Logica 1100, so a different mode of signaling for each type may be provided. One known industry standard protocol is BMSP. Administration data includes routing or address information for the appropriate Carrier Broadcast Center (CBC) interface unit, so that the appropriate signaling protocol conversion occurs.

**[0145]** Signaling to the CBC may utilize an industry standard BMSP protocol that defines the area polygons in WGS84 co-ordinates, the message, and associated scheduling information. The CBC provides a check of the proposed broadcast message for validity and converts the polygons into a Cell Identification (CellID) list. In one embodiment, the CBC sends the CellID list to the broadcast switching centers (BSC) by standard communication protocol such as the GSM 03.49 protocol/list. Transmission between PLBS-SB and CBC may utilize commercially available systems and facilities that may include TCP/IP secure tunneling protocols, or X25 as demanded by the local carrier.

**[0146]** When a PLBS Location Selector is provided at the carriers or local carrier's location, the Broadcast Request file may be transmitted by FTP/TCP/IP to the Location Selector for local processing into a Cell ID list before sending to the CBC or the BSC.

**[0147]** The Administrative Operator utilizes the system to designate administrative and operating parameters and profiles, authorizations, and restrictions for each Broadcast Agent Administrator. These may be based on government regulations, negotiated agreements, standards or policies and practices. This may include establishing schedule of authorizations for various Broadcast Agent Administrators and/or Broadcast Agents.

**[0148]** The Administrative Operator also establishes within the system an Administration Database to set account parameters so that Broadcast Agent Administrators and their Broadcast Agents have defined authorization levels. The Administrative Operator also uses the system to establish and maintain an account for

each Broadcast Agent and Broadcast Agent Administrator for billing and administration purposes.

**[0149]** The system is configured to enable the Administrative Operator to resolve review Logfiles and Broadcast Requests. The system enables the Administrative Operator to read the logfiles, and to read and write to the Administration Data Base. The Administrative Operator Management Subsystem is configured to provide the Administrative Operator with a web control panel or GUI environment in which to administer the User account data and system. Addition the system is configured to generate statistics for administration, management, reporting, and billing.

**[0150]** A Location Broadcast Reporter may be configured to store broadcast messaging data and to prepare and produce reports related to past, pending, and future broadcast messages in one or more areas. The Location Broadcast Report may be located at a disaster management office, a control room, or the PLBS-SB. Access to such reports and data is made available to authorized personnel of the PLBS operator or an administrative or government entity. Such reports may be made in real-time via a web-based interface such that immediate action may be taken or additional or related actions may be initiated.

**[0151]** When the Admission Control Subsystem does not accept the Proposed Broadcast Request for any reason, a status message may be sent to the Broadcast Agent Access Device and a Report Required flag may be set. In such as case, reporting obtains the profile from the account data to determine the appropriate procedure.

**[0152]** Additionally, a notice or dialogue box may be opened at the Broadcast Agent Access Device to report the situation to the Broadcast Agent. If the Broadcast Agent has logged off the Broadcast Agent Access Device, a notification such as an email report is sent to the Broadcast Agent Administrator and the Broadcast Agent according to predefined addresses and arrangements. A copy of the report is also appended to the Broadcast Request to provide a record of the action.

**[0153]** Reporting also provides for reporting of any activity on the account to the Administrative Operator and Broadcast Agent Administrator. This includes reporting of any warnings that the account may expire. Reporting also sends account information to the Broadcast Agent Administrator on a regular basis depending on parameters defined in

the account data. Reports are stored in the logfile which may be accessed by the Broadcast Administrative Operator.

**[0154]** A Broadcast Agent Terminal accessing the Broadcast Agent Portal or Webpage may be located at a Disaster Management Office such as a police control room. The authorized Broadcast Agent creates and proposes the message using a web or internet browser, with web access, public service message location broadcasting system Direct, or the Public Service Location Broadcast Controller (PLBC).

**[0155]** The Broadcast Agent interacts with the PLBS-SB over a web page, (via a Web Portal); loading of special client software is unnecessary. Almost any computer can use PLBS-SB without any modification at all.

**[0156]** The Broadcast Agent accesses the Public Service Location Broadcast System (PLBS) via a communication network including the Internet and/or the World Wide Web. The Broadcast Agent device may be any communication device and is preferably one that is configured to access the Internet and/or to host a webpage. This includes a personal computer, laptop computer, mobile phone, and personal administrative device and variations thereof.

**[0157]** The Broadcast Agent device access a webpage or portal hosted directly or indirectly by the public service message location broadcasting system. Any current or future web, internet, or similar and future services browser or access method may be used by the Broadcast Agent. A standard language such as in one embodiment a Hyper Text Mark-up Language, HTML, may be utilized using any existing or future hardware and/or software platform. Standard, proprietary, and/or commercially available communications systems and protocols may be utilized to provide the various communications facilities and interconnections.

**[0158]** When added security is desired, commercially available or proprietary effective security protocols and measures such as SSL with public key encryption may be employed along with private networking facilities, Virtual Private Network (VPN) facilities, and/or secure tunneling features.

**[0159]** A Broadcast Agent Web Portal is made available throughout a LAN or an Internet to provide each and every Broadcast Agent with the flexibility of accessing the Public Service Message Location Broadcast System (PLBS) via any workstation

wherever it may be located, including ones located at a home, remote office, or a portable computing computer, device or platform. The system may utilize wireless LANs such as the 802.11 technology and mobile Internet systems and networks.

**[0160]** The Broadcast Agent Web Portal is presented as a web page. The Broadcast Agent Webpage may be designed in a design configuration or pattern with an appearance of a control room or panel. Additionally, Broadcast Agent Webpage may be consistent a Geographical Information System (GIS) service portal or webpage.

**[0161]** The Broadcast Agent Web Portal or Webpage may include or be composed of one or more maps with scroll bars and zoom options for easy and quick map viewing. One or more tool bars provide for Broadcast Agent with the ability to select and define a broadcast target area in a map format. While currently web browsers do not process Geographical Information System (GIS) data, the map may be a jpeg format image or file with conversions for position being performed by the PLBS-SB to aid the browser. However, it is expected that in the future the Broadcast Agent Web Portal or Webpage will directly support GIS map data, displaying, and definitional inputs.

**[0162]** The Homepage of the Broadcast Agent Webpage may present a map of the demonstration zone and a city or location name associated with the particular geographic area and/or the particular Broad Agent. In an alternative embodiment, the Homepage may display general data available to all users.

**[0163]** When a Broadcast Agent logs in, a map of the jurisdiction of that Broadcast Agent is displayed. The map is established by the Administrative Operator and/or the Broad Agent Administrator to prevent accidentally sending messages to an unrelated or unauthorized area.

**[0164]** The Broadcast Agent Web Portal or Webpage are designed to enable the sending or requesting of a Broadcast Request or message within six enters or "clicks" from the Broadcast Agent accessing the Web Portal. Similarly, the system is designed so that such actions are in a timely manner and may be accomplished in 15 seconds.

**[0165]** The Broadcast Agent utilizing the Broadcast Agent Webpage uses a pointing device such as a mouse or touchpad to define an area for which the message will be broadcast, e.g., the broadcast target area or Broadcast Target Area/Footprint.



Preferably, the broadcast target area is defined by the Broadcast Agent through a graphical selection means such as clicking a mouse on the displayed map.

[0166] After the Broadcast Agent defines the broadcast target area, the Broadcast Agent initiates a message menu button on the menu bar and enters a message such as by typing a text message into a keyboard.

[0167] After this is complete, the Broadcast Agent authenticates the Broadcast Request through one or more authentication procedures. These may include entering a User ID and Password, speaking a voice authentication message, or otherwise. After the Broadcast Request has been authenticated, the Broadcast Request is forwarded to the Public Service Location Broadcast System (PLBS) Service Bureau.

[0168] Optional system features may also be made available to the Broadcast Agent via the Broadcast Agent Web Portal or Webpage. These may be implemented as additional options on an Advanced button or the toolbar. These optional features may include:

[0169] - Broadcast Target Area/Footprint library

[0170] - Message library

[0171] - Multiple language messages

[0172] - Long messages

[0173] - Start time, Stop time

[0174] - Channel codes

[0175] - Recall messages

[0176] - Select networks

[0177] - Progress windows

[0178] The Broadcast Agent Web Portal and Webpage may provide one or more progress windows.

[0179] Once the Broadcast Agent has pressed the GO-button, and accepted liability for the message by typing his User ID and password, the message is not transmitted directly. Instead it is sent to the PLBS-SB's administrations subsystem where the Broadcast Agent is checked out for authority for this message. For example, the message has been defined for transmission within his jurisdiction. There may be

restrictions on how many messages one individual or center may send in a period. This may be defined by the local carriers, government entities, or by the PLBS-SB operator.

**[0180]** Billing for the service may be done on the basis of the area that was defined for the message, or the population density assumed for the message. In each case the Broadcast Agent may want to know what the message is costing before deciding to proceed.

**[0181]** The Broadcast Agents request and message are checked over thoroughly by the administration subsystem to make sure of compliance to all agreements, with the Broadcast Agent, the government authorities and the local carriers. Only in the case of full compliance does the message proceed. If so, a dialogue box confirms when each local carrier has accepted the message.

