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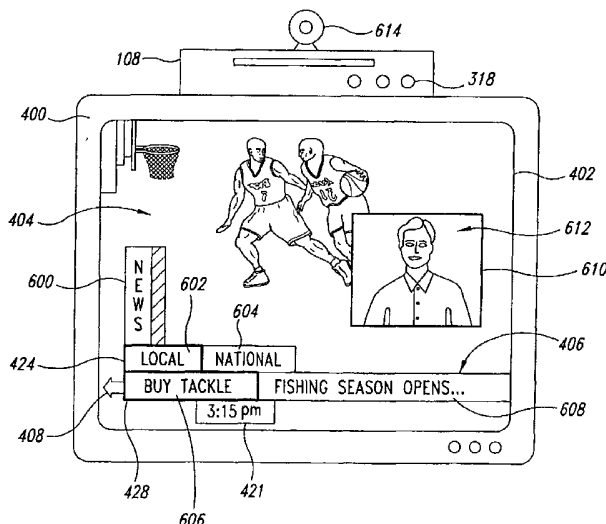GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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(54) Title: AUTOMATIC ADVERTISEMENT INSERTION INTO AN INTERACTIVE TELEVISION TICKER

(57) Abstract: Advertisements (606) are automatically inserted into an interactive television ticker (406), alternatively to being
presented in windows or banners on a television display screen. The advertisements (606) within the tickers (406) are provided
with links. If selected, these links provide a connection to a merchant web site, a synthetic shopping channel, or other location
where the viewer can conduct a transaction. The viewer can conduct the transaction within the ticker itself, rather than through a
separate transaction window. The advertisements presented in the ticker can be targeted based on implicit or explicit profiling of the
viewer. The advertisements can be context-sensitive in that they relate to the subject matter of the television program currently being
shown, via use of triggers. Viewer response to an advertisement presented in a ticker can launch a videophone or web cam phone
communication with the participating merchant, in some situations.

AUTOMATIC ADVERTISEMENT INSERTION INTO AN INTERACTIVE TELEVISION TICKER

BACKGROUND OF THE INVENTION

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Field of the Invention

This disclosure relates generally to presentation of information on a display device, and in particular but not exclusively, relates to insertion of 10 advertisements into an interactive television "ticker."

Description of the Related Art

An important business element in the production and distribution of 15 television programming is revenue received from manufacturers and service providers who pay to advertise their products. The ubiquitous television commercial is the manifestation of this enterprise. The survival of a television program is heavily dependent on the advertising revenue that can be realized from the television program. Advertisers in turn rely on the ability of the television 20 program to draw viewers who then become potential purchasers of the advertised products.

Television and Internet technologies are beginning to converge. In particular, access to the World Wide Web via an Internet-enabled television system (sometimes referred to as "interactive television" or "enhanced television") 25 is progressing and becoming more popular. In a typical scenario, a television commercial can be provided with a "trigger" that renders an icon on television display screen, signaling to the viewers that there is a potential e-commerce opportunity.

Viewers can then obtain information about goods and services that 30 are advertised in the commercial by, for example, connecting to the Internet while

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viewing the commercial and ordering the advertised products. A user interface for this e-commerce transaction can comprise a hypertext markup language (HTML) web page or pop-up window that is rendered on the display screen as an overlay over the current television program or in full screen. Picture-in-picture (PIP)

5   features are also available, where the e-commerce window is displayed concurrently with a scaled window having the television program image (or vice versa).

Unfortunately, these implementations are non-ideal for many viewers. For instance, the viewer can initiate an e-commerce transaction while its

10   corresponding commercial is showing. However, if the viewer does not complete the transaction and close the e-commerce window by the time the commercial ends, then the viewer typically will have to finish the transaction while the television program resumes (or defer the remainder of the transaction until later). Keeping the e-commerce window rendered on the display screen is distracting and

15   annoying to viewers (e.g., the viewer who initiated the transaction and other viewers in the room) who wish to enjoy uninterrupted viewing of the television program.

Thus, while interactive television does provide new opportunities for commerce, it must be remembered that the primary purpose of television is to

20   entertain or inform viewers through television programming. Barraging viewers with increased numbers of commercials in an effort to maximize commercial transaction opportunities will make viewers less inclined to watch television— viewers would rather watch television programs instead of commercials. Similarly, implementing "banner ads" or pop-up advertisement windows (as is commonly

25   done on the Internet) will provide further annoyance to viewers who wish to enjoy uninterrupted television programming, rather than encourage them to initiate an e-commerce transaction.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S)

Non-limiting and non-exhaustive embodiments of the present
5   invention are described with reference to the following figures, wherein like
reference numerals refer to like parts throughout the various views unless
otherwise specified.

Figure 1 is a block diagram of an example interactive video casting
system that can implement advertisement in a ticker in accordance with an
10   embodiment of the invention.

Figure 2 is a block diagram illustrating example components that can
be included in the system of Figure 1 to provide a ticker usable for advertisements
in accordance with an embodiment of the invention.

Figure 3 is a block diagram of an embodiment of a client terminal that
15   can be used in the system of Figure 1 to present an advertisement in a ticker.

Figure 4 is an example screen shot in conjunction with a remote
control for implementing one embodiment of the invention.

Figures 5-6 are additional screen shots depicting advertisements
inserted in a ticker in accordance with various embodiments of the invention.

20   Figure 7 is a block diagram illustrating components that can interact
to present an advertisement inserted in a ticker according to an embodiment of the
invention.

Figure 8 is a flowchart illustrating automatic insertion of
advertisement into a ticker according to an embodiment of the invention.

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DETAILED DESCRIPTION

Embodiments of techniques to automatically insert advertisements
into a ticker, including conducting corresponding transactions within the ticker, are
30   described herein. In the following description, numerous specific details are given
to provide a thorough understanding of embodiments of the invention. One skilled

in the relevant art will recognize, however, that the invention can be practiced without one or more of the specific details, or with other methods, components, materials, etc. In other instances, well-known structures, materials, or operations are not shown or described in detail to avoid obscuring aspects of the invention.

5   Reference throughout this specification to "one embodiment" or "an embodiment" means that a particular feature, structure, or characteristic described in connection with the embodiment is included in at least one embodiment of the present invention. Thus, the appearances of the phrases "in one embodiment" or "in an embodiment" in various places throughout this specification are not

10   necessarily all referring to the same embodiment. Furthermore, the particular features, structures, or characteristics may be combined in any suitable manner in one or more embodiments.

As an overview, an embodiment of the invention addresses the previously described advertisement problems by providing advertisements in a

15   ticker that can be implemented in a television system, such as an interactive television system. Advertisements (including e-commerce opportunities) can be automatically inserted into the ticker, alternatively to being presented in windows or banners on the television display screen. Because viewers are relatively used to seeing tickers along with their television programming, placing advertisements

20   within the ticker itself provides a less intrusive technique to expose viewers to transaction opportunities (e.g., a ticker occupies a minority portion of the display screen), as compared to increasing the number of television commercials or showing banner advertisements or advertisement windows that interfere with the television program viewing experience.

25   In one embodiment, the advertisements within the tickers are provided with hypertext links or other types of links. If selected, these links provide a connection to a merchant web site, an interactive shopping channel or other synthetic channel, or other location where the viewer can conduct a transaction or obtain more information on advertised products. In an embodiment, the viewer

30   can conduct the transaction within a user interface having the ticker, rather than through a separate transaction window. This embodiment further reduces

interference with television programming (*e.g.*, viewer distraction) because the transaction is performed in the minority space occupied by the ticker on the display screen, which is a location where viewers readily accept presentation of information. HTML-to-text conversion or other suitable conversion technique, if

5   needed, can be used to convert an original format of the advertisement into a format compatible with information to be displayed in the ticker.

According to various embodiments, the advertisements presented in the ticker can be targeted based on implicit or explicit profiling of the viewer. The advertisements can be context-sensitive in that they relate to the subject matter of

10   the television program currently being shown. One technique to provide this correlation is through the use of triggers, for instance. Moreover in other embodiments, viewer response to an advertisement presented in a ticker can launch a videophone or web cam phone communication with the participating merchant, in situations where the viewer does not mind concurrently viewing the

15   television program and video communication on the same display screen.

Moreover, the term "ticker" as used herein is intended to generally describe a presentation of information on a display screen, such as a display screen for a television, and is not intended to be limited solely to implementations where the information is presented in a manner to exactly mimic a stock market

20   ticker. In one embodiment, the ticker can comprise text and graphics that are scrolled or otherwise presented in a region of the display screen, along with a television image (such as an image from a live broadcast or from a recorded program). Various embodiments will be described herein in the context of "scrolling" the ticker information. It is to be appreciated that the term "scrolling" is

25   merely illustrative of a technique to present dynamic ticker information, and that this term, in some embodiments, can encompass implementations where the ticker information is presented via screen segments of information, text segments, one-line-at-a-time, one-sentence-at-a-time, one-word-at-a-time, and the like, rather than the traditional format of one-character-at-a-time typically associated with

30   stock market tickers. Moreover, the term "scrolling" is used generically herein to

refer not only to vertical movement from bottom to top, but also movement from right to left (often referred to as "crawl") or movement in other directions.

Figure 1 shows an example of an interactive video casting system 100 for distributing ticker content, Internet content, and television content
5 according to an embodiment of the invention. In accordance with an embodiment of the present invention, the system 100 can be integrated with a cable television distribution system to provide interactive television tickers. The system 100 includes an Internet 102, a plurality of content sources 104, a plurality of distribution centers (depicted as the head-ends or H/Es 106), and a plurality of
10 client terminals 108 (depicted as set top boxes). In addition, a content source 104 is depicted as receiving data from data feeds 112, advertisement servers 114, image sources 116, and streaming video sources 118. The content source 104 may also receive content from a broadcast video source. For the sake of clarity and to avoid clutter, not all of these sources are shown in Figure 1 for each content
15 source 104.

The plurality of content sources 104 is coupled to the Internet 102. For example, a content source 104 may comprise a web site portal such as Go2Net.com™, or a news web site such as CNN.com™, or other types of sources. Each content source 104 may have various data feeds 112, servers 114, and
20 sources 116/118 coupled to it.

For example, news or stock quote feeds 112 (including data for tickers) may be fed into the content source 104. Servers 114 may provide advertisements for insertion into multimedia content delivered by the content source 104 in accordance with one embodiment of the invention. Sources 116 and
25 118 may provide images 116, streaming video 118, and other content to the content source 104. Various other feeds, servers, and sources may also be coupled to the content source 104 of Figure 1. An example configuration of components that can be integrated with the system 100 to provide ticker information to client terminals 108 is shown in Figure 2.
30 The Internet 102 comprises a network of networks and is well known in the art. Communications over the Internet 102 can be accomplished using

standard protocols such as transmission control protocol/internet protocol (TCP/IP), hypertext transfer protocol (HTTP), file transfer protocol (FTP), or other protocols. Web sites, such as merchant web sites, can be included within or otherwise be in communication with the Internet 102. The Internet 102 is coupled

5   to the plurality of distribution centers 106, and each distribution center 106 is in turn coupled to a plurality of client terminals 108, which may comprise a set top box, a PC, an interactive television set, or another type of communication device or display device.

