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(54) **COMBINING TELEVISION BROADCAST AND PERSONALIZED/INTERACTIVE INFORMATION**

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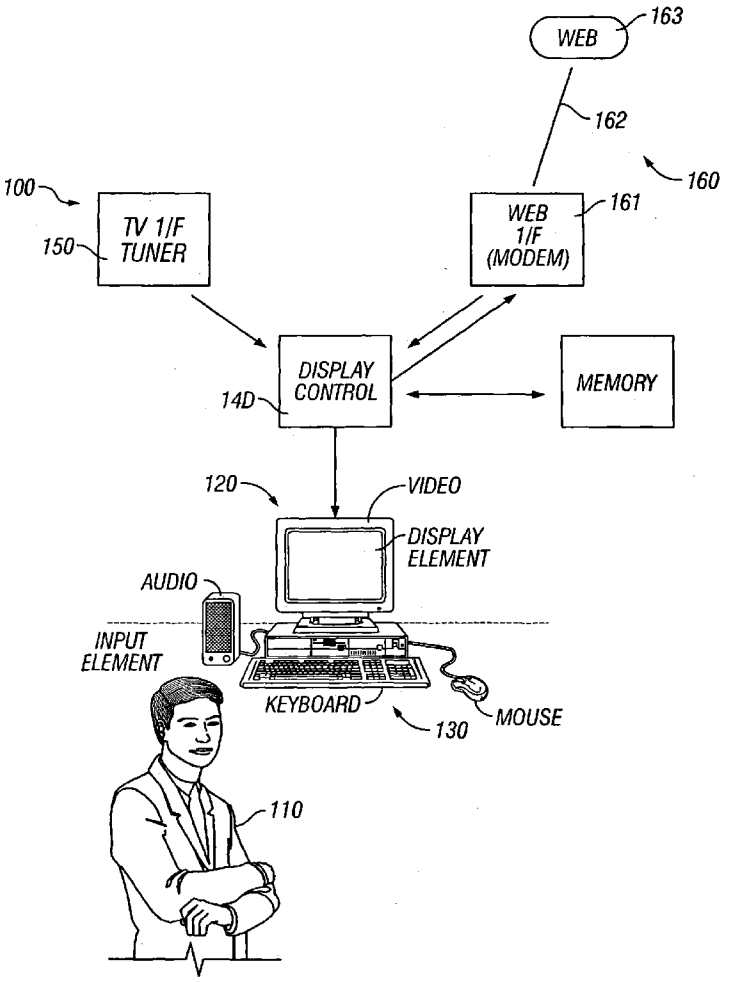
(57) **ABSTRACT**

The invention provides an improved method and system for interactive broadcast and web information browsing. In embodiments of the invention, web information is presented in conjunction with a broadcast television image, either at an edge of the image screen or overlaid with the image screen in an opaque, transparent or translucent image. The presented web information is fully interactive and can be interacted with by the user using all known features of interactive web presentation.