**[0182]** If not, then the Broadcast Agent will get a dialogue box explaining why the message was declines and a suggestion as to what to do next to get the message sent off quickly. For example, a smaller less ambitious Broadcast Target Area/Footprint may be tried, or perhaps authorization from a higher ranking Broadcast Agent.

**[0183]** Alternatively, when a web-based interface cannot handle a particular application or situation, the Advanced Broadcast Controller (PLBC) may provide this functionality. This third party application, can call on more, perhaps confidential information to define the broadcast area. In this way the confidential information never leaves the building.

**[0184]** At the local carrier's office, there is a Carrier Broadcast Center (CBC) server collates the cell Latitude and Longitude data received from the PLBS-SB with the locally provided Cell ID data for that carrier's network. A cell serving area map or table is derived from local carrier planning tool, systems, and data. Typically a carrier's engineering group prepares similar information for planning, maintenance and administration purposes.

**[0185]** Location broadcast messages are broadcast by the Cellular Network Operators on a per-cell basis over a location broadcast channel. In order to send a location broadcast message, a signal is sent to the Carrier Broadcast Center. From here, to the Base Station Controllers (BSC), containing the message to be transmitted, and

crucially, the Global Cell IDs of the cells in which the broadcast is to be made, along with some other data such as how often and when the message is to be broadcast.

**[0186]** Cellular operators guard the information about their cells (the cell data) with great care, as the information can be useful to a competitor. They may find the prospect of having this information on multiple unsecured servers to be unacceptable.

**[0187]** According to one embodiment of the PLBS, each carrier maintains and controls access to their own proprietary network data including cell locations and cell serving areas. Each carrier receives geographic data defining the target area for the public service broadcast and determines which transmissions and transmitting locations relate to the target area. Once established, each carrier initiates message broadcasting to only those locations or areas which relate in whole or in part to the target area. As such, competing carriers do not have access to other carrier's networks or proprietary network or customer data.

**[0188]** Transmission between PLBS-SB and CBC is achieved with available telecommunication facilities and protocols which may include TCP/IP secure tunneling protocols, security, and authentication. Transmission may be by wireline, wireless, including satellite facilities.

**[0189]** In one embodiment, the BLBS system ensures that the Carrier's cell data is retained by the Carrier in a look up table in the Carrier Broadcast Center at the Local carrier's office. This includes the Cell Identification Codes of the cells, the Latitude and Longitude positions of their respective Radio Base Station sites and azimuth data for their sectors. This leads to per-cell resolution, but for the first application this may be good enough considering the small size of modern cells, which are typically 1-3 Km across (about 2 miles). The cell data never leaves the Network's office. The local carrier such as a mobile service provider provides the hosting of the cell-broadcast messaging technology, access to the local cell network, and transmission of the cell-broadcast messages to its subscribers. Additionally, the carriers or mobile unit service providers may provide cell-site geographic coverage data either internally or to the PLBS operator to enable the operator GUI interface.

**[0190]** Location broadcast messages may be employed in several ways when numerous operators or carriers in a particular geographical area require the same

information in a timely manner. Such information may include text messages relating to emergency situations, and, for 3G cells and phones, pictures of wanted or missing persons, graphical data, maps of problem areas including areas to avoid and escape routes.

**[0191]** Location broadcasting is a function of cellular networks and is defined by the official standardization bodies, such as GSM MoU, (GSM 03.41) UMTS, 3GPP/3GPP2 and IS95 CDMA. Many networks have location broadcast channels defined for their networks which are unused at present for lack of a suitable application.

**[0192]** There is typically more than one carrier or operator providing service in the same area. There is no co-ordination of cell planning between competing operators, and as such, the Cell layouts and Cell IDs of each are different. In addition, due to constant improvements in telecommunication and cell coverage and capacity, the network design, and size and layout of geographic network systems and cells covering a particular area can be dynamic, e.g., network reconfigurations, cell splits and switch cutovers.

**[0193]** Also, many networks have a hierarchical network or cell structure system, with overlapping patterns of networks or cells of different sizes, such as Umbrella Cells, Macro Cells, Overlaid cells, Micro Cells and Pico cells. They may also have multiple layers of sub-band structure in different frequency bands such as (850-1900 or 900-1800-2Ghz, with each having different Cell IDs and different base station spacing.

**[0194]** Multi-network configurations will continue to increase in complexity with the introduction of 3G General Packet Radio Service (GPRS), EDGE, CDMA2000, and UMTS. 3G location broadcast messages will be much more capable, so different Cell ID tables are entered for a plain text version of the broadcast than for a multi-media version.

**[0195]** A single signal of about 1KB may be used by the Carrier for each transmission area or cell. The transceiver then carries out the repetition of the message for the time required.

**[0196]** User receiving devices may include mobile or cellular phones, PDA's, PC's, etc. Receiving devices may provide a distinct alert ring-tone that continues until the message is acknowledged by a local user. Such features and functions are dependent on the features and functionality of the various receiving devices. Some receiving

devices may be configured to receive text messages, graphical data, images, and maps or may be capable of connecting to a designated website that provides additional information.

**[0197]** With one or more embodiments of the current system, special handsets or mobile unit units are not required. Global System for Mobile Communication (GSM) handsets may display a public service message location broadcasting system message as provided by a supporting GSM mobile service provider. Additionally, 3rd Generation mobile unit services providers and mobile unit or cellular devices will display location broadcast messages consistent with the public service message location broadcasting system.

**[0198]** A public service message location broadcasting service may also display a public service message location broadcasting system provider insignia or service mark.

**[0199]** Because public service message location broadcasting system is independent of the mobile unit service providers voice and SMS channels, cell-broadcasting will continue to operate during emergencies that result in high calling volume thereby enabling local authorities with a viable communications link for emergency instructions despite interruptions in voice and SMS service.

**[0200]** In operation, the public service message location broadcasting system may be provided, in one embodiment, by a method described herein. In the event of a need for a public service message broadcast, an authorized Broadcast Agent enters a password to access the public service message location broadcasting system via a Broadcast Agent System accessing a Broadcast Agent Web Portal from an Internet-attached device. The screen recognizes the Broadcast Agent and displays a map or illustration of his jurisdiction.

**[0201]** The Broadcast Agent defines or selects the target area which may be the entire authorized Broadcast Jurisdiction or may be a portion thereof. The Broadcast Agent constructs a text message indicating the nature of the emergency and/or required action. The Broadcast Agent specifies the length of time the message is to be broadcast and/or received by the receiving devices in the target area. The Broadcast Agent utilizing the Broadcast Agent System confirms and sends the data to the public service message location broadcasting system server.

**[0202]** The public service message location broadcasting system's Broadcast Data Management (BDM) server reformats the data and forwards it to the Carrier Broadcast Center for each of the telecommunication carriers providing service within the target area.

**[0203]** The Carriers Broadcast Center (CBC) selects one or more sub-networks and/or cell-sectors (such as transmission towers) that serve all or a portion of the target area so that the entire target area is covered by a broadcast. The CBC broadcast the message to all receiving devices within its serving area. The CBC broadcast transmission process is repeated for the duration of the alert to accommodate additional devices entering, becoming available, or being activated/powering-on within the target area. Receiving devices located within the broadcast sub-networks or cells receive the public service broadcast message, and may provide an alert and display of the message.

**[0204]** In practice, operation of one or more embodiments may be described by the following example.

**[0205]** It is late at night and a river level is rising to dangerous levels. The local police want to warn the population at risk, the people who live in the area likely to flood. However since it is night time, they are not watching their televisions or listening to the radio. The senior police officer, or disaster manager, in the position of a Broadcast Agent accesses the public service message location broadcasting system web site that is located at a central site. The officer selects a map of the area that is in danger. The officer defines or selects a geographic broadcast target area to be notified of the danger. The officer enters a message indicating the nature of the danger and suggested actions such as FLOOD WARNING in your area. The officer initiates the broadcast messaging by following a security procedure and presses a Go-button.

**[0206]** The PLBS-SB receives the messages, performs a check on the validity of the officer as a Broadcast Agent that is proposing the message for the particular notification or broadcast target area. Once validated, the PLBS-SB sends messages to each of the telecommunication service providers or carrier having networks, coverage, or receiving units within the defined coverage area.

**[0207]** Each local telecommunication service provider receives the message and broadcast target area definitions from the broadcast system and initiates transmission of



the broadcast message to the particular transmission networks serving the defined notification area. The local network of the telecommunication service provider broadcasts the message to every active compatible receiving unit active within the defined notification area. Each receiving unit receives the broadcast message and displays the message and may provide a common or unique alerting signal.

**[0208]** When introducing aspects of the disclosure or embodiments thereof, the articles "a", "an", "the", and "said" are intended to mean that there are one or more of the elements. The terms "comprising", "including", and "having" are intended to be inclusive and mean that there may be additional elements other than the listed elements.

**[0209]** In view of the above, it will be seen that several aspects of the disclosure are achieved and other advantageous results attained. As various changes could be made in the above exemplary constructions and methods without departing from the scope of the disclosure, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

**[0210]** It is further to be understood that the steps described herein are not to be construed as necessarily requiring their performance in the particular order discussed or illustrated. It is also to be understood that additional or alternative steps may be employed.