In alternative or in addition to the Internet 102 being used to
10   distribute multimedia content (including ticker data and advertisements) from the content sources 104 to distribution centers 106, communications channels or networks 120 (which can include satellite delivery sources/networks) apart from the Internet 102 may couple one or more content sources 104 to one or more distribution centers 106. One example of such an alternate path for
15   communications is illustrated by a first dashed line 120 in Figure 1. Alternately or additionally, peering connections may exist between distribution centers 106. One example of such peering is illustrated by a second dashed line 122 in Figure 1. Other communications configurations are also possible and are included within the scope of the present invention.

20   Caches 110 may be provided at (or otherwise coupled to) the distribution centers 106. Such caches 110 may be used to increase the performance in the delivery of multimedia content (including ticker data and advertisements) to the client terminals 108. For example, larger files for video and other high bandwidth content may be stored in such caches 110, which may be
25   closer-in-time to the client terminals 108 than to the content sources 104. In addition, reliability and guaranteed bandwidth may be provided because the Internet 102 is not in-between such caches 110 and the client terminals 108. In one embodiment, the caches 110 or other storage media in the system 100 can store ticker information and advertisements, rather than or in addition to having
30   such information buffered, cached, or otherwise stored at the client side.

In an embodiment, servers may be present in the distribution centers 106, with such servers including or being coupled to the caches 110 or other storage media. Alternatively or in addition, these servers may be located remotely from but still communicatively coupled to the distribution centers 106, via the Internet 102 or other communications channels or networks. Examples of such servers that can be used in connection with providing ticker information to client terminals 108 are shown in Figure 2.

In accordance with one embodiment of the invention, different or multiple portals may be used to access the information provided through the interactive video casting systems of Figure 1, based on the type of client terminal being used by the end user. That is, for example, a television portal may be provided for an end user that uses a television set coupled to the client terminal 108 to access the information. A PC portal may be provided for an end user that uses a PC to access the information. Portals can be provided for end users that use cellular telephones, personal digital assistants (PDAs), audio devices, and the like to access the interactive video casting system 100 of Figure 1.

Such portals may be provided in several possible ways. In one embodiment, the client terminal (e.g., the end user's display device or audio device) can be suitably configured with an adapter that includes hardware and software. The adapter converts the television signals, the Internet or web page content, or other information provided from the interactive video casting system into a digitized format or other format that is compatible with the operational features of the particular client terminal 108.

In another embodiment, a cable service provider can deliver signals having different formats to the various client terminals 108, with the client terminals not necessarily having special adapters. Therefore, as an example, the cable service provider or other party can generate/deliver information (e.g., television programming, web page content, ticker information, and the like) having a format that is compatible for end users that receive the information via a television set. The cable service provider or other party can also generate/deliver the same information (e.g., simultaneously with the television portal on the same

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communication link, separately on a different communication link, on-demand independent of the television portal, and the like) using a format that is compatible with end users that receive the information via PCs, PDAs, cellular telephones, and the like. Thus, the term "interactive video casting system" is used to describe

5   generally a system that can deliver video information and other information over any network and any network-compatible device by broadcasting, multicasting, or unicasting. An "interactive television system" is one type of or one means of access to an "interactive video casting system."

Figure 2 is a block diagram illustrating example components that can

10 be included in the system 100 of Figure 1 to provide data for tickers in accordance with an embodiment of the invention. The data feeds 112 include a plurality of different ticker data feeds 200 that provide a variety of different topical data that can be displayed in a ticker. For instance, the different ticker data can include sports data, weather data, national news, and so forth. The sources that can

15 provide this data can include entities such as Reuters™, The Sporting News™ (TSN), Associated Press™ (AP™), and others. In one embodiment, the ticker data from the data feeds 200 comprises "raw" unformatted data (e.g., data with minimal or no formatting or graphics).

The raw ticker data is provided to a feed server 202. In an

20 embodiment, the feed server 202 operates as a content aggregator that pulls or otherwise receives the raw ticker data from the data feeds 200. The feed server 202 also performs data manipulation on the received ticker data to manipulate the data into a database format so that the data can be indexed and stored. A feed engine 204, which can be embodied in software or other machine-readable

25 instructions stored on one or more machine-readable media according to an embodiment, can reside and run in the feed server 202 to perform at least some of this data manipulation.

The feed server 202 is coupled to provide the manipulated ticker data to a production server 206. The production server 206 includes or is otherwise

30 coupled to a database 208. The feed engine 204 calls on the database 208, and instructs the database 208 where to place the various ticker data. For example,

the database 208 can include a plurality of database code objects 210 that cooperate with ticker tables 212 (such as a sports table 214, a weather table 216, and so forth) to index or store ticker data. The feed engine 204 calls the database 208 and identifies the database code objects and ticker tables where the ticker

5   data is to be stored.

The various components of the database 208, such as the ticker tables 212, can also be configured in a manner that optimizes the organization and distribution of the ticker data. For example, ticker data unique to various geographic regions can be segregated from or otherwise identifiable from each

10   other, so that ticker data that is relevant to only particular client terminals 108 need not be broadcast to all client terminals. For instance, California weather information can be segregated from Oregon weather information in the database 208 in a manner that client terminals 108 of California users do not receive Oregon weather information, unless specifically requested. This feature improves

15   transmission efficiency and transmission time, since the bandwidth of communication paths to certain client terminals 108 are not clogged by non-relevant ticker data.

In an embodiment, the production server 206 can also perform data manipulation, such as before the data is stored in the database 208, while it is

20   stored in the database 208, or after the data is retrieved from the database 208 for transmission to client terminals 108. For instance, the production server 206 can perform data manipulation to place the ticker data into a format that is "consumable" or otherwise compatible with operating software of the client terminals 108. For instance, the production server 206 can place the ticker data

25   into formats such as hypertext markup language (HTML), extensible markup language (XML), or other suitable formats.

The production server 206 is coupled to provide ticker data from the database 208 to one or more distribution servers 218, which may be located in or otherwise communicatively coupled to a distribution center 106 (such as a head-

30   end). The distribution server 218 operates to provide the ticker data to the client

terminals 108 via several possible communication paths or channels, as will be described with reference to Figure 3.

It is to be appreciated that the components shown in Figure 2 are merely illustrative of the various components of one embodiment that can be used

5   to provide ticker information. For example, other embodiments can use more or fewer servers, as well as different components, to perform the various operations. Moreover, the various servers and their components (such as the feed engine 204 and the database 208) can be distributed elsewhere in the system 100, instead of or in addition to the locations shown in Figure 2. There may be multiple feed

10 servers 202, production servers 206 and databases 208, distribution servers 218, and so on to account for load balancing, redundancy in case of outages or broken connections, and other factors that can affect distribution of ticker information.

Figure 3 is a block diagram of an embodiment of a client terminal 108 for the system 100 of Figure 1 that can implement an embodiment of the

15 invention to present a ticker having advertisements inserted therein. For the sake of simplicity of illustration and explanation, only the components that are germane to understanding an embodiment of the invention are shown in Figure 3. It is understood that the embodiment of the client terminal 108 shown in Figure 3 can have other components different than or in addition to what is shown. Moreover,

20 the various illustrated components may be suitably combined in some embodiments, instead of being separate. It also should be noted that the client terminal 108 is only one embodiment of the invention and that some or all of the components described as embodied in the client terminal 108 can be incorporated into a client television rather than in a separate device. A bus 301 is shown

25 symbolically to depict coupling between the various components.

To briefly describe an embodiment, the client terminal 108 receives ticker data and advertisement data from the distribution server 218 or other sources, and then performs the appropriate processing of the data to allow the data to be displayed in a ticker on a display screen of a television set. The client

30 terminal 108 can be passive in that it receives the ticker data (as well as updates) and when the data is sent by the distribution server 218, independently of whether

the client terminal 108 requested the ticker data (*e.g.*, the distribution server 218 "pushes" the data to client terminals 108). Alternatively or in addition, the client terminal 108 can poll or otherwise explicitly request the data from the distribution server 218, including polling the distribution server 218 for updated data (*e.g.*, the

5 client terminal 108 "pulls" the data from the distribution server 218). In some embodiments, both push and pull mechanisms may be involved.

Once it receives the ticker data from the distribution server 218, the data can be buffered or cached (if appropriate), and processed for presentation on the display screen of the television set. In an embodiment, ticker software in the

10 client terminal 108 can work in conjunction with a ticker template or other ticker user interface to display the ticker (and its ticker items) in the appropriate scrolling layout, format, locations, time intervals, topics, content, and so forth. In one embodiment where the ticker data is obtained from the Internet 102, this ticker software can comprise browser-based software or other software capable to

15 cooperate with a web browser. According to various embodiments, the ticker can be generated and made interactive through Flash, C++, Java, HTML, or other suitable code or software.

The client terminal 108 comprises a first tuner 300 to tune to a Moving Pictures Experts Group (MPEG) stream 302 or other video source. The

20 stream 302 may include video, live transmission, and/or application code, including corresponding text and graphic resources. In an embodiment where tickers are provided in an integrated manner along with the video signal, the ticker can be received by way of the stream 302. One skilled in the art will recognize that there will be a plurality of streams 302, depending on the number of channels and

25 programs that the cable service provider makes available to the client terminal 108.

The first tuner 300 is coupled to a decoder 306 that decodes the video, application, and/or audio into a format that is compatible with a television set coupled to the client terminal 108. The client terminal 108 may include a second

30 tuner 310. The second tuner 310 can work in conjunction with a cable modem 312 to obtain ticker data 314 from the Internet 102, such as via a Data Over Cable

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Service Interface Specifications (DOCSIS) connection with the distribution server 218. In addition to the ticker data 314, advertisements and Internet content can also be received by the client terminal 108 by way of the DOCSIS connection through the second tuner 310 and the cable modem 312. In one embodiment, the

5   second tuner 310 can be used to obtain such advertisement data from a server (such as that used by a merchant or advertiser), remote database, Internet location or web site, or other source depicted in Figure 1.

In addition, the client terminal 108 includes or is coupled to an input interface 315, through which other sources 316 of ticker data and advertisement

10   data can be provided to the client terminal 108. An example of the input interface 315 comprises an out-of-band tuner that can be used to tune to ticker data or advertisements that are provided via an out-of-band channel. In an embodiment, the out-of-band channel(s) can comprise one or more low-bandwidth frequencies carried on the same coaxial cable used to provide the MPEG streams and the

15   Internet content. The out-of-band channel(s) tuned to by the input interface 315 to receive ticker data or advertisements can be used alternatively or in addition to the DOCSIS channel tuned to by the second tuner 310 in such an embodiment. In one embodiment, transactions in response to an advertisement may be communicated to and from the client terminal 108 via the input interface 315.

20   Further alternatively or in addition, the input interface 315 can comprise another television broadcast tuner (such as the first tuner 300) to tune to one or more channels that may be carrying ticker data or advertisements. For example, ticker data (including updates) and advertisements may be broadcast in one or more channel frequencies specifically dedicated for transmission of such

25   data to client terminals 108. Thus, as an illustration, the first tuner 300 can tune to a channel showing a television program, while the input interface 315 is tuned to receive data (in the form of packets, for example) from a ticker channel or advertisement channel to allow a ticker having inserted advertisements to be simultaneously shown on the same television screen as the television program.