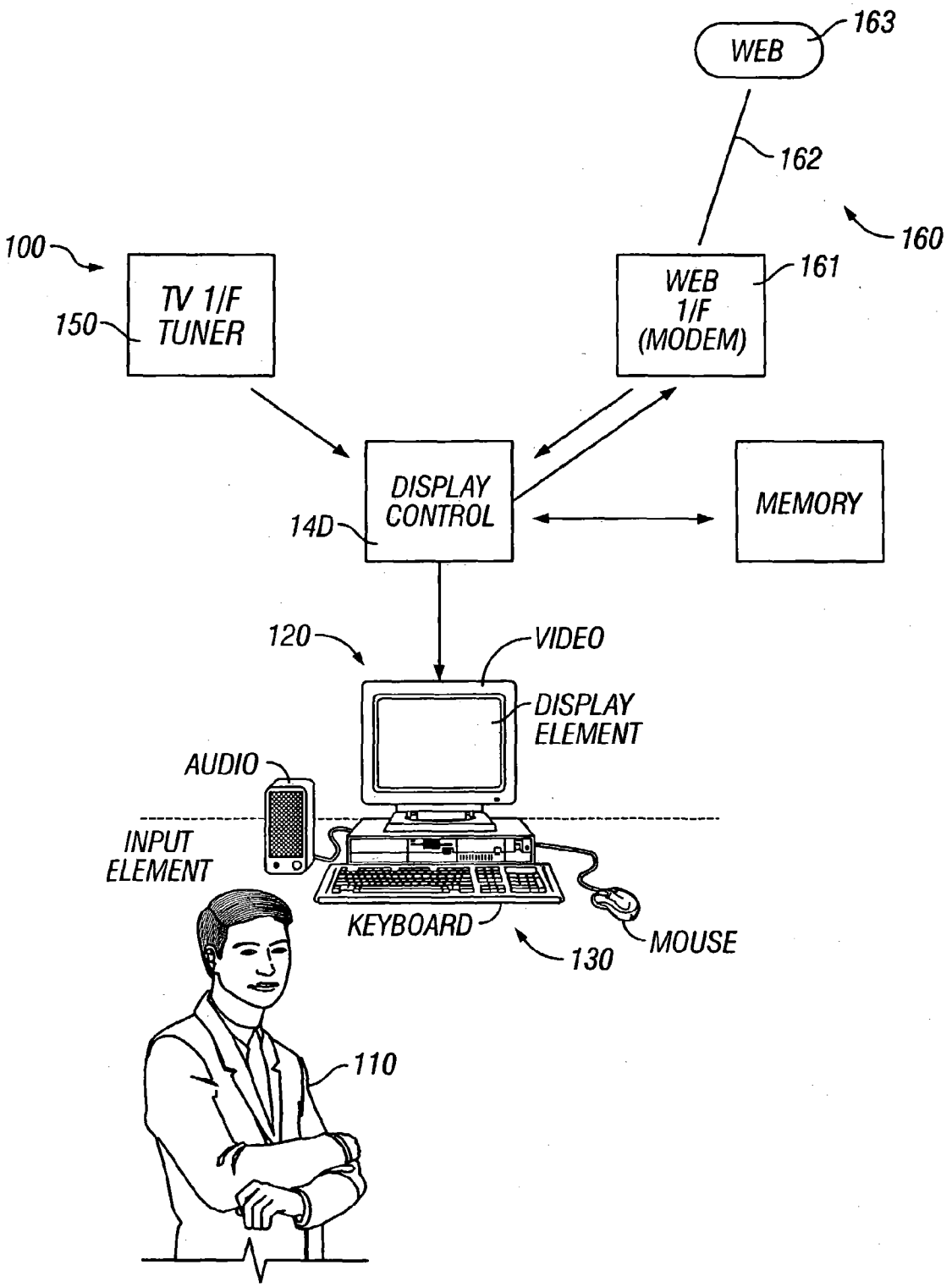

WEB
163
162
160
100
TV 1/F TUNER
150
WEB 1/F (MODEM)
161
DISPLAY CONTROL
14D
MEMORY
120
VIDEO
DISPLAY ELEMENT
AUDIO
INPUT ELEMENT
KEYBOARD
MOUSE
130
110