**[0211] Appendix 1: Code channel assignments**

500 common training, exercise and test channel.
501-650 Languages listed in order according to ISO 639.
501 aa Afar
502 ab Abkhazian
503 af Afrikaans
504 am Amharic
505 ar Arabic
506 as Assamese
507 ay Aymara
508 az Azerbaijani
509 ba Bashkir
510 be Byelorussian
511 bg Bulgarian
512 bh Bihari
513 bi Bislama
514 bn Bengali, Bangla
515 bo Tibetan
516 br Breton
517 ca Catalan
518 co Corsican
519 cs Czech
520 cy Welsh
521 da Danish
522 de German
523 dz Bhutani
524 el Greek
525 en English
526 eo Esperanto
527 es Spanish
528 et Estonian
529 eu Basque
530 fa Persian
531 fi Finnish
532 fj Fiji
533 fo Faeroese
534 fr French
535 fy Frisian
536 ga Irish
537 gd Scots Gaelic
538 gl Galician
539 gn Guarani

540 gu Gujarati
541 ha Hausa
542 hi Hindi
543 hr Croatian
544 hu Hungarian
555 hy Armenian
556 ia Interlingua
557 ie Interlingue
558 ik Inupiak
559 in Indonesian
560 is Icelandic
561 it Italian
562 iw Hebrew
563 ja Japanese
564 ji Yiddish
565 jw Javanese
566 ka Georgian
567 kk Kazakh
568 kl Greenlandic
569 km Cambodian
570 kn Kannada
571 ko Korean
572 ks Kashmiri
573 ku Kurdish
574 ky Kirghiz
575 la Latin
576 ln Lingala
577 lo Laothian
578 lt Lithuanian
579 lv Latvian, Lettish
580 mg Malagasy
581 mi Maori
582 mk Macedonian
583 ml Malayalam
584 mn Mongolian
585 mo Moldavian
586 mr Marathi
587 ms Malay
588 mt Maltese
589 my Burmese
590 na Nauru
591 ne Nepali
592 nl Dutch
593 no Norwegian
594 oc Occitan

ENIT 9834C2

595 om (Afan) Oromo
596 or Oriya
597 pa Punjabi
598 pl Polish
599 ps Pashto, Pushto
600 pt Portuguese
601 qu Quechua
602 rm Rhaeto-Romance
603 rn Kirundi
604 ro Romanian
605 ru Russian
606 rw Kinyarwanda
607 sa Sanskrit
608 sd Sindhi
609 sg Sangro
610 sh Serbo-Croatian
611 si Singhalese
612 sk Slovak
613 sl Slovenian
614 sm Samoan
615 sn Shona
616 so Somali
617 sq Albanian
618 sr Serbian
619 ss Siswati
620 st Sesotho
621 su Sundanese
622 sv Swedish
623 sw Swahili
624 ta Tamil
625 te Tegulu
626 tg Tajik
627 th Thai
628 ti Tigrinya
629 tk Turkmen
630 tl Tagalog
631 tn Setswana
632 to Tonga
633 tr Turkish
634 ts Tsonga
635 tt Tatar
636 tw Twi
637 uk Ukrainian
638 ur Urdu
639 uz Uzbek

640 vi Vietnamese
641 vo Volapuk
642 wo Wolof
643 xh Xhosa
644 yo Yoruba
645 zh Chinese
646 zu Zulu
646-669 locally specified purpose or language.
670-699 International alert channels.
671 Maritime service channel.
672 Aeronautical service channels.
673 Amateur service channels.
674 Scientific services.
690-699 UN and International Organisations. E.G.
690 UNSECORD (UN Security Co-Ordinator.)
691 UNICEF (Child security)
692 WFP
693 WHO
694 UNHCR
695 OCHA
696 Red Cross/ Crescent Movement.

[0212] Other channels at the discretion of the networks, and in conjunction with the governmental authorities and other interested parties.

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<b>Application Data Sheet 37 CFR 1.76</b>		<b>Attorney Docket Number</b>	ENIT 9834C2
		<b>Application Number</b>	
<b>Title of Invention</b>	BROADCAST ALERTING MESSAGE AGGREGATOR/GATEWAY SYSTEM AND METHOD		
<p>The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.</p> <p>This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.</p>			

**Secrecy Order 37 CFR 5.2**

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

**Applicant Information:**

<b>Applicant 1</b>					<a href="#">Remove</a>
<b>Applicant Authority</b>		<input checked="" type="radio"/> Inventor		<input type="radio"/> Legal Representative under 35 U.S.C. 117	<input type="radio"/> Party of Interest under 35 U.S.C. 118
<b>Prefix</b>	<b>Given Name</b>	<b>Middle Name</b>	<b>Family Name</b>	<b>Suffix</b>	
	Mark	Andrew	Wood		
<b>Residence Information (Select One)</b> <input type="radio"/> US Residency <input checked="" type="radio"/> Non US Residency <input type="radio"/> Active US Military Service					
<b>City</b>	Haslemere	<b>Country Of Residence<sup>i</sup></b>	GB		
<b>Citizenship under 37 CFR 1.41(b)<sup>i</sup></b>		GB			
<b>Mailing Address of Applicant:</b>					
<b>Address 1</b>	8 Lion Lane				
<b>Address 2</b>					
<b>City</b>	Haslemere, Surrey	<b>State/Province</b>	GB		
<b>Postal Code</b>	GU17 1JF	<b>Country<sup>i</sup></b>	GB		
<b>Applicant 2</b>					<a href="#">Remove</a>
<b>Applicant Authority</b>		<input checked="" type="radio"/> Inventor		<input type="radio"/> Legal Representative under 35 U.S.C. 117	<input type="radio"/> Party of Interest under 35 U.S.C. 118
<b>Prefix</b>	<b>Given Name</b>	<b>Middle Name</b>	<b>Family Name</b>	<b>Suffix</b>	
	Kevin	Russell	Preston		
<b>Residence Information (Select One)</b> <input type="radio"/> US Residency <input checked="" type="radio"/> Non US Residency <input type="radio"/> Active US Military Service					
<b>City</b>	Gwent	<b>Country Of Residence<sup>i</sup></b>	GB		
<b>Citizenship under 37 CFR 1.41(b)<sup>i</sup></b>		GB			
<b>Mailing Address of Applicant:</b>					
<b>Address 1</b>	Nant-y Celslad Farm				
<b>Address 2</b>	Pennilwyn Lane Machen				
<b>City</b>	Gwent	<b>State/Province</b>	GB		
<b>Postal Code</b>	Cf83 8RL	<b>Country<sup>i</sup></b>	GB		
<b>Applicant 3</b>					<a href="#">Remove</a>
<b>Applicant Authority</b>		<input checked="" type="radio"/> Inventor		<input type="radio"/> Legal Representative under 35 U.S.C. 117	<input type="radio"/> Party of Interest under 35 U.S.C. 118
<b>Prefix</b>	<b>Given Name</b>	<b>Middle Name</b>	<b>Family Name</b>	<b>Suffix</b>	
	Douglas		Weiser		
<b>Residence Information (Select One)</b> <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service					
<b>City</b>	Port Richey	<b>State/Province</b>	FL	<b>Country of Residence<sup>i</sup></b>	US



<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	ENIT 9834C2	
		Application Number		
Title of Invention	BROADCAST ALERTING MESSAGE AGGREGATOR/GATEWAY SYSTEM AND METHOD			
<b>Citizenship under 37 CFR 1.41(b) i</b>				
<b>Mailing Address of Applicant:</b>				
Address 1	5009 Galleo Ct.			
Address 2				
City	Port Richey	State/Province	FL	
Postal Code	34652	Country	US	
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the <b>Add</b> button. <span style="float: right;"><b>Add</b></span>				

### Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below. For further information see 37 CFR 1.33(a).			
<input type="checkbox"/> An Address is being provided for the correspondence Information of this application.			
Customer Number	01688		
Email Address	patents@polsterlieder.com	<b>Add Email</b>	<b>Remove Email</b>
Email Address	dhoward@polsterlieder.com	<b>Add Email</b>	<b>Remove Email</b>

### Application Information:

Title of the Invention	BROADCAST ALERTING MESSAGE AGGREGATOR/GATEWAY SYSTEM AND METHOD		
Attorney Docket Number	ENIT 9834C2	Small Entity Status Claimed <input checked="" type="checkbox"/>	
Application Type	Nonprovisional		
Subject Matter	Utility		
Suggested Class (if any)		Sub Class (if any)	
Suggested Technology Center (if any)			
Total Number of Drawing Sheets (if any)	11	Suggested Figure for Publication (if any)	

### Publication Information:

<input type="checkbox"/> Request Early Publication (Fee required at time of Request 37 CFR 1.219)
<input type="checkbox"/> <b>Request Not to Publish.</b> I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application <b>has not and will not</b> be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

### Representative Information:

<p>Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Enter either Customer Number or complete the Representative Name section below. If both sections are completed the Customer Number will be used for the Representative Information during processing.</p>
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<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	ENIT 9834C2	
		Application Number		
Title of Invention	BROADCAST ALERTING MESSAGE AGGREGATOR/GATEWAY SYSTEM AND METHOD			
Please Select One:	<input checked="" type="radio"/> Customer Number	<input type="radio"/> US Patent Practitioner	<input type="radio"/> Limited Recognition (37 CFR 11.9)	
Customer Number	01688			

### Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78(a)(2) or CFR 1.78(a)(4), and need not otherwise be made part of the specification.					
Prior Application Status		Patented		<a href="#">Remove</a>	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
	Continuation of	12559405	2009-09-14	8073903	2011-12-06
Prior Application Status		Patented		<a href="#">Remove</a>	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
12/559405	Continuation of	11/057704	2005-02-14	7752259	2010-07-06
Prior Application Status				<a href="#">Remove</a>	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)		
11/057704	non provisional of		2004-02-13		
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the <a href="#">Add</a> button.					