30   Yet another example of the input interface 315 is an interface to receive outputs of recording devices such as a PVR or a digital video recorder

(DVR) that may have ticker data or advertisements, which may be received via download. Alternatively or in addition, the input interface 315 can comprise a communication interface, such as an Ethernet connection, a digital subscriber line modem, a wireless communication interface, and so forth, which can provide a link

5   to the server 218 to receive ticker data and advertisements, for instance.

An embodiment of the client terminal 108 may include a processor 320 to control operation of the various components shown in Figure 3. The processor 320 may work in conjunction with ticker software or other machine-readable instructions stored on at least one machine-readable storage medium

10   322. Such ticker software may cooperate with the processor 320 to present ticker data in a ticker template or other screen interface or user interface, configure the format and layout of the ticker displayed on the display screen of the television, select and insert an advertisement in a ticker, process received user commands related to responding to an advertisement and conducting a related transaction,

15   and other operations. In an embodiment, the ticker software can be pre-installed in the client terminal 108. In another embodiment, the ticker software may be installed by way of download from the system 100.

An audio and video output subsection 308 of the client terminal 108 receives decoded video and/or other applications (including ticker templates and

20   the ticker data presented therein), and provides the decoded information to a television set. A wireless interface 318 operates to receive commands from a user input device (such as a wireless remote control). Such commands can include user commands to respond to an advertisement and perform a subsequent transaction, in an embodiment. The wireless interface 318 provides these

25   commands to the processor 320 so that the processor 320 can cooperate with the ticker software to perform the corresponding operation.

In an embodiment of the invention, the storage medium 322 can also store user data 324 related to operation of the ticker. For instance, the user data 324 can include an implicit or explicit viewer profile that can be used to select

30   advertisements targeted to the viewer. An explicit profile can be created by the viewer, and can specify information such as the viewer's age, hobbies, gender,

occupation, and so forth. An implicit profile may be created by collecting viewer behavior data, such as channels watched, programs watched, Internet browsing activities, e-commerce transactions conducted, merchant web sites previously used, and so forth. In any of these storage locations, multiple sets of user data

5   324 may be stored, such as in implementations where multiple users in a household log into a same client terminal 108.

The storage medium 322 can include cache(s), buffer(s), or other types of storage locations where ticker data, advertisements, or other information may be stored. For example, received sports scores can be stored in the storage

10   medium and retrieved during the appropriate times during the course of the scrolling of the ticker. The ticker data stored in the storage medium 322 can be replaced as updates are received from the distribution server 218. In one embodiment, less time-dependent ticker information (e.g., information that need not necessarily be updated several times per day), including graphics for weather

15   displays, game schedules, some types of advertisements, and the like, can be downloaded to the storage medium 322 during non-peak television viewing periods (such as late at night), and then retrieved from the storage medium 322 when that piece of information is appropriate for presentation in the ticker.

Figures 4-6 are television screen shots depicting operation of a ticker

20   having advertisements automatically inserted therein, in accordance with various embodiments of the invention. For simplicity of explanation, not all of the possible types of advertisement insertions and related transactions are shown or described, as such other possible information can be ascertained by examination of the features specifically shown in Figures 4-6. Moreover, it is to be appreciated that

25   the format, layout, direction, content, and other characteristics of the ticker shown in Figures 4-6 are merely illustrative and that variations are possible.

In Figure 4, a television set 400 is coupled to the client terminal 108 in a manner that allows a display screen 402 of the television set to show a television program 404. The television program 404 in this example is a basketball

30   game. A ticker 406 is shown scrolling across the bottom of the display screen 402. The ticker 406 can be in a screen interface that overlays the television program

404, or the television program 404 may be scaled appropriately on the display screen 402 to fit the screen interface for the ticker 406 and thereby avoid the need for an overlay. An embodiment of the ticker 406 displays the current time 421.

5   In the example of the ticker 406, the ticker 406 is scrolling from right to left (as symbolically depicted by an arrow 408). It is to be appreciated that in other embodiments, the ticker 406 may be scrolling in different directions and may also be positioned differently on the display screen 402. For the sake of illustration, the ticker 406 is shown as being set in a cycle where it is presenting NBA™ basketball news (e.g., "Mavs beat 76ers." is a moving ticker text item 409

10   that is being displayed in a scroll region for a "Sports" category 420 and an NBA™ subcategory 405). There may be any suitable number of categories 417 and subcategories 407 through which the user can navigate. A navigation control 424, such as a stationary center focus box or movable selection rectangle, can be used to make navigation selections.

15   Figure 4 illustrates one embodiment of the invention where an advertisement 426 has been inserted into the ticker 406 and is directly related to or otherwise in context with the television program 404. More specifically, assuming that the television program 404 is a live Sonics basketball game, the advertisement 426 can present a purchase opportunity that is directly related to the subject matter

20   of the television program (e.g., an advertisement to purchase a Sonics jersey in this example). The advertisement 426 can be presented within the scroll region of the ticker 406 in bold, in a different color (which may indicate a hyperlink or other link), accompanied with an icon, underlined, or via some other technique to alert the viewer that he can interact with the advertisement 426 to perform a purchase.

25   When the advertisement 426 scrolls into a center focus box 428, the viewer can then press an INFO button 430 on a user input device (such as wireless remote control 410) so as to view additional details of the advertisement for purposes of beginning a purchase transaction. Alternatively or in addition, the viewer can press a "BUY" button (not shown) on the remote control 410 to view

30   additional information. In one embodiment, responding to the advertisement 426

in this manner results in access of additional information via a hyperlink or other link (which may include channel tuning).

Figure 4 illustrates an example of an implementation where the advertisement 426 is directly correlated to the content of the television program 5 404, such as via use of Advanced Television Enhancement Forum (ATVEF) triggers or other triggering mechanisms. For instance, identification (ID) information or other information can be placed in the vertical blanking interval (VBI) of signal the television program 404 in a manner that identifies the teams in the game, the type of sport, the location of the game, time of the game, and so forth. 10 Such ID information can be extracted and processed, based on techniques familiar to those skilled in the art having the benefit of this disclosure, to identify and select context-sensitive advertisements to present in the ticker 406. In the example of Figure 4, triggers from the signal of the television program 404 have been processed by software to select the advertisement 426 (for clothing) of one of the 15 teams involved in the basketball game.

The wireless remote control 410 is in communication with the client terminal 108 (via the wireless interface 318) to perform conventional television-viewing operations and also to control operation of the ticker 406 according to an embodiment of the invention, including operations associated with 20 selection of an advertisement for a transaction and the resulting interaction. The remote control 410 includes an alphanumeric keypad 412 that the viewer can use to select television channels or to conduct a transaction according to one embodiment (such as making menu selections of advertised products, entering a PIN, and the like). Buttons 418 can comprise buttons that are similar to play, 25 rewind, fast forward, pause, etc. buttons usable for recording devices or for ticker operations. In an embodiment, the remote control 410 can include a ticker button 414, which if pressed, causes a command to be sent to the client terminal 108 to instruct the ticker software to render the ticker 406 on the display screen 402. If the ticker button 414 is pressed again, the ticker 406 is taken off the display screen 30 402. Alternatively or in addition, a TV button 422 can be pressed to dismiss the ticker 406.

In one embodiment, selection of the ticker category, subcategory, or item (including those that are presented as advertisements or as part of the accompanying transaction) may be performed via the navigation control 424 in the form of a stationary center focus box into which ticker items scroll, or in the form of

5   a selection rectangle movable via arrow keys 416 on the remote control 410, with both navigation techniques in conjunction with pressing an OK button 419 or the INFO button 430. The center focus box 428 can also be similarly used in conjunction with the buttons of the remote control 410.

Figure 5 illustrates an example when the viewer has clicked the INFO
10   button 430 (or the OK button 419) after the advertisement 426 has scrolled into the center focus box 428. The viewer may have performed this action to view additional information about the advertised product, to actually buy it, or both. In an embodiment, the ticker 406 scrolls transaction information within its scroll region so that the viewer can perform the transaction within the ticker, as opposed
15   to launching a separate window or web page.

For example, ticker items can scroll that prompt the viewer to make selections, such as a "Select Size" ticker item 500 to alert the viewer to select a size for the desired jersey. The Select Size ticker item 500 is followed by sizes that the viewer can select, which are represented as individually selectable ticker
20   items 502 for small, medium, large, and extra large. When the appropriate size has scrolled into the center focus box 428, the viewer can press the OK button 419 to make the selection. Similar other selections can be scrolled by the ticker 406, such as color, quantity, other products, and so forth. These items may be selected when they scroll into the center focus box 428, navigated to via a selection
25   rectangle used in conjunction with the arrow keys 416, selected from a list by pressing the alphanumeric key(s) 412 to enter a number corresponding to a selection number in the list, selected from a drop-down menu, or via some other suitable selection technique.

Alternatively or in addition, a text entry tool can be provided if
30   necessary for text entry of information such as address, credit card number, name, monogram, messages, remarks, etc., if such information is needed for the

transaction. For instance, the ticker 405 might scroll an item 504 prompting the viewer to enter a personal identification number (PIN). Once the item 504 comes into center focus, the viewer can then press the OK button 419 and the appropriate alphanumeric keys 412 on the remote control 410 (or on an on-screen menu) to

5   enter the PIN. The PIN may or may not be displayed within the scroll region of the ticker 406 as it is entered. Once obtained, the PIN can be used to identify the viewer, his address, credit card, etc.

        After the viewer has responded to all of the items scrolled by the ticker 406 that require a response, the viewer-entered information is sent to the

10   merchant. The ticker 406 can then continue to scroll additional advertisements, in the event that the viewer wishes to make additional purchases or continue perusing advertised products. Accordingly, as shown and described above, providing the capability to present advertisements within the ticker 406 and the capability to conduct the resulting transaction within the ticker 406 results in little or

15   no interruption of the television program 404, since the ticker only occupies a minority portion of the display screen 402.

        Figure 6 illustrates an example of an advertisement 606 inserted into the ticker 406 based on viewer profile information. Figure 6 also illustrates an alternative or additional technique to perform the resulting transaction. In Figure 6,

20   the ticker 406 is scrolling headlines from a news category 600 while the basketball television program 404 is playing (e.g., the ticker 406 is scrolling ticker items unrelated to the television program 404). Since the navigational control 424 is positioned on a "Local" news subcategory 602, the ticker 406 currently scrolls a local headline 608 related to fishing. Once local headlines finish scrolling, the

25   ticker 406 may scroll national headlines from a "National" news subcategory 604.

        In Figure 6, the inserted advertisement 606 is an advertisement for fishing tackle, since the viewer profile indicates that the viewer likes fishing, the outdoors, or seafood, for instance. The advertisement 606 need not necessarily have been correlated to the fishing headline 608. Rather, the advertisement 606 is

30   selected for presentation in the ticker 406 to target the viewer. In embodiments where an explicit profile was used to select the advertisement 606, the explicit

profile was previously created by the viewer and stored, and specified the viewer's hobbies, interests, age, favorite foods, or other information. An implicit profile may be created based on the viewer's viewing habits, previous on-line purchases (*e.g.*, if the viewer has made sporting goods purchases in the past), Internet-surfing

5   habits (*e.g.*, if the viewer commonly visits fishing web sites), click history, and so forth.

