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Description

[0001] The present invention relates to a communication system such as a cellular wireless communication system, more particularly a communication system capable of efficiently distributing advertisements and other information to users of a large number of terminals accommodated in the system, a communication terminal for the same, and an information distribution apparatus suitably used in such a communication system.

[0002] In a broadcast system, one broadcast station distributes information to a large number of receiving stations at one time, so efficient distribution of advertisements is possible. Many broadcast systems distribute advertisements.

[0003] A typical form of distribution of an advertisement in an ordinary broadcast system is shown in Fig. 9.

[0004] As shown in Fig. 9, a broadcast system of the related art generally inserts an advertisement between contents by time division in a channel providing an actual program (contents) so as to distribute the advertisement. This can be said to be a means used since there is no channel exclusively for advertisements and therefore the only method for sending advertisements to viewers has been forced insertion of advertisements between contents.

[0005] On the other hand, in a general communication system of the related art, the only broadcast information has been broadcasts of control information for securing communication paths. There has been no means of simultaneously distributing information to users.

[0006] For example, in a cellular wireless communication system, a broadcast control channel (BCCH) is used for broadcasts to terminals, but the content of the information transmitted by the broadcast control channel (BCCH) consists only of control information of system environment etc. Information directly relating to users is not transmitted.

[0007] Also, in the cellular wireless communication system of the related art and almost all other communication systems, there is no defined user information channel common for a plurality of terminals. Information is transferred in units of terminals in a traffic channel (TCH) giving access rights to a specific terminal.

[0008] There is demand for simultaneously distributing for example advertisements and other information to cellular phones and other terminals of cellular wireless communication systems and to computers connected to a network. If it were possible to simultaneously distribute desired information to such communication terminals, this could be utilized as an effective advertisement medium and, furthermore, the users of the communication terminals could expect to receive information of a form different from that of ordinary communication and take advantage of a communication charging system set considering reception of advertisements, thereby enabling a wireless communication system to be more effectively used.

[0009] In the communication system of the related art, however, there is nothing like a package broadcast traffic channel for users of all terminals defined. The channel configuration does not even allow any experiments for efficient distribution of advertisements.

[0010] Further, broadcast systems broadcast advertisements, but there is no channel provided exclusively for advertisements. Therefore, the only way to distribute advertisements is to temporarily suspend transmission of information content on the physical channel transmitting the information contents and insert them time-wise. This cannot be applied immediately to communication systems.

[0011] Namely, the general communication systems of the related art have not been able to distribute information such as advertisements. No such attempts have been made either.

[0012] Specifically, immediately after turning on for example a communication terminal, a computer, etc., there is certain waiting time before the environment is set up. This period is perfect for displaying advertisements to users. There have been requests for displaying advertisements during this time, however, the contents displayed during this time are usually always fixed. Advertisements and other information are not being displayed.

[0013] Also, when for example browsing the web, there is a waiting time while information is being downloaded. This time can be also considered a perfect time for displaying advertisement in the same way, but there is no system displaying advertisements using this time.

SUMMARY OF THE INVENTION

[0014] An object of the present invention is to provide a communication system capable of broadcasting desired advertisements and other information to a large number of unspecified terminals.

[0015] Another object of the present invention is to provide a communication terminal, to be used in such a communication system, capable of receiving broadcasted information and suitably displaying it to the user.

[0016] Still another object of the present invention is to provide an information distribution apparatus capable of broadcasting for example advertisements and other desired information to a large number of unspecified terminals.

[0017] Therefore, there is provided a communication system as defined in claim 1.

[0018] Preferably, the communication system of the present invention further comprises a control channel for transferring information regarding predetermined control processing for suitable communication between said host system and said plurality of terminals.

[0019] Further preferably, said host system comprises a server apparatus for storing information and transmitting in accordance with requests from said terminals the requested information to the terminal and said plurality of terminals substantially use said distributed signal

including a content at least while waiting for transmission of said requested information from said server apparatus.

[0020] Further preferably, said plurality of terminals notify said host system of information regarding usage of said distributed signal when substantially using a signal distributed via said distribution channel.

[0021] Specifically, a plurality of types of signals each including a content are multiplexed and broadcasted over said distribution channel.

[0022] Further specifically, said communication system comprises a cellular wireless communication system, said plurality of terminals comprise cellular wireless communication terminals, said host system comprises a base station, and said base station and said cellular wireless communication terminals are connected by a plurality of channels including a control channel for transferring information for predetermined control processing, a communication channel for communication between said cellular wireless communication terminals, and a distribution channel for broadcasting a signal each including a content to said cellular wireless communication terminals.

[0023] According to a further aspect of the invention, there is provided a cellular wireless communication terminal according to claim 6.

[0024] Preferably, said control means makes said output means output said signal stored in said storage means while the communication terminal is processing and waiting for a new operation.

[0025] Further preferably, said control means makes said output means output said signal stored in said storage means while the communication terminal is waiting to receive a information by a communication via said first channel.

[0026] Further preferably, said communication terminal has an off state, a stand-by state, and an active state, and said receiving means receives said distributed signal including a content when the communication terminal is in a stand-by state as defined in claim 9.

[0027] Further preferably, the communication terminal of the present invention further comprises an output notification means for notifying information regarding usage of said distributed signal to said host system when said distributed signal is output from said output means.

[0028] Specifically, said distributed signal comprises a signal obtained by multiplexing a plurality of types of signals each including a content and said receiving means demultiplexes said multiplexed plurality of signals and selects a signal by a predetermined method.

[0029] As a further aspect of the invention, there is provided an information distribution apparatus as defined in claim 12.

[0030] Specifically, said distribution means multiplexes and broadcasts a plurality of types of signals each including a content.

[0031] Further specifically, said signal comprises a signal including advertising information, and said processing means carries out processing for totaling up the state

of viewing of said advertising information at said terminals.

[0032] Further specifically, said signal comprises a signal including advertising information, and said processing means carries out processing for totaling up the state of viewing for each said advertising information.

BRIEF DESCRIPTION OF THE DRAWINGS

10 **[0033]** These and other objects and features of the present invention will become clearer from the following description of the preferred embodiments given with reference to the accompanying drawings, in which:

15 Fig. 1 is a view of the configuration of a network of a cellular wireless communication system of an embodiment of the present invention;

Fig. 2 is a block diagram of the configuration of a terminal of the cellular wireless communication system shown in Fig. 1;

20 Fig. 3 is a view of a basic information distribution procedure in the cellular wireless communication system shown in Fig. 1;

Fig. 4 is a schematic view of a method of distributing advertisements and other information to a large number of unspecified users and a state of a channel at that time in the cellular wireless communication system shown in Fig. 1;

25 Fig. 5 is a view of an information distribution procedure in a case of receiving desired information, including distribution of advertising information, in the cellular wireless communication system shown in Fig. 1;

Fig. 6 is a view of contents of logic channels and a state of a terminal when communicating by the procedure shown in Fig. 5;

30 Fig. 7 is a view of the state of change for explaining processing in the terminal shown in Fig. 1;

Fig. 8 is a view of contents of logic channels and a state of a terminal when multiplexing information of a plurality of advertisements for distribution; and

35 Fig. 9 is a view of a typical form of advertising distribution in an ordinary broadcast system.

45 DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0034] An embodiment of the present invention will be explained with reference to Figs. 1 to 8

[0035] In the present embodiment, the present invention will be explained with reference to example of simultaneously sending an advertisement to terminals in a mobile-body wireless communication system such as a cellular wireless communication system.

[0036] First, the network configuration of the cellular wireless communication system of the present embodiment will be explained with reference to Fig. 1.

[0037] Figure 1 is a view of the configuration of a network of a cellular wireless communication system of the

present embodiment.

[0038] A cellular wireless communication system 1 of the present embodiment is configured by a contents server 10, a plurality of network nodes 20₁ to 20_n, and a plurality of terminals 30₁ to 30_m arranged hierarchically as shown in Fig. 1. The desired information including a text data, image data, and audio data is transmitted and the advertising information is distributed from the contents server 10 to the terminals 30_j, (j=1 to m) via the network nodes 20_i (i=1 to n).

[0039] Note that in the cellular wireless communication system 1, the network nodes 20₁ to 20_n correspond to cell sites CS, MTSO (mobile telephone switching offices), etc. Accordingly, communication between the network nodes 20_i and the terminals 30_j is maintained under the control of an existing cellular wireless communication system.

[0040] Note that the network nodes 20_j will be also referred to as CS's 20_i in the following explanation.

[0041] The parts of the cellular wireless communication system 1 will be explained in detail below.

[0042] The contents server 10 stores the desired information and advertising information to be distributed. The information is appropriately distributed in accordance with need or a predetermined schedule. Specifically, the contents server 10 is comprised by, for example, a work station, file server, etc. having a communications interface.

[0043] The network nodes 20_i are relays for substantially connecting the contents server 10 and the terminals 30_j in accordance with a predetermined network topology. In Fig. 1, the layers of the network nodes 20_i serving as the relay layers are made one layer for simplifying the illustration, but an actual cellular wireless communication system 1 is configured to have a plurality of layers.

[0044] The network nodes 20_i suitably distribute requests for distribution of information from the terminals 30_j to the contents server 10, information from the contents server 10 to the terminals 30_j, etc.

[0045] The terminals 30_j are cellular phone type terminals in the cellular wireless communication system 1 of the present embodiment. Users use them to request distribution of information from the contents server 10, receive the requested information and advertising information, or communicate with each other.

[0046] The configuration of the terminal 30_j will be explained in detail with reference to Fig. 2.

[0047] Figure 2 is a block diagram of the configuration of one of the terminals 30_j.

[0048] The terminal 30_j comprises a signal transmitter/receiver 31, cellular controller 32, information controller 33, storage 34, and a display/command input unit 35.