### Foreign Priority Information:

This section allows for the applicant to claim benefit of foreign priority and to identify any prior foreign application for which priority is not claimed. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(a).			
<a href="#">Remove</a>			
Application Number	Country <sup>i</sup>	Parent Filing Date (YYYY-MM-DD)	Priority Claimed
			<input type="radio"/> Yes <input checked="" type="radio"/> No
Additional Foreign Priority Data may be generated within this form by selecting the <a href="#">Add</a> button.			

### Assignee Information:

Providing this information in the application data sheet does not substitute for compliance with any requirement of part 3 of Title 37 of the CFR to have an assignment recorded in the Office.	
<a href="#">Remove</a>	
<b>Assignee 1</b>	
If the Assignee is an Organization check here. <input checked="" type="checkbox"/>	
Organization Name	ENVISIONIT LLC

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<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	ENIT 9834C2
		Application Number	
Title of Invention	BROADCAST ALERTING MESSAGE AGGREGATOR/GATEWAY SYSTEM AND METHOD		

<b>Mailing Address Information:</b>			
Address 1		17 Research Park Drive, Suite 200	
Address 2			
City	St. Charles	State/Province	MO
Country <sup>i</sup>		Postal Code	63304
Phone Number		Fax Number	
Email Address			
Additional Assignee Data may be generated within this form by selecting the Add button.			
			<input type="button" value="Add"/>

**Signature:**

A signature of the applicant or representative is required in accordance with 37 CFR 1.33 and 10.18. Please see 37 CFR 1.4(d) for the form of the signature.					
Signature	/David L. Howard/			Date (YYYY-MM-DD)	2011-12-05
First Name	David	Last Name	Howard	Registration Number	41502

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**



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The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt	
EFS ID:	11543717
Application Number:	13311448
International Application Number:	
Confirmation Number:	9039
Title of Invention:	BROADCAST ALERTING MESSAGE AGGREGATOR/GATEWAY SYSTEM AND METHOD
First Named Inventor/Applicant Name:	Mark Andrew Wood
Customer Number:	1688
Filer:	David L. Howard
Filer Authorized By:	
Attorney Docket Number:	ENIT 9834C2
Receipt Date:	05-DEC-2011
Filing Date:	
Time Stamp:	20:36:11
Application Type:	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$ 530
RAM confirmation Number	4288
Deposit Account	162201
Authorized User	

### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
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A U.S. Patent Number Citation or a U.S. Publication Number Citation is required in the Information Disclosure Statement (IDS) form for autoloading of data into USPTO systems. You may remove the form to add the required data in order to correct the Informational Message if you are citing U.S. References. If you chose not to include U.S. References, the image of the form will be processed and be made available within the Image File Wrapper (IFW) system. However, no data will be extracted from this form. Any additional data such as Foreign Patent Documents or Non Patent Literature will be manually reviewed and keyed into USPTO systems.					
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			4e8fd12dc8f48920a5adc7e0a5ba3ac829a6 2880		
Warnings:					
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47	Non Patent Literature	News_from_Senator_John_Ed wards.pdf	32218	no	1
			d5a6d137bc91548ef3e73853bd5bc87ddb 810f3a		
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Information:					
48	Non Patent Literature	Newscientist_com_Text_Messa ge_Broadcast_Public.pdf	181279	no	2
			1f630f95208708974d85e254b7a82cf7af0f3 ecd		
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49	Non Patent Literature	OCG_EMTEL_Archives_Cell_Bro adcast_Public_Demonstration. pdf	137562	no	3
			4015edc5cac09a04514ea291e045447a0ad dd6f		
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50	Non Patent Literature	RCR_Cell_Broadcast_Service_G ets_Second_Look.pdf	218744	no	4
			4b9463d4facd187a929e39864d02237f588 05fe0		
Warnings:					
Information:					
51	Non Patent Literature	Recommendation_12_WTDC_0 2_Istanbul_2002.pdf	45461	no	2
			ba0bc8b211adff0d0c38e576d23f1773604a 7c1b2		
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Information:					

52	Non Patent Literature	SMS_News_Text_Message_Broadcasts_Could_Provide.pdf	112688 a9b1373027525460bb8f333ce8e2ee0de405b749	no	2
Warnings:					
Information:					
53	Non Patent Literature	Stanford_University_EE179_Introduction_to_Communications.pdf	590978 3d3e48ca4ae86699248abf081699d970a1c6a45c	no	22
Warnings:					
Information:					
54	Non Patent Literature	TeliaSonera_Mobile_Broadcast_Multicast_Service_MBMS.pdf	466543 356230ae6594acd4f6bb2a23793a17ea1bae3a49	no	12
Warnings:					
Information:					
55	Non Patent Literature	Text_message_warn_of_killer_flu_hot_spots.pdf	32319 09bdb2e36ab9a37ebd1ca09c293f683bfd1a1f9b	no	1
Warnings:					
Information:					
56	Non Patent Literature	The_Cellular_Emergency_alert_Services.pdf	20188 a08e362e9ab5686bc9471429bce1d1a205e2a558	no	1
Warnings:					
Information:					
57	Non Patent Literature	The_Wall_Street_Journal_Local_govts.pdf	164676 7276d3b651e458097479ee40233e9239bb51986e	no	2
Warnings:					
Information:					
58	Fee Worksheet (SB06)	fee-info.pdf	33169 50695177d186e95054c97d808ce446b32dcf3613	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			41404117		



This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

**New Applications Under 35 U.S.C. 111**

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

**National Stage of an International Application under 35 U.S.C. 371**

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

**New International Application Filed with the USPTO as a Receiving Office**

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Electronic Patent Application Fee Transmittal				
Application Number:				
Filing Date:				
Title of Invention:		BROADCAST ALERTING MESSAGE AGGREGATOR/GATEWAY SYSTEM AND METHOD		
First Named Inventor/Applicant Name:		Mark Andrew Wood		
Filer:		David L. Howard/Kim Adler		
Attorney Docket Number:		ENIT 9834C2		
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Utility filing Fee (Electronic filing)	4011	1	95	95
Utility Search Fee	2111	1	310	310
Utility Examination Fee	2311	1	125	125
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				530

# PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To:  
BRYAN K. WHEELock  
HARNESs, DICKEY & PIERCE, P.C.  
7700 BONHOMME AVENUE, SUITE 400  
ST. LOUIS, MO 63105

RECEIVED

HARNESs, DICKEY & PIERCE  
ST. LOUIS, MISSOURI

## PCT

NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL SEARCH REPORT AND  
THE WRITTEN OPINION OF THE INTERNATIONAL  
SEARCHING AUTHORITY, OR THE DECLARATION

(PCT Rule 44.1)

7362-000002/WO/POA

Date of mailing  
(day/month/year) 17 JUL 2006

Applicant's or agent's file reference  
7362-000002/WO/POA

**FOR FURTHER ACTION** See paragraphs 1 and 4 below

International application No.  
PCT/US05/04897

International filing date  
(day/month/year) 14 February 2005 (14.02.2005)

Applicant  
WEISER, DOUGLAS D

1. ☒ The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.

**Filing of amendments and statement under Article 19:**

The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

**When?** The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.

**Where?** Directly to the International Bureau of WIPO, 34 chemin des Colombettes  
1211 Geneva 20, Switzerland, Facsimile No.: (41-22) 338.82.70.

For more detailed instructions, see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.

3. ☐ With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

- ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.  
☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

Shortly after the expiration of 18 months from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication.

The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. These comments would also be made available to the public but not before the expiration of 30 months from the priority date.

Within 19 months from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later); otherwise, the applicant must, within 20 months from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

In respect of other designated Offices, the time limit of 30 months (or later) will apply even if no demand is filed within 19 months.

See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the *PCT Applicant's Guide*, Volume II, National Chapters and the WIPO Internet site.