FIG. 1

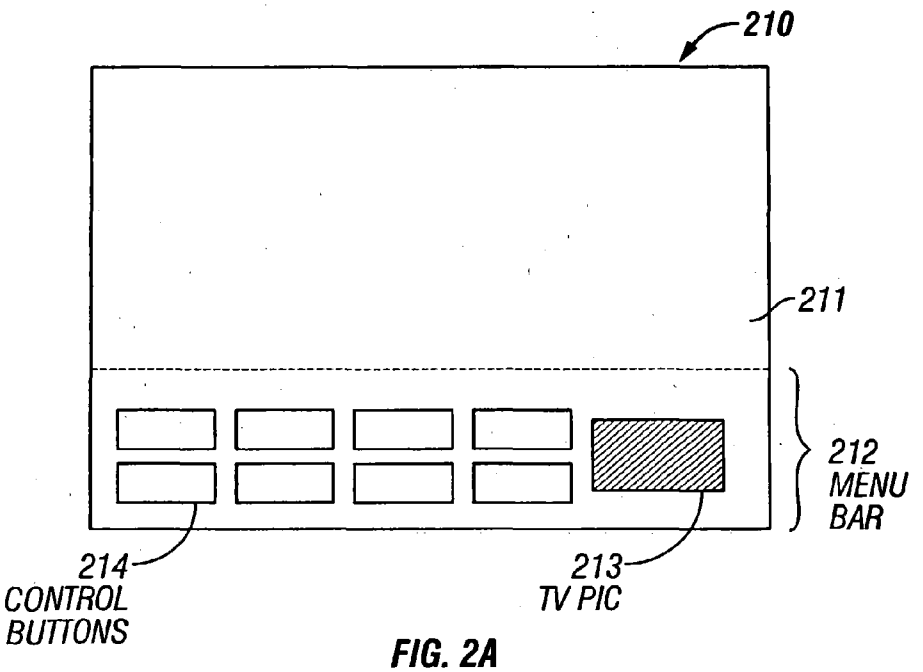

210
211
212
MENU
BAR
214
CONTROL
BUTTONS
213
TV PIC

FIG. 2A

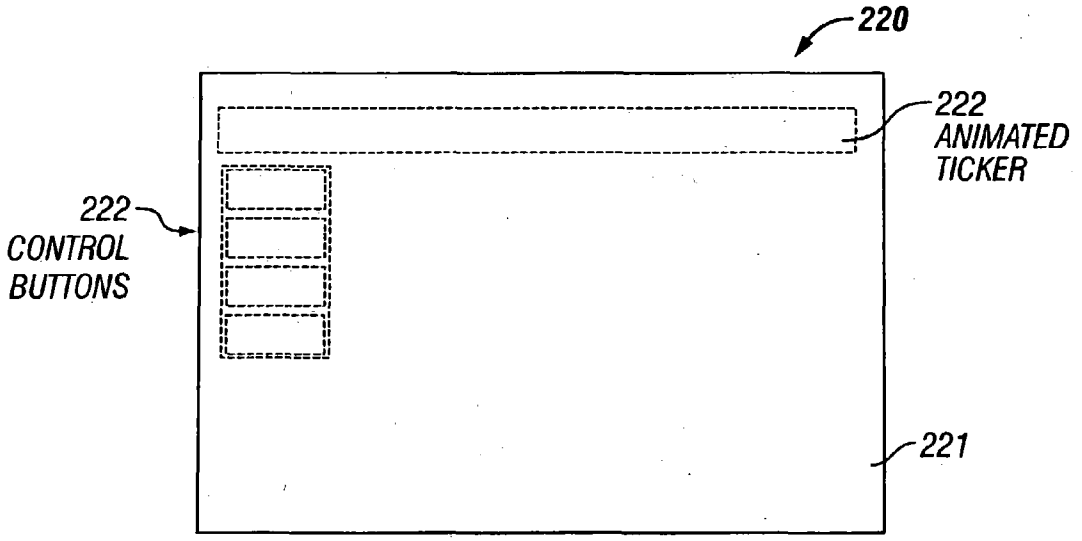

220
222
ANIMATED
TICKER
222
CONTROL
BUTTONS
221

FIG. 2B

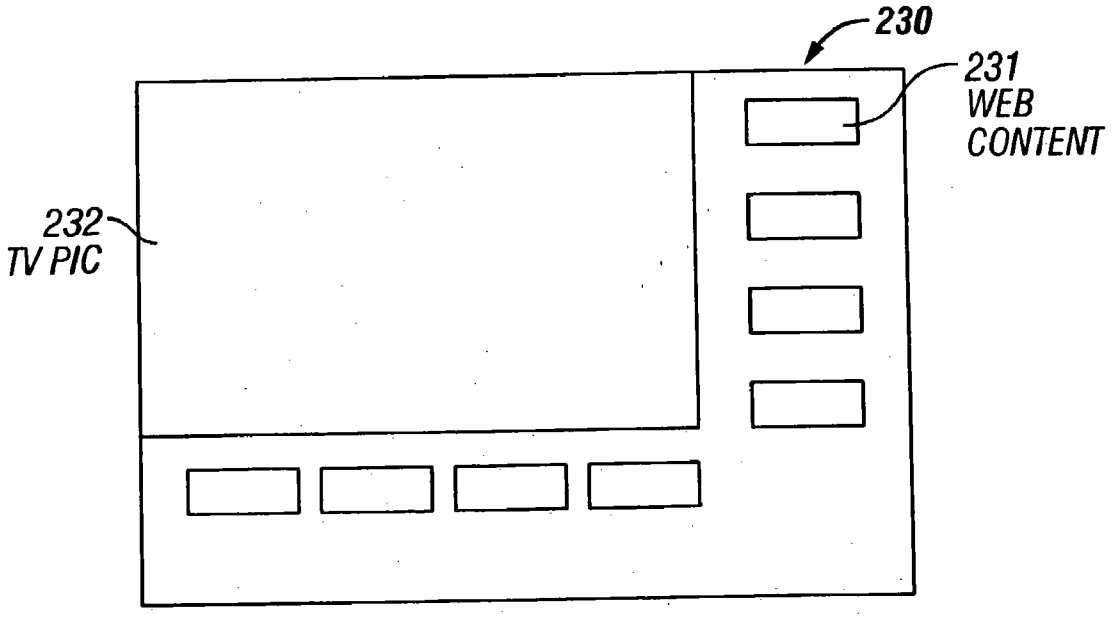


FIG. 2C

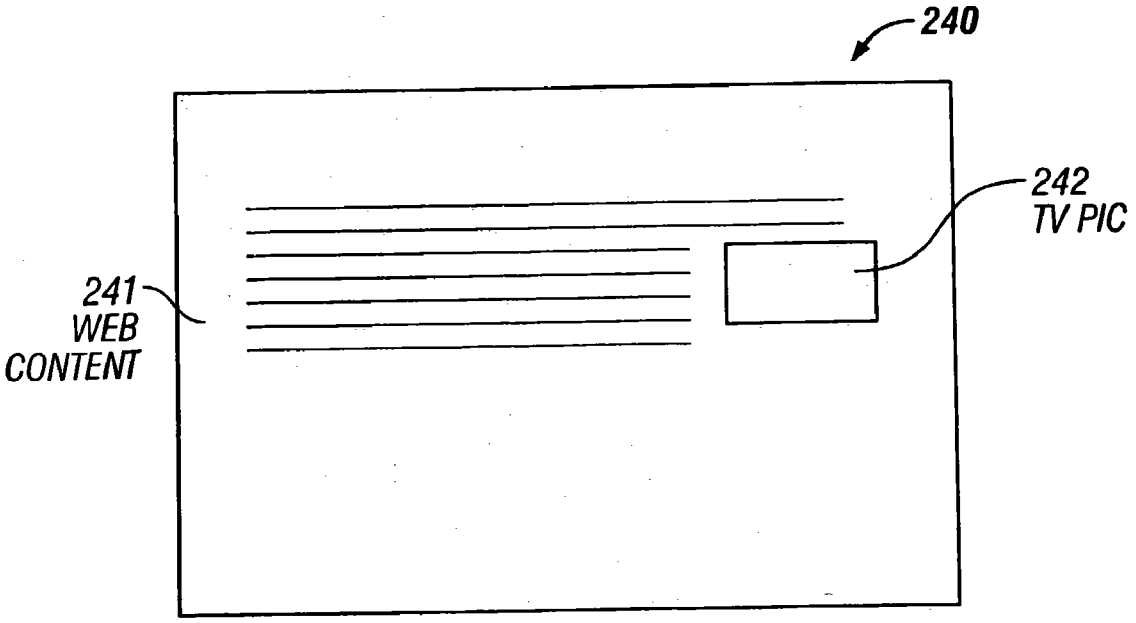


FIG. 2D

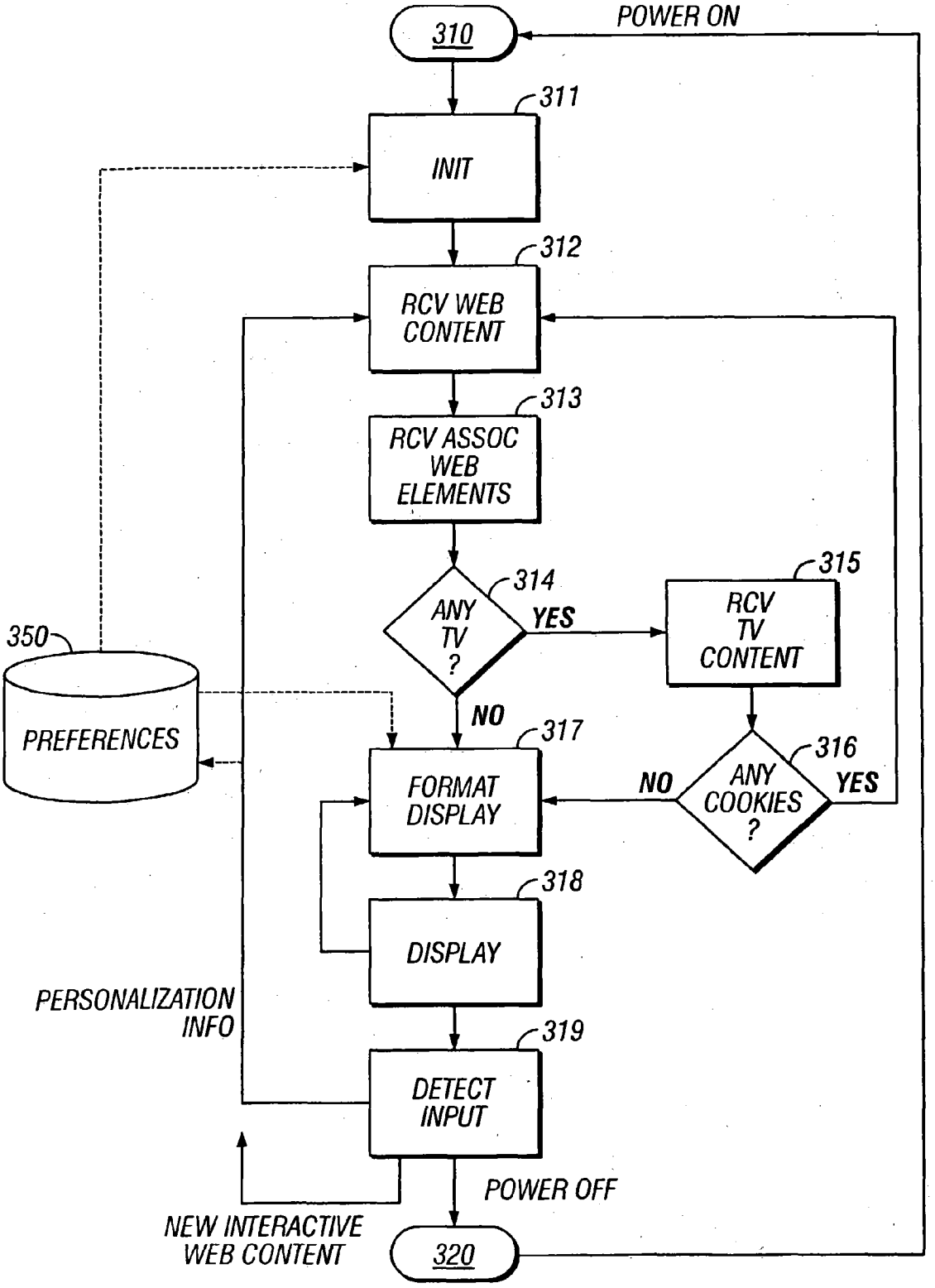

310
POWER ON
311
INIT
312
RCV WEB CONTENT
313
RCV ASSOC WEB ELEMENTS
314
ANY TV ?
YES
315
RCV TV CONTENT
NO
316
ANY COOKIES ?
YES
NO
317
FORMAT DISPLAY
318
DISPLAY
319
DETECT INPUT
350
PREFERENCES
PERSONALIZATION INFO
POWER OFF
NEW INTERACTIVE WEB CONTENT
320

FIG. 3

COMBINING TELEVISION BROADCAST AND PERSONALIZED/INTERACTIVE INFORMATION

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims priority of the following applications:

[0002] application Ser. No. 08/770,238, filed Dec. 20, 1996, in the name of inventors Wei Yen and Steven Weinstein, titled "Internet Multiplexer for Broadcast and Other Information", attorney docket NAV-001;

[0003] Provisional Application Serial No. 60/047,809, filed May 16, 1997, in the name of inventors Steven Weinstein, James Palmer, James Fulker and Jeffrey Mock, titled "User Interface," attorney docket number NAV-004P.

[0004] Each of these applications is hereby incorporated by reference as if fully set forth herein. These applications are collectively referred to herein as the "Navio Disclosures."

BACKGROUND OF THE INVENTION

[0005] 1. Field of the Invention

[0006] The invention relates to a system for combining interactive broadcast and web information browser.

[0007] As used herein, the term "broadcast" includes wide variations on the theme of broadcast, including cablecast, narrowcast, network multicast, "push" technology, and other variations of simultaneous information distribution to a plurality of recipients.

[0008] As used herein, the term "interactive" includes wide variations on the theme of interactivity and personalization, including both of the following:—

[0009] interactive systems in which a recipient of information has a transmission channel by which to express preferences or to request information of a specific type; and

[0010] personalized systems in which a recipient of information can select among a plurality of simultaneously distributed sets of information, in which the particular information presented to the recipient is responsive to individual or personal preferences or selections (instead of the information being identically presented to a mass audience).

[0011] As used herein, the term "personalized" also includes wide variations on the theme of interactivity and personalization, similar to those encompassed within the term "interactive." Information distribution referred to herein as "interactive" also includes the many concepts of personalization; information distribution referred to herein as "personalized" also includes the many concepts of interactivity.

[0012] As used herein, the terms "web,""HTML," and "embedded information" also include wide variations on the theme of information provided by a server and including links or hyperlinks to other information. For example, other internet information retrieval protocols, such as electronic mail, file transfer, gopher, IRC, telnet, are within the scope and spirit of the invention, and should be considered at each use of the term "web." Moreover, other information formats, including SGML, XML, and graphical document formats or word processor formats that allow for linking or hyperlinking, are also within the scope and spirit of the invention, and should be considered at each use of the terms "HTML" or "embedded."