[0049] The signal transmitter/receiver 31 is a circuit for signal processing for actual communication with a base station and generates a communication signal of a desired protocol and transmits the same under the control of the cellular controller 32. Also, the signal transmitter/receiver 31 decodes a received signal to a predetermined

baseband signal under the control of the cellular controller 32 and outputs the result to the information controller 33.

[0050] The cellular controller 32 controls the signal transmitter/receiver 31 so that the terminal 30_j can suitably communicate in accordance with a predetermined protocol and supports the parts of the terminal 30_j so as to suitably maintain state of the terminal 30_j relating to communication by functions provided to the communication system. For example, the cellular controller 32 carries out a cell search for detecting whether it is in or out of a communication zone, whether it is in an area capable of communicating with its base station, etc. and outputs the results to the display/command input unit 35.

[0051] The information controller 33 processes the information received via the signal transmitter/receiver 31 and information set by the user via the display/command input unit 35.

[0052] The information controller 33 generates data for requesting to distribute desired information based on the operation of the user and outputs it to the signal transmitter/receiver 31.

[0053] Also, the information controller 33 stores in the storage 34 a variety of notification information and advertising information received from the contents server 10 and displays the same on the display/command input unit 35 so that the user can confirm it.

[0054] The storage 34 is a small size storage storing desired information transmitted from the contents server 10, advertising information to be suitably distributed, or information set by the user via the display/command input unit 35 and is accessed as needed by the information controller 33. Specifically, the storage 34 is realized by a small size hard disk drive (HDD), an MD, a re-writeable CD, a compact MO, etc.

[0055] The display/command input unit 35 is an interface between internal circuits of the terminal 30_j and the user and comprises a liquid crystal display panel for displaying information to the user, a speaker for audio output

of the information, and a keyboard for the user to operate.

[0056] Next, the processing at the time of basic information distribution in such a cellular wireless communication system 1 will be explained with reference to Fig. 3.

[0057] Figure 3 is a view of a basic information distribution procedure in the cellular wireless communication system 1.

[0058] First, a user turns on a switch of a terminal 30_j, and the state of the terminal 30_j changes from an off state to a stand-by state.

[0059] In the stand-by state, the terminal 30_j attempts to receive information of a broadcast control channel (BCCH) transmitted from a nearby CS 20_i to obtain information on which network node (CS) 20_i it should communicate with etc. The CS's 20_i in the system transmit information at all times. The terminal 30_j judges whether it can connect to the network at that location and frequency channel by receiving this.

[0060] - Note that the cellular wireless communication

system 1 of the present invention 1 receives advertisements from another channel at this time, but the specific operations and processing of the present invention will be explained in detail later on. The basic processing will be explained here.

[0061] As a result, when the terminal judges that it can connect to the network, it sends information required for position registration and acknowledgment etc. needed therefor to the CS 20_i via a random access channel (RACH) (registration).

[0062] Upon receiving the information, the CS 20_i forwards the received information to the contents server 10 or an HLR (home location register) around it (registration).

[0063] The HLR checks the transferred information and confirms that it is suitable information from the terminal 30_j (check). After confirmation, it notifies the terminal 30_j via the CS 20_i that the registration has been completed (registration response).

[0064] Upon receiving this, the terminal 30_j provides information indicating that it can be connected to the system to the user using an LED, sound, etc. (state ready). Note that in the stand-by state, the terminal 30_j is activated only at the minimum parts required for communication with the CS 20_i. For example, when the terminal 30_j has a liquid crystal screen, the liquid crystal screen is turned off.

[0065] The user carries out a predetermined operation to activate the terminal (active command), and the terminal 30_j changes to an active state, supplies power to the liquid crystal screen etc. for the first time after being activated, and enters a state capable of receiving a variety of commands from the user.

[0066] When a command to the effect that a user desires specified information (demand command) is input by the user in the active state, the terminal 30_j first checks whether the required information is stored in the storage 34 provided in itself. When it is stored, it reads the information from the storage 34 and provides it to the user. When the required information is not stored, the terminal 30_j transmits a request for information (demand for contents) to the CS 20_i for requesting that the contents server 10 provide the information.

[0067] Upon correctly receiving this, the CS 20_i further forwards transfers it to the contents server 10 (demand for contents). The contents server 10 searches for and extracts the requested information (requested contents) and provides it to the requesting terminal 30_j.

[0068] The terminal 30_j receives the information from the CS 20_i via a traffic channel (TCH) and stores the same in the storage 34 once. When the storing operation is completed, it provides the received information to the user using the liquid crystal screen, sound, etc. (show contents).

[0069] Note that even during such processing, the CS's 20_i are transmitting information of the broadcast control channel (BCCH) (control signal). The terminal 30_j receives the same and thereby judges whether it can

connect to the network at that location and frequency channel.

[0070] Next, the processing at the time of distributing advertisements in the cellular wireless communication system 1 of such a configuration and operations will be explained with reference to Figs. 4 to 7.

[0071] Figure 4 is a schematic view of a method of distributing advertisements and other information for a large number of unspecified users (hereinafter simply referred to as "advertisements") in the cellular wireless communication system 1 and the state of the channel at that time.

[0072] In the cellular wireless communication system 1, other than the traffic channel (TCH) for separately transmitting information to the users at the respective terminals 30_j, a common traffic channel (CTCH) for transmitting information to users of all terminals 30_j in the system is defined.

[0073] Specific information for the users is transferred on demand as before via the traffic channel (TCH), while advertisements are periodically distributed from the CS's 20_i not via the traffic channel (TCH) but by the common traffic channel (CTCH).

[0074] Accordingly, the distribution of advertisements does not interfere with the traffic channel (TCH).

[0075] Also, the terminal 30_j counts and stores in the storage 34 the date the advertisement was received over the common traffic channel (CTCH), the ID number of the CS 20_i transmitting the advertisement, the number of times and the time the advertisement was displayed/reproduced for the user, etc.

[0076] The information is delivered to the network side attached as advertisement reception history information when the terminal 30_j transmits position registration, acknowledgment, etc., and other control information required for connection with the existing network, namely, at the time of the cell search.

[0077] The information is received by the contents server 10 via a CS 20_i. The contents server 10 compiles this information for every terminal 30_j or for all terminals 30_j.

[0078] As a result, the contents server 10 can determine to how many users and how frequently advertisements broadcasted to large numbers of unspecified users over the common traffic channel (CTCH) were displayed/reproduced.

[0079] Accordingly, a network operator can collect fees for advertisement from advertising agents and clients based on the display/reproduction history of the advertisements.

[0080] The processing at the time of distributing advertisements in such a cellular wireless communication system 1 will be explained with reference to Fig. 5.

[0081] Figure 5 is a view of a procedure for distribution of advertising information in the cellular wireless communication system 1.

[0082] Note that the explanation will be made by focusing on the reception and display of advertising infor-

mation in a terminal 30_j here. Accordingly, processing higher than the CS's 20_i, that is, processing relating to the contents server 10, is omitted in Fig. 5.

[0083] First, the user turns on a switch of a terminal 30_j, and the terminal 30_j changes from an off state to a stand-by state.

[0084] The terminal 30_j in the stand-by state receives information of a broadcast control channel (BCCH) and tries to connect to the network as explained above. The terminal 30_j receives a common traffic channel (CTCH) from the broadcast control channel (BCCH), receives an advertisement distributed by the common traffic channel (CTCH), and stores it in the storage 34 provided inside its own terminal.

[0085] Then, in the same way as above, the terminal 30_j which received the broadcast control channel (BCCH) transmits the necessary information to an HLR via the CS 20_i (registration). The HLR confirms the information is from a suitable terminal 30_j. The fact that the registration has been completed is transmitted to the terminal 30_j via the CS 20_i (registration response). Processing indicating that the terminal 30_j is in a connection-ready state (state ready) is then carried out.

[0086] When the user carries out a predetermined operation to activate the terminal 30_j (active command), the terminal 30_j simultaneously sets the environment and carries out other initialization. The terminal 30_j automatically provides the user with the advertising information received and stored in the storage 34 by a liquid crystal screen, sound, etc. (show ad).

[0087] As a result, the user views the advertising information while the terminal 30_j is initializing.

[0088] When the user inputs a command demanding specified information to the terminal 30_j (demand command), as explained above, the terminal 30_j checks whether the information is stored in the storage 34 and, when it is not stored, transmits a request for information (demand for contents) to the CS 20_i. In this case, the request for information is further forwarded to the contents server 10, the information (requested contents) is searched in the contents server 10, provided to the terminal 30_j via the CS 20_i, stored in the storage 34 (store contents), and provided to the user in a viewable way (show contents).

[0089] When the information requested by the user is being downloaded from the contents server 10, the terminal 30_j again provides the user with the advertising information stored in the storage 34 via a liquid crystal screen, sound, etc. Note that when providing the advertising information during the waiting time, the remaining time until the completion of the information transfer is also provided to the user.

[0090] Namely, the user views the advertising information during the waiting time for the requested information to be downloaded.

[0091] The terminal 30_j ends the display/reproduction of the advertisement as soon as the storing of information transmitted via the traffic channel (TCH) in the storage

34 (store contents) has been completed and then starts to display/reproduce the information stored in the storage 34 (show contents).

[0092] Note that even during such processing, information of the broadcast control channel (BCCH) (control signaling) and advertising information (advertisement) distributed by the common traffic channel (CTCH) are transmitted from the CS's 20_i. The terminal 30_j receives the same and judges whether it can connecting to the network at that location/frequency channel. Also, it stores the distributed advertising information in the storage 34 provided in it.

[0093] Accordingly, the successively viewed advertisements, that is, the advertisement viewed during initialization of the terminal 30_j and the advertisement viewed during the waiting time for downloading in the example shown in Fig. 5, become different.