Name and mailing address of the ISA/ US  
Mail Stop PCT, Attn: ISA/US  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
Facsimile No. (571) 273-3201

Authorized officer  
*Zarni Maung*  
Telephone No. (571) 272-1400

Form PCT/ISA/220 (January 2004)

(See notes on accompanying sheet)

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 7362-000002/WO/POA	<b>FOR FURTHER ACTION</b> see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/US05/04897	International filing date (day/month/year) 14 February 2005 (14.02.2005)	(Earliest) Priority Date (day/month/year) 13 February 2004 (13.02.2004)
Applicant WEISER, DOUGLAS D		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 9 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the Report

- a. With regard to the language, the international search was carried out on the basis of:
- ☒ the international application in the language in which it was filed.
- ☐ a translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))
- b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.
2. ☐ Certain claims were found unsearchable (See Box No. II)
3. ☐ Unity of invention is lacking (See Box No. III)
4. With regard to the title,
- ☒ the text is approved as submitted by the applicant.
- ☐ the text has been established by this Authority to read as follows:
5. With regard to the abstract,
- ☒ the text is approved as submitted by the applicant.
- ☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.
6. With regard to the drawings,
- a. the figure of the drawings to be published with the abstract is Figure No. \_\_\_\_\_
- ☐ as suggested by the applicant.
- ☐ as selected by this Authority, because the applicant failed to suggest a figure.
- ☐ as selected by this Authority, because this figure better characterizes the invention.
- b. ☒ none of the figures is to be published with the abstract.

Form PCT/ISA/210 (first sheet) (April 2005)

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/04897

## A. CLASSIFICATION OF SUBJECT MATTER

IPC: G06E 15/16

USPC: 709/206

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 709/206

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2002/0107016 A1 (HANLEY) 08 August 2002 (08.08.2002), figure 1, paragraphs 0025-0030	1-30
Y	US 6,219,696 B1 (WYNBLATT et al) 17 April 2001 (17.04.2001), column 2-4.	1-30
Y	US 6,240,360 B1 (PHELAN) 29 May 2001 (29.05.2001), figures 1-3, column 4-7	3, 7, 12, 14, 17-18, 24-25, 27-29

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier application or patent published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

12 June 2006 (12.06.2006)

Date of mailing of the international search report

17 JUL 2006

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Commissioner for Patents  
P.O. Box 1450  
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Facsimile No. (571) 273-3201

Authorized officer

Zanli Maung

Telephone No. (571) 272-1400

Form PCT/ISA/210 (second sheet) (April 2005)



## INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU 01/00132

<b>A. CLASSIFICATION OF SUBJECT MATTER</b>		
Int Cl <sup>7</sup> : G06F 17/30, 13/00		
According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b>		
Minimum documentation searched (classification system followed by classification symbols) WHOLE IPC		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched WHOLE IPC		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) WPAT : (Remote Program, Remote Computing, Intelligent, Interactive, Network, Agent, Task, Terminal, Interface, Mobile Phone, PHS, Cell Phone, PDA)		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5761663 A (Lagarde et al.) 2 June 1998 Col. 4 Line 45 - Col. 19 Line 45	1-42
X	WO 98/47250 A2 (INTERNATIONAL BUSINESS MACHINES CORP.) 22 October 1998 Page 5 Line 5 - Page 29 Line 34	1-42
P,X	US 6076099 A (Chen et al.) 13 June 2000 Col. 2 Line 42 - Col. 9 Line 18	1-42
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C <input checked="" type="checkbox"/> See patent family annex		
<p>* Special categories of cited documents:</p> <p>"A" Document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier application or patent but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</p> <p>"&amp;" document member of the same patent family</p>		
Date of the actual completion of the international search 30 March 2001		Date of mailing of the international search report 19 April 2001
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200 WODEN ACT 2606 AUSTRALIA E-mail address: pct@ipaustalia.gov.au Facsimile No.: (02) 6285 3929		Authorized officer  JUZER KHANBHAI Telephone No.: (02) 6283 2176

Form PCT/ISA/210 (second sheet) (July 1998) COPJHA

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/AU 01/00132

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	WO 00/54178 A2 (A C PROPERTIES B.V) 14 Septmeber 2000 Page 3 Line 23 - Page 102 Line 18	1-42
P, X	US 6134548 A (Gottsman et al.) 17 October 2000 Col 1 Line 54 - Col. 44 Line 18	1-42
P, X	WO 00/63837 A1 (TEXTWISE, LLC) 26 October 2000 Page 4 Line 9 - Page 23 Line 18	1-42

**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

International application No.  
**PCT/AU 01/00132**

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report				Patent Family Member			
US	5761663	EP	19961211	EP	19961211	EP	19961211
		JP	19970128	JP	19970128	JP	19970128
		US	19980120	US	19980120	US	19980120
		US	19980602	US	19980602	US	19980602
		BR	19981006	BR	19981006	BR	19981006
		CA	19961208	CA	19961208	CA	19961208
		CN	19970122	CN	19970122	CN	19970122
		EP	19961211	EP	19961211	EP	19961211
		JP	19970214	JP	19970214	JP	19970214
		US	19980811	US	19980811	US	19980811
		EP	19961211	EP	19961211	EP	19961211
		JP	19970502	JP	19970502	JP	19970502
		US	19971223	US	19971223	US	19971223
		US	19991026	US	19991026	US	19991026
		US	20000725	US	20000725	US	20000725
		CA	19961208	US	19961208	US	19961208
		CN	19961218	CN	19961218	CN	19961218
		EP	19961211	EP	19961211	EP	19961211
		JP	19970128	JP	19970128	JP	19970128
		US	19980224	US	19980224	JP	19980224
		EP	19961211	EP	19961211	EP	19961211
		JP	19970128	JP	19970128	JP	19970128
		US	19980120	US	19980120	US	19980120
		US	19980602	US	19980602	US	19980602
		BR	19981006	BR	19981006	BR	19981006
		CA	19961208	CA	19961208	CA	19961208
		CN	19970122	CN	19970122	CN	19970122
		EP	19961211	EP	19961211	EP	19961211
		JP	19970214	JP	19970214	JP	19970214
		US	19980811	US	19980811	US	19980811

CONTINUED

Patent Document Cited in Search Report		Patent Family Member			
		EP	19961211	EP	19961211
		JP	19970502	JP	19970502
		US	19971223	US	19971223
		US	19991026	US	19991026
		US	20000725	US	20000725
		CA	19961208	CA	19961208
		CN	19961218	CN	19961218
		EP	19961211	EP	19961211
		JP	19970128	JP	19970128
		US	19980224	US	19980224
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US	6076099 A	US	20000613	US	20000613
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US	6134548 A	AU	20000529	AU	20000529
		US	20001017	AU	20001017
		WO	20000518	WO	20000518
		AU	200015234	AU	200015234
		US	20001017	US	20001017
		WO	20000518	WO	20000518
WO	00/63837				
END OF ANNEX					

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/IB 00/01872

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 G07G1/14

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G07G G06F G07F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 97 21200 A (LEE CHONG U ;MOALLEMI KAMRAN (US); WARREN ROBERT L (US); SOLONA TE) 12 June 1997 (1997-06-12)	1,3,5,7, 25,30, 34,36, 43,46
Y	page 2, line 15 -page 4, line 14; figure 1  page 4, line 10-12 page 6, line 9-14 ---	2,4,6,8, 10-21, 23,24, 26-29, 31-33, 35, 37-39, 41,42, 44,45, 47-56
	---	-/--

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*I\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*G\* document member of the same patent family

Date of the actual completion of the international search

1 February 2002

Date of mailing of the international search report

19/02/2002

Name and mailing address of the ISA

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NL - 2280 HV Rijswijk  
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Authorized officer

Laub, C

## INTERNATIONAL SEARCH REPORT

 Intl. Application No  
 PCT/IB 00/01872

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5 420 606 A (GEIGER MARK A ET AL) 30 May 1995 (1995-05-30)	11,29
A	column 4, line 60-67; claim 9; figure 1	1,5,20, 38
Y	US 5 979 757 A (MURRAH JUDITH ET AL) 9 November 1999 (1999-11-09)	6,8,12, 13,19, 23,26,27
A	column 1, line 30-40; figure 3  column 2, line 12-15	5,15,17, 18,21, 31,32, 35,37
Y	EP 0 950 968 A (MATSUSHITA ELECTRIC IND CO LTD) 20 October 1999 (1999-10-20)	2,4, 14-18, 20,21, 31-33, 35, 37-39, 41,42, 44,45, 47,48, 51,52, 55,56
Y	figure 2A	
Y	US 5 657 317 A (BUNTE ALAN G ET AL) 12 August 1997 (1997-08-12)	10,24, 28,33, 39,49, 50,53,54
A	abstract; claim 6; figure 1B	17,39, 51,52,56



# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IB 00/01872

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9721200 A	12-06-1997	AU 1279897 A EP 0871944 A2 WO 9721200 A2	27-06-1997 21-10-1998 12-06-1997
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US 5657317 A	12-08-1997	US 5555276 A US 5602854 A US 5365546 A US 5052020 A AU 700800 B2 AU 3145895 A AU 715628 B2 AU 9815198 A CA 2195661 A1 EP 0784893 A1 WO 9603823 A1 US 5790536 A US 5726984 A US 5949776 A AU 6987694 A CA 2184811 A1 WO 9427382 A1 WO 9524074 A1 US 5912926 A US 5696903 A CA 2162722 A1 AU 696841 B2 AU 5986994 A CA 2152598 A1 EP 0681762 A1 WO 9415413 A1 US 5673031 A US 5708680 A US 5844893 A US 5940771 A CA 2074169 A1 EP 0511295 A1 US 5331136 A WO 9111065 A1 US 5680633 A US 5567925 A	10-09-1996 11-02-1997 15-11-1994 24-09-1991 14-01-1999 22-02-1996 03-02-2000 04-03-1999 08-02-1996 23-07-1997 08-02-1996 04-08-1998 10-03-1998 07-09-1999 12-12-1994 08-09-1995 24-11-1994 08-09-1995 15-06-1999 09-12-1997 24-11-1994 17-09-1998 19-07-1994 07-07-1994 15-11-1995 07-07-1994 30-09-1997 13-01-1998 01-12-1998 17-08-1999 19-07-1991 04-11-1992 19-07-1994 25-07-1991 21-10-1997 22-10-1996