In one embodiment, and in particular where the viewer does not mind viewing another window along with the current television program 404, a window 610 can be rendered. The window 604 can comprise a pop-up window, overlay,

10   PIP window, full-screen window, or a tuned-to channel. In an embodiment, the window 604 can display a video image 612 of a sales representative (live or recorded) that can assist the viewer with the transaction. For instance, a web cam or videophone communication can generate the video image in the window 604. For face-to-face communication between the viewer and sales representative, a

15   camera 614 (such a web camera) can be located adjacent to the client terminal 108. The subject matter of the video communication transaction may or may not be in-context with the subject matter of the television program 404.

Various models can be used to present advertisements in the ticker 406, whether in-context or not to the television program 404. In a passive model,

20   the advertisements presented in the ticker 406 are time-based. That is, the configuration of the ticker, the service provider, a broadcaster, or other party or component defines when advertisements are to be scrolled in the ticker 406. Examples of these definitions include presenting an advertisement every 5 minutes, every half hour, each time the ticker 406 cycles between subcategories or

25   categories, and so forth.

In an active model, advertisements are displayed in the ticker 406 based on viewer action, for instance. Presentation of an advertisement in response to a viewer action can be based on viewer actions such as, but not limited to, turning on the television set 400, logging into an interactive service

30   account, invoking the ticker 406, changing a television channel, invoking an electronic program guide (EPG), clicking on something in the ticker, navigating

within the ticker, pressing one of the buttons on the remote control 410 (such as the INFO button 430), and others.

Figure 7 is a block diagram 700 illustrating components that can interact to present advertisements in the ticker 406 according to an embodiment of
5 the invention. At least some of the components of Figure 7 can be embodied in software or other machine-readable instruction stored on a machine-readable medium, such as the storage medium 322. An embodiment of the ticker software includes a ticker user interface (UI) 702 that presents the ticker 406 on the display screen 402, as well as being able to receive and process viewer responses. A
10 ticker application program interface (API) 704 interacts with the ticker UI 702 to control what the ticker UI displays, how to display, when to display, and so forth. In an embodiment, the ticker API 704 provides advertisement data to the ticker UI 702, as well as processing user commands that interact with the presented advertisements (if necessary) and that are entered via the ticker UI 702.

15 The ticker API 704 interfaces with a plurality of applications 708. These applications can include a sports application, news application, weather application, or other applications associated with categories that the ticker 406 can present to the viewer. A feed manager (FM) 706 (or other software controller) operates to determine when new or updated ticker information is present and
20 needs to be provided to the ticker API 704.

To generally describe operation of the ticker 406 in an example embodiment, the ticker API 704 logs and knows what the ticker 406 is displaying, and also knows how often the displayed information needs to be refreshed (based on business rules or other requirements present in functions defined in the ticker
25 UI 702). In an embodiment, there may be rules in the ticker UI level that define when at least some of the advertisements are to be presented. If it is time for an update, the ticker API 704 (acting as a container of data) calls a load function that will cause the feed manager 706 to loop through the applications 708 to search for new data, and if there is new data, the feed manager 706 will pass the new data
30 from the application(s) 708 to the ticker API 704 so that the ticker API 704 can pass the new data to the ticker UI 702.

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In another embodiment, the ticker API 704 manages the information that the ticker UI 702 will display, but it does not have knowledge of what the ticker UI 702 displays and when it is displayed. The ticker UI 702 invokes the lower level components via method calls to retrieve business objects. This means that the

5   invocations of these lower levels are done potentially many times for each accessor/factory method to get a particular business object (assuming that there may be more than one business object needed to gather all data), including objects associated with advertisements. There are at least two routes that the ticker UI 702 can take in an embodiment.

10   First, the ticker UI 702 invokes the feed manager 706. This is done in situations when the business object contains some data that needs to be refreshed periodically during the session. The feed manager 706 receives several arguments that tell it which method in the ticker API 704 will return the business object, how frequently the feed manager 706 should poll this business logic, and

15   the name of the ticker UI variable (a collection such as an array) that holds the properties of the business object for the ticker UI 702 components to use and display. The feed manager 706 calls the ticker API 704 immediately, and then at the intervals specified by the ticker UI 702. Second, the ticker UI 702 invokes the ticker API 704 directly. This bypasses the feed manager 706 and is done for data

20   that only needs to be instantiated once during the session.

To obtain new ticker data, in an embodiment, the application(s) 708 calls a Java server page (JSP) at a web server (which may be located at the distribution server 218). Java objects at the web server will then communicate with the database 208 to obtain the appropriate ticker information. The Java objects

25   will then construct XML code from the ticker information obtained from the database 208, and send the XML code to the corresponding application 708. The application 708 then converts the XML code to local data objects, in one embodiment, and returns the object(s) to the ticker API 704. The ticker API 704 subsequently sends the object(s) to the ticker UI 702 for display in the ticker 406.

30   In an embodiment, the ticker API 704 formats the data to be provided to the ticker UI 702, including advertisement data, in a manner that the viewer can

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interact with the advertisement at the ticker UI 702 level. For instance, the ticker API 704 can format the ticker data to provide such data with hypertext links or with other links to additional product information or to a merchant website. This formatting may include defining objects or functions that link to such advertising

5 information.

As an example illustrated in Figure 7, the ticker API 704 can be communicatively coupled to an advertisement application 712, so that the ticker API 704 can be provided with advertisement data to pass to the ticker UI 702 for presentation. Also, the ticker API 704 can communicate with the advertisement

10 application 712 to receive additional advertisement information requested by the viewer, to pass viewer responses for transactions to the advertisement application 712, to obtain advertisement data from the advertisement application 712 for presentation at the ticker UI 702 based on rules (such as presentation of an advertisement in response to viewer action, in response to a trigger in a television

15 signal, in response to active or passive business rules, in response to an implicit or explicit viewer profile, and so forth, including combinations thereof).

In an embodiment, the advertisement application 712 can comprise a software module or program that can retrieve the requested advertisement information from an advertisement source 714, and then provide the requested

20 information to the ticker API 704 or otherwise cause an advertisement to be displayed on the display screen 402.

One example of the advertisement application 712 is a browser, such as a web browser. In a browser-based or other implementation, the advertisement application 712 can include an HTML-to-text conversion component or other

25 suitable conversion component that can convert an advertisement from an original format (such as HTML, audio, video, etc.) to a text or other data format suitable for presentation within the ticker 406. In other examples, the advertisement application 712 can comprise other types of software, familiar to those skilled in the art having the benefit of this disclosure, that can retrieve advertisements from

30 the advertisement source(s) 714, including servers, web sites, local storage (such as the storage medium 322 having advertisements downloaded therein, which may

be based on a viewer profile in some instances), carousel broadcast advertisement channel, or other sources depicted in Figures 1-2.

The advertisement application 712 can also access a viewer profile 718 (which may be an implicit or explicit profile) to determine which advertisements are appropriate for the particular viewer. The viewer profile 718 may be stored locally as the user data 324 in the storage medium 322, or it may be remotely stored (such as at the cache 110). Also, the advertisement application 712 can include or otherwise interact with trigger processing software that process triggers in a television signal, and then use the information from the triggers to select an in-context advertisement from the advertisement source 714.

The advertisement application 712 can provide the retrieved information to the ticker API 708 so that the information can be formatted for display within the ticker 406, such as depicted in Figures 4-6. It is to be appreciated that in other embodiments, some of the advertisement data (including data associated with a transaction) can be communicated between the ticker UI 702 and the advertisement application 712 without necessarily having to go through the ticker API 704. Alternatively or in addition, the advertisement application 712 can issue commands to components of the client terminal 108 (such as the tuners 300 or 310, or the input interface 318) so that these components can tune to the advertisement source 714 to obtain advertisement data.

In one embodiment, the various data exchanged between the ticker API 704, the application(s) 708, and the advertisement application 712 (such as textual advertisement information to be displayed within the ticker 406) can comprise objects, or arguments that are passed in calls. The feed manager 706 can operate in one embodiment to control the communication of data between the ticker API 704 and the advertisement application 712, including interacting with the advertisement application 712 to determine if there are updated advertisements that are available. It is to be appreciated that the feed manager 706 need not be involved in operations related to providing advertisements (and related transaction

data) in some embodiments (and is therefore symbolically depicted by a broken line 716 in Figure 7).

Figure 8 is a flowchart 800 illustrating automatic insertion of advertisements into the ticker 406 according to an embodiment of the invention.

5   Figure 8 also illustrates operations associated with a resulting transaction. Elements of the flowchart 800 may be embodied in software or other machine-readable instruction stored on a machine-readable medium, such as the storage medium 322. Moreover, operations shown in the flowchart 800 need not necessarily occur in the exact order shown.

10   Beginning at a block 802, the ticker software (such as the ticker API 704) checks a ticker definition (which may include business rules) that specifies the conditions under which an advertisement is to be presented in the ticker 406. For instance, the ticker definition may require insertion of advertisements every 10 minutes (passive model), in response to a viewer action (active model), if certain

15   triggers are detected (for in-context implementations), if conditions matching a viewer profile are met, or others or suitable combinations or variations thereof.

At a decision block 804 and based on the definition checked at the block 802, the ticker software determines whether an advertisement is to be inserted. If a condition specified in the block 82 is not met, then the ticker software

20   returns to the block 802 to continue checking the definition(s) as needed until a condition for advertisement insertion is encountered.

However, if the ticker software at the block 804 determines that a condition specified in the block 802 has been met (such as if the definition specifies in-context advertisement insertion and a trigger that matches an

25   advertisement is detected by trigger processing software), then the ticker API 704 (or the ticker UI 702) requests the advertisement at a block 806. The request can comprise a request for advertisement data sent to the advertisement application 712, in one embodiment.

At a block 808, the advertisement application 712 receives the

30   request and selects a suitable advertisement from the advertisement source 714. Selection criteria can be based on the viewer profile 718, based on information

obtained from a trigger, based on the current subcategory that the ticker 406 is scrolling, and so forth. In an embodiment, such as in a passive model, the advertisement application 712 can select any advertisement from the advertisement source 714 without any particular regard to in-context, viewer

5   profile, or other selective criteria—the advertisement source 714 just finds an advertisement to insert into the ticker 406.

At a block 810, the selected advertisement is formatted to a format suitable for the ticker 406. This can include HTML-to-text conversion by the advertisement application 712, for instance. Alternatively or in addition, the ticker

10   API 704 can format the advertisement data after it is passed from the advertisement application. Some of the formatting can include addition of links or graphics to the advertisement data.

At a block 812, the advertisement data is returned from the advertisement application 712 to the ticker API 704 or directly to the ticker UI 702.