[0094] The contents of the logic channels and state of the terminal 30_j at the time of such processing are schematically shown in Fig. 6.

[0095] The common traffic channel (CTCH) is configured by frames at timings the same as in the broadcast control channel (BCCH) or synchronized with the broadcast control channel (BCCH). These are received while the terminal 30_j is in a stand-by state. When the terminal 30_j is activated, as explained above, the advertisement stored during the stand-by state is displayed/reproduced to the user the terminal itself is being initialized.

[0096] Furthermore, when downloading information from the contents server 10, advertising information is provided to the user via a liquid crystal screen, sound, etc. during the waiting time from transmission of a request for information until the information is transmitted via the traffic channel (TCH) and during the reception of the same.

[0097] The processing in the terminal 30_j during such processing will be explained with reference to this change in state.

[0098] Figure 7 is a view of the change (transition) in state in a terminal 30_j of the present invention.

[0099] The terminal 30_j changes from a power off state (off state) to a stand-by state by being supplied with power, carries out a cell search to confirms to which CS 20_i it should connect, and receives a broadcast control channel (BCCH) transmitted by that CS 20_i.

[0100] At this time, when a suitable CS 20_i is not found or the broadcast control channel (BCCH) cannot be correctly received (failed), the terminal changes to an out-of-service state indicating it currently is unable to receive provided information. When entering this state, it again starts a cell search after waiting for a certain period of time by a timer (timer expiration).

[0101] When the terminal correctly receives the broadcast control channel (BCCH) (recognize available network), it registers its position and acknowledges reception (registration). As a result, when failing in registration, the terminal enters an out-of-service state, while when succeeding in the registration, it receives a common traf-

fic channel (CTCH) and stores the received advertisement in the storage 34 (RX advertisement and store). Note that reception and storage of the advertisement are carried out directly from the cell searching state without registering.

[0102] When the storing of the advertisement is completed (ad store completed), the terminal enters an idle state (ready idle state).

[0103] When entering an idle state, a timer starts to operate and cell searching is carried out at predetermined time intervals (time expiration).

[0104] When a command to shift to an active state (active command) is input by the user in the idle state or in the out-of-service state, the terminal 30_j enters an active state.

[0105] The terminal 30_j shifted to an active state shows the advertisement to the user (show stored advertisement), then enters a state waiting for a command from the user (wait for user command).

[0106] Here, when a command indicating information contents already stored in the storage 34 are input (stored content demand), the terminal 30_j immediately extracts and shows the content (show stored contents), then returns to a state waiting for a command from the user.

[0107] When information contents not stored in the storage 34 are input (new content demand), the terminal 30_j shows an advertisement to the user (show stored advertisement) as transmitting a request for information to the contents server 10 (TX request & wait for response). When the requested information is all stored in the storage 34 (RX completed & stored), the terminal 30_j shows the information to the user.

[0108] Further, when there is no command input by the user for a predetermined period of time (time expiration) in a state waiting for a command from the user, an advertisement stored in the storage 34 is displayed to the user in some cases.

[0109] Note that advertisements are basically received in the stand-by state. When there is no command input from the user for a predetermined period of time in the state waiting for a command from the user (time expiration), advertisements may be received by a common traffic channel (CTCH) (RX advertisement and store).

[0110] Also, in the state waiting for a command from the user, a terminal carries out a cell search at predetermined time intervals.

[0111] As explained above, in the cellular wireless communication system 1 of the present embodiment, it becomes possible to effectively distributes advertisement something which has been impossible so far.

[0112] Also, by using such a system, for example, it becomes possible for a network operator to increase the advertising income.

[0113] Further, due to this, the cost charged to the user of the terminal is reduced, a larger number of people can become users, and large economic effects can be obtained.

[0114] Note that the present invention is not limited to

the above embodiments and a variety of modifications can be made.

[0115] For example, as advertisements distributed by the common traffic channel (CTCH), in the above embodiment, an example was described where the same advertisement was continuously distributed, however, a plurality of advertisements may be distributed multiplexed.

[0116] The contents of the logic channels in such a case are shown in Fig. 8.

[0117] In the example shown in Fig. 8, contents of three advertisements are multiplied by time division in the common traffic channel (CTCH).

[0118] A variety of methods can be considered for selecting an advertisement to be displayed from such a plurality of advertisements. Here, however, a terminal 30_j is assigned an attribute in advance of which kind of common traffic channel (CTCH) to receive in accordance with its user. The terminal 30_j assigns priorities to the advertisements in accordance with this attribute to select one of the advertisements.

[0119] Since the broadcast control channel (BCCH) broadcasts where various advertisements can be received, the terminal 30_j need only receive the broadcast control channel (BCCH) to obtain the information, then receive an advertisement in accordance with the priority.

[0120] In the example in Fig. 8, the terminal 30_j gives the highest priority to the Vol. 3 in its attribute and receives only the Vol. 3 advertisement.

[0121] Note that the method of multiplexing a plurality of advertisements directed at a large number of unspecified users is not limited to the time-division multiplexing as shown in Fig. 8. The methods of frequency-division multiplexing, code multiplexing, etc. may be used.

[0122] Also, various forms of the method of display based on priority may be considered.

[0123] For example, it is possible to change the frequency of display/reproduction for a user in accordance with the priority. In such a case, a plurality of advertisements are received and stored in the storage 34 and the number of times of display to the user is changed in accordance with the priority.

[0124] Furthermore, in the above embodiments, the explanation was made by assuming a case where the information for a large number of unspecified users was a normal advertisement, but the present invention is not limited to this. Headline news, regional information, etc. may be distributed other than advertisements. In such cases as well, the same procedures as in the above explanation may be used for the transfer, processing, and display/reproduction of information.

[0125] As explained above, according to the present invention, a communication system capable of broadcasting advertisements and other desired information to a large number of unspecified terminals can be provided.

[0126] Further, a communication terminal, applied in such a communication system, capable of receiving broadcasted information and suitably displaying it to us-

ers can be provided.

[0127] Further, a contents server capable of broadcasting for example advertisements and other desired information to a large number of unspecified terminals can be provided.

Claims

1. A cellular wireless communication system (1), comprising:

a host system (10);
a plurality of terminals (30_{-n}) arranged to register with the host system;
a communication channel (TCH) for communicating between said host system (10) and a specified terminal (30_{-j}) of said plurality of terminals (30_{-n}) and between said plurality of terminals (30_{-n}) once the plurality of terminals are registered with the host system; **characterised in that** the communication system further comprises:

a distribution channel (CTCH) for distributing a signal having advertisement information from said host system (10) to said plurality of terminals (30_{-n}) as unspecified terminals, wherein each of the plurality of terminals is arranged to receive advertisements from the distribution channel and store the advertisements in a storage means (34) prior to the respective terminal registering with the host system.
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2. A communication system (1) as set forth in claim 1, further comprising a control channel (BCCH) for transferring information regarding predetermined control processing for suitable communication between said host system (10) and said plurality of terminals (30_{-n}).
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3. A communication system (1) as set forth in claim 1 or 2, wherein said host system (10) comprises a server apparatus for storing a information and transmitting in accordance with requests from said terminals (30_{-n}) the requested information to the terminal (30_{-j}) and said plurality of terminals (30_{-n}) being adapted to display said distributed signal including advertisement information at least while waiting for transmission of said requested information from said server apparatus.
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4. A communication system (1) as set forth in claim 1, 2 or 3 wherein said plurality of terminals (30_{-n}) is arranged to notify
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5. A communication system (1) as set forth in any preceding claim, wherein a plurality of types of signals each including advertisement information are multiplexed and broadcasted over said distribution channel (CTCH).
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6. A cellular wireless communication terminal (30_{-j}) for use in a communication system (1) comprising a host system (10) and a plurality of terminals (30_{-n}) connected to said host system (10), the communication terminal being arranged to register with the host system, **characterised in that** the communication terminal (30_{-j}) comprises:

a channel means connected to said host system and including a first channel (TCH) for desired communication once the communication terminal is registered with the host system, and a second channel (CTCH) for distribution of a signal including an advertisement to be broadcast;
a receiving means (31) for receiving said signal including advertisement information via said second channel (CTCH) prior to registration with said host system;
a storage means (34) for storing said received signal including advertisement information;
transmission means for transmitting registration information to said host system in order to register the communication terminal with the host system;
an output means (35) for outputting said signal in a predetermined form; and
a control means (32) for making said output means output said signal stored in said storage means (34) in a predetermined period, said period being after registration of the communication terminal with the host system.
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7. A communication terminal (30_{-j}) as set forth in claim 6, wherein said control means (32) is arranged to make said output means (31) output said signal stored in said storage means (34) while the communication terminal (30_{-j}) is processing and waiting for a new operation.
85
8. A communication terminal (30_{-j}) as set forth in claim 6 or 7, wherein said control means (32) is arranged to make said output means (35) output said signal stored in said storage means (34) while the communication terminal (30_{-j}) is waiting to receive an information by a communication via said first channel (TCH).
90
9. A communication terminal (30_{-j}) as set forth in claim
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said host system of information regarding usage of said distributed signal when receiving a signal distributed via said distribution channel (CTCH).

5 5. A communication system (1) as set forth in any preceding claim, wherein a plurality of types of signals each including advertisement information are multiplexed and broadcasted over said distribution channel (CTCH).

6 6. A cellular wireless communication terminal (30_{-j}) for use in a communication system (1) comprising a host system (10) and a plurality of terminals (30_{-n}) connected to said host system (10), the communication terminal being arranged to register with the host system, **characterised in that** the communication terminal (30_{-j}) comprises:

a channel means connected to said host system and including a first channel (TCH) for desired communication once the communication terminal is registered with the host system, and a second channel (CTCH) for distribution of a signal including an advertisement to be broadcast;
a receiving means (31) for receiving said signal including advertisement information via said second channel (CTCH) prior to registration with said host system;
a storage means (34) for storing said received signal including advertisement information;
transmission means for transmitting registration information to said host system in order to register the communication terminal with the host system;
an output means (35) for outputting said signal in a predetermined form; and
a control means (32) for making said output means output said signal stored in said storage means (34) in a predetermined period, said period being after registration of the communication terminal with the host system.