[0013] 2. Related Art

[0014] Known information distribution systems include broadcast media, such as radio and television, and interactive media, such as telephone systems and electronic mail. Recent computer systems include the World Wide Web (the "web"), which is interactive in that users, using web clients, can request information from web servers, and after receiving that information can display or present it for review. Information available using the web includes text, graphics, pictures, sound, animation, and programs or program applets such as Java or JavaScript.

[0015] Many users would like to receive both broadcast information and interactive (or personalized) information in a unified interface, whether or not that unified interface has a return transmission channel by which to express preferences or to request information. It would be advantageous for the unified interface to combine both the broadcast and interactive (or personalization) features, that is, to allow the user to interact with and personalize broadcast information, and to receive interactive or personalized information without closely and actively requesting it. It would also be advantageous for the unified interface to simultaneously present both broadcast information, and interactive or personalized information, without either interfering with the other.

[0016] One problem in the known art is that broadcast television signals are designed for presentation over the entire screen of a television monitor, while web pages (and other interactive or personalized content) are also designed for presentation over the entire screen, or at least most of the entire screen. Since there is only a finite amount of screen space for presentation of visual material, this problem makes it difficult for the user to simultaneously receive and present both broadcast information and interactive or personalized information, as each tends to interfere with the other.

[0017] A first method in the known art is to reserve a separate mode on an otherwise ordinary television set for presentation of web information. In this known method, the user selects the separate mode for presentation of web information, and selects television channels (and deselects the separate mode) for presentation of broadcast television information. While this known method achieves the presentation of both broadcast and interactive information, it has the drawback that both kinds of information are not presented simultaneously, and the user does not achieve the advantage of simultaneously using both the broadcast and interactive models of receiving information.

[0018] A second method in the known art is to use a "picture-in-picture" feature of broadcast television receivers to present a relatively smaller version of a broadcast television picture while simultaneously presenting web information (or other broadcast television information) to the user. While this known method achieves the presentation of both broadcast and interactive information, it has the draw-

back that at least some of the interactive information is covered up by the picture-in-picture feature, and thus is not readily viewable by the user.

[0019] A third method in the known art is to present raw text, selected from an out-of-band part of the television signal such as the VBI (vertical blanking interval) in a reserved section of the television display. This known method is used for "closed caption" television subtitles. However, this known method only achieves the presentation of broadcast information, as the subtitles are not subject to interactive use by the user. Moreover, this known method is limited to presentation of only simple information, such as raw text and some rudimentary block graphics; it is also opaque and interferes with display of the broadcast television signal. This simple information is supplied by the broadcaster for all recipient devices, and is neither interactive nor personalized.

[0020] Accordingly, it would be desirable to provide an improved method and system for combining television broadcast and personalized/interactive information. This advantage is achieved in embodiments of the invention in which personalized or interactive graphical information is presented in conjunction with a broadcast television image, either at an edge of the image screen or overlaid with the image screen in an opaque, transparent, translucent, or at least partially transparent or translucent, image. The presented web information is fully interactive or personalized, and can be interacted with, and personalized, by the user using all known features of interactive or personalized web presentation.

SUMMARY OF THE INVENTION

[0021] The invention provides an improved method and system for combining television broadcast and personalized/interactive information. In embodiments of the invention, personalized or interactive graphical information (such as web information) is presented in conjunction with a broadcast television image, either at an edge of the image screen or overlaid with the image screen in an opaque, transparent, translucent, or at least partially transparent or translucent, image. The presented web information is filly interactive or personalized, and can be interacted with, and personalized, by the user using all known features of interactive or personalized web presentation.

BRIEF DESCRIPTION OF THE DRAWINGS

[0022] **FIG. 1** shows a block diagram of a system for combining television broadcast and personalized/interactive information.

[0023] **FIG. 2** (including panels **2**A, **2**B, **2**C, and **2**D) shows a set of diagrams of screens for displaying television broadcast and personalized/interactive information in combination.

[0024] **FIG. 3** shows a process flow diagram of a method for combining television broadcast and personalized/interactive information.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0025] In the following description, a preferred embodiment of the invention is described with regard to preferred process steps and data structures. However, those skilled in the art would recognize, after perusal of this application, that embodiments of the invention may be implemented using one or more general purpose processors (or special purpose processors adapted to the particular process steps and data structures) operating under program control, or other special purpose circuits, and that implementation of the preferred process steps and data structures described herein using such equipment would not require undue experimentation or further invention.

[0026] System Elements

[0027] **FIG. 1** shows a block diagram of a system for combining television broadcast and personalized/interactive information.

[0028] A system **100** for combining television broadcast and personalized/interactive information includes the following elements:

- [0029] one or more individual recipients **110** who receive information, and who can interactively select information to receive or personalize the information they receive;
- [0030] a display element **120** disposed for displaying information to one or more individual recipients **110**;
- [0031] an input element **130** disposed for receiving choices or other information from the individual recipients **110**;
- [0032] a display controller **140** disposed for selecting information to be distributed to the individual recipients **110**, and for controlling distribution of that information to the display element **120**;
- [0033] a broadcast information interface **150** disposed for receiving broadcast information and decoding or demodulating that broadcast information for use by the display controller **140**; and
- [0034] an interactive information interface **160** disposed for receiving interactive or personalized information and transmitting that interactive or personalized information to the display controller **140**.

[0035] In a preferred embodiment, the individual recipients **110** comprise individual users, and can be distinguished by the system **100** by requiring one or more of them to login or to otherwise identify themselves.

[0036] In alternative embodiments, the individual recipients **110** may include devices that maintain information about individual user preferences, and which interact with the system **100** to make the system **100** responsive to those preferences. For example, the individual recipients **110** may include electronic devices such as cellular telephones, pagers, or personal electronic notebooks, which record user preferences and interact with the system **100**.