15   Once received, the ticker UI 702 presents the advertisement data in the ticker 406, such as shown in Figures 4-6.

The ticker software monitors for a viewer response to a presented advertisement at a block 814. If there is no response detected at the block 814, then the ticker software continues to monitor at the block 812. If there is a

20   response at the block 814, such as viewer selection of the advertisement 606 in Figure 6 with the center focus box 428, the ticker UI 702 reads or "captures" the key presses sent by the viewer, and translates the key presses into data requests. In an embodiment at a block 816, the ticker UI 902 (or the ticker API 904 in another embodiment) correlates this key press information (e.g., viewer response

25   information) with objects that have been constructed/defined and that represent transaction information, such as identification of which advertisement item in the ticker has been clicked, which product has been selected from a menu, text entry (e.g., PIN), whether the viewer is navigating through products in an advertisement, and so on. In an embodiment where it is involved, the ticker API 904 calls this

30   object or objects, and passes the called object(s) to the advertisement application

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712—otherwise, the ticker UI 702 passes the information to the advertisement application 712.

The viewer responses are received by the advertisement application 712 at a block 818, and sent to a merchant (such as a web site), as appropriate. The merchant web site may return additional information to be presented in the ticker, such as additional transaction prompts, error notices, and the like, which the advertisement application 712 will pass back to the ticker UI 702 directly or to the ticker API 704 so that this information can be presented in the ticker 406 to allow the viewer to continue the transaction at a block 820. Thereafter, the ticker software again monitors for viewer responses at a block 814. If there are no more viewer responses, such as if the viewer has finished or canceled the transaction at the block 820, then the ticker software resumes monitoring for advertisement insertion conditions at the block 802.

The above description of illustrated embodiments of the invention, including what is described in the Abstract, is not intended to be exhaustive or to limit the invention to the precise forms disclosed. While specific embodiments of, and examples for, the invention are described herein for illustrative purposes, various equivalent modifications are possible within the scope of the invention and can be made without deviating from the spirit and scope of the invention.

As an example, a satellite television (TV) delivery system may be implemented alternatively or in addition to a cable distribution system. A satellite TV delivery system may comprise a direct broadcast satellite (DBS) system. A DBS system may comprise a small 18-inch satellite dish (which is an antenna for receiving a satellite broadcast signal); a digital integrated receiver/decoder (IRD), which separates each channel, and decompresses and translates the digital signal so a television can show it; and a remote control. Programming for a DBS system may be distributed, for example, by multiple high-power satellites in geosynchronous orbit, each with multiple transponders. Compression (e.g., MPEG) is used to increase the amount of programming that can be transmitted in the available bandwidth.

A digital broadcast center (*e.g.*, analogous to the head-end 106) may be used to gather programming content, ensure its digital quality, and transmit the signal up to the satellites. Programming may come to the broadcast center from content providers (TBS™, HBO™, CNN™, ESPN™, etc.) via satellite, fiber optic

5   cable, and/or special digital tape. Satellite-delivered programming is typically immediately digitized, encrypted and uplinked to the orbiting satellites. The satellites retransmit the signal back down to every earth-station--or, in other words, every compatible DBS system receiver dish at customers' homes and businesses.

Some programs may be recorded on digital videotape in the

10   broadcast center to be broadcast later. Before any recorded programs are viewed by customers, technicians may use post-production equipment to view and analyze each tape to ensure audio and video quality. Tapes may then be loaded into a robotic tape handling system, and playback may be triggered by a computerized signal sent from a broadcast automation system. Back-up videotape

15   playback equipment may ensure uninterrupted transmission when appropriate.

These and other modifications can be made to the invention in light of the above detailed description. The terms used in the following claims should not be construed to limit the invention to the specific embodiments disclosed in the specification and the claims. Rather, the scope of the invention is to be

20   determined entirely by the following claims, which are to be construed in accordance with established doctrines of claim interpretation.

CLAIMS

What is claimed is:

1.   A method, comprising:

receiving television signal from a video casting system and presenting the received television signal on a first portion of a display screen;

presenting a ticker having a scroll region on a second portion of the display screen, the second portion of the display screen being a minority portion relative to the first portion of the display screen;

at a client terminal coupled to the display screen, selecting an advertisement in context with subject matter of the television signal presented on the display screen; and

presenting the selected advertisement within the scroll region of the ticker.

2.   The method of claim 1, further comprising:

responsive to user selection of the presented advertisement, presenting information corresponding to the advertisement within the scroll region of the ticker; and

within the scroll region of the ticker, conducting a transaction related to the presented information with a user.

3.   The method of claim 1 wherein conducting the transaction within the scroll region includes at least one of receiving a user-entered selection from a menu presented within the scroll region, receiving a user-entered alphanumeric text entry, and receiving a user-entered selection based on navigation over an item presented within the scroll region.

4.   The method of claim 1, further comprising at the client terminal coupled to the display screen:

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selecting an advertisement unrelated to the subject matter of the television signal presented on the display screen; and

presenting that selected advertisement within the scroll region of the ticker.

5.   The method of claim 1 wherein selecting the advertisement in context with subject matter of the television signal presented on the display screen includes selecting the advertisement based on a trigger included along with the received television signal.

6.   The method of claim 1, further comprising selecting the advertisement based on profile information.

7.   The method of claim 6 wherein the profile information comprises explicit profile information.

8.   The method of claim 6 wherein the profile information comprises implicit profile information.

9.   The method of claim 1, further comprising rendering a window having a video communication image on the display screen, the video communication image being related to a transaction initiated in response to the presented advertisement.

10.   The method of claim 1, further comprising converting the selected advertisement from an initial format to a format usable with the ticker.

11.   The method of claim 1, further comprising providing the presented advertisement with a link to indicate availability of a transaction related to the presented advertisement.

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12. A method, comprising:

presenting a ticker having a scroll region on a portion of a display screen capable to display a video image received from an interactive video casting system;

presenting an advertisement within the scroll region of the ticker; and

if a user responds to the presented advertisement, conducting a transaction related to the presented advertisement with the user within the scroll region of the ticker.

13. The method of claim 12, further comprising selecting the advertisement to present within the scroll region of the ticker to be in context with subject matter of the received video image.

14. The method of claim 12, further comprising selecting the advertisement to present within the scroll region of the ticker based on profile information associated with the user.

15. An article of manufacture, comprising:

a machine-readable medium having instructions stored thereon to:

present a television signal received from an interactive video casting system on a first portion of a display screen;

present a ticker having a scroll region on a second portion of the display screen, the second portion of the display screen being a minority portion relative to the first portion of the display screen;

at a client terminal coupled to the display screen, select an advertisement in context with subject matter of the television signal presented on the display screen; and

present the selected advertisement within the scroll region of the ticker.

16.   The article of manufacture of claim 15 wherein the machine-readable medium further includes instructions stored thereon to:

present information corresponding to the advertisement within the scroll region of the ticker, in response to user selection of the presented advertisement; and

within the scroll region of the ticker, conduct a transaction related to the presented information with a user.

17.   The article of manufacture of claim 15 wherein the machine-readable medium further includes instructions stored thereon to select the advertisement based on profile information.

18.   The article of manufacture of claim 15 wherein the machine-readable medium further includes instructions stored thereon to provide the presented advertisement with a link to indicate availability of a transaction related to the presented advertisement.

19.   An article of manufacture, comprising:

a machine-readable medium having instructions stored thereon to:

present a ticker having a scroll region on a portion of a display screen capable to display a video image received from an interactive video casting system;

present an advertisement within the scroll region of the ticker; and

conduct a transaction related to the presented advertisement with the user within the scroll region of the ticker, if a user responds to the presented advertisement.

20.   The article of manufacture of claim 19 wherein the machine-readable medium further includes instructions stored thereon to select the

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advertisement to present within the scroll region of the ticker to be in context with subject matter of the received video image.

21. The article of manufacture of claim 19 wherein the machine-readable medium further includes instructions stored thereon to select the advertisement to present in the ticker based on profile data associated with the user.

22. An apparatus, comprising:

a means for receiving television signal from a video casting system and presenting the received television signal on a first portion of a display screen;

a means for presenting a ticker having a scroll region on a second portion of the display screen, the second portion of the display screen being a minority portion relative to the first portion of the display screen;

at a client terminal coupled to the display screen, a means for selecting an advertisement in context with subject matter of the television signal presented on the display screen;

a means for presenting the selected advertisement within the scroll region of the ticker, including a means for presenting transaction information associated with the presented advertisement within the scroll region of the ticker.

23. The apparatus of claim 22, further comprising a means for selecting the advertisement based on user profile information.

24. A ticker for a video casting system, the ticker comprising:

a plurality of selectable items, wherein at least one of the items comprises an advertisement that is in-context with subject matter of a video image from the video casting system that is displayed on a first portion of a

display screen, the plurality of selectable items capable of being presented on a second portion of a display screen;

at least one scroll region within the second portion of the display screen to present the selectable items, including the advertisement, presented therein; and

a navigation control to select the advertisement presented within the scroll region to initiate a transaction related to the presented advertisement within the scroll region.

25.   The ticker of claim 24, further comprising an indicator provided along with the advertisement to indicate availability of the transaction.

26.   The ticker of claim 24 wherein the advertisement is linked to supplemental information including text that is capable of being presented within the scroll region.

27.   The ticker of claim 24 wherein the advertisement is inserted into the scroll region based on user profile information.

28.   The ticker of claim 27 wherein the transaction within the scroll region is accompanied by concurrent presentation of a video communication on the display screen that is related to the transaction.

29.   The ticker of claim 24 wherein the selectable items presented within the scroll region includes transaction information selectable by a user in connection with performing the transaction.

30.   The ticker of claim 24, further comprising:

a ticker user interface (UI) to generate the scroll region that presents the advertisement and to provide the navigation control to select that advertisement presented within the scroll region;

a ticker application program interface (API) in communication with the ticker (UI) to control presentation of the advertisement by the ticker UI and to provide the selectable items to the ticker UI; and

an advertisement application in communication with the ticker API to select and provide the advertisement to the ticker API.

31.   The ticker of claim 30 wherein the advertisement application comprises a browser.

32.   The ticker of claim 30 wherein the supplemental information engine comprises a software module to control at least one of a tuner of a client terminal for the video casting system to tune to a source of the advertisement, an input interface to connect to the source of the advertisement, and an input interface to retrieve the advertisement downloaded into local storage coupled to the client terminal.

33.   The ticker of claim 30, further comprising a feed manager in communication with the video casting system and with the ticker API to control transmission of ticker data, associated with the selectable items, from the video casting system to the ticker API.

34.   An apparatus for a video casting system, the apparatus comprising:

at least one communication interface to receive an advertisement sent from the video casting system;

a storage medium coupled to the communication interface to store a ticker software program;

a processor, coupled to the storage medium and to the communication interface, to cooperate with the ticker software program to control presentation of the advertisement within scroll region of a ticker; and

an output section to provide the ticker to a display screen capable to present the ticker concurrently with a received television program image, the

advertisement being selected by the ticker software program to be inserted into the ticker based on context of subject matter of the received television program image.

35.   The apparatus of claim 34 wherein the ticker software program comprises:

a ticker user interface (UI) to generate the scroll region that presents the advertisement and to provide the navigation control to select that advertisement presented within the scroll region;

a ticker application program interface (API) in communication with the ticker (UI) to control presentation of the advertisement by the ticker UI and to provide the selectable items to the ticker UI; and

an advertisement application in communication with the ticker API to select and provide the advertisement to the ticker API.