7 7. A communication terminal (30_{-j}) as set forth in claim 6, wherein said control means (32) is arranged to make said output means (31) output said signal stored in said storage means (34) while the communication terminal (30_{-j}) is processing and waiting for a new operation.

8 8. A communication terminal (30_{-j}) as set forth in claim 6 or 7, wherein said control means (32) is arranged to make said output means (35) output said signal stored in said storage means (34) while the communication terminal (30_{-j}) is waiting to receive an information by a communication via said first channel (TCH).

9 9. A communication terminal (30_{-j}) as set forth in claim
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6, 7 or 8 wherein:

5 said communication terminal (30_j) has an off state, a stand-by state, and an active state; and said receiving means (32) is arranged to receive said distributed signal including advertisement information when the communication terminal (30_j) is in a stand-by state, wherein the stand-by state is a state in which the communication terminal has been switched on from the off state, but has not yet completed registration with the host system.

10 10. A communication terminal (30_j) as set forth in any one of claims 6 to 9, further comprising:

15 an output notification means for notifying information regarding usage of said distributed signal to said host system (10) when said distributed signal is output from said output means (35).

20 11. A communication terminal (30_j) as set forth in any one of claims 6 to 10, wherein:

25 said distributed signal comprises a signal obtained by multiplexing a plurality of types of signals each including advertisement information and
said receiving means (32) is arranged to demultiplex said multiplexed plurality of signals and selects a signal by a predetermined method.

30 12. An information distribution apparatus connected to a cellular wireless communication system (1), comprising:

35 a communication channel (TCH) for desired communication between a plurality of terminals (30_n), each of the plurality of terminals being arranged to register with the information distribution apparatus, the communication channel further being for communication between the information distribution apparatus and each terminal of the plurality of terminals once each respective terminal has registered with the information distribution apparatus, **characterised in that** the information apparatus (10) further comprises:

40 a distribution channel (CTCH) for broadcasting a signal including advertisement information to said plurality of terminals (30_n) as unspecified terminals; and
a distribution means (20_n) for broadcasting said signal to said plurality of unspecified terminals via said distribution channel (CTCH) prior to said unspecified terminals

registering with said information on distribution apparatus.

45 13. An information distribution apparatus according to claim 12, further comprising:

a receiving means for receiving information, regarding a state of use of said signal distributed via said distribution channel (CTCH), transmitted from said terminals (30_n); and
a processing means for predetermined processing based on said information regarding the state of use of said received signal.

50 14. An information distribution apparatus as set forth in claim 12 or 13, wherein
said distribution means is arranged to multiplex and broadcasts a plurality of types of signals each including advertisement information.

55 15. An information distribution apparatus as set forth in claim 12, 13 or 14, wherein;
said signal comprises a signal including advertising information, and
said processing means is arranged to carry out processing for totalling up the state of viewing of said advertising information at said terminals (30_n).

16. An information distribution apparatus as set forth in claim 12, 13, 14 or 15 wherein;
said signal comprises a signal including advertising information, and
said processing means carries out processing for totalling up the state of viewing for each said advertising information.

Patentansprüche

- 40 1. Zellulares drahtloses Kommunikationssystem (1), umfassend: ein Host-System (10), eine Vielzahl von Endgeräten (30_n), die so ausgelagert sind, dass sie sich in dem Host-System anmelden, einen Kommunikationskanal (TCH) für eine Kommunikation zwischen dem genannten Host-System (10) und einem spezifizierten Endgerät (30_j) der betreffenden Vielzahl von Endgeräten (30_n) und zwischen der betreffenden Vielzahl von Endgeräten (30_n), nachdem die Vielzahl der Endgeräte in dem Host-System angemeldet ist,
dadurch gekennzeichnet,
dass das Kommunikationssystem ferner einen Verteilungskanal (CTCH) zum Verteilen eines Signals mit einer Werbeinformation von dem genannten Host-System (10) an die betreffende Vielzahl der Endgeräte (30_n) als nicht spezifizierte Endgeräte umfasst, wobei jedes Endgerät der Vielzahl von End-

- geräten so ausgelegt ist, dass es Werbungen von dem Verteilungskanal empfängt und die Werbungen in einer Speichereinrichtung (34) vor der jeweiligen Endgeräteanmeldung in dem Host-System speichert.
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2. Kommunikationssystem (1) nach Anspruch 1, ferner umfassend einen Steuerkanal (BCCH) zum Übertragen von Informationen bezüglich einer bestimmten Steuerungsverarbeitung für eine geeignete Kommunikation zwischen dem genannten Host-System (10) und der genannten Vielzahl von Endgeräten (30_{-n}).
- 10
3. Kommunikationssystem (1) nach Anspruch 1 oder 2, wobei das Host-System (10) eine Server-Vorrichtung zum Speichern einer Information und zum Übertragen der angeforderten Information entsprechend Anforderungen von den genannten Endgeräten (30_{-n}) zu dem Endgerät (30_{-j}) umfasst und wobei die betreffende Vielzahl der Endgeräte (30_{-n}) imstande ist, das eine Werbeinformation enthaltende verteilte Signal zumindest während des Wartens auf eine Übertragung der betreffenden angeforderten Information von der genannten Server-Vorrichtung anzuzeigen.
- 15
4. Kommunikationssystem (1) nach Anspruch 1, 2 oder 3, wobei die betreffende Vielzahl der Endgeräte (30_{-n}) so ausgelegt ist, dass dem genannten Host-System Informationen bezüglich der Nutzung des genannten verteilten Signals gemeldet werden, wenn ein über den genannten Verteilungskanal (CTCH) verteiltes Signal empfangen wird.
- 20
5. Kommunikationssystem (1) nach einem der vorhergehenden Ansprüche, wobei eine Vielzahl von Arten von Signalen, die jeweils eine Werbeinformation enthalten, multiplexmäßig verarbeitet und über den genannten Verteilungskanal (CTCH) gesendet wird.
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6. Zellulares drahtloses Kommunikationsendgerät (30_{-j}) für die Verwendung in einem Kommunikationssystem (1), welches ein Host-System (10) und eine Vielzahl von mit dem betreffenden Host-System (10) verbundenen Endgeräten (30_{-n}) umfasst, wobei das Kommunikationsendgerät so ausgelegt ist, dass es sich in dem Host-System anmeldet,
dadurch gekennzeichnet, dass das Kommunikationsendgerät (30_{-j}) eine Kanaleinrichtung, die mit dem genannten Host-System verbunden ist und die einen ersten Kanal (TCH) für eine gewünschte Kommunikation, nachdem das Kommunikationsendgerät in dem Host-System angemeldet ist, und einen zweiten Kanal (CTCH) für eine Verteilung eines zu sendende Werbung enthaltenden Signals aufweist,
eine Empfangseinrichtung (31) für den Empfang des die genannte Werbeinformation enthaltenden Si-
- 30
- gnals über den genannten zweiten Kanal (CTCH) vor einer Anmeldung in dem betreffenden Host-System,
- eine Speichereinrichtung (34) zum Speichern des die Werbeinformation enthaltenden genannten empfangenen Signals,
- eine Übertragungseinrichtung zum Übertragen einer Anmeldungsinformation zu dem betreffenden Host-System für eine Anmeldung des Kommunikationsendgerätes in dem Host-System,
- eine Abgabeeinrichtung (35) für eine Ausgabe des genannten Signals in einer bestimmten Form und eine Steuereinrichtung (32) umfasst, welche die Abgabeeinrichtung veranlasst, das in der genannten Speichereinrichtung (34) gespeicherte Signal innerhalb einer bestimmten Zeitspanne abzugeben, wobei die betreffende Zeitspanne nach der Anmeldung des Kommunikationsendgeräts in dem Host-System liegt.
- 35
7. Kommunikationsendgerät (30_{-j}) nach Anspruch 6, wobei die genannte Steuereinrichtung (32) so ausgelegt ist, dass sie die Abgabeeinrichtung (35) veranlasst, das in der genannten Speichereinrichtung (34) gespeicherte Signal abzugeben, während das Kommunikationsendgerät (30_{-j}) eine Verarbeitung ausführt und auf einen neuen Arbeitsgang wartet.
- 40
8. Kommunikationsendgerät (30_{-j}) nach Anspruch 6 oder 7, wobei die genannte Steuereinrichtung (32) so ausgelegt ist, dass sie die Abgabeeinrichtung (35) veranlasst, das in der genannten Speichereinrichtung (34) gespeicherte Signal abzugeben, während das Kommunikationsendgerät (30_{-j}) auf den Empfang einer Information durch eine Kommunikation über den genannten ersten Kanal (TCH) wartet.
- 45
9. Kommunikationsendgerät (30_{-j}) nach Anspruch 6, 7 oder 8, wobei das genannte Kommunikationsendgerät (30_{-j}) einen Aus-Zustand, einen Bereitschafts- bzw. Standby-Zustand und einen aktiven Zustand aufweist und wobei die genannte Empfangseinrichtung (31) so ausgelegt ist, dass sie das die Werbeinformation enthaltende verteilte Signal empfängt, wenn das Kommunikationsendgerät (30_{-j}) sich in einem Standby-Zustand befindet, der einen Zustand darstellt, in welchem das Kommunikationsendgerät vom Aus-Zustand eingeschaltet worden ist, jedoch noch nicht eine Anmeldung in dem Host-System abgeschlossen worden ist.
- 50
10. Kommunikationsendgerät (30_{-j}) nach einem der Ansprüche 6 bis 9, ferner umfassend eine Abgabe-Meldeneinrichtung zur Meldung einer Information bezüglich der Nutzung des genannten verteilten Signals an das Host-System (10), wenn das betreffende verteilte Signal von der Abgabeeinrichtung (35) abge-