[0037] The display element **120** includes a television monitor **121** and a speaker **122**. The television monitor **121** is disposed for displaying still picture and motion picture information for viewing by the users. Similarly, the speaker

122 is disposed for presenting audio information to the users, and can be packaged with the television monitor **121** as part of a television set, or can be packaged as a set of headphones for one or more users.

[**0038**] The input element **130** can include a keyboard **131**, such as an alphanumeric keyboard, and a pointing device **132**, such as a mouse, trackball, or joystick.

[**0039**] In a preferred embodiment, the keyboard **131** comprises a special-purpose keyboard adapted to the techniques described herein, including buttons disposed for directing the display controller **140** to move a cursor displayed on the television monitor **121**, and buttons disposed for selecting an item indicated by the cursor. For example, the keyboard **131** can comprise a television remote control. The keyboard **131** and its operation can be such as described in the Navio Disclosures.

[**0040**] The display controller **140** includes a processor, program and data memory for executing operating system and application programs, and storage for storing and retrieving one or more sets of user preferences.

[**0041**] In a preferred embodiment, the broadcast information interface **150** includes a television tuner, disposed for control by the display controller **140**.

[**0042**] In alternative embodiments, the broadcast information interface **150** may include, either in addition or instead, other devices for receiving broadcast information (as that term is used broadly herein), such as a cable television receiver, a satellite receiver, a video-cassette player/recorder, or other known transducers for pre-selected information generally distributed en masse.

[**0043**] The interactive information interface **160** includes a communication link **161** to an information server **162**. For example, in a preferred embodiment, the interactive information interface **160** includes a modem **163** disposed for coupling using an ISP (internet service provider) to at least one selected server on the internet (or more specifically, the web).

[**0044**] In alternative embodiments, there is no special requirement that the interactive information interface **160** be included in the system **100**. As described herein, the broadcast information interface **150** may provide information in multiple streams, of which one or more such streams may be selected by the individual recipients **110** for display.

[**0045**] Nature of Display

[**0046**] **FIG. 2** (including panels **2**A, **2**B, **2**C, and **2**D) shows a set of diagrams of screens for displaying television broadcast and personalized/interactive information in combination.

[**0047**] ///

[**0048**] Menu Bar

[**0049**] A first panel **2**A shows a screen **210** having a first region **211** for display of broadcast information or web information and a second region **212** for display of a menu bar.

[**0050**] In the first panel **2**A, the second region **212** is for display of a menu bar, comprising a selected set of graphical and text objects for display at the request of the individual recipients **1110**.

[**0051**] In a preferred embodiment, the second region **212** includes a first sub-region **213** for display of a television signal, and a set of second sub-regions **214** for display of interactive controls. For example, the first sub-region **213** can display a television signal for a selected television channel, to which the broadcast information interface **150** is tuned for reception, even while the individual recipients **110** request and retrieve web information.

[**0052**] The first region **211** can either be obscured, or not obscured, by the appearance of the menu bar, at the selection of the individual recipients **110**.

[**0053**] If the individual recipients **110** select that the first region **211** should be obscured, the menu bar overrides the display for its part of the screen **210**. If the individual recipients **110** select that the first region **211** should not be obscured, the broadcast information is redisplayed or resized to encompass the information entirely within the first region **211**. This can be accomplished by changing an aspect ratio of the broadcast information, or by leaving a portion of the first region **211** blank while not changing any aspect ratio.

[**0054**] In a preferred embodiment, the menu bar in the second region **212** is similar even when the first region **211** is used to display web information. Thus, the individual recipients **110** can have a continuous display of a selected television signal even while requesting and displaying web information.

[**0055**] Control Panel and Ticker

[**0056**] A second panel **2**B shows a screen **220** having a first region **221** for display of broadcast information, and a set of second regions **212** for display of web information in an opaque, transparent, translucent, or at least partially transparent or translucent, manner.

[**0057**] In a preferred embodiment, the second panel **2**B comprises a model for the default home page that is accessed by most individual recipients **110** upon startup of the system **100** (described in further detail with reference to **FIG. 3**).

[**0058**] The first region **221** for display of broadcast information is modeled as a web graphic that is transparent, either fully or partially, with a selected television signal designated as a background source. The display controller **140** formats the screen **220** to display the background source, except in the set of second regions **222** where the background graphic is overlaid by one or more translucent or opaque (or at least partially translucent) selected web graphics. These selected web graphics can themselves include television signals.

[**0059**] The set of second regions **222** includes a first subset, including control buttons for selecting preferences or requesting a particular service (such as a selected screen for composing or reviewing electronic mail). The choice of which control elements to display can be responsive to one or more of the following:

[**0060**] preferences set by the individual recipients **110**, or implied by their past actions;

[**0061**] selections made by the individual recipients **110** using the control elements themselves; and

[**0062**] interactive information made available by the system **100**, such as news bulletins or alerts indicating incoming messages.

[0063] The set of second regions **222** also includes a second subset, including an animated ticker for continuously displaying information that can be of interest to the individual recipients **110**. The choice of what information to display in the animated ticker can be responsive to one or more of the following:

[0064] preferences set by the individual recipients **110**, or implied by their past actions, operating to filter a sequence of new information; and

[0065] selections made by the individual recipients **110**, including selecting one or more of the ticker elements for further information.

[0066] When the individual recipients **110** make selections responsive to the ticker elements, the system **100** responds similarly to any other request for interactive information. For example, each ticker element can include an HTML pointer to a web page or embedded object for further display or processing.

[0067] Broadcast Information in a Web Frame

[0068] A third panel **2**C shows a screen **230** having a first region **231** for display of web information, including a second region **232** for display of broadcast information in a frame of the web page.

[0069] In a preferred embodiment, the second region **232** for display of broadcast information includes an entire screen of television signals, either resized but using a same aspect ratio, or resized or not and using a different aspect ratio, to present the entire television signal screen is present without distortion.