Form PCT/ISA/210 (patent family annex) (July 1992)

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IB 00/01872

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5657317	A	US 5679943 A	21-10-1997
		US 5949056 A	07-09-1999
		US 5218187 A	08-06-1993
		US 5313053 A	17-05-1994
<hr/>			

Form PCT/ISA/210 (patent family annex) (July 1992)

page 2 of 2

BNSDOCID: <WO\_\_\_\_\_0145061A3\_L\_>

94/245

DOJ EX. 1009

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US98/08333**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(6) : G08B 5/22, 13/19; H04Q 1/00, 7/00; H04B 1/16

US CL : 340/825.44, 825.52; 455/58

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 340/825.44, 825.52; 455/58

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Aps

Search terms: emergency, wireless, select?, group#, message#, recipient#, transmit?, receive?, locat?, geographic, area#

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,077,830A (MALLIA) 31 December 1991, abstract, col 1 lines 22 - 26, col 2 lines 48 - 59, paragraph bridging col 3 and 4, col 4 lines 56 through col 5 lines 4, col 5 lines 5 - 14, figs. 1, 2, 4B.	1 - 6, 9, 12, 13, 21
X, P ----- Y	US 5,635,914A (PETREYE et al.) 3 June 1997, figs. 1, 2, 11, 19, paragraph bridging col 12 and 13, col 14 lines 25 - 28, col 16 lines 33 - 37.	8, 10, 11, 17 - 20 ----- 1 - 7, 9, 14 - 16, 21
Y	US 5,381,133A (ERHART et al.) 10 January 1995, figs. 6 and 7, paragraph bridging col 6 and 7.	6

☒ Further documents are listed in the continuation of Box C.
 ☐ See patent family annex.

* Special categories of cited documents:	*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
*A* document defining the general state of the art which is not considered to be of particular relevance	*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
*E* earlier document published on or after the international filing date	*Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
*L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	*Z* document member of the same patent family
*O* document referring to an oral disclosure, use, exhibition or other means	
*P* document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

23 JUNE 1998

Date of mailing of the international search report

09 OCT 1998

Name and mailing address of the ISA/US  
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Washington, D.C. 20231

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JEAN JEANGLAUE

Telephone No. 703 - 305 - 2701

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US98/08333

## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 4,894,649A (DAVIS) 16 January 1990, col 3 lines 25 - 32.	7
X	US 4,891,638A (DAVIS) 2 January 1990, abstract, fig. 2, fig. 3(A-B).	12, 13
Y	US 5,570,079A (DOCKERY) 29 October 1996, abstract, fig. 1.	14, 15
Y	US 5,459,458A (RICHARDSON et al. ) 17 October 1995, fig. 1, paragraph bridging col 11 and 12.	16

Form PCT/ISA/210 (continuation of second sheet)(July 1992)\*

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US95/10170

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) : HO4L 27/00, G08G 1/23

US CL : 375/37; 340/993

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 375/259, 340, 345; 340/993, 989, 988; 370/92, 85.1; 342/457; 364/449

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

APS

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ---- Y	US, A, 5,095,532 (MARDUS) 10 MARCH 1992, col. 2, line 36 - col.4, line 19.	1-6,8-11,13 - 14, 16 - 17, 19,23-26 ----- 7,12,18,20-21.
Y	US, A, 4,097,695 (GRACE ET AL) 27 June 1978, col.4, line 30 - col.6, line 34.	1-14, 16-21, 23-26.
A	US, A, 5,311,197 (SORDEN ET AL) 10 May 1994, see abstract.	1-26.
A	US, A, 4,627,052 (HOARE ET AL) 2 December 1986, see abstract.	1-26.

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

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Date of the actual completion of the international search

23 SEPTEMBER 1995

Date of mailing of the international search report

20 DEC 1995

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## INTERNATIONAL SEARCH REPORT

International Application No.  
PCT/US 99/26045

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 H04Q7/22

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 H04Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 96 05678 A (MITRE CORP) 22 February 1996 (1996-02-22)  page 5, line 2 - line 12 page 9, line 13 - line 21 page 6, line 15 - line 20 page 7, line 19 - page 8, line 6	1-4, 6-13, 15-20
X	DE 196 05 632 A (AEG MOBILE COMMUNICATION) 21 August 1997 (1997-08-21)  page 2, line 24 - line 26 page 2, line 51 - line 56 page 3, line 23 - line 28 page 3, line 66 - page 4, line 14	1,2,4-6, 8,9,11, 12, 14-16, 18,19,21

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"P" document published prior to the international filing date but later than the priority date claimed

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Date of the actual completion of the international search

22 February 2000

Date of mailing of the international search report

02/03/2000

Name and mailing address of the ISA

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Authorized officer

Kampouris, A

# INTERNATIONAL SEARCH REPORT

Information on patent family members

Inte. .ional Application No  
PCT/US 99/26045

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
W0 9605678 A	22-02-1996	US 5636245 A	03-06-1997
		CA 2197080 A	22-02-1996
		EP 0775407 A	28-05-1997
		FI 970512 A	07-02-1997
		JP 10504392 T	28-04-1998
		NO 970578 A	24-03-1997
DE 19605632 A	21-08-1997	EP 0790747 A	20-08-1997
		NO 970724 A	18-08-1997



<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number		
	Filing Date		2011-12-05
	First Named Inventor	Wood, et al.	
	Art Unit		
	Examiner Name		
	Attorney Docket Number	ENIT 9834C2	

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	1	441720	JP		2000-08-18			<input type="checkbox"/>
	2	0030379	WO		2000-05-25			<input type="checkbox"/>
	3	9605678	WO		1996-02-22			<input type="checkbox"/>

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	Filing Date		2011-12-05	
	First Named Inventor	Wood, et al.		
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	Attorney Docket Number		ENIT 9834C2	

	4	9849661	WO		1998-11-05			<input type="checkbox"/>
	5	0145061	WO		2001-06-21			<input type="checkbox"/>
	6	0157724	WO		2001-08-09			<input type="checkbox"/>
	7	0189150	WO		2001-11-22			<input type="checkbox"/>
	8	0371392	WO		2003-08-28			<input type="checkbox"/>
	9	0377063	WO		2003-09-18			<input type="checkbox"/>
	10	0579421	WO		2005-09-01			<input type="checkbox"/>
	11	0915598	EP		1999-09-12			<input type="checkbox"/>
	12	1032148	EP		2000-08-30			<input type="checkbox"/>
	13	1071296	EP		2001-01-24			<input type="checkbox"/>
	14	1515512	EP		2005-03-16			<input type="checkbox"/>

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number		
	Filing Date		2011-12-05
	First Named Inventor	Wood, et al.	
	Art Unit		
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	1	3rd Generation Partnership Project TS 23.246, Release 6, September 2004	<input type="checkbox"/>
	2	Bharat Sanchar Nigam Limited, "Value Added Services in GSM", Engineering Instruction, 04 May 2005; <a href="http://www.bsnl.co.in/service/mobile voice based service.htm">http://www.bsnl.co.in/service/mobile voice based service.htm</a>	<input type="checkbox"/>
	3	British Parliament Debates CellAlert Service for the UK, May 13, 2003, <a href="http://www.ceasa.us/news.htm">www.ceasa.us/news.htm</a>	<input type="checkbox"/>
	4	Canadian Contract No. 5007441, 23 July 2003; <a href="http://72.14.203.104/search?q=cache:piSqEswBv74J:strategis.ic.gc.ca/epic/internet/inet-td">http://72.14.203.104/search?q=cache:piSqEswBv74J:strategis.ic.gc.ca/epic/internet/inet-td</a>	<input type="checkbox"/>
	5	Canadians want Emergency-Location Services, by Dave Ebner, April 11, 2003, <a href="http://www.ceasa.us/news.htm">www.ceasa.us/news.htm</a>	<input type="checkbox"/>
	6	CEASA, "Cell Alert System Via Cell Broadcast, Wood, September 2005, <a href="http://www.eglobalconf.net/speeches/MarkWood.ppt">www.eglobalconf.net/speeches/MarkWood.ppt</a>	<input type="checkbox"/>
	7	CEASA; News and Events, "News", 14 January 2005-June 2005, <a href="http://www.ceasa-international.org/news.html">http://www.ceasa-international.org/news.html</a>	<input type="checkbox"/>
	8	CEASA, "Text Message Broadcasts Could Provide Disaster Alerts" 28 July 2005, <a href="http://ceasa-international.com/usa/index2.php?option=comcontent&amp;task=view&amp;id=1&amp;Ite">http://ceasa-international.com/usa/index2.php?option=comcontent&amp;task=view&amp;id=1&amp;Ite</a>	<input type="checkbox"/>
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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number		
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	Art Unit		
	Examiner Name		
	Attorney Docket Number		ENIT 9834C2