- geben ist.
11. Kommunikationsendgerät (30_j) nach einem der Ansprüche 6 bis 10, wobei das betreffende verteilte Signal ein Signal umfasst, welches durch eine Multiplexverarbeitung einer Vielzahl von Arten von Signalen erhalten wird, deren jedes eine Werbeinformation enthält,
und wobei die genannte Empfangseinrichtung (31) so ausgelegt ist, dass sie eine Demultiplexverarbeitung der multiplexmäßig verarbeiteten Vielzahl von Signalen vornimmt und ein Signal durch ein bestimmtes Verfahren auswählt.
12. Informationsverteilungsvorrichtung, die mit einem zellularen drahtlosen Kommunikationssystem (1) verbunden ist, umfassend einen Kommunikationskanal (TCH) für eine gewünschte Kommunikation zwischen einer Vielzahl von Endgeräten (30_n), deren jedes so ausgelegt ist, dass es sich in der Informationsverteilungsvorrichtung anmeldet,
wobei der Kommunikationskanal ferner zur Kommunikation zwischen der Informationsverteilungsvorrichtung und jedem Endgerät der Vielzahl von Endgeräten dient, nachdem das jeweilige Endgerät sich in der Informationsverteilungsvorrichtung angemeldet hat,
dadurch gekennzeichnet, dass die Informationsverteilung (10) ferner einen Verteilungskanal (CTCH) zum Senden eines eine Werbeinformation enthaltenden Signals an die betreffende Vielzahl von Endgeräten (30_n) als nicht spezifizierte Endgeräte und eine Verteilungseinrichtung (20_n) zum Senden des betreffenden Signals an die genannte Vielzahl der nicht spezifizierten Endgeräte über den genannten Verteilungskanal (CTCH) vor einer Anmeldung der betreffenden nicht spezifizierten Endgeräte in der Informationsverteilungsvorrichtung umfasst.
13. Informationsverteilungsvorrichtung nach Anspruch 12, ferner umfassend eine Empfangseinrichtung zum Empfangen der von den betreffenden Endgeräten (30_n) übertragenen Informationen betreffend einen Zustand der Nutzung des über den genannten Verteilungskanal (CTCH) verteilten Signals und eine Verarbeitungseinrichtung für eine bestimmte Verarbeitung auf der Grundlage der den Zustand der Nutzung des empfangenen Signals betreffenden Information.
14. Informationsverteilungsvorrichtung nach Anspruch 12 oder 13, wobei die genannte Verteilungseinrichtung so ausgelegt ist, dass sie eine Vielzahl von Arten von Signalen multiplexmäßig verarbeitet und sendet, die jeweils eine Werbeinformation enthalten.
15. Informationsverteilungsvorrichtung nach Anspruch 12, 13 oder 14, wobei das genannte Signal ein eine Werbeinformation enthaltendes Signal umfasst und wobei die genannte Verarbeitungseinrichtung so ausgelegt ist, dass sie eine Verarbeitung zum Zusammenzählen des Zustands der Darstellung der genannten Werbeinformation in den genannten Endgeräten (30_n) ausführt.
16. Informationsverteilungsvorrichtung nach Anspruch 12, 13, 14 oder 15, wobei das genannte Signal ein eine Werbeinformation enthaltendes Signal umfasst und wobei die genannte Verarbeitungseinrichtung eine Verarbeitung zum Zusammenzählen des Zustands der Darstellung der jeweiligen Werbeinformation ausführt.

Revendications

1. Système de communication cellulaire sans fil (1), comportant :

un système hôte (10) ;
 une pluralité de terminaux (30_n) pour s'enregistrer auprès du système hôte ;
 un canal de communication (TCH) pour communiquer entre ledit système hôte (10) et un terminal spécifié (30_j) de ladite pluralité de terminaux (30_n) une fois que la pluralité de terminaux se sont enregistrés auprès du système hôte ; **caractérisé en ce que** le système de communication comporte en outre :

un canal de distribution (CTCH) pour distribuer un signal possédant une information publicitaire provenant dudit système hôte (10) à ladite pluralité de terminaux (30_n) en tant que terminaux non spécifiés, dans lequel chacun de la pluralité de terminaux est disposé pour recevoir des publicités provenant du canal de distribution et mémoriser la publicité dans un moyen de stockage (34) avant que le terminal respectif ne s'enregistre auprès du système hôte.
2. Système de communication (1) selon la revendication 1, comportant en outre
 un canal de contrôle (BCCH) pour transférer l'information concernant le traitement de contrôle préterminé pour une communication appropriée entre ledit système hôte (10) et ladite pluralité de terminaux (30_n).
3. Système de communication (1) selon la revendication 1 ou 2, dans lequel
 ledit système hôte (10) comporte un serveur pour mémoriser une information et transmettre, conformément aux requêtes provenant desdits terminaux

- (30_{-n}), l'information demandée au terminal (30_{-j}) et ladite pluralité de terminaux (30_{-n}) étant adaptée pour afficher ledit signal distribué comportant l'information publicitaire tout en attendant au moins la transmission de ladite information demandée provenant dudit serveur.
4. Système de communication (1) selon la revendication 1, 2 ou 3, dans lequel ladite pluralité de terminaux (30_{-n}) est agencée pour avertir ledit système hôte de l'information concernant l'usage dudit signal distribué tout en recevant un signal distribué par l'intermédiaire dudit canal de distribution (CTCH).
5. Système de communication (1) selon l'une des revendications précédentes, dans lequel une pluralité de types de signaux comprenant chacun une information publicitaire sont multiplexés et diffusés par ledit canal de distribution (CTCH).
6. Terminal de communication cellulaire sans fil (30_{-j}) utilisé dans un système de communication (1) comportant un système hôte (10) et une pluralité de terminaux (30_{-n}) reliés audit système hôte (10), le terminal de communication étant agencé pour s'enregistrer auprès du système hôte, **caractérisé en ce que** ledit terminal de communication (30_{-j}) comporte :
- 30
- un moyen de canal pour relier audit système hôte et comportant un premier canal (TCH) pour une communication désirée une fois que le terminal de communication est enregistré auprès du système hôte, et un second canal (CTCH) pour distribuer un signal comprenant une publicité à diffuser ;
- 35
- un moyen de réception (31) pour recevoir ledit signal comprenant l'information publicitaire par l'intermédiaire dudit second canal (CTCH) avant l'enregistrement auprès dudit système hôte ;
- 40
- un moyen de stockage (34) pour stocker ledit signal reçu comprenant l'information publicitaire ;
- 45
- des moyens de transmission pour transmettre l'information d'enregistrement audit système hôte afin d'enregistrer le terminal de communication auprès du système hôte ;
- 50
- un moyen de sortie (35) pour délivrer ledit signal sous une forme prédéterminée ; et
- un moyen de contrôle (32) pour amener ledit moyen de sortie à délivrer ledit signal mémorisé dans ledit moyen de stockage (34) dans une période prédéterminée, ladite période se trouvant après l'enregistrement du terminal de communication auprès du système hôte.
- 55
7. Terminal de communication (30_{-j}) selon la revendi-
- cation 6, dans lequel ledit moyen de contrôle (32) est agencé pour amener ledit moyen de sortie (31) à délivrer ledit signal mémorisé dans ledit moyen de stockage (34) tandis que le terminal de communication (30_{-j}) traite et attend une nouvelle opération.
8. Terminal de communication (30_{-j}) selon la revendication 6 ou 7, dans lequel ledit moyen de contrôle (32) est agencé pour amener ledit moyen de sortie (35) à délivrer ledit signal mémorisé dans ledit moyen de stockage (34) tandis que le terminal de communication (30_{-j}) attend pour recevoir une information par une communication par l'intermédiaire dudit premier canal (TCH).
- 15
9. Terminal de communication (30_{-j}) selon la revendication 6, 7 ou 8, dans lequel :
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- ledit terminal de communication (30_{-j}) possède un état de coupure, un état d'attente, et un état actif ; et
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- ledit moyen de réception (31) est agencé pour recevoir ledit signal distribué comprenant l'information publicitaire quand le terminal de communication (30_{-j}) se trouve dans un état d'attente, où l'état d'attente est un état dans lequel le terminal de communication a été mis en marche à partir de l'état de coupure, mais n'a pas encore achevé l'enregistrement auprès du système hôte.
- 30
10. Terminal de communication (30_{-j}) selon l'une quelconque des revendications 6 à 9, comportant en outre :
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- un moyen de notification de sortie pour notifier une information concernant l'usage dudit signal distribué audit système hôte (10) lorsque ledit signal distribué est délivré depuis ledit moyen de sortie (35).
- 40
11. Terminal de communication (30_{-j}) selon l'une quelconque des revendications 6 à 10, dans lequel :
- 45
- ledit signal distribué comprend un signal obtenu en multiplexant une pluralité de types de signaux, comprenant chacun une information publicitaire et
- 50
- ledit moyen de réception (31) est agencé pour démultiplexer ladite de pluralité de signaux multiplexés et sélectionne un signal par un procédé prédéterminé.
- 55
12. Appareil de distribution d'information relié au système de communication cellulaire sans fil (1), comportant:
- un canal de communication (TCH) pour une

communication désirée entre une pluralité de terminaux (30_{-n}), chacun de la pluralité de terminaux étant agencé pour s'enregistrer auprès de l'appareil de distribution d'information, le canal de communication existant en outre pour une communication entre l'appareil de distribution d'information et chaque terminal de la pluralité de terminaux une fois que chaque terminal respectif se soit enregistré auprès de l'appareil de distribution d'information, **caractérisé en ce que** l'appareil d'information (10) comprend en outre :

un canal de distribution (CTCH) pour diffuser un signal comprenant une information publicitaire à ladite pluralité de terminaux (30_{-n}) comme terminaux non spécifiés; et un moyen de distribution (20_{-n}) pour diffuser ledit signal à ladite pluralité de terminaux non spécifiés par l'intermédiaire dudit canal de distribution (CTCH) avant que lesdits terminaux non spécifiés ne s'enregistrent auprès dudit appareil de distribution d'information.