36.   The apparatus of claim 34 wherein the software program includes code to select the advertisement to insert in the ticker based on profile data.

37.   The apparatus of claim 34 wherein the ticker software program includes code to present transaction information, related to the inserted advertisement, within the scroll region of the ticker and in response to user selection of the inserted advertisement.

38.   A video casting system, comprising:

a source of ticker data; and

an apparatus coupled to the source, the apparatus including:

at least one communication interface to receive an advertisement sent from the video casting system;

a storage medium coupled to the communication interface to store a ticker software program;

a processor, coupled to the storage medium and to the communication interface, to cooperate with the ticker software program to control presentation of the advertisement within scroll region of a ticker in addition to the ticker data that is presented within the scroll region; and

an output section to provide the ticker to a display screen capable to present the ticker concurrently with a received television program image, the advertisement being selected by the ticker software program to be inserted into the ticker based on context of subject matter of the received television program image.

39.   The system of claim 38 wherein the advertisement is sent into the storage medium from the video casting system and provided to the ticker from the storage medium.

40.   The system of claim 38 wherein the ticker software program includes code to present transaction information, related to the inserted advertisement, within the scroll region of the ticker and in response to user selection of the inserted advertisement.

41.   The system of claim 38 wherein the software program includes code to select the advertisement to insert in the ticker based on profile data.

42.   The system of claim 38 wherein the source of the data comprises:

a feed server to receive a plurality of feeds of ticker data and having a feed engine to manipulate the ticker data received from the feeds;

a production server coupled to the feed server to receive the ticker data manipulated by the feed engine, and coupled to a database having tables for the manipulated ticker data received from the feed server, the production server being capable to change a format of the manipulated ticker

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data to a format compatible with client terminals configured to present the screen interface on the display screen; and

a distribution server to send the manipulated ticker data having the format compatible with the client terminals.

43.   A method usable in a video casting system, the method comprising:
receiving television signal from the video casting system and presenting the received television signal on a first portion of a display screen,

wherein the display screen comprises part of a television for the video casting system,

wherein a client terminal for the television is coupled to the display screen,

wherein the video casting system includes a plurality of sources, which provide ticker data for a ticker capable of being rendered on a second portion the display screen, the plurality of sources being communicatively coupled to a plurality of broadcast centers,

wherein at least one of the broadcast centers is coupled to a server capable to provide the ticker data from the sources to the client terminal, and

wherein the video casting system is capable to provide the ticker data to the client terminal via different communication channels, including at least one of a plurality of television broadcast channels, an out-of-band channel, and a communication channel with a communication network;

presenting the ticker with a scroll region on the second portion of the display screen, the second portion of the display screen being a minority portion relative to the first portion of the display screen;

at the client terminal coupled to the display screen, selecting an advertisement in context with subject matter of the television signal presented on the display screen; and

presenting the selected advertisement within the scroll region of the ticker.

44.   The method of claim 43, further comprising:

responsive to user selection of the presented advertisement, presenting information corresponding to the advertisement within the scroll region of the ticker; and

within the scroll region of the ticker, conducting a transaction related to the presented information with a user.

45.   The method of claim 43 further comprising selecting the advertisement based on profile information.

46.   A video casting system, comprising:

a source of ticker data including:

a feed server to receive a plurality of feeds of ticker data and having a feed engine to manipulate the ticker data received from the feeds;

a production server coupled to the feed server to receive the ticker data manipulated by the feed engine, and coupled to a database having tables for the manipulated ticker data received from the feed server, the production server being capable to change a format of the manipulated ticker data to a format compatible with client terminals configured to present a screen interface on a display screen; and

a distribution server to send the manipulated ticker data having the format compatible with the client terminals; and

an apparatus coupled to the distribution server of the source, the apparatus including:

at least one communication interface to receive an advertisement sent from the video casting system;

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a storage medium coupled to the communication interface to store a ticker software program;

a processor, coupled to the storage medium and to the communication interface, to cooperate with the ticker software program to control presentation of the advertisement within scroll region of a ticker in addition to the ticker data that is presented within the scroll region; and

an output section to provide the ticker to a display screen capable to present the ticker concurrently with a received television program image, the advertisement being selected by the ticker software program to be inserted into the ticker based on context of subject matter of the received television program image, the ticker software program including code to present transaction information, related to the inserted advertisement, within the scroll region of the ticker and in response to user selection of the inserted advertisement.