	10	CEASA International, "Welcome to CEASa USA", Ceasa Admin, 12 June 2004, <a href="http://ceasa-international.com">http://ceasa-international.com</a>	<input type="checkbox"/>
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	12	Chinese Office Action (page 1 with cited reference EP 1032148)	<input type="checkbox"/>
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	15	Engadget, "Dutch Testing Geo-Targeted SMS Emergency Broadcast System", Ricker, 08 October 2005, <a href="http://engadget.com/entry/12340005900692252">http://engadget.com/entry/12340005900692252</a>	<input type="checkbox"/>
	16	ETSI TS 123.246, Universal Mobile Telecommunications Systems (UMTS); Multimedia Broadcast/Multicast Service (MBMS); Architecture and functional description (3GPP TS 23.246 version 6.6.0 Release 6) (2005-03)	<input type="checkbox"/>
	17	Global Amateur Radio Emergency Communications Conference, Tampere, Finland, 13-14 June 2005, "What is 'Cell Broadcasting' and Why do I care, as a HAM?", Wood, <a href="http://www.rientola.fi/oh3ag/garec/documents/Cellalert.ppt">www.rientola.fi/oh3ag/garec/documents/Cellalert.ppt</a>	<input type="checkbox"/>
	18	International Search Report, date of mailing July 17, 2006 received from the International Searching Authority	<input type="checkbox"/>
	19	International Telecommunication Union, "Cell Broadcast Broker System" M. Wood, Cell Alert Services Corp., 18 Feb 2003, <a href="http://www.itu.int/itudoc/itu-t/workshop/ets/isd3-001.html">http://www.itu.int/itudoc/itu-t/workshop/ets/isd3-001.html</a>	<input type="checkbox"/>
	20	Messaging Network, Bercut Limited, "Broadcast for the Masses", Sergey Ermilov, 2 March 2005, <a href="http://www.bercut.biz">http://www.bercut.biz</a>	<input type="checkbox"/>

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number		
	Filing Date		2011-12-05
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	Art Unit		
	Examiner Name		
	Attorney Docket Number		ENIT 9834C2

	21	MobileIN.com Perspective, "Cell Broadcasting Technical Primer", Wood, September 2005, <a href="http://www.mobilein.com/Perspectives/Authors/CB_Primer.htm">http://www.mobilein.com/Perspectives/Authors/CB_Primer.htm</a>	<input type="checkbox"/>
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	23	News from Senator John Edwards, North Carolina, April 3, 2003, Senate Okays Edwards Emergency Warning Bill, <a href="http://www.ceasa.us/news.htm">www.ceasa.us/news.htm</a>	<input type="checkbox"/>
	24	News scientist.com, "Text Message Broadcasts Could Provide Disaster Alerts", 06 January 2005, <a href="http://www.newscientist.com/article.ns?id=dn6852">http://www.newscientist.com/article.ns?id=dn6852</a>	<input type="checkbox"/>
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	26	RCR, Cell-Broadcast Service Gets Second Look, Jeffrey Silva, November 10, 2003, <a href="http://www.ceasa.us/news.htm">www.ceasa.us/news.htm</a>	<input type="checkbox"/>
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	29	Stanford Univeristy, EE179 "Introduction to Communications, Professor Andrea Goldsmith, Winter 2005, <a href="http://www.stanford.edu/class/ee179">http://www.stanford.edu/class/ee179</a>	<input type="checkbox"/>
	30	TeliaSonera, "Mobile Broadcast/Multicast Service (MBMS)", MediaLab, August 2004, <a href="http://www.medialab.sonera.fi">www.medialab.sonera.fi</a>	<input type="checkbox"/>
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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number		
	Filing Date		2011-12-05
	First Named Inventor	Wood, et al.	
	Art Unit		
	Examiner Name		
	Attorney Docket Number		ENIT 9834C2

	32	The Cellular Emergency Alert Services Association Policy Statement, August 5, 2002, <a href="http://www.ceasa.us/news.htm">http://www.ceasa.us/news.htm</a>	<input type="checkbox"/>
	33	The Wall Street Journal Online, Local Governments Look to Cellphone-Based Alerts, Carl Bialik, June 12, 2003, <a href="http://www.ceasa.us/news.htm">www.ceasa.us/news.htm</a>	<input type="checkbox"/>

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	Filing Date		2011-12-05
	First Named Inventor	Wood, et al.	
	Art Unit		
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### CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

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☐ See attached certification statement.

☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☐ A certification statement is not submitted herewith.

### SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/David L. Howard/	Date (YYYY-MM-DD)	2011-12-05
Name/Print	David L. Howard	Registration Number	41502

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7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

# INTERNATIONAL SEARCH REPORT

International: Application No  
PCT/US 01/16156

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H04L12/18 G06F17/60 H04L29/06 G06F17/30

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04L G06F H04N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC, IBM-TDB, COMPENDEX

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>EP 0 575 279 A (INTERNATIONAL BUSINESS MACHINES CORPORATION) 22 December 1993 (1993-12-22) column 2, line 35 -column 3, line 17 column 4, line 35 -column 5, line 6 column 8, line 37 -column 9, line 52 -----</p>	1-47

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents:

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- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*G\* document member of the same patent family

Date of the actual completion of the international search

7 March 2002

Date of mailing of the international search report

15/03/2002

Name and mailing address of the ISA

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Authorized officer

Ströbeck, A.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

Internati

Application No

PCT/US 01/16156

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
EP 0575279	A	22-12-1993	AU	3839093 A		23-12-1993
			CA	2094410 A1		19-12-1993
			CN	1081042 A ,B		19-01-1994
			EP	0575279 A2		22-12-1993
			JP	2503189 B2		05-06-1996
			JP	6152593 A		31-05-1994
			KR	9614979 B1		23-10-1996
			US	5634011 A		27-05-1997
<hr/>						

Form PCT/ISA/210 (patent family annex) (July 1992)

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/04986

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G06F 17/60  
US CL : 705/418; 377/16; 705/400

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 377/15 16; 705/400, 417, 418

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
None

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
None

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DE 4331432 A1 (LAUDAHN) 16 March 1995 (16.03.1995), see abstract.	1-42
A	PCNetter: "SPECIAL REPORT: Cisco Systems' Universal Access Servers", 01 April 1996, vol. 11, no. 4, retrieved from DIALOG, DIALOG No.: 03065139, see entire	1-42
X	US 5,606,497 A (CRAMER et al) 25 February 1997 (25.02.1997), see abstract.	1-6, 8-16, 18-26, 28-36 & 38-42
A		7, 17, 27 & 37
X	US 6,011,841 A (ISONO) 04 January 2000 (04.01.2000), see abstract.	1-6, 8-16, 18-26, 28-36 & 38-42
A		7, 17, 27 & 37
X	US 2002/0002470 A1 (ARIA) 03 January 2002 (03.01.2002), see abstract.	1-42
A, P	US 6,363,137 B1 (NAKAO et al) 26 March 2002 (26.03.2002), see abstract.	1-42

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"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

08 September 2003 (08.09.2003)

Date of mailing of the international search report

01 OCT 2003

Name and mailing address of the ISA/US

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Form PCT/ISA/210 (second sheet) (July 1998)

# INTERNATIONAL SEARCH REPORT

PCT/US03/04986

## C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X,P --- A,P	US 2002/0062289 A1 (KONDO) 23 May 2002 (23.05.2002), see abstract.	1-6, 8-16, 18-26, 28-36 & 38-42 ----- 7, 17, 27 & 37
X,P	US 2002/0077981 A1 (TAKATORI et al) 20 June 2002 (20.06.2002), see abstract.	1-42
X,P --- A,P	US 6,424,704 B1 (LEE) 23 July 2002 (23.07.2002), see abstract.	1-6, 8-16, 18-26, 28-36 & 38-42 ----- 7, 17, 27 & 37

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# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/06526

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G06F 11/30, 12/14; H04L 9/00, 9/32

US CL : 713/200, 200

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 713/200, 200; 380/277, 278, 279

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
EAST Database

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,084,510 A (Lemelson et al) 04 July 2000 (04.07.2000), column 3, lines 24-28; column 4, lines 4-27; column 5, lines 54-60; column 13, lines 19-20; column 14, lines 19-26; column 16, lines 55-67.	1-7, 11-14
Y		8-10, 15-20
Y	US 6,247,059 B1 (Johnson et al) 12 June 2001 (12.06.2001), column 2, lines 30-34; column 5, lines 64-67.	8-10, 15-19
Y	US 6,169,805 B1 (Dunn et al) 02 January 2001 (02.01.2001), column 2, lines 16-21.	20
A	US 5,636,245 A (Ernst et al) 03 June 1997 (03.06.1997), column 2, lines 1-6; column 2, lines 15-35, 50-58.	1-20



Further documents are listed in the continuation of Box C.