[0070] The first region **231** for display of web information can include a set of embedded objects, including HTML links to other web objects, which can themselves comprise frames having other selected television signals.

[0071] Broadcast Information as a Web Embedded Object

[0072] A fourth panel **2**D shows a screen **240** having a first region **241** for display of web information, and a second region **242** for display of broadcast information as a designated embedded object of the web page.

[0073] The first region **241** for display of web information can include any type of objects that can otherwise be embedded in a web document, including text, graphical objects, animation, program elements, or frames or subframes.

[0074] The second region **242** for display of broadcast information comprises a section of the web information that includes a graphic whose source is a dynamic and continuous display of a television signal. The particular television signal can be resized and have its aspect ratio altered as well. The particular television signal can be selected in response to a choice by the web information provider, such as by so indicating in an HTML tag, or can be selected in response to a choice by the individual recipients **110**. The graphic whose source is a dynamic and continuous display of a television signal can itself be coupled to any web object, such as any personalized element or clickable object.

[0075] Method of Operation

[0076] **FIG. 3** shows a process flow diagram of a method for combining television broadcast and personalized/interactive information.

[0077] A method **300** is performed by the system **100**, including the display element **120**, the input element **130**, the display controller **140**, the broadcast information interface **150**, and the interactive information interface **160**. The system **100** is also responsive to input from the individual recipients **110**.

[0078] At a flow point **310**, the system **100** is brought into an initial state, such as by turning the power on or by using a reset switch.

[0079] At a step **311**, the system **100** performs any required initialization, such as the following:

[0080] performing any required power-on self-test or self-authentication;

[0081] retrieving any required global information, such as time or location of the system **100**;

[0082] authenticating the particular individual recipients **110**, such as using a login procedure, and retrieving any preferences for those particular individual recipients **110**; and

[0083] selecting a web page, such as an initial page or home page, at which the particular individual recipients **110** can begin receiving web content.

[0084] In a preferred embodiment, the system **100** records a location of the home page, and any preferences for retrieving information from that home page, with a set of recorded preferences **350** for the individual recipients **110**. For example, the preferences **350** can include a set of parameters for a home page that includes a CGI script or JavaScript program.

[0085] At a step **312**, the interactive information interface **160** retrieves the selected web page for the individual recipients **110**.

[0086] At a step **313**, the interactive information interface **160** retrieves any other web content associated with the home page.

[0087] At a step **314**, the system **100** determines if there is any broadcast content included among the web content to be retrieved. If so, the method **300** continues with the step **315**. If not, the method **300** continues with the step **317**.

[0088] In a preferred embodiment, broadcast content can be included among the web content to be retrieved using a URL including "TV://". This new "TV" protocol can be used as either a location or as an image source, and can thus fully link any broadcast television signal into any web page or frame.

[0089] For a first example, the "TV" protocol can be used as a top location typed in at a menu bar, in HTML using "tv://3", or in Javascript (using top.location="tv:1/same").

[0090] For a second example, the location can specify a frame in a frameset, in HTML (using <FRAME SRC="tv://3" NAME="tv">), or in Javascript (using top.frame[0].location="tv://3").

[0091] For a third example, the location can be specified as the destination of a link, in HTML using the HREF property (using <A HREF="tv://3"></A>).

[0092] Thus, the author of a web page or frame can set the entire background of the web page or frame to correspond to a broadcast television signal, or can provide a selected "screen" region in which the broadcast television signal is to be displayed.

[0093] For a first example, the following HTML lines each set the background image of the page to correspond to a broadcast television signal:

```
<BODY BGCOLOR="transparent" BACKGROUND="tv://same/">  (351)
<BODY BGCOLOR="transparent" BACKGROUND="tv://03">  (352)
<BODY BGCOLOR="transparent" BACKGROUND="tv://MTV">  (353)
```

[0094] HTML line **351** sets the background image source to whatever channel the television tuner is then currently set to. HTML line **352** specifically sets the background image source to channel three. HTML line **353** specifically sets the background image source to the channel broadcasting MTV.

[0095] For a second example, the following HTML lines include a broadcast television signal as a window in the web page content:

```
<IMG SRC="tv://same/">  (354)
<IMG SRC="tv://7" width=564 height=204>  (355)
<IMG SRC="tv://36">  (356)
<IMG SRC="tv://KPIX">  (357)
```

[0096] HTML line **354** sets the image source to whatever channel the television tuner is then currently set to. HTML line **355** specifically sets the image source to channel seven, with a specified height and width. HTML line **356** specifically sets the image source to channel **36**. HTML line **357** specifically sets the image source to the channel broadcasting KPIX.

[0097] For a third example, the following HTML lines include a broadcast television signal as a full-screen television window in the web page content:

```
<A HREF="tv://"></A>  (358)
```

[0098] HTML line **358** sets the anchor reference for a window to a broadcast television signal.

[0099] At a step **315**, the broadcast information interface **150** retrieves the selected broadcast content. For example, if the selected broadcast content includes a selected television signal for video display and audio presentation, the broadcast information interface **150** tunes to the associated television channel for that television signal and retrieves that television signal.

[0100] At a step **316**, the system **100** determines if any personalized information is included with the broadcast content. For example, the broadcast television signal can include personalized information or other information, such as web browser "cookies," in the VBI or other out-of-band portion of the television signal. The display controller **140** can alter the presentation of the broadcast content, such as for example by selecting a particular camera angle (or otherwise selecting among multiple broadcast channels, sources, or streams), in response to the personalized information. Moreover, the personalized information can direct the system **100** to retrieve different web content; if so, the method **300** returns to the step **312**.