47.   The system of claim 46 wherein a source of the video comprises part of a satellite television delivery system.

48.   The system of claim 46 wherein a source of the video comprises part of an interactive television system.

49.   The system of claim 46 wherein the ticker software program further includes code to select the advertisement based on user profile information.
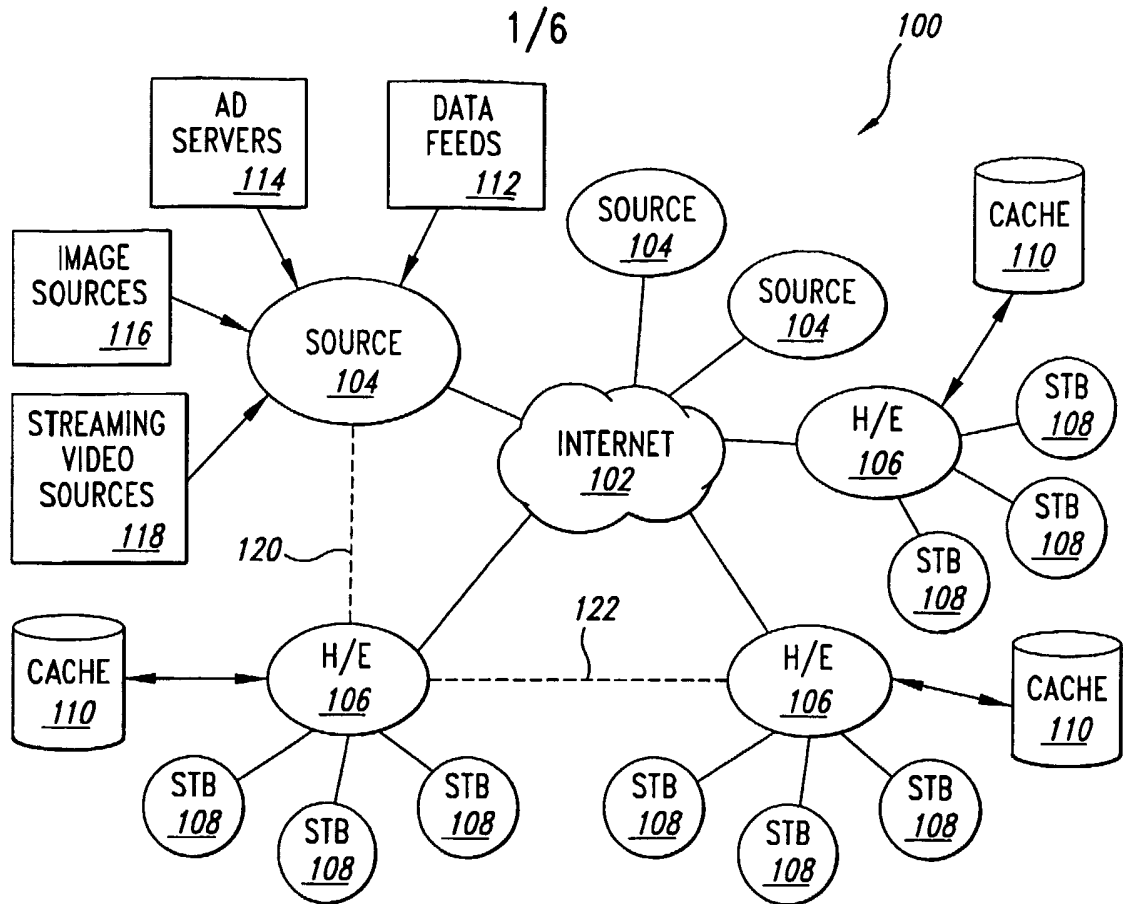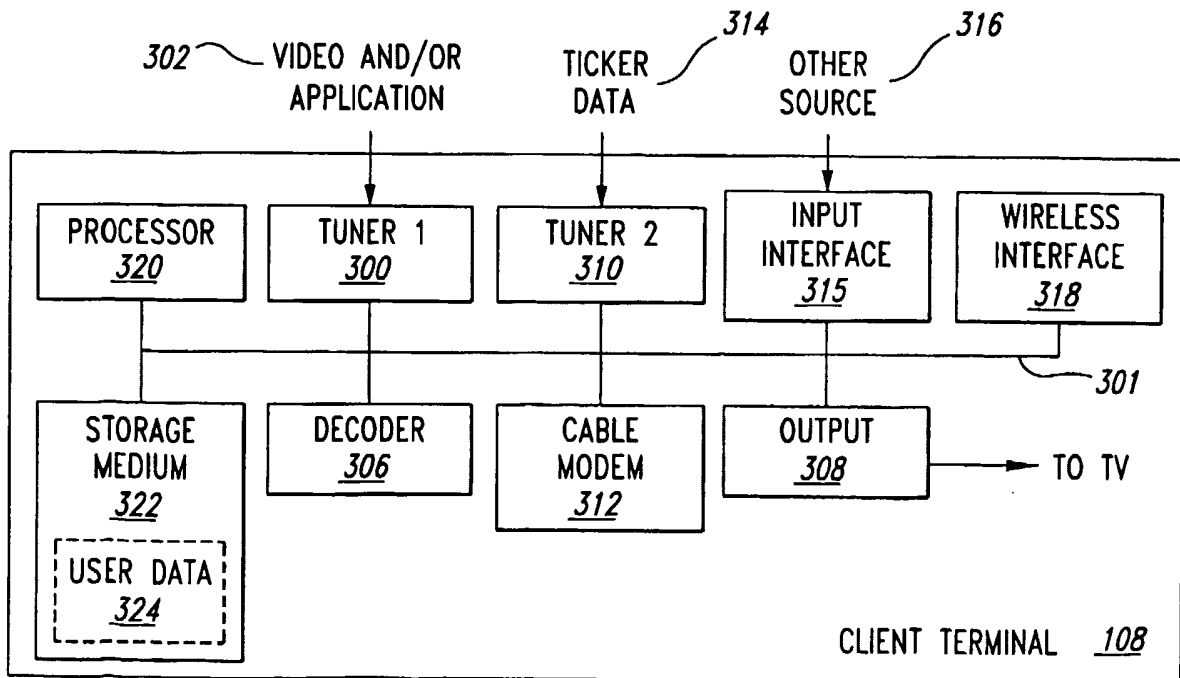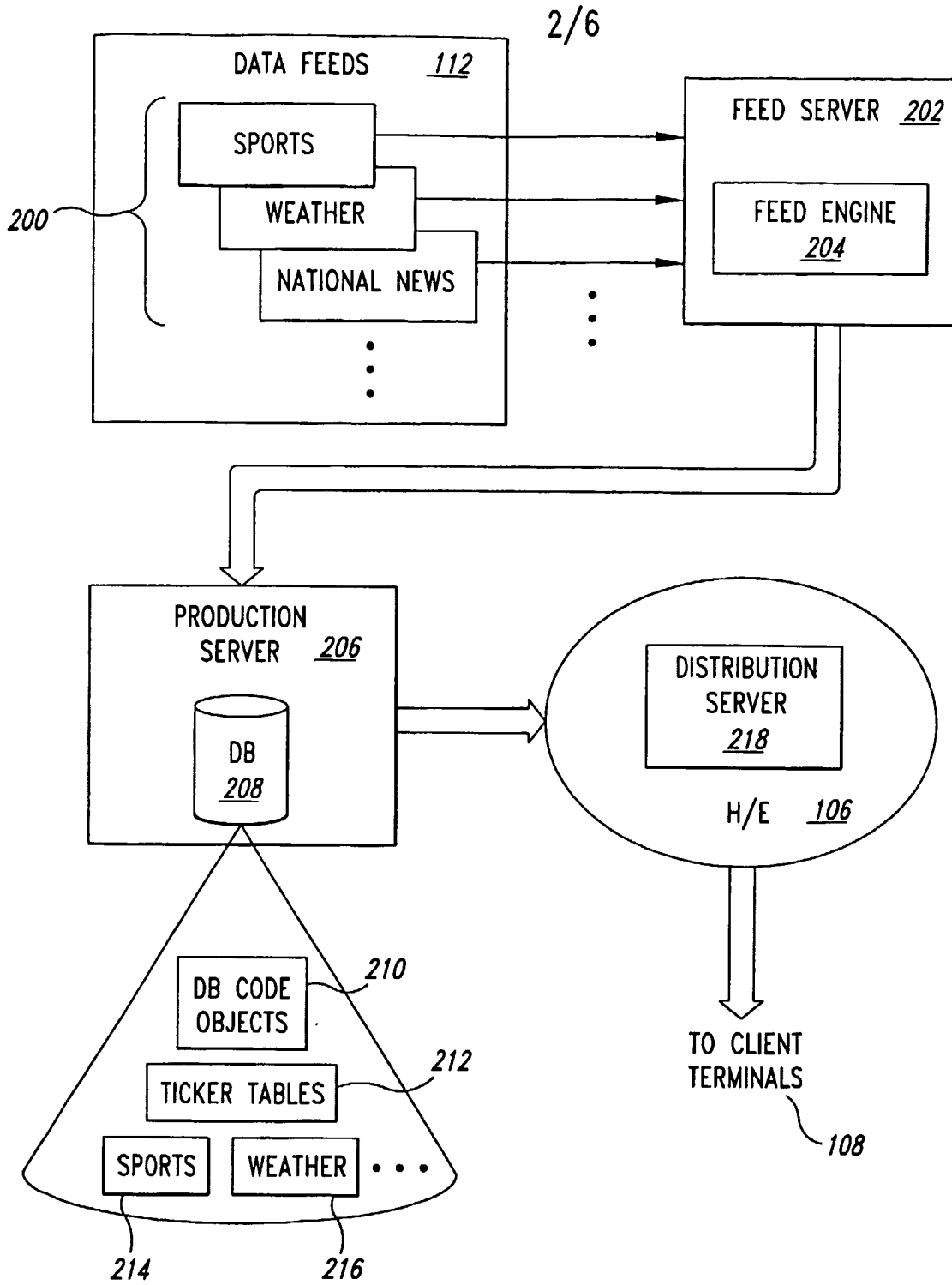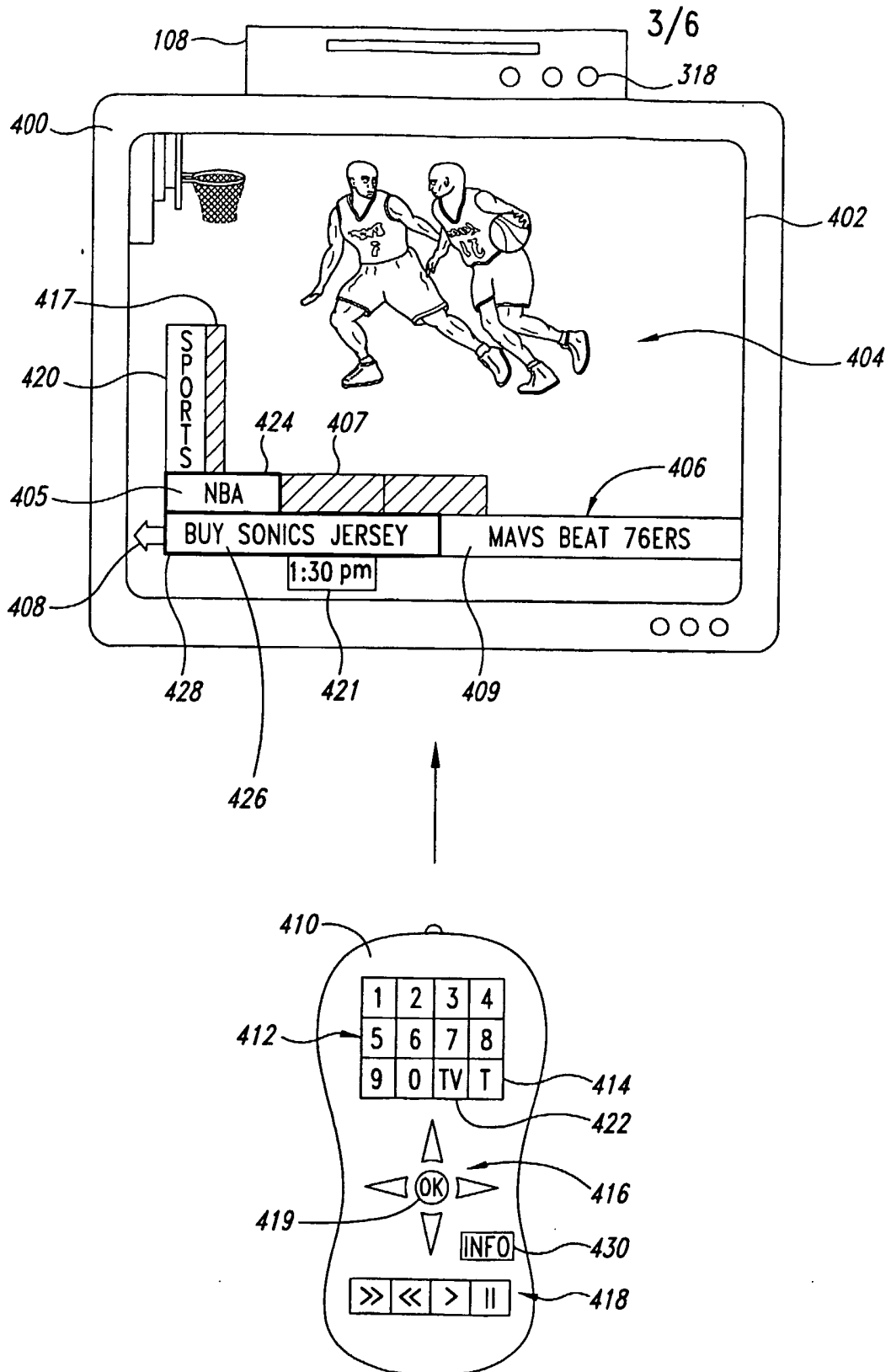
Fig. 1