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"T"

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document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&"

document member of the same patent family

Date of the actual completion of the international search

20 August 2003 (20.08.2003)

Date of mailing of the international search report

11 SEP 2003

Name and mailing address of the ISA/US

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Form PCT/ISA/210 (second sheet) (July 1998)



## INTERNATIONAL SEARCH REPORT

PCT/US05/04897

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC: G06E 15/16  USPC: 709/206 According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b>  Minimum documentation searched (classification system followed by classification symbols) U.S. : 709/206  Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2002/0107016 A1 (HANLEY) 08 August 2002 (08.08.2002), figure 1, paragraphs 0025-0030	1-30
Y	US 6,219,696 B1 (WYNBLATT et al) 17 April 2001 (17.04.2001), column 2-4.	1-30
Y	US 6,240,360 B1 (PHELAN) 29 May 2001 (29.05.2001), figures 1-3, column 4-7	3, 7, 12, 14, 17-18, 24-25, 27-29
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
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"E"	earlier application or patent published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O"	document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P"	document published prior to the international filing date but later than the priority date claimed	
Date of the actual completion of the international search 12 June 2006 (12.06.2006)		Date of mailing of the international search report 17 JUL 2006
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201		Authorized officer Zami Maung Telephone No. (571) 272-1400

Form PCT/ISA/210 (second sheet) (April 2005)





European Patent  
Office

# EUROPEAN SEARCH REPORT

Application Number  
EP 99 40 1864

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	WO 98 25422 A (NOKIA TELECOMMUNICATIONS OY ; HAUMONT SERGE (FI)) 11 June 1998 (1998-06-11) * page 1, line 3 - line 6 * * page 2, line 1 - line 13 * * page 3, line 12 - page 4, line 4 * * page 6, line 21 - line 36 * * page 11, line 3 - line 12 *	1,6-9	H04Q7/22
X	WO 97 21313 A (NORTHERN TELECOM LTD ; SAYERS IAN (GB); RICHARDSON KENNETH (GB)) 12 June 1997 (1997-06-12) * page 2, line 5 - line 20 * * page 5, line 4 - line 19 * * page 6, line 16 - line 35 *	1,2,6,9	
A	BRASCHE G: "EVALUATION OF A MAC PROTOCOL PROPOSED FOR A GENERAL PACKET RADIO SERVICE IN GSM" IEEE INTERNATIONAL SYMPOSIUM ON PERSONAL, INDOOR AND MOBILE RADIO COMMUNICATIONS, vol. 2, 1 May 1996 (1996-05-01), page 668-672 XP000198338 * page 669, left-hand column, line 20 - line 36 * * page 669, right-hand column, line 18 - line 28 *		TECHNICAL FIELDS SEARCHED (Int.Cl.7)  H04Q H04L
The present search report has been drawn up for all claims			
Place of search <b>BERLIN</b>		Date of completion of the search <b>9 December 1999</b>	Examiner <b>RothlÜbbers, C</b>
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons S : member of the same patent family, corresponding document			

EPO FORM 1503 03.02 (P0401)

ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.

EP 99 40 1864

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on  
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

09-12-1999

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9825422 A	11-06-1998	FI 964818 A	03-06-1998
		AU 5123398 A	29-06-1998
		EP 0947114 A	06-10-1999
WO 9721313 A	12-06-1997	GB 2307827 A	04-06-1997
		GB 2307828 A	04-06-1997

EPN FORM P438

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

<b>PATENT APPLICATION FEE DETERMINATION RECORD</b> Substitute for Form PTO-875						Application or Docket Number 13/311,448	
<b>APPLICATION AS FILED - PART I</b>							
(Column 1)		(Column 2)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	95		N/A	
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A	310		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	125		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	20	minus 20 = *	x 30 =	0.00	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	2	minus 3 = *	x 125 =	0.00			
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			0.00			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0.00			
			TOTAL	530		TOTAL	
* If the difference in column 1 is less than zero, enter "0" in column 2.							
<b>APPLICATION AS AMENDED - PART II</b>							
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY	
AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x	=
	Application Size Fee (37 CFR 1.16(s))						
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
						TOTAL ADD'L FEE	
(Column 1)		(Column 2)		(Column 3)		OR OTHER THAN SMALL ENTITY	
AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x	=
	Application Size Fee (37 CFR 1.16(s))						
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
						TOTAL ADD'L FEE	
						TOTAL ADD'L FEE	
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.							



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United States Patent and Trademark Office  
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P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
13/311,448	12/05/2011	2617	530	ENIT 9834C2	20	2

CONFIRMATION NO. 9039

1688

Polster, Lieder, Woodruff & Lucchesi, L.C.

12412 Powerscourt Dr. Suite 200

St. Louis, MO 63131-3615

FILING RECEIPT



OC000000051543750

Date Mailed: 12/21/2011

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

**Applicant(s)**

Mark Andrew Wood, Haslemere, UNITED KINGDOM;  
Kevin Russell Preston, Gwent, UNITED KINGDOM;  
Douglas Weiser, Port Richey, FL;

**Assignment For Published Patent Application**

ENVISIONIT LLC, St. Charles, MO

**Power of Attorney:** None

**Domestic Priority data as claimed by applicant**

This application is a CON of 12/559,405 09/14/2009 PAT 8073903  
which is a CON of 11/057,704 02/14/2005 PAT 7752259  
which claims benefit of 60/544,739 02/13/2004

**Foreign Applications** (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.)

**If Required, Foreign Filing License Granted:** 12/16/2011

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 13/311,448**

**Projected Publication Date:** To Be Determined - pending completion of Missing Parts

**Non-Publication Request:** No

**Early Publication Request:** No

**\*\* SMALL ENTITY \*\***

**Title**

BROADCAST ALERTING MESSAGE AGGREGATOR/GATEWAY SYSTEM AND METHOD

**Preliminary Class**

455

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/311,448	12/05/2011	Mark Andrew Wood	ENIT 9834C2

CONFIRMATION NO. 9039

FORMALITIES LETTER

1688

Polster, Lieder, Woodruff & Lucchesi, L.C.  
12412 Powerscourt Dr. Suite 200  
St. Louis, MO 63131-3615



Date Mailed: 12/21/2011

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

*Filing Date Granted*

**Items Required To Avoid Abandonment:**

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The oath or declaration is missing.

*A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.*

*Note: If a petition under 37 CFR 1.47 is being filed, an oath or declaration in compliance with 37 CFR 1.63 signed by all available joint inventors, or if no inventor is available by a party with sufficient proprietary interest, is required.*

The application is informal since it does not comply with the regulations for the reason(s) indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

- A replacement abstract not exceeding 150 words in length and commencing on a separate sheet in compliance with 37 CFR 1.72(b) and 37 CFR 1.121 is required.

Applicant is cautioned that correction of the above items may cause the specification and drawings page count to exceed 100 pages. If the specification and drawings exceed 100 pages, applicant will need to submit the required application size fee.

The applicant needs to satisfy supplemental fees problems indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

- A surcharge (for late submission of filing fee, search fee, examination fee or oath or declaration) as set forth in 37 CFR 1.16(f) of \$65 for a small entity in compliance with 37 CFR 1.27, must be submitted.

**SUMMARY OF FEES DUE:**

Total fee(s) required within **TWO MONTHS** from the date of this Notice is **\$65** for a small entity

- \$65 Surcharge.



Replies should be mailed to:

Mail Stop Missing Parts  
Commissioner for Patents  
P.O. Box 1450  
Alexandria VA 22313-1450

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web.

<https://sportal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html>

For more information about EFS-Web please call the USPTO Electronic Business Center at **1-866-217-9197** or visit our website at <http://www.uspto.gov/ebc>.

If you are not using EFS-Web to submit your reply, you must include a copy of this notice.

/bmnguyen/

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Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

Electronic Acknowledgement Receipt	
EFS ID:	12074365
Application Number:	13311448
International Application Number:	
Confirmation Number:	9039
Title of Invention:	BROADCAST ALERTING MESSAGE AGGREGATOR/GATEWAY SYSTEM AND METHOD
First Named Inventor/Applicant Name:	Mark Andrew Wood
Customer Number:	1688
Filer:	David L. Howard
Filer Authorized By:	
Attorney Docket Number:	ENIT 9834C2
Receipt Date:	14-FEB-2012
Filing Date:	05-DEC-2011
Time Stamp:	16:24:54
Application Type:	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$65
RAM confirmation Number	3415
Deposit Account	162201
Authorized User	

### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
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1		ENIT_9834C2_Preliminary_Amendment.pdf	23161 09e8a7f99b8c1a5fb022f1745a12d54164a05ca0	yes	3
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Preliminary Amendment		1	1	
	Abstract		2	2	
	Applicant Arguments/Remarks Made in an Amendment		3	3	
Warnings:					
Information:					
2	Oath or Declaration filed	ENIT_9834C2_Executed_Wood_Declaration.pdf	548673 3246e28fadd70836bb72efa379333664726cc1ae	no	2
Warnings:					
Information:					
3	Oath or Declaration filed	ENIT_9834C2_Executed_Preston_Declaration.pdf	116864 98540f9395f540914a79c3facd68481ca7a59e70	no	2
Warnings:					
Information:					
4	Oath or Declaration filed	ENIT_9834C2_Executed>Weiser_Declaration.pdf	124421 a890f0e1be374ece426755d3a5f7fa580aab7b54	no	2
Warnings:					
Information:					
5	Fee Worksheet (SB06)	fee-info.pdf	30385 53a9d69e51db19b65958bc58c68577dc62562425	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			843504		