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13. Appareil de distribution d'information selon la revendication 12, comprenant en outre :

un moyen de réception pour recevoir une information, concernant un état d'utilisation dudit signal distribué par l'intermédiaire dudit canal de distribution (CTCH), transmis depuis lesdits terminaux (30_{-n}) ; et un moyen de traitement pour un traitement pré-déterminé en fonction de ladite information concernant l'état d'utilisation dudit signal reçu.

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14. Appareil de distribution d'information selon la revendication 12 ou 13, dans lequel

ledit moyen de distribution est agencé pour multiplexer et diffuser une pluralité de types de signaux comprenant chacun une information publicitaire.

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15. Appareil de distribution d'information selon la revendication 12, 13 ou 14, dans lequel :

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ledit signal comporte un signal comprenant une information publicitaire, et ledit moyen de traitement est agencé pour effectuer le traitement pour totaliser l'état de visualisation de ladite information publicitaire auxdits terminaux (30_{-n}).

50

16. Appareil de distribution d'information selon la revendication 12, 13, 14 ou 15, dans lequel :

55

ledit signal comporte un signal comprenant une information publicitaire, et

ledit moyen de traitement effectue un traitement pour totaliser l'état de visualisation pour chaque information publicitaire.

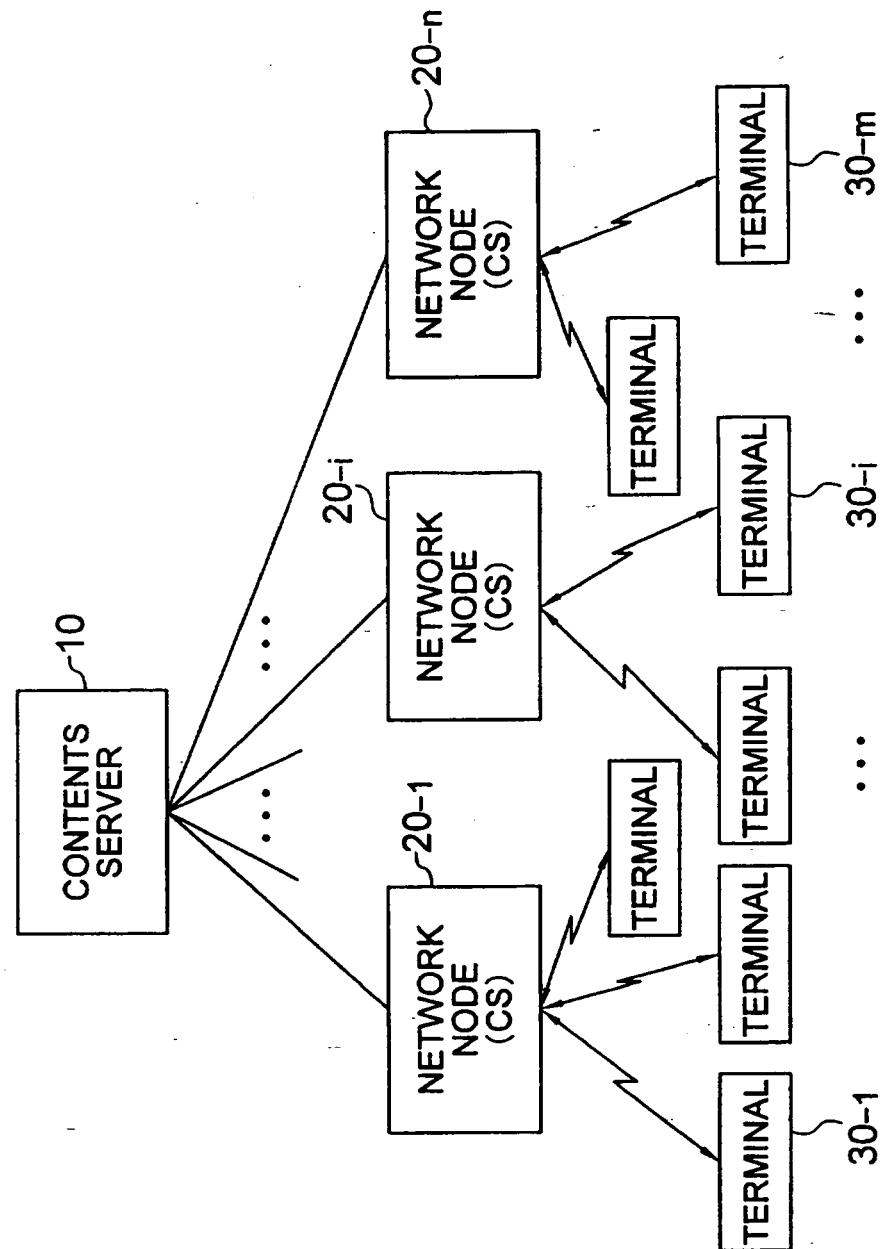
FIG. 1

FIG. 2

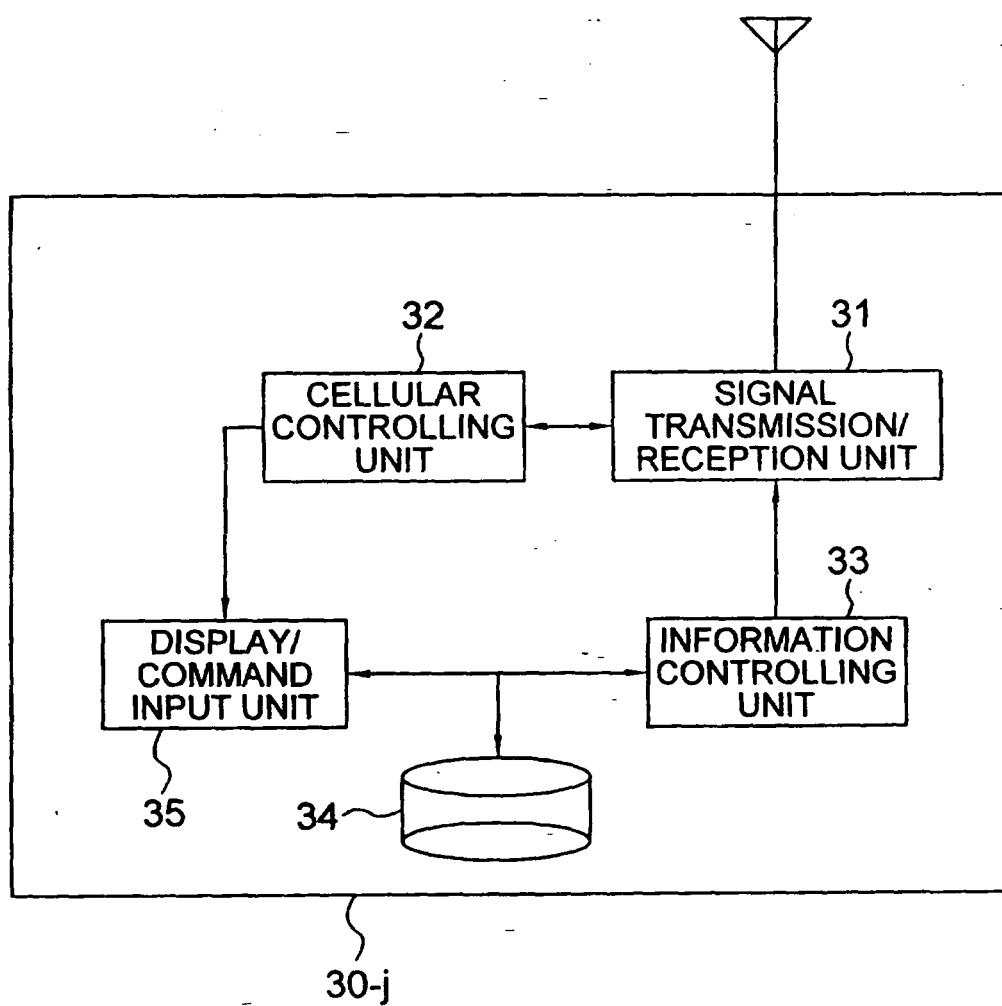


FIG. 3

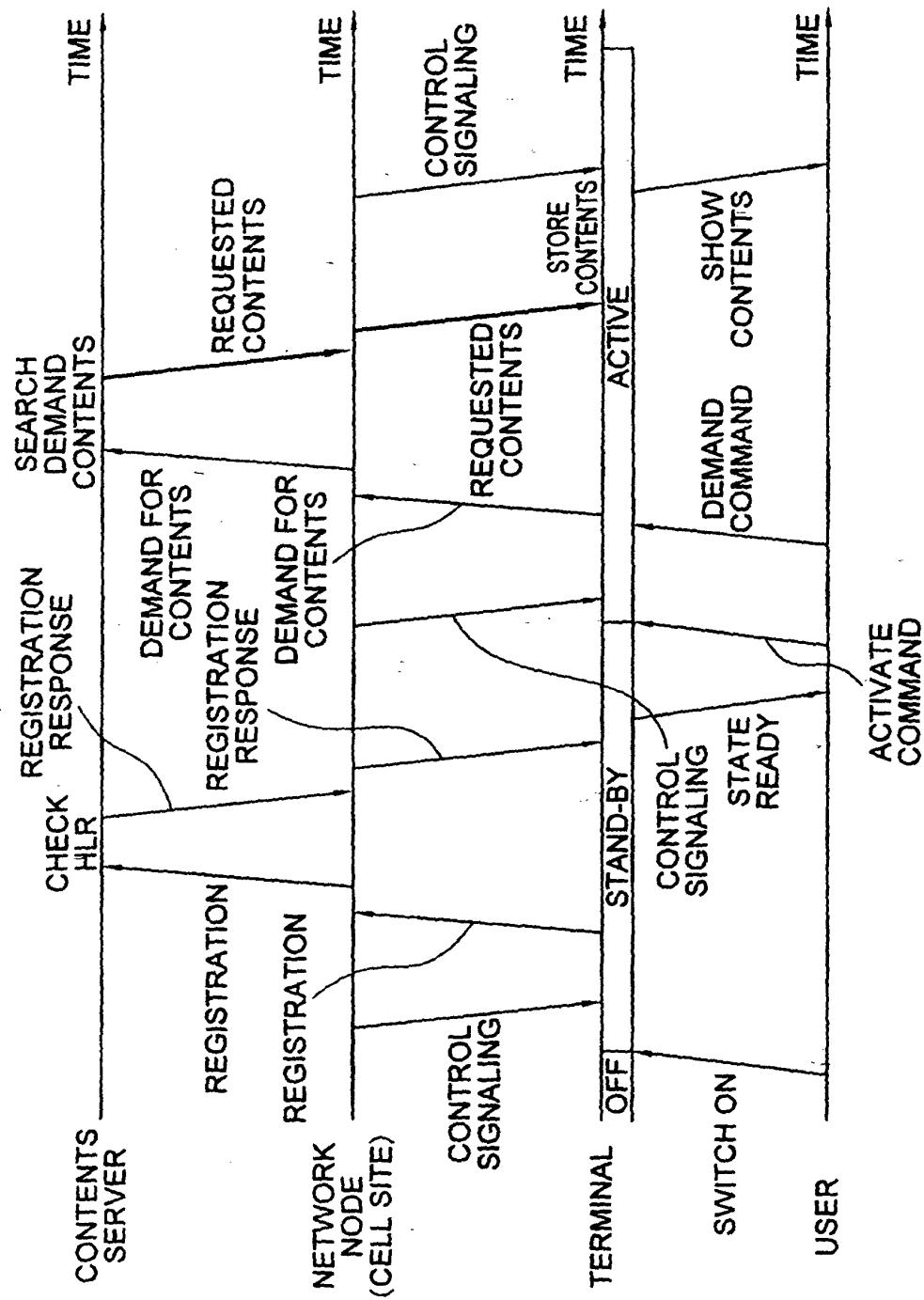


FIG. 4

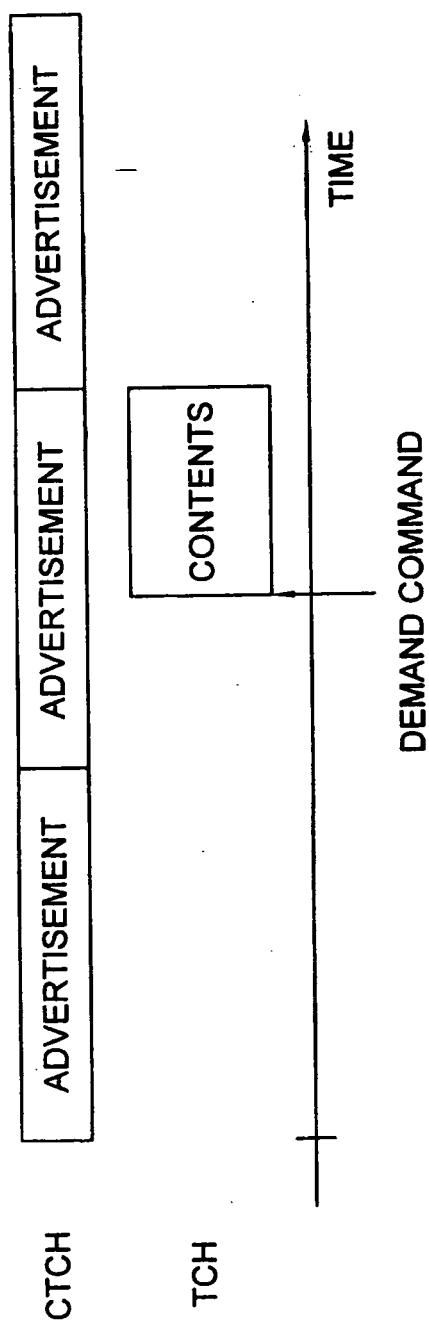


FIG. 5

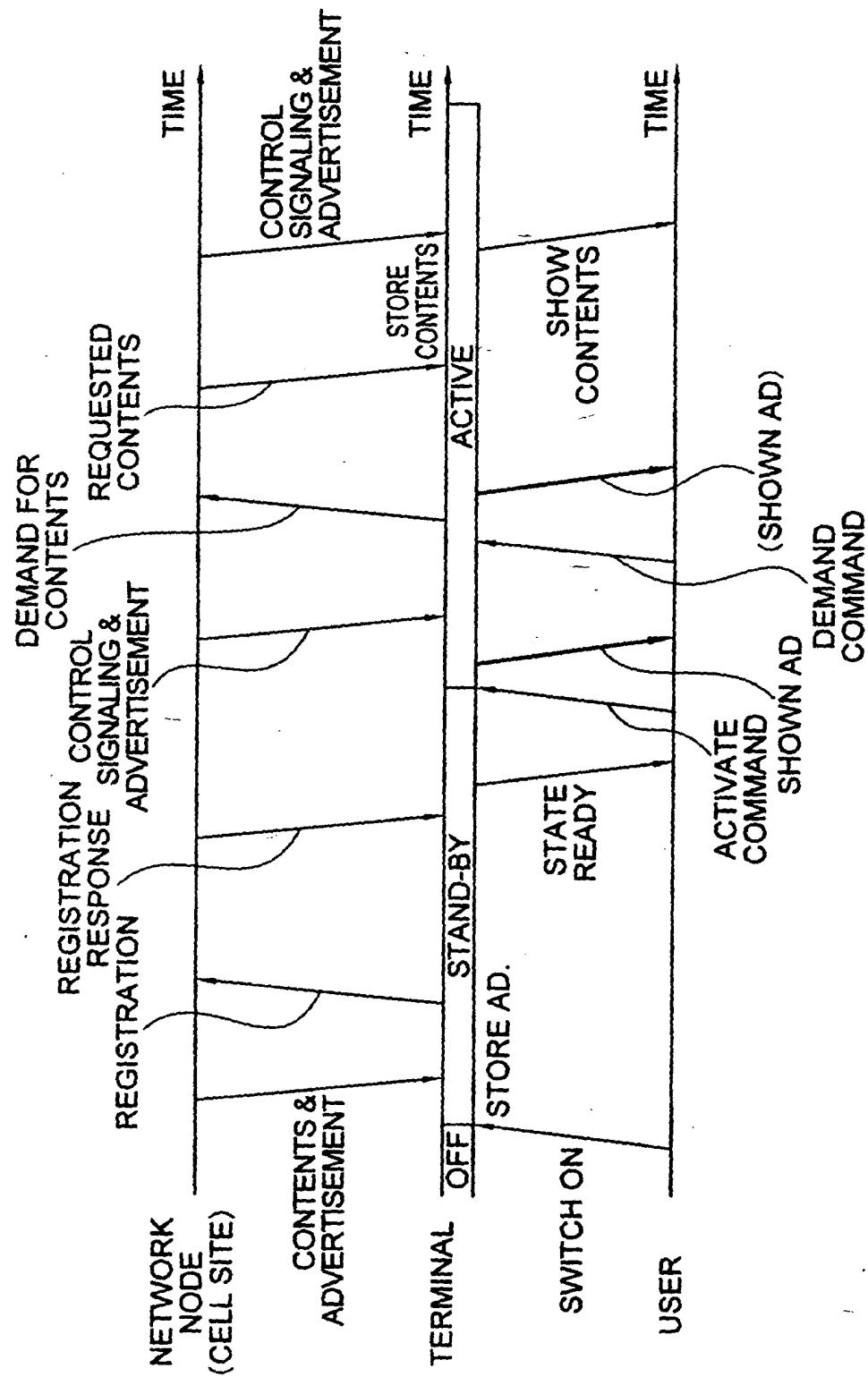


FIG. 6

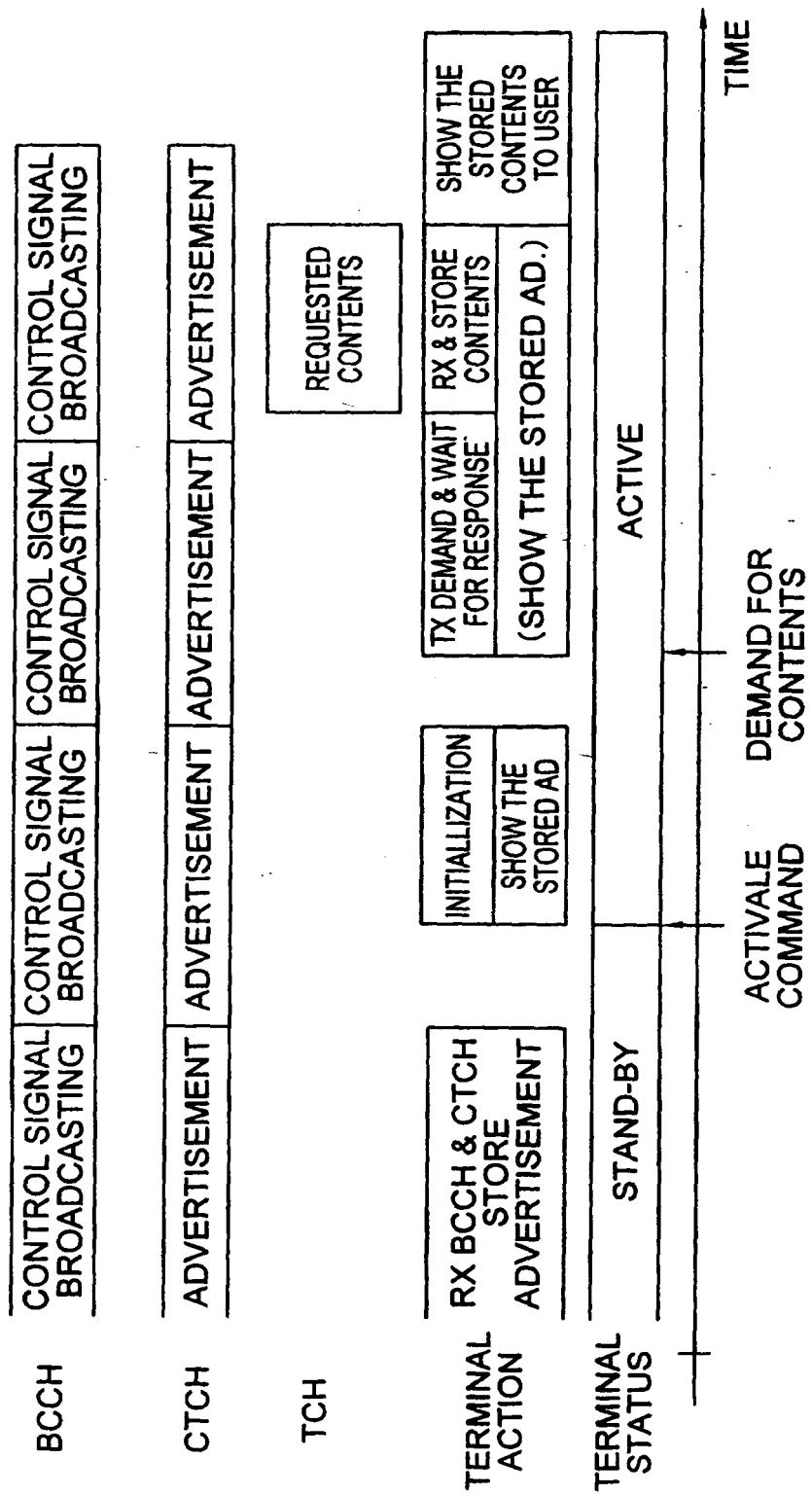


FIG. 7

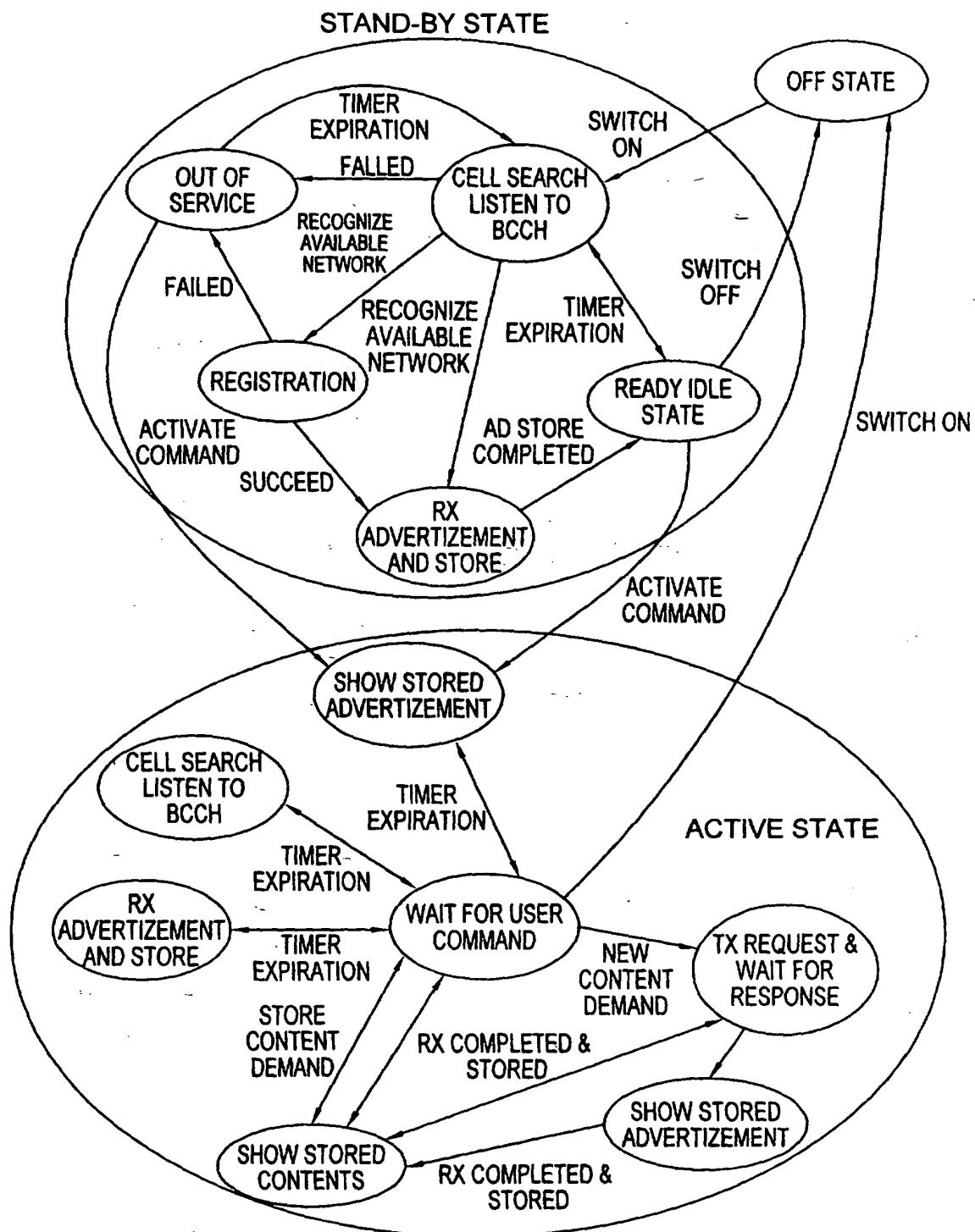


FIG. 8

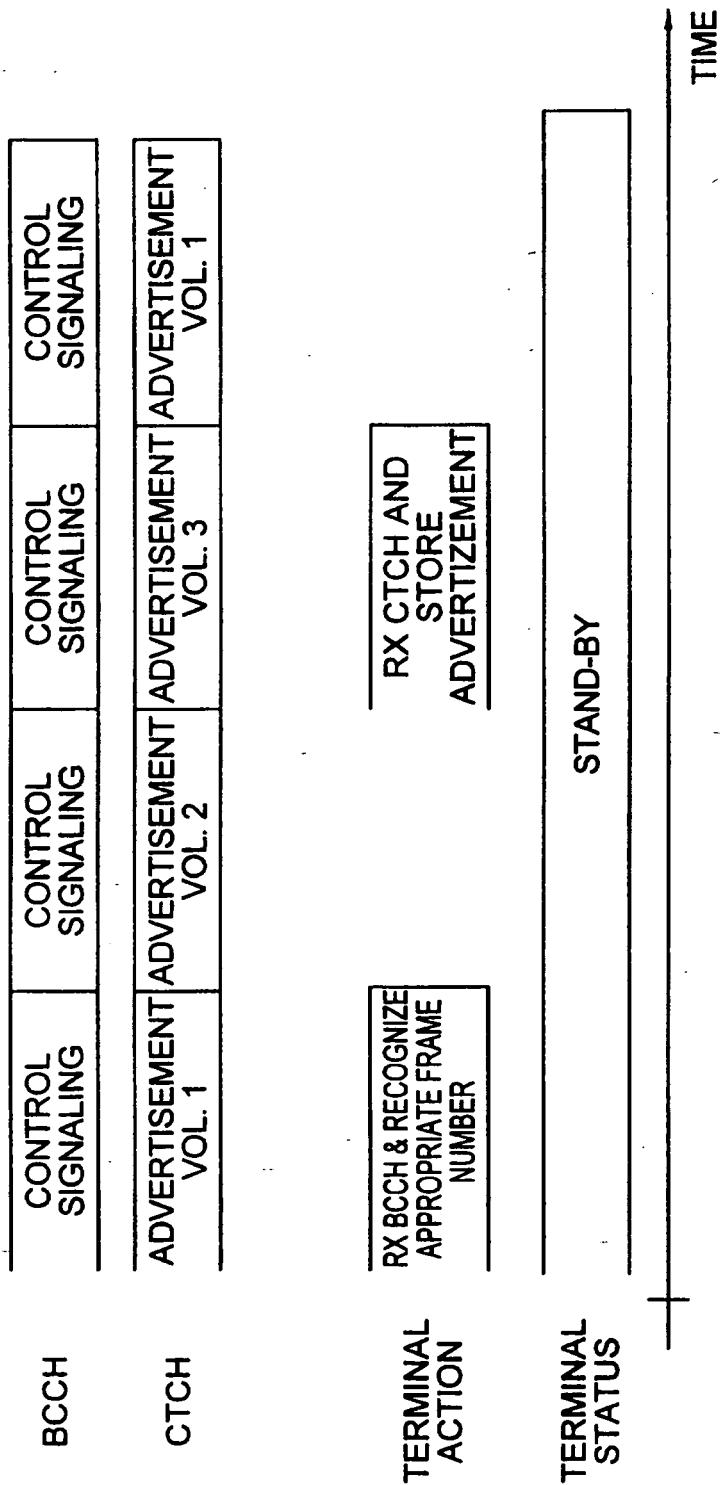


FIG. 9