Fig. 3

Fig. 2

Fig. 4
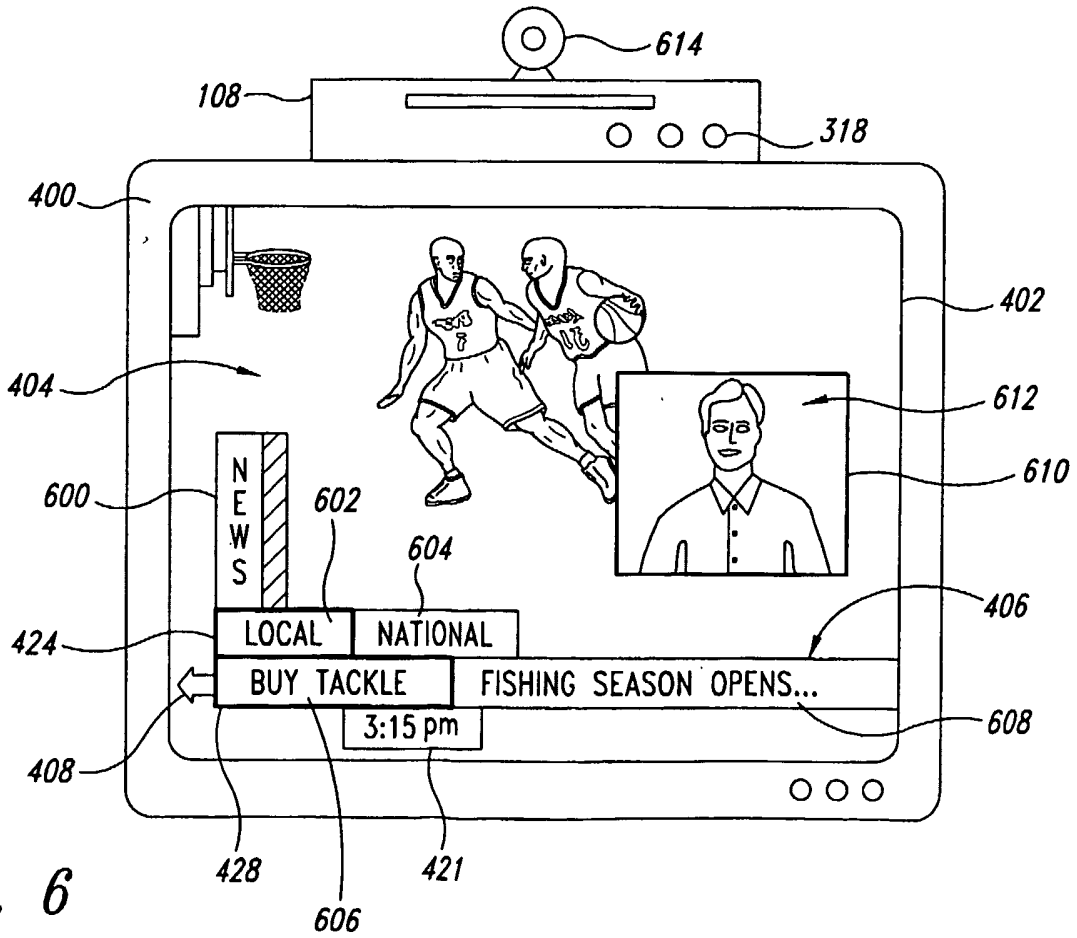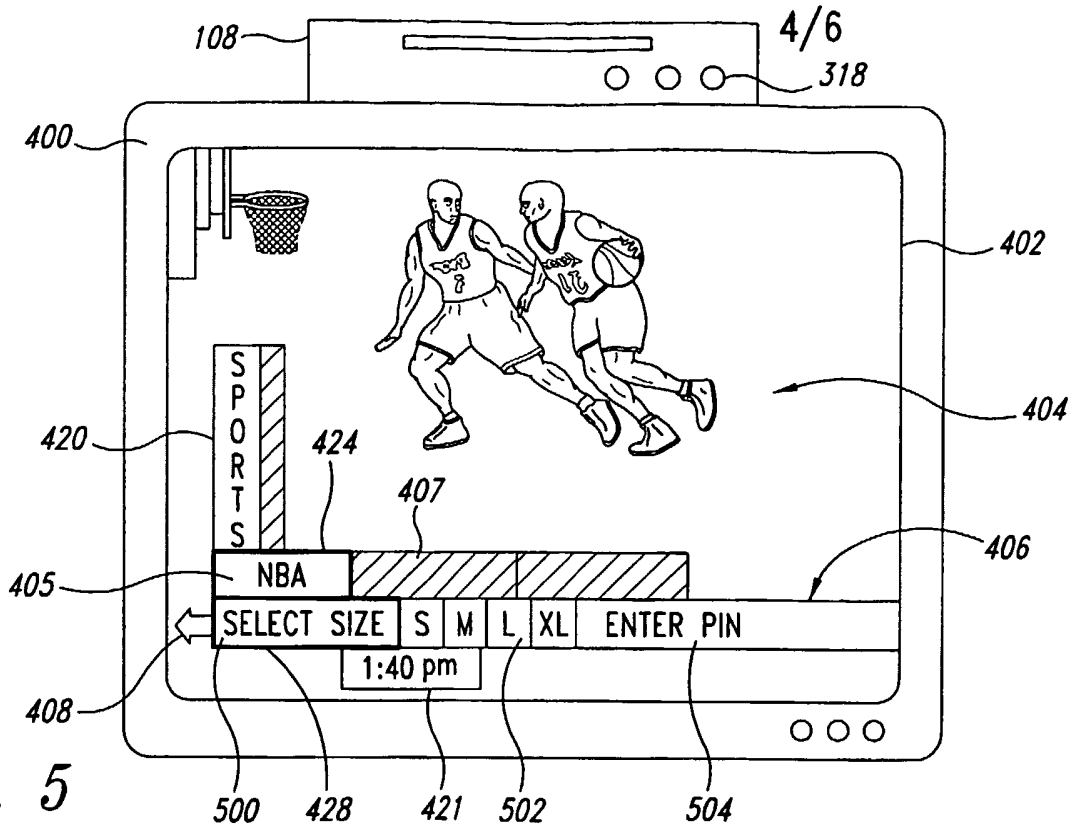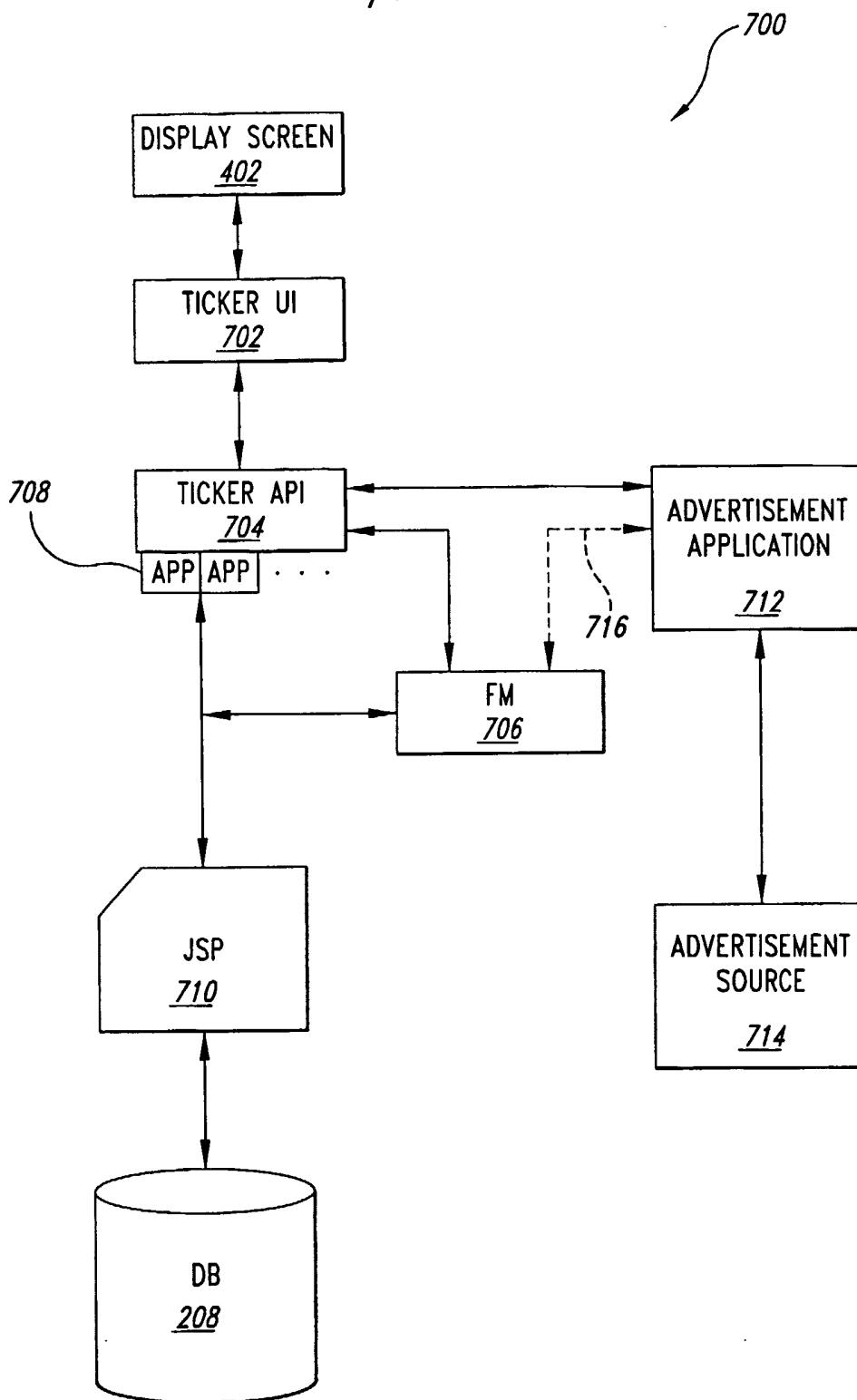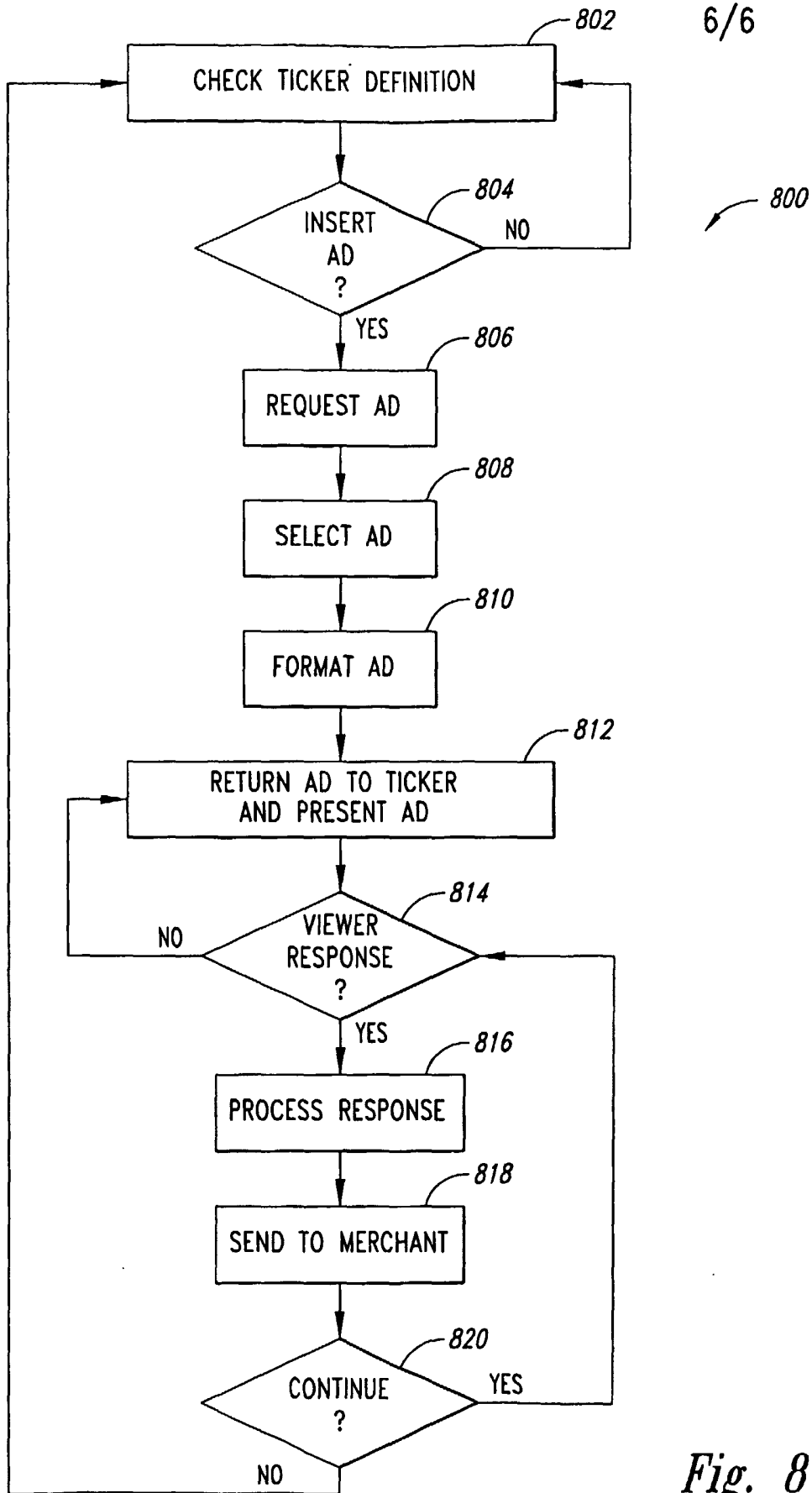
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Fig. 5

Fig. 6

Fig. 7

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Fig. 8

INTERNATIONAL SEARCH REPORT

A.	CLASSIFICATION OF SUBJECT MATTER

IPC(7)   : H04N 5/445; G06F 3/00, 13/00
US CL   : 725/42

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. : 725/42, 34, 46

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

C.	DOCUMENTS CONSIDERED TO BE RELEVANT	
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X,E --- Y,E	US 6,564,379 B1 (KNUDSON et al) 13 May 2003 (13.05.2003), see col. 3, line 13 to col. 10, line 26.	1-5, 9-13, 15, 16, 18-20, 22, 24-26, 29-35, 37-40, 42-44 and 46-48 ---------- 6-8, 14, 17, 21, 27, 28, 36, 41, 45 and 49
Y	US 6,029,045 A (PICCO et al) 22 February 2000 (22.02.2000), see col. 12, lines 37-59).	6-8, 14, 17, 21, 27, 28, 36, 41, 45 and 49
A, P	US 6,526,577 B1 (KNUDSON et al) 25 February 2003 (25.02.2003), see entire document.	1-49
A, P	US 6,536,041 B1 (KNUDSON et al) 18 March 2003 (18.03.2003), see entire document.	1-49

☐ 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
"E"	earlier application or patent published on or after the international filing date
"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)
"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
"&"	document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
27 May 2003 (27.05.2003)	3 0 JUN 2003

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