[0101] In alternative embodiments, the broadcast television signal can include much other information, such as pointers to web content (URLs or embedded web objects), in the VBI or other out-of-band portion of the television signal. The system **100** can use this other information to display options to the individual recipients **110**, to alter the preferences **350** for the individual recipients **110**, or to otherwise alter its state to enhance the simultaneous presentation of the broadcast content and the (individual or personalized) web content.

[0102] At a step **317**, the display controller **140** formats the screen for display on the television monitor **121**. As part of this step, the display controller **140** integrates the selected broadcast content into the web content for display (and presentation) using the display element **130**. In a preferred embodiment, the display controller **140** uses information from the preferences **350** to determine, at least in part, how to integrate the selected television signal into the web content.

[0103] At a step **318**, the display element **120** displays the screen to the individual recipients **110**. After a short period of time, the method **300** returns to the step **317** to reformat and redisplay the screen. For example, if the web content can include animation or a program element, or the broadcast content can include a motion picture (as it typically will).

[0104] At a step **319**, the input element **130** detects input from one or more of the individual recipients **110**. A wide variety of possible inputs, and consequently a wide variety of possible responses, are within the scope and spirit of the invention. These include at least the following:

- [0105] The input includes personalization information or otherwise alters preferences for the individual recipients **110**. The method **300** returns to the step **312** so that the display controller **140** can retrieve other web content, and consequently reformat and redisplay the screen, in response to the personalization information. The system **100** can also record the personalization information in the preferences **350**.
- [0106] The input selects new selected interactive information. The method **300** returns to the step **312** so that the interactive information interface **160** can retrieve the new selected interactive information, similar to retrieving the home page.
- [0107] The input turns the system **100** off. The system **100** performs any required termination, and returns to a quiescent state. When the system is next activated, it will return to the flow point **310**.

[0108] General Applicability of the Invention

[0109] Those skilled in the art will recognize, after perusal of this application, that the particular examples shown herein are a few of the many possibilities for combining web content (which can be interactive and personalized) with broadcast content (which can be dynamic and selected from multiple sources).

[0110] Any individual web object can have a selected television signal presented for display as an embedded object within the web object, such as a frame or sub-frame, a graphical object, or an object presented using a program element (such as a CGI script or Java or JavaScript program). For example, a web object can be constructed includ-

ing all or part of many selected television signals for display, so the individual recipients **110** can choose to watch individual television signals according to parameters selected and performed by a web server or application.

[**0111**] Any selected television signal can be presented for display underlying a transparent web object, so that the web object can be presented in conjunction with the television signal without obscuring any significant part of the television signal. Moreover, principles of web design can be used in conjunction with the television signal, so elements of the television signal can be made interactive. For example, a television signal advertisement including a telephone number can have a web object superposed so individual recipients **110** can select the telephone number to call it.

[**0112**] Alternative Embodiments

[**0113**] Although preferred embodiments are disclosed herein, many variations are possible which remain within the concept, scope, and spirit of the invention, and these variations would become clear to those skilled in the art after perusal of this application.

1. An information system, comprising:

a controller, for generating an image representative signal adapted for use by a display device;

a broadcast interface, for applying broadcast information to a controller; and

an interactive information interface, for applying interactive information to said controller;

said controller including said broadcast information, said interactive information and a user selectable element in said image representative signal such that corresponding presented imagery includes an interactive portion, a broadcast portion and a user selectable element.

2. The information system of claim 1, wherein:

said user selectable element comprises a hyperlink having associated with it an object;

said interactive information interface, in response to a selection of said hyperlink, includes said object associated with said hyperlink within said interactive information.

3. The information system of claim 1, further comprising:

an input device for selecting said user selectable element, said input element comprising at least one of a keypad, a pointing device and a graphical user interface.

4. The information system of claim 1, further comprising:

data memory for storing a user preference.

5. The information system of claim 1, wherein:

said interactive information interface comprises a network access device.

6. The information system of claim 5, wherein:

said internet access device includes a web modem.

7. The information system of claim 1, wherein:

said interactive portion of said imagery comprises objects retrieved from a network and displayed in a first image panel; and

said broadcast portion of said imagery comprises broadcast video imagery displayed in a second image panel.

8. The information system of claim 7, wherein:

said first panel is at least partially transparent and overlaps said second panel.

9. The information system of claim 1, wherein:

said user selectable element includes a control button for selecting a preference, said preference being used to determine how said broadcast information is presented in relationship to said interactive information.

10. The information system of claim 1 wherein said first image panel is used to display web content.

11. The information system of claim 4, wherein:

said user preference stored in said data memory is accessible to at least a networked server to which the preference relates.

12. The information system of claim 1, wherein:

said interactive information interface retrieving information from a network in response to the reception of broadcast information conforming to a user preference.

13. The information system of claim 12, wherein:

said retrieved information is displayed in said first image panel.

14. The information system of claim 12, further comprising:

data memory for storing a user preference, said user preference being stored in said memory by a web site interacting with said interactive information interface.

15. The information system of claim 12, further comprising:

data memory for storing a user preference, said user preference being stored in said memory in response to user interaction via said user selectable element.

16. A method of displaying information comprising:

initializing a display system;

receiving selected web content;

receiving broadcast content;

receiving personalized indicia;

formatting received web content, received broadcast content, and received personalized indicia into video information; and

displaying video information to simultaneously produce interactive information having a user selectable element and a television broadcast.

17. A method according to claim 16 further including identifying personalized indicia within at least one of the displayed video information and an out-of-band portion of a television signal.

18. A method according to claim 17 further including retrieving personalized information based on the personalized indicia.

19. A method according to claim 16 wherein the personalized indicia is a web browser cookie.

20. A method according to claim 15 further including retrieving preferences and formatting the received selected web content and received broadcast content based on those preferences.